Select most suitable product for easy operation.

# GTR

# GEAR MOTOR MIDI SERIES

## 0.1kW-2.2kW

(F-50W)

## 2005-2006

The CAD data can be downloaded for the homepage:
http://www.nissei-gtr.co.jp/

NISSEI CORPORATION

* The specifications of the products in this catalogue are subject to change by modification or other reasons without notice, therefore, we recommend you to contact us for confirmation, before start designing.
* In case the end-user of products is military organization or the purpose of products is for manufacturing weapons, or the country you export products is the restricted country stipulated in the "Foreign Exchange and Foreign Trade Law", execute prior investigations and take proper measures for export.



**NISSEI CORPORATION**

http://www.nissei-gtr.co.jp

**For orders and/or inquiries about products in this catalogue, please contact the dealer mentioned below:**


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# Precautions for Safety

## General

■ Be sure to observe the safety regulations for the installation location and the equipments to be used with.
(Ordinance on Labor Safety and hygiene, Electrical Equipment Technical Standard, Internal Line Regulations, Factory's Guide for Protecting Explosion, Building Standard Law, etc.)

■ Carefully read the Instruction Manual before actual operation of products and operate properly as instructed. When the Instruction Manual is not available in your place, ask your dealer or our nearest sales office. The Instruction Manual should be reached to the end-user who actually operates the product.

## Particular user

■ Select the most adequate products for your using conditions and/or purposes. (For selection of products, be sure to carefully read the " Technical Information " and " Precautions for Use ")

■ If the product is applied as a hoist or elevator for human transport, be sure to furnish it with a protective device such as safeguard.

■ Be sure to use explosion-proof motor in the circumstances where explosive gases or flammable gases exist. The explosion-proof motor should have specifications most adequate for the facing danger.

■ If a inverter is employed for driving an explosion-proof motor, the approved combination is 1:1 between motor and inverter. Be sure to operate motor with the designated inverter. The inverter itself is not explosion-proof specifications, therefore, be sure to install it in the location where no explosive gases exist.

■ If a 400V class inverter is employed for driving motor, be sure to attach a control filter or a reactor to the inverter, or use insulation enhanced motor.

■ In the equipment such as food machines, especially machines which do not accept oil or grease, be sure to furnished with protective devices such as oil pan, etc., to protect from the oil leakage due to failure or life.

## ●Note:

The specifications of the products in this catalogue are subject to change by modification or other reasons without notice, therefore, we recommend you to contact us for confirmation, before start designing.

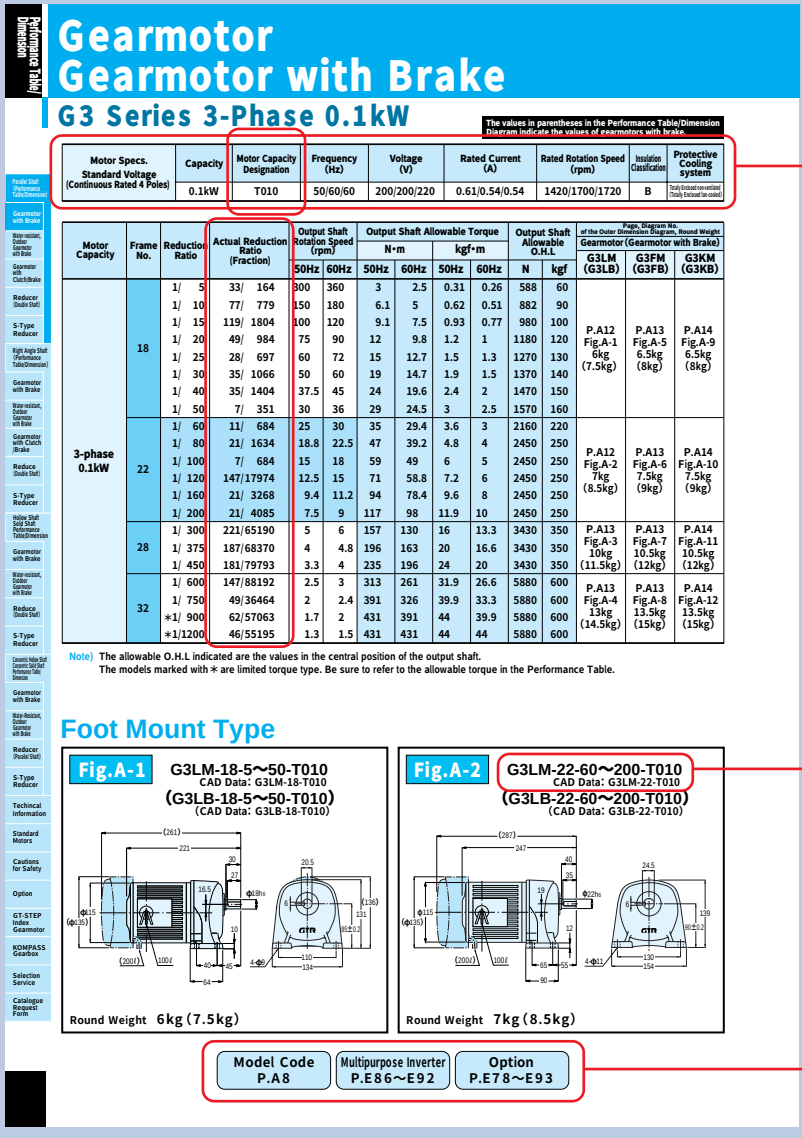
●If you need catalogues of our GTR and/or other products, ask us with the " Catalogue Request Form " on page X11 of this catalogue.




Electronic Media Catalogue is also available.

# Page Layout of the catalogue for the Medium Type (50W 0.1kW～2.2kW)

## The latest edition of the 2005-2006 Catalogue is made with a clear to look and easy to understand layout. Try it by yourself.



Performance Table/ Dimension

Gearmotor
Gearmotor with Brake
G3 Series 3-Phase 0.1kW

The values in parentheses in the Performance Table/Dimension diagram indicate the values of gearmotors with brake.

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) 50Hz | 60Hz | Output Shaft Allowable Torque N·m 50Hz | 60Hz | kgf·m 50Hz | 60Hz | Output Shaft Allowable O.H.L N | kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3-phase 0.1kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 3 | 2.5 | 0.31 | 0.26 | 588 | 60 | P.A12 Fig.A-1 6kg (7.5kg) | P.A13 Fig.A-5 6.5kg (8kg) | P.A14 Fig.A-9 6.5kg (8kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 9.1 | 7.5 | 0.93 | 0.77 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 12 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 15 | 12.7 | 1.5 | 1.3 | 1270 | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 50 | 60 | 19 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 37.5 | 45 | 24 | 19.6 | 2.4 | 2 | 1470 | 150 | | | |
| | | 1/ 50 | 7/ 351 | 30 | 36 | 29 | 24.5 | 3 | 2.5 | 1570 | 160 | | | |
| | 22 | 1/ 60 | 11/ 684 | 25 | 30 | 35 | 29.4 | 3.6 | 3 | 2160 | 220 | P.A12 Fig.A-2 7kg (8.5kg) | P.A13 Fig.A-6 7.5kg (9kg) | P.A14 Fig.A-10 7.5kg (9kg) |
| | | 1/ 80 | 21/ 1634 | 18.8 | 22.5 | 47 | 39.2 | 4.8 | 4 | 2450 | 250 | | | |
| | | 1/ 100 | 7/ 684 | 15 | 18 | 59 | 49 | 6 | 5 | 2450 | 250 | | | |
| | | 1/ 120 | 147/17974 | 12.5 | 15 | 71 | 58.8 | 7.2 | 6 | 2450 | 250 | | | |
| | | 1/ 160 | 21/ 3268 | 9.4 | 11.2 | 94 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | 1/ 200 | 21/ 4085 | 7.5 | 9 | 117 | 98 | 11.9 | 10 | 2450 | 250 | | | |
| | 28 | 1/ 300 | 221/65190 | 5 | 6 | 157 | 130 | 16 | 13.3 | 3430 | 350 | P.A13 Fig.A-3 10kg (11.5kg) | P.A13 Fig.A-7 10.5kg (12kg) | P.A14 Fig.A-11 10.5kg (12kg) |
| | | 1/ 375 | 187/68370 | 4 | 4.8 | 196 | 163 | 20 | 16.6 | 3430 | 350 | | | |
| | | 1/ 450 | 181/79793 | 3.3 | 4 | 235 | 196 | 24 | 20 | 3430 | 350 | | | |
| | 32 | 1/ 600 | 147/88192 | 2.5 | 3 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A13 Fig.A-4 13kg (14.5kg) | P.A13 Fig.A-8 13.5kg (15kg) | P.A14 Fig.A-12 13.5kg (15kg) |
| | | 1/ 750 | 49/36464 | 2 | 2.4 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | ∗1/ 900 | 62/57063 | 1.7 | 2 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | | ∗1/1200 | 46/55195 | 1.3 | 1.5 | 431 | 431 | 44 | 44 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

Foot Mount Type

Fig.A-1 G3LM-18-5～50-T010
CAD Data: G3LM-18-T010
(G3LB-18-5～50-T010)
(CAD Data: G3LB-18-T010)



Round Weight 6kg (7.5kg)

Fig.A-2 G3LM-22-60～200-T010
CAD Data: G3LM-22-T010
(G3LB-22-60～200-T010)
(CAD Data: G3LB-22-T010)



Round Weight 7kg (8.5kg)

Model Code P.A8 | Multipurpose Inverter P.E86～E92 | Option P.E78～E93

The specifications of the motor are shown in the Performance Table. And the actual reduction ratios are indicated by fraction for easy understanding.

The product dimensions are described by 3-angle diagram and easy-to-find file numbers are now realized.

Easy findings of the index for product type designation, price list, option, etc., are also realized.

## ■Data for the outer dimension diagram of products:




CAD Data (CD-ROM)



Nessei Home Page

All the data for the outer dimension diagram can be downloaded from the CAD Data CD-ROM or from Nissei homepage shown below:

http://www.nissei-gtr.co.jp/

# Introduction of the Product Series (Products shown in this catalogue)

GTR®

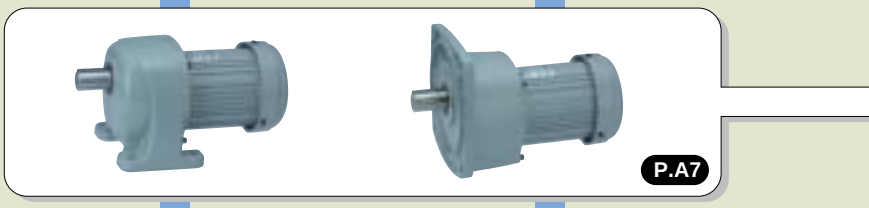
| | Gearmotor | Gearmotor with Brake |
|---|---|---|

## G3 Series Parallel Shaft

●Capacity
3-Phase 0.1kW～2.2kW
Single-Phase 100W～400W
●Reduction Ratio 1/5～1/1200

**Small flange also available in G3-series to save your space.**

●Electronic Media Catalogue is also available



P.A7

## H2 Series Right Angle Shaft

●Capacity
3-Phase 0.1kW～2.2kW
Single-Phase 100W～400W
●Reduction Ratio 1/5～1/1500

●Electronic Media Catalogue is also available

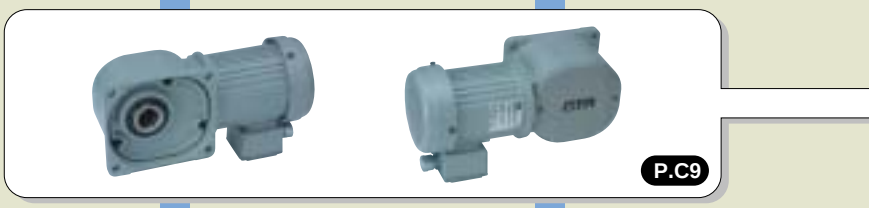


P.B7

## F Series

### FS Type Hollow Shaft

●Capacity
3-Phase 50W～2.2kW
Single-Phase 100W～400W
●Reduction Ratio 1/5～1/1800



P.C9

### FF Type Solid Shaft

●Capacity 3-Phase 50W～0.75kW
●Reduction Ratio 1/5～1/240

●Electronic Media Catalogue is also available

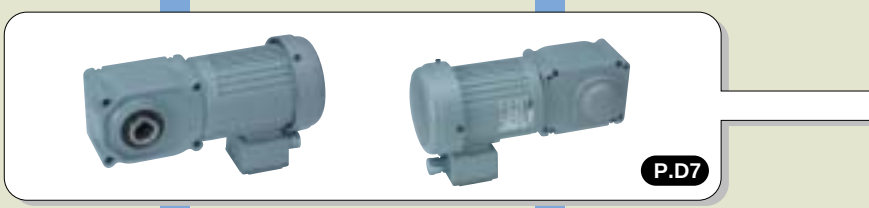


P.C39

## F2 Series

### F2S Type Concentric Hollow Shaft

●Capacity 3-Phase 0.1kW～1.5kW
●Reduction Ratio 1/5～1/60



P.D7

### F2F Type Concentric Solid Shaft

●Capacity 3-Phase 0.1kW～1.5kW
●Reduction Ratio 1/5～1/60

●Electronic Media Catalogue is also available



P.D19

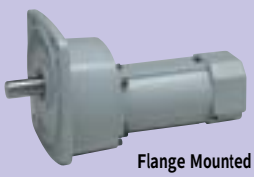
## GT-STEP Index Gearmotor

●Capacity
3-Phase 25W～0.2kW
Single-Phase 25W～90W

●Electronic Media Catalogue is also available



Foot Mount Type



Flange Mounted Type P.F1

## KOMPASS Gear Boxes

KOMPASS® Gear Box

●Output Shaft Diameter ϕ4～40
●Reduction Ratio 1/1・1/2

●Electronic Media Catalogue is also available

K-Type (Lightweight)



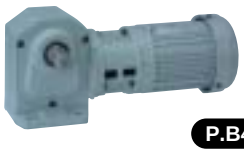
P.G8

K-Type



P.G10

GTR Gearmotor

| Gearmotor with Clutch and Brake | Reducer (Double Shaft Type) | S-Type Reducer (Designated motor attachable type) |
|---|---|---|
|  P.A79 |  P.A101 |  P.A129 |
|  P.B47 |  P.B57 |  P.B71 |
| |  P.C63 |  P.C75 |
| |  P.D39 |  P.D51 |

■Motor capacity 25W～0.2kW
■Nanber of Stop and Normal Cycle Time

| Nanber of Stop | Normal Cycle Time |
|---|---|
| 4～12 | 1～24s |

■Model Lineup
● With Motor
● With Brake Motor

**KN-Type**



P.G13

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# With the high percentage in-house production, we correspond to various needs of our customers.

**Output Shaft Custom-made Specifications**



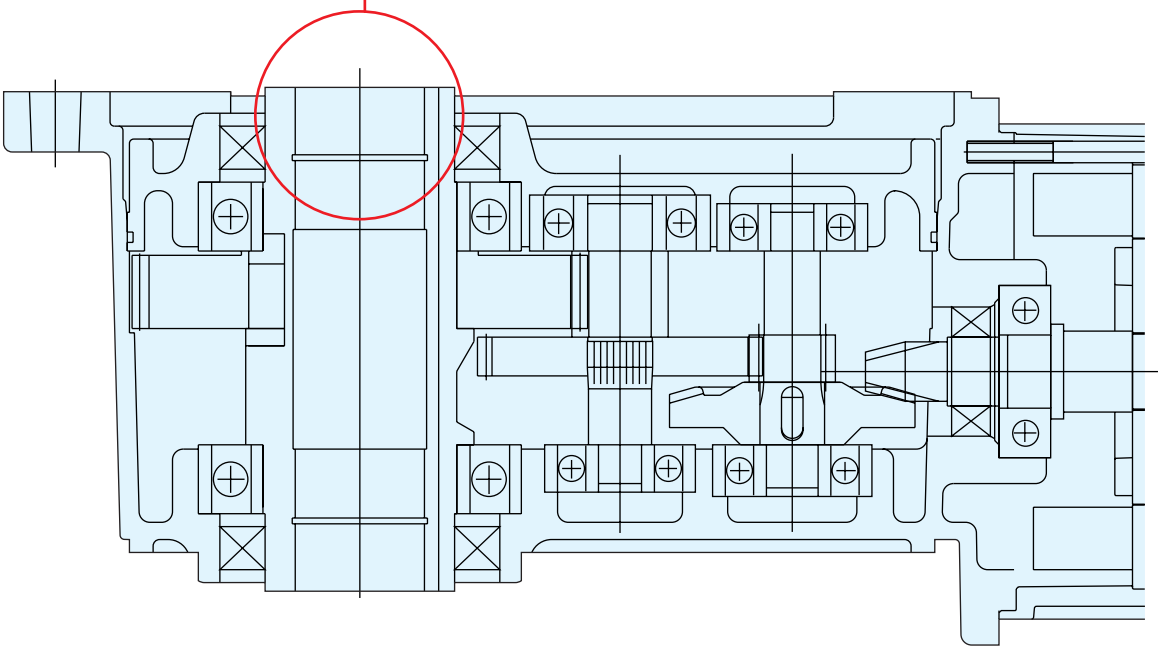
**Ship out : Only 3 days after confirming order**

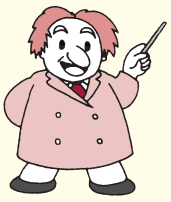
**Available only the dimension corresponds to our options(F/F2 Series).**

**Please refer to page E84.**

## Following requests are also welcome:

- ●Products of special reduction ratio
- ●Cutting of the casing





**Perfect Custom-made Specifications**

Original Gearmotor can also be designed and manufactured by us.

- ●Casing originally designed for reducer
- ●Originally designed motor

# Gear-head

GTR Gearmotor

## Following requests are also welcome:

- ●Output Shaft extension and cutting
- ●Output Shaft special shaping

**Tap on the output shaft**

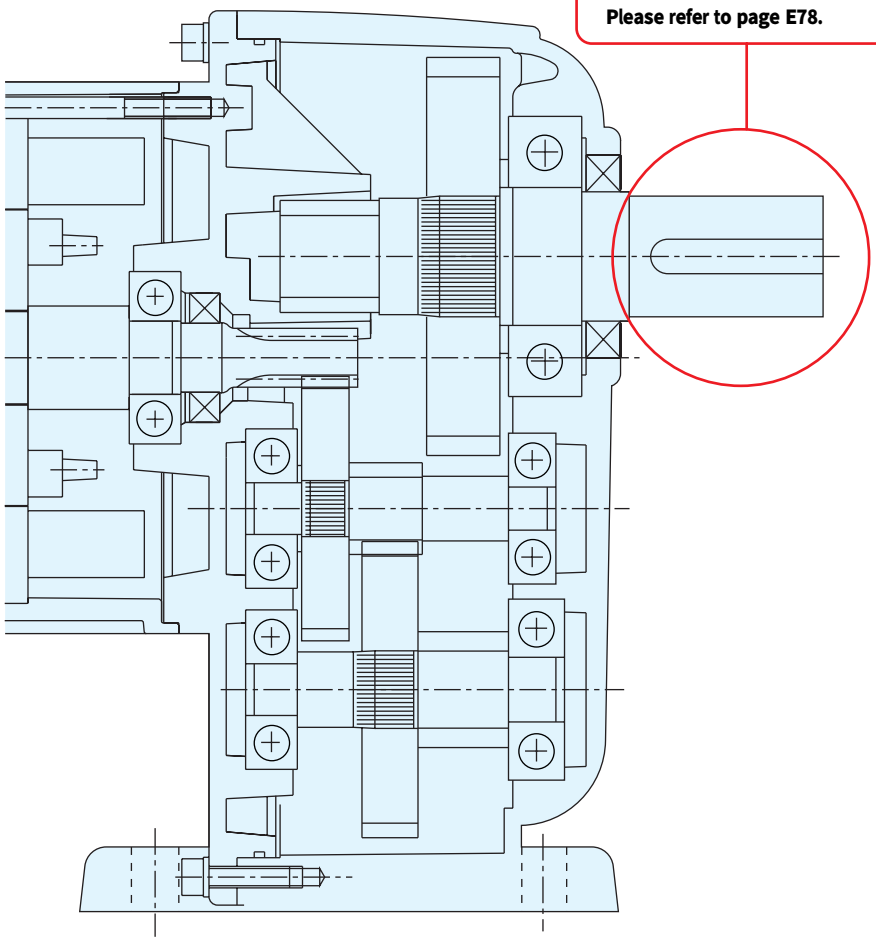


**Ship out : Only 3 days after confirming order**

however in case of Nissei's standard tap dimesions as below.

G3 Series…
H2 Series…L-shaft・R-shaft
F Series…L-shaft

Please refer to page E78.



# With the high percentage in-house production, we correspond to various needs of our customers.

## Accessible as for High voltage (class 400V)

● 3 phase 380V/50Hz
400V/50•60Hz
440V/60Hz

Ship out : Only 3 days after confirming order

## Accessible as for irregular voltage

● 3 phase Other than standard voltage frequency 200V and those irregular

Ship out : Only 5 days after confirming order

●But 480V and above is

Ship out : Only 10 days after confirming order

## Standard gearmotor

● UL-standard
● CE-marking
● CCC-certification

Ship out : Only 5 days after confirming order

●But irregular voltage is

Ship out : Only 10 days after confirming order

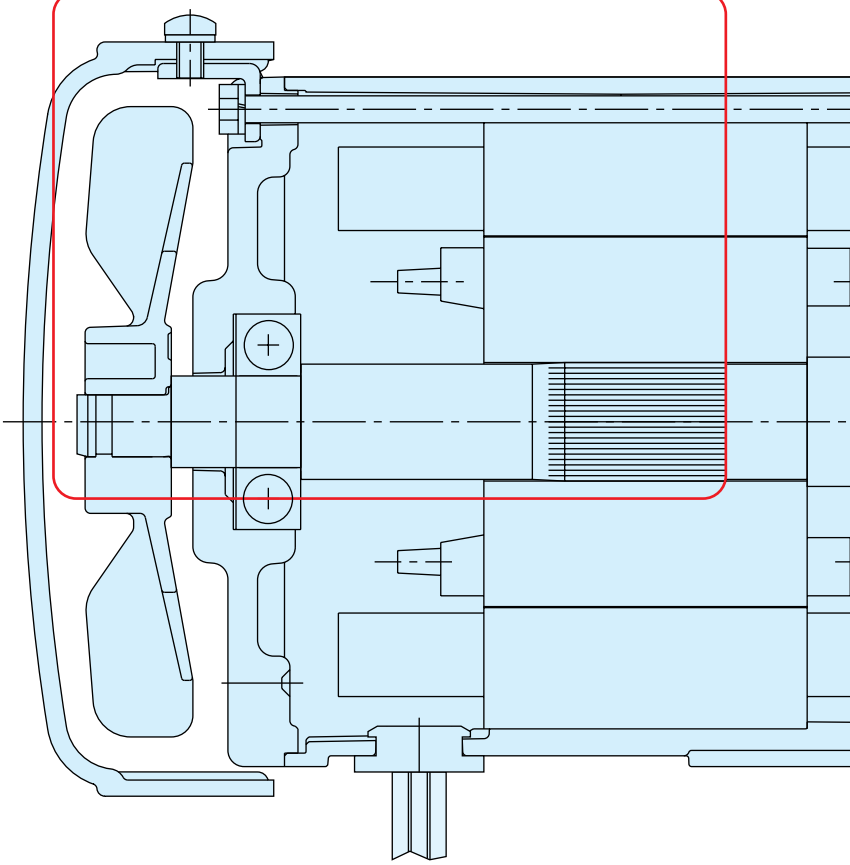
## Class F moror • tropical treatment

●3 phase motor, class F
(0.1kW～2.2kW)

Ship out : Only 10 days after confirming order

●Toropical Treetment

Ship out : Only 5 days after confirming order



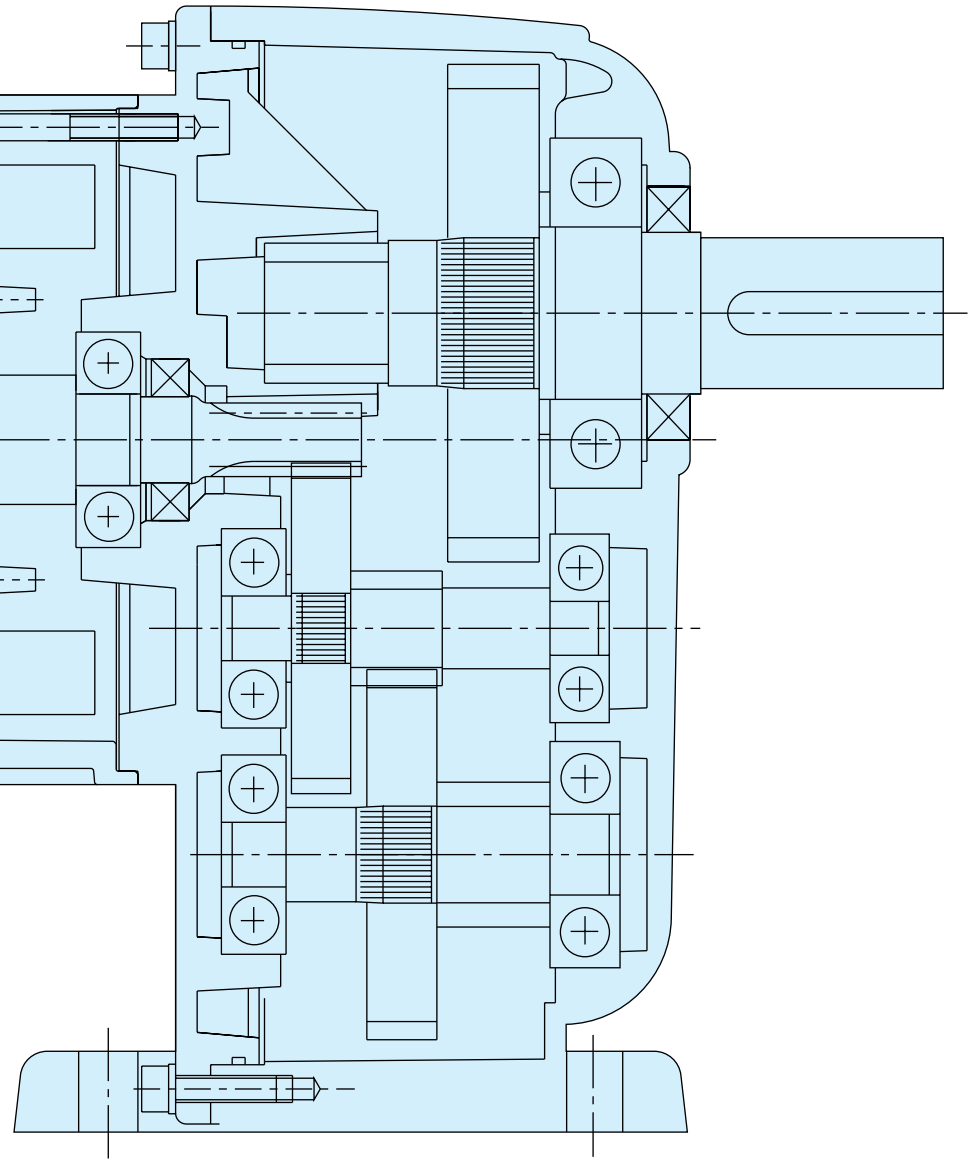
"Ship out" means the lead time to complete product in the factory.
It doesn't include shipping and trucking days.

GTR Gearmotor

# Wide Lineup of Standard Models

## Models correspond to Standard Specifications

- IP65(Water-resistant, Outdoor)Models
- Models combined with Inverter(0.1kW～2.2kW)
- Explosion-proof(Increased Safety Explosion-proof・Pressure-resistant



# We, Leader of the Industry, offer quick Ship out of standard products of more than 140,000 models within 3 days after receiving order.

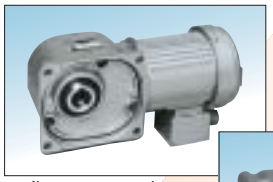


## Delivery

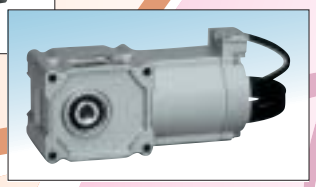
- Scramble Shipping Service (Urgent order acceptable 24 hours)
- CS Center
  - Repair and Survey Desk

## Product Value

- Pursuing integrated value and affinity
- Conform to International Standards
- Improvement of painting quality



Medium Type F Series
•Hollow Shaft



Small Type F2 Series•Water-Resistant•
Concentric Hollow Shaft

**“ From one piece ”is Nissei's motto, caring customer satisfaction.**

## Providing Information

- CS Center
  - Customer1s Technical Inquiries Desk
  - CRM Desk (Information Transmission System)
- Caravan Car (Traveling Exhibit by car)
- Factory Tour•Lecture about Products



to machining.



## In-house Production

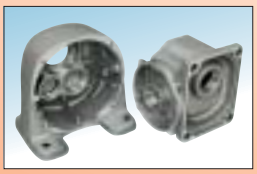
- Over 90% of the products are in-house production(Reducer products).
- Providing reducers and gear products to OEM
- Integrated Production from mold designing/manufacturing, die-casting,



mold designing/manufacturing



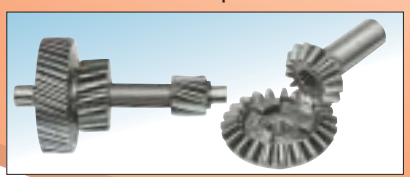
Motor production line



die-cast products



heat treatment (gas carburizing equipment)



OEM gear products



Obtain ISO 14001



Obtain ISO 9001

## Quality

- Obtain ISO 9001
- Obtain ISO 14001
- Awards for '99TPM




Awards for '99TPM



Gleason Phoenix#400PG
Hypoid grinding machine

## Product Development Capability

- Gear designing and manufacturing technology cultivated more than half Century, represented by HRH (High Ratio Hypoid Gear).
- Development of new transmission equipments, corresponding to the market needs.



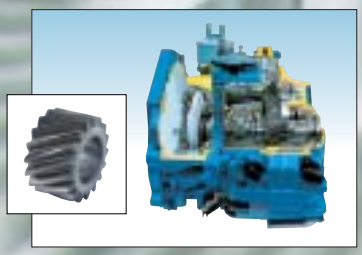
Gleason #102 Hypoid Generator Line



Spiral Bevel Gear



HRH (High Ratio Hypoid) Gear



Helical Gear



## Corporate Profile

**Company Name: Nissei Corporation**
**Capital: 3,475 Million Yen**
**Employees: 715**
**Headquarters: Anjo-shi, Aichi**
**Manufacturing Plant:**
**Main Plant, Anjo Minami Manufacturing Plant**
**Stock Exchange:**
**Listed on the Second Section of the Tokyo Stock Exchange**
**Listed on the Second Section of the Nagoya Stock Exchange**
**Main Products:**
**Reducers, Variable-Speed Reducers, Direct Drive Equipments (Electric Slide-Base, Cylinder, etc.)···500,000units/year**
**Various Small gears**
**(Standard gears, Make-to-order gears)···18 Million units/year**

## Company History:

| | | |
|---|---|---|
| March | 1942 | Established company JAPAN SEWING MACHINE NEEDLE MANUFACTURING LTD in Nagoya. |
| **June** | **1955** | **Started production of small fine pitch gears in a make-to-order base in domestic Japanese market.** |
| May | 1964 | Anjo Manufacturing Plant newly opened in 1-1, Inoue, Izumi-cho, Anjo-shi, Aichi and started operation. (Headquarters and Main Manufacturing Plant at present) |
| July | 1965 | Changed company name to NISSEI INDUSTRY CO.LTD |
| May | 1969 | Started production and sales of power transmissions such as reducers, gear boxes, clutches, brake units, etc. |
| Oct. | 1974 | Started production of spur gear reducers " GTR Gearmotor ". |
| **May** | **1980** | **Started production and sales of " GTR " H-Type orthogonal shaft reducers (Hypoid Gearmotor)** |
| Nov. | 1984 | Started production and sales of " GTR Mini Gearmotors " (15W～90W) |
| July | 1985 | Listed on the Second Section of the Nagoya Stock Exchange. Capital became 3,475 Million Yen |
| Sept. | 1985 | Opened Anjo Minami Manufacturing Plant, as a plant exclusively produce power transmissions. |
| | 1989 | Started sales of Stock Bevel Gear and HRH (High Ratio Hypoid Gearmotor). |
| May | 1992 | Added " Helical Gear " and " Straight Bevel Gear " to our standard production line and started sales with the name of " My Set ". |
| May | 1992 | Started production and sales of GTR-V Series (Variable-speed gearmotor). |
| March | 1995 | Started production and sales of GTR IIS Series (Power Slide Base) and C-Series(Power Cylinder). |
| April | 1998 | Started production and sales of GTR-F2 Series (Concentric hollow and solid shaft). |
| Nov. | 1998 | Agreed sales cooperation with SEW-EURODRIVE, JAPAN, Inc. |
| Oct. | 1999 | Awarded '99TPM. |
| March | 2000 | Obtained " ISO 9001 " Certification. |
| **Oct.** | **2000** | **Changed company name to " Nissei Corporation ".** |
| Dec. | 2000 | Obtained " ISO 14001 " Certification. |
| Sept. | 2001 | Started sales of " Small multipurpose inverters "(0.1kW～3.7kW). |
| Oct. | 2001 | Expanded Anjo Minami Manufacturing Plant. (CEL Line assembly started.) |
| April | 2002 | Started production and sales of " GTR A-Series "(Low Backlash Reducers). |
| April | 2002 | Agreed sales cooperation with KOHARA GEAR INDUSTRY CO.LTD |
| Sept. | 2002 | Started production and sales of GTRII V-Series, battery power type. |
| **March** | **2003** | **Listed on the Second Section of the Tokyo Stock Exchange.** |
| Aug. | 2003 | Agreed sales cooperation with DAIKIN INDUSTRIES. LTD |
| Oct. | 2003 | Started production and sales of " GTR Medium Type, Water-resistant Gearmotor with Brake ". |
| Dec. | 2003 | Shipping system for urgent requests " Scramble Shipment Service " started. |
| Dec. | 2003 | Started production and sales of " GTR A-Series IPM servomotor attached ". |
| Jan. | 2004 | Started production and sales of " GTR A-Series Parallel Shaft(AG3) ". |
| Feb. | 2004 | Started production and sales of " GTR Medium Type Explosion-proof Gearmotors ". |
| April | 2004 | Agreed sales cooperation with SEW-EURODRIVE(TIANJIN) CO.,LTD. |
| June | 2004 | Started production and sales of GTRII V-Series Battery Power Type with the specifications of 400W/48V). |
| Dec. | 2004 | Started production and sales of Bevel Gearbox " KOMPASS " |
| Jan. | 2006 | Certificated to Aichi Quality brand. |

Parallel Shaft

# G3 Series Gearmotor • Reducer

## Model • Type Designation Standard Model Lineup

G3 Series


■Gearmotor/Gearmotor with Brake
Model and Type Designation/Standard Model Lineup ..... P. A7
3-phase Performance Table/Dimension Diagram ..... P. A11
1-phase Performance Table/Dimension Diagram ..... P. A37
■Water-Resistant (IP65) Gearmotor/Gearmotor with Brake
Model and Type Designation/Standard Model Lineup ..... P. A51
Performance List/Dimension Diagram ..... P. A55
■Gearmotor with Clutch and Brake (Standard Type/Heavy duty)
Model and Type Designation/Standard Model Lineup ..... P. A79
Standard Type Performance Table/Dimension Diagram ..... P. A83
Heavy duty Performance Table/Dimension Diagram ..... P. A93
■Reducer (Double Shaft Type)
Model and Type Designation/Standard Model Lineup ..... P. A101
Performance List/Dimension Diagram ..... P. A105
■S-Type Reducer (Designated Motor Attachable Type)
Model and Type Designation/Standard Model Lineup ..... P. A129
Performance List/Dimension Diagram ..... P. A133

# Model and Type Designation G3 Series (Parallel Shaft)

G3 series gearmotors and reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| G3 | L | M | – 22 | – 50 | – T020 | W | A | | |
| G3 | F | B | – 40 | – 200 | – 075 | | | X | T9HZ |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

| | | |
|---|---|---|
| ①Series Name | G3 | : G3 Series(Parallel Shaft) |
| ②Classification by Mount Form | L | : Foot Mount |
| | F | : Flange Mount |
| | K | : Small Flange Mount (Frame No.18～32) |
| ③Classification by Motor Type | M | : With Motor |
| | B | : With Brake Motor |
| | J | : With Brake Manual Release Device(Option) |
| | W | : With Water-resistant Motor(Output Shaft material:SUS420J2) |
| | V | : With Water-resistant Brake Motor(Output Shaft material:SUS420J2) |
| | G | : With Outdoor Motor(Output Shaft material: S43C) |
| | H | : With Outdoor Brake Motor(Output Shaft material: S43C) |
| | E | : With Clutch/Brake |
| | Blank | : Without Motor(Double Shaft Type) |
| | S | : Designated Motor Attachable Type(S Type) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter | |
| ⑤Reduction Ratio | 5 : 1／5 ～ 1200 : 1／1200 | |
| ⑥Motor Designation and Capacity | T010 | : 3-phase 0.1kW 010:0.1kW or equiv. (Parallel Shaft・S-Type) |
| | T020 | : 3-phase 0.2kW 020:0.2kW or equiv. (Parallel Shaft・S-Type) |
| | T040 | : 3-phase 0.4kW 040:0.4kW or equiv. (Parallel Shaft・S-Type) |
| | 075 | : 3-phase 0.75kW 0.75kW or equiv. (Parallel Shaft・S-Type) |
| | 150 | : 3-phase 1.5kW 1.5kW or equiv. (Parallel Shaft・S-Type) |
| | 220 | : 3-phase 2.2kW 2.2kW or equiv. (Parallel Shaft・S-Type) |
| | | |
| | 100 | : 1-phase 100W |
| | 200 | : 1-phase 200W |
| | 400 | : 1-phase 400W |
| ⑦⑧Option | Blank | : Standard Specifications<br>3-phase: 200V／50Hz, 200V／60Hz, 220V／60Hz<br>0.1kW～0.4kW Without Terminal Box (Note 1)<br>0.75kW～2.2kW With Terminal Box<br>1-phase : 100V／50Hz, 100V／60Hz<br>Without Terminal Box (Note 2) |
| | W | : High Voltage<br>3-phase: 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz<br>0.1kW～0.4kW Without Terminal Box (Note 1)<br>0.75kW～2.2kW With Terminal Box<br>1-phase : 200V／50Hz, 200V／60Hz (Custom design Specs.)<br>Without Terminal Box (Note 2) |
| | A | : Terminal Box(Option) |
| | Z | : For 3-phase Brake Motor,Terminal Box with a built-in rectifier(Option) |
| | E | : Terminal Box for Water-resistant outdoor motor(Standard Specs.) (Note 3) |
| | A1 | : (Note 4) |
| ⑨Auxiliary Mark | Blank | : Standard Specs. |
| | X | : Mark for Additional Specs. |
| ⑩Spec. Designation | Indication of Terminal Box lead wire position<br>Refer to the indication mark list in P. E35 for details. | |

Note 1: For orders of gearmotors with the capacity of less than 0.4Kw and with terminal box, specify A or Z at the end of the capacity designation. In the standard specs. of gearmotors of the capacity of 0.4Kw with clutch and brake, the terminal box is originally equipped with , therefore, for orders, specify A at the end of the capacity designation accordingly. (Example:G3LE-22-10-T040A)
All the products of the capacity of 0.75～2.2KW are equipped with terminal box and have no additional mark at the end of capacity designation. For the products equipped with rectifier, refer to P. E26.

Note 2: Standard 1-phase products are not equipped with terminal box. Terminal box should be ordered additionally.

Note 3: The E-Type terminal box is equipped as a standard, to the Water-Protect, Outdoor Type products. Therefore, for orders, specify E at the end of the capacity designation.

Note 4: 1. The position of the terminal box hole is downward direction.
2. Without capcon.
3. Separate Rectifier
4. Insert brake leard wires in the terminal box.
5. With Screw-tap process.

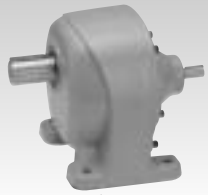
Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate.



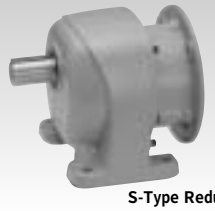
Gearmotor
Gearmotor with Brake



Gearmotor with Clutch and Brake



Reducer (Double Shaft Type)



S-Type Reducer

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

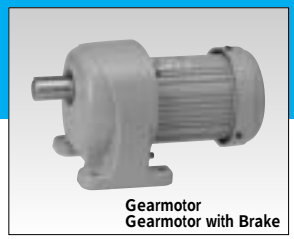
# Standard Model Lineup G3 Series (Parallel Shaft)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

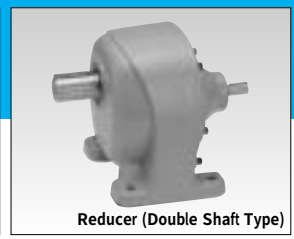
| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Gearmotor G3LM•G3FM G3KM | 3-Phase 0.1kW / 1-Phase 100W | 18 | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 |
| | | 22 | 1/60 1/80 1/100 1/120 1/160 1/200 |
| | | 28 | 1/300 1/375 1/450 |
| | | 32 | 1/600 1/750 **1/900** **1/1200** |
| | 3-Phase 0.2kW / 1-Phase 200W | 18 | 1/5 1/10 1/15 1/20 1/25 |
| | | 22 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 28 | 1/100 1/120 1/160 1/200 |
| | | 32 | 1/300 1/375 1/450 |
| | | 40 | 1/600 1/750 **1/900** **1/1200** |
| Gearmotor with Brake G3LB•G3FB G3KB | 3-Phase 0.4kW / 1-Phase 400W | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | | 40 | 1/300 1/375 **1/450** |
| | | 50 | 1/600 **1/750** **1/900** **1/1200** |
| Gearmotor equipped with brake manual release device G3LJ•G3FJ G3KJ (Optional Spec.) | 3-Phase 0.75kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 40 | 1/100 1/120 1/160 1/200 |
| | | 50 | 1/300 1/375 **1/450** |
| Reducer (Double Shaft Type) G3L•G3F G3K | 3-Phase 1.5kW | 32 | 1/5 1/10 1/15 1/20 1/25 |
| | | 40 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 50 | 1/100 1/120 1/160 **1/200** |
| S-Type Reducer G3LS•G3FS G3KS | 3-Phase 2.2kW | 40 | 1/5 1/10 1/15 1/20 1/25 |
| | | 50 | 1/30 1/40 1/50 1/60 1/80 1/100 |

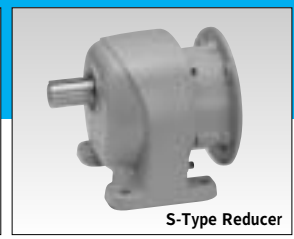
Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.


Gearmotor
Gearmotor with Brake


Gearmotor with Clutch and Brake


Reducer (Double Shaft Type)


S-Type Reducer

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Standard Type 〈GT-PACK〉 Gearmotor with Clutch and Brake G3LE・G3FE G3KE | 3-Phase 0.1kW | 18 | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 |
| | | 22 | 1/60 1/80 1/100 1/120 1/160 1/200 |
| | 3-Phase 0.2kW | 18 | 1/5 1/10 1/15 1/20 1/25 |
| | | 22 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 28 | 1/100 1/120 1/160 1/200 |
| | 3-Phase 0.4kW | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | 3-Phase 0.75kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 40 | 1/100 1/120 1/160 1/200 |
| Reinforced Type 〈GT-PACK〉 Gearmotor with Clutch and Brake G3LE・G3FE G3KE | 3-Phase 0.2kW | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | 3-Phase 0.4kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 |
| | | 40 | 1/100 1/120 1/160 1/200 |
| | 3-Phase 0.75kW | 32 | 1/5 1/10 1/15 1/20 1/25 |
| | | 40 | 1/30 1/40 1/50 1/60 1/80 |
| | | 50 | 1/100 1/120 1/160 1/200 |

Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) **1/100** The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Parallel Shaft

# Gearmotor
# Gearmotor with Brake

## Model • Type Designation
## Standard Model Lineup

G3 Series

### Standard Specifications G3 Series

| | | | |
|---|---|---|---|
| Motor Part | Number of phase | 3-Phase | 1-Phase |
| | Capacity | 0.1kW～2.2kW | 100W～400W |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz | 100V 50/60Hz |
| | Insulation Classification | Class B | Class B |
| | Starting Method | Direct start | Capacitor Start |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed only for 0.1kW without brake) | Totally Enclosed fan-cooled |
| | Number of Pole | 4 | |
| | Rating | Continuous Rating | |
| Speed Reduction Part | Reduction Method | Helical gear | |
| | Lubrication | Grease Lubrication(Maintenance Free) | |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) | |
| | Output Shaft Material | S43C | |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron) | |
| Ambient Conditions | Ambient Temperature | −10°C～40°C | |
| | Ambient Humidity | 85% max.(without any dew condensation) | |
| | Altitude | 1,000m max. | |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. | |
| | Installation Location | Indoors | |
| Painting | Painting Method | Anion painting, Acrylic paint | |
| | Painting Color | Grey(Mansel code: 9B6/0.5) | |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) | |

# Model and Type Designation G3 Series (Parallel Shaft)

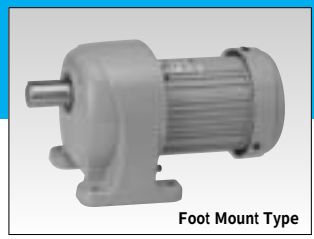
G3 series gearmotors and gearmotor with brake are classified by codes as shown below. Specify these codes in your inquiry and order.

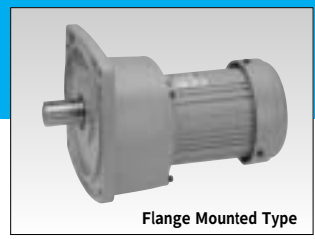
| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| G3 | L | M | 22 | 50 | T020 | W | A | | |
| G3 | F | B | 40 | 200 | 075 | | | X | T9HZ |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

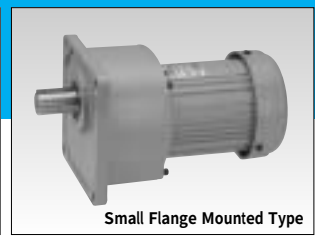
| | | |
|---|---|---|
| ①Series Name | G3 | : G3 Series(Parallel Shaft) |
| ②Classification by Mount Form | L | : Foot Mount |
| | F | : Flange Mount |
| | K | : Small Flange Mount (Frame No.18～32) |
| ③Classification by Motor Type | M | : With Motor |
| | B | : With Brake Motor |
| | J | : With Brake Manual Release Device(Option) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter | |
| ⑤Reduction Ratio | 5 : 1／5 ～ 1200 : 1／1200 | |
| ⑥Motor Designation and Capacity | T010 | : 3-phase 0.1 kW |
| | T020 | : 3-phase 0.2 kW |
| | T040 | : 3-phase 0.4 kW |
| | 075 | : 3-phase 0.75kW |
| | 150 | : 3-phase 1.5 kW |
| | 220 | : 3-phase 2.2 kW |
| | | |
| | 100 | : 1-phase 100W |
| | 200 | : 1-phase 200W |
| | 400 | : 1-phase 400W |
| ⑦⑧Option<br>Note 1: When terminal box is necessary for 0.1kW to 0.4kW, please indicate "A" or "Z" at the of the capacity. Capacity of 0.75kW to 2.2kW are terminal box equipped as Standard and have no additional code. For rectifier built-in, please refer to page E26.<br>Note 2: Standard single-phase products are not equipped with terminal box. Terminal box should be ordered additionally.<br>Note 3: 1. The position of the terminal box hole is downward direction.<br>2. Without capcon.<br>3. Separate Rectifier<br>4. Insert brake wires in the terminal box.<br>5. with screw-tap process. | Blank | : Standard Specifications<br>3-phase : 200V／50Hz, 200V／60Hz, 220V／60Hz<br>0.1kW～0.4kW Without Terminal Box (Note 1)<br>0.75kW～2.2kW With Terminal Box<br>1-phase : 100V／50Hz, 100V／60Hz<br>Without Terminal Box (Note 2) |
| | W | : High Voltage<br>3-phase : 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz<br>0.1kW～0.4kW Without Terminal Box (note 1)<br>0.75kW～2.2kW With Terminal Box<br>1-phase : 200V／50Hz, 200V／60Hz (Custom design Specs.)<br>Without Terminal Box (Note 2) |
| | A | : Terminal Box(Option) |
| | Z | : For 3-phase Brake Motor,Terminal Box with a built-in rectifier(Option) |
| | A1 | : (Note 3) |
| ⑨Auxiliary Mark | Blank | : Standard Specs. |
| | X | : Mark for Additional Specs |
| ⑩Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Indication of Terminal Box lead wire position<br>Refer to the indication mark list in P. E35 for details. | |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Gearmotor G3LM•G3FM G3KM<br>Gearmotor with Brake G3LB•G3FB G3KB<br>Gearmotor equipped with brake manual release device G3LJ•G3FJ G3KJ (Optional Spec.) | 3-Phase 0.1kW<br>1-Phase 100W | 18 | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 |
| | | 22 | 1/60 1/80 1/100 1/120 1/160 1/200 |
| | | 28 | 1/300 1/375 1/450 |
| | | 32 | 1/600 1/750 **1/900** **1/1200** |
| | 3-Phase 0.2kW<br>1-Phase 200W | 18 | 1/5 1/10 1/15 1/20 1/25 |
| | | 22 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 28 | 1/100 1/120 1/160 1/200 |
| | | 32 | 1/300 1/375 1/450 |
| | | 40 | 1/600 1/750 **1/900** **1/1200** |
| | 3-Phase 0.4kW<br>1-Phase 400W | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | | 40 | 1/300 1/375 **1/450** |
| | | 50 | 1/600 1/750 **1/900** **1/1200** |
| | 3-Phase 0.75kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 40 | 1/100 1/120 1/160 1/200 |
| | | 50 | 1/300 1/375 **1/450** |
| | 3-Phase 1.5kW | 32 | 1/5 1/10 1/15 1/20 1/25 |
| | | 40 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 50 | 1/100 1/120 1/160 **1/200** |
| | 3-Phase 2.2kW | 40 | 1/5 1/10 1/15 1/20 1/25 |
| | | 50 | 1/30 1/40 1/50 1/60 1/80 1/100 |

Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) ▭ The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

# Parallel Shaft

# Gearmotor
# Gearmotor with Brake

## Performance Table
## Dimension diagram

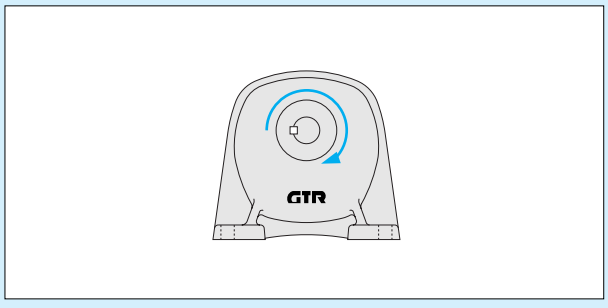
G3 Series

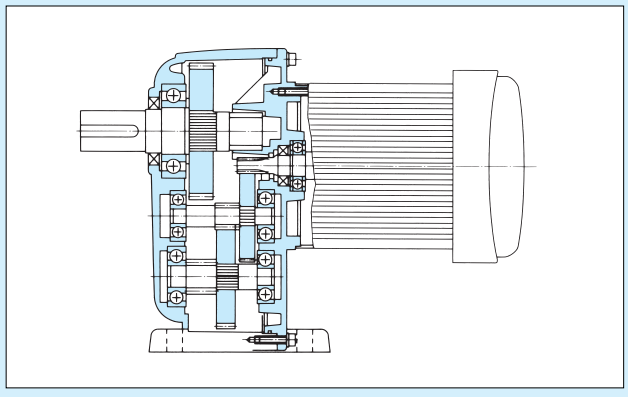
### 3-Phase

【Remarks】

- Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The Shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, the shaft rotates clock wise when viewing from output side. (Reter to the diagram shown below.)



# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.1kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) |

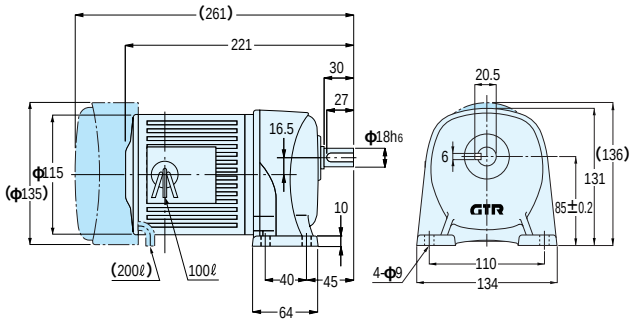
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | | | |
| 3-phase 0.1kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 3 | 2.5 | 0.31 | 0.26 | 588 | 60 | P.A12 Fig.A-1 6kg (7.5kg) | P.A13 Fig.A-5 6.5kg (8kg) | P.A14 Fig.A-9 6.5kg (8kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 9.1 | 7.5 | 0.93 | 0.77 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 12 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 15 | 12.7 | 1.5 | 1.3 | 1270 | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 50 | 60 | 19 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 37.5 | 45 | 24 | 19.6 | 2.4 | 2 | 1470 | 150 | | | |
| | | 1/ 50 | 7/ 351 | 30 | 36 | 29 | 24.5 | 3 | 2.5 | 1570 | 160 | | | |
| | 22 | 1/ 60 | 11/ 684 | 25 | 30 | 35 | 29.4 | 3.6 | 3 | 2160 | 220 | P.A12 Fig.A-2 7kg (8.5kg) | P.A13 Fig.A-6 7.5kg (9kg) | P.A14 Fig.A-10 7.5kg (9kg) |
| | | 1/ 80 | 21/ 1634 | 18.8 | 22.5 | 47 | 39.2 | 4.8 | 4 | 2450 | 250 | | | |
| | | 1/ 100 | 7/ 684 | 15 | 18 | 59 | 49 | 6 | 5 | 2450 | 250 | | | |
| | | 1/ 120 | 147/ 17974 | 12.5 | 15 | 71 | 58.8 | 7.2 | 6 | 2450 | 250 | | | |
| | | 1/ 160 | 21/ 3268 | 9.4 | 11.2 | 94 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | 1/ 200 | 21/ 4085 | 7.5 | 9 | 117 | 98 | 11.9 | 10 | 2450 | 250 | | | |
| | 28 | 1/ 300 | 221/ 65190 | 5 | 6 | 157 | 130 | 16 | 13.3 | 3430 | 350 | P.A13 Fig.A-3 10kg (11.5kg) | P.A13 Fig.A-7 10.5kg (12kg) | P.A14 Fig.A-11 10.5kg (12kg) |
| | | 1/ 375 | 187/ 68370 | 4 | 4.8 | 196 | 163 | 20 | 16.6 | 3430 | 350 | | | |
| | | 1/ 450 | 181/ 79793 | 3.3 | 4 | 235 | 196 | 24 | 20 | 3430 | 350 | | | |
| | 32 | 1/ 600 | 147/ 88192 | 2.5 | 3 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A13 Fig.A-4 13kg (14.5kg) | P.A13 Fig.A-8 13.5kg (15kg) | P.A14 Fig.A-12 13.5kg (15kg) |
| | | 1/ 750 | 49/ 36464 | 2 | 2.4 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | ∗1/ 900 | 62/ 57063 | 1.7 | 2 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | | ∗1/1200 | 46/ 55195 | 1.3 | 1.5 | 431 | 431 | 44 | 44 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-1**

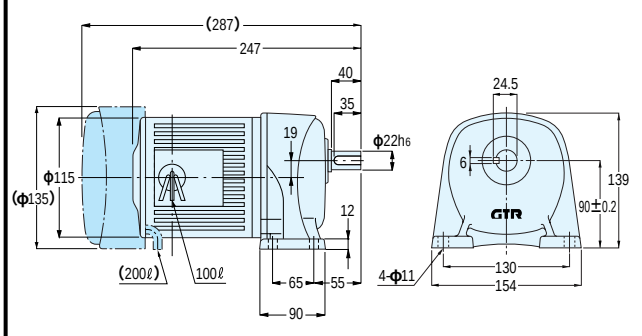
**G3LM-18-5〜50-T010**
CAD Data: G3LM-18-T010
**(G3LB-18-5〜50-T010)**
(CAD Data: G3LB-18-T010)




Round Weight 6kg (7.5kg)

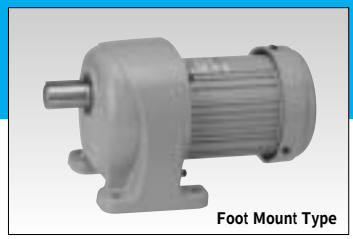
**Fig.A-2**

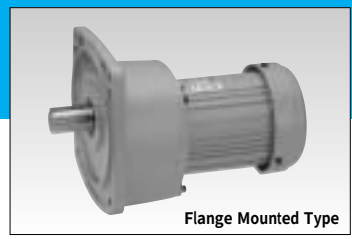
**G3LM-22-60〜200-T010**
CAD Data: G3LM-22-T010
**(G3LB-22-60〜200-T010)**
(CAD Data: G3LB-22-T010)

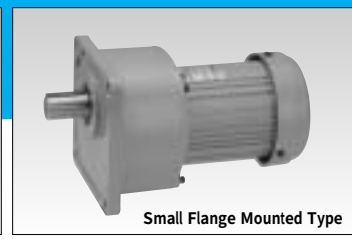



Round Weight 7kg (8.5kg)

Model Code P.A8
Multipurpose Inverter P.E86〜E92
Option P.E78〜E93

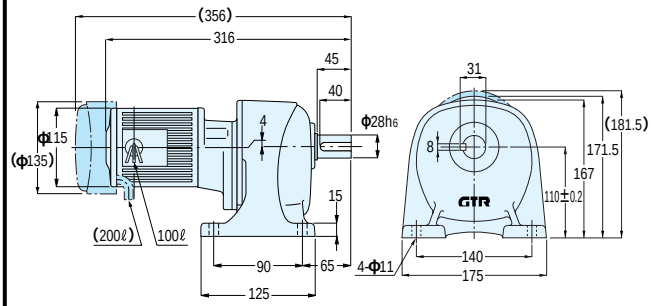

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-3

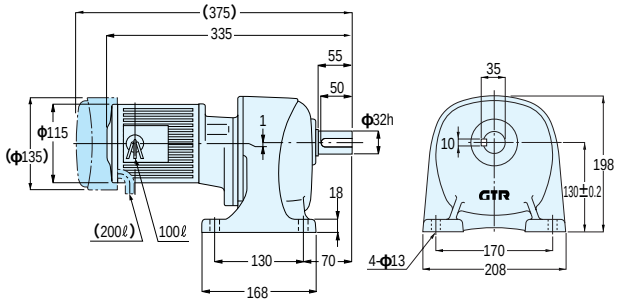
**G3LM-28-300～450-T010**
CAD Data: G3LM-28-T010
**(G3LB-28-300～450-T010)**
(CAD Data: G3LB-28-T010)




Round Weight 10kg (11.5kg)

## Fig.A-4

**G3LM-32-600～1200-T010**
CAD Data: G3LM-32-T010
**(G3LB-32-600～1200-T010)**
(CAD Data: G3LB-32-T010)

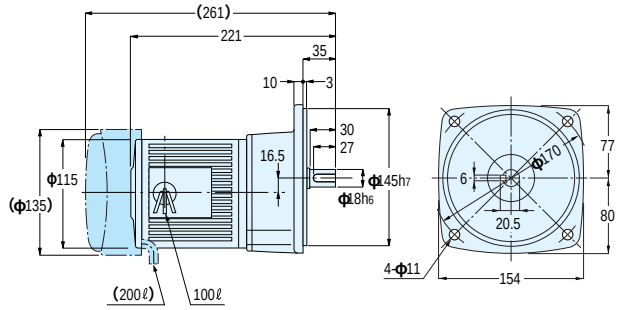



Round Weight 13kg (14.5kg)

# Flange Mounted Type

## Fig.A-5

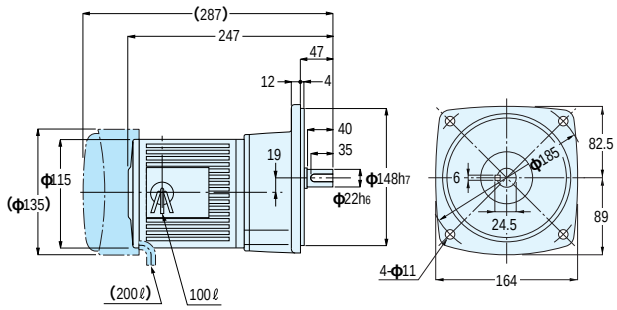
**G3FM-18-5～50-T010**
CAD Data: G3FM-18-T010
**(G3FB-18-5～50-T010)**
(CAD Data: G3FB-18-T010)




Round Weight 6.5kg (8kg)

## Fig.A-6

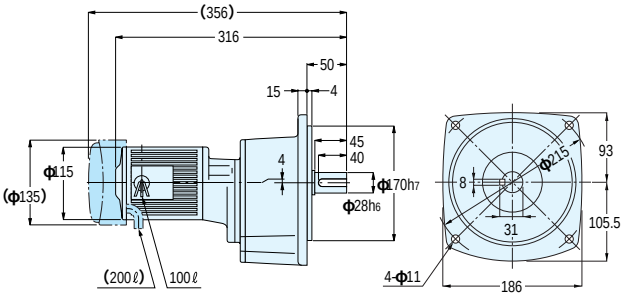
**G3FM-22-60～200-T010**
CAD Data: G3FM-22-T010
**(G3FB-22-60～200-T010)**
(CAD Data: G3FB-22-T010)




Round Weight 7.5kg (9kg)

## Fig.A-7

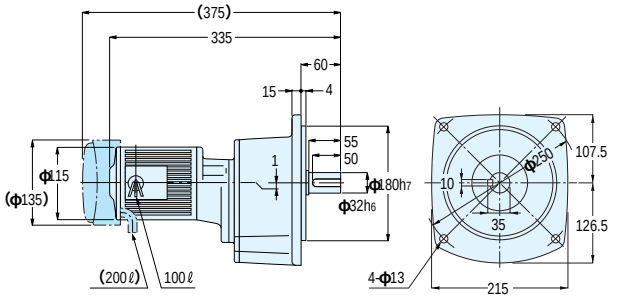
**G3FM-28-300～450-T010**
CAD Data: G3FM-28-T010
**(G3FB-28-300～450-T010)**
(CAD Data: G3FB-28-T010)




Round Weight 10.5kg (12kg)

## Fig.A-8

**G3FM-32-600～1200-T010**
CAD Data: G3FM-32-T010
**(G3FB-32-600～1200-T010)**
(CAD Data: G3FB-32-T010)




Round Weight 13.5kg (15kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.1kW

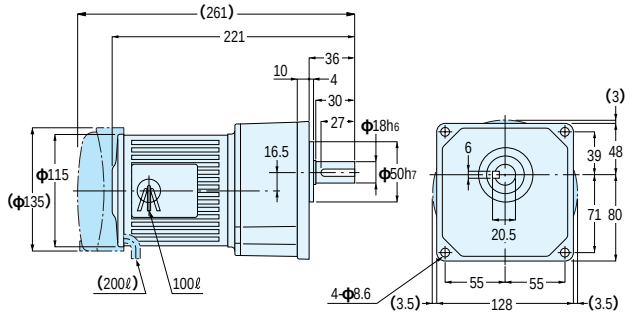
## Small Flange Mounted Type

**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


### Fig.A-9

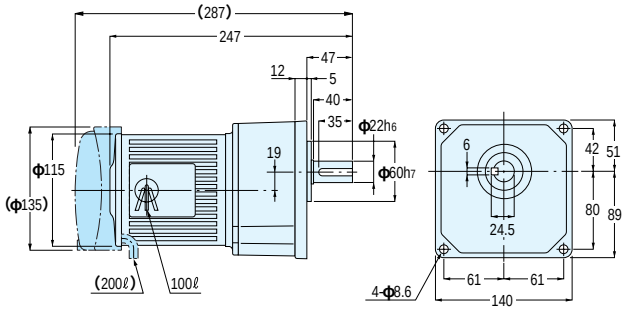
**G3KM-18-5～50-T010**
CAD Data: G3KM-18-T010
**(G3KB-18-5～50-T010)**
(CAD Data: G3KB-18-T010)




**Round Weight 6.5kg (8kg)**

### Fig.A-10

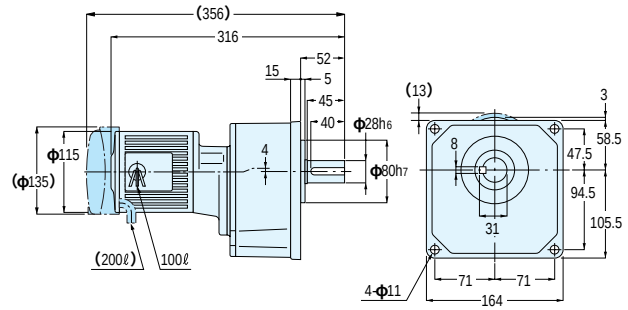
**G3KM-22-60～200-T010**
CAD Data: G3KM-22-T010
**(G3KB-22-60～200-T010)**
(CAD Data: G3KB-22-T010)




**Round Weight 7.5kg (9kg)**

### Fig.A-11

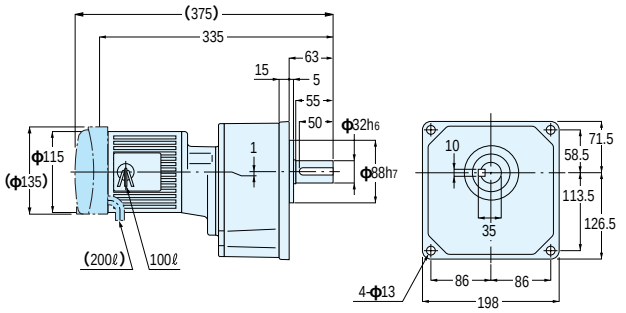
**G3KM-28-300～450-T010**
CAD Data: G3KM-28-T010
**(G3KB-28-300～450-T010)**
(CAD Data: G3KB-28-T010)




**Round Weight 10.5kg (12kg)**

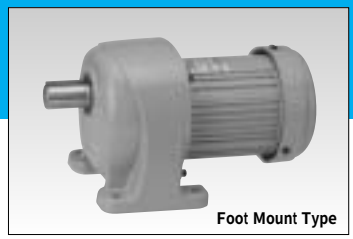
### Fig.A-12

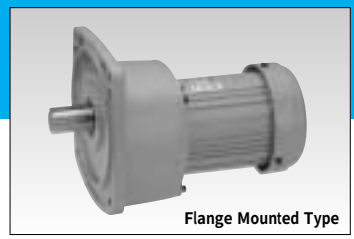
**G3KM-32-600～1200-T010**
CAD Data: G3KM-32-T010
**(G3KB-32-600～1200-T010)**
(CAD Data: G3KB-32-T010)

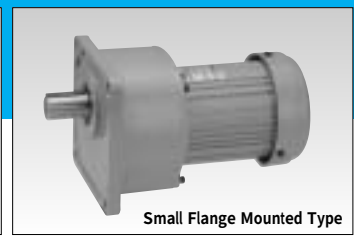



**Round Weight 13.5kg (15kg)**


Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed Fan-cooled |

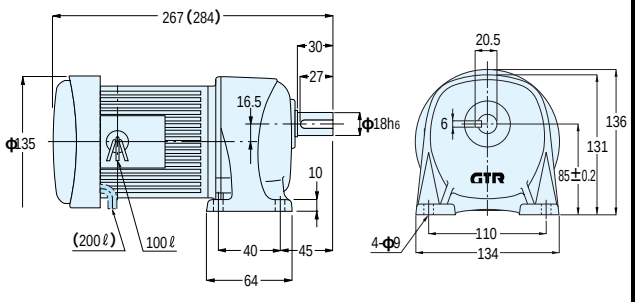
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | | | |
| 3-phase 0.2kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 6.1 | 5 | 0.62 | 0.51 | 588 | 60 | P.A16 Fig.A-13 6.5kg (8kg) | P.A18 Fig.A-18 7kg (8.5kg) | P.A19 Fig.A-23 7kg (8.5kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 11.8 | 9.8 | 1.2 | 1 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 18.6 | 14.7 | 1.9 | 1.5 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 24.5 | 20.6 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 30.4 | 25.5 | 3.1 | 2.6 | 1270 | 130 | | | |
| | 22 | 1/ 30 | 7/ 216 | 50 | 60 | 36.3 | 30.4 | 3.7 | 3.1 | 1760 | 180 | P.A16 Fig.A-14 7.5kg (9kg) | P.A18 Fig.A-19 8kg (9.5kg) | P.A19 Fig.A-24 8kg (9.5kg) |
| | | 1/ 40 | 91/ 3600 | 37.5 | 45 | 47 | 39.2 | 4.8 | 4 | 1860 | 190 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 58.8 | 49 | 6 | 5 | 1960 | 200 | | | |
| | | 1/ 60 | 637/ 39600 | 25 | 30 | 70.6 | 58.8 | 7.2 | 6 | 2160 | 220 | | | |
| | | 1/ 80 | 91/ 7200 | 18.8 | 22.5 | 94.1 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | 1/ 100 | 11/ 1080 | 15 | 18 | 97 | 80.4 | 9.9 | 8.2 | 2450 | 250 | | | |
| | 28 | 1/ 100 | 13/ 1353 | 15 | 18 | 117 | 98 | 11.9 | 10 | 2840 | 290 | P.A17 Fig.A-15 9.5kg (11kg) | P.A18 Fig.A-20 10kg (11.5kg) | P.A19 Fig.A-25 10kg (11.5kg) |
| | | 1/ 120 | 91/ 11000 | 12.5 | 15 | 140 | 117 | 14.3 | 11.9 | 3330 | 340 | | | |
| | | 1/ 160 | 1/ 165 | 9.4 | 11.2 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | 1/ 200 | 7/ 1375 | 7.5 | 9 | 234 | 195 | 23.9 | 19.9 | 3430 | 350 | | | |
| | 32 | 1/ 300 | 91/ 27348 | 5 | 6 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A17 Fig.A-16 13.5kg (15kg) | P.A18 Fig.A-21 14kg (15.5kg) | P.A19 Fig.A-26 14kg (15.5kg) |
| | | 1/ 375 | 77/ 28620 | 4 | 4.8 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | 1/ 450 | 91/ 41022 | 3.3 | 4 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | 40 | 1/ 600 | 9/ 5300 | 2.5 | 3 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A17 Fig.A-17 20kg (21.5kg) | P.A18 Fig.A-22 21.5kg (23kg) | |
| | | 1/ 750 | 62/ 46427 | 2 | 2.4 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ∗1/ 900 | 23/ 21259 | 1.7 | 2 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | | ∗1/1200 | 9/ 10600 | 1.3 | 1.5 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-13**

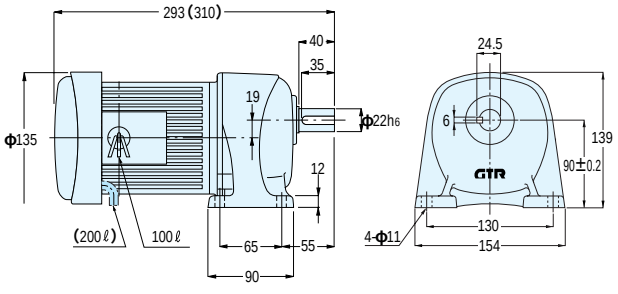
**G3LM-18-5〜25-T020**
CAD Data: G3LM-18-T020
**(G3LB-18-5〜25-T020)**
(CAD Data: G3LB-18-T020)




Round Weight 6.5kg (8kg)

**Fig.A-14**

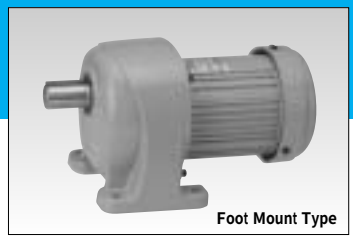
**G3LM-22-30〜100-T020**
CAD Data: G3LM-22-T020
**(G3LB-22-30〜100-T020)**
(CAD Data: G3LB-22-T020)

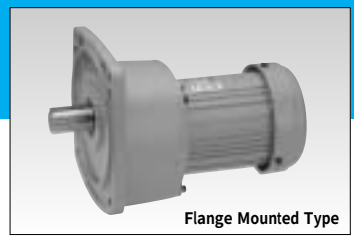


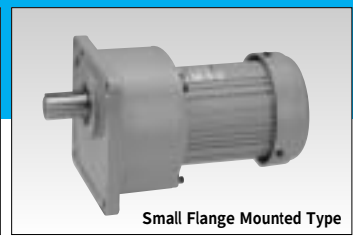

Round Weight 7.5kg (9kg)

Model Code P.A8
Multipurpose Inverter P.E86〜E92
Option P.E78〜E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

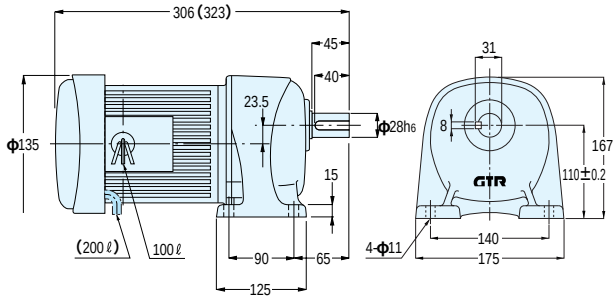

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-15

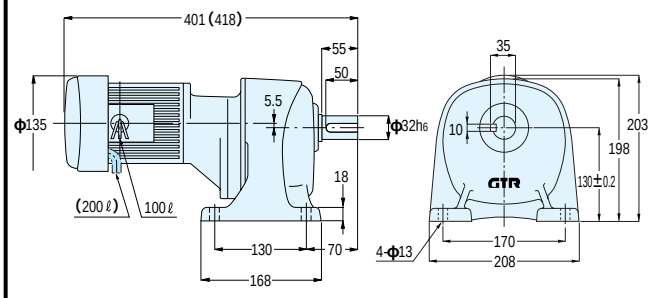
**G3LM-28-100～200-T020**
CAD Data: G3LM-28-T020
**(G3LB-28-100～200-T020)**
(CAD Data: G3LB-28-T020)




Round Weight 9.5kg (11kg)

## Fig.A-16

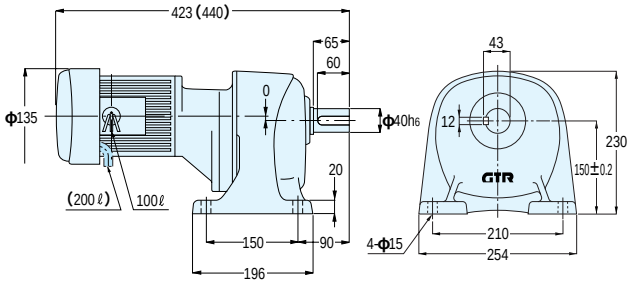
**G3LM-32-300～450-T020**
CAD Data: G3LM-32-T020
**(G3LB-32-300～450-T020)**
(CAD Data: G3LB-32-T020)




Round Weight 13.5kg (15kg)

## Fig.A-17

**G3LM-40-600～1200-T020**
CAD Data: G3LM-40-T020
**(G3LB-40-600～1200-T020)**
(CAD Data: G3LB-40-T020)




Round Weight 20kg (21.5kg)

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.2kW

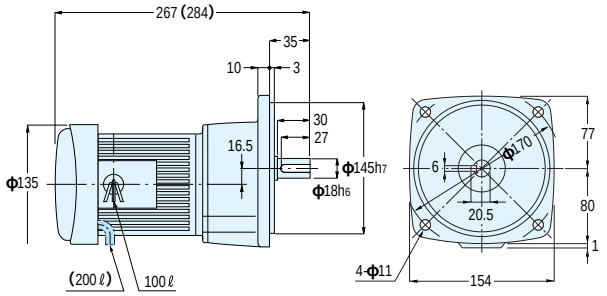
## Flange Mounted Type

The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


### Fig.A-18

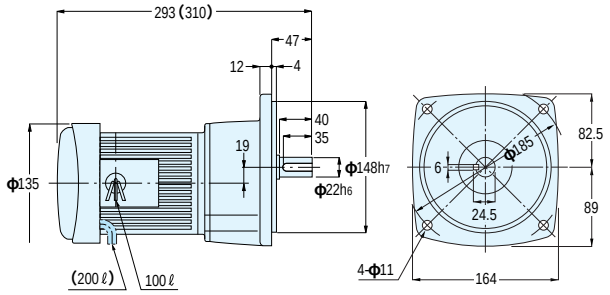
**G3FM-18-5～25-T020**
CAD Data: G3FM-18-T020
**(G3FB-18-5～25-T020)**
(CAD Data: G3FB-18-T020)




Round Weight 7kg (8.5kg)

### Fig.A-19

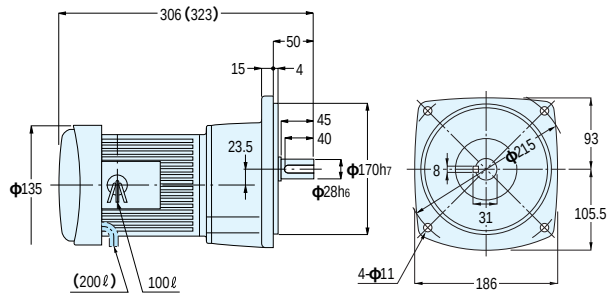
**G3FM-22-30～100-T020**
CAD Data: G3FM-22-T020
**(G3FB-22-30～100-T020)**
(CAD Data: G3FB-22-T020)




Round Weight 8kg (9.5kg)

### Fig.A-20

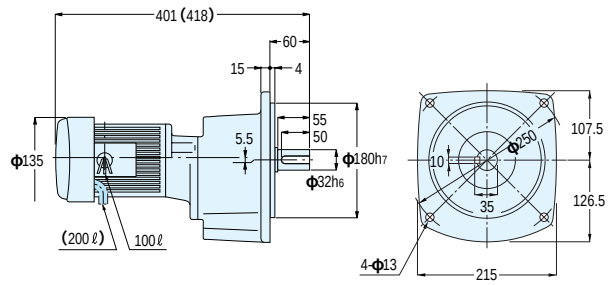
**G3FM-28-100～200-T020**
CAD Data: G3FM-28-T020
**(G3FB-28-100～200-T020)**
(CAD Data: G3FB-28-T020)




Round Weight 10kg (11.5kg)

### Fig.A-21

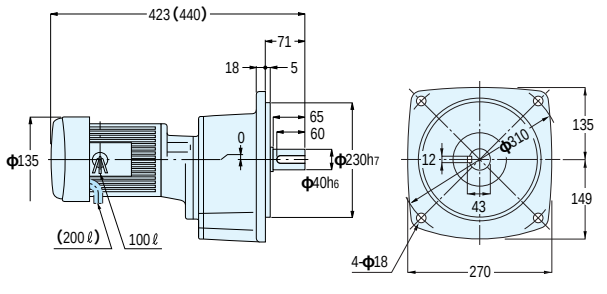
**G3FM-32-300～450-T020**
CAD Data: G3FM-32-T020
**(G3FB-32-300～450-T020)**
(CAD Data: G3FB-32-T020)




Round Weight 14kg (15.5kg)

### Fig.A-22

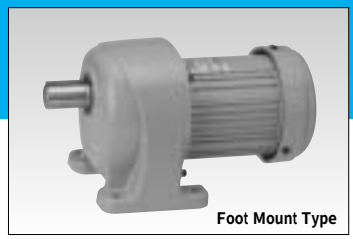
**G3FM-40-600～1200-T020**
CAD Data: G3FM-40-T020
**(G3FB-40-600～1200-T020)**
(CAD Data: G3FB-40-T020)

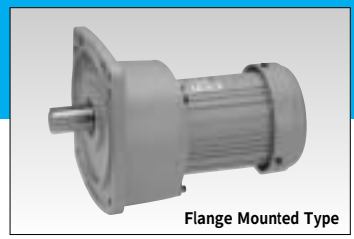


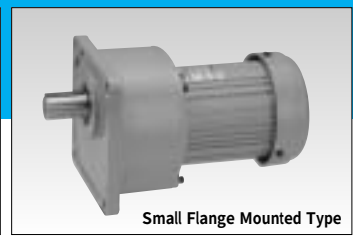

Round Weight 21.5kg (23kg)


Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# Small Flange Mounted Type

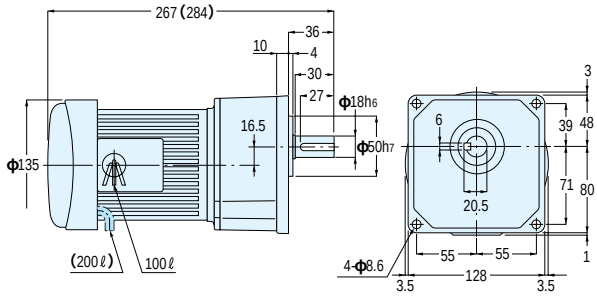

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-23

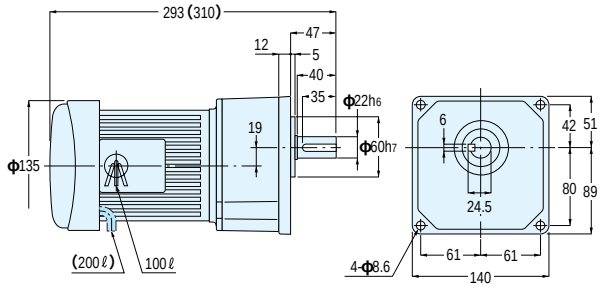
**G3KM-18-5～25-T020**
CAD Data: G3KM-18-T020
**(G3KB-18-5～25-T020)**
(CAD Data: G3KB-18-T020)




Round Weight 7kg (8.5kg)

## Fig.A-24

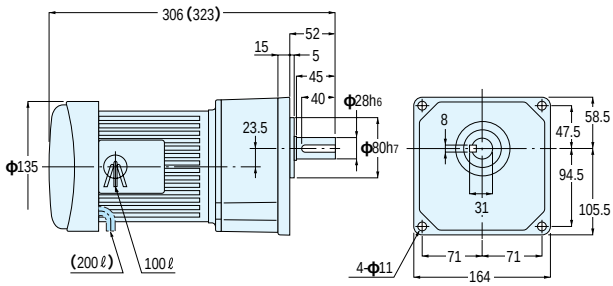
**G3KM-22-30～100-T020**
CAD Data: G3KM-22-T020
**(G3KB-22-30～100-T020)**
(CAD Data: G3KB-22-T020)




Round Weight 8kg (9.5kg)

## Fig.A-25

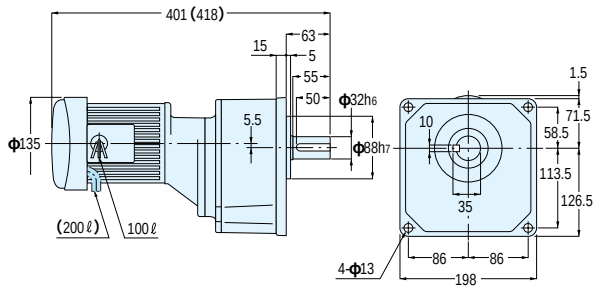
**G3KM-28-100～200-T020**
CAD Data: G3KM-28-T020
**(G3KB-28-100～200-T020)**
(CAD Data: G3KB-28-T020)




Round Weight 10kg (11.5kg)

## Fig.A-26

**G3KM-32-300～450-T020**
CAD Data: G3KM-32-T020
**(G3KB-32-300～450-T020)**
(CAD Data: G3KB-32-T020)




Round Weight 14kg (15.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.4kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed Fan-cooled |

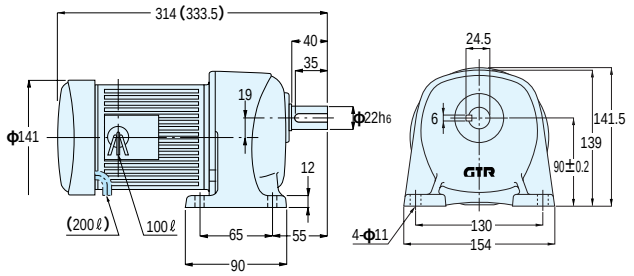
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | | | |
| 3-phase 0.4kW | 22 | 1/ 5 | 7/ 34 | 300 | 360 | 12 | 10 | 1.2 | 1 | 882 | 90 | P.A20 Fig.A-27 9.5kg (11kg) | P.A22 Fig.A-32 10kg (11.5kg) | P.A23 Fig.A-37 10kg (11.5kg) |
| | | 1/ 10 | 7/ 68 | 150 | 180 | 25 | 21 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 15 | 49/ 748 | 100 | 120 | 36 | 30 | 3.7 | 3.1 | 1370 | 140 | | | |
| | | 1/ 20 | 7/ 136 | 75 | 90 | 48 | 40 | 4.9 | 4.1 | 1470 | 150 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 61 | 50 | 6.2 | 5.1 | 1670 | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 50 | 60 | 73 | 61 | 7.4 | 6.2 | 2550 | 260 | P.A20 Fig.A-28 11.5kg (13kg) | P.A22 Fig.A-33 12kg (13.5kg) | P.A23 Fig.A-38 12kg (13.5kg) |
| | | 1/ 40 | 221/ 8610 | 37.5 | 45 | 94 | 78 | 9.6 | 8 | 2840 | 290 | | | |
| | | 1/ 50 | 187/ 9030 | 30 | 36 | 117 | 98 | 11.9 | 10 | 3140 | 320 | | | |
| | | 1/ 60 | 169/ 9840 | 25 | 30 | 140 | 117 | 14.3 | 11.9 | 3430 | 350 | | | |
| | | 1/ 80 | 65/ 5166 | 18.8 | 22.5 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | ∗1/ 100 | 55/ 5418 | 15 | 18 | 193 | 161 | 19.7 | 16.4 | 3430 | 350 | | | |
| | 32 | 1/ 100 | 7/ 688 | 15 | 18 | 234 | 195 | 23.9 | 19.9 | 4900 | 500 | P.A21 Fig.A-29 14.5kg (16kg) | P.A22 Fig.A-34 15kg (16.5kg) | P.A23 Fig.A-39 15kg (16.5kg) |
| | | 1/ 120 | 77/ 9360 | 12.5 | 15 | 281 | 234 | 28.7 | 23.9 | 5880 | 600 | | | |
| | | 1/ 160 | 21/ 3328 | 9.4 | 11.2 | 374 | 313 | 38.2 | 31.9 | 5880 | 600 | | | |
| | | 1/ 200 | 189/38272 | 7.5 | 9 | 431 | 390 | 44 | 39.8 | 5880 | 600 | | | |
| | 40 | 1/ 300 | 7/ 2160 | 5 | 6 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A21 Fig.A-30 23kg (24.5kg) | P.A22 Fig.A-35 24.5kg (26kg) | |
| | | 1/ 375 | 77/29328 | 4 | 4.8 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ∗1/ 450 | 49/21600 | 3.3 | 4 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | 50 | 1/ 600 | 57/35360 | 2.5 | 3 | 1225 | 1044 | 125 | 106.5 | 9800 | 1000 | P.A21 Fig.A-31 52.5kg (54kg) | P.A22 Fig.A-36 57.5kg (59kg) | |
| | | ∗1/ 750 | 25/19448 | 2 | 2.4 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/ 900 | 5/ 4338 | 1.7 | 2 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/1200 | 33/40664 | 1.3 | 1.5 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-27**

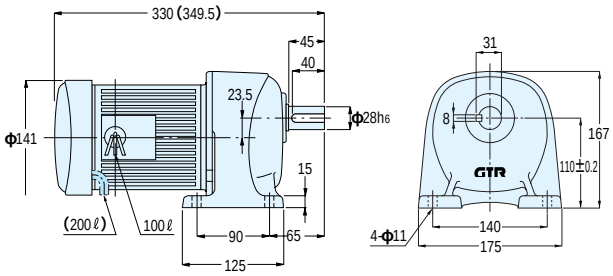
**G3LM-22-5～25-T040**
CAD Data: G3LM-22-T040
**(G3LB-22-5～25-T040)**
(CAD Data: G3LB-22-T040)




Round Weight 9.5kg (11kg)

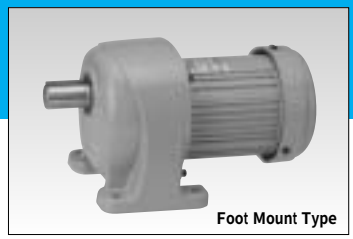
**Fig.A-28**

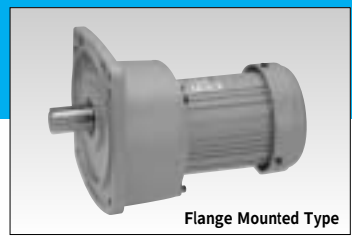
**G3LM-28-30～100-T040**
CAD Data: G3LM-28-T040
**(G3LB-28-30～100-T040)**
(CAD Data: G3LB-28-T040)

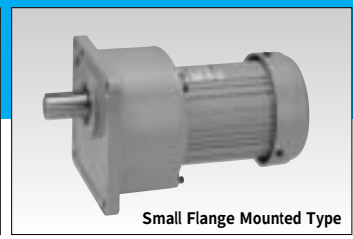



Round Weight 11.5kg (13kg)

Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93


Foot Mount Type

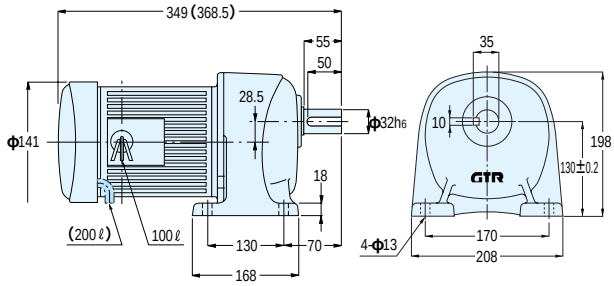

Flange Mounted Type


Small Flange Mounted Type

## Fig.A-29

### G3LM-32-100～200-T040
CAD Data: G3LM-32-T040

### (G3LB-32-100～200-T040)
(CAD Data: G3LB-32-T040)

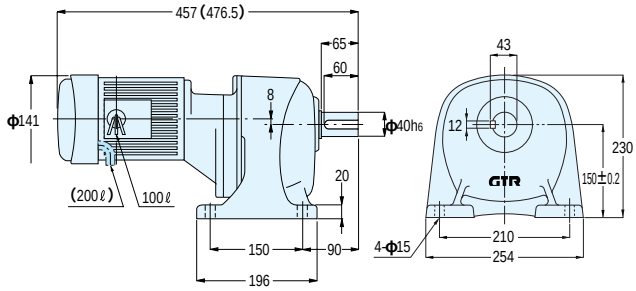



Round Weight 14.5kg (16kg)

## Fig.A-30

### G3LM-40-300～450-T040
CAD Data: G3LM-40-T040

### (G3LB-40-300～450-T040)
(CAD Data: G3LB-40-T040)

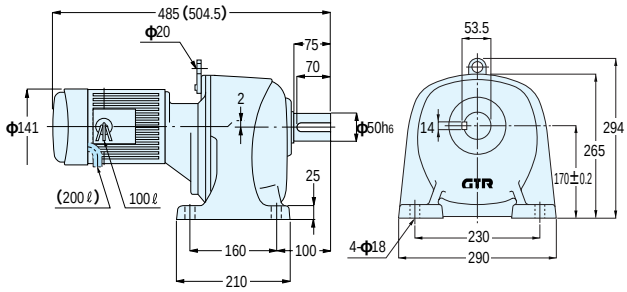



Round Weight 23kg (24.5kg)

## Fig.A-31

### G3LM-50-600～1200-T040
CAD Data: G3LM-50-T040

### (G3LB-50-600～1200-T040)
(CAD Data: G3LB-50-T040)




Round Weight 52.5kg (54kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.4kW

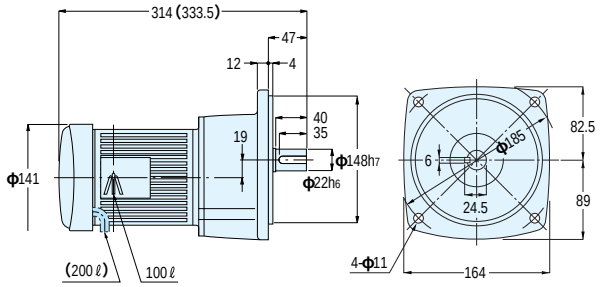


## Flange Mounted Type

**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**

### Fig.A-32

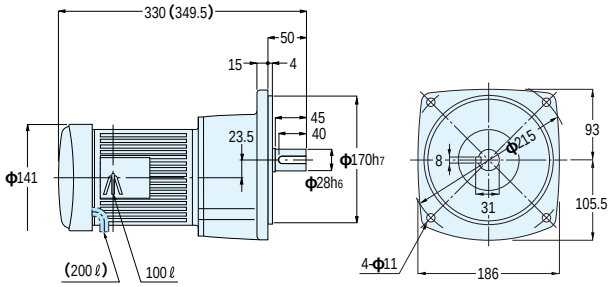
**G3FM-22-5～25-T040**
CAD Data: G3FM-22-T040
**(G3FB-22-5～25-T040)**
(CAD Data: G3FB-22-T040)




Round Weight 10kg (11.5kg)

### Fig.A-33

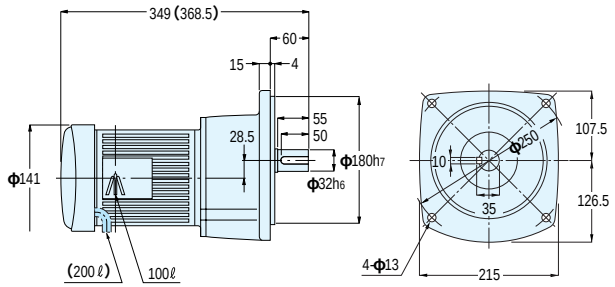
**G3FM-28-30～100-T040**
CAD Data: G3FM-28-T040
**(G3FB-28-30～100-T040)**
(CAD Data: G3FB-28-T040)




Round Weight 12kg (13.5kg)

### Fig.A-34

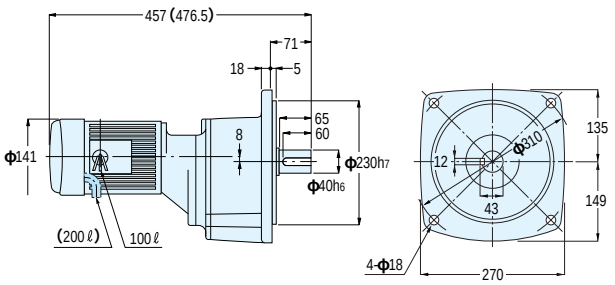
**G3FM-32-100～200-T040**
CAD Data: G3FM-32-T040
**(G3FB-32-100～200-T040)**
(CAD Data: G3FB-32-T040)




Round Weight 15kg (16.5kg)

### Fig.A-35

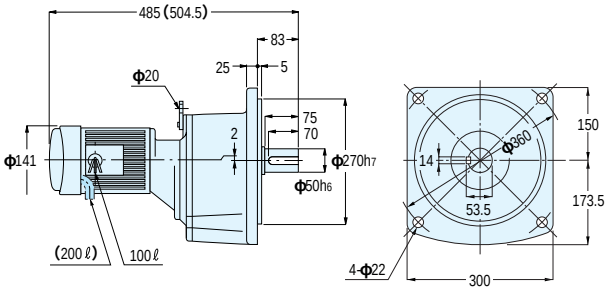
**G3FM-40-300～450-T040**
CAD Data: G3FM-40-T040
**(G3FB-40-300～450-T040)**
(CAD Data: G3FB-40-T040)




Round Weight 24.5kg (26kg)

### Fig.A-36

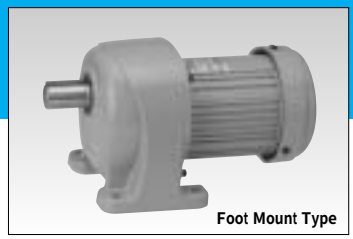
**G3FM-50-600～1200-T040**
CAD Data: G3FM-50-T040
**(G3FB-50-600～1200-T040)**
(CAD Data: G3FB-50-T040)

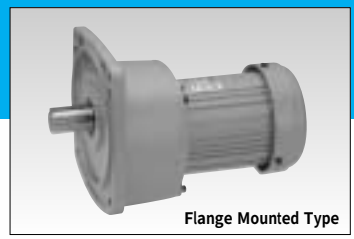


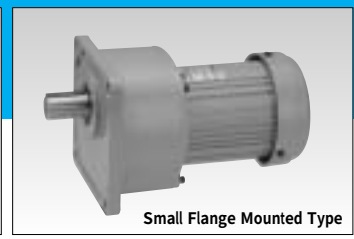

Round Weight 57.5kg (59kg)

Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# Small Flange Mounted Type

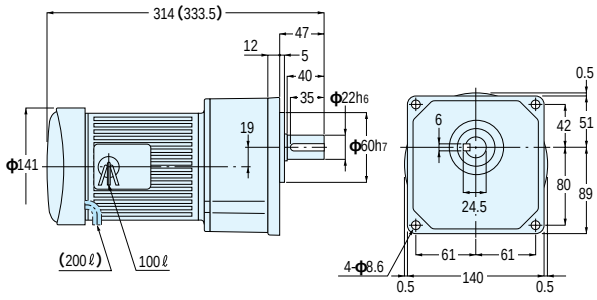

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-37

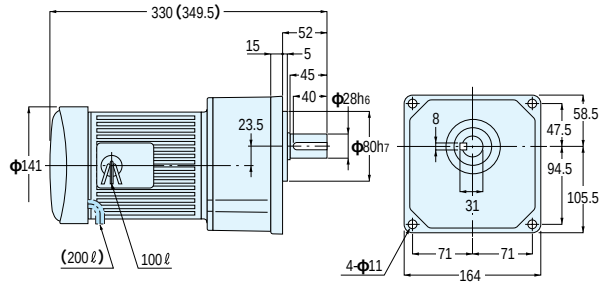
**G3KM-22-5～25-T040**
CAD Data: G3KM-22-T040
**(G3KB-22-5～25-T040)**
(CAD Data: G3KB-22-T040)




Round Weight 10kg (11.5kg)

## Fig.A-38

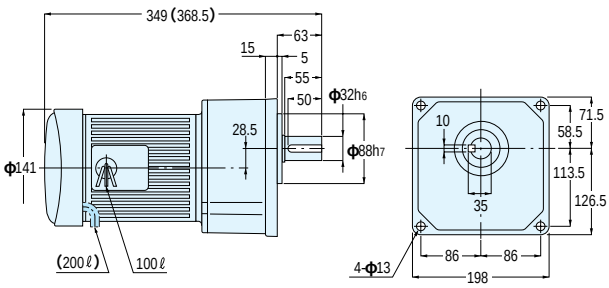
**G3KM-28-30～100-T040**
CAD Data: G3KM-28-T040
**(G3KB-28-30～100-T040)**
(CAD Data: G3KB-28-T040)




Round Weight 12kg (13.5kg)

## Fig.A-39

**G3KM-32-100～200-T040**
CAD Data: G3KM-32-T040
**(G3KB-32-100～200-T040)**
(CAD Data: G3KB-32-T040)




Round Weight 15kg (16.5kg)

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.75kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed Fan-cooled |

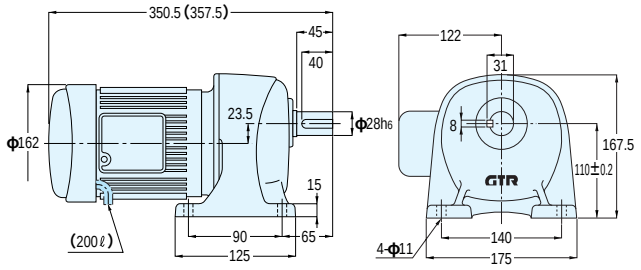
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| 3-phase 0.75kW | 28 | 1/ 5 | 91/ 459 | 300 | 360 | 23 | 19 | 2.3 | 1.9 | 1270 | 130 | P.A24 Fig.A-40 15kg (17.5kg) | P.A26 Fig.A-45 15.5kg (18kg) | P.A27 Fig.A-50 15.5kg (18kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | | | |
| | | 1/ 15 | 91/ 1360 | 100 | 120 | 68 | 57 | 6.9 | 5.8 | 2160 | 220 | | | |
| | | 1/ 20 | 5/ 102 | 75 | 90 | 91 | 75 | 9.3 | 7.7 | 2350 | 240 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 114 | 94 | 11.6 | 9.6 | 2450 | 250 | | | |
| | 32 | 1/ 30 | 3/ 92 | 50 | 60 | 136 | 114 | 13.9 | 11.6 | 4020 | 410 | P.A24 Fig.A-41 18.5kg (21kg) | P.A26 Fig.A-46 19kg (21.5kg) | P.A27 Fig.A-51 19kg (21.5kg) |
| | | 1/ 40 | 13/ 516 | 37.5 | 45 | 175 | 146 | 17.9 | 14.9 | 4210 | 430 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 220 | 183 | 22.4 | 18.7 | 4610 | 470 | | | |
| | | 1/ 60 | 13/ 774 | 25 | 30 | 264 | 220 | 26.9 | 22.4 | 5490 | 560 | | | |
| | | 1/ 80 | 13/ 1032 | 18.8 | 22.5 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | ∗1/ 100 | 11/ 1080 | 15 | 18 | 362 | 302 | 36.9 | 30.8 | 5880 | 600 | | | |
| | 40 | 1/ 100 | 91/ 9000 | 15 | 18 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | P.A25 Fig.A-42 25kg (27.5kg) | P.A26 Fig.A-47 26.5kg (29kg) | |
| | | 1/ 120 | 77/ 9400 | 12.5 | 15 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | 1/ 160 | 9/ 1400 | 9.4 | 11.2 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | 1/ 200 | 9/ 1750 | 7.5 | 9 | 764 | 732 | 78 | 74.7 | 7060 | 720 | | | |
| | 50 | 1/ 300 | 211/62013 | 5 | 6 | 1176 | 978 | 120 | 99.8 | 9800 | 1000 | P.A25 Fig.A-43 56.5kg (59kg) | P.A26 Fig.A-48 61.5kg (64kg) | |
| | | 1/ 375 | 94/36103 | 4 | 4.8 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/ 450 | 65/29167 | 3.3 | 4 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-40**

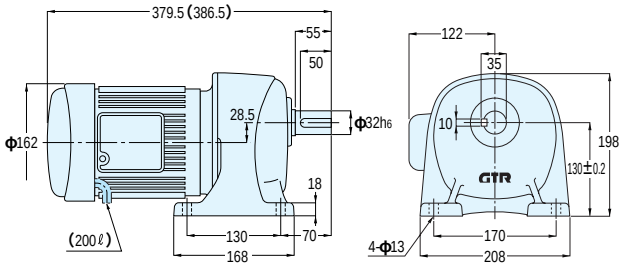
**G3LM-28-5〜25-075**
CAD Data: G3LM-28-075
**(G3LB-28-5〜25-075)**
(CAD Data: G3LB-28-075)




Round Weight 15kg (17.5kg)

**Fig.A-41**

**G3LM-32-30〜100-075**
CAD Data: G3LM-32-075
**(G3LB-32-30〜100-075)**
(CAD Data: G3LB-32-075)

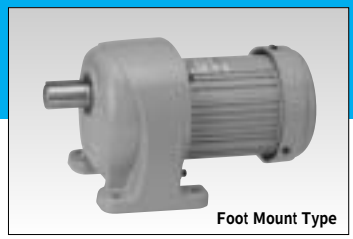


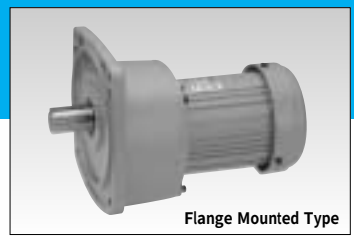

Round Weight 18.5kg (21kg)

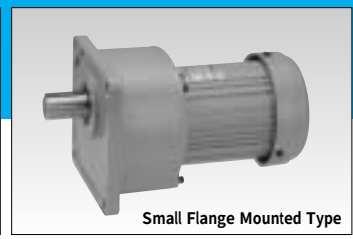
Model Code P.A8
Multipurpose Inverter P.E86〜E92
Option P.E78〜E93



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

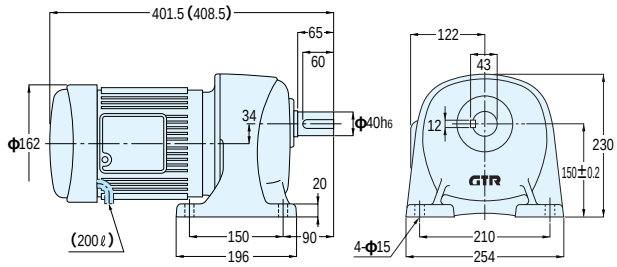

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-42

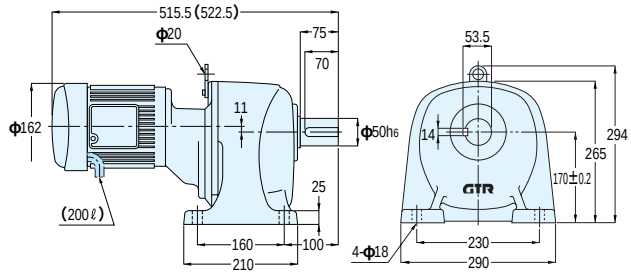
**G3LM-40-100～200-075**
CAD Data: G3LM-40-075
**(G3LB-40-100～200-075)**
(CAD Data: G3LB-40-075)




Round Weight 25kg (27.5kg)

## Fig.A-43

**G3LM-50-300～450-075**
CAD Data: G3LM-50-075
**(G3LB-50-300～450-075)**
(CAD Data: G3LB-50-075)




Round Weight 56.5kg (59kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 0.75kW

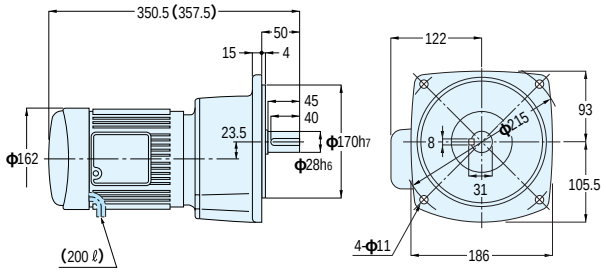
## Flange Mounted Type

**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


### Fig.A-45

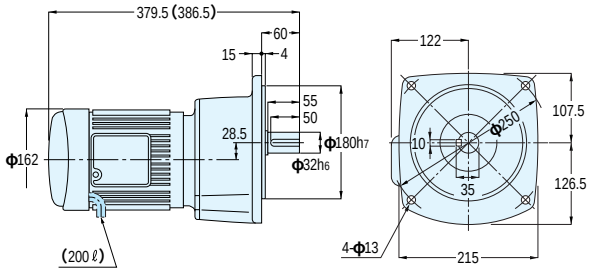
**G3FM-28-5～25-075**
CAD Data: G3FM-28-075
**(G3FB-28-5～25-075)**
(CAD Data: G3FB-28-075)




Round Weight 15.5kg (18kg)

### Fig.A-46

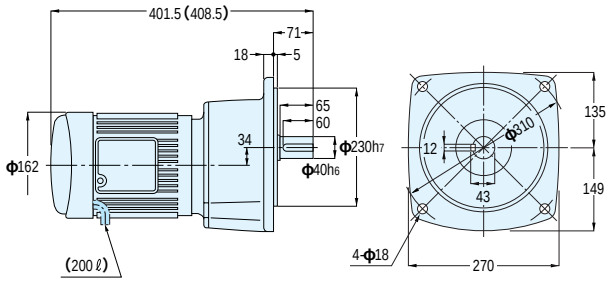
**G3FM-32-30～100-075**
CAD Data: G3FM-32-075
**(G3FB-32-30～100-075)**
(CAD Data: G3FB-32-075)




Round Weight 19kg (21.5kg)

### Fig.A-47

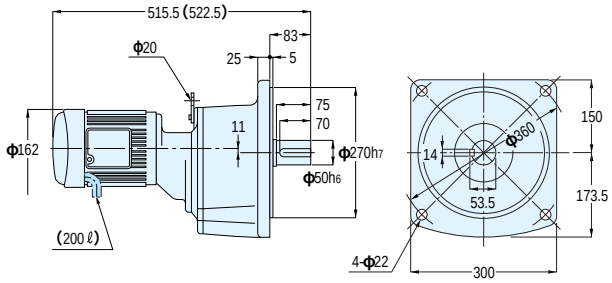
**G3FM-40-100～200-075**
CAD Data: G3FM-40-075
**(G3FB-40-100～200-075)**
(CAD Data: G3FB-40-075)




Round Weight 26.5kg (29kg)

### Fig.A-48

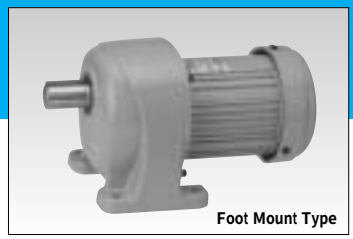
**G3FM-50-300～450-075**
CAD Data: G3FM-50-075
**(G3FB-50-300～450-075)**
(CAD Data: G3FB-50-075)

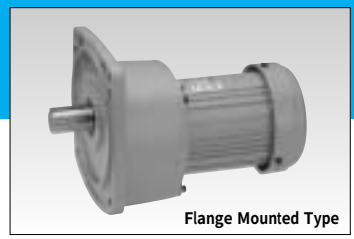


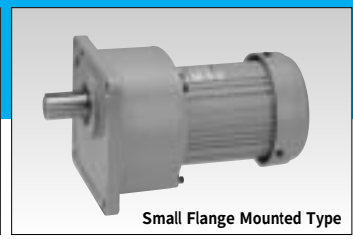

Round Weight 61.5kg (64kg)


Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# Small Flange Mounted Type

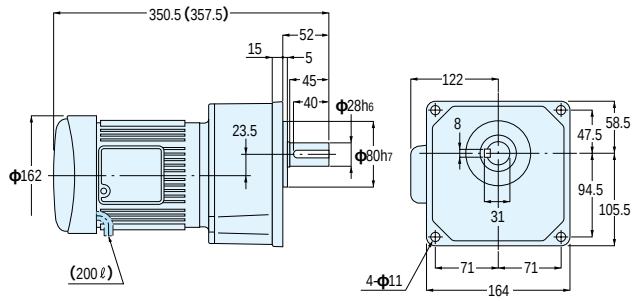

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-50

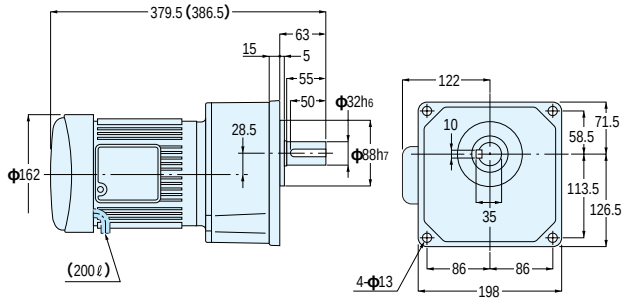
**G3KM-28-5～25-075**
CAD Data: G3KM-28-075
**(G3KB-28-5～25-075)**
(CAD Data: G3KB-28-075)




Round Weight 15.5kg (18kg)

## Fig.A-51

**G3KM-32-30～100-075**
CAD Data: G3KM-32-075
**(G3KB-32-30～100-075)**
(CAD Data: G3KB-32-075)




Round Weight 19kg (21.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 1.5kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed Fan-cooled |

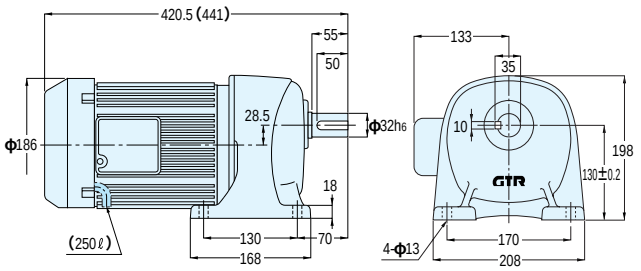
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| 3-phase 1.5kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | P.A28 Fig.A-52 24.5kg (28kg) | P.A29 Fig.A-56 25kg (28.5kg) | P.A30 Fig.A-60 25kg (28.5kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 91 | 75 | 9.3 | 7.7 | 2450 | 250 | | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 136 | 114 | 13.9 | 11.6 | 2840 | 290 | | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 181 | 151 | 18.5 | 15.4 | 3230 | 330 | | | |
| | | 1/ 25 | 9/ 230 | 60 | 72 | 226 | 189 | 23.1 | 19.3 | 3820 | 390 | | | |
| | 40 | 1/ 30 | 1/ 30 | 50 | 60 | 272 | 226 | 27.8 | 23.1 | 5100 | 520 | P.A28 Fig.A-53 31.5kg (35kg) | P.A29 Fig.A-57 33kg (36.5kg) | |
| | | 1/ 40 | 13/ 540 | 37.5 | 45 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | 1/ 50 | 11/ 564 | 30 | 36 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | | | |
| | | 1/ 60 | 91/ 5400 | 25 | 30 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | 1/ 80 | 13/ 1080 | 18.8 | 22.5 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | ∗1/ 100 | 11/ 1128 | 15 | 18 | 724 | 603 | 73.9 | 61.5 | 7060 | 720 | | | |
| | 50 | 1/ 100 | 25/ 2618 | 15 | 18 | 878 | 732 | 89.6 | 74.7 | 9800 | 1000 | P.A29 Fig.A-54 61kg (64.5kg) | P.A29 Fig.A-58 66kg (69.5kg) | |
| | | 1/ 120 | 77/ 8993 | 12.5 | 15 | 1060 | 878 | 108 | 89.6 | 9800 | 1000 | | | |
| | | 1/ 160 | 33/ 5474 | 9.4 | 11.2 | 1230 | 1170 | 125 | 119 | 9800 | 1000 | | | |
| | | ∗1/ 200 | 30/ 5831 | 7.5 | 9 | 1230 | 1230 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-52**

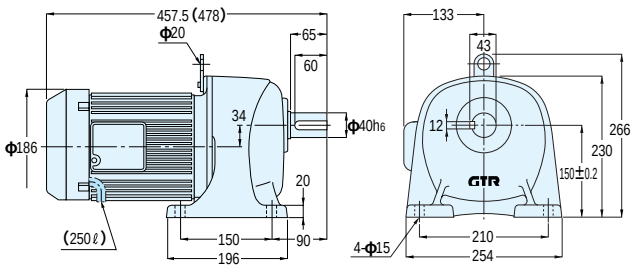
**G3LM-32-5〜25-150**
CAD Data: G3LM-32-150
**(G3LB-32-5〜25-150)**
(CAD Data: G3LB-32-150)




Round Weight 24.5kg (28kg)

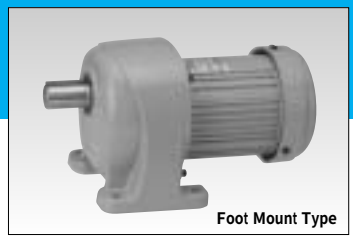
**Fig.A-53**

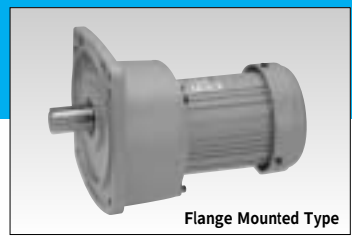
**G3LM-40-30〜100-150**
CAD Data: G3LM-40-150
**(G3LB-40-30〜100-150)**
(CAD Data: G3LB-40-150)




Round Weight 31.5kg (35kg)

Model Code P.A8
Multipurpose Inverter P.E86〜E92
Option P.E78〜E93


Foot Mount Type


Flange Mounted Type

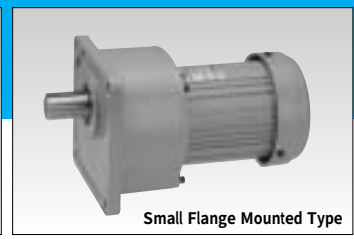
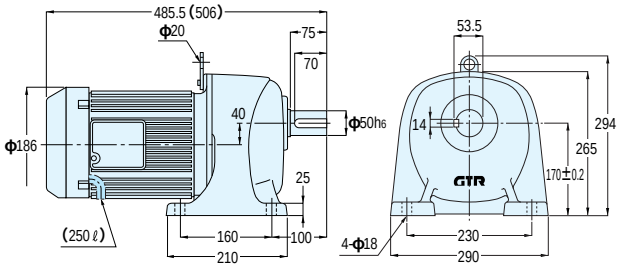

Small Flange Mounted Type

**Fig.A-54**

## G3LM-50-100～200-150
CAD Data: G3LM-50-150

## (G3LB-50-100～200-150)
(CAD Data: G3LB-50-150)



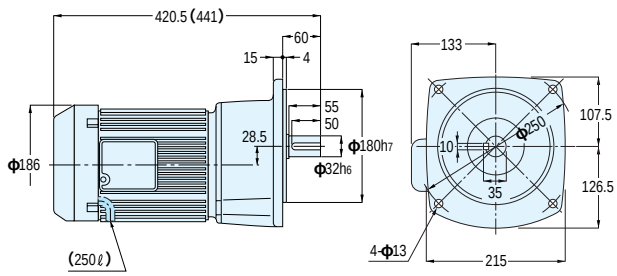

Round Weight 61kg (64.5kg)

# Flange Mounted Type

**Fig.A-56**

## G3FM-32-5～25-150
CAD Data: G3FM-32-150

## (G3FB-32-5～25-150)
(CAD Data: G3FB-32-150)

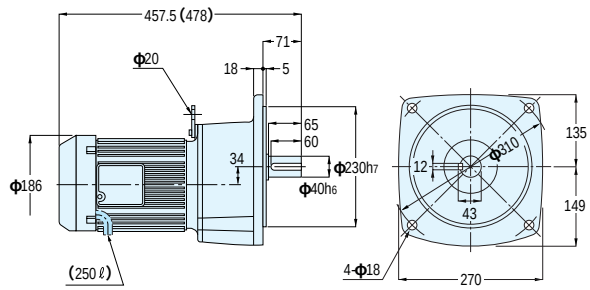



Round Weight 25kg (28.5kg)

**Fig.A-57**

## G3FM-40-30～100-150
CAD Data: G3FM-40-150

## (G3FB-40-30～100-150)
(CAD Data: G3FB-40-150)

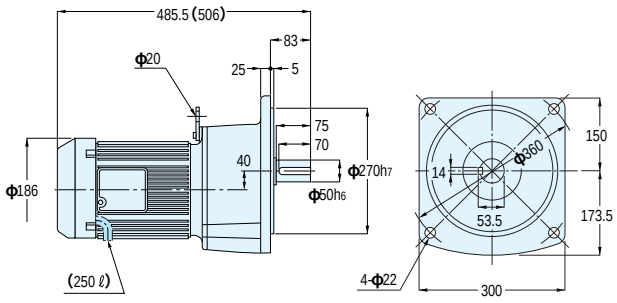



Round Weight 33kg (36.5kg)

**Fig.A-58**

## G3FM-50-100～200-150
CAD Data: G3FM-50-150

## (G3FB-50-100～200-150)
(CAD Data: G3FB-50-150)




Round Weight 66kg (69.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 1.5kW

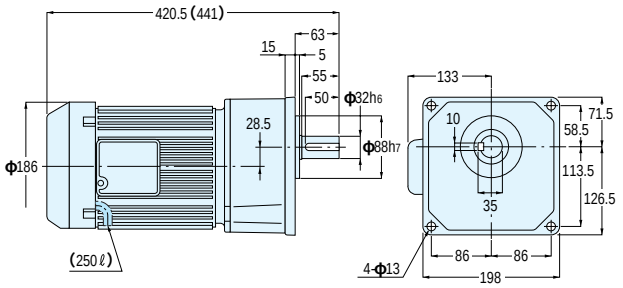
**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

## Small Flange Mounted Type

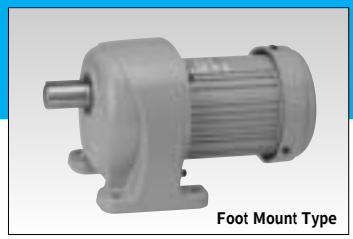
**Fig.A-60**

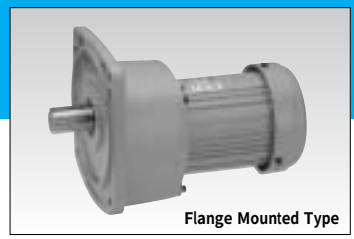
**G3KM-32-5～25-150**
CAD Data: G3KM-32-150
**(G3KB-32-5～25-150)**
(CAD Data: G3KB-32-150)

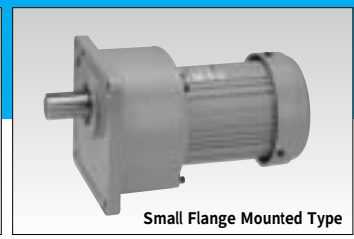



Round Weight 25kg (28.5kg)

Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 3-Phase 2.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 2.2kW | 220 | 50/60/60 | 200/200/220 | 9.0/8.6/8.0 | 1410/1690/1710 | B | Totally Enclosed Fan-cooled |

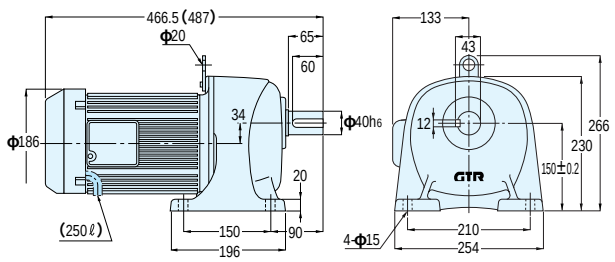
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | G3LM (G3LB) | G3FM (G3FB) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | | |
| 3-phase 2.2kW | 40 | 1/ 5 | 7/ 36 | 300 | 360 | 67 | 56 | 6.8 | 5.7 | 2160 | 220 | P.A32 Fig.A-61 34.5kg (38kg) | P.A33 Fig.A-64 36kg (39.5kg) |
| | | 1/ 10 | 7/ 72 | 150 | 180 | 133 | 111 | 13.6 | 11.3 | 3140 | 320 | | |
| | | 1/ 15 | 49/ 720 | 100 | 120 | 200 | 167 | 20.4 | 17 | 3530 | 360 | | |
| | | 1/ 20 | 7/ 144 | 75 | 90 | 266 | 221 | 27.1 | 22.6 | 4020 | 410 | | |
| | | 1/ 25 | 7/ 180 | 60 | 72 | 332 | 277 | 33.9 | 28.3 | 4700 | 480 | | |
| | 50 | 1/ 30 | 5/ 154 | 50 | 60 | 399 | 332 | 40.7 | 33.9 | 6960 | 710 | P.A32 Fig.A-62 64.5kg (68kg) | P.A33 Fig.A-65 69.5kg (73kg) |
| | | 1/ 40 | 399/15488 | 37.5 | 45 | 515 | 429 | 52.6 | 43.8 | 7250 | 740 | | |
| | | 1/ 50 | 399/20240 | 30 | 36 | 644 | 537 | 65.7 | 54.8 | 8620 | 880 | | |
| | | 1/ 60 | 49/ 2904 | 25 | 30 | 773 | 644 | 78.9 | 65.7 | 9800 | 1000 | | |
| | | 1/ 80 | 49/ 3795 | 18.8 | 22.5 | 1029 | 858 | 105 | 87.6 | 9800 | 1000 | | |
| | | 1/ 100 | 21/ 2116 | 15 | 18 | 1230 | 1080 | 125 | 110 | 9800 | 1000 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

**Fig.A-61**

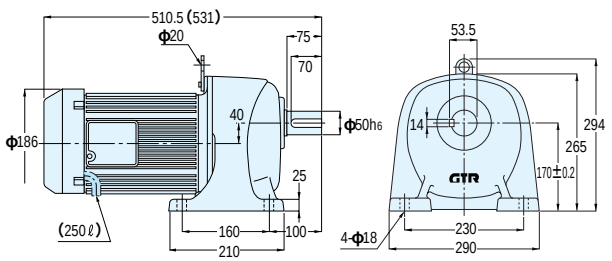
**G3LM-40-5～25-220**
CAD Data: G3LM-40-220
**(G3LB-40-5～25-220)**
(CAD Data: G3LB-40-220)




Round Weight 34.5kg (38kg)

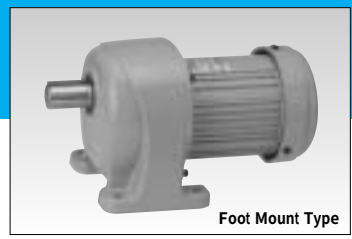
**Fig.A-62**

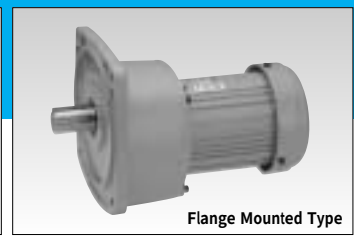
**G3LM-50-30～100-220**
CAD Data: G3LM-50-220
**(G3LB-50-30～100-220)**
(CAD Data: G3LB-50-220)




Round Weight 64.5kg (68kg)

Model Code P.A8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

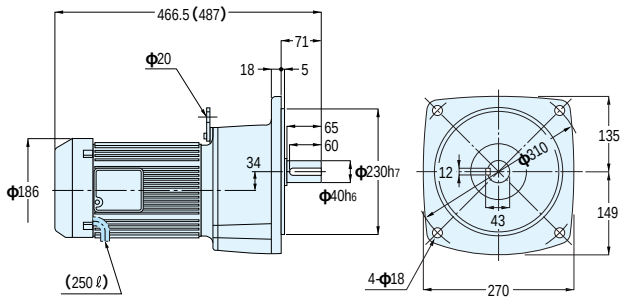

Foot Mount Type


Flange Mounted Type

# Flange Mounted Type

## Fig.A-64

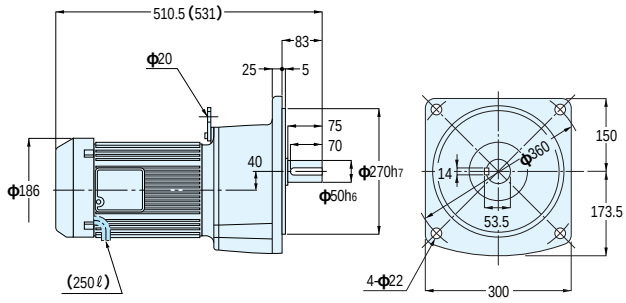
**G3FM-40-5〜25-220**
CAD Data: G3FM-40-220
**(G3FB-40-5〜25-220)**
(CAD Data: G3FB-40-220)




Round Weight 36kg (39.5kg)

## Fig.A-65

**G3FM-50-30〜100-220**
CAD Data: G3FM-50-220
**(G3FB-50-30〜100-220)**
(CAD Data: G3FB-50-220)

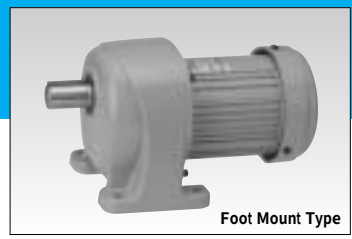


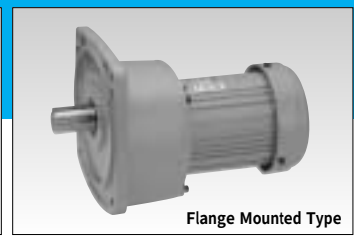

Round Weight 69.5kg (73kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Parallel Shaft

# Gearmotor
# Gearmotor with Brake

## Performance Table
## Dimension diagram

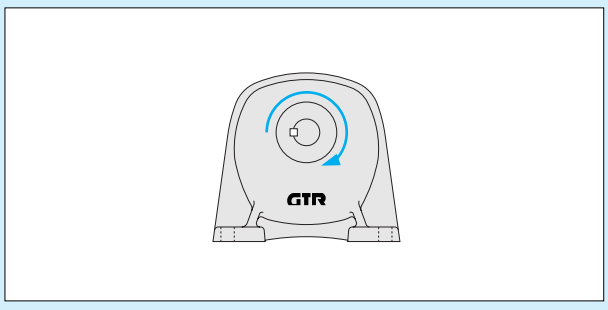
G3 Series

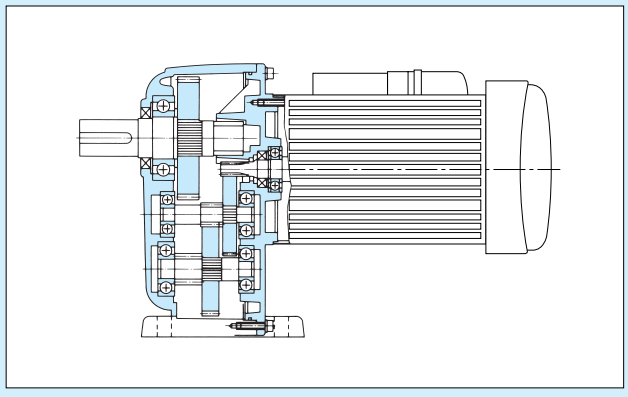
### 1-Phase

【Remarks】

- Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The Shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, the shaft rotates clock wise when viewing from output side. (Reter to the diagram shown below.)



# Gearmotor
# Gearmotor with Brake
## G3 Series 1-Phase 100W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 100W | 100 | 50/60 | 100/100 | 2.7/2.4 | 1420/1710 | B | Totally Enclosed (Totally Enclosed Fan-cooled) | Capacitor Start |

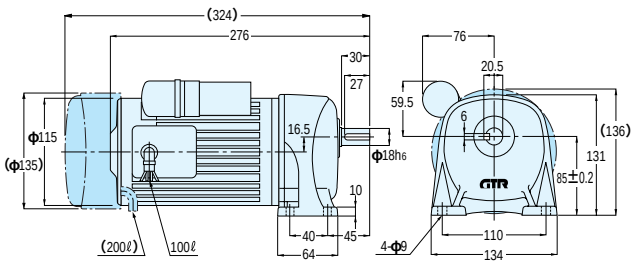
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | | | |
| 1-phase 100W | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 3 | 2.5 | 0.31 | 0.26 | 588 | 60 | P.A38 Fig.A-71 7.5kg (9kg) | P.A39 Fig.A-75 8kg (9.5kg) | P.A40 Fig.A-79 8kg (9.5kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 9.1 | 7.5 | 0.93 | 0.77 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 12 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 15 | 12.7 | 1.5 | 1.3 | 1270 | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 50 | 60 | 19 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 37.5 | 45 | 24 | 19.6 | 2.4 | 2 | 1470 | 150 | | | |
| | | 1/ 50 | 7/ 351 | 30 | 36 | 29 | 24.5 | 3 | 2.5 | 1570 | 160 | | | |
| | 22 | 1/ 60 | 11/ 684 | 25 | 30 | 35 | 29.4 | 3.6 | 3 | 2160 | 220 | P.A38 Fig.A-72 8.5kg (10kg) | P.A39 Fig.A-76 9kg (10.5kg) | P.A40 Fig.A-80 9kg (10.5kg) |
| | | 1/ 80 | 21/ 1634 | 18.8 | 22.5 | 47 | 39.2 | 4.8 | 4 | 2450 | 250 | | | |
| | | 1/ 100 | 7/ 684 | 15 | 18 | 59 | 49 | 6 | 5 | 2450 | 250 | | | |
| | | 1/ 120 | 147/ 17974 | 12.5 | 15 | 71 | 58.8 | 7.2 | 6 | 2450 | 250 | | | |
| | | 1/ 160 | 21/ 3268 | 9.4 | 11.2 | 94 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | 1/ 200 | 21/ 4085 | 7.5 | 9 | 117 | 98 | 11.9 | 10 | 2450 | 250 | | | |
| | 28 | 1/ 300 | 221/ 65190 | 5 | 6 | 157 | 130 | 16 | 13.3 | 3430 | 350 | P.A39 Fig.A-73 11.5kg (13kg) | P.A39 Fig.A-77 12kg (13.5kg) | P.A40 Fig.A-81 12kg (13.5kg) |
| | | 1/ 375 | 187/ 68370 | 4 | 4.8 | 196 | 163 | 20 | 16.6 | 3430 | 350 | | | |
| | | 1/ 450 | 181/ 79793 | 3.3 | 4 | 235 | 196 | 24 | 20 | 3430 | 350 | | | |
| | 32 | 1/ 600 | 147/ 88192 | 2.5 | 3 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A39 Fig.A-74 14.5kg (16kg) | P.A39 Fig.A-78 15kg (16.5kg) | P.A40 Fig.A-82 15kg (16.5kg) |
| | | 1/ 750 | 49/ 36464 | 2 | 2.4 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | ＊1/ 900 | 62/ 57063 | 1.7 | 2 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | | ＊1/1200 | 46/ 55195 | 1.3 | 1.5 | 431 | 431 | 44 | 44 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-71**

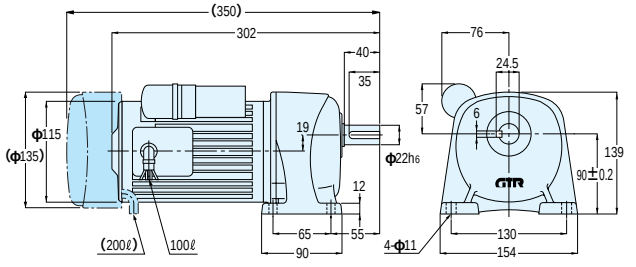
**G3LM-18-5〜50-100**
CAD Data: G3LM-18-100
**(G3LB-18-5〜50-100)**
(CAD Data: G3LB-18-100)




Round Weight 7.5kg (9kg)

**Fig.A-72**

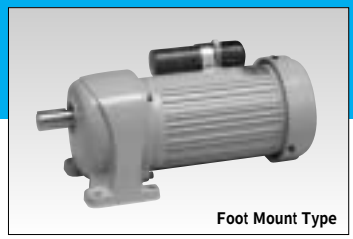
**G3LM-22-60〜200-100**
CAD Data: G3LM-22-100
**(G3LB-22-60〜200-100)**
(CAD Data: G3LB-22-100)

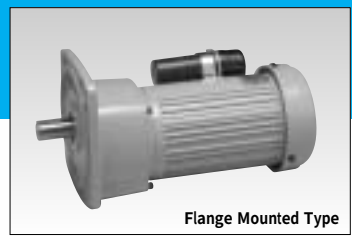


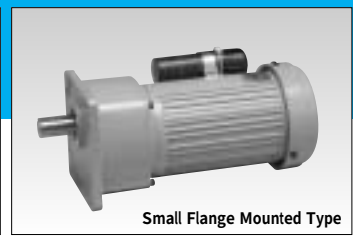

Round Weight 8.5kg (10kg)

Model Code P.A8
Option P.E78〜E85

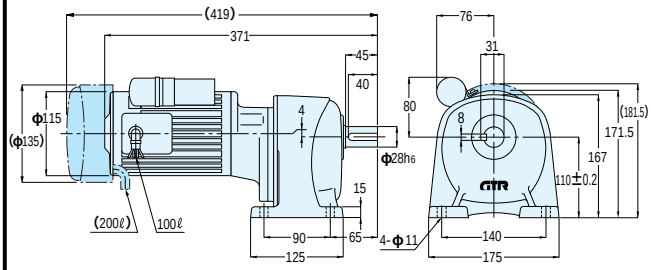
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mounted Type

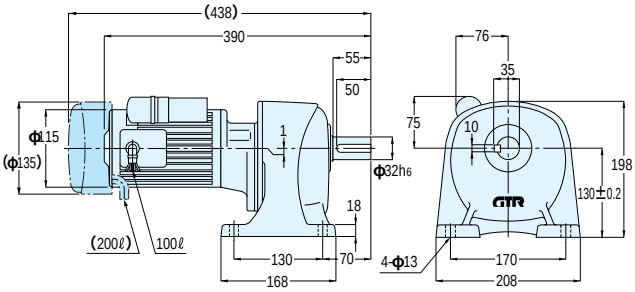

Small Flange Mounted Type

## Fig.A-73 G3LM-28-300～450-100
CAD Data: G3LM-28-100
(G3LB-28-300～450-100)
(CAD Data: G3LB-28-100)




Round Weight 11.5kg (13kg)

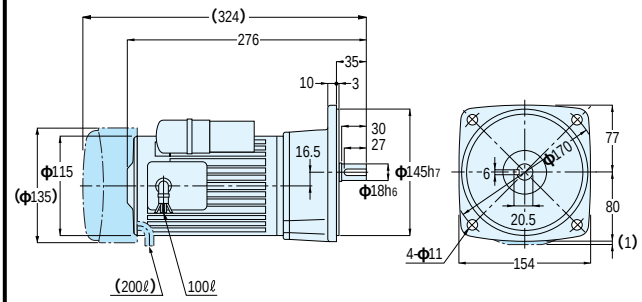
## Fig.A-74 G3LM-32-600～1200-100
CAD Data: G3LM-32-100
(G3LB-32-600～1200-100)
(CAD Data: G3LB-32-100)




Round Weight 14.5kg (16kg)

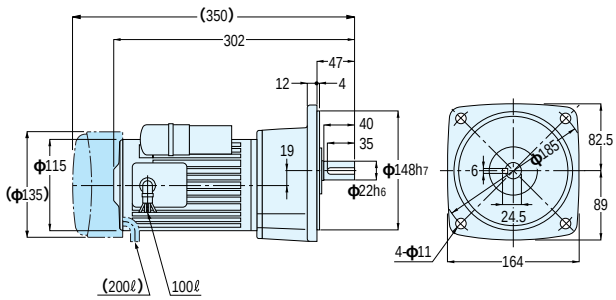
# Flange Mounted Type

## Fig.A-75 G3FM-18-5～50-100
CAD Data: G3FM-18-100
(G3FB-18-5～50-100)
(CAD Data: G3FB-18-100)



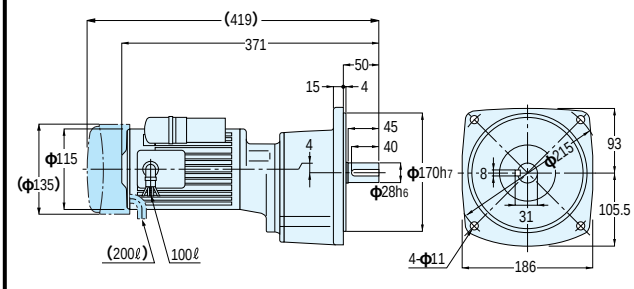

Round Weight 8kg (9.5kg)

## Fig.A-76 G3FM-22-60～200-100
CAD Data: G3FM-22-100
(G3FB-22-60～200-100)
(CAD Data: G3FB-22-100)



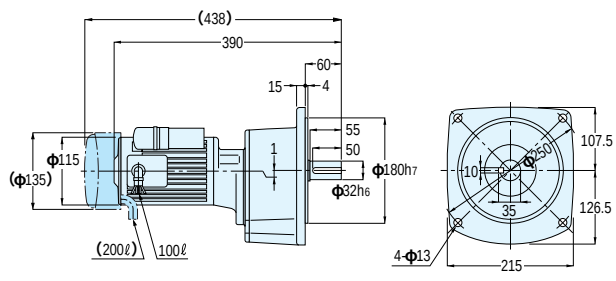

Round Weight 9kg (10.5kg)

## Fig.A-77 G3FM-28-300～450-100
CAD Data: G3FM-28-100
(G3FB-28-300～450-100)
(CAD Data: G3FB-28-100)




Round Weight 12kg (13.5kg)

## Fig.A-78 G3FM-32-600～1200-100
CAD Data: G3FM-32-100
(G3FB-32-600～1200-100)
(CAD Data: G3FB-32-100)




Round Weight 15kg (16.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

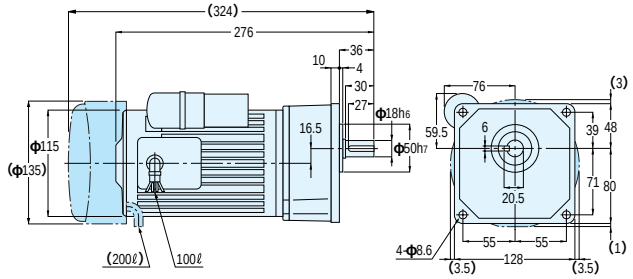
# Gearmotor
# Gearmotor with Brake
## G3 Series 1-Phase 100W
## Small Flange Mounted Type

**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


**Fig.A-79**

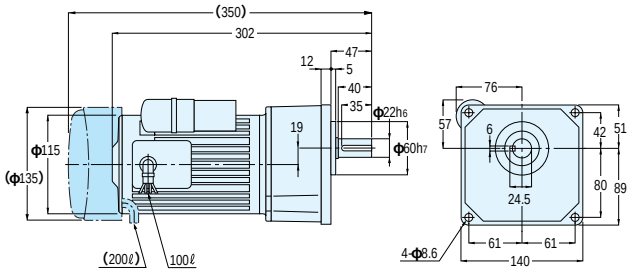
**G3KM-18-5～50-100**
CAD Data: G3KM-18-100
**(G3KB-18-5～50-100)**
(CAD Data: G3KB-18-100)




Round Weight 8kg (9.5kg)

**Fig.A-80**

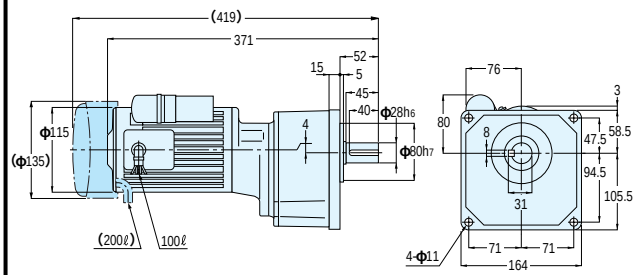
**G3KM-22-60～200-100**
CAD Data: G3KM-22-100
**(G3KB-22-60～200-100)**
(CAD Data: G3KB-22-100)




Round Weight 9kg (10.5kg)

**Fig.A-81**

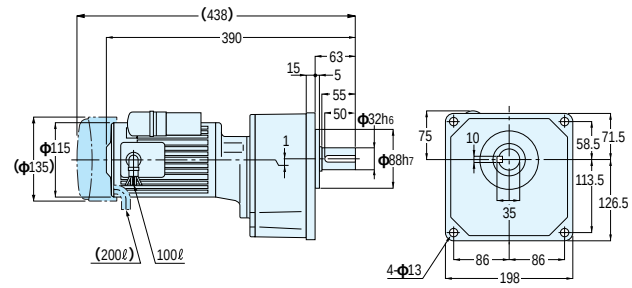
**G3KM-28-300～450-100**
CAD Data: G3KM-28-100
**(G3KB-28-300～450-100)**
(CAD Data: G3KB-28-100)




Round Weight 12kg (13.5kg)

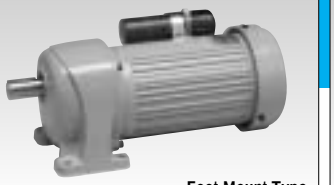
**Fig.A-82**

**G3KM-32-600～1200-100**
CAD Data: G3KM-32-100
**(G3KB-32-600～1200-100)**
(CAD Data: G3KB-32-100)

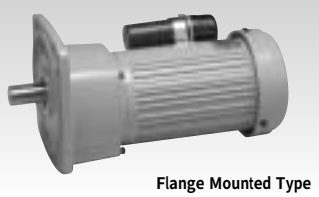



Round Weight 15kg (16.5kg)


Model Code P.A8
Option P.E78～E85



Foot Mount Type



Flange Mounted Type



Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 1-Phase 200W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 200W | 200 | 50/60 | 100/100 | 5.1/4.5 | 1420/1700 | B | Totally Enclosed Fan-cooled | Capacitor Start |

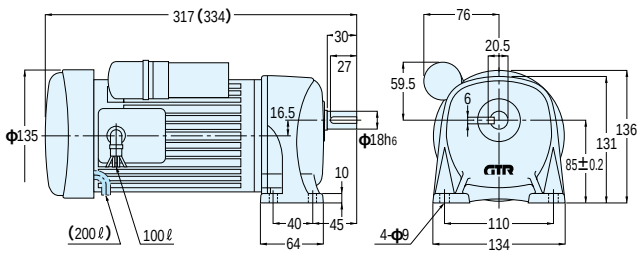
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| 1-phase 200W | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 6.1 | 5 | 0.62 | 0.51 | 588 | 60 | P.A42 Fig.A-83 8.5kg (10kg) | P.A44 Fig.A-88 9kg (10.5kg) | P.A45 Fig.A-93 9kg (10.5kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 11.8 | 9.8 | 1.2 | 1 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 18.6 | 14.7 | 1.9 | 1.5 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 24.5 | 20.6 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 30.4 | 25.5 | 3.1 | 2.6 | 1270 | 130 | | | |
| | 22 | 1/ 30 | 7/ 216 | 50 | 60 | 36.3 | 30.4 | 3.7 | 3.1 | 1760 | 180 | P.A42 Fig.A-84 9.5kg (11kg) | P.A44 Fig.A-89 10kg (11.5kg) | P.A45 Fig.A-94 10kg (11.5kg) |
| | | 1/ 40 | 91/ 3600 | 37.5 | 45 | 47 | 39.2 | 4.8 | 4 | 1860 | 190 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 58.8 | 49 | 6 | 5 | 1960 | 200 | | | |
| | | 1/ 60 | 637/ 39600 | 25 | 30 | 70.6 | 58.8 | 7.2 | 6 | 2160 | 220 | | | |
| | | 1/ 80 | 91/ 7200 | 18.8 | 22.5 | 94.1 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | ∗1/ 100 | 11/ 1080 | 15 | 18 | 97 | 80.4 | 9.9 | 8.2 | 2450 | 250 | | | |
| | 28 | 1/ 100 | 13/ 1353 | 15 | 18 | 117 | 98 | 11.9 | 10 | 2840 | 290 | P.A43 Fig.A-85 11.5kg (13kg) | P.A44 Fig.A-90 12kg (13.5kg) | P.A45 Fig.A-95 12kg (13.5kg) |
| | | 1/ 120 | 91/ 11000 | 12.5 | 15 | 140 | 117 | 14.3 | 11.9 | 3330 | 340 | | | |
| | | 1/ 160 | 1/ 165 | 9.4 | 11.2 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | 1/ 200 | 7/ 1375 | 7.5 | 9 | 234 | 195 | 23.9 | 19.9 | 3430 | 350 | | | |
| | 32 | 1/ 300 | 91/ 27348 | 5 | 6 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A43 Fig.A-86 15.5kg (17kg) | P.A44 Fig.A-91 16kg (17.5kg) | P.A45 Fig.A-96 16kg (17.5kg) |
| | | 1/ 375 | 77/ 28620 | 4 | 4.8 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | 1/ 450 | 91/ 41022 | 3.3 | 4 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | 40 | 1/ 600 | 9/ 5300 | 2.5 | 3 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A43 Fig.A-87 22kg (23.5kg) | P.A44 Fig.A-92 23.5kg (25kg) | |
| | | 1/ 750 | 62/ 46427 | 2 | 2.4 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ∗1/ 900 | 23/ 21259 | 1.7 | 2 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | | ∗1/1200 | 9/ 10600 | 1.3 | 1.5 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-83**

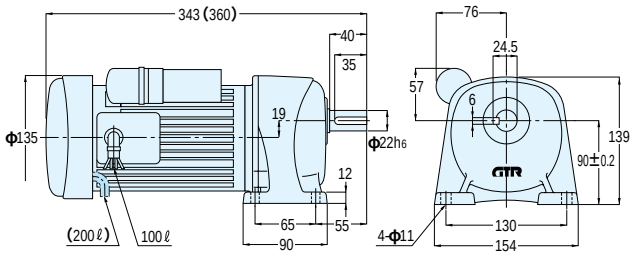
**G3LM-18-5〜25-200**
CAD Data: G3LM-18-200
**(G3LB-18-5〜25-200)**
(CAD Data: G3LB-18-200)




Round Weight 8.5kg (10kg)

**Fig.A-84**

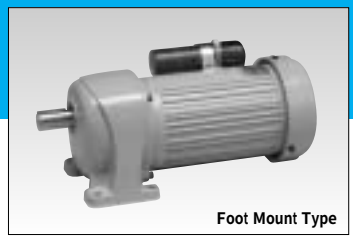
**G3LM-22-30〜100-200**
CAD Data: G3LM-22-200
**(G3LB-22-30〜100-200)**
(CAD Data: G3LB-22-200)

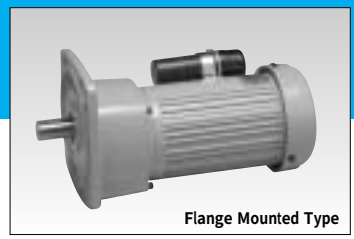


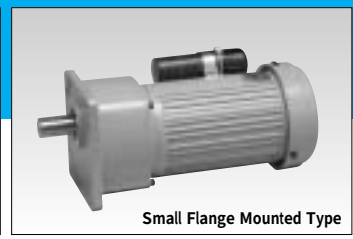

Round Weight 9.5kg (11kg)

Model Code P.A8
Option P.E78〜E85

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

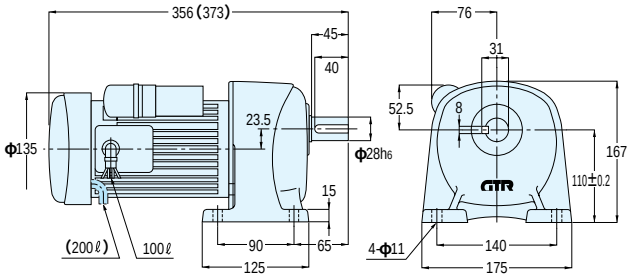

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-85

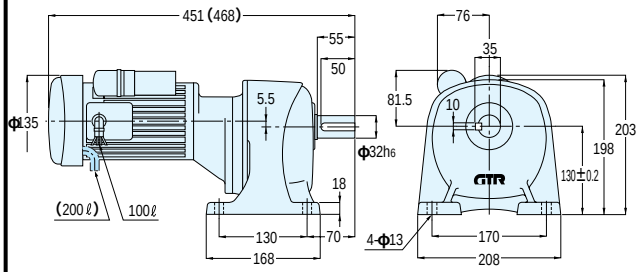
**G3LM-28-100～200-200**
CAD Data: G3LM-28-200
**(G3LB-28-100～200-200)**
(CAD Data: G3LB-28-200)




Round Weight 11.5kg (13kg)

## Fig.A-86

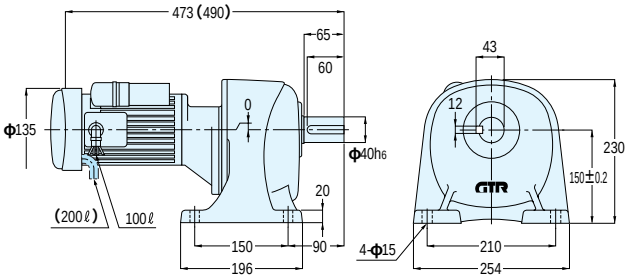
**G3LM-32-300～450-200**
CAD Data: G3LM-32-200
**(G3LB-32-300～450-200)**
(CAD Data: G3LB-32-200)




Round Weight 15.5kg (17kg)

## Fig.A-87

**G3LM-40-600～1200-200**
CAD Data: G3LM-40-200
**(G3LB-40-600～1200-200)**
(CAD Data: G3LB-40-200)




Round Weight 22kg (23.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 1-Phase 200W

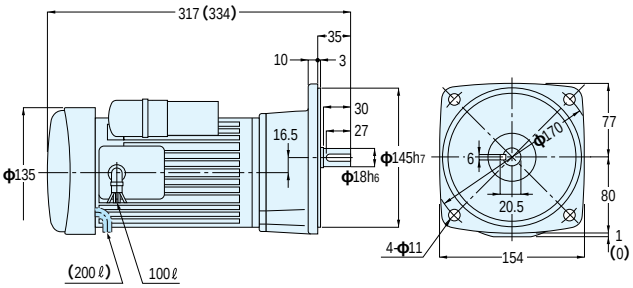
## Flange Mounted Type

The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

### Fig.A-88

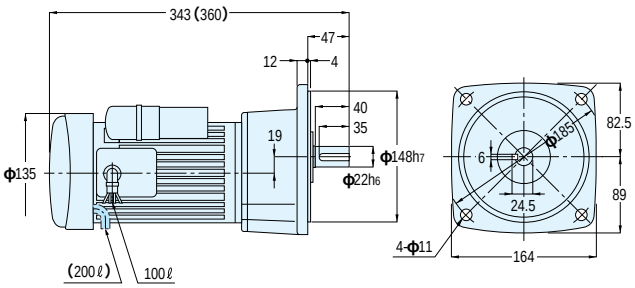
**G3FM-18-5～25-200**
CAD Data: G3FM-18-200
**(G3FB-18-5～25-200)**
(CAD Data: G3FB-18-200)




Round Weight 9kg (10.5kg)

### Fig.A-89

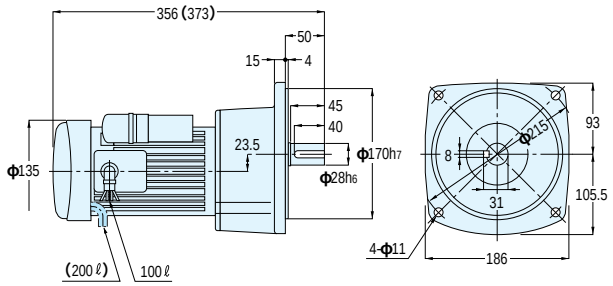
**G3FM-22-30～100-200**
CAD Data: G3FM-22-200
**(G3FB-22-30～100-200)**
(CAD Data: G3FB-22-200)




Round Weight 10kg (11.5kg)

### Fig.A-90

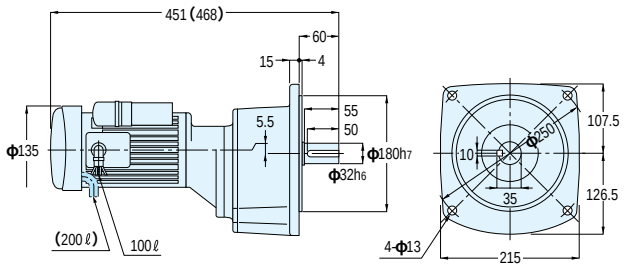
**G3FM-28-100～200-200**
CAD Data: G3FM-28-200
**(G3FB-28-100～200-200)**
(CAD Data: G3FB-28-200)




Round Weight 12kg (13.5kg)

### Fig.A-91

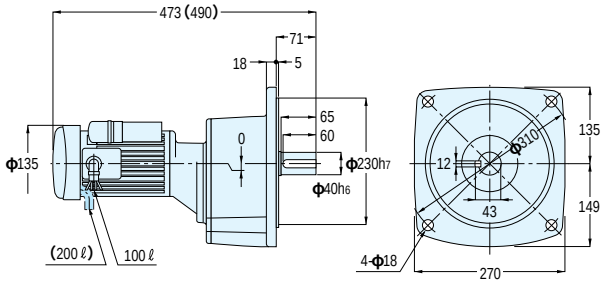
**G3FM-32-300～450-200**
CAD Data: G3FM-32-200
**(G3FB-32-300～450-200)**
(CAD Data: G3FB-32-200)




Round Weight 16kg (17.5kg)

### Fig.A-92

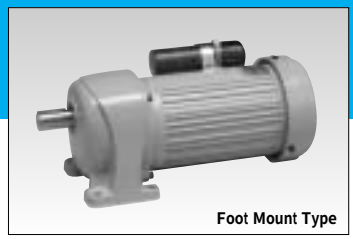
**G3FM-40-600～1200-200**
CAD Data: G3FM-40-200
**(G3FB-40-600～1200-200)**
(CAD Data: G3FB-40-200)

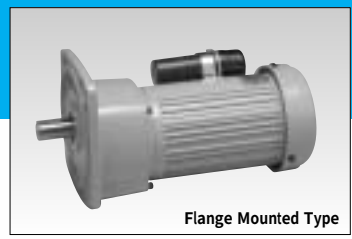


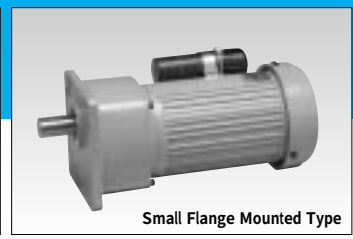

Round Weight 23.5kg (25kg)

Model Code P.A8
Option P.E78～E85

# Small Flange Mounted Type

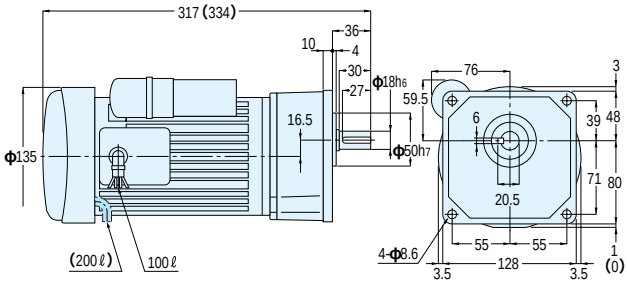

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-93

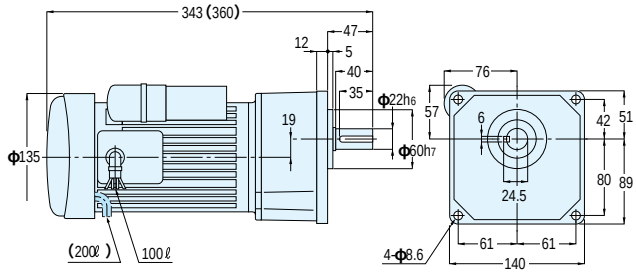
**G3KM-18-5～25-200**
CAD Data: G3KM-18-200
**(G3KB-18-5～25-200)**
(CAD Data: G3KB-18-200)




Round Weight 9kg (10.5kg)

## Fig.A-94

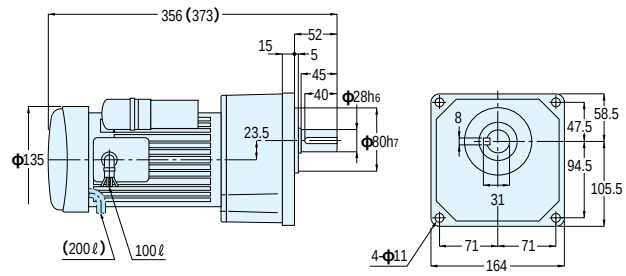
**G3KM-22-30～100-200**
CAD Data: G3KM-22-200
**(G3KB-22-30～100-200)**
(CAD Data: G3KB-22-200)




Round Weight 10kg (11.5kg)

## Fig.A-95

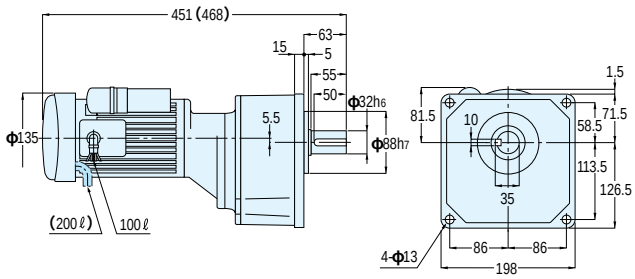
**G3KM-28-100～200-200**
CAD Data: G3KM-28-200
**(G3KB-28-100～200-200)**
(CAD Data: G3KB-28-200)




Round Weight 12kg (13.5kg)

## Fig.A-96

**G3KM-32-300～450-200**
CAD Data: G3KM-32-200
**(G3KB-32-300～450-200)**
(CAD Data: G3KB-32-200)




Round Weight 16kg (17.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 1-Phase 400W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 400W | 400 | 50/60 | 100/100 | 8.7/7.9 | 1440/1730 | B | Totally Enclosed Fan-cooled | Capacitor Start |

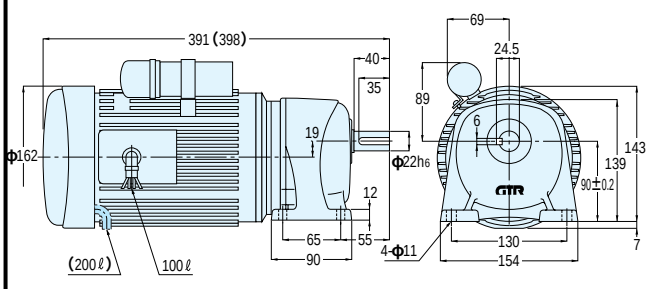
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LM (G3LB) | G3FM (G3FB) | G3KM (G3KB) |
| 1-phase 400W | 22 | 1/ 5 | 7/ 34 | 300 | 360 | 12 | 10 | 1.2 | 1 | 882 | 90 | P.A46 Fig.A-97 15kg (17.5kg) | P.A48 Fig.A-102 15.5kg (18kg) | P.A49 Fig.A-107 15.5kg (18kg) |
| | | 1/ 10 | 7/ 68 | 150 | 180 | 25 | 21 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 15 | 49/ 748 | 100 | 120 | 36 | 30 | 3.7 | 3.1 | 1370 | 140 | | | |
| | | 1/ 20 | 7/ 136 | 75 | 90 | 48 | 40 | 4.9 | 4.1 | 1470 | 150 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 61 | 50 | 6.2 | 5.1 | 1670 | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 50 | 60 | 73 | 61 | 7.4 | 6.2 | 2550 | 260 | P.A46 Fig.A-98 17kg (19.5kg) | P.A48 Fig.A-103 17.5kg (20kg) | P.A49 Fig.A-108 17.5kg (20kg) |
| | | 1/ 40 | 221/ 8610 | 37.5 | 45 | 94 | 78 | 9.6 | 8 | 2840 | 290 | | | |
| | | 1/ 50 | 187/ 9030 | 30 | 36 | 117 | 98 | 11.9 | 10 | 3140 | 320 | | | |
| | | 1/ 60 | 169/ 9840 | 25 | 30 | 140 | 117 | 14.3 | 11.9 | 3430 | 350 | | | |
| | | 1/ 80 | 65/ 5166 | 18.8 | 22.5 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | ∗1/ 100 | 55/ 5418 | 15 | 18 | 193 | 161 | 19.7 | 16.4 | 3430 | 350 | | | |
| | 32 | 1/ 100 | 7/ 688 | 15 | 18 | 234 | 195 | 23.9 | 19.9 | 4900 | 500 | P.A47 Fig.A-99 20kg (22.5kg) | P.A48 Fig.A-104 20.5kg (23kg) | P.A49 Fig.A-109 20.5kg (23kg) |
| | | 1/ 120 | 77/ 9360 | 12.5 | 15 | 281 | 234 | 28.7 | 23.9 | 5880 | 600 | | | |
| | | 1/ 160 | 21/ 3328 | 9.4 | 11.2 | 374 | 313 | 38.2 | 31.9 | 5880 | 600 | | | |
| | | 1/ 200 | 189/38272 | 7.5 | 9 | 431 | 390 | 44 | 39.8 | 5880 | 600 | | | |
| | 40 | 1/ 300 | 7/ 2160 | 5 | 6 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A47 Fig.A-100 28.5kg (31kg) | P.A48 Fig.A-105 30kg (32.5kg) | |
| | | 1/ 375 | 77/29328 | 4 | 4.8 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ∗1/ 450 | 49/21600 | 3.3 | 4 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | 50 | 1/ 600 | 57/35360 | 2.5 | 3 | 1225 | 1044 | 125 | 106.5 | 9800 | 1000 | P.A47 Fig.A-101 58kg (60.5kg) | P.A48 Fig.A-106 63kg (65.5kg) | |
| | | ∗1/ 750 | 25/19448 | 2 | 2.4 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/ 900 | 5/ 4338 | 1.7 | 2 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/1200 | 33/40664 | 1.3 | 1.5 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-97**

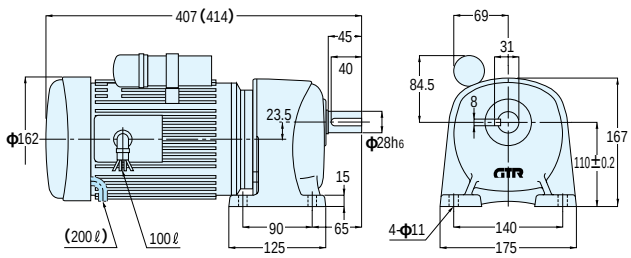
**G3LM-22-5〜25-400**
CAD Data: G3LM-22-400
**(G3LB-22-5〜25-400)**
(CAD Data: G3LB-22-400)




Round Weight 15kg (17.5kg)

**Fig.A-98**

**G3LM-28-30〜100-400**
CAD Data: G3LM-28-400
**(G3LB-28-30〜100-400)**
(CAD Data: G3LB-28-400)



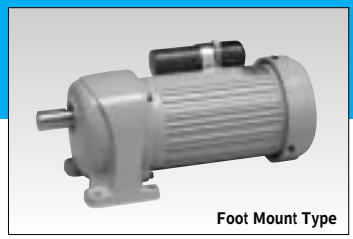

Round Weight 17kg (19.5kg)

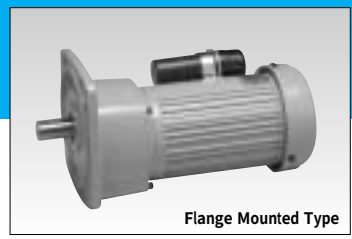
Model Code P.A8

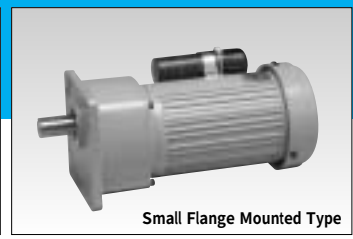
Option P.E78〜E85



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type

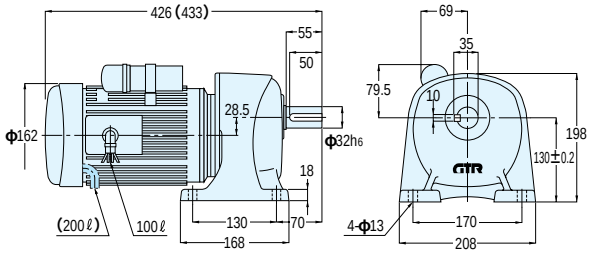

Flange Mounted Type


Small Flange Mounted Type

## Fig.A-99

### G3LM-32-100～200-400
CAD Data: G3LM-32-400

### (G3LB-32-100～200-400)
(CAD Data: G3LB-32-400)

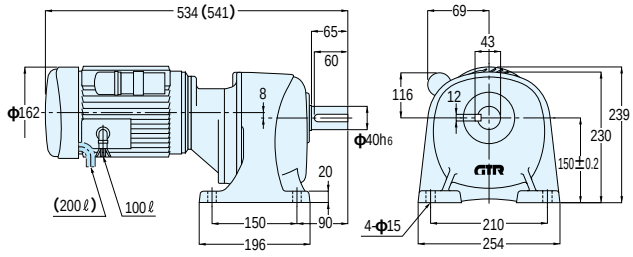



Round Weight 20kg (22.5kg)

## Fig.A-100

### G3LM-40-300～450-400
CAD Data: G3LM-40-400

### (G3LB-40-300～450-400)
(CAD Data: G3LB-40-400)

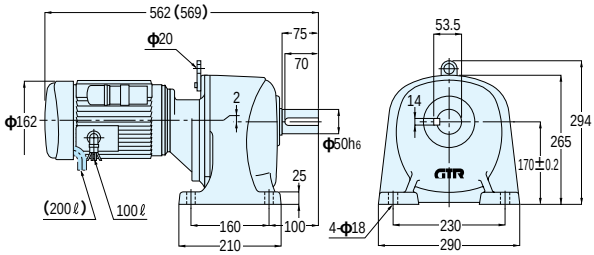



Round Weight 28.5kg (31kg)

## Fig.A-101

### G3LM-50-600～1200-400
CAD Data: G3LM-50-400

### (G3LB-50-600～1200-400)
(CAD Data: G3LB-50-400)




Round Weight 58kg (60.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## G3 Series 1-Phase 400W

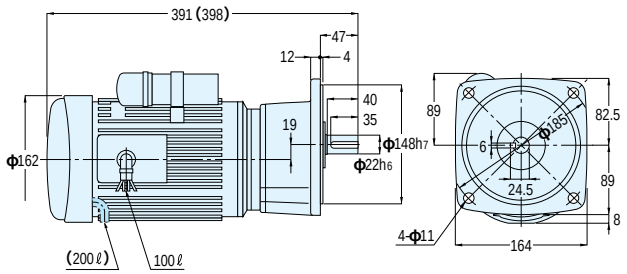
## Flange Mounted Type

The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

### Fig.A-102

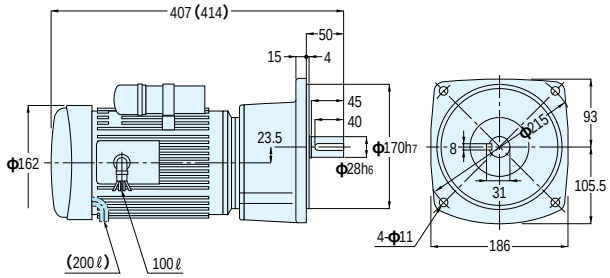
**G3FM-22-5〜25-400**
CADデータ: G3FM-22-400
**(G3FB-22-5〜25-400)**
(CADデータ: G3FB-22-400)




Round Weight 15.5kg (18kg)

### Fig.A-103

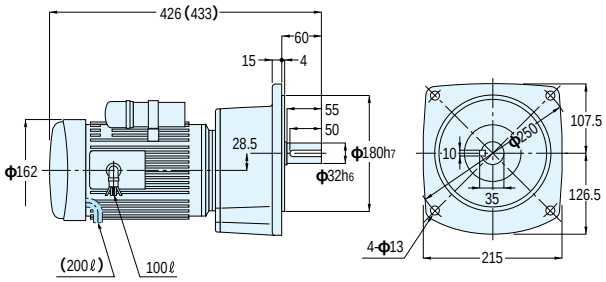
**G3FM-28-30〜100-400**
CAD Data: G3FM-28-400
**(G3FB-28-30〜100-400)**
(CAD Data: G3FB-28-400)




Round Weight 17.5kg (20kg)

### Fig.A-104

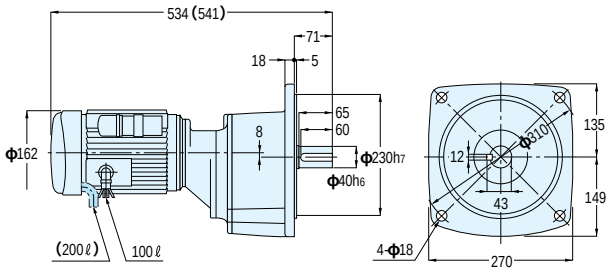
**G3FM-32-100〜200-400**
CAD Data: G3FM-32-400
**(G3FB-32-100〜200-400)**
(CAD Data: G3FB-32-400)




Round Weight 20.5kg (23kg)

### Fig.A-105

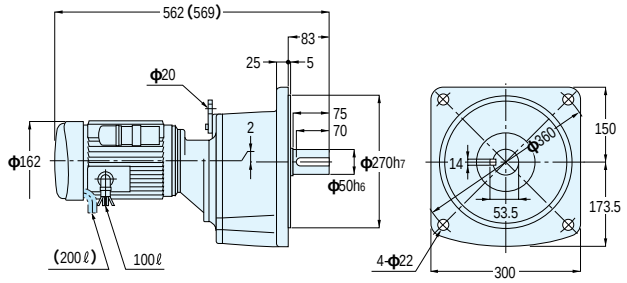
**G3FM-40-300〜450-400**
CAD Data: G3FM-40-400
**(G3FB-40-300〜450-400)**
(CAD Data: G3FB-40-400)




Round Weight 30kg (32.5kg)

### Fig.A-106

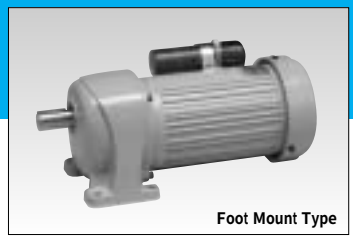
**G3FM-50-600〜1200-400**
CAD Data: G3FM-50-400
**(G3FB-50-600〜1200-400)**
(CAD Data: G3FB-50-400)

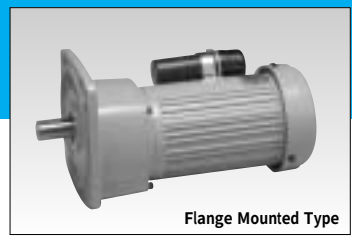


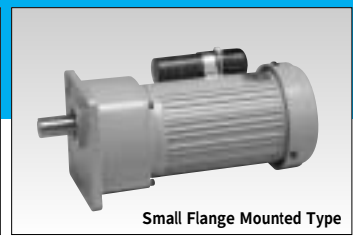

Round Weight 63kg (65.5kg)

Model Code P.A8
Option P.E78〜E85

# Small Flange Mounted Type

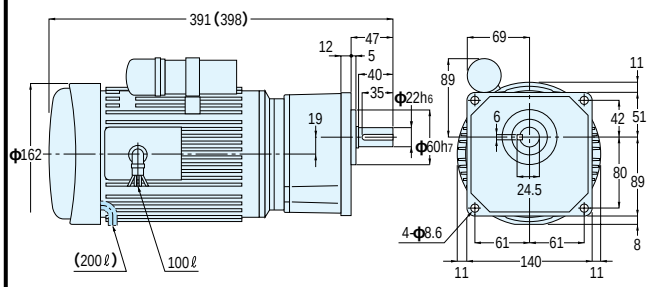

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-107

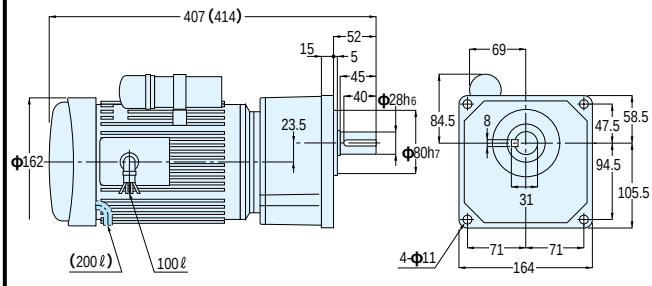
**G3KM-22-5～25-400**
CAD Data: G3KM-22-400
**(G3KB-22-5～25-400)**
(CAD Data: G3KB-22-400)




Round Weight 15.5kg (18kg)

## Fig.A-108

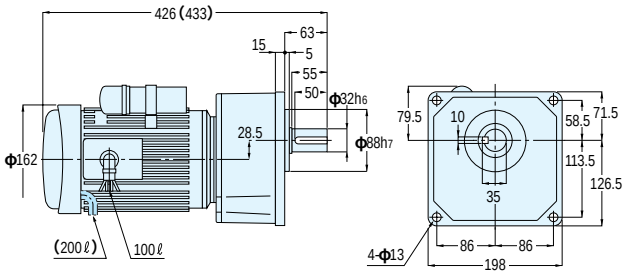
**G3KM-28-30～100-400**
CAD Data: G3KM-28-400
**(G3KB-28-30～100-400)**
(CAD Data: G3KB-28-400)




Round Weight 17.5kg (20kg)

## Fig.A-109

**G3KM-32-100～200-400**
CAD Data: G3KM-32-400
**(G3KB-32-100～200-400)**
(CAD Data: G3KB-32-400)




Round Weight 20.5kg (23kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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GT-STEP Index Gearmotor
KOMPASS Gearbox

Parallel Shaft IP-65

# Water-Resistant Gearmotor Gearmotor with Brake

## Model • Type Designation Standard Model Lineup

GTR Gearmotor

G3 Series

### ■Standard Specifications G3 Series (Water-Resistant-Outdoor)

| | | |
|---|---|---|
| Motor Part | Number of phase | 3-Phase |
| | Capacity | 0.1kW～2.2kW |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed non-ventilated for 0.1kW) |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | SUS420J2 (Water-Resistant W/Carbon Steel Shaft is S43C) |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron) |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 100% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas,<br>Should not be used in water and the place where high-hydrostatic pressure receives. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Parallel Shaft)

G3 series Water-Resistant-Outdoor gearmotor are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | Terminal box | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| G3 | L | W | – 22 | – 50 | – T020 | | E | | |
| G3 | F | V | – 40 | – 200 | – 075 | W | E | X | AA |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

| | |
|---|---|
| ①Series Name | G3 : G3 Series (Parallel Shaft) |
| ②Classification by Mount Form | L : Foot Mount |
| | F : Flange Mount |
| | K : Small Flange Mount (Frame No.18～32) |
| ③Classification by Motor Type | W : With Water-resistant Motor W/SUS Shaft (JIS:SUS420J2) |
| | V : With Water-resistant Brake Motor (Output Shaft material:SUS420J2) |
| | G : With Water-resistant moter W/Carbon Steel Shaft (JIS:S43C) |
| | H : With Outdoor Brake Motor (Output Shaft material:S43C) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter |
| ⑤Reduction Ratio | 5 : 1／5 ～ 1200 : 1／1200 |
| ⑥Motor Designation and Capacity | T010 : 3-phase 0.1 kW |
| | T020 : 3-phase 0.2 kW |
| | T040 : 3-phase 0.4 kW |
| | 075 : 3-phase 0.75kW |
| | 150 : 3-phase 1.5 kW |
| | 220 : 3-phase 2.2 kW |
| ⑦Option | Blank : Standard Specifications<br>3-phase: 200V／50Hz, 200V／60Hz, 220V／60Hz |
| | W : High Voltage<br>3-phase: 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz |
| ⑧Terminal box | E : Terminal Box for Water-resistant type (Standard Specs.) |
| ⑨Auxiliary Mark | Blank : Standard Specs. |
| | X : Mark for Additional Specs. |
| ⑩Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | ●Specification Code for Rectifier built-in Wiring<br>For details, refer to the Specification Code Table on page E31.<br>●Indication of Terminal Box lead wire position<br>Refer to the indication mark list in P. E35 for details. |

**Separated rectifier type is the standard specification of the terminal box in gearmotors with brake.**
**When you need the rectifier built-in type, contact us with the following manner.**
**We will do the wiring accordingly.For details, refer to page E31.**

| Type | Type Code when ordering(Example) (Indicate this type cord in your order.) |
|---|---|
| Standard (rectifier separated) | G3LV-32-200-T040E |
| AC Switching A | G3LV-32-200-T040EX-AA |
| AC Switching B | G3LV-32-200-T040EX-AB |
| DC Switching | G3LV-32-200-T040EX-DC |

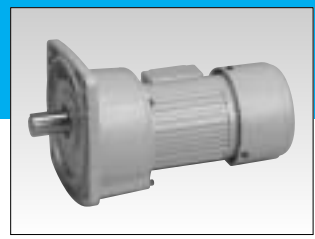
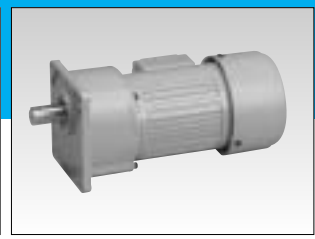
(Note) The wiring method indication code does not appear on the product-type name. It appears in the supplemental number column on the nameplate.

## ■Model・Type Code (Option)

| Capacity・Option | | | | |
|---|---|---|---|---|
| T040 | E | X | – | AA |
| | ⑧ | ⑨ | | ⑩ |

| | |
|---|---|
| ⑧Terminal box | Refer to the above table. |
| ⑨Auxiliary Code | Refer to the above table. |
| ⑩Wiring Method Indication Code(Note) | Refer to the table on the left. |

# Standard Model Lineup



| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Water-Resistant Gearmotor W/SUS Shaft G3LW•G3FW G3KW | 3-Phase 0.1kW | 18 | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 |
| | | 22 | 1/60 1/80 1/100 1/120 1/160 1/200 |
| | | 28 | 1/300 1/375 1/450 |
| | | 32 | 1/600 1/750 **1/900** **1/1200** |
| Water-Resistant Brake Gearmotor W/SUS Shaft G3LV•G3FV G3KV | 3-Phase 0.2kW | 18 | 1/5 1/10 1/15 1/20 1/25 |
| | | 22 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 28 | 1/100 1/120 1/160 1/200 |
| | | 32 | 1/300 1/375 1/450 |
| | | 40 | 1/600 1/750 **1/900** **1/1200** |
| Water-Resistant Gearmotor W/Carbon Steel Shaft G3LG•G3FG G3KG | 3-Phase 0.4kW | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | | 40 | 1/300 1/375 **1/450** |
| | | 50 | 1/600 1/750 **1/900** **1/1200** |
| Water-Resistant Brake Gearmotor W/Carbon Steel Shaft G3LH•G3FH G3KH | 3-Phase 0.75kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 40 | 1/100 1/120 1/160 1/200 |
| | | 50 | 1/300 1/375 **1/450** |
| Water-Resistant Gearmotor W/SUS Shaft G3LW•G3FW G3KW | 3-Phase 1.5kW | 32 | 1/5 1/10 1/15 1/20 1/25 |
| | | 40 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 50 | 1/100 1/120 1/160 **1/200** |
| Water-Resistant Gearmotor W/Carbon Steel Shaft G3LG•G3FG G3KG | 3-Phase 2.2kW | 40 | 1/5 1/10 1/15 1/20 1/25 |
| | | 50 | 1/30 1/40 1/50 1/60 1/80 1/100 |

Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) **Bold** The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

**Parallel Shaft** **IP-65**

# Water-Resistant W/SUS Shaft
# Water-Resistant W/Carbon Steel Shaft
# Gearmotor
# Gearmotor with Brake

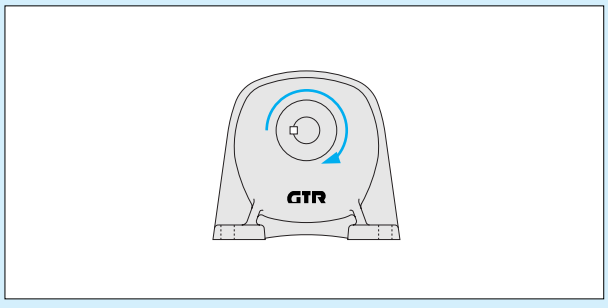
## Performance Table
## Dimension diagram

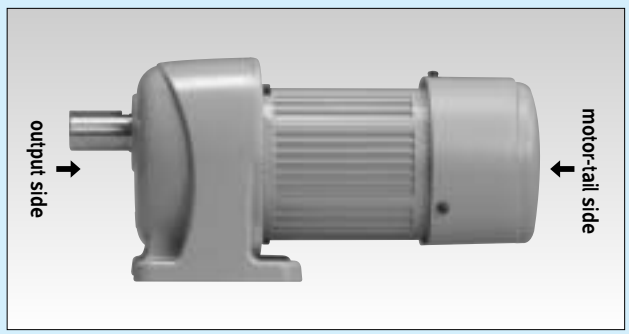
G3 Series

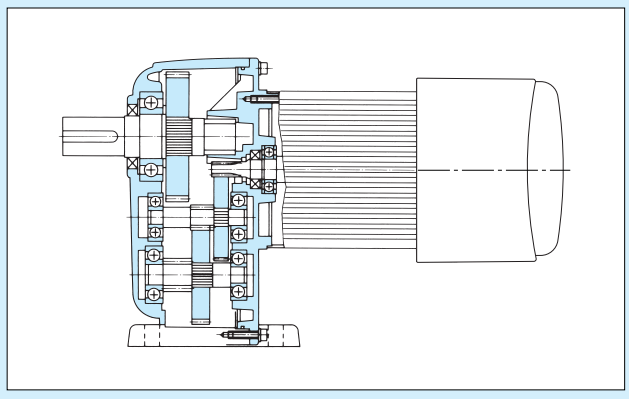
### 3-Phase

**【Remarks】**

- Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The Shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E28, the shaft rotates clock wise when viewing from output side. (Reter to the diagram shown below.)



# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.1kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed |

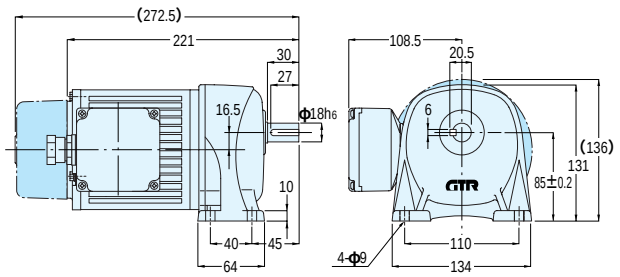
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | | | |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3L$^{W}_{G}$ (G3L$^{V}_{H}$) | G3F$^{W}_{G}$ (G3F$^{V}_{H}$) | G3K$^{W}_{G}$ (G3K$^{V}_{H}$) |
| 3-phase 0.1kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 3 | 2.5 | 0.31 | 0.26 | 588 | 60 | P.A56 Fig.A-110 6kg (7.5kg) | P.A57 Fig.A-114 6.5kg (8kg) | P.A58 Fig.A-118 6.5kg (8kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 9.1 | 7.5 | 0.93 | 0.77 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 12 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 15 | 12.7 | 1.5 | 1.3 | 1270 | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 50 | 60 | 19 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 37.5 | 45 | 24 | 19.6 | 2.4 | 2 | 1470 | 150 | | | |
| | | 1/ 50 | 7/ 351 | 30 | 36 | 29 | 24.5 | 3 | 2.5 | 1570 | 160 | | | |
| | 22 | 1/ 60 | 11/ 684 | 25 | 30 | 35 | 29.4 | 3.6 | 3 | 2160 | 220 | P.A56 Fig.A-111 7kg (8.5kg) | P.A57 Fig.A-115 7.5kg (9kg) | P.A58 Fig.A-119 7.5kg (9kg) |
| | | 1/ 80 | 21/ 1634 | 18.8 | 22.5 | 47 | 39.2 | 4.8 | 4 | 2450 | 250 | | | |
| | | 1/ 100 | 7/ 684 | 15 | 18 | 59 | 49 | 6 | 5 | 2450 | 250 | | | |
| | | 1/ 120 | 147/ 17974 | 12.5 | 15 | 71 | 58.8 | 7.2 | 6 | 2450 | 250 | | | |
| | | 1/ 160 | 21/ 3268 | 9.4 | 11.2 | 94 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | 1/ 200 | 21/ 4085 | 7.5 | 9 | 117 | 98 | 11.9 | 10 | 2450 | 250 | | | |
| | 28 | 1/ 300 | 221/ 65190 | 5 | 6 | 157 | 130 | 16 | 13.3 | 3430 | 350 | P.A57 Fig.A-112 10kg (11.5kg) | P.A57 Fig.A-116 10.5kg (12kg) | P.A58 Fig.A-120 10.5kg (12kg) |
| | | 1/ 375 | 187/ 68370 | 4 | 4.8 | 196 | 163 | 20 | 16.6 | 3430 | 350 | | | |
| | | 1/ 450 | 181/ 79793 | 3.3 | 4 | 235 | 196 | 24 | 20 | 3430 | 350 | | | |
| | 32 | 1/ 600 | 147/ 88192 | 2.5 | 3 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A57 Fig.A-113 13kg (14.5kg) | P.A57 Fig.A-117 13.5kg (15kg) | P.A58 Fig.A-121 13.5kg (15kg) |
| | | 1/ 750 | 49/ 36464 | 2 | 2.4 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | ∗1/ 900 | 62/ 57063 | 1.7 | 2 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | | ∗1/1200 | 46/ 55195 | 1.3 | 1.5 | 431 | 431 | 44 | 44 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-110**

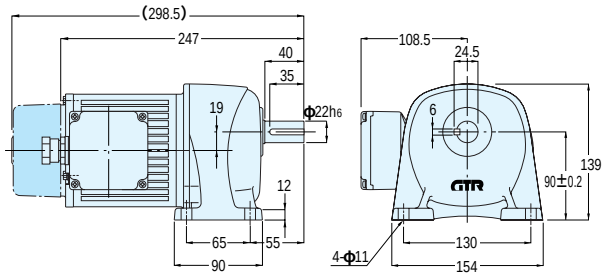
**G3L$^{W}_{G}$-18-5〜50-T010E**
CAD Data: G3L$^{W}_{G}$-18-T010E
**(G3L$^{V}_{H}$-18-5〜50-T010E)**
(CAD Data: G3L$^{V}_{H}$-18-T010E)




Round Weight 6kg (7.5kg)

**Fig.A-111**

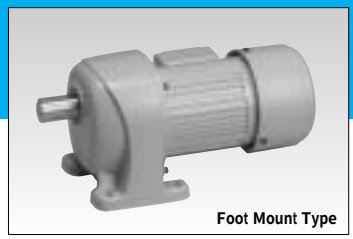
**G3L$^{W}_{G}$-22-60〜200-T010E**
CAD Data: G3L$^{W}_{G}$-22-T010E
**(G3L$^{V}_{H}$-22-60〜200-T010E)**
(CAD Data: G3L$^{V}_{H}$-22-T010E)

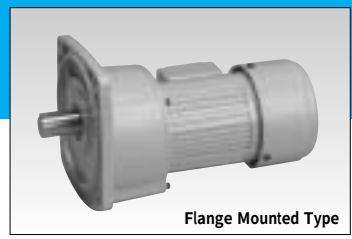


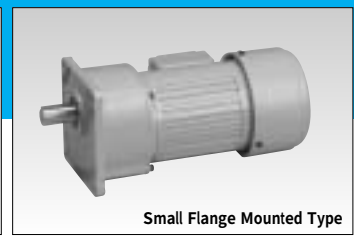

Round Weight 7kg (8.5kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52 | Multipurpose Inverter P.E86〜E92 | Option P.E78〜E92

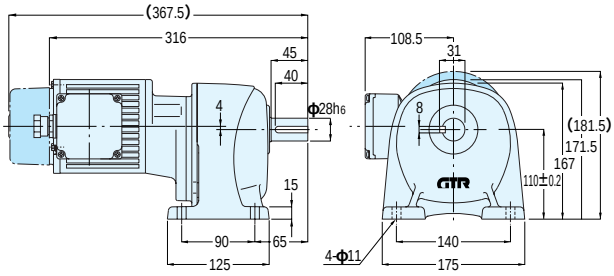

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-112

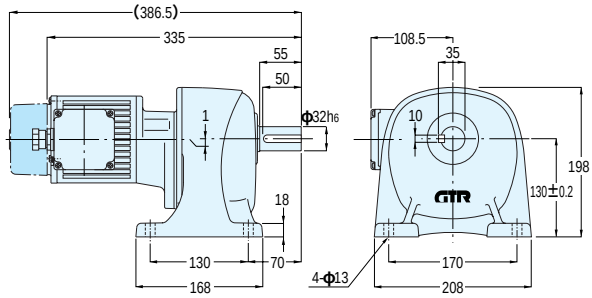
**G3L$^{W}_{G}$-28-300～450-T010E**
CAD Data: G3L$^{W}_{G}$-28-T010E
**(G3L$^{V}_{H}$-28-300～450-T010E)**
(CAD Data: G3L$^{V}_{H}$-28-T010E)




Round Weight 10kg (11.5kg)

## Fig.A-113

**G3L$^{W}_{G}$-32-600～1200-T010E**
CAD Data: G3L$^{W}_{G}$-32-T010E
**(G3L$^{V}_{H}$-32-600～1200-T010E)**
(CAD Data: G3L$^{V}_{H}$-32-T010E)

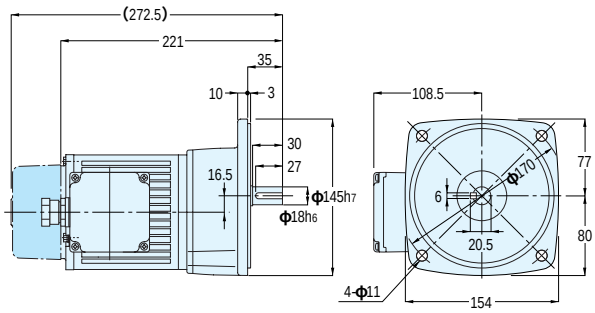



Round Weight 13kg (14.5kg)

# Flange Mounted Type

## Fig.A-114

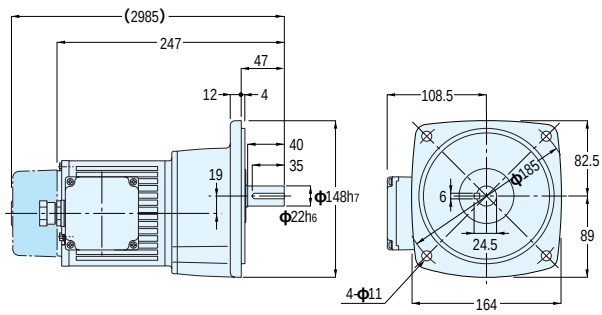
**G3F$^{W}_{G}$-18-5～50-T010E**
CAD Data: G3F$^{W}_{G}$-18-T010E
**(G3F$^{V}_{H}$-18-5～50-T010E)**
(CAD Data: G3F$^{V}_{H}$-18-T010E)




Round Weight 6.5kg (8kg)

## Fig.A-115

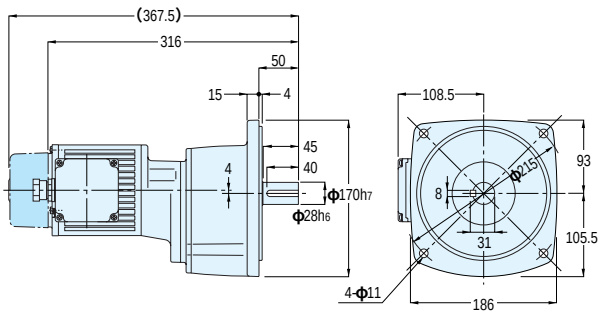
**G3F$^{W}_{G}$-22-60～200-T010E**
CAD Data: G3F$^{W}_{G}$-22-T010E
**(G3F$^{V}_{H}$-22-60～200-T010E)**
(CAD Data: G3F$^{V}_{H}$-22-T010E)




Round Weight 7.5kg (9kg)

## Fig.A-116

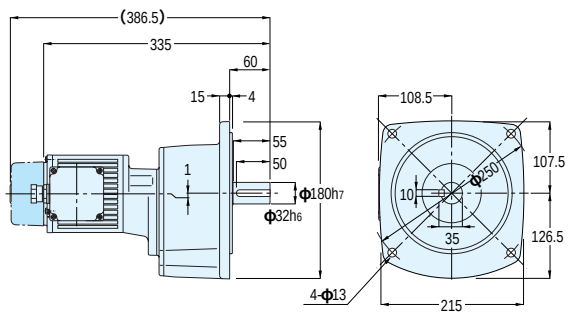
**G3F$^{W}_{G}$-28-300～450-T010E**
CAD Data: G3F$^{W}_{G}$-28-T010E
**(G3F$^{V}_{H}$-28-300～450-T010E)**
(CAD Data: G3F$^{V}_{H}$-28-T010E)




Round Weight 10.5kg (12kg)

## Fig.A-117

**G3F$^{W}_{G}$-32-600～1200-T010E**
CAD Data: G3F$^{W}_{G}$-32-T010E
**(G3F$^{V}_{H}$-32-600～1200-T010E)**
(CAD Data: G3F$^{V}_{H}$-32-T010E)




Round Weight 13.5kg (15kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.1kW

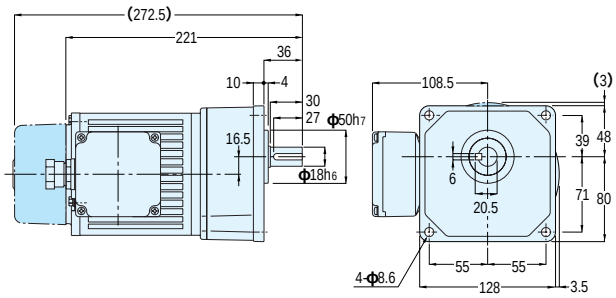
## Small Flange Mounted Type

**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


### Fig.A-118

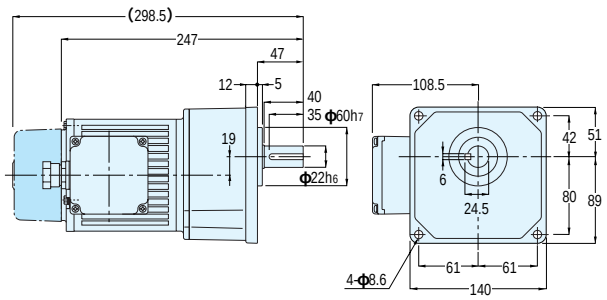
**G3K$^{W}_{G}$-18-5〜50-T010E**
CAD Data: G3K$^{W}_{G}$-18-T010E
**(G3K$^{V}_{H}$-18-5〜50-T010E)**
(CAD Data: G3K$^{V}_{H}$-18-T010E)




Round Weight 6.5kg (8kg)

### Fig.A-119

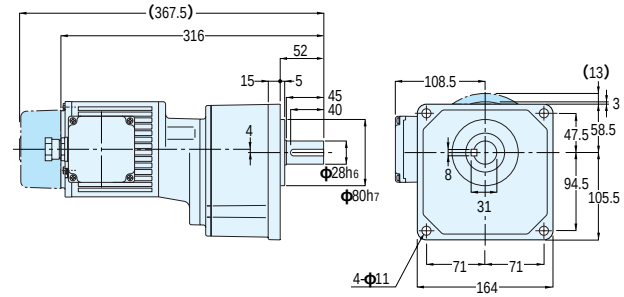
**G3K$^{W}_{G}$-22-60〜200-T010E**
CAD Data: G3K$^{W}_{G}$-22-T010E
**(G3K$^{V}_{H}$-22-60〜200-T010E)**
(CAD Data: G3K$^{V}_{H}$-22-T010E)




Round Weight 7.5kg (9kg)

### Fig.A-120

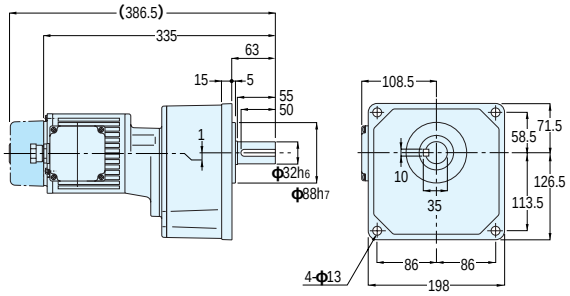
**G3K$^{W}_{G}$-28-300〜450-T010E**
CAD Data: G3K$^{W}_{G}$-28-T010E
**(G3K$^{V}_{H}$-28-300〜450-T010E)**
(CAD Data: G3K$^{V}_{H}$-28-T010E)




Round Weight 10.5kg (12kg)

### Fig.A-121

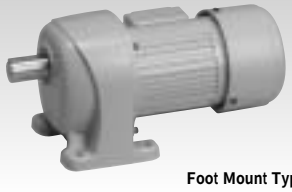
**G3K$^{W}_{G}$-32-600〜1200-T010E**
CAD Data: G3K$^{W}_{G}$-32-T010E
**(G3K$^{V}_{H}$-32-600〜1200-T010E)**
(CAD Data: G3K$^{V}_{H}$-32-T010E)



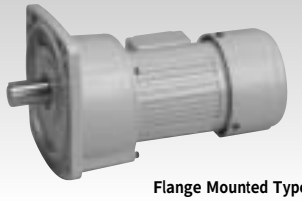

Round Weight 13.5kg (15kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

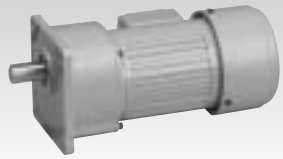

Model Code P.A52
Multipurpose Inverter P.E86〜E92
Option P.E78〜E92



Foot Mount Type



Flange Mounted Type



Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed Fan-cooled |

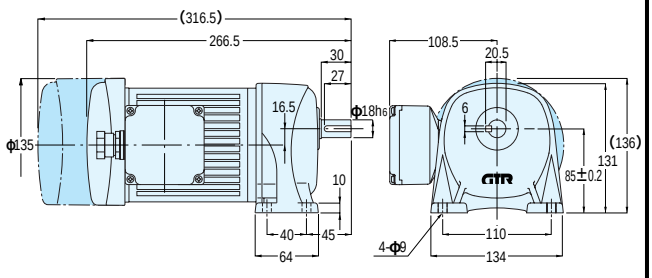
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | | | |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LW (G3LX) | G3FW (G3FX) | G3KW (G3KX) |
| 3-phase 0.2kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 6.1 | 5 | 0.62 | 0.51 | 588 | 60 | P.A60 Fig.A-122 6.5kg (8kg) | P.A62 Fig.A-127 7kg (8.5kg) | P.A63 Fig.A-132 7kg (8.5kg) |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 11.8 | 9.8 | 1.2 | 1 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 18.6 | 14.7 | 1.9 | 1.5 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 24.5 | 20.6 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 30.4 | 25.5 | 3.1 | 2.6 | 1270 | 130 | | | |
| | 22 | 1/ 30 | 7/ 216 | 50 | 60 | 36.3 | 30.4 | 3.7 | 3.1 | 1760 | 180 | P.A60 Fig.A-123 7.5kg (9kg) | P.A62 Fig.A-128 8kg (9.5kg) | P.A63 Fig.A-133 8kg (9.5kg) |
| | | 1/ 40 | 91/ 3600 | 37.5 | 45 | 47 | 39.2 | 4.8 | 4 | 1860 | 190 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 58.8 | 49 | 6 | 5 | 1960 | 200 | | | |
| | | 1/ 60 | 637/ 39600 | 25 | 30 | 70.6 | 58.8 | 7.2 | 6 | 2160 | 220 | | | |
| | | 1/ 80 | 91/ 7200 | 18.8 | 22.5 | 94.1 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | ＊1/ 100 | 11/ 1080 | 15 | 18 | 97 | 80.4 | 9.9 | 8.2 | 2450 | 250 | | | |
| | 28 | 1/ 100 | 13/ 1353 | 15 | 18 | 117 | 98 | 11.9 | 10 | 2840 | 290 | P.A61 Fig.A-124 9.5kg (11kg) | P.A62 Fig.A-129 10kg (11.5kg) | P.A63 Fig.A-134 10kg (11.5kg) |
| | | 1/ 120 | 91/ 11000 | 12.5 | 15 | 140 | 117 | 14.3 | 11.9 | 3330 | 340 | | | |
| | | 1/ 160 | 1/ 165 | 9.4 | 11.2 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | 1/ 200 | 7/ 1375 | 7.5 | 9 | 234 | 195 | 23.9 | 19.9 | 3430 | 350 | | | |
| | 32 | 1/ 300 | 91/ 27348 | 5 | 6 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A61 Fig.A-125 13.5kg (15kg) | P.A62 Fig.A-130 14kg (15.5kg) | P.A63 Fig.A-135 14kg (15.5kg) |
| | | 1/ 375 | 77/ 28620 | 4 | 4.8 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | 1/ 450 | 91/ 41022 | 3.3 | 4 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | 40 | 1/ 600 | 9/ 5300 | 2.5 | 3 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A61 Fig.A-126 20kg (21.5kg) | P.A62 Fig.A-131 21.5kg (23kg) | |
| | | 1/ 750 | 62/ 46427 | 2 | 2.4 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ＊1/ 900 | 23/ 21259 | 1.7 | 2 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | | ＊1/1200 | 9/ 10600 | 1.3 | 1.5 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-122**

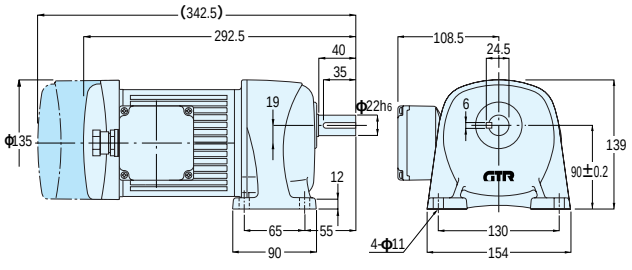
**G3LW -18-5～25-T020E**
CAD Data：G3LW-18-T020E
**(G3LV -18-5～25-T020E)**
(CAD Data：G3LV-18-T020E)




Round Weight 6.5kg (8kg)

**Fig.A-123**

**G3LW -22-30～100-T020E**
CAD Data：G3LW-22-T020E
**(G3LV -22-30～100-T020E)**
(CAD Data：G3LV-22-T020E)

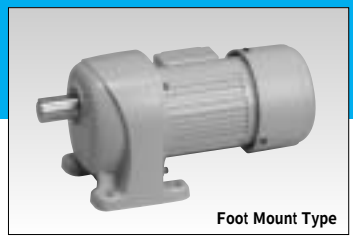


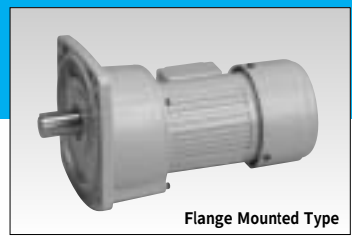

Round Weight 7.5kg (9kg)

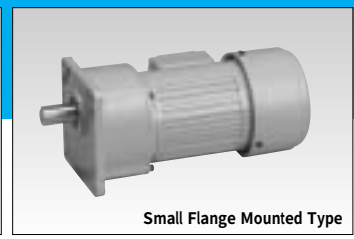
Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52 | Multipurpose Inverter P.E86～E92 | Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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Cautions for Safety
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GT-STEP Index Gearmotor
KOMPASS Gearbox

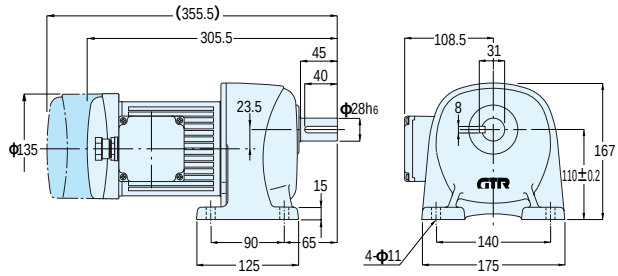

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-124

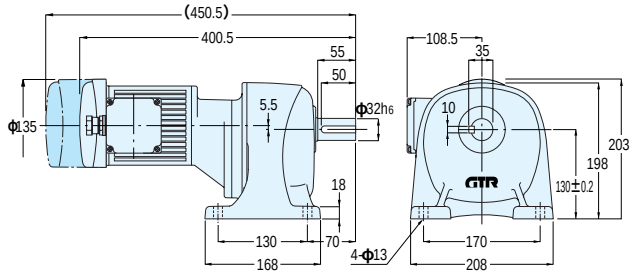
**G3L$^{W}_{G}$-28-100～200-T020E**
CAD Data：G3L$^{W}_{G}$-28-T020E
**(G3L$^{V}_{H}$-28-100～200-T020E)**
(CAD Data：G3L$^{V}_{H}$-28-T020E)




Round Weight 9.5kg (11kg)

## Fig.A-125

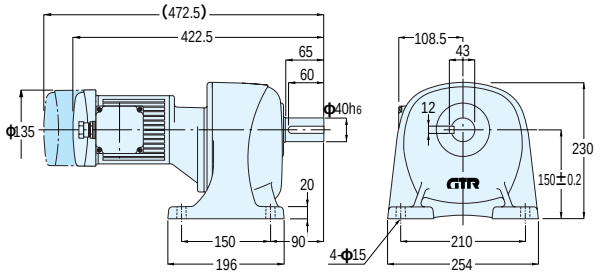
**G3L$^{W}_{G}$-32-300～450-T020E**
CAD Data：G3L$^{W}_{G}$-32-T020E
**(G3L$^{V}_{H}$-32-300～450-T020E)**
(CAD Data：G3L$^{V}_{H}$-32-T020E)




Round Weight 13.5kg (15kg)

## Fig.A-126

**G3L$^{W}_{G}$-40-600～1200-T020E**
CAD Data：G3L$^{W}_{G}$-40-T020E
**(G3L$^{V}_{H}$-40-600～1200-T020E)**
(CAD Data：G3L$^{V}_{H}$-40-T020E)




Round Weight 20kg (21.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.2kW

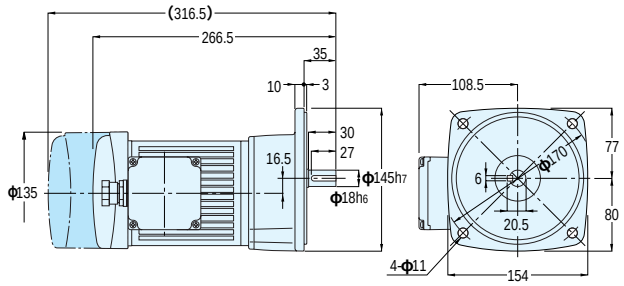
## Flange Mounted Type

The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


### Fig.A-127

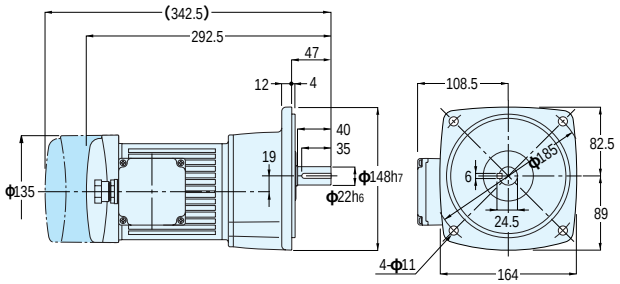
**G3F$^{W}_{G}$-18-5～25-T020E**
CAD Data：G3F$^{W}_{G}$-18-T020E
**(G3F$^{V}_{H}$-18-5～25-T020E)**
(CAD Data：G3F$^{V}_{H}$-18-T020E)




Round Weight 7kg (8.5kg)

### Fig.A-128

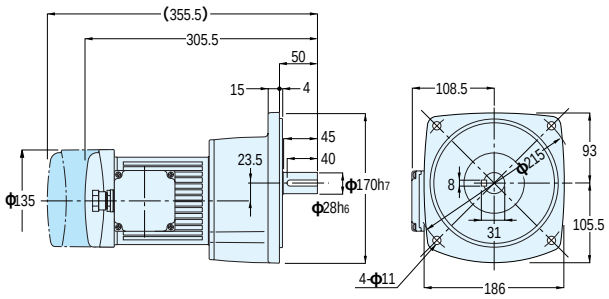
**G3F$^{W}_{G}$-22-30～100-T020E**
CAD Data：G3F$^{W}_{G}$-22-T020E
**(G3F$^{V}_{H}$-22-30～100-T020E)**
(CAD Data：G3F$^{V}_{H}$-22-T020E)




Round Weight 8kg (9.5kg)

### Fig.A-129

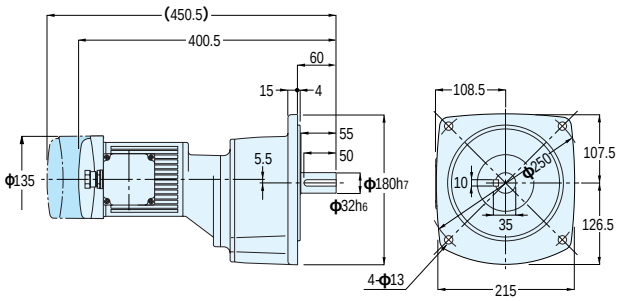
**G3F$^{W}_{G}$-28-100～200-T020E**
CAD Data：G3F$^{W}_{G}$-28-T020E
**(G3F$^{V}_{H}$-28-100～200-T020E)**
(CAD Data：G3F$^{V}_{H}$-28-T020E)




Round Weight 10kg (11.5kg)

### Fig.A-130

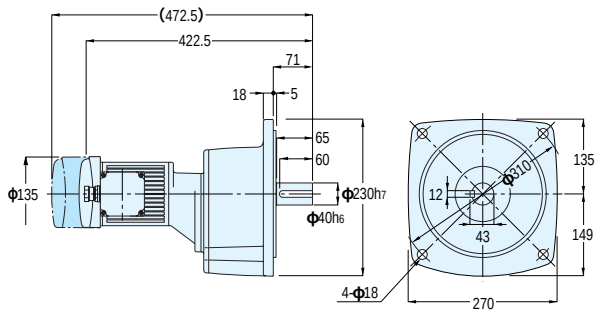
**G3F$^{W}_{G}$-32-300～450-T020E**
CAD Data：G3F$^{W}_{G}$-32-T020E
**(G3F$^{V}_{H}$-32-300～450-T020E)**
(CAD Data：G3F$^{V}_{H}$-32-T020E)




Round Weight 14kg (15.5kg)

### Fig.A-131

**G3F$^{W}_{G}$-40-600～1200-T020E**
CAD Data：G3F$^{W}_{G}$-40-T020E
**(G3F$^{V}_{H}$-40-600～1200-T020E)**
(CAD Data：G3F$^{V}_{H}$-40-T020E)

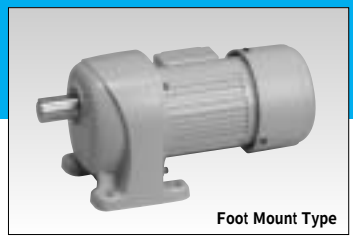


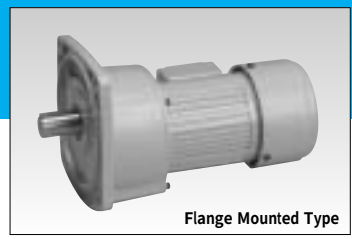

Round Weight 21.5kg (23kg)

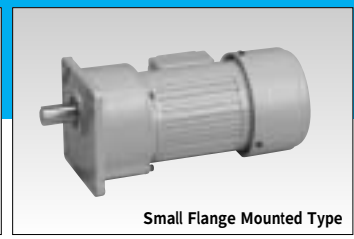
Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.


Model Code P.A52
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# Small Flange Mounted Type

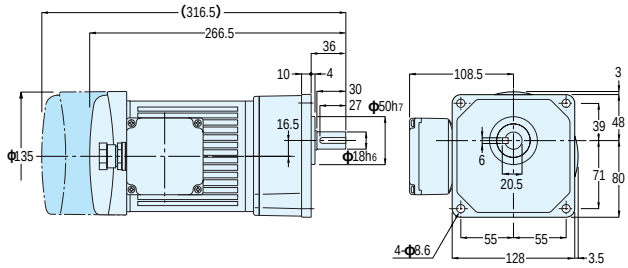

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-132

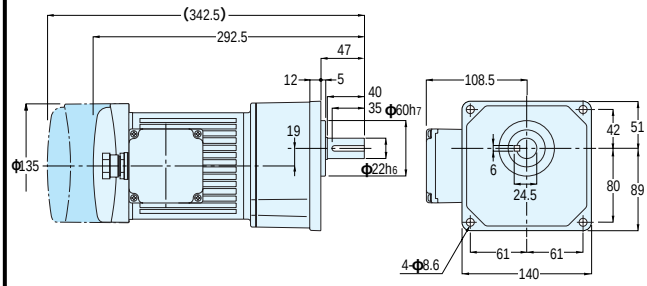
**G3K$^{W}_{G}$-18-5～25-T020E**
CAD Data：G3K$^{W}_{G}$-18-T020E
**(G3K$^{V}_{H}$-18-5～25-T020E)**
(CAD Data：G3K$^{V}_{H}$-18-T020E)




Round Weight 7kg (8.5kg)

## Fig.A-133

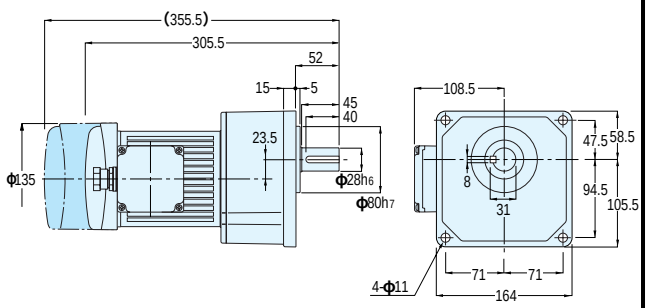
**G3K$^{W}_{G}$-22-30～100-T020E**
CAD Data：G3K$^{W}_{G}$-22-T020E
**(G3K$^{V}_{H}$-22-30～100-T020E)**
(CAD Data：G3K$^{V}_{H}$-22-T020E)




Round Weight 8kg (9.5kg)

## Fig.A-134

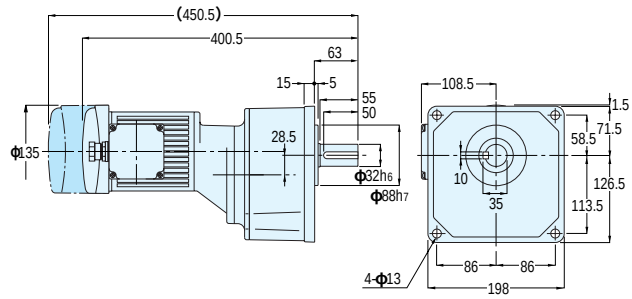
**G3K$^{W}_{G}$-28-100～200-T020E**
CAD Data：G3K$^{W}_{G}$-28-T020E
**(G3K$^{V}_{H}$-28-100～200-T020E)**
(CAD Data：G3K$^{V}_{H}$-28-T020E)




Round Weight 10kg (11.5kg)

## Fig.A-135

**G3K$^{W}_{G}$-32-300～450-T020E**
CAD Data：G3K$^{W}_{G}$-32-T020E
**(G3K$^{V}_{H}$-32-300～450-T020E)**
(CAD Data：G3K$^{V}_{H}$-32-T020E)




Round Weight 14kg (15.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.4kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed Fan-cooled |

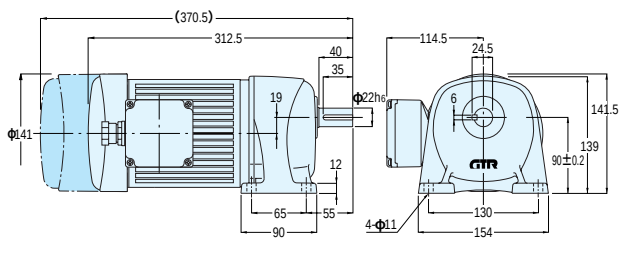
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | | | |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LW (G3LV) | G3FW (G3FV) | G3KW (G3KV) |
| 3-phase 0.4kW | 22 | 1/ 5 | 7/ 34 | 300 | 360 | 12 | 10 | 1.2 | 1 | 882 | 90 | P.A64 Fig.A-136 9.5kg (11kg) | P.A66 Fig.A-141 10kg (11.5kg) | P.A67 Fig.A-146 10kg (11.5kg) |
| | | 1/ 10 | 7/ 68 | 150 | 180 | 25 | 21 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 15 | 49/ 748 | 100 | 120 | 36 | 30 | 3.7 | 3.1 | 1370 | 140 | | | |
| | | 1/ 20 | 7/ 136 | 75 | 90 | 48 | 40 | 4.9 | 4.1 | 1470 | 150 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 61 | 50 | 6.2 | 5.1 | 1670 | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 50 | 60 | 73 | 61 | 7.4 | 6.2 | 2550 | 260 | P.A64 Fig.A-137 11.5kg (13kg) | P.A66 Fig.A-142 12kg (13.5kg) | P.A67 Fig.A-147 12kg (13.5kg) |
| | | 1/ 40 | 221/ 8610 | 37.5 | 45 | 94 | 78 | 9.6 | 8 | 2840 | 290 | | | |
| | | 1/ 50 | 187/ 9030 | 30 | 36 | 117 | 98 | 11.9 | 10 | 3140 | 320 | | | |
| | | 1/ 60 | 169/ 9840 | 25 | 30 | 140 | 117 | 14.3 | 11.9 | 3430 | 350 | | | |
| | | 1/ 80 | 65/ 5166 | 18.8 | 22.5 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | ∗1/ 100 | 55/ 5418 | 15 | 18 | 193 | 161 | 19.7 | 16.4 | 3430 | 350 | | | |
| | 32 | 1/ 100 | 7/ 688 | 15 | 18 | 234 | 195 | 23.9 | 19.9 | 4900 | 500 | P.A65 Fig.A-138 14.5kg (16kg) | P.A66 Fig.A-143 15kg (16.5kg) | P.A67 Fig.A-148 15kg (16.5kg) |
| | | 1/ 120 | 77/ 9360 | 12.5 | 15 | 281 | 234 | 28.7 | 23.9 | 5880 | 600 | | | |
| | | 1/ 160 | 21/ 3328 | 9.4 | 11.2 | 374 | 313 | 38.2 | 31.9 | 5880 | 600 | | | |
| | | 1/ 200 | 189/38272 | 7.5 | 9 | 431 | 390 | 44 | 39.8 | 5880 | 600 | | | |
| | 40 | 1/ 300 | 7/ 2160 | 5 | 6 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A65 Fig.A-139 23kg (24.5kg) | P.A66 Fig.A-144 24.5kg (26kg) | |
| | | 1/ 375 | 77/29328 | 4 | 4.8 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ∗1/ 450 | 49/21600 | 3.3 | 4 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | 50 | 1/ 600 | 57/35360 | 2.5 | 3 | 1225 | 1044 | 125 | 106.5 | 9800 | 1000 | P.A65 Fig.A-140 52.5kg (54kg) | P.A66 Fig.A-145 57.5kg (59kg) | |
| | | ∗1/ 750 | 25/19448 | 2 | 2.4 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/ 900 | 5/ 4338 | 1.7 | 2 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/1200 | 33/40664 | 1.3 | 1.5 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-136**

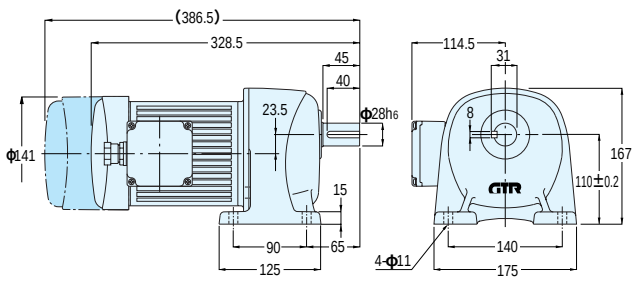
**G3LW -22-5～25-T040E**
CAD Data: G3LW-22-T040E
**(G3LV -22-5～25-T040E)**
(CAD Data: G3LV-22-T040E)




Round Weight 9.5kg (11kg)

**Fig.A-137**

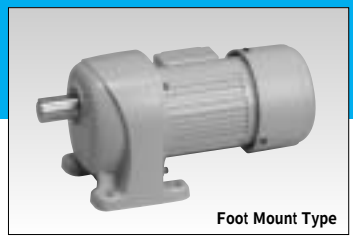
**G3LW -28-30～100-T040E**
CAD Data: G3LW-28-T040E
**(G3LV -28-30～100-T040E)**
(CAD Data: G3LV-28-T040E)

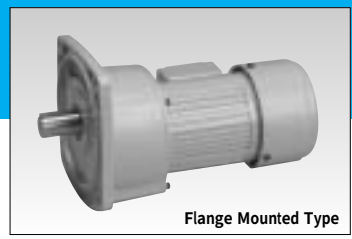


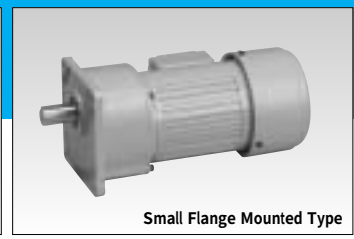

Round Weight 11.5kg (13kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52
Multipurpose Inverter P.E86～E92
Option P.E78～E92

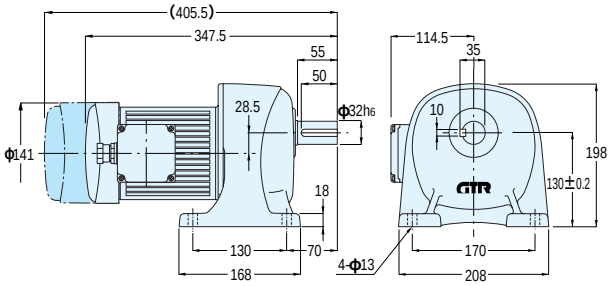

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-138

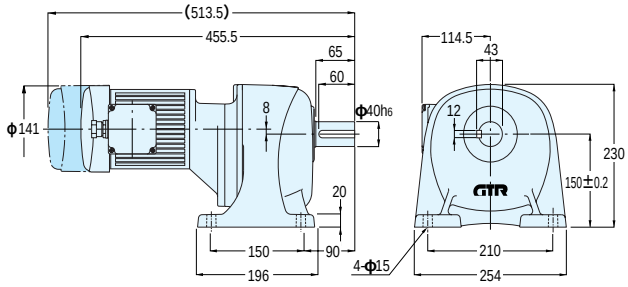
**G3L$^{W}_{G}$-32-100～200-T040E**
CAD Data：G3L$^{W}_{G}$-32-T040E
**(G3L$^{V}_{H}$-32-100～200-T040E)**
(CAD Data：G3L$^{V}_{H}$-32-T040E)




Round Weight 14.5kg (16kg)

## Fig.A-139

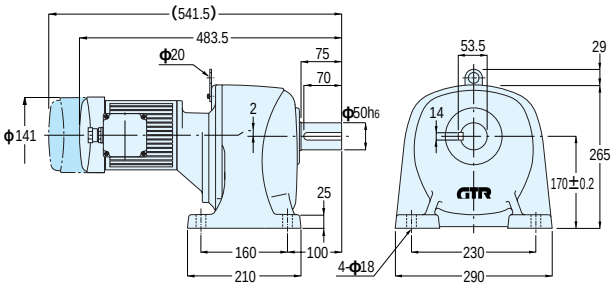
**G3L$^{W}_{G}$-40-300～450-T040E**
CAD Data：G3L$^{W}_{G}$-40-T040E
**(G3L$^{V}_{H}$-40-300～450-T040E)**
(CAD Data：G3L$^{V}_{H}$-40-T040E)




Round Weight 23kg (24.5kg)

## Fig.A-140

**G3L$^{W}_{G}$-50-600～1200-T040E**
CAD Data：G3L$^{W}_{G}$-50-T040E
**(G3L$^{V}_{H}$-50-600～1200-T040E)**
(CAD Data：G3L$^{V}_{H}$-50-T040E)




Round Weight 52.5kg (54kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.4kW

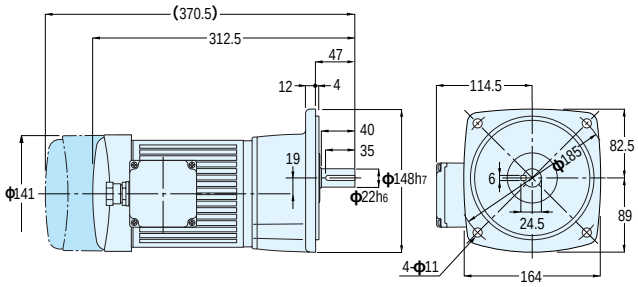
## Flange Mounted Type

**The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.**

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

### Fig.A-141

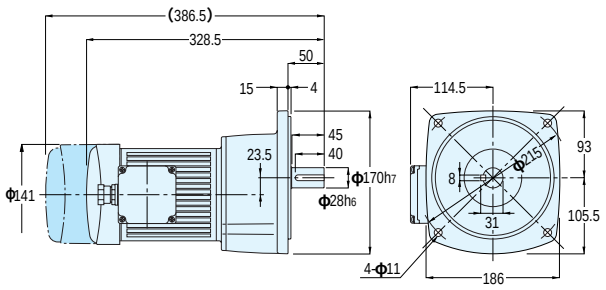
**G3F$^{W}_{G}$-22-5～25-T040E**
CAD Data: G3F$^{W}_{G}$-22-T040E
**(G3F$^{V}_{H}$-22-5～25-T040E)**
(CAD Data: G3F$^{V}_{H}$-22-T040E)




Round Weight 10kg (11.5kg)

### Fig.A-142

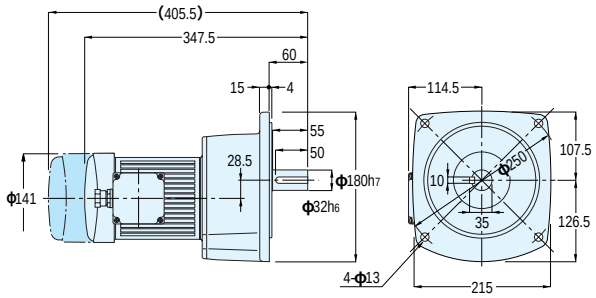
**G3F$^{W}_{G}$-28-30～100-T040E**
CAD Data: G3F$^{W}_{G}$-28-T040E
**(G3F$^{V}_{H}$-28-30～100-T040E)**
(CAD Data: G3F$^{V}_{H}$-28-T040E)




Round Weight 12kg (13.5kg)

### Fig.A-143

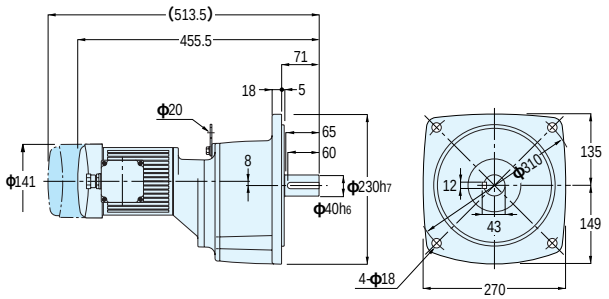
**G3F$^{W}_{G}$-32-100～200-T040E**
CAD Data: G3F$^{W}_{G}$-32-T040E
**(G3F$^{V}_{H}$-32-100～200-T040E)**
(CAD Data: G3F$^{V}_{H}$-32-T040E)




Round Weight 15kg (16.5kg)

### Fig.A-144

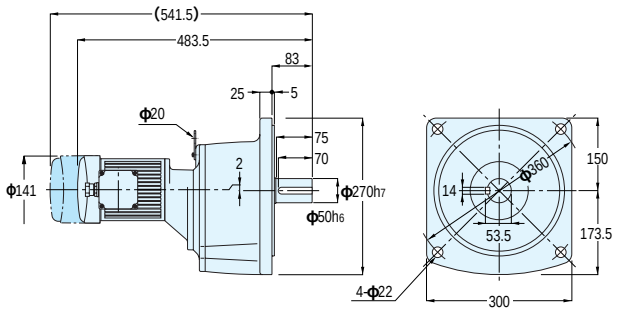
**G3F$^{W}_{G}$-40-300～450-T040E**
CAD Data: G3F$^{W}_{G}$-40-T040E
**(G3F$^{V}_{H}$-40-300～450-T040E)**
(CAD Data: G3F$^{V}_{H}$-40-T040E)




Round Weight 24.5kg (26kg)

### Fig.A-145

**G3F$^{W}_{G}$-50-600～1200-T040E**
CAD Data: G3F$^{W}_{G}$-50-T040E
**(G3F$^{V}_{H}$-50-600～1200-T040E)**
(CAD Data: G3F$^{V}_{H}$-50-T040E)

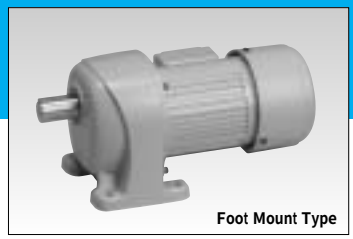


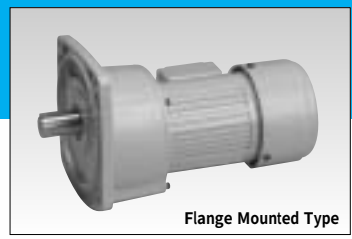

Round Weight 57.5kg (59kg)

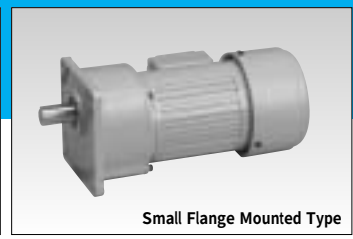
Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# Small Flange Mounted Type

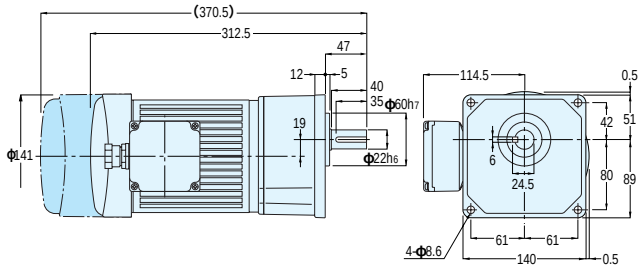

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-146

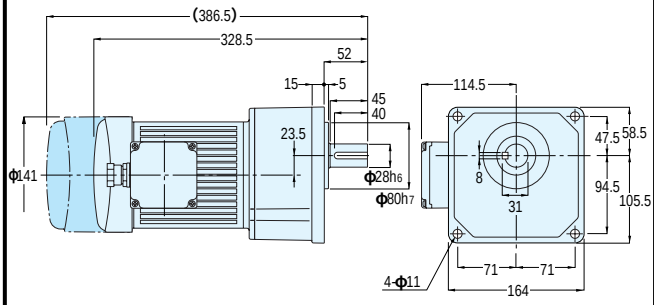
**G3K$^{W}_{G}$-22-5～25-T040E**
CAD Data: G3K$^{W}_{G}$-22-T040E
**(G3K$^{V}_{H}$-22-5～25-T040E)**
(CAD Data: G3K$^{V}_{H}$-22-T040E)




Round Weight 10kg (11.5kg)

## Fig.A-147

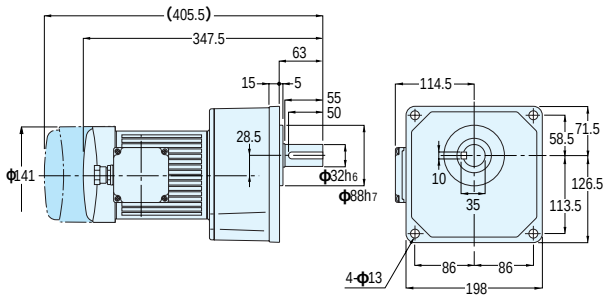
**G3K$^{W}_{G}$-28-30～100-T040E**
CAD Data: G3K$^{W}_{G}$-28-T040E
**(G3K$^{V}_{H}$-28-30～100-T040E)**
(CAD Data: G3K$^{V}_{H}$-28-T040E)




Round Weight 12kg (13.5kg)

## Fig.A-148

**G3K$^{W}_{G}$-32-100～200-T040E**
CAD Data: G3K$^{W}_{G}$-32-T040E
**(G3K$^{V}_{H}$-32-100～200-T040E)**
(CAD Data: G3K$^{V}_{H}$-32-T040E)




Round Weight 15kg (16.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.75kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed Fan-cooled |

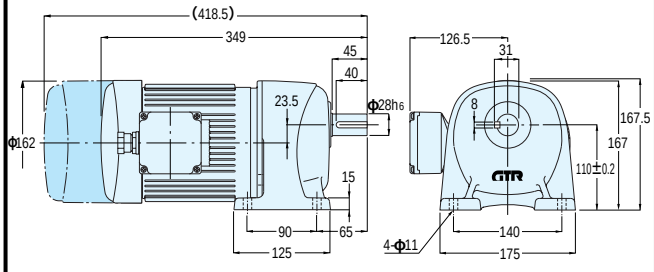
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor (Gearmotor with Brake) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | | | |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LW (G3LV) | G3FW (G3FV) | G3KW (G3KV) |
| 3-phase 0.75kW | 28 | 1/ 5 | 91/ 459 | 300 | 360 | 23 | 19 | 2.3 | 1.9 | 1270 | 130 | P.A68 Fig.A-149 15kg (17.5kg) | P.A69 Fig.A-153 15.5kg (18kg) | P.A70 Fig.A-157 15.5kg (18kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | | | |
| | | 1/ 15 | 91/ 1360 | 100 | 120 | 68 | 57 | 6.9 | 5.8 | 2160 | 220 | | | |
| | | 1/ 20 | 5/ 102 | 75 | 90 | 91 | 75 | 9.3 | 7.7 | 2350 | 240 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 114 | 94 | 11.6 | 9.6 | 2450 | 250 | | | |
| | 32 | 1/ 30 | 3/ 92 | 50 | 60 | 136 | 114 | 13.9 | 11.6 | 4020 | 410 | P.A68 Fig.A-150 18.5kg (21kg) | P.A69 Fig.A-154 19kg (21.5kg) | P.A70 Fig.A-158 19kg (21.5kg) |
| | | 1/ 40 | 13/ 516 | 37.5 | 45 | 175 | 146 | 17.9 | 14.9 | 4210 | 430 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 220 | 183 | 22.4 | 18.7 | 4610 | 470 | | | |
| | | 1/ 60 | 13/ 774 | 25 | 30 | 264 | 220 | 26.9 | 22.4 | 5490 | 560 | | | |
| | | 1/ 80 | 13/ 1032 | 18.8 | 22.5 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | ∗1/ 100 | 11/ 1080 | 15 | 18 | 362 | 302 | 36.9 | 30.8 | 5880 | 600 | | | |
| | 40 | 1/ 100 | 91/ 9000 | 15 | 18 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | P.A69 Fig.A-151 25kg (27.5kg) | P.A69 Fig.A-155 26.5kg (29kg) | |
| | | 1/ 120 | 77/ 9400 | 12.5 | 15 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | 1/ 160 | 9/ 1400 | 9.4 | 11.2 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | 1/ 200 | 9/ 1750 | 7.5 | 9 | 764 | 732 | 78 | 74.7 | 7060 | 720 | | | |
| | 50 | 1/ 300 | 211/62013 | 5 | 6 | 1176 | 978 | 120 | 99.8 | 9800 | 1000 | P.A69 Fig.A-152 56.5kg (59kg) | P.A69 Fig.A-156 61.5kg (64kg) | |
| | | 1/ 375 | 94/36103 | 4 | 4.8 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ∗1/ 450 | 65/29167 | 3.3 | 4 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.A-149**

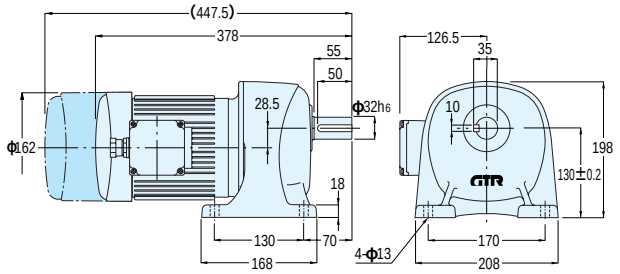
**G3LW-28-5〜25-075E**
CAD Data: G3LW-28-075E
**(G3LV-28-5〜25-075E)**
(CAD Data: G3LV-28-075E)




Round Weight 15kg (17.5kg)

**Fig.A-150**

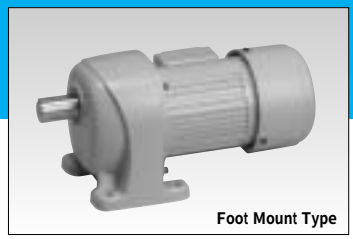
**G3LW-32-30〜100-075E**
CAD Data: G3LW-32-075E
**(G3LV-32-30〜100-075E)**
(CAD Data: G3LV-32-075E)

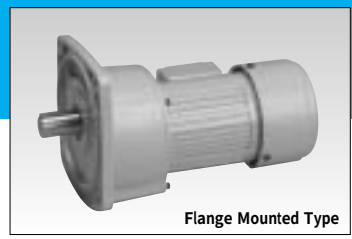


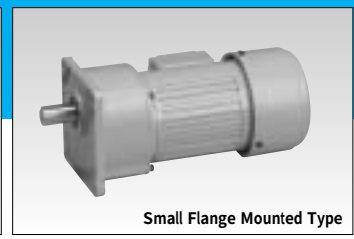

Round Weight 18.5kg (21kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52 | Multipurpose Inverter P.E86〜E92 | Option P.E78〜E92

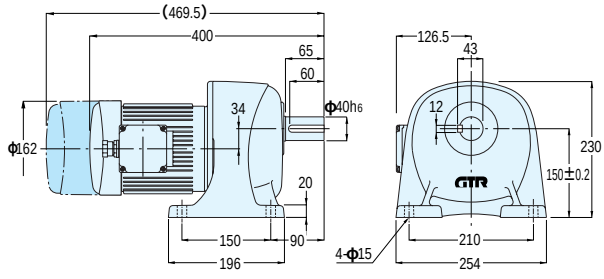

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-151

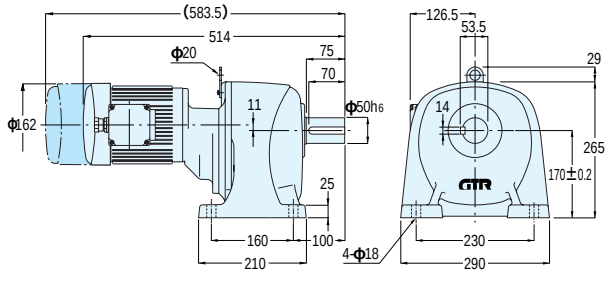
**G3L$^{W}_{G}$-40-100～200-075E**
CAD Data: G3L$^{W}_{G}$-40-075E
**(G3L$^{V}_{H}$-40-100～200-075E)**
(CAD Data: G3L$^{V}_{H}$-40-075E)




Round Weight 25kg (27.5kg)

## Fig.A-152

**G3L$^{W}_{G}$-50-300～450-075E**
CAD Data: G3L$^{W}_{G}$-50-075E
**(G3L$^{V}_{H}$-50-300～450-075E)**
(CAD Data: G3L$^{V}_{H}$-50-075E)

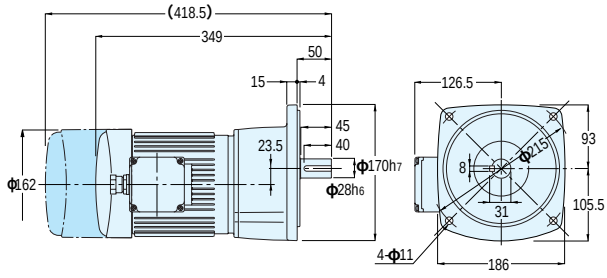



Round Weight 56.5kg (59kg)

# Flange Mounted Type

## Fig.A-153

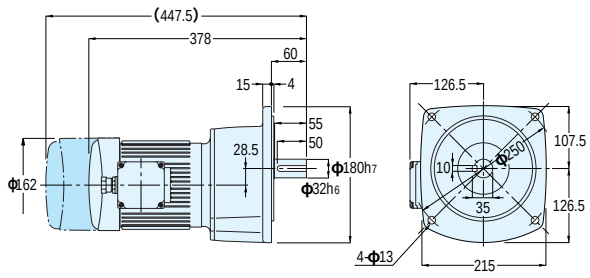
**G3F$^{W}_{G}$-28-5～25-075E**
CAD Data: G3F$^{W}_{G}$-28-075E
**(G3F$^{V}_{H}$-28-5～25-075E)**
(CAD Data: G3F$^{V}_{H}$-28-075E)




Round Weight 15.5kg (18kg)

## Fig.A-154

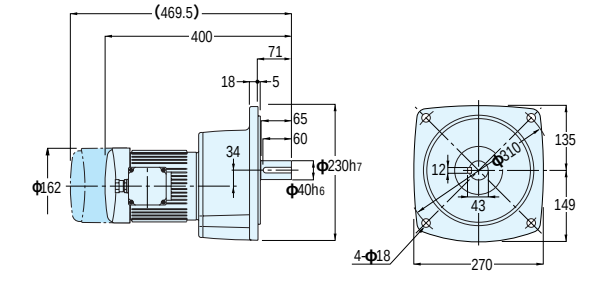
**G3F$^{W}_{G}$-32-30～100-075E**
CAD Data: G3F$^{W}_{G}$-32-075E
**(G3F$^{V}_{H}$-32-30～100-075E)**
(CAD Data: G3F$^{V}_{H}$-32-075E)




Round Weight 19kg (21.5kg)

## Fig.A-155

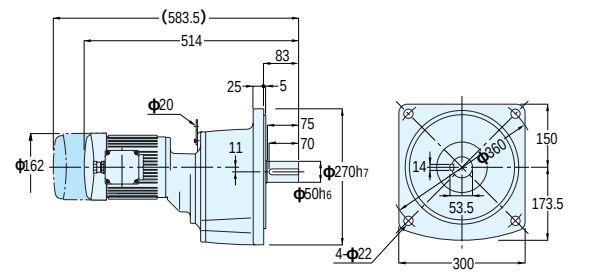
**G3F$^{W}_{G}$-40-100～200-075E**
CAD Data: G3F$^{W}_{G}$-40-075E
**(G3F$^{V}_{H}$-40-100～200-075E)**
(CAD Data: G3F$^{V}_{H}$-40-075E)




Round Weight 26.5kg (29kg)

## Fig.A-156

**G3F$^{W}_{G}$-50-300～450-075E**
CAD Data: G3F$^{W}_{G}$-50-075E
**(G3F$^{V}_{H}$-50-300～450-075E)**
(CAD Data: G3F$^{V}_{H}$-50-075E)




Round Weight 61.5kg (64kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## G3 Series 3-Phase 0.75kW

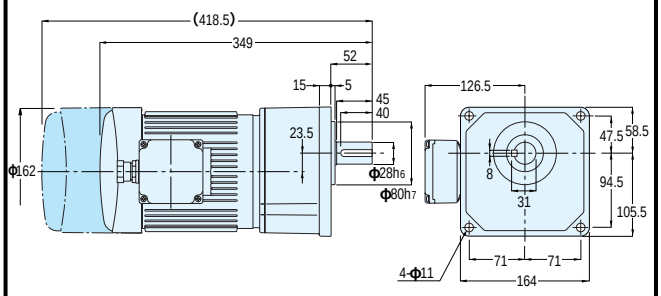
### Small Flange Mounted Type

The values in parentheses in the Dimension Diagram indicate the values of gearmotors with brake.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


**Fig.A-157**

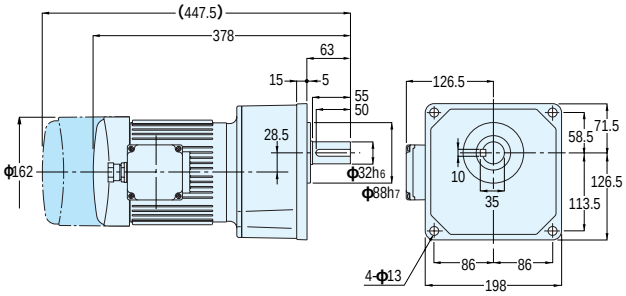
**G3K$^{W}_{G}$-28-5～25-075E**
CAD Data: G3K$^{W}_{G}$-28-075E
**(G3K$^{V}_{H}$-28-5～25-075E)**
(CAD Data: G3K$^{V}_{H}$-28-075E)




Round Weight 15.5kg (18kg)

**Fig.A-158**

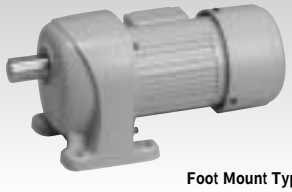
**G3K$^{W}_{G}$-32-30～100-075E**
CAD Data: G3K$^{W}_{G}$-32-075E
**(G3K$^{V}_{H}$-32-30～100-075E)**
(CAD Data: G3K$^{V}_{H}$-32-075E)



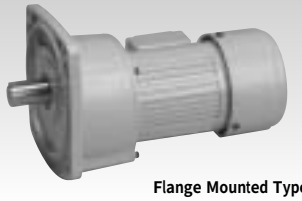

Round Weight 19kg (21.5kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

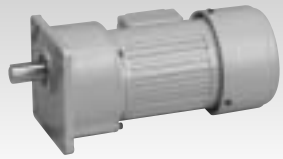

Model Code P.A52
Multipurpose Inverter P.E86～E92
Option P.E78～E92



Foot Mount Type



Flange Mounted Type



Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor

## G3 Series 3-Phase 1.5kW

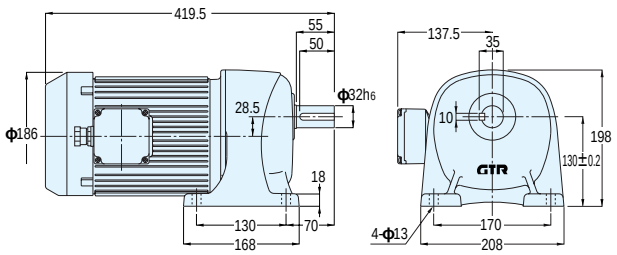
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed Fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LW G | G3FW G | G3KW G |
| 3-phase 1.5kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | P.A72 Fig.A-159 24.5kg | P.A73 Fig.A-162 25kg | P.A74 Fig.A-165 25kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 91 | 75 | 9.3 | 7.7 | 2450 | 250 | | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 136 | 114 | 13.9 | 11.6 | 2840 | 290 | | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 181 | 151 | 18.5 | 15.4 | 3230 | 330 | | | |
| | | 1/ 25 | 9/ 230 | 60 | 72 | 226 | 189 | 23.1 | 19.3 | 3820 | 390 | | | |
| | 40 | 1/ 30 | 1/ 30 | 50 | 60 | 272 | 226 | 27.8 | 23.1 | 5100 | 520 | P.A72 Fig.A-160 31.5kg | P.A73 Fig.A-163 33kg | |
| | | 1/ 40 | 13/ 540 | 37.5 | 45 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | 1/ 50 | 11/ 564 | 30 | 36 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | | | |
| | | 1/ 60 | 91/5400 | 25 | 30 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | 1/ 80 | 13/1080 | 18.8 | 22.5 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | ∗1/ 100 | 11/1128 | 15 | 18 | 724 | 603 | 73.9 | 61.5 | 7060 | 720 | | | |
| | 50 | 1/ 100 | 25/2618 | 15 | 18 | 878 | 732 | 89.6 | 74.7 | 9800 | 1000 | P.A72 Fig.A-161 61kg | P.A73 Fig.A-164 66kg | |
| | | 1/ 120 | 77/8993 | 12.5 | 15 | 1060 | 878 | 108 | 89.6 | 9800 | 1000 | | | |
| | | 1/ 160 | 33/5474 | 9.4 | 11.2 | 1230 | 1170 | 125 | 119 | 9800 | 1000 | | | |
| | | ∗1/ 200 | 30/5831 | 7.5 | 9 | 1230 | 1230 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

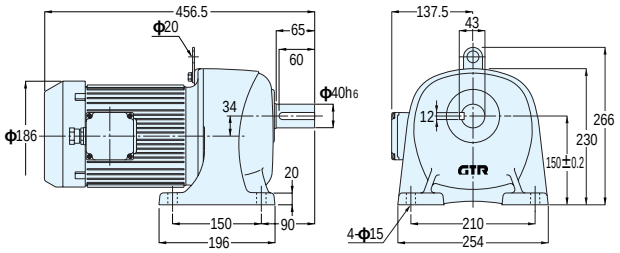
## Foot Mount Type

**Fig.A-159** G3LW G-32-5〜25-150E
CAD Data: G3LW G-32-150E



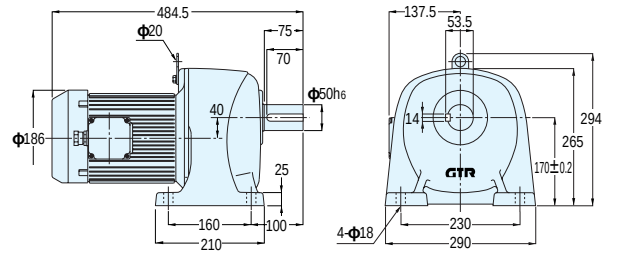

Round Weight 24.5kg

**Fig.A-160** G3LW G-40-30〜100-150E
CAD Data: G3LW G-40-150E




Round Weight 31.5kg

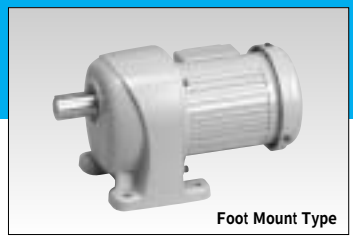
**Fig.A-161** G3LW G-50-100〜200-150E
CAD Data: G3LW G-50-150E

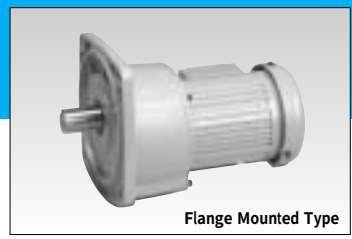


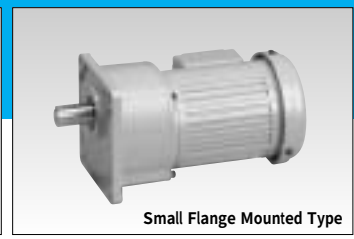

Round Weight 61kg

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52
Multipurpose Inverter P.E86〜E92
Option P.E78〜E92


Foot Mount Type

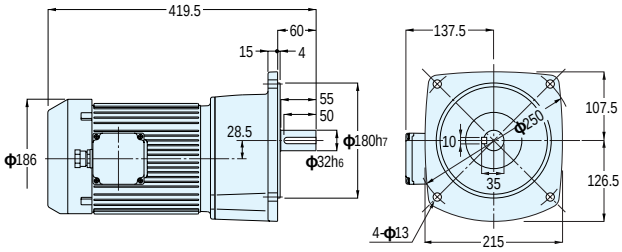

Flange Mounted Type


Small Flange Mounted Type

# Flange Mounted Type

## Fig.A-162 G3F$^{W}_{G}$-32-5～25-150E

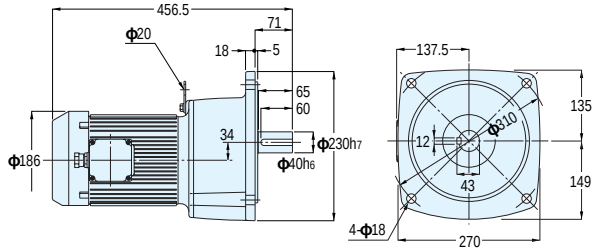
CAD Data: G3F$^{W}_{G}$-32-150E




Round Weight 25kg

## Fig.A-163 G3F$^{W}_{G}$-40-30～100-150E

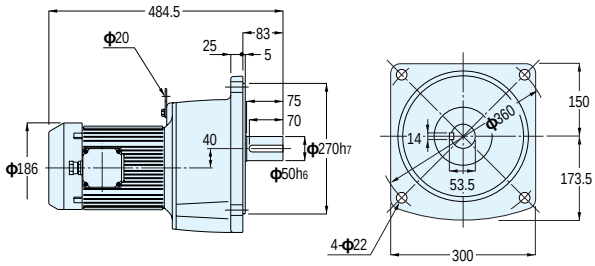
CAD Data: G3F$^{W}_{G}$-40-150E




Round Weight 33kg

## Fig.A-164 G3F$^{W}_{G}$-50-100～200-150E

CAD Data: G3F$^{W}_{G}$-50-150E




Round Weight 66kg

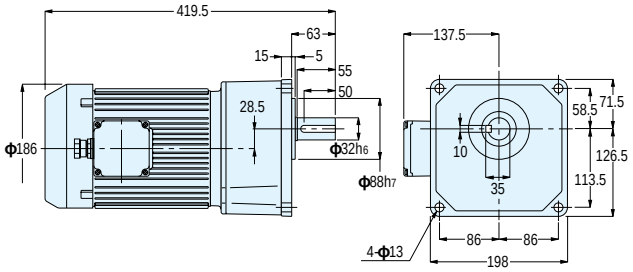
# Water-Resistant Gearmotor

## G3 Series 3-Phase 1.5kW

### Small Flange Mounted Type

**Fig.A-165** G3K$^{W}_{G}$-32-5～25-150E

CAD Data: G3K$^{W}_{G}$-32-150E

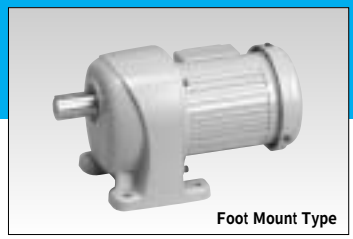


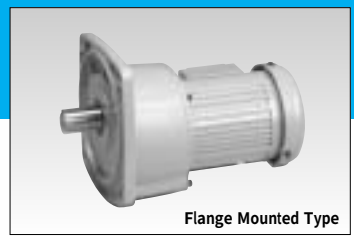

Round Weight 25kg

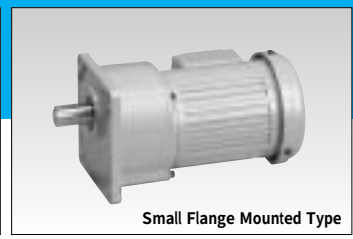
Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52 | Multipurpose Inverter P.E86～E92 | Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor

## G3 Series 3-Phase 2.2kW

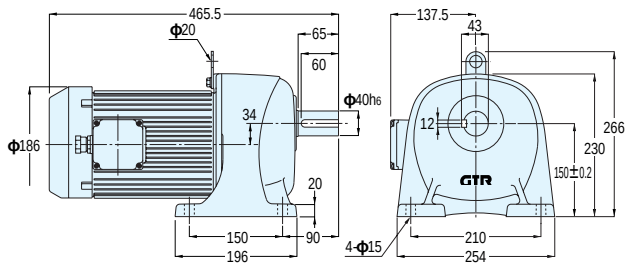
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 2.2kW | 220 | 50/60/60 | 200/200/220 | 9.0/8.6/8.0 | 1410/1690/1710 | B | Totally Enclosed Fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LW | G3FW |
| 3-phase 2.2kW | 40 | 1/ 5 | 7/ 36 | 300 | 360 | 67 | 56 | 6.8 | 5.7 | 2160 | 220 | P.A76 Fig.A-166 34.5kg | P.A77 Fig.A-168 36kg |
| | | 1/ 10 | 7/ 72 | 150 | 180 | 133 | 111 | 13.6 | 11.3 | 3140 | 320 | | |
| | | 1/ 15 | 49/ 720 | 100 | 120 | 200 | 167 | 20.4 | 17 | 3530 | 360 | | |
| | | 1/ 20 | 7/ 144 | 75 | 90 | 266 | 221 | 27.1 | 22.6 | 4020 | 410 | | |
| | | 1/ 25 | 7/ 180 | 60 | 72 | 332 | 277 | 33.9 | 28.3 | 4700 | 480 | | |
| | 50 | 1/ 30 | 5/ 154 | 50 | 60 | 399 | 332 | 40.7 | 33.9 | 6960 | 710 | P.A76 Fig.A-167 64.5kg | P.A77 Fig.A-169 69.5kg |
| | | 1/ 40 | 399/15488 | 37.5 | 45 | 515 | 429 | 52.6 | 43.8 | 7250 | 740 | | |
| | | 1/ 50 | 399/20240 | 30 | 36 | 644 | 537 | 65.7 | 54.8 | 8620 | 880 | | |
| | | 1/ 60 | 49/ 2904 | 25 | 30 | 773 | 644 | 78.9 | 65.7 | 9800 | 1000 | | |
| | | 1/ 80 | 49/ 3795 | 18.8 | 22.5 | 1029 | 858 | 105 | 87.6 | 9800 | 1000 | | |
| | | 1/ 100 | 21/ 2116 | 15 | 18 | 1230 | 1080 | 125 | 110 | 9800 | 1000 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

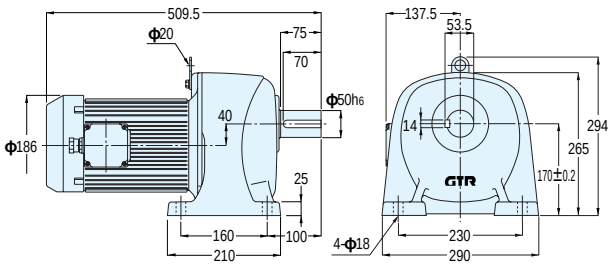
## Foot Mount Type

**Fig.A-166** G3LW-40-5～25-220E
CAD Data: G3LW-40-220E




Round Weight 34.5kg

**Fig.A-167** G3LW-50-30～100-220E
CAD Data: G3LW-50-220E



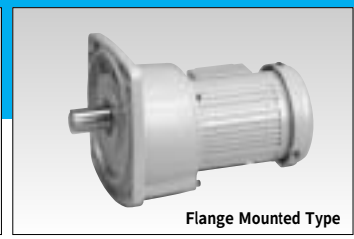

Round Weight 64.5kg

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.A52 | Multipurpose Inverter P.E86～E92 | Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

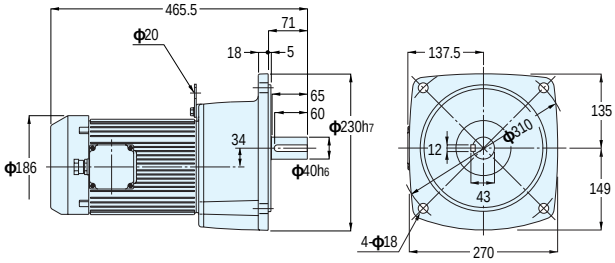

Foot Mount Type


Flange Mounted Type

# Flange Mounted Type

## Fig.A-168 G3F$^{W}_{G}$-40-5〜25-220E

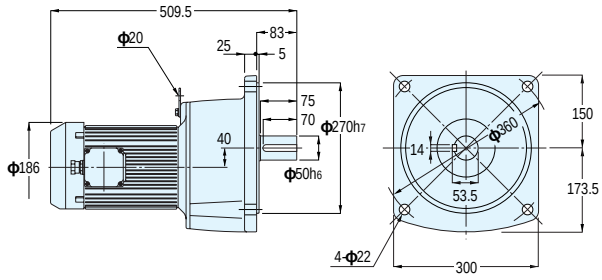
CAD Data: G3F$^{W}_{G}$-40-220E




Round Weight 36kg

## Fig.A-169 G3F$^{W}_{G}$-50-30〜100-220E

CAD Data: G3F$^{W}_{G}$-50-220E




Round Weight 69.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Parallel Shaft

# Gearmotor with Clutch and Brake

## (Standard Type/Heavy Duty Type)

## Model • Type Designation
## Standard Model Lineup

GTR Gearmotor

G3 Series

### ■Standard Specifications G3 Series (With glutch and Brake)

| | | |
|---|---|---|
| Motor Part | Number of phase | 3-Phase |
| | Capacity | 0.1kW～0.75kW (Heavy Duty 0.2kW～0.75kW) |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed Fan-cooled (Totally Enclosed non-Lentilated for 0.1kW) |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast |
| Ambient Conditions | Ambient Temperature | −10°C～40°C |
| | Ambient Humidity | 85%max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Parallel Shaft)

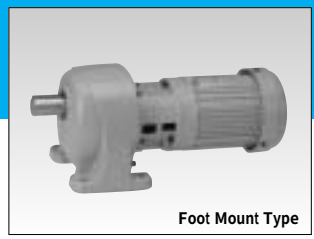
G3 series gearmotors with Clutch and Brake are classified by codes as shown below. Specify these codes in your inquiry and order.

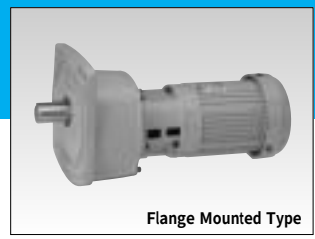
| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| G3 | L | E | – 28 | – 50 | – T040 | A | | | |
| G3 | F | E | – 40 | – 200 | – 075 | W | | X | |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

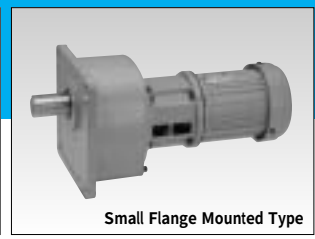
| | |
|---|---|
| ①Series Name | G3 : G3 Series (Parallel Shaft) |
| ②Classification by Mount Form | L : Foot Mount |
| | F : Flange Mount |
| | K : Small Flange Mount (Frame No.18～32) |
| ③Classification by Motor Type | E : With Clutch/Brake |
| ④Frame Number and Diameter of Output Shaft Diameter of Output Shaft | Output Shaft Diameter |
| ⑤Reduction Ratio | 5:1／5～200:1／200 |
| ⑥Motor Type and Capacity | T010 : 3-phase 0.1 kW |
| | T020 : 3-phase 0.2 kW |
| | T040 : 3-phase 0.4 kW |
| | 075 : 3-phase 0.75kW |
| ⑦⑧Option<br>Note 1: When terminal box is required, please indicate "A" at the end of motor capacity.for 0.1kW and 0.2kW type. For 0.4kW type, with "A" box is the standard, so please indecate "A" at the end of motor capacity. (For example, G3LE-22-10-T040A, A is required) 0.75kW type automatically leads to come with terminal box, so there is not "A" for 0.75kW as option. | Blank : 3-phase : 200V／50Hz, 200V／60Hz, 220V／60Hz<br>0.1kW～0.2kW Without Terminal Box (note 1)<br>0.4kW～0.75kW With Terminal Box |
| | W : 3-phase : 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz<br>0.1kW～0.2kW Without Terminal Box (note 1)<br>0.4kW～0.75kW With Terminal Box |
| | A : Terminal Box (For 0.1kW and 0.2kW) |
| ⑨Auxiliary Mark | Blank : Standard Specifications |
| | X : Mark for Additional Specs. |
| ⑩Specification Code<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Blank : Standard Specifications |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard Type 〈GT-PACK〉 Gearmotor with Clutch and Brake G3LE・G3FE G3KE | 3-Phase 0.1kW | 18 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | 1/30 | 1/40 | 1/50 |
| | | 22 | 1/60 | 1/80 | 1/100 | 1/120 | 1/160 | 1/200 | | |
| | 3-Phase 0.2kW | 18 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | | | |
| | | 22 | 1/30 | 1/40 | 1/50 | 1/60 | 1/80 | 1/100 | | |
| | | 28 | 1/100 | 1/120 | 1/160 | 1/200 | | | | |
| | 3-Phase 0.4kW | 22 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | | | |
| | | 28 | 1/30 | 1/40 | 1/50 | 1/60 | 1/80 | 1/100 | | |
| | | 32 | 1/100 | 1/120 | 1/160 | 1/200 | | | | |
| | 3-Phase 0.75kW | 28 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | | | |
| | | 32 | 1/30 | 1/40 | 1/50 | 1/60 | 1/80 | 1/100 | | |
| | | 40 | 1/100 | 1/120 | 1/160 | 1/200 | | | | |
| Heavy Duty Type 〈GT-PACK〉 Gearmotor with Clutch and Brake G3LE・G3FE G3KE | 3-Phase 0.2kW | 22 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | | | |
| | | 28 | 1/30 | 1/40 | 1/50 | 1/60 | 1/80 | | | |
| | | 32 | 1/100 | 1/120 | 1/160 | 1/200 | | | | |
| | 3-Phase 0.4kW | 28 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | | | |
| | | 32 | 1/30 | 1/40 | 1/50 | 1/60 | 1/80 | | | |
| | | 40 | 1/100 | 1/120 | 1/160 | 1/200 | | | | |
| | 3-Phase 0.75kW | 32 | 1/5 | 1/10 | 1/15 | 1/20 | 1/25 | | | |
| | | 40 | 1/30 | 1/40 | 1/50 | 1/60 | 1/80 | | | |
| | | 50 | 1/100 | 1/120 | 1/160 | 1/200 | | | | |

Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) ▭ The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Parallel Shaft

# Gearmotor with Clutch and Brake (Standard Type)

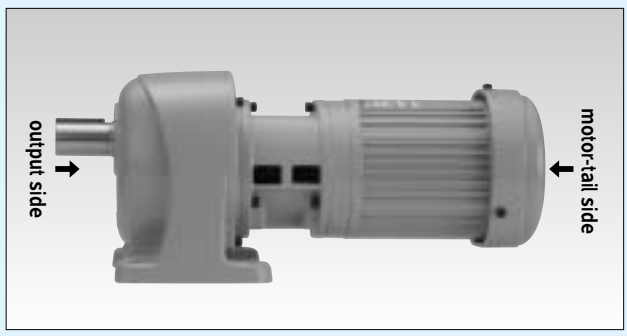
## Performance Table
## Dimension diagram

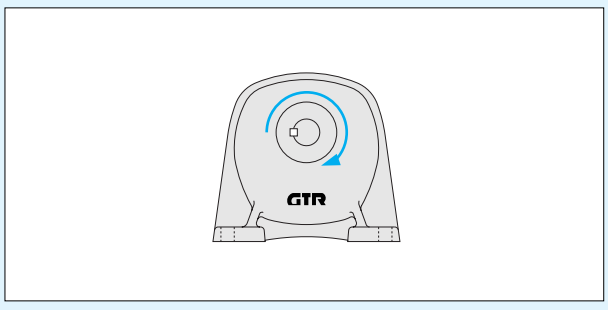
G3 Series

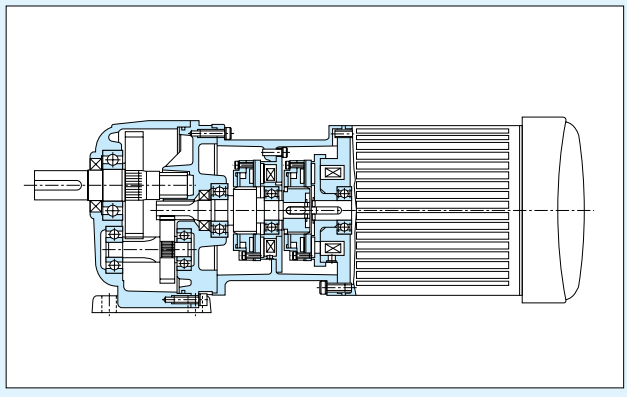
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The Shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E41, the shaft rotates clock wise when viewing from output side. (Reter to the diagram shown below.)



# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.1kW Standard Type

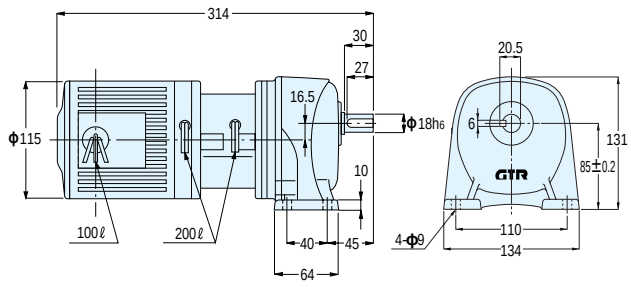
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.1kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 3 | 2.5 | 0.31 | 0.26 | 588 | 60 | P.A84 Fig.A-170 7kg | P.A85 Fig.A-172 7.5kg | P.A85 Fig.A-174 7.5kg |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 9.1 | 7.5 | 0.93 | 0.77 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 12 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 15 | 12.7 | 1.5 | 1.3 | 1270 | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 50 | 60 | 19 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 37.5 | 45 | 24 | 19.6 | 2.4 | 2 | 1470 | 150 | | | |
| | | 1/ 50 | 7/ 351 | 30 | 36 | 29 | 24.5 | 3 | 2.5 | 1570 | 160 | | | |
| | 22 | 1/ 60 | 11/ 684 | 25 | 30 | 35 | 29.4 | 3.6 | 3 | 2160 | 220 | P.A84 Fig.A-171 8.5kg | P.A85 Fig.A-173 9kg | P.A85 Fig.A-175 9kg |
| | | 1/ 80 | 21/ 1634 | 18.8 | 22.5 | 47 | 39.2 | 4.8 | 4 | 2450 | 250 | | | |
| | | 1/ 100 | 7/ 684 | 15 | 18 | 59 | 49 | 6 | 5 | 2450 | 250 | | | |
| | | 1/ 120 | 147/ 17974 | 12.5 | 15 | 71 | 58.8 | 7.2 | 6 | 2450 | 250 | | | |
| | | 1/ 160 | 21/ 3268 | 9.4 | 11.2 | 94 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | 1/ 200 | 21/ 4085 | 7.5 | 9 | 117 | 98 | 11.9 | 10 | 2450 | 250 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

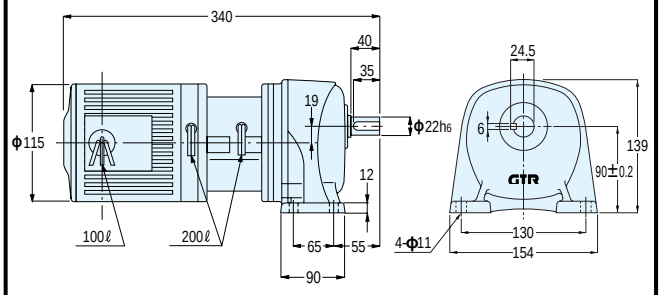
## Foot Mount Type

**Fig.A-170** G3LE-18-5～50-T010
CAD Data: G3LE-18-T010




Round Weight 7kg

**Fig.A-171** G3LE-22-60～200-T010
CAD Data: G3LE-22-T010

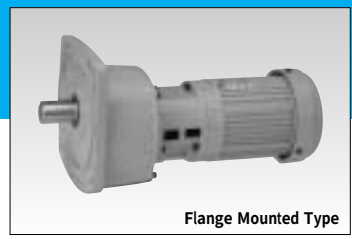


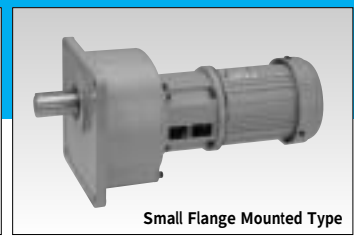

Round Weight 8.5kg

Model Code P.A80

Option P.E78～E79

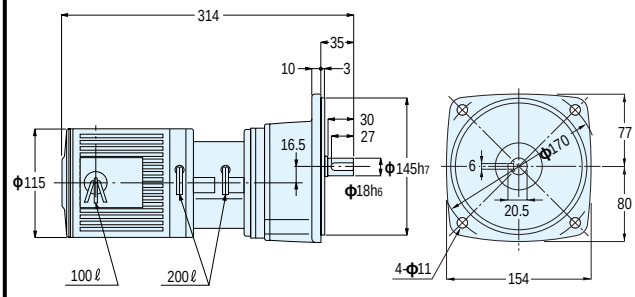

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

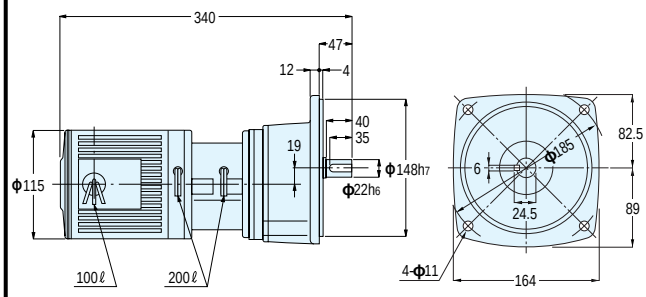
## Flange Mounted Type

**Fig.A-172** G3FE-18-5～50-T010
CAD Data: G3FE-18-T010




Round Weight 7.5kg

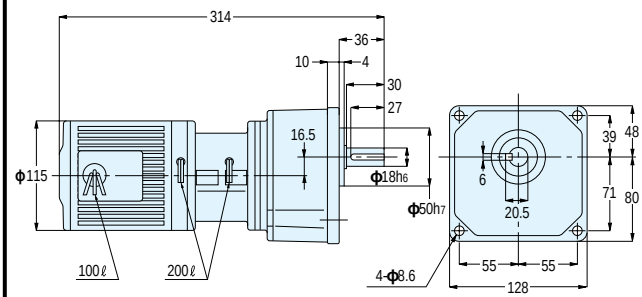
**Fig.A-173** G3FE-22-60～200-T010
CAD Data: G3FE-22-T010




Round Weight 9kg

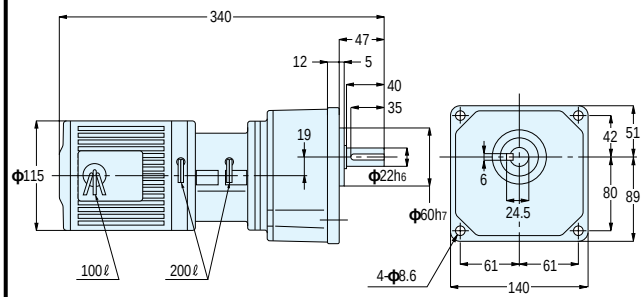
## Small Flange Mounted Type

**Fig.A-174** G3KE-18-5～50-T010
CAD Data: G3KE-18-T010




Round Weight 7.5kg

**Fig.A-175** G3KE-22-60～200-T010
CAD Data: G3KE-22-T010




Round Weight 9kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.2kW Standard Type

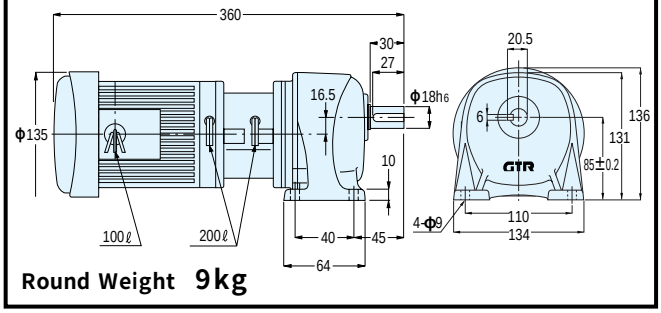
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.2kW | 18 | 1/ 5 | 33/ 164 | 300 | 360 | 6.1 | 5 | 0.62 | 0.51 | 588 | 60 | P.A86 Fig.A-176 9kg | P.A87 Fig.A-179 9.5kg | P.A87 Fig.A-182 9.5kg |
| | | 1/ 10 | 77/ 779 | 150 | 180 | 11.8 | 9.8 | 1.2 | 1 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 100 | 120 | 18.6 | 14.7 | 1.9 | 1.5 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 75 | 90 | 24.5 | 20.6 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 60 | 72 | 30.4 | 25.5 | 3.1 | 2.6 | 1270 | 130 | | | |
| | 22 | 1/ 30 | 7/ 216 | 50 | 60 | 36.3 | 30.4 | 3.7 | 3.1 | 1760 | 180 | P.A86 Fig.A-177 10kg | P.A87 Fig.A-180 10.5kg | P.A87 Fig.A-183 10.5kg |
| | | 1/ 40 | 91/ 3600 | 37.5 | 45 | 47 | 39.2 | 4.8 | 4 | 1860 | 190 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 58.8 | 49 | 6 | 5 | 1960 | 200 | | | |
| | | 1/ 60 | 637/ 39600 | 25 | 30 | 70.6 | 58.8 | 7.2 | 6 | 2160 | 220 | | | |
| | | 1/ 80 | 91/ 7200 | 18.8 | 22.5 | 94.1 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | ∗1/ 100 | 11/ 1080 | 15 | 18 | 97 | 80.4 | 9.9 | 8.2 | 2450 | 250 | | | |
| | 28 | 1/ 100 | 13/ 1353 | 15 | 18 | 117 | 98 | 11.9 | 10 | 2840 | 290 | P.A86 Fig.A-178 12kg | P.A87 Fig.A-181 12.5kg | P.A87 Fig.A-184 12.5kg |
| | | 1/ 120 | 91/ 11000 | 12.5 | 15 | 140 | 117 | 14.3 | 11.9 | 3330 | 340 | | | |
| | | 1/ 160 | 1/ 165 | 9.4 | 11.2 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | 1/ 200 | 7/ 1375 | 7.5 | 9 | 234 | 195 | 23.9 | 19.9 | 3430 | 350 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

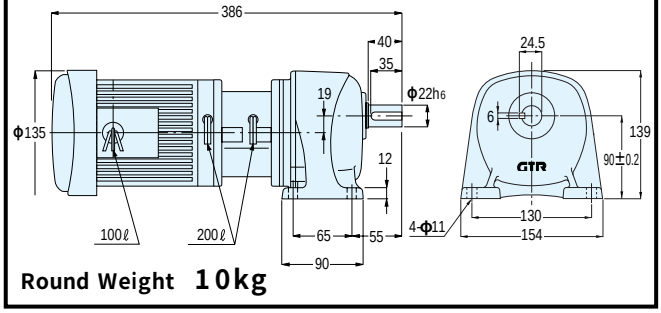
## Foot Mount Type

### Fig.A-176 G3LE-18-5～25-T020
CAD Data: G3LE-18-T020



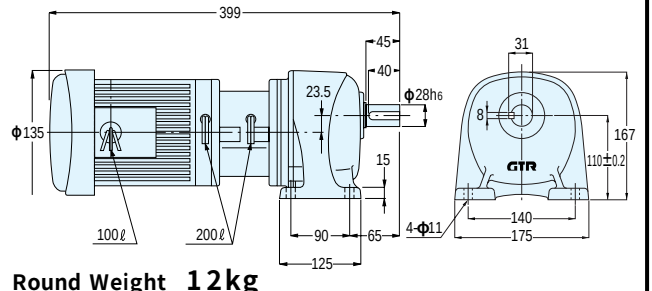

Round Weight 9kg

### Fig.A-177 G3LE-22-30～100-T020
CAD Data: G3LE-22-T020




Round Weight 10kg

### Fig.A-178 G3LE-28-100～200-T020
CAD Data: G3LE-28-T020

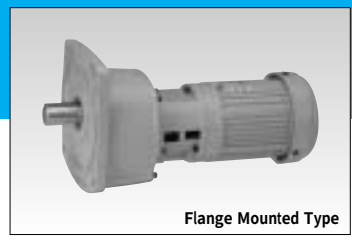


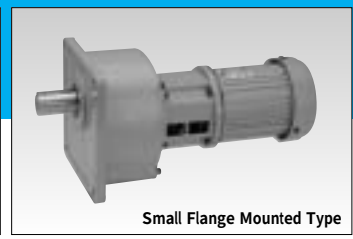

Round Weight 12kg

Model Code P.A80
Option P.E78～E79

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

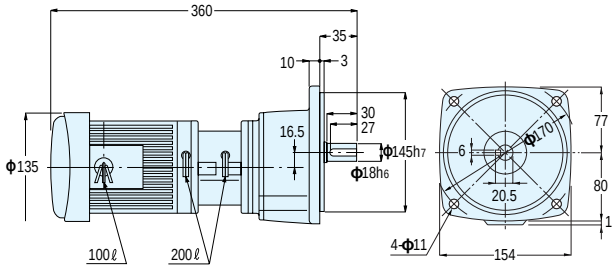

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

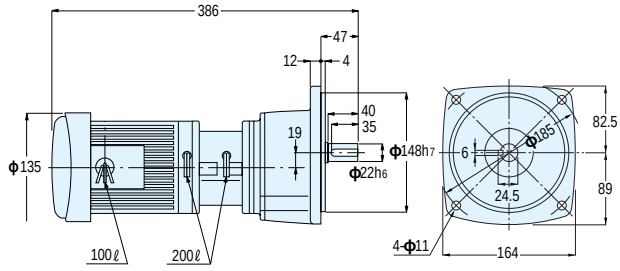
## Flange Mounted Type

### Fig.A-179 G3FE-18-5～25-T020
CAD Data: G3FE-18-T020



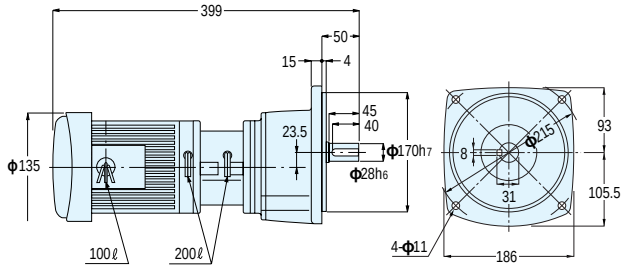

Round Weight 9.5kg

### Fig.A-180 G3FE-22-30～100-T020
CAD Data: G3FE-22-T020




Round Weight 10.5kg

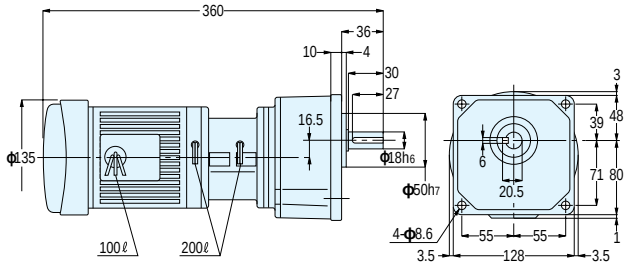
### Fig.A-181 G3FE-28-100～200-T020
CAD Data: G3FE-28-T020




Round Weight 12.5kg

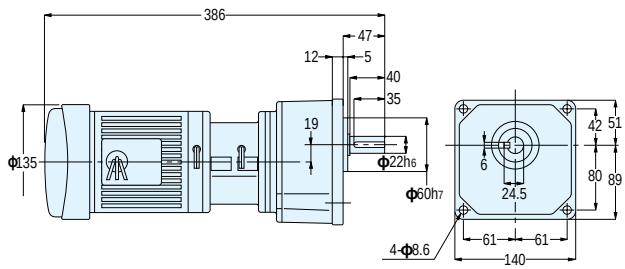
## Small Flange Mounted Type

### Fig.A-182 G3KE-18-5～25-T020
CAD Data: G3KE-18-T020



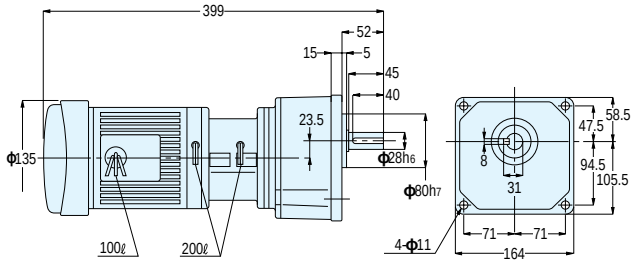

Round Weight 9.5kg

### Fig.A-183 G3KE-22-30～100-T020
CAD Data: G3KE-22-T020




Round Weight 10.5kg

### Fig.A-184 G3KE-28-100～200-T020
CAD Data: G3KE-28-T020




Round Weight 12.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.4kW Standard Type

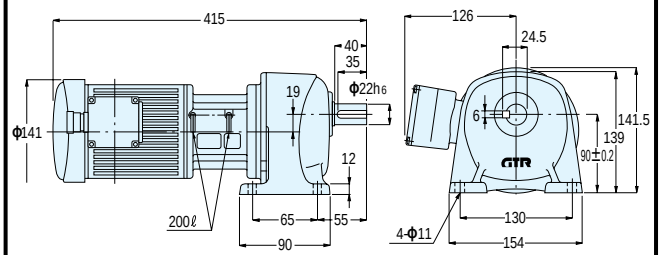
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.4kW | 22 | 1/ 5 | 7/ 34 | 300 | 360 | 12 | 10 | 1.2 | 1 | 882 | 90 | P.A88 Fig.A-185 12.5kg | P.A89 Fig.A-188 13kg | P.A89 Fig.A-191 13kg |
| | | 1/ 10 | 7/ 68 | 150 | 180 | 25 | 21 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 15 | 49/ 748 | 100 | 120 | 36 | 30 | 3.7 | 3.1 | 1370 | 140 | | | |
| | | 1/ 20 | 7/ 136 | 75 | 90 | 48 | 40 | 4.9 | 4.1 | 1470 | 150 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 61 | 50 | 6.2 | 5.1 | 1670 | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 50 | 60 | 73 | 61 | 7.4 | 6.2 | 2550 | 260 | P.A88 Fig.A-186 14.5kg | P.A89 Fig.A-189 15kg | P.A89 Fig.A-192 15kg |
| | | 1/ 40 | 221/ 8610 | 37.5 | 45 | 94 | 78 | 9.6 | 8 | 2840 | 290 | | | |
| | | 1/ 50 | 187/ 9030 | 30 | 36 | 117 | 98 | 11.9 | 10 | 3140 | 320 | | | |
| | | 1/ 60 | 169/ 9840 | 25 | 30 | 140 | 117 | 14.3 | 11.9 | 3430 | 350 | | | |
| | | 1/ 80 | 65/ 5166 | 18.8 | 22.5 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | ∗1/ 100 | 55/ 5418 | 15 | 18 | 193 | 161 | 19.7 | 16.4 | 3430 | 350 | | | |
| | 32 | 1/ 100 | 7/ 688 | 15 | 18 | 234 | 195 | 23.9 | 19.9 | 4900 | 500 | P.A88 Fig.A-187 17.5kg | P.A89 Fig.A-190 18kg | P.A89 Fig.A-193 18kg |
| | | 1/ 120 | 77/ 9360 | 12.5 | 15 | 281 | 234 | 28.7 | 23.9 | 5880 | 600 | | | |
| | | 1/ 160 | 21/ 3328 | 9.4 | 11.2 | 374 | 313 | 38.2 | 31.9 | 5880 | 600 | | | |
| | | 1/ 200 | 189/ 38272 | 7.5 | 9 | 431 | 390 | 44 | 39.8 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

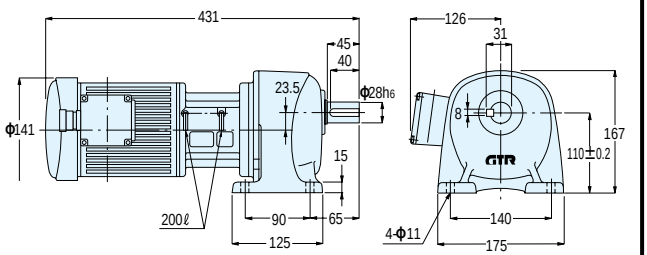
## Foot Mount Type

**Fig.A-185** G3LE-22-5〜25-T040A
CAD Data: G3LE-22-T040A



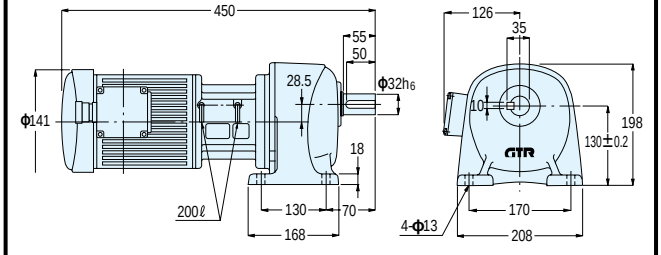

Round Weight 12.5kg

**Fig.A-186** G3LE-28-30〜100-T040A
CAD Data: G3LE-28-T040A




Round Weight 14.5kg

**Fig.A-187** G3LE-32-100〜200-T040A
CAD Data: G3LE-32-T040A

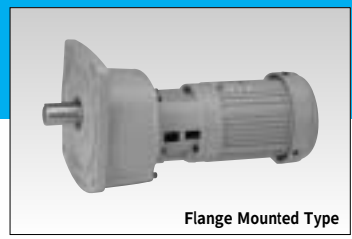


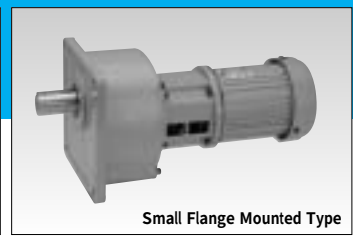

Round Weight 17.5kg

Model Code P.A80

Option P.E78〜E79

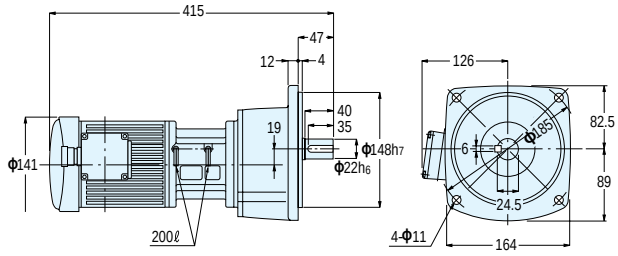

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

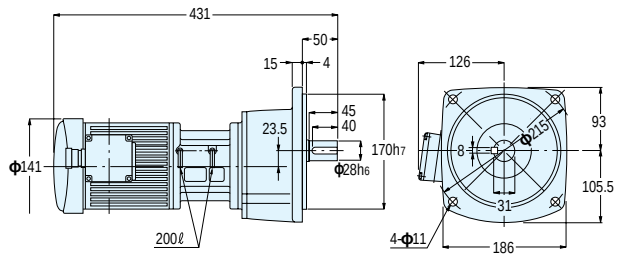
## Flange Mounted Type

### Fig.A-188 G3FE-22-5～25-T040A
CAD Data: G3FE-22-T040A



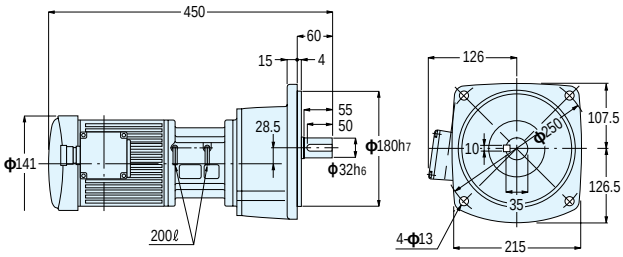

Round Weight 13kg

### Fig.A-189 G3FE-28-30～100-T040A
CAD Data: G3FE-28-T040A




Round Weight 15kg

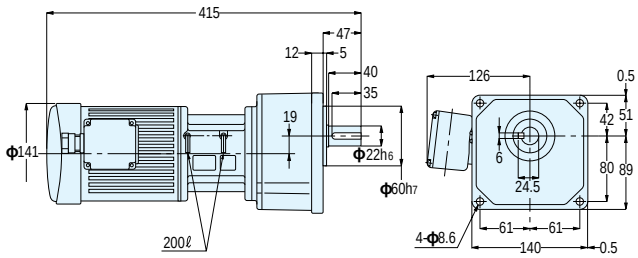
### Fig.A-190 G3FE-32-100～200-T040A
CAD Data: G3FE-32-T040A




Round Weight 18kg

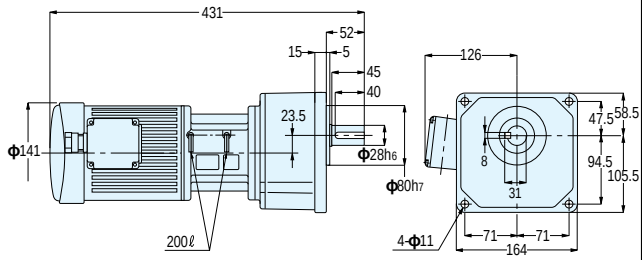
## Small Flange Mounted Type

### Fig.A-191 G3KE-22-5～25-T040A
CAD Data: G3KE-22-T040A



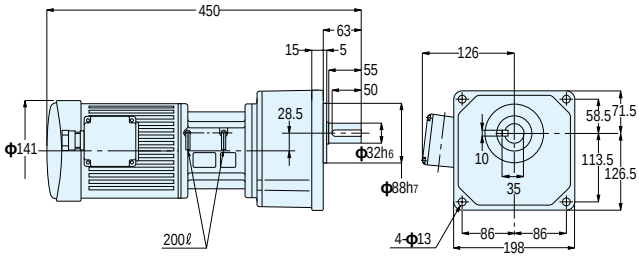

Round Weight 13kg

### Fig.A-192 G3KE-28-30～100-T040A
CAD Data: G3KE-28-T040A




Round Weight 15kg

### Fig.A-193 G3KE-32-100～200-T040A
CAD Data: G3KE-32-T040A




Round Weight 18kg

# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.75kW Standard Type

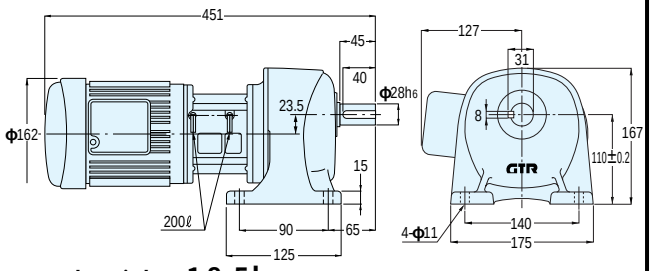
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.75kW | 28 | 1/ 5 | 91/ 459 | 300 | 360 | 23 | 19 | 2.3 | 1.9 | 1270 | 130 | P.A90 Fig.A-194 18.5kg | P.A91 Fig.A-197 19kg | P.A91 Fig.A-200 19kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | | | |
| | | 1/ 15 | 91/ 1360 | 100 | 120 | 68 | 57 | 6.9 | 5.8 | 2160 | 220 | | | |
| | | 1/ 20 | 5/ 102 | 75 | 90 | 91 | 75 | 9.3 | 7.7 | 2350 | 240 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 114 | 94 | 11.6 | 9.6 | 2450 | 250 | | | |
| | 32 | 1/ 30 | 3/ 92 | 50 | 60 | 136 | 114 | 13.9 | 11.6 | 4020 | 410 | P.A90 Fig.A-195 22kg | P.A91 Fig.A-198 22.5kg | P.A91 Fig.A-201 22.5kg |
| | | 1/ 40 | 13/ 516 | 37.5 | 45 | 175 | 146 | 17.9 | 14.9 | 4210 | 430 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 220 | 183 | 22.4 | 18.7 | 4610 | 470 | | | |
| | | 1/ 60 | 13/ 774 | 25 | 30 | 264 | 220 | 26.9 | 22.4 | 5490 | 560 | | | |
| | | 1/ 80 | 13/ 1032 | 18.8 | 22.5 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | ＊1/ 100 | 11/ 1080 | 15 | 18 | 362 | 302 | 36.9 | 30.8 | 5880 | 600 | | | |
| | 40 | 1/ 100 | 91/ 9000 | 15 | 18 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | P.A90 Fig.A-196 28.5kg | P.A91 Fig.A-199 30kg | |
| | | 1/ 120 | 77/ 9400 | 12.5 | 15 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | 1/ 160 | 9/ 1400 | 9.4 | 11.2 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | 1/ 200 | 9/ 1750 | 7.5 | 9 | 764 | 732 | 78 | 74.7 | 7060 | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

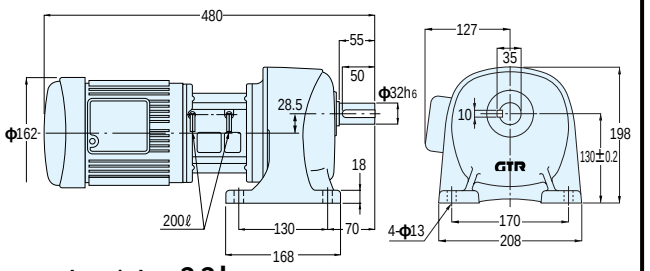
## Foot Mount Type

**Fig.A-194** G3LE-28-5〜25-075
CAD Data: G3LE-28-075



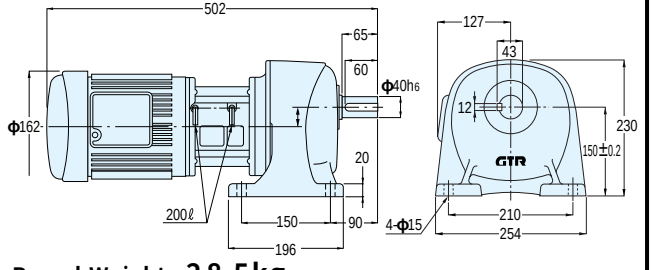

Round Weight 18.5kg

**Fig.A-195** G3LE-32-30〜100-075
CAD Data: G3LE-32-075




Round Weight 22kg

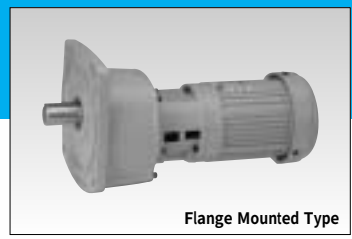
**Fig.A-196** G3LE-40-100〜200-075
CAD Data: G3LE-40-075

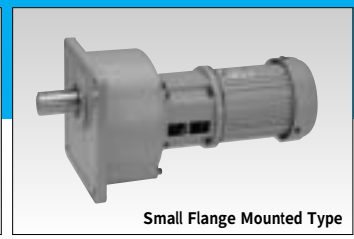



Round Weight 28.5kg

Model Code P.A80
Option P.E78〜E79

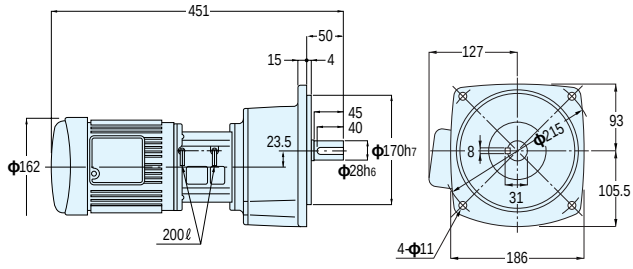

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

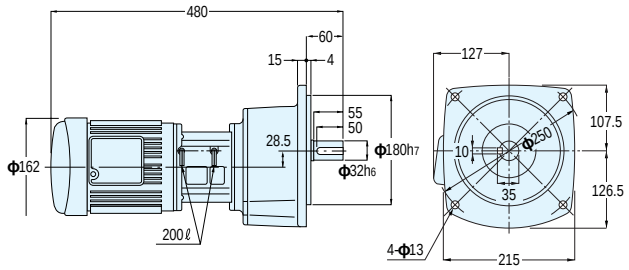
## Flange Mounted Type

### Fig.A-197 G3FE-28-5～25-075
CAD Data: G3FE-28-075



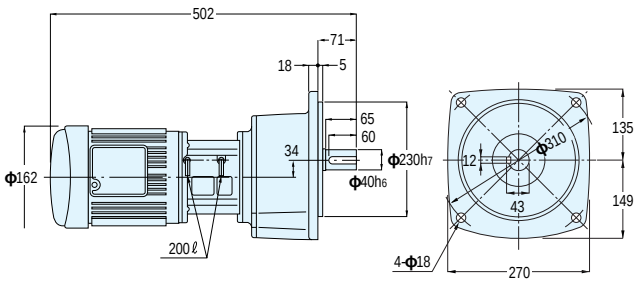

Round Weight 19kg

### Fig.A-198 G3FE-32-30～100-075
CAD Data: G3FE-32-075




Round Weight 22.5kg

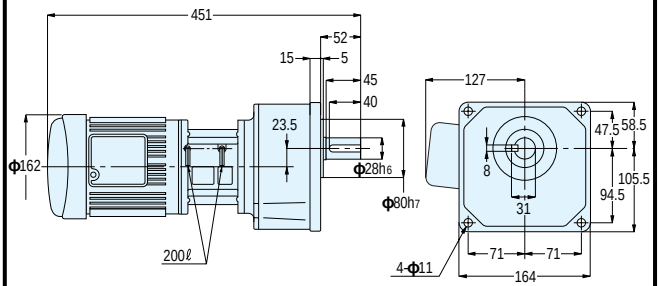
### Fig.A-199 G3FE-40-100～200-075
CAD Data: G3FE-40-075




Round Weight 30kg

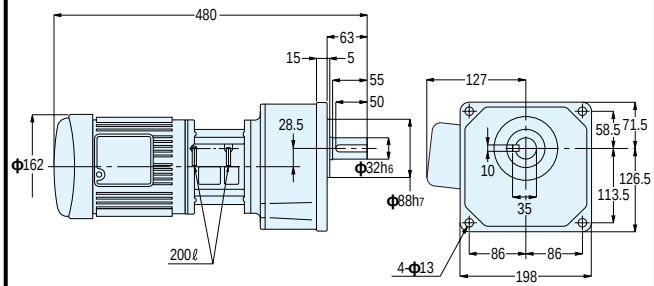
## Small Flange Mounted Type

### Fig.A-200 G3KE-28-5～25-075
CAD Data: G3KE-28-075




Round Weight 19kg

### Fig.A-201 G3KE-32-30～100-075
CAD Data: G3KE-32-075




Round Weight 22.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Parallel Shaft

# Gearmotor with Clutch and Brake (Heavy duty Type)

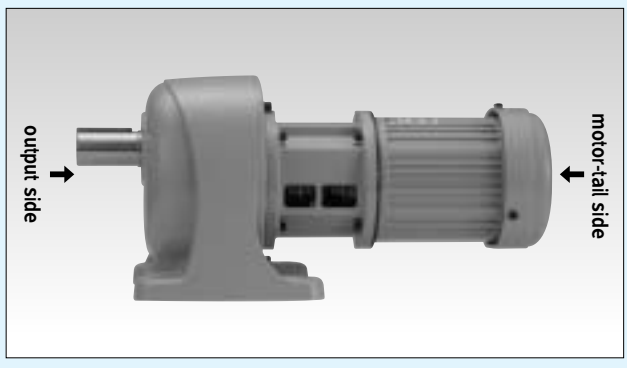
## Performance Table
## Dimension diagram

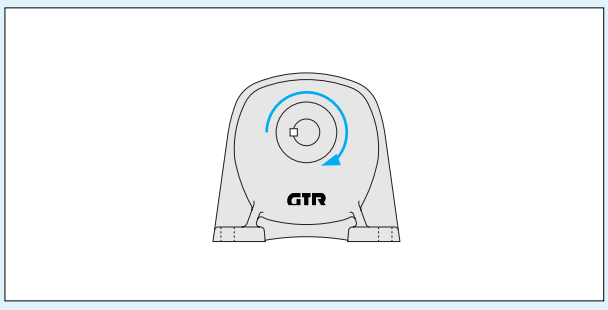
G3 Series

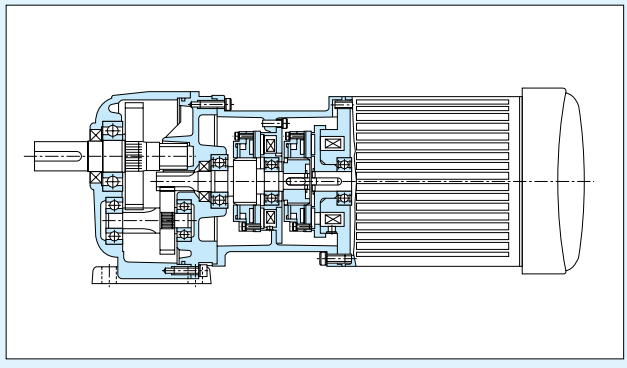
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The Shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E41, the shaft rotates clock wise when viewing from output side. (Reter to the diagram shown below.)



# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.2kW Heavy duty type

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

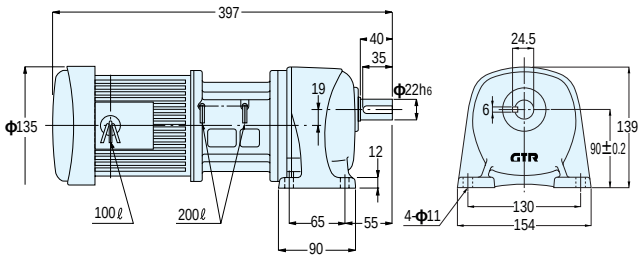
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.2kW | 22 | 1/ 5 | 7/ 34 | 300 | 360 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | P.A94 Fig.A-202 10.5kg | P.A95 Fig.A-205 11kg | P.A95 Fig.A-208 11kg |
| | | 1/ 10 | 7/ 68 | 150 | 180 | 11.8 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 15 | 49/ 748 | 100 | 120 | 18.6 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 20 | 7/ 136 | 75 | 90 | 24.5 | 20.6 | 2.5 | 2.1 | 1470 | 150 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 30.4 | 25.5 | 3.1 | 2.6 | 1670 | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 50 | 60 | 36.3 | 30.4 | 3.7 | 3.1 | 2550 | 260 | P.A94 Fig.A-203 12.5kg | P.A95 Fig.A-206 13kg | P.A95 Fig.A-209 13kg |
| | | 1/ 40 | 221/ 8610 | 37.5 | 45 | 47 | 39.2 | 4.8 | 4 | 2840 | 290 | | | |
| | | 1/ 50 | 187/ 9030 | 30 | 36 | 58.8 | 49 | 6 | 5 | 3140 | 320 | | | |
| | | 1/ 60 | 169/ 9840 | 25 | 30 | 70.6 | 58.8 | 7.2 | 6 | 3430 | 350 | | | |
| | | 1/ 80 | 65/ 5166 | 18.8 | 22.5 | 94.1 | 78.4 | 9.6 | 8 | 3430 | 350 | | | |
| | 32 | 1/ 100 | 7/ 688 | 15 | 18 | 117 | 98 | 11.9 | 10 | 4900 | 500 | P.A94 Fig.A-204 16.5kg | P.A95 Fig.A-207 17kg | P.A95 Fig.A-210 17kg |
| | | 1/ 120 | 77/ 9360 | 12.5 | 15 | 140 | 117 | 14.3 | 11.9 | 5880 | 600 | | | |
| | | 1/ 160 | 21/ 3328 | 9.4 | 11.2 | 187 | 156 | 19.1 | 15.9 | 5880 | 600 | | | |
| | | 1/ 200 | 189/38272 | 7.5 | 9 | 234 | 195 | 23.9 | 19.9 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

### Fig.A-202 G3LE-22-5〜25-T020

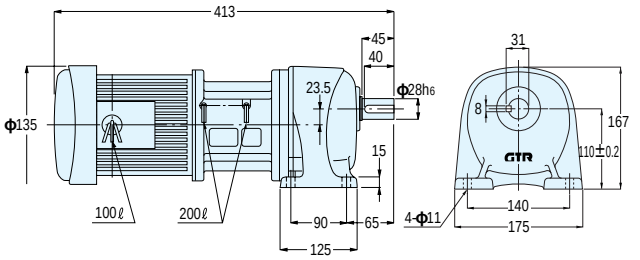
CAD Data: G3LE-22-T020K




Round Weight 10.5kg

### Fig.A-203 G3LE-28-30〜80-T020

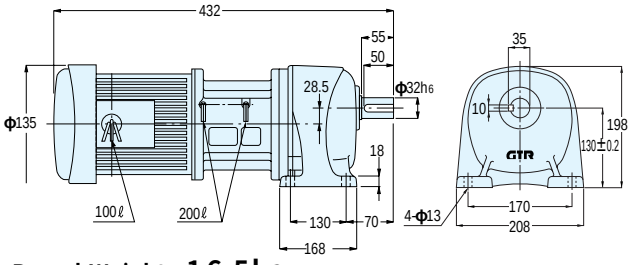
CAD Data: G3LE-28-T020K




Round Weight 12.5kg

### Fig.A-204 G3LE-32-100〜200-T020

CAD Data: G3LE-32-T020K

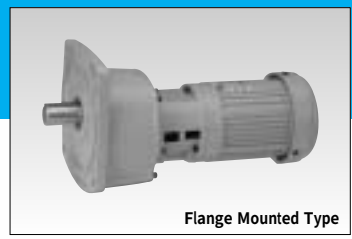


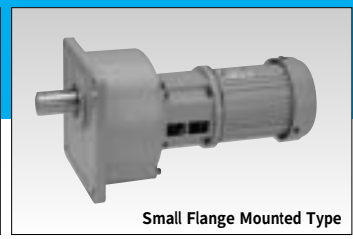

Round Weight 16.5kg

Model Code P.A80

Option P.E78〜E79

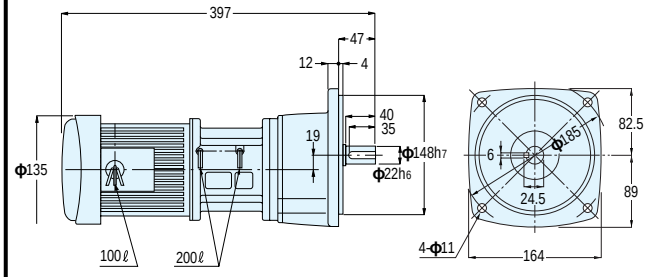

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

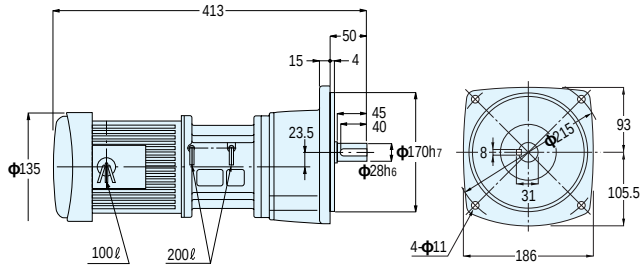
## Flange Mounted Type

### Fig.A-205 G3FE-22-5～25-T020
CAD Data: G3FE-22-T020K



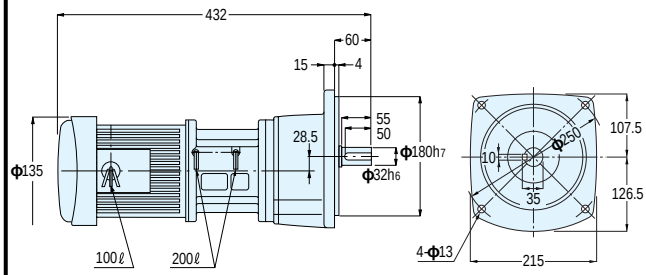

Round Weight 11kg

### Fig.A-206 G3FE-28-30～80-T020
CAD Data: G3FE-28-T020K




Round Weight 13kg

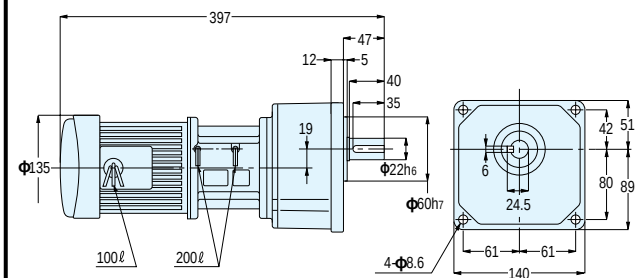
### Fig.A-207 G3FE-32-100～200-T020
CAD Data: G3FE-32-T020K




Round Weight 17kg

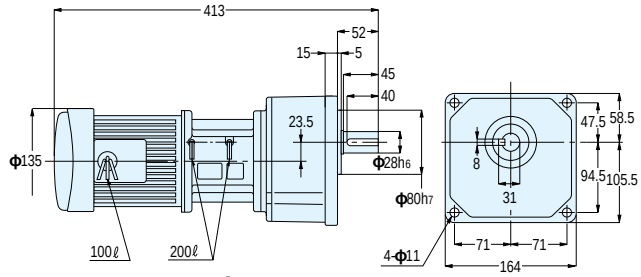
## Small Flange Mounted Type

### Fig.A-208 G3KE-22-5～25-T020
CAD Data: G3KE-22-T020K



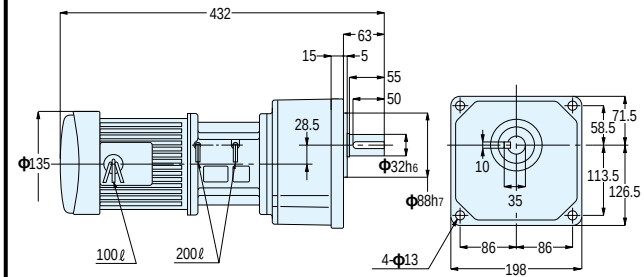

Round Weight 11kg

### Fig.A-209 G3KE-28-30～80-T020
CAD Data: G3KE-28-T020K




Round Weight 13kg

### Fig.A-210 G3KE-32-100～200-T020
CAD Data: G3KE-32-T020K




Round Weight 17kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.4kW Heavy duty type

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

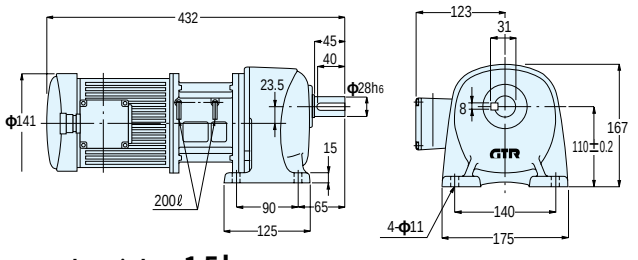
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.4kW | 28 | 1/ 5 | 91/ 459 | 300 | 360 | 12 | 10 | 1.2 | 1 | 1270 | 130 | P.A96 Fig.A-211 15kg | P.A97 Fig.A-214 15.5kg | P.A97 Fig.A-217 15.5kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 25 | 21 | 2.5 | 2.1 | 1760 | 180 | | | |
| | | 1/ 15 | 91/1360 | 100 | 120 | 36 | 30 | 3.7 | 3.1 | 2160 | 220 | | | |
| | | 1/ 20 | 5/ 102 | 75 | 90 | 48 | 40 | 4.9 | 4.1 | 2350 | 240 | | | |
| | | 1/ 25 | 7/ 170 | 60 | 72 | 61 | 50 | 6.2 | 5.1 | 2450 | 250 | | | |
| | 32 | 1/ 30 | 3/ 92 | 50 | 60 | 73 | 61 | 7.4 | 6.2 | 4020 | 410 | P.A96 Fig.A-212 18kg | P.A97 Fig.A-215 18.5kg | P.A97 Fig.A-218 18.5kg |
| | | 1/ 40 | 13/ 516 | 37.5 | 45 | 94 | 78 | 9.6 | 8 | 4210 | 430 | | | |
| | | 1/ 50 | 11/ 540 | 30 | 36 | 117 | 98 | 11.9 | 10 | 4610 | 470 | | | |
| | | 1/ 60 | 13/ 774 | 25 | 30 | 140 | 117 | 14.3 | 11.9 | 5490 | 560 | | | |
| | | 1/ 80 | 13/1032 | 18.8 | 22.5 | 187 | 156 | 19.1 | 15.9 | 5880 | 600 | | | |
| | 40 | 1/ 100 | 91/9000 | 15 | 18 | 234 | 195 | 23.9 | 19.9 | 7060 | 720 | P.A96 Fig.A-213 26.5kg | P.A97 Fig.A-216 28kg | |
| | | 1/ 120 | 77/9400 | 12.5 | 15 | 281 | 234 | 28.7 | 23.9 | 7060 | 720 | | | |
| | | 1/ 160 | 9/1400 | 9.4 | 11.2 | 374 | 313 | 38.2 | 31.9 | 7060 | 720 | | | |
| | | 1/ 200 | 9/1750 | 7.5 | 9 | 468 | 390 | 47.8 | 39.8 | 7060 | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

### Fig.A-211 G3LE-28-5～25-T040A

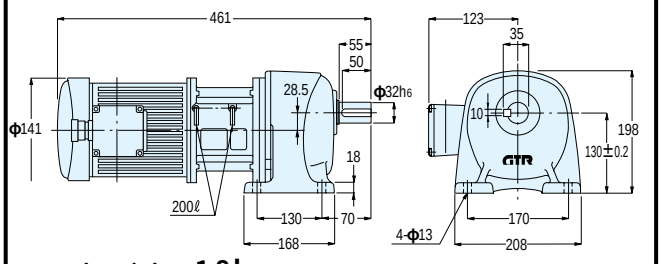
CAD Data: G3LE-28-T040AK




Round Weight 15kg

### Fig.A-212 G3LE-32-30～80-T040A

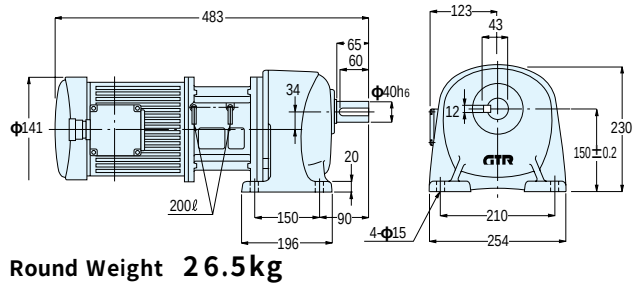
CAD Data: G3LE-32-T040AK




Round Weight 18kg

### Fig.A-213 G3LE-40-100～200-T040A

CAD Data: G3LE-40-T040AK

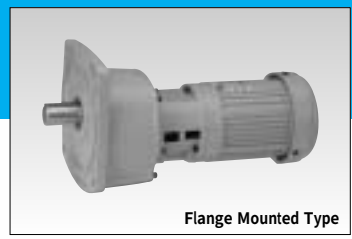


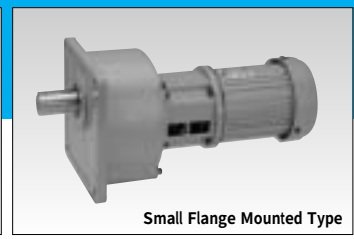

Round Weight 26.5kg

Model Code P.A80

Option P.E78～E79

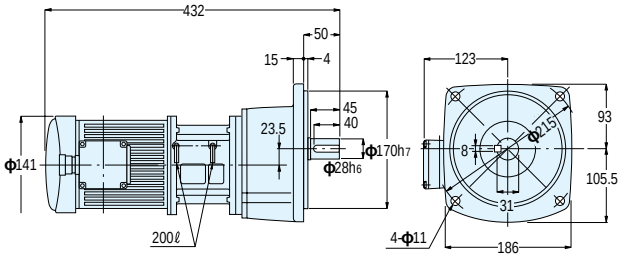

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

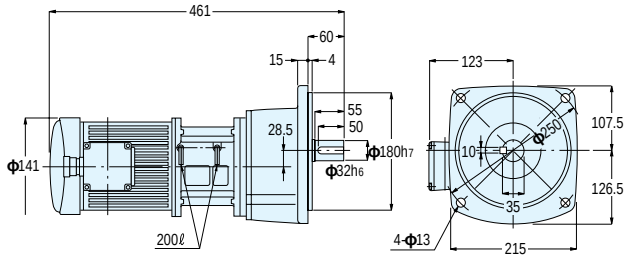
## Flange Mounted Type

### Fig.A-214 G3FE-28-5～25-T040A
CAD Data: G3FE-28-T040AK



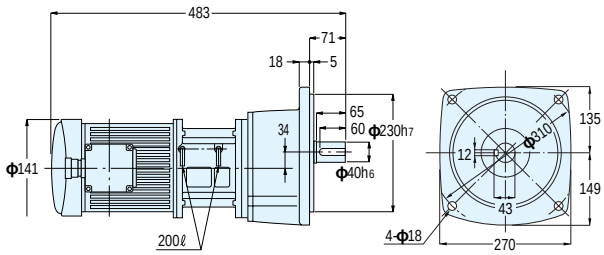

Round Weight 15.5kg

### Fig.A-215 G3FE-32-30～80-T040A
CAD Data: G3FE-32-T040AK




Round Weight 18.5kg

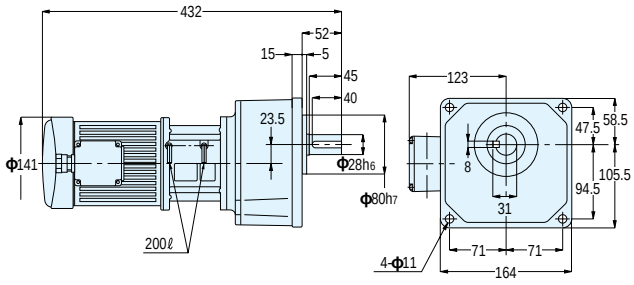
### Fig.A-216 G3FE-40-100～200-T040A
CAD Data: G3FE-40-T040AK




Round Weight 28kg

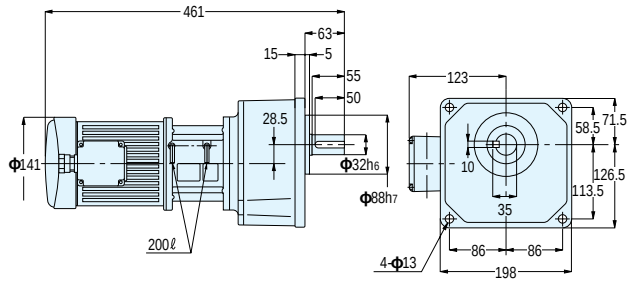
## Small Flange Mounted Type

### Fig.A-217 G3KE-28-5～25-T040A
CAD Data: G3KE-28-T040AK




Round Weight 15.5kg

### Fig.A-218 G3KE-32-30～80-T040A
CAD Data: G3KE-32-T040AK




Round Weight 18.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor with Clutch and Brake

## G3 Series 3-Phase 0.75kW Heavy duty type

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

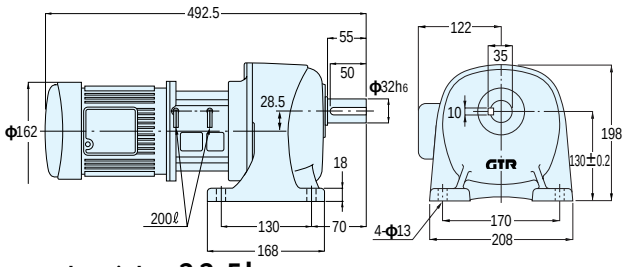
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | G3LE | G3FE | G3KE |
| 3-phase 0.75kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 23 | 19 | 2.3 | 1.9 | 1760 | 180 | P.A98 Fig.A-219 22.5kg | P.A99 Fig.A-222 23kg | P.A99 Fig.A-225 23kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 45 | 38 | 4.6 | 3.9 | 2450 | 250 | | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 68 | 57 | 6.9 | 5.8 | 2840 | 290 | | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 91 | 75 | 9.3 | 7.7 | 3230 | 330 | | | |
| | | 1/ 25 | 9/ 230 | 60 | 72 | 114 | 94 | 11.6 | 9.6 | 3820 | 390 | | | |
| | 40 | 1/ 30 | 1/ 30 | 50 | 60 | 136 | 114 | 13.9 | 11.6 | 5100 | 520 | P.A98 Fig.A-220 29kg | P.A99 Fig.A-223 30.5kg | |
| | | 1/ 40 | 13/ 540 | 37.5 | 45 | 175 | 146 | 17.9 | 14.9 | 5880 | 600 | | | |
| | | 1/ 50 | 11/ 564 | 30 | 36 | 220 | 183 | 22.4 | 18.7 | 7060 | 720 | | | |
| | | 1/ 60 | 91/5400 | 25 | 30 | 264 | 220 | 26.9 | 22.4 | 7060 | 720 | | | |
| | | 1/ 80 | 13/1080 | 18.8 | 22.5 | 351 | 293 | 35.8 | 29.9 | 7060 | 720 | | | |
| | 50 | 1/ 100 | 25/2618 | 15 | 18 | 439 | 366 | 44.8 | 37.3 | 9800 | 1000 | P.A98 Fig.A-221 60.5kg | P.A99 Fig.A-224 65.5kg | |
| | | 1/ 120 | 77/8993 | 12.5 | 15 | 527 | 439 | 53.8 | 44.8 | 9800 | 1000 | | | |
| | | 1/ 160 | 33/5474 | 9.4 | 11.2 | 703 | 585 | 71.7 | 59.7 | 9800 | 1000 | | | |
| | | 1/ 200 | 30/5831 | 7.5 | 9 | 878 | 732 | 89.6 | 74.7 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

### Fig.A-219 G3LE-32-5～25-075

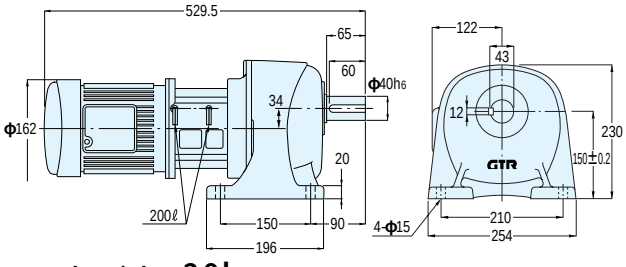
CAD Data: G3LE-32-075K




Round Weight 22.5kg

### Fig.A-220 G3LE-40-30～80-075

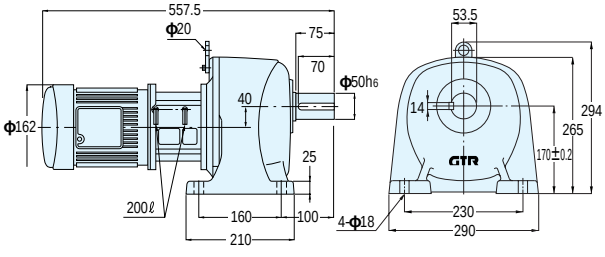
CAD Data: G3LE-40-075K




Round Weight 29kg

### Fig.A-221 G3LE-50-100～200-075

CAD Data: G3LE-50-075K

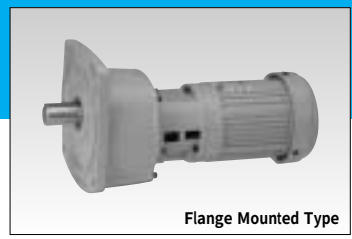


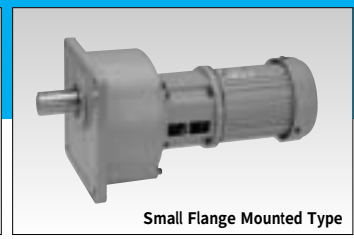

Round Weight 60.5kg

Model Code P.A80

Option P.E78～E79

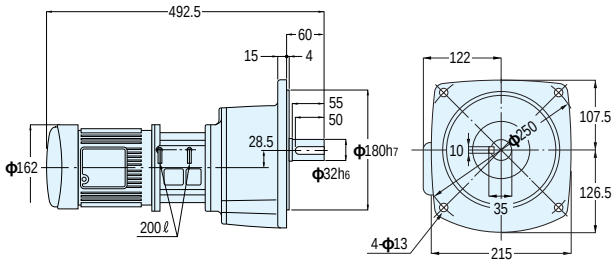

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

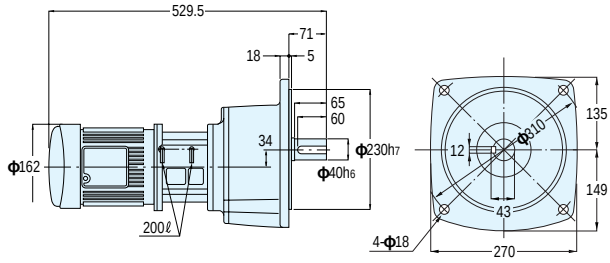
## Flange Mounted Type

### Fig.A-222 G3FE-32-5～25-075
CAD Data: G3FE-32-075K



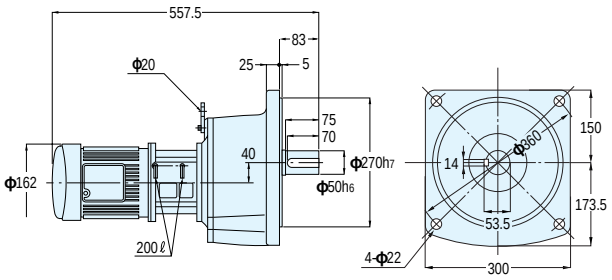

Round Weight 23kg

### Fig.A-223 G3FE-40-30～80-075
CAD Data: G3FE-40-075K




Round Weight 30.5kg

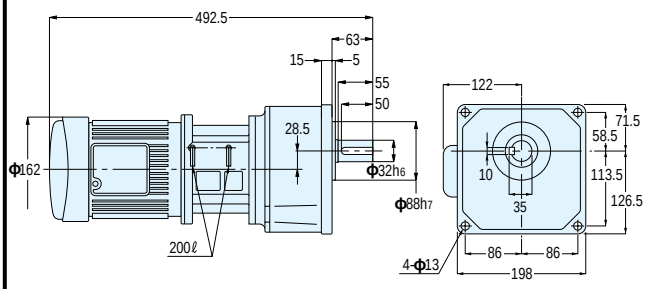
### Fig.A-224 G3FE-50-100～200-075
CAD Data: G3FE-50-075K




Round Weight 65.5kg

## Small Flange Mounted Type

### Fig.A-225 G3KE-32-5～25-075
CAD Data: G3KE-32-075K




Round Weight 23kg

Parallel Shaft

# Reducer (Double Shaft Type)

## Model・Type Designation
## Standard Model Lineup

G3 Series

### ■Standard Specifications G3 Series (Reducer)

| | | |
|---|---|---|
| The capacity of 4P equivalent motor | | Equivalent of 0.1kW～2.2kW |
| Speed Reduction Part | Reduction Method | Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron) |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 85%max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

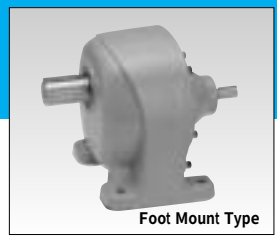
# Model and Type Designation G3 Series (Parallel Shaft)

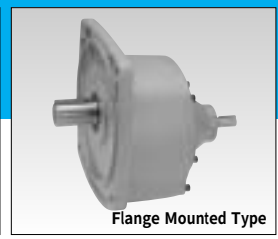
G3 series Reducer(Double Shaft Type) are classified by codes as shown below. Specify these codes in your inquiry and order.

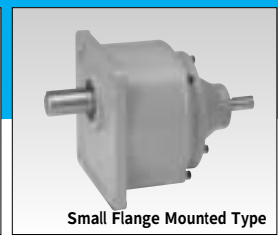
| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| G3 | L | | 22 | 50 | 020 | | | | |
| G3 | F | | 40 | 200 | 075 | | | X | |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

| | |
|---|---|
| ①Series Name | G3 : G3 Series(Parallel Shaft) |
| ②Classification by Mount Form | L : Foot Mount |
| | F : Flange Mount |
| | K : Small Flange Mount (Frame No.18～32) |
| ③Classification by Motor Type | Blank : Without Motor(Double Shaft Type) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter |
| ⑤Reduction Ratio | 5 : 1／5 ～ 1200 : 1／1200 |
| ⑥Equivalent capacity | 010 : 0.1 kW or equiv. |
| | 020 : 0.2 kW or equiv. |
| | 040 : 0.4 kW or equiv. |
| | 075 : 0.75kW or equiv. |
| | 150 : 1.5 kW or equiv. |
| | 220 : 2.2 kW or equiv. |
| ⑦⑧Option | Blank : Standard Specifications |
| ⑨Auxiliary Mark | Blank : Standard Specifications |
| | X : Mark for Additional Specs |
| ⑩Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Blank : Standard Specifications |

# Standard Model Lineup


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

| Type | Equivalent of 4P motor capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Reducer (Double Shaft Type) G3L・G3F G3K | 0.1kW | 18 | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 |
| | | 22 | 1/60 1/80 1/100 1/120 1/160 1/200 |
| | | 28 | 1/300 1/375 1/450 |
| | | 32 | 1/600 1/750 **1/900** **1/1200** |
| | 0.2kW | 18 | 1/5 1/10 1/15 1/20 1/25 |
| | | 22 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 28 | 1/100 1/120 1/160 1/200 |
| | | 32 | 1/300 1/375 1/450 |
| | | 40 | 1/600 1/750 **1/900** **1/1200** |
| | 0.4kW | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | | 40 | 1/300 1/375 **1/450** |
| | | 50 | 1/600 **1/750** **1/900** **1/1200** |
| | 0.75kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 40 | 1/100 1/120 1/160 1/200 |
| | | 50 | 1/300 1/375 **1/450** |
| | 1.5kW | 32 | 1/5 1/10 1/15 1/20 1/25 |
| | | 40 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 50 | 1/100 1/120 1/160 **1/200** |
| | 2.2kW | 40 | 1/5 1/10 1/15 1/20 1/25 |
| | | 50 | 1/30 1/40 1/50 1/60 1/80 1/100 |

Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Parallel Shaft

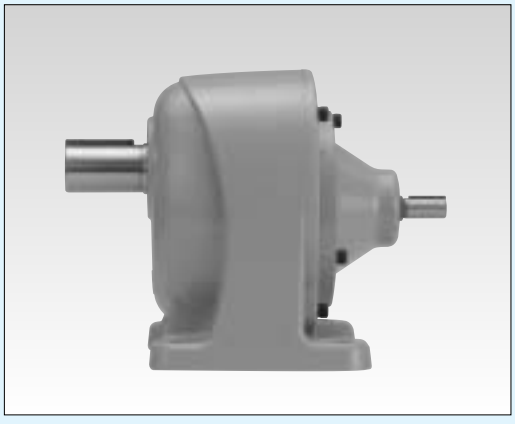
# Reducer (Double Shaft Type)

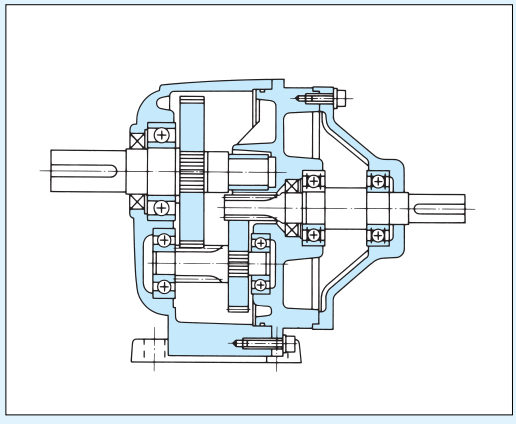
## Performance Table Dimension diagram

G3 Series

【Remarks】

- ●The mark (−) in the reduction ratio indicate that the rotation of Input/Output Shaft are opposite direction each other.
- ●The corresponding motor capacities are the values when using 4-pole motor.





# Reducer (Double Shaft Type)

## G3 Series equiv 0.1kW

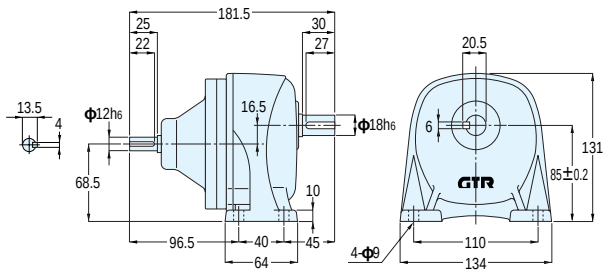


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | G3L | G3F | G3K |
| 0.1kW | 18 | 1/ 5 | 33/ 164 | 3 | 0.31 | 176 | 588 | 18 | 60 | P.A106 Fig.A-226 2.5kg | P.A107 Fig.A-230 3kg | P.A108 Fig.A-234 3kg |
| | | 1/ 10 | 77/ 779 | 6.1 | 0.62 | | 882 | | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 9.1 | 0.93 | | 980 | | 100 | | | |
| | | 1/ 20 | 49/ 984 | 12 | 1.2 | | 1180 | | 120 | | | |
| | | 1/ 25 | 28/ 697 | 15 | 1.5 | | 1270 | | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 19 | 1.9 | | 1370 | | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 24 | 2.4 | | 1470 | | 150 | | | |
| | | 1/ 50 | 7/ 351 | 29 | 3 | | 1570 | | 160 | | | |
| | 22 | −1/ 60 | 11/ 684 | 35 | 3.6 | 176 | 2160 | 18 | 220 | P.A106 Fig.A-227 3.5kg | P.A107 Fig.A-231 4kg | P.A108 Fig.A-235 4kg |
| | | −1/ 80 | 21/ 1634 | 47 | 4.8 | | 2450 | | 250 | | | |
| | | −1/ 100 | 7/ 684 | 59 | 6 | | 2450 | | 250 | | | |
| | | −1/ 120 | 147/17974 | 71 | 7.2 | | 2450 | | 250 | | | |
| | | −1/ 160 | 21/ 3268 | 94 | 9.6 | | 2450 | | 250 | | | |
| | | −1/ 200 | 21/ 4085 | 117 | 11.9 | | 2450 | | 250 | | | |
| | 28 | 1/ 300 | 221/65190 | 157 | 16 | 176 | 3430 | 18 | 350 | P.A107 Fig.A-228 6.5kg | P.A107 Fig.A-232 7kg | P.A108 Fig.A-236 7kg |
| | | 1/ 375 | 187/68370 | 196 | 20 | | 3430 | | 350 | | | |
| | | 1/ 450 | 181/79793 | 235 | 24 | | 3430 | | 350 | | | |
| | 32 | 1/ 600 | 147/88192 | 313 | 31.9 | 176 | 5880 | 18 | 600 | P.A107 Fig.A-229 9.5kg | P.A107 Fig.A-233 10kg | P.A108 Fig.A-237 10kg |
| | | 1/ 750 | 49/36464 | 391 | 39.9 | | 5880 | | 600 | | | |
| | | ＊ 1/ 900 | 62/57063 | 431 | 44 | | 5880 | | 600 | | | |
| | | ＊ 1/1200 | 46/55195 | 431 | 44 | | 5880 | | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

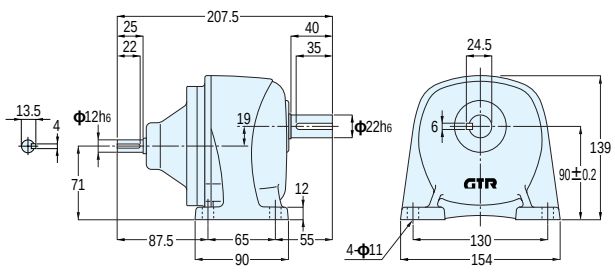
## Foot Mount Type

**Fig.A-226** G3L-18-5〜50-（010）
CAD Data: G3L-18-010



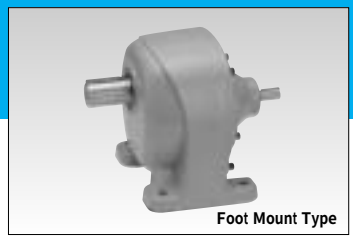

Round Weight 2.5kg

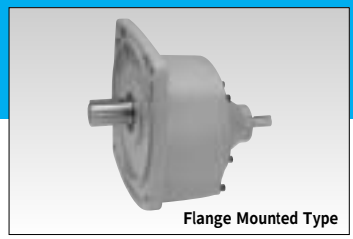
**Fig.A-227** G3L-22-60〜200-（010）
CAD Data: G3L-22-010

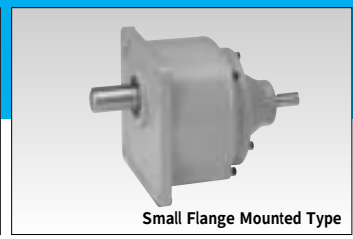



Round Weight 3.5kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

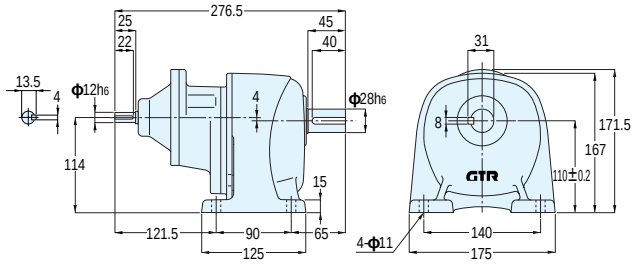

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-228 G3L-28-300～450-（010）

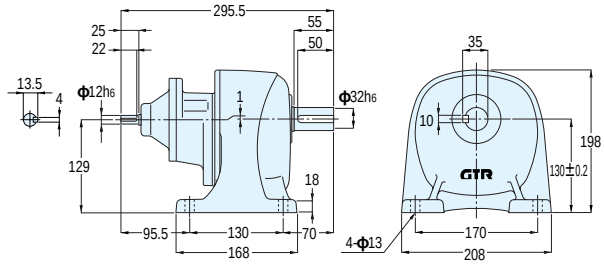
CAD Data: G3L-28-010




Round Weight 6.5kg

## Fig.A-229 G3L-32-600～1200-（010）

CAD Data: G3L-32-010

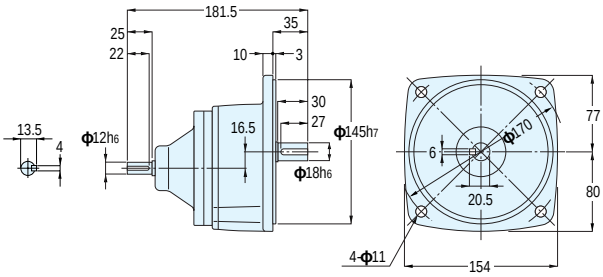



Round Weight 9.5kg

# Flange Mounted Type

## Fig.A-230 G3F-18-5～50-（010）

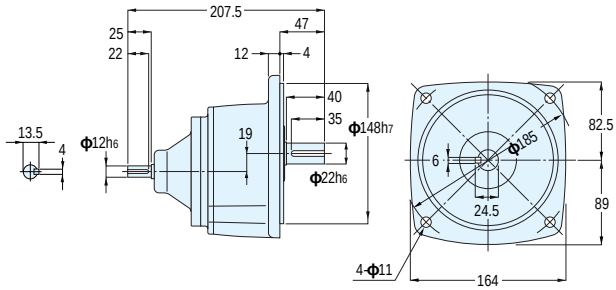
CAD Data: G3F-18-010




Round Weight 3kg

## Fig.A-231 G3F-22-60～200-（010）

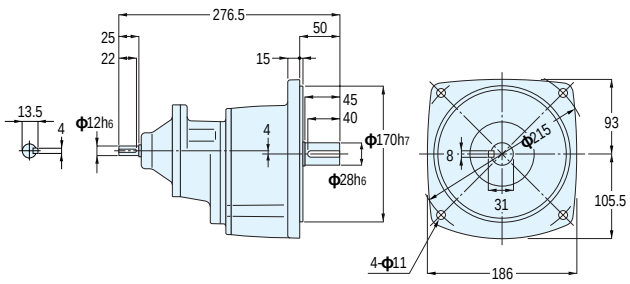
CAD Data: G3F-22-010




Round Weight 4kg

## Fig.A-232 G3F-28-300～450-（010）

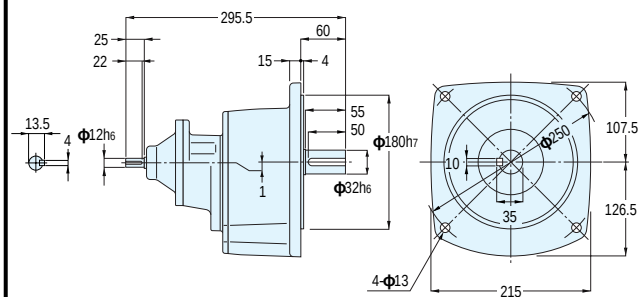
CAD Data: G3F-28-010




Round Weight 7kg

## Fig.A-233 G3F-32-600～1200-（010）

CAD Data: G3F-32-010




Round Weight 10kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

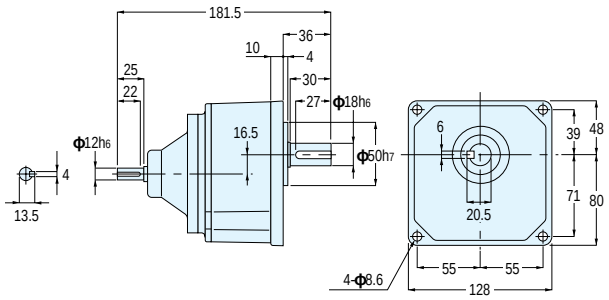
# Reducer (Double Shaft Type)

## G3 Series equiv 0.1kW

### Small Flange Mounted Type

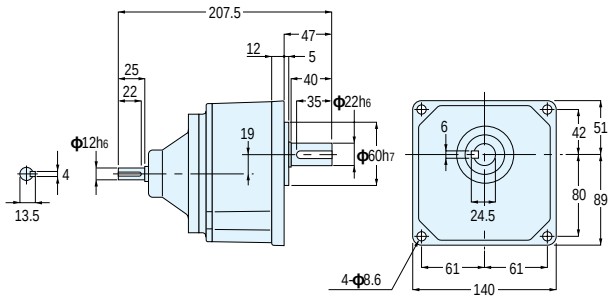


**Fig.A-234** G3K-18-5～50-（010）
CAD Data: G3K-18-010



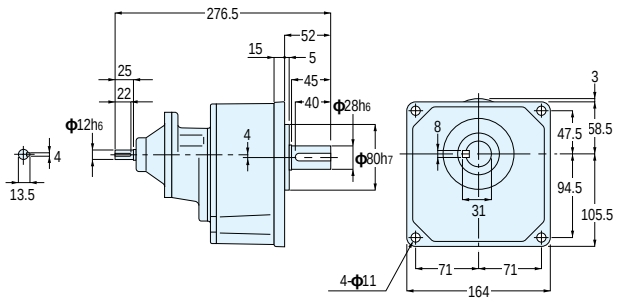

Round Weight 3kg

**Fig.A-235** G3K-22-60～200-（010）
CAD Data: G3K-22-010



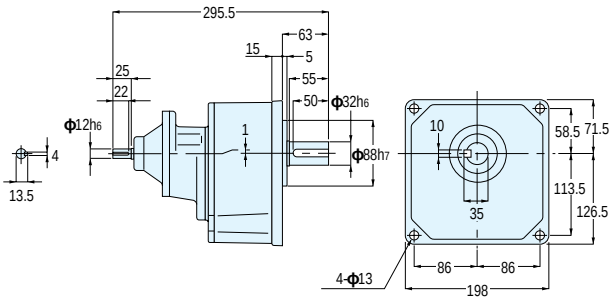

Round Weight 4kg

**Fig.A-236** G3K-28-300～450-（010）
CAD Data: G3K-28-010




Round Weight 7kg

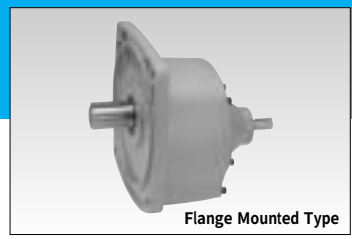
**Fig.A-237** G3K-32-600～1200-（010）
CAD Data: G3K-32-010

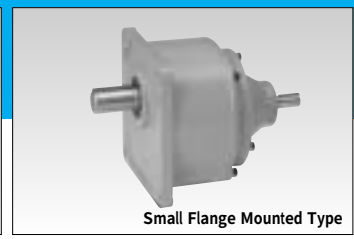



Round Weight 10kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## G3 Series equiv 0.2kW

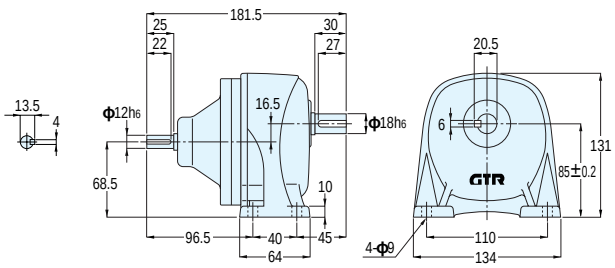


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | G3L | G3F | G3K |
| 0.2kW | 18 | 1/ 5 | 33/ 164 | 6.1 | 0.62 | 196 | 588 | 20 | 60 | P.A110 Fig.A-238 2.5kg | P.A112 Fig.A-243 3kg | P.113 Fig.A-248 3kg |
| | | 1/ 10 | 77/ 779 | 11.8 | 1.2 | | 882 | | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 18.6 | 1.9 | | 980 | | 100 | | | |
| | | 1/ 20 | 49/ 984 | 24.5 | 2.5 | | 1180 | | 120 | | | |
| | | 1/ 25 | 28/ 697 | 30.4 | 3.1 | | 1270 | | 130 | | | |
| | 22 | 1/ 30 | 7/ 216 | 36.3 | 3.7 | 196 | 1760 | 20 | 180 | P.A110 Fig.A-239 3.5kg | P.A112 Fig.A-244 4kg | P.A113 Fig.A-249 4kg |
| | | −1/ 40 | 91/ 3600 | 47 | 4.8 | | 1860 | | 190 | | | |
| | | −1/ 50 | 11/ 540 | 58.8 | 6 | | 1960 | | 200 | | | |
| | | −1/ 60 | 637/39600 | 70.6 | 7.2 | | 2160 | | 220 | | | |
| | | −1/ 80 | 91/ 7200 | 94.1 | 9.6 | | 2450 | | 250 | | | |
| | | ＊−1/ 100 | 11/ 1080 | 97 | 9.9 | | 2450 | | 250 | | | |
| | 28 | −1/ 100 | 13/ 1353 | 117 | 11.9 | 196 | 2840 | 20 | 290 | P.A111 Fig.A-240 5.5kg | P.A112 Fig.A-245 6kg | P.A113 Fig.A-250 6kg |
| | | −1/ 120 | 91/11000 | 140 | 14.3 | | 3330 | | 340 | | | |
| | | −1/ 160 | 1/ 165 | 187 | 19.1 | | 3430 | | 350 | | | |
| | | −1/ 200 | 7/ 1375 | 234 | 23.9 | | 3430 | | 350 | | | |
| | 32 | 1/ 300 | 91/27348 | 313 | 31.9 | 196 | 5880 | 20 | 600 | P.A111 Fig.A-241 9.5kg | P.A112 Fig.A-246 10kg | P.A113 Fig.A-251 10kg |
| | | 1/ 375 | 77/28620 | 391 | 39.9 | | 5880 | | 600 | | | |
| | | 1/ 450 | 91/41022 | 431 | 44 | | 5880 | | 600 | | | |
| | 40 | 1/ 600 | 9/ 5300 | 626 | 63.9 | 196 | 7060 | 20 | 720 | P.A111 Fig.A-242 16kg | P.A112 Fig.A-247 17.5kg | |
| | | 1/ 750 | 62/46427 | 764 | 78 | | 7060 | | 720 | | | |
| | | ＊ 1/ 900 | 23/21259 | 764 | 78 | | 7060 | | 720 | | | |
| | | ＊ 1/1200 | 9/10600 | 764 | 78 | | 7060 | | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

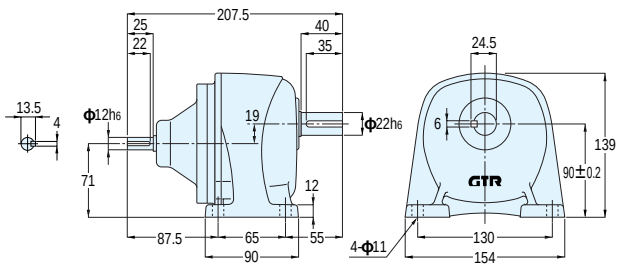
## Foot Mount Type

**Fig.A-238** G3L-18-5〜25-（020）
CAD Data: G3L-18-020




Round Weight 2.5kg

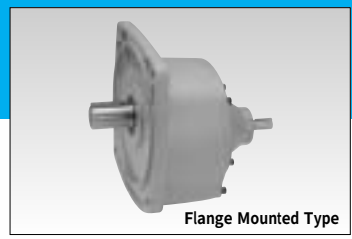
**Fig.A-239** G3L-22-30〜100-（020）
CAD Data: G3L-22-020

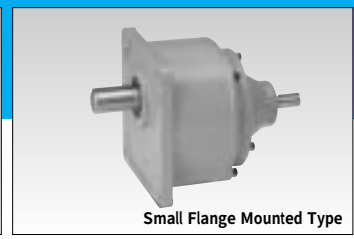



Round Weight 3.5kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

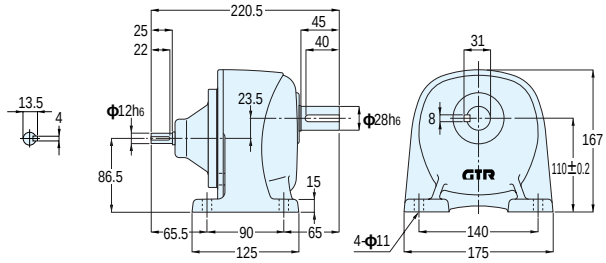

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-240 G3L-28-100～200-（020）

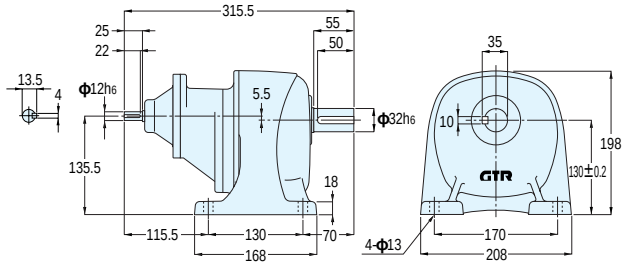
CAD Data: G3L-28-020




Round Weight 5.5kg

## Fig.A-241 G3L-32-300～450-（020）

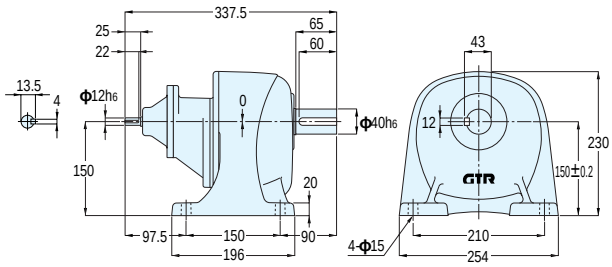
CAD Data: G3L-32-020




Round Weight 9.5kg

## Fig.A-242 G3L-40-600～1200-（020）

CAD Data: G3L-40-020




Round Weight 16kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

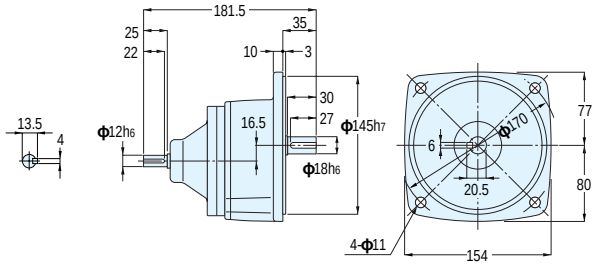
# Reducer (Double Shaft Type)

## G3 Series equiv 0.2kW

### Flange Mounted Type

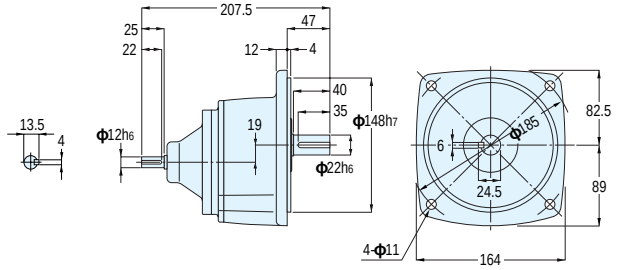


**Fig.A-243** G3F-18-5～25-（020）
CAD Data: G3F-18-020



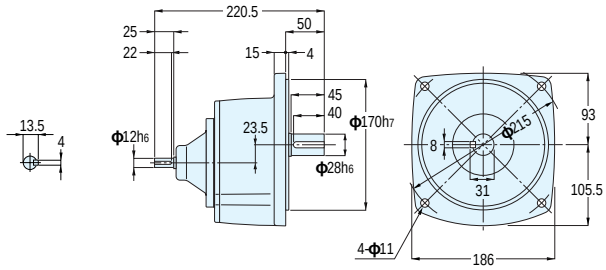

Round Weight 3kg

**Fig.A-244** G3F-22-30～100-（020）
CAD Data: G3F-22-020



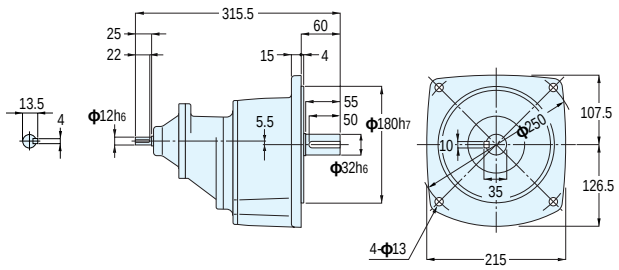

Round Weight 4kg

**Fig.A-245** G3F-28-100～200-（020）
CAD Data: G3F-28-020



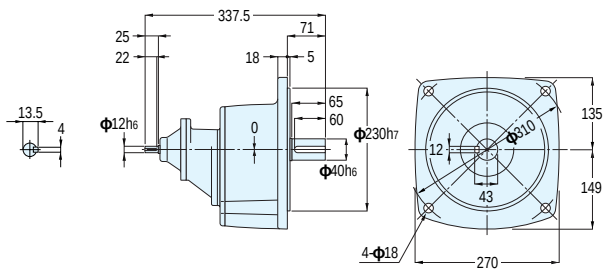

Round Weight 6kg

**Fig.A-246** G3F-32-300～450-（020）
CAD Data: G3F-32-020




Round Weight 10kg

**Fig.A-247** G3F-40-600～1200-（020）
CAD Data: G3F-40-020

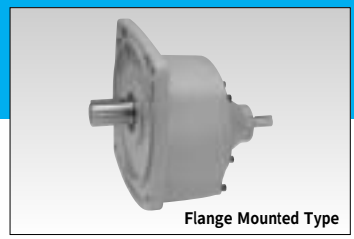


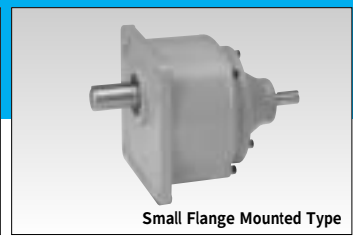

Round Weight 17.5kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

# Small Flange Mounted Type

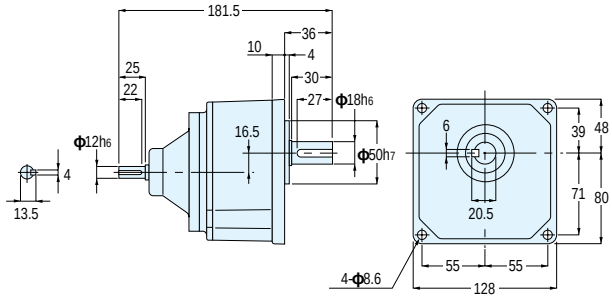

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-248 G3K-18-5～25-（020）

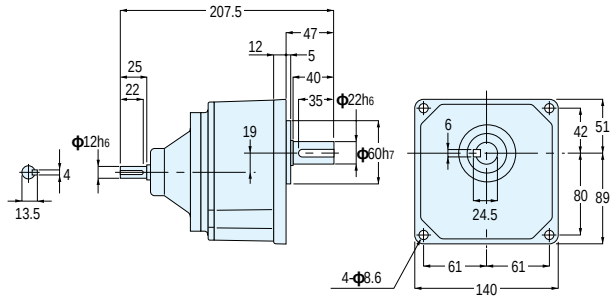
CAD Data: G3K-18-020




Round Weight 3kg

## Fig.A-249 G3K-22-30～100-（020）

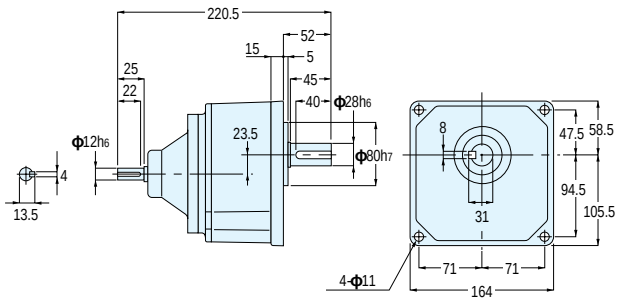
CAD Data: G3K-22-020




Round Weight 4kg

## Fig.A-250 G3K-28-100～200-（020）

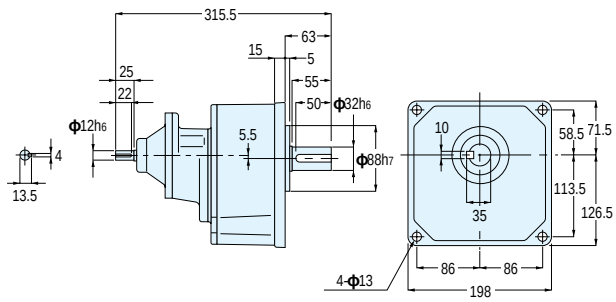
CAD Data: G3K-28-020




Round Weight 6kg

## Fig.A-251 G3K-32-300～450-（020）

CAD Data: G3K-32-020




Round Weight 10kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## G3 Series equiv 0.4kW

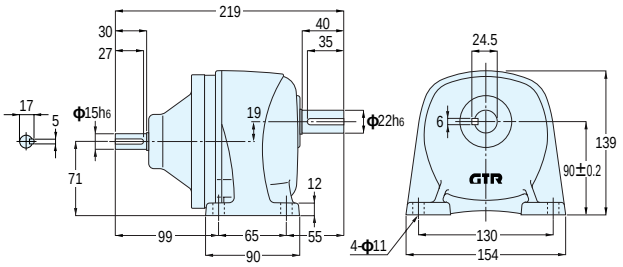


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | G3L | G3F | G3K |
| 0.4kW | 22 | 1/ 5 | 7/ 34 | 12 | 1.2 | 245 | 882 | 25 | 90 | P.A114 Fig.A-252 4kg | P.A116 Fig.A-257 4.5kg | P.117 Fig.A-262 4.5kg |
| | | 1/ 10 | 7/ 68 | 25 | 2.5 | | 1180 | | 120 | | | |
| | | 1/ 15 | 49/ 748 | 36 | 3.7 | | 1370 | | 140 | | | |
| | | 1/ 20 | 7/ 136 | 48 | 4.9 | | 1470 | | 150 | | | |
| | | 1/ 25 | 7/ 170 | 61 | 6.2 | | 1670 | | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 73 | 7.4 | 245 | 2550 | 25 | 260 | P.A114 Fig.A-253 6kg | P.A116 Fig.A-258 6.5kg | P.A117 Fig.A-263 6.5kg |
| | | −1/ 40 | 221/ 8610 | 94 | 9.6 | | 2840 | | 290 | | | |
| | | −1/ 50 | 187/ 9030 | 117 | 11.9 | | 3140 | | 320 | | | |
| | | −1/ 60 | 169/ 9840 | 140 | 14.3 | | 3430 | | 350 | | | |
| | | −1/ 80 | 65/ 5166 | 187 | 19.1 | | 3430 | | 350 | | | |
| | | ∗−1/ 100 | 55/ 5418 | 193 | 19.7 | | 3430 | | 350 | | | |
| | 32 | −1/ 100 | 7/ 688 | 234 | 23.9 | 245 | 4900 | 25 | 500 | P.A115 Fig.A-254 9kg | P.A116 Fig.A-259 9.5kg | P.A117 Fig.A-264 9.5kg |
| | | −1/ 120 | 77/ 9360 | 281 | 28.7 | | 5880 | | 600 | | | |
| | | −1/ 160 | 21/ 3328 | 374 | 38.2 | | 5880 | | 600 | | | |
| | | −1/ 200 | 189/38272 | 431 | 44 | | 5880 | | 600 | | | |
| | 40 | 1/ 300 | 7/ 2160 | 626 | 63.9 | 245 | 7060 | 25 | 720 | P.A115 Fig.A-255 17.5kg | P.A116 Fig.A-260 19kg | |
| | | 1/ 375 | 77/29328 | 764 | 78 | | 7060 | | 720 | | | |
| | | ∗ 1/ 450 | 49/21600 | 764 | 78 | | 7060 | | 720 | | | |
| | 50 | 1/ 600 | 57/35360 | 1225 | 125 | 245 | 9800 | 25 | 1000 | P.A115 Fig.A-256 47kg | P.A116 Fig.A-261 52kg | |
| | | ∗ 1/ 750 | 25/19448 | 1225 | 125 | | 9800 | | 1000 | | | |
| | | ∗ 1/ 900 | 5/ 4338 | 1225 | 125 | | 9800 | | 1000 | | | |
| | | ∗ 1/1200 | 33/40664 | 1225 | 125 | | 9800 | | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

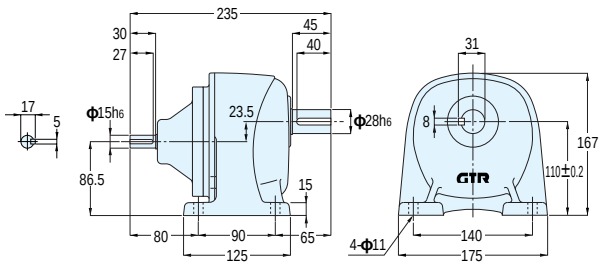
## Foot Mount Type

**Fig.A-252** G3L-22-5〜25-（040）
CAD Data: G3L-22-040




Round Weight 4kg

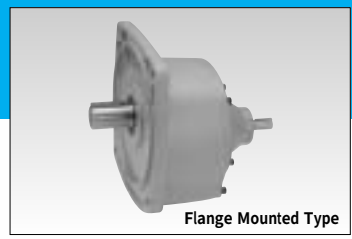
**Fig.A-253** G3L-28-30〜100-（040）
CAD Data: G3L-28-040

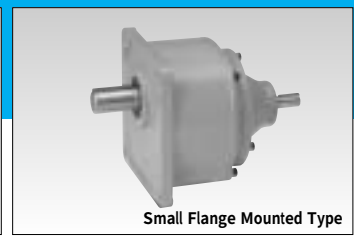



Round Weight 6kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

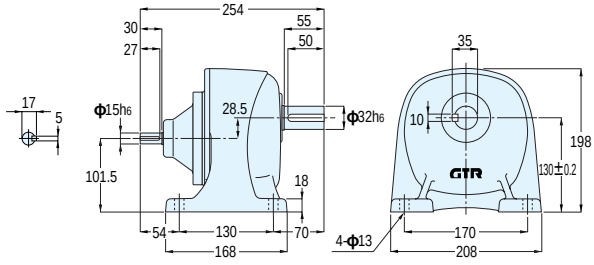

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-254 G3L-32-100～200-（040）

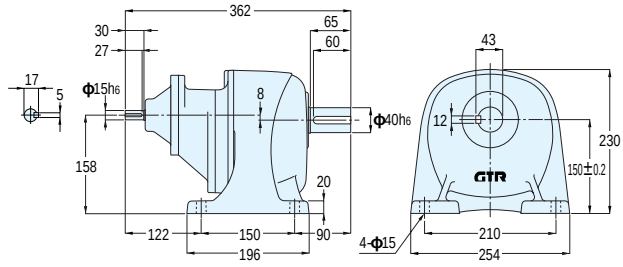
CAD Data: G3L-32-040




Round Weight 9kg

## Fig.A-255 G3L-40-300～450-（040）

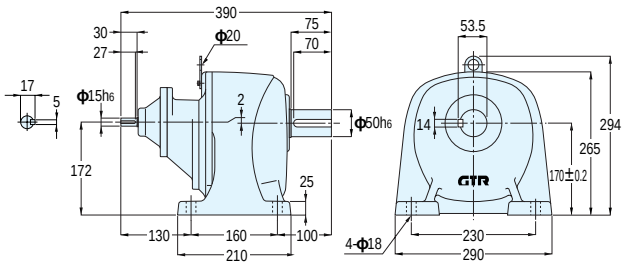
CAD Data: G3L-40-040




Round Weight 17.5kg

## Fig.A-256 G3L-50-600～1200-（040）

CAD Data: G3L-50-040




Round Weight 47kg

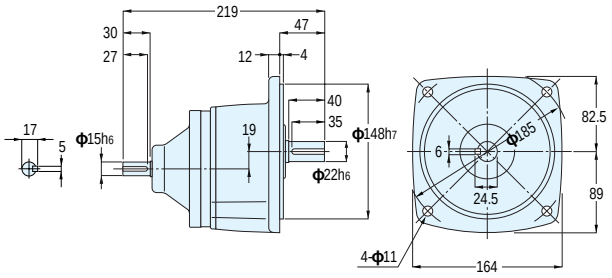
# Reducer (Double Shaft Type)

## G3 Series equiv 0.4kW

### Flange Mounted Type

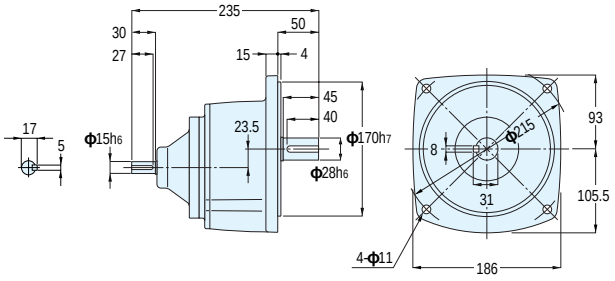


**Fig.A-257** G3F-22-5～25-（040）
CAD Data: G3F-22-040



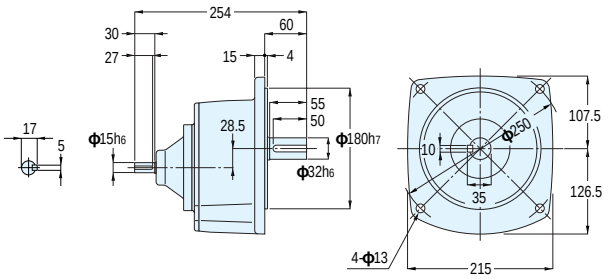

Round Weight 4.5kg

**Fig.A-258** G3F-28-30～100-（040）
CAD Data: G3F-28-040



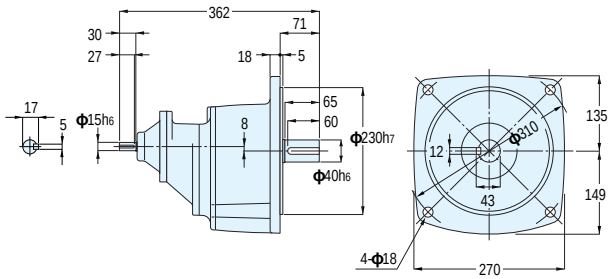

Round Weight 6.5kg

**Fig.A-259** G3F-32-100～200-（040）
CAD Data: G3F-32-040



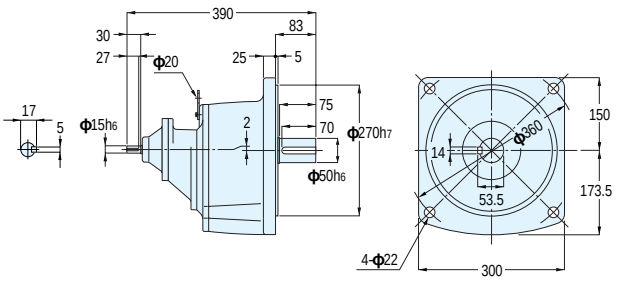

Round Weight 9.5kg

**Fig.A-260** G3F-40-300～450-（040）
CAD Data: G3F-40-040




Round Weight 19kg

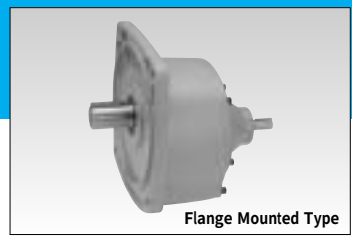
**Fig.A-261** G3F-50-600～1200-（040）
CAD Data: G3F-50-040

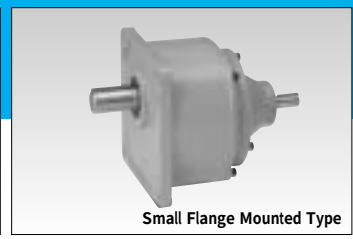



Round Weight 52kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type

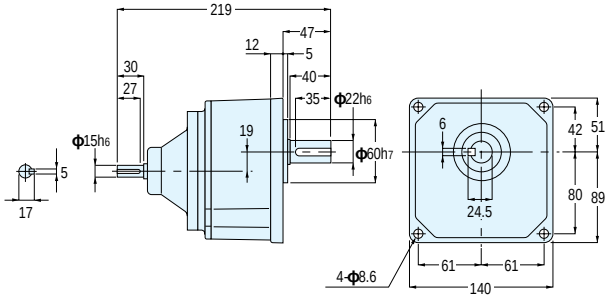

Flange Mounted Type


Small Flange Mounted Type

# Small Flange Mounted Type

## Fig.A-262 G3K-22-5～25-（040）

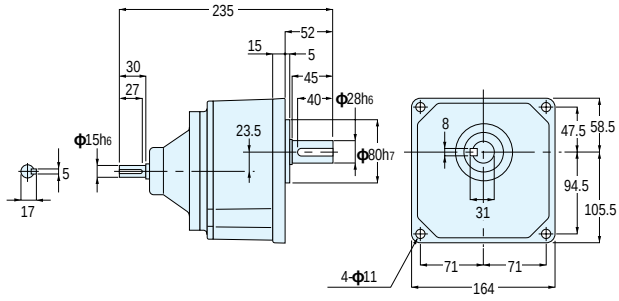
CAD Data: G3K-22-040




Round Weight 4.5kg

## Fig.A-263 G3K-28-30～100-（040）

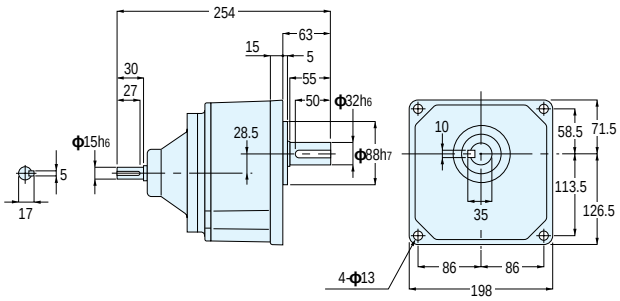
CAD Data: G3K-28-040




Round Weight 6.5kg

## Fig.A-264 G3K-32-100～200-（040）

CAD Data: G3K-32-040




Round Weight 9.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## G3 Series equiv 0.75kW

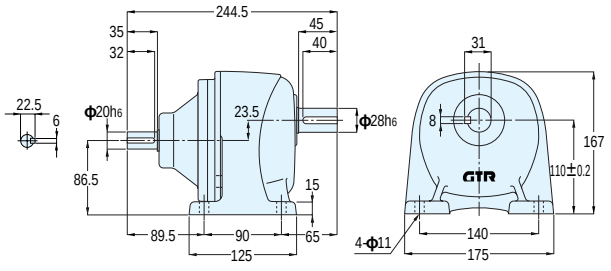


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | G3L | G3F | G3K |
| 0.75kW | 28 | 1/ 5 | 91/459 | 23 | 2.3 | 294 | 1270 | 30 | 130 | P.A118 Fig.A-265 6kg | P.A119 Fig.A-269 6.5kg | P.A120 Fig.A-273 6.5kg |
| | | 1/ 10 | 1/10 | 45 | 4.6 | | 1760 | | 180 | | | |
| | | 1/ 15 | 91/1360 | 68 | 6.9 | | 2160 | | 220 | | | |
| | | 1/ 20 | 5/102 | 91 | 9.3 | | 2350 | | 240 | | | |
| | | 1/ 25 | 7/170 | 114 | 11.6 | | 2450 | | 250 | | | |
| | 32 | 1/ 30 | 3/92 | 136 | 13.9 | 294 | 4020 | 30 | 410 | P.A118 Fig.A-266 9.5kg | P.A119 Fig.A-270 10kg | P.A120 Fig.A-274 10kg |
| | | −1/ 40 | 13/516 | 175 | 17.9 | | 4210 | | 430 | | | |
| | | −1/ 50 | 11/540 | 220 | 22.4 | | 4610 | | 470 | | | |
| | | −1/ 60 | 13/774 | 264 | 26.9 | | 5490 | | 560 | | | |
| | | −1/ 80 | 13/1032 | 351 | 35.8 | | 5880 | | 600 | | | |
| | | ＊−1/ 100 | 11/1080 | 362 | 36.9 | | 5880 | | 600 | | | |
| | 40 | −1/ 100 | 91/9000 | 439 | 44.8 | 294 | 7060 | 30 | 720 | P.A119 Fig.A-267 16kf | P.A119 Fig.A-271 17.5kg | |
| | | −1/ 120 | 77/9400 | 527 | 53.8 | | 7060 | | 720 | | | |
| | | −1/ 160 | 9/1400 | 703 | 71.7 | | 7060 | | 720 | | | |
| | | −1/ 200 | 9/1750 | 764 | 78 | | 7060 | | 720 | | | |
| | 50 | 1/ 300 | 211/62013 | 1176 | 120 | 294 | 9800 | 30 | 1000 | P.A119 Fig.A-268 47.5kg | P.A119 Fig.A-272 52.5kg | |
| | | 1/ 375 | 94/36103 | 1225 | 125 | | 9800 | | 1000 | | | |
| | | ＊ 1/ 450 | 65/29167 | 1225 | 125 | | 9800 | | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

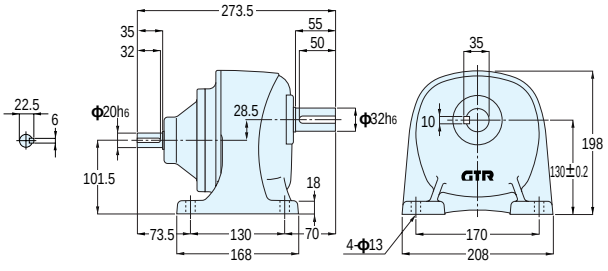
## Foot Mount Type

**Fig.A-265** G3L-28-5〜25-(075)
CAD Data: G3L-28-075




Round Weight 6kg

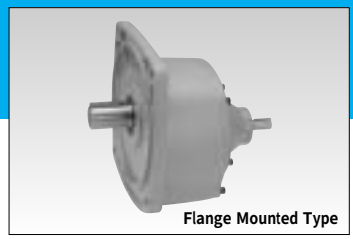
**Fig.A-266** G3L-32-30〜100-(075)
CAD Data: G3L-32-075

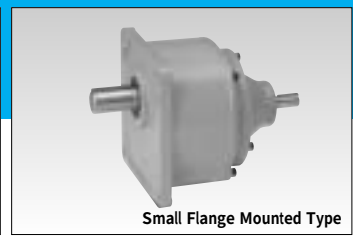



Round Weight 9.5kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

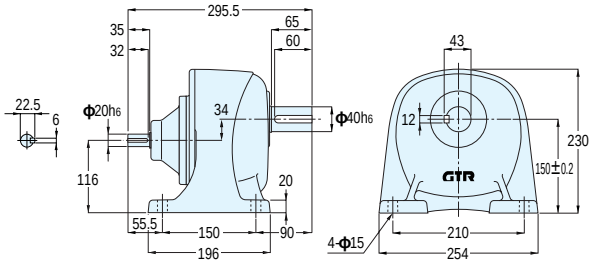

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-267 G3L-40-100～200-（075）

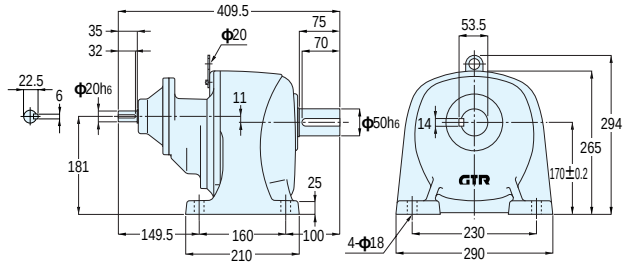
CAD Data: G3L-40-075




Round Weight 16kg

## Fig.A-268 G3L-50-300～450-（075）

CAD Data: G3L-50-075

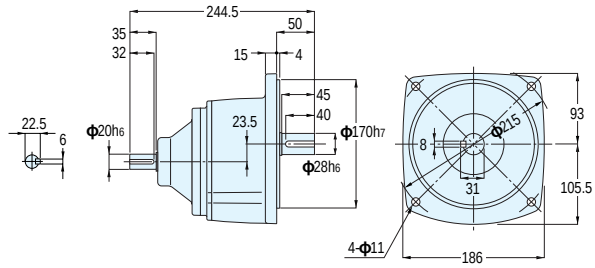



Round Weight 47.5kg

# Flange Mounted Type

## Fig.A-269 G3F-28-5～25-（075）

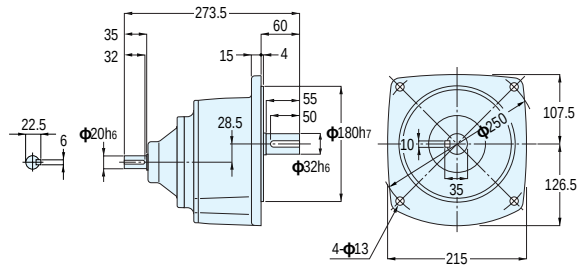
CAD Data: G3F-28-075




Round Weight 6.5kg

## Fig.A-270 G3F-32-30～100-（075）

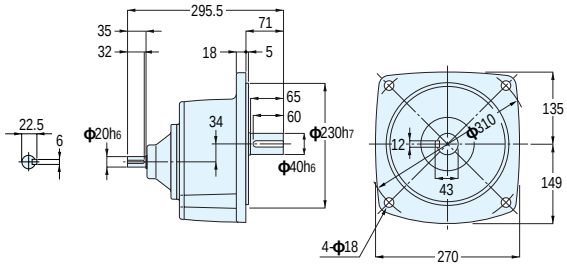
CAD Data: G3F-32-075




Round Weight 10kg

## Fig.A-271 G3F-40-100～200-（075）

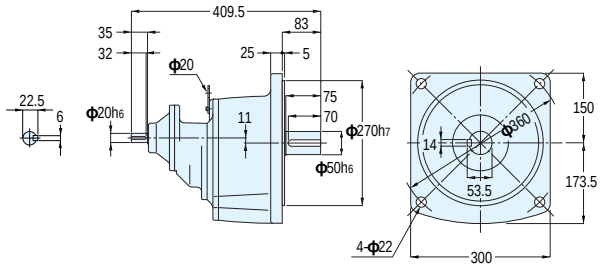
CAD Data: G3F-40-075




Round Weight 17.5kg

## Fig.A-272 G3F-50-300～450-（075）

CAD Data: G3F-50-075




Round Weight 52.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

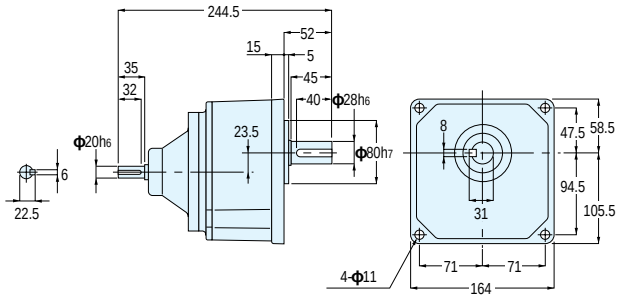
## G3 Series equiv 0.75kW

### Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

**Fig.A-273** G3K-28-5～25-（075）

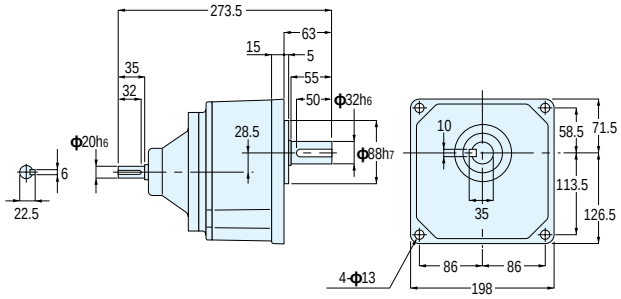
CAD Data: G3K-28-075




Round Weight 6.5kg

**Fig.A-274** G3K-32-30～100-（075）

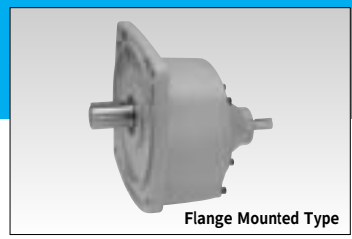
CAD Data: G3K-32-075

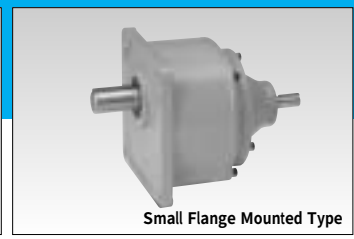



Round Weight 10kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## G3 Series equiv 1.5kW

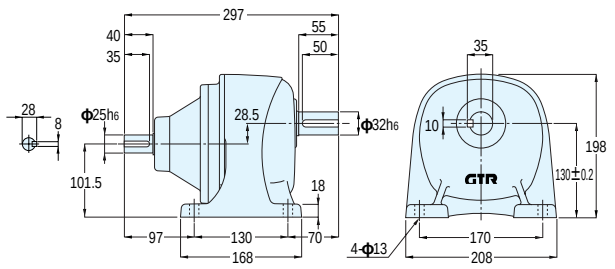


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | G3L | G3F | G3K |
| 1.5kW | 32 | 1/ 5 | 1/ 5 | 45 | 4.6 | 343 | 1760 | 35 | 180 | P.A122 Fig.A-275 10kg | P.A123 Fig.A-278 10.5kg | P.124 Fig.A-281 10.5kg |
| | | 1/ 10 | 1/ 10 | 91 | 9.3 | | 2450 | | 250 | | | |
| | | 1/ 15 | 1/ 15 | 136 | 13.9 | | 2840 | | 290 | | | |
| | | 1/ 20 | 1/ 20 | 181 | 18.5 | | 3230 | | 330 | | | |
| | | 1/ 25 | 9/ 230 | 226 | 23.1 | | 3820 | | 390 | | | |
| | 40 | 1/ 30 | 1/ 30 | 272 | 27.8 | 343 | 5100 | 35 | 520 | P.A122 Fig.A-276 17kg | P.A123 Fig.A-279 18.5kg | |
| | | −1/ 40 | 13/ 540 | 351 | 35.8 | | 5880 | | 600 | | | |
| | | −1/ 50 | 11/ 564 | 439 | 44.8 | | 7060 | | 720 | | | |
| | | −1/ 60 | 91/ 5400 | 527 | 53.8 | | 7060 | | 720 | | | |
| | | −1/ 80 | 13/ 1080 | 703 | 71.7 | | 7060 | | 720 | | | |
| | | ＊−1/ 100 | 11/ 1128 | 724 | 73.9 | | 7060 | | 720 | | | |
| | 50 | −1/ 100 | 25/ 2618 | 878 | 89.6 | 343 | 9800 | 35 | 1000 | P.A122 Fig.A-277 46.5kg | P.A123 Fig.A-280 51.5kg | |
| | | −1/ 120 | 77/ 8993 | 1060 | 108 | | 9800 | | 1000 | | | |
| | | −1/ 160 | 33/ 5474 | 1230 | 125 | | 9800 | | 1000 | | | |
| | | ＊−1/ 200 | 30/ 5831 | 1230 | 125 | | 9800 | | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

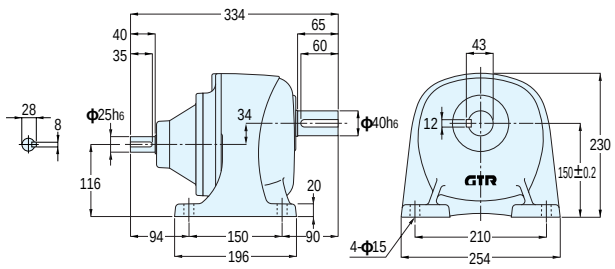
## Foot Mount Type

**Fig.A-275** G3L-32-5〜25-（150）
CAD Data: G3L-32-150



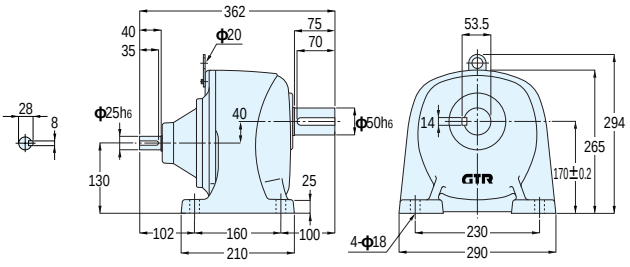

Round Weight 10kg

**Fig.A-276** G3L-40-30〜100-（150）
CAD Data: G3L-40-150




Round Weight 17kg

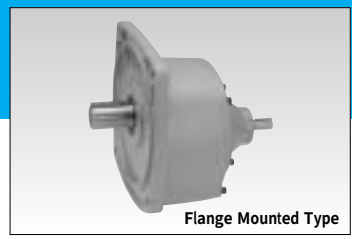
**Fig.A-277** G3L-50-100〜200-（150）
CAD Data: G3L-50-150

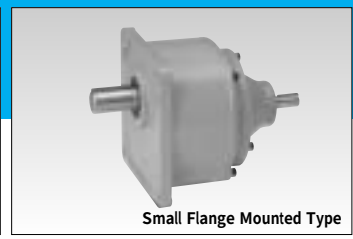



Round Weight 46.5kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type

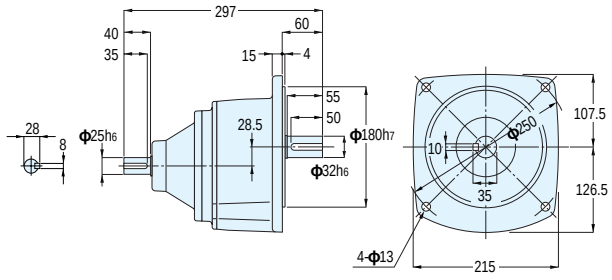

Flange Mounted Type


Small Flange Mounted Type

# Flange Mounted Type

## Fig.A-278 G3F-32-5～25-（150）

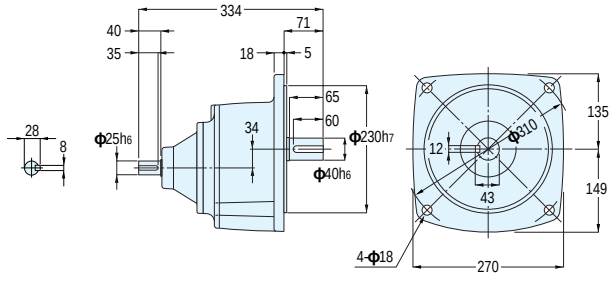
CAD Data: G3F-32-150




Round Weight 10.5kg

## Fig.A-279 G3F-40-30～100-（150）

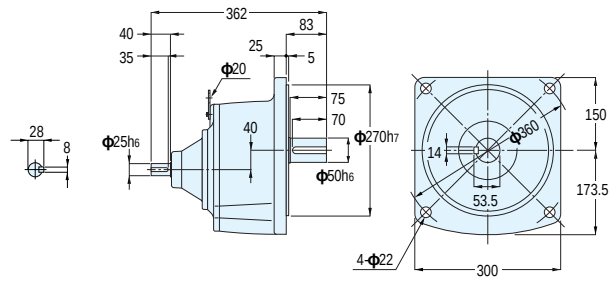
CAD Data: G3F-40-150




Round Weight 18.5kg

## Fig.A-280 G3F-50-100～200-（150）

CAD Data: G3F-50-150




Round Weight 51.5kg

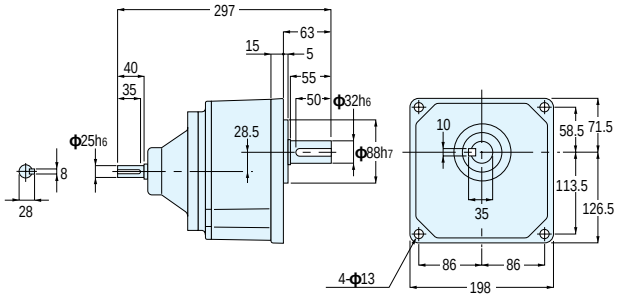
# Reducer (Double Shaft Type)

## G3 Series equiv 1.5kW

### Small Flange Mounted Type

**Fig.A-281** G3K-32-5〜25-（150）

CAD Data: G3K-32-150

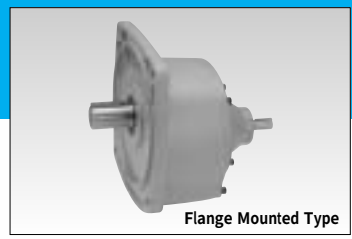


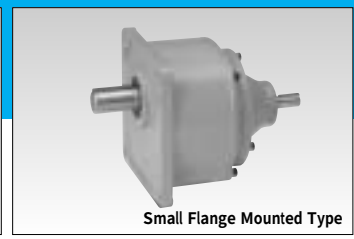

Round Weight 10.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## G3 Series equiv 2.2kW

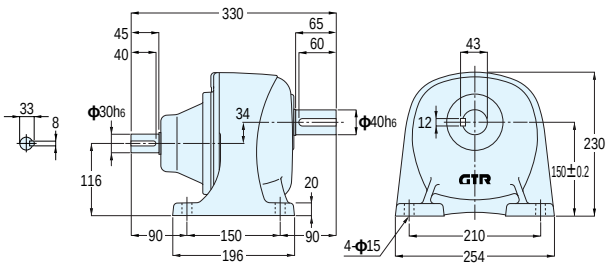


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | G3L | G3F |
| 2.2kW | 40 | 1/ 5 | 7/ 36 | 66 | 6.7 | 392 | 2160 | 40 | 220 | P.A126 Fig.A-282 16.5kg | P.A127 Fig.A-284 18kg |
| | | 1/ 10 | 7/ 72 | 131 | 13.4 | | 3140 | | 320 | | |
| | | 1/ 15 | 49/ 720 | 197 | 20.1 | | 3530 | | 360 | | |
| | | 1/ 20 | 7/ 144 | 264 | 26.9 | | 4020 | | 410 | | |
| | | 1/ 25 | 7/ 180 | 329 | 33.6 | | 4700 | | 480 | | |
| | 50 | 1/ 30 | 5/ 154 | 395 | 40.3 | 392 | 6960 | 40 | 710 | P.A126 Fig.A-283 46.5kg | P.A127 Fig.A-285 51.5kg |
| | | −1/ 40 | 399/15488 | 499 | 50.9 | | 7250 | | 740 | | |
| | | −1/ 50 | 399/20240 | 623 | 63.6 | | 8620 | | 880 | | |
| | | −1/ 60 | 49/ 2904 | 748 | 76.3 | | 9800 | | 1000 | | |
| | | −1/ 80 | 49/ 3795 | 1000 | 102 | | 9800 | | 1000 | | |
| | | −1/ 100 | 21/ 2116 | 1230 | 125 | | 9800 | | 1000 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

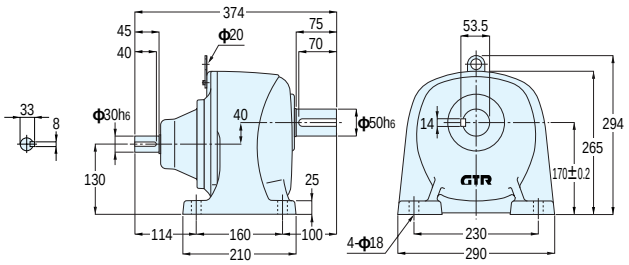
## Foot Mount Type

**Fig.A-282** G3L-40-5～25- (220)
CAD Data: G3L-40-220




Round Weight 16.5kg

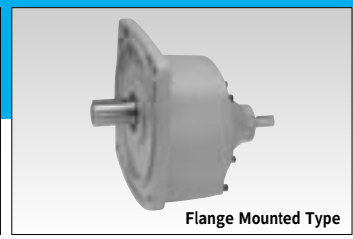
**Fig.A-283** G3L-50-30～100- (220)
CAD Data: G3L-50-220




Round Weight 46.5kg

Model Code P.A102
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

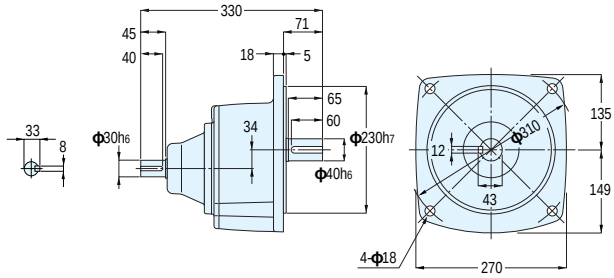

Foot Mount Type


Flange Mounted Type

# Flange Mounted Type

## Fig.A-284 G3F-40-5～25-（220）

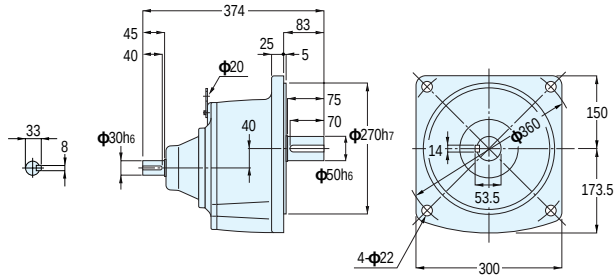
CAD Data: G3F-40-220




Round Weight 18kg

## Fig.A-285 G3F-50-30～100-（220）

CAD Data: G3F-50-220




Round Weight 51.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Parallel Shaft

# S-Type Reducer
## (Designated Motor Attachable Type)

# Model・Type Designation
# Standard Model Lineup

GTR Gearmotor

G3 Series

### ■Standard Specifications G3 Series (S-Type Reducer)

| | | |
|---|---|---|
| The capacity of 4P equivalent motor | | Equivalent of 0.1kW～2.2kW |
| Speed Reduction Part | Reduction Method | Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron) |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 85%max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Parallel Shaft)

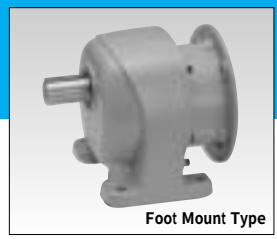
G3 series S-Type Reducer are classified by codes as shown below.
Specify these codes in your inquiry and order.

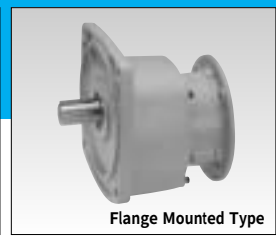
| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark |
|---|---|---|---|---|---|---|---|---|
| G3 | L | S | – 22 | – 50 | – 020 | | | |
| G3 | F | S | – 40 | – 200 | – 075 | | | X |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ |

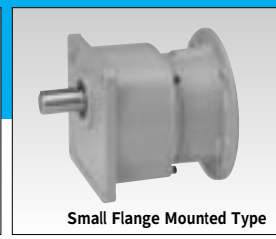
| | | |
|---|---|---|
| ①Series Name | G3 | :: G3 Series(Parallel Shaft) |
| ②Classification by Mount Form | L | : Foot Mount |
| | F | : Flange Mount |
| | K | : Small Flange Mount (Frame No.18～32) |
| ③Classification by Motor Type | S | : Designated Motor Attachable Type (S Type) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter | |
| ⑤Reduction Ratio | 5 : 1／5 ～ 1200 : 1／1200 | |
| ⑥Equivalent capacity | 010 | : 0.1 kW or equiv. |
| | 020 | : 0.2 kW or equiv. |
| | 040 | : 0.4 kW or equiv. |
| | 075 | : 0.75kW or equiv. |
| | 150 | : 1.5 kW or equiv. |
| | 220 | : 2.2 kW or equiv. |
| ⑦⑧Option | Blank : Standard Specifications | |
| ⑨Auxiliary Mark | Blank : Standard Specifications | |
| | X | : Mark for Additional Specs |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

| Type | Equivalent of 4P motor capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| S-Type Reducer G3LS•G3FS G3KS | 0.1kW | 18 | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 |
| | | 22 | 1/60 1/80 1/100 1/120 1/160 1/200 |
| | | 28 | 1/300 1/375 1/450 |
| | | 32 | 1/600 1/750 **1/900** **1/1200** |
| | 0.2kW | 18 | 1/5 1/10 1/15 1/20 1/25 |
| | | 22 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 28 | 1/100 1/120 1/160 1/200 |
| | | 32 | 1/300 1/375 1/450 |
| | | 40 | 1/600 1/750 **1/900** **1/1200** |
| | 0.4kW | 22 | 1/5 1/10 1/15 1/20 1/25 |
| | | 28 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 32 | 1/100 1/120 1/160 1/200 |
| | | 40 | 1/300 1/375 **1/450** |
| | | 50 | 1/600 **1/750** **1/900** **1/1200** |
| | 0.75kW | 28 | 1/5 1/10 1/15 1/20 1/25 |
| | | 32 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 40 | 1/100 1/120 1/160 1/200 |
| | | 50 | 1/300 1/375 **1/450** |
| | 1.5kW | 32 | 1/5 1/10 1/15 1/20 1/25 |
| | | 40 | 1/30 1/40 1/50 1/60 1/80 **1/100** |
| | | 50 | 1/100 1/120 1/160 **1/200** |
| | 2.2kW | 40 | 1/5 1/10 1/15 1/20 1/25 |
| | | 50 | 1/30 1/40 1/50 1/60 1/80 1/100 |

Note 1) In the G3 Series, 3 kinds are available, namely Foot Mount, Flange Mount and Small Flange Mount. Please note that the Small Flange Mount is available only for the frame No.18～32.

2) **Bold** The models enclosed with orange color bold line are low torque type. Special care should be given to the allowable torque in the performance table.



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Parallel Shaft

# S-Type Reducer
## (Designated Motor Attachable Type)

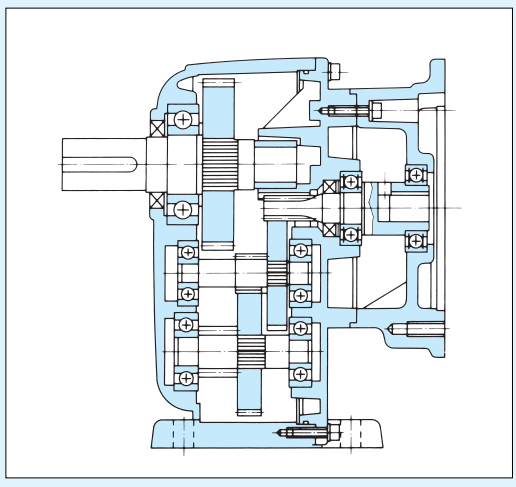
# Performance Table
# Dimension diagram

G3 Series

**【Remarks】**

- ●The mark (−) in the reduction ratio indicate that the rotation of Input/Output Shaft are opposite direction each other.
- ●The values of allowable torque in the output shaft indicate the values at operation by 4 pole motor.
- ●In case of using with motors other than 4-pole motor, the output allowable torque can be obtained by multiplying the torque correction coefficient indicated in page E46, to the written value.





Designated Motor Attachable Type

# S-Type Reducer

## G3 Series equiv 0.1kW

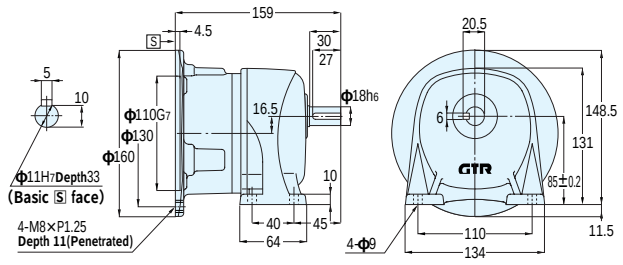


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3LS | G3FS | G3KS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.1kW | 18 | 1/ 5 | 33/ 164 | 3 | 2.5 | 0.31 | 0.26 | 588 | 60 | P.A134 Fig.A-286 3.5kg | P.A135 Fig.A-290 4kg | P.A136 Fig.A-294 4kg |
| | | 1/ 10 | 77/ 779 | 6.1 | 5 | 0.62 | 0.51 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 9.1 | 7.5 | 0.93 | 0.77 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 12 | 9.8 | 1.2 | 1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 15 | 12.7 | 1.5 | 1.3 | 1270 | 130 | | | |
| | | 1/ 30 | 35/ 1066 | 19 | 14.7 | 1.9 | 1.5 | 1370 | 140 | | | |
| | | 1/ 40 | 35/ 1404 | 24 | 19.6 | 2.4 | 2 | 1470 | 150 | | | |
| | | 1/ 50 | 7/ 351 | 29 | 24.5 | 3 | 2.5 | 1570 | 160 | | | |
| | 22 | −1/ 60 | 11/ 684 | 35 | 29.4 | 3.6 | 3 | 2160 | 220 | P.A134 Fig.A-287 4.5kg | P.A135 Fig.A-291 5kg | P.A136 Fig.A-295 5kg |
| | | −1/ 80 | 21/ 1634 | 47 | 39.2 | 4.8 | 4 | 2450 | 250 | | | |
| | | −1/ 100 | 7/ 684 | 59 | 49 | 6 | 5 | 2450 | 250 | | | |
| | | −1/ 120 | 147/17974 | 71 | 58.8 | 7.2 | 6 | 2450 | 250 | | | |
| | | −1/ 160 | 21/ 3268 | 94 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | −1/ 200 | 21/ 4085 | 117 | 98 | 11.9 | 10 | 2450 | 250 | | | |
| | 28 | 1/ 300 | 221/65190 | 157 | 130 | 16 | 13.3 | 3430 | 350 | P.A135 Fig.A-288 7.5kg | P.A135 Fig.A-292 8kg | P.A136 Fig.A-296 8kg |
| | | 1/ 375 | 187/68370 | 196 | 163 | 20 | 16.6 | 3430 | 350 | | | |
| | | 1/ 450 | 181/79793 | 235 | 196 | 24 | 20 | 3430 | 350 | | | |
| | 32 | 1/ 600 | 147/88192 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A135 Fig.A-289 10.5kg | P.A135 Fig.A-293 11kg | P.A136 Fig.A-297 11kg |
| | | 1/ 750 | 49/36464 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | ＊ 1/ 900 | 62/57063 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | | ＊ 1/1200 | 46/55195 | 431 | 431 | 44 | 44 | 5880 | 600 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

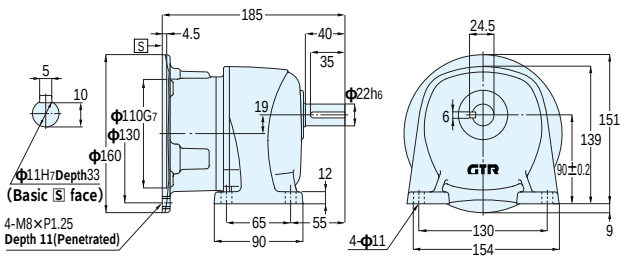
## Foot Mount Type

**Fig.A-286** G3LS-18-5〜50-（010）
CAD Data: G3LS-18-010




Round Weight 3.5kg

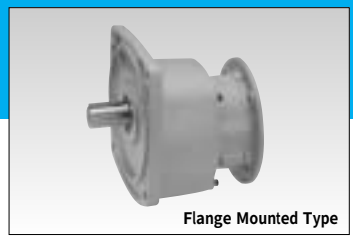
**Fig.A-287** G3LS-22-60〜200-（010）
CAD Data: G3LS-22-010

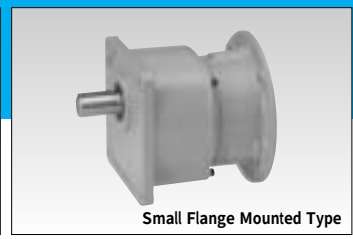



Round Weight 4.5kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

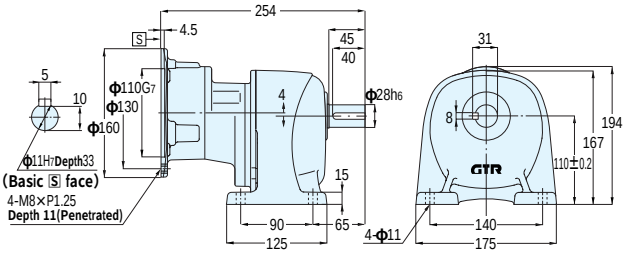

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-288 G3LS-28-300～450-（010）

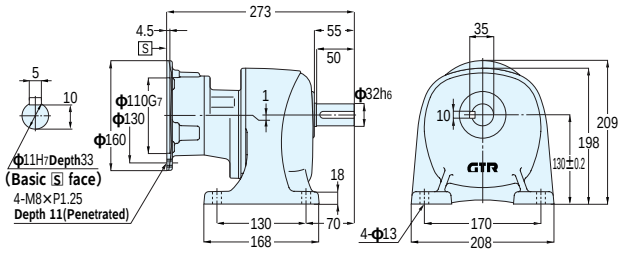
CAD Data：G3LS-28-010




Round Weight 7.5kg

## Fig.A-289 G3LS-32-600～1200-（010）

CAD Data：G3LS-32-010

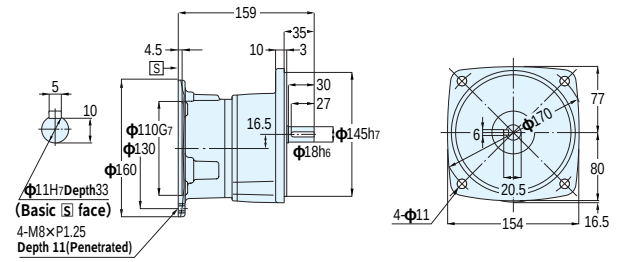



Round Weight 10.5kg

# Flange Mounted Type

## Fig.A-290 G3FS-18-5～50-（010）

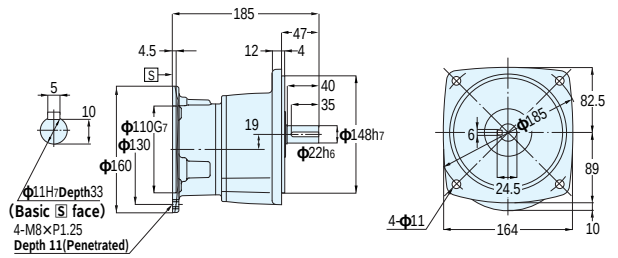
CAD Data：G3FS-18-010




Round Weight 4kg

## Fig.A-291 G3FS-22-60～200-（010）

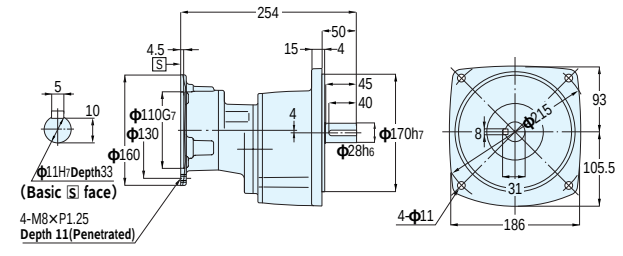
CAD Data：G3FS-22-010




Round Weight 5kg

## Fig.A-292 G3FS-28-300～450-（010）

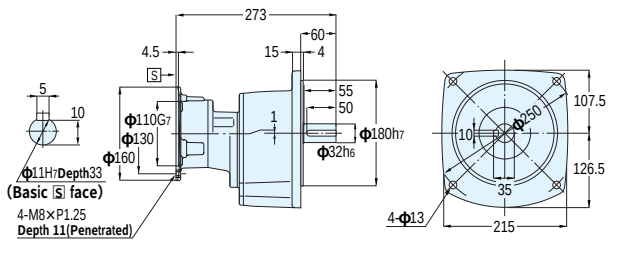
CAD Data：G3FS-28-010




Round Weight 8kg

## Fig.A-293 G3FS-32-600～1200-（010）

CAD Data：G3FS-32-010




Round Weight 11kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

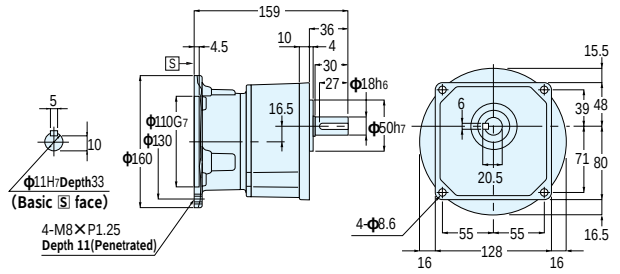
## G3 Series equiv 0.1kW

## Small Flange Mounted Type



**Fig.A-294** G3KS-18-5～50-（010）

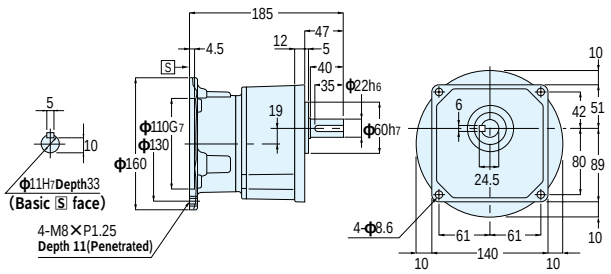
CAD Data: G3KS-18-010




Round Weight 4kg

**Fig.A-295** G3KS-22-60～200-（010）

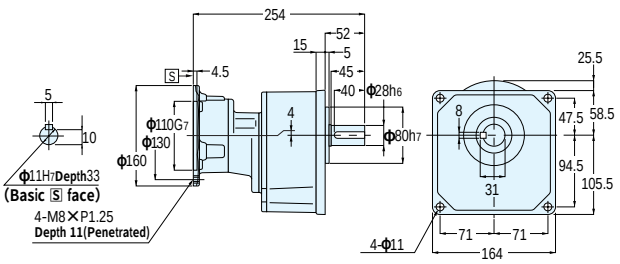
CAD Data: G3KS-22-010




Round Weight 5kg

**Fig.A-296** G3KS-28-300～450-（010）

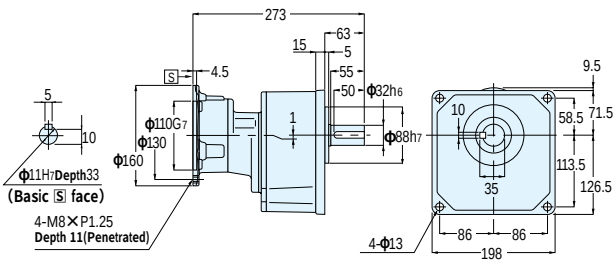
CAD Data: G3KS-28-010




Round Weight 8kg

**Fig.A-297** G3KS-32-600～1200-（010）

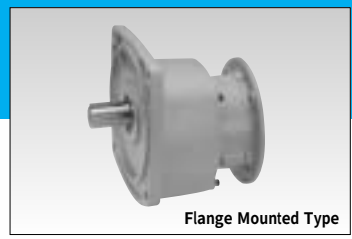
CAD Data: G3KS-32-010

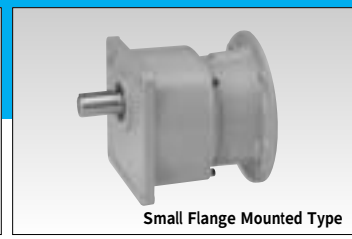



Round Weight 11kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## G3 Series equiv 0.2kW

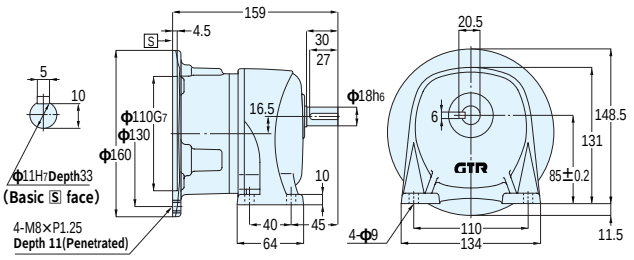


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3LS | G3FS | G3KS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2kW | 18 | 1/ 5 | 33/ 164 | 6.1 | 5 | 0.62 | 0.51 | 588 | 60 | P.A138 Fig.A-298 3.5kg | P.A140 Fig.A-303 4kg | P.A141 Fig.A-308 4kg |
| | | 1/ 10 | 77/ 779 | 11.8 | 9.8 | 1.2 | 1 | 882 | 90 | | | |
| | | 1/ 15 | 119/ 1804 | 18.6 | 14.7 | 1.9 | 1.5 | 980 | 100 | | | |
| | | 1/ 20 | 49/ 984 | 24.5 | 20.6 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 25 | 28/ 697 | 30.4 | 25.5 | 3.1 | 2.6 | 1270 | 130 | | | |
| | 22 | 1/ 30 | 7/ 216 | 36.3 | 30.4 | 3.7 | 3.1 | 1760 | 180 | P.A138 Fig.A-299 4.5kg | P.A140 Fig.A-304 5kg | P.A141 Fig.A-309 5k |
| | | −1/ 40 | 91/ 3600 | 47 | 39.2 | 4.8 | 4 | 1860 | 190 | | | |
| | | −1/ 50 | 11/ 540 | 58.8 | 49 | 6 | 5 | 1960 | 200 | | | |
| | | −1/ 60 | 637/39600 | 70.6 | 58.8 | 7.2 | 6 | 2160 | 220 | | | |
| | | −1/ 80 | 91/ 7200 | 94.1 | 78.4 | 9.6 | 8 | 2450 | 250 | | | |
| | | ＊−1/ 100 | 11/ 1080 | 97 | 80.4 | 9.9 | 8.2 | 2450 | 250 | | | |
| | 28 | −1/ 100 | 13/ 1353 | 117 | 98 | 11.9 | 10 | 2840 | 290 | P.A139 Fig.A-300 6.5k | P.A140 Fig.A-305 7k | P.A141 Fig.A-310 7k |
| | | −1/ 120 | 91/11000 | 140 | 117 | 14.3 | 11.9 | 3330 | 340 | | | |
| | | −1/ 160 | 1/ 165 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | −1/ 200 | 7/ 1375 | 234 | 195 | 23.9 | 19.9 | 3430 | 350 | | | |
| | 32 | 1/ 300 | 91/27348 | 313 | 261 | 31.9 | 26.6 | 5880 | 600 | P.A139 Fig.A-301 10.5k | P.A140 Fig.A-306 11k | P.A141 Fig.A-311 11k |
| | | 1/ 375 | 77/28620 | 391 | 326 | 39.9 | 33.3 | 5880 | 600 | | | |
| | | 1/ 450 | 91/41022 | 431 | 391 | 44 | 39.9 | 5880 | 600 | | | |
| | 40 | 1/ 600 | 9/ 5300 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A139 Fig.A-302 17k | P.A140 Fig.A-307 18.5k | |
| | | 1/ 750 | 62/46427 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ＊ 1/ 900 | 23/21259 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | | ＊ 1/1200 | 9/10600 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

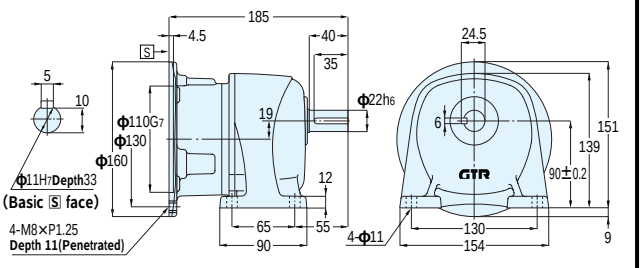
## Foot Mount Type

**Fig.A-298** G3LS-18-5〜25-（020）
CAD Data: G3LS-18-020




Round Weight 3.5kg

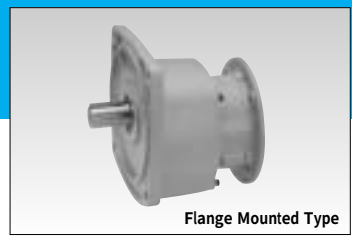
**Fig.A-299** G3LS-22-30〜100-（020）
CAD Data: G3LS-22-020

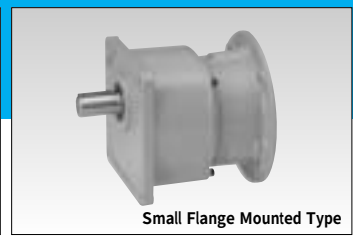



Round Weight 4.5kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

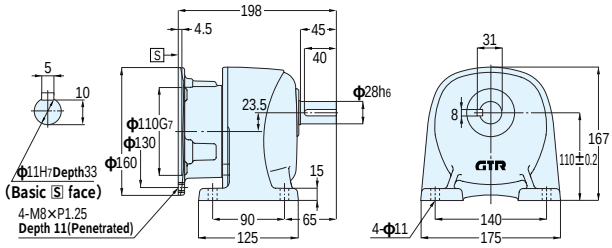

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-300 G3LS-28-100～200-（020）

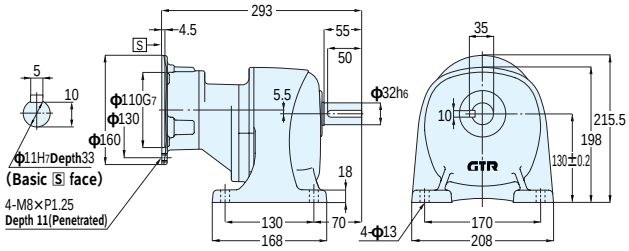
CAD Data: G3LS-28-020




Round Weight 6.5kg

## Fig.A-301 G3LS-32-300～450-（020）

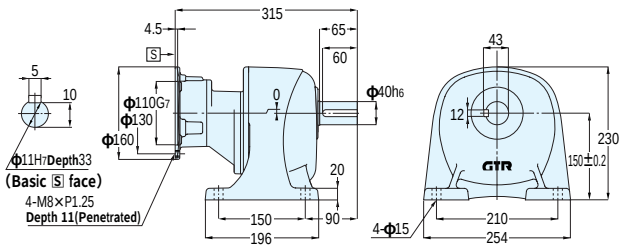
CAD Data: G3LS-32-020




Round Weight 10.5kg

## Fig.A-302 G3LS-40-600～1200-（020）

CAD Data: G3LS-40-020




Round Weight 17kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

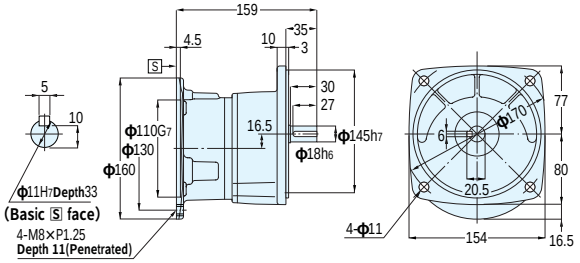
## G3 Series equiv 0.2kW

## Flange Mounted Type



### Fig.A-303 G3FS-18-5～25-（020）

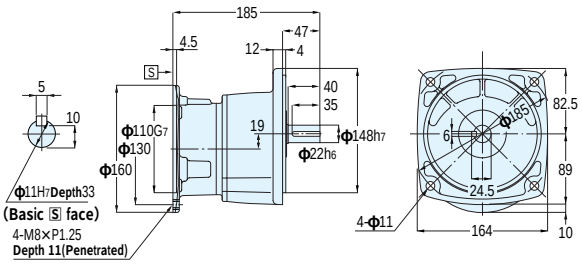
CAD Data: G3FS-18-020




Round Weight 4kg

### Fig.A-304 G3FS-22-30～100-（020）

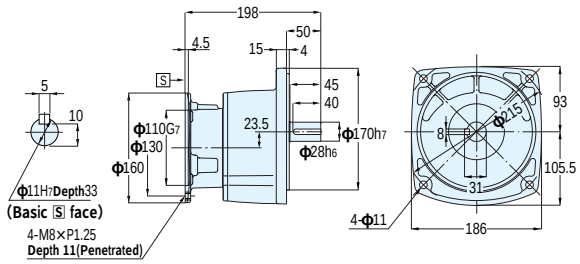
CAD Data: G3FS-22-020




Round Weight 5kg

### Fig.A-305 G3FS-28-100～200-（020）

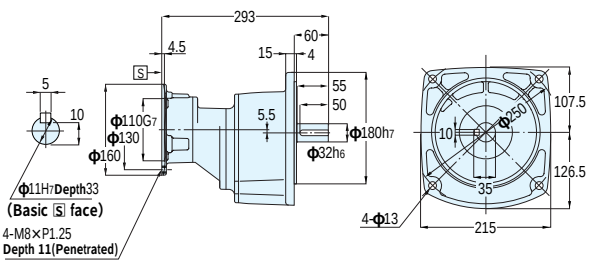
CAD Data: G3FS-28-020




Round Weight 7kg

### Fig.A-306 G3FS-32-300～450-（020）

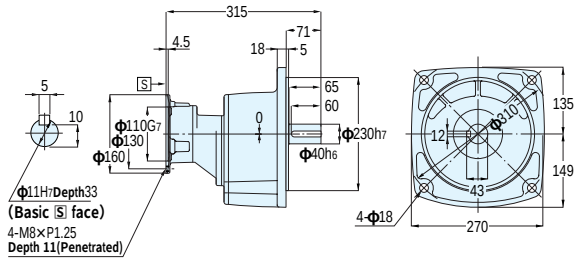
CAD Data: G3FS-32-020




Round Weight 11kg

### Fig.A-307 G3FS-40-600～1200-（020）

CAD Data: G3FS-40-020

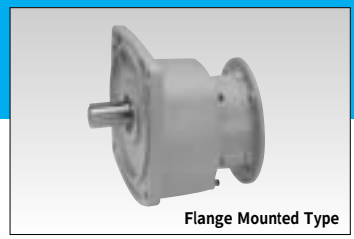


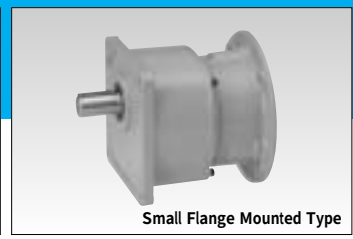

Round Weight 18.5kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

# Small Flange Mounted Type

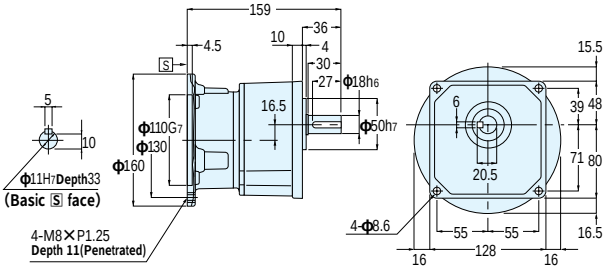

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-308 G3KS-18-5～25-（020）

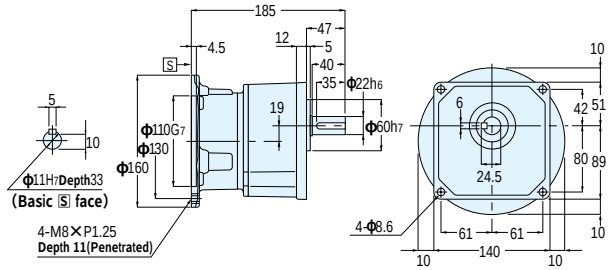
CAD Data: G3KS-18-020




Round Weight 4kg

## Fig.A-309 G3KS-22-30～100-（020）

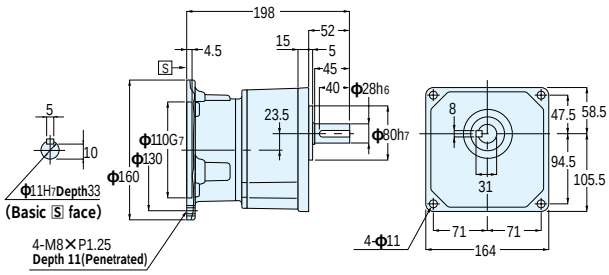
CAD Data: G3KS-22-020




Round Weight 5kg

## Fig.A-310 G3KS-28-100～200-（020）

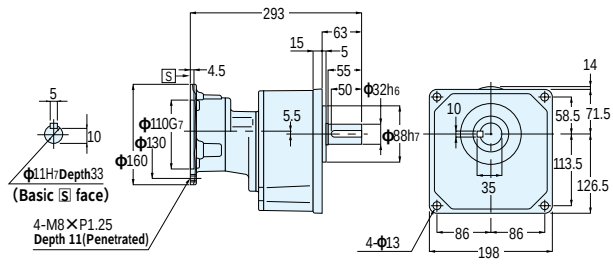
CAD Data: G3KS-28-020




Round Weight 7kg

## Fig.A-311 G3KS-32-300～450-（020）

CAD Data: G3KS-32-020




Round Weight 11kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## G3 Series equiv 0.4kW

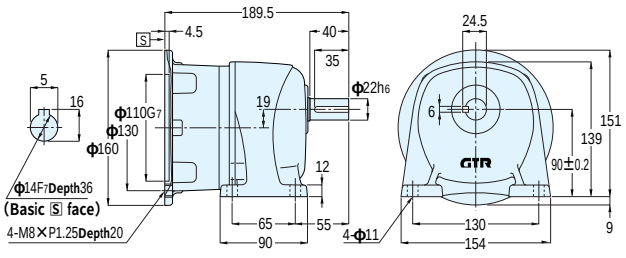


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3LS | G3FS | G3KS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.4kW | 22 | 1/ 5 | 7/ 34 | 12 | 10 | 1.2 | 1 | 882 | 90 | P.A142 Fig.A-312 5kg | P.A144 Fig.A-317 5.5kg | P.A145 Fig.A-322 5.5kg |
| | | 1/ 10 | 7/ 68 | 25 | 21 | 2.5 | 2.1 | 1180 | 120 | | | |
| | | 1/ 15 | 49/ 748 | 36 | 30 | 3.7 | 3.1 | 1370 | 140 | | | |
| | | 1/ 20 | 7/ 136 | 48 | 40 | 4.9 | 4.1 | 1470 | 150 | | | |
| | | 1/ 25 | 7/ 170 | 61 | 50 | 6.2 | 5.1 | 1670 | 170 | | | |
| | 28 | 1/ 30 | 1/ 30 | 73 | 61 | 7.4 | 6.2 | 2550 | 260 | P.A142 Fig.A-313 7kg | P.A144 Fig.A-318 7.5kg | P.A145 Fig.A-323 7.5kg |
| | | −1/ 40 | 221/ 8610 | 94 | 78 | 9.6 | 8 | 2840 | 290 | | | |
| | | −1/ 50 | 187/ 9030 | 117 | 98 | 11.9 | 10 | 3140 | 320 | | | |
| | | −1/ 60 | 169/ 9840 | 140 | 117 | 14.3 | 11.9 | 3430 | 350 | | | |
| | | −1/ 80 | 65/ 5166 | 187 | 156 | 19.1 | 15.9 | 3430 | 350 | | | |
| | | ＊−1/ 100 | 55/ 5418 | 193 | 161 | 19.7 | 16.4 | 3430 | 350 | | | |
| | 32 | −1/ 100 | 7/ 688 | 234 | 195 | 23.9 | 19.9 | 4900 | 500 | P.A143 Fig.A-314 10kg | P.A144 Fig.A-319 10.5kg | P.A145 Fig.A-324 10.5kg |
| | | −1/ 120 | 77/ 9360 | 281 | 234 | 28.7 | 23.9 | 5880 | 600 | | | |
| | | −1/ 160 | 21/ 3328 | 374 | 313 | 38.2 | 31.9 | 5880 | 600 | | | |
| | | −1/ 200 | 189/38272 | 431 | 390 | 44 | 39.8 | 5880 | 600 | | | |
| | 40 | 1/ 300 | 7/ 2160 | 626 | 521 | 63.9 | 53.2 | 7060 | 720 | P.A143 Fig.A-315 18.5kg | P.A144 Fig.A-320 20kg | |
| | | 1/ 375 | 77/29328 | 764 | 653 | 78 | 66.6 | 7060 | 720 | | | |
| | | ＊ 1/ 450 | 49/21600 | 764 | 764 | 78 | 78 | 7060 | 720 | | | |
| | 50 | 1/ 600 | 57/35360 | 1225 | 1044 | 125 | 106.5 | 9800 | 1000 | P.A143 Fig.A-316 48kg | P.A144 Fig.A-321 53kg | |
| | | ＊ 1/ 750 | 25/19448 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ＊ 1/ 900 | 5/ 4338 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ＊ 1/1200 | 33/40664 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

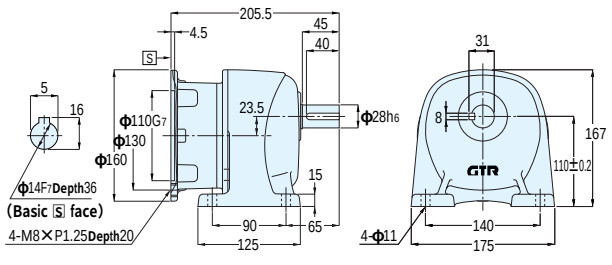
## Foot Mount Type

**Fig.A-312** G3LS-22-5〜25-（040）
CAD Data: G3LS-22-040




Round Weight 5kg

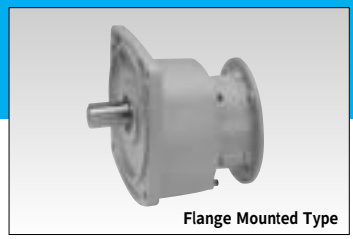
**Fig.A-313** G3LS-28-30〜100-（040）
CAD Data: G3LS-28-040

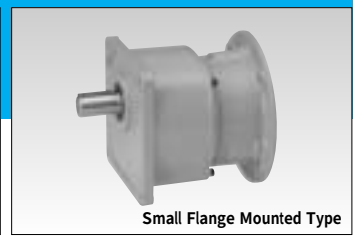



Round Weight 7kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

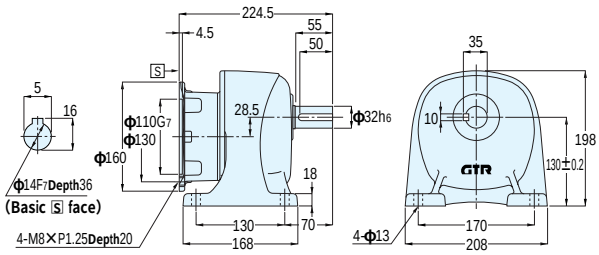

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-314 G3LS-32-100～200-（040）

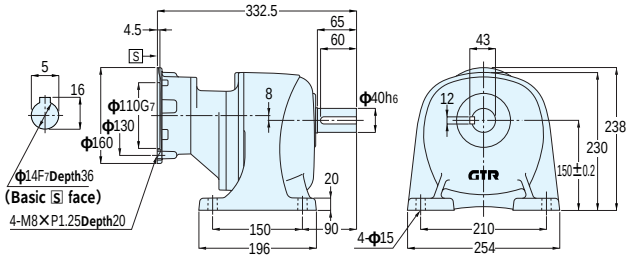
CAD Data：G3LS-32-040




Round Weight 10kg

## Fig.A-315 G3LS-40-300～450-（040）

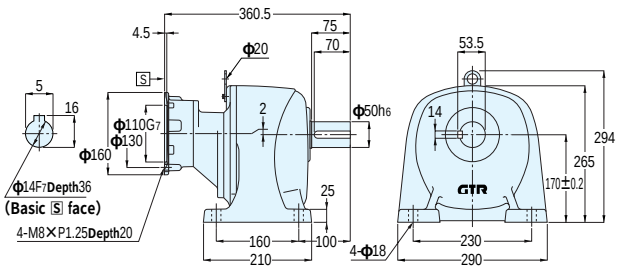
CAD Data：G3LS-40-040




Round Weight 18.5kg

## Fig.A-316 G3LS-50-600～1200-（040）

CAD Data：G3LS-50-040




Round Weight 48kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

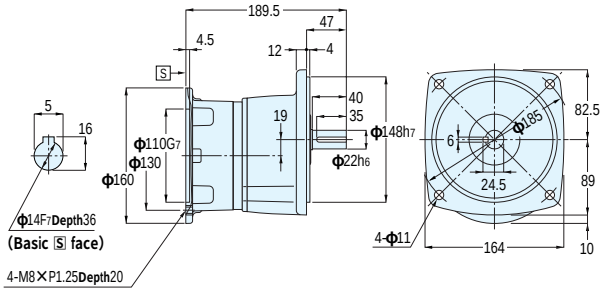
## G3 Series equiv 0.4kW

## Flange Mounted Type



### Fig.A-317 G3FS-22-5～25-（040）

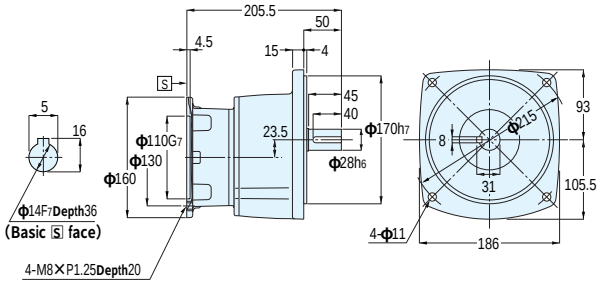
CAD Data: G3FS-22-040




Round Weight 5.5kg

### Fig.A-318 G3FS-28-30～100-（040）

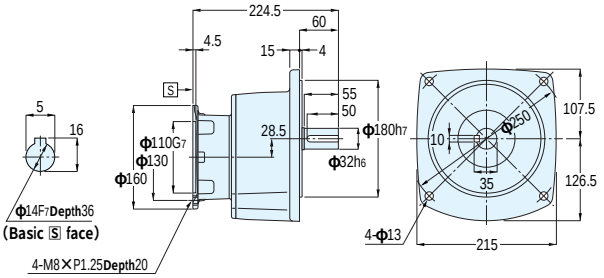
CAD Data: G3FS-28-040




Round Weight 7.5kg

### Fig.A-319 G3FS-32-100～200-（040）

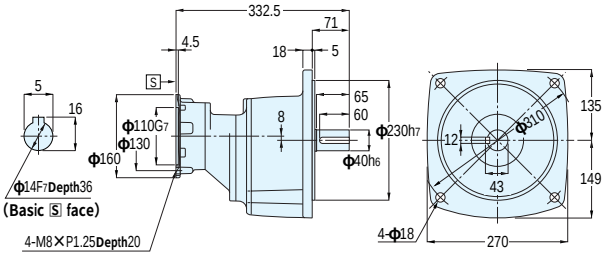
CAD Data: G3FS-32-040




Round Weight 10.5kg

### Fig.A-320 G3FS-40-300～450-（040）

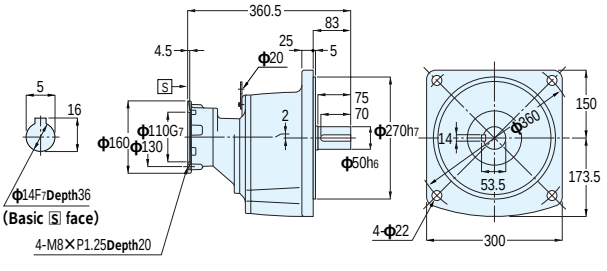
CAD Data: G3FS-40-040




Round Weight 20kg

### Fig.A-321 G3FS-50-600～1200-（040）

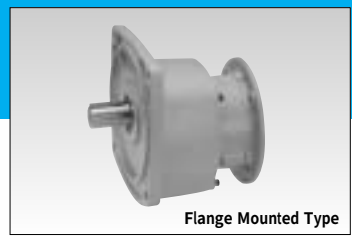
CAD Data: G3FS-50-040

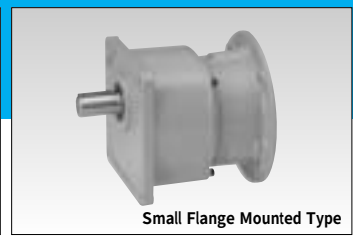



Round Weight 53kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type

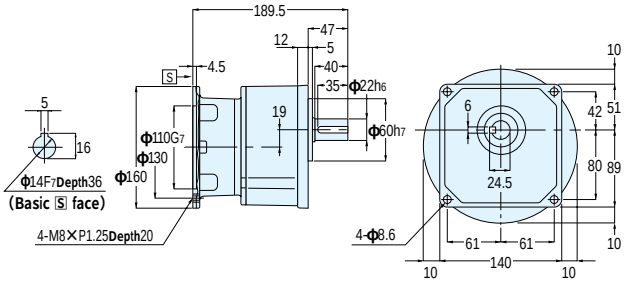

Flange Mounted Type


Small Flange Mounted Type

# Small Flange Mounted Type

## Fig.A-322 G3KS-22-5～25-（040）

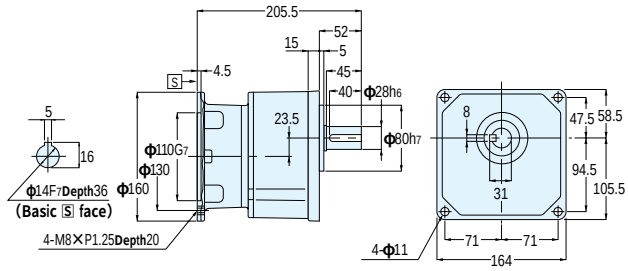
CAD Data: G3KS-22-040




Round Weight 5.5kg

## Fig.A-323 G3KS-28-30～100-（040）

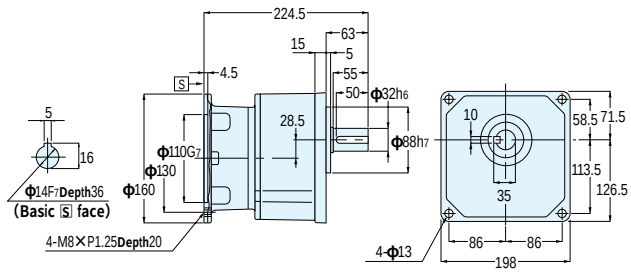
CAD Data: G3KS-28-040




Round Weight 7.5kg

## Fig.A-324 G3KS-32-100～200-（040）

CAD Data: G3KS-32-040




Round Weight 10.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## G3 Series equiv 0.75kW

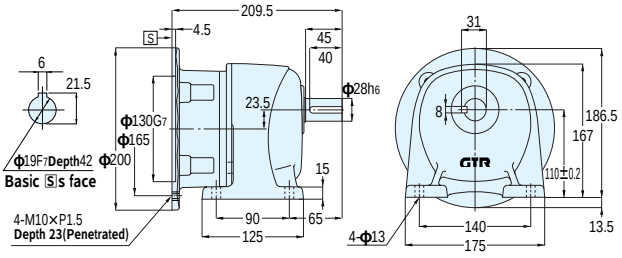


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3LS | G3FS | G3KS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.75kW | 28 | 1/ 5 | 91/ 459 | 23 | 19 | 2.3 | 1.9 | 1270 | 130 | P.A146 Fig.A-325 6.5kg | P.A147 Fig.A-329 7kg | P.A148 Fig.A-333 7kg |
| | | 1/ 10 | 1/ 10 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | | | |
| | | 1/ 15 | 91/ 1360 | 68 | 57 | 6.9 | 5.8 | 2160 | 220 | | | |
| | | 1/ 20 | 5/ 102 | 91 | 75 | 9.3 | 7.7 | 2350 | 240 | | | |
| | | 1/ 25 | 7/ 170 | 114 | 94 | 11.6 | 9.6 | 2450 | 250 | | | |
| | 32 | 1/ 30 | 3/ 92 | 136 | 114 | 13.9 | 11.6 | 4020 | 410 | P.A146 Fig.A-326 10kg | P.A147 Fig.A-330 10.5kg | P.A148 Fig.A-334 10.5kg |
| | | −1/ 40 | 13/ 516 | 175 | 146 | 17.9 | 14.9 | 4210 | 430 | | | |
| | | −1/ 50 | 11/ 540 | 220 | 183 | 22.4 | 18.7 | 4610 | 470 | | | |
| | | −1/ 60 | 13/ 774 | 264 | 220 | 26.9 | 22.4 | 5490 | 560 | | | |
| | | −1/ 80 | 13/ 1032 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | ＊−1/ 100 | 11/ 1080 | 362 | 302 | 36.9 | 30.8 | 5880 | 600 | | | |
| | 40 | −1/ 100 | 91/ 9000 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | P.A147 Fig.A-327 16.5kg | P.A147 Fig.A-331 18kg | |
| | | −1/ 120 | 77/ 9400 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | −1/ 160 | 9/ 1400 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | −1/ 200 | 9/ 1750 | 764 | 732 | 78 | 74.7 | 7060 | 720 | | | |
| | 50 | 1/ 300 | 211/62013 | 1176 | 978 | 120 | 99.8 | 9800 | 1000 | P.A147 Fig.A-328 48kg | P.A147 Fig.A-332 53kg | |
| | | 1/ 375 | 94/36103 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |
| | | ＊ 1/ 450 | 65/29167 | 1225 | 1225 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

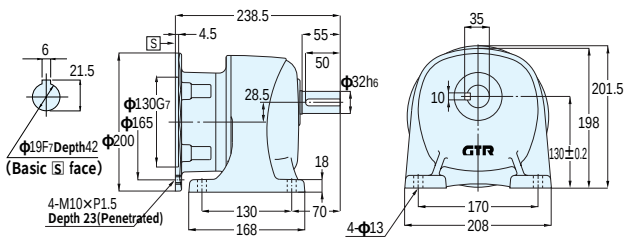
## Foot Mount Type

**Fig.A-325** G3LS-28-5〜25-（075）
CAD Data: G3LS-28-075




Round Weight 6.5kg

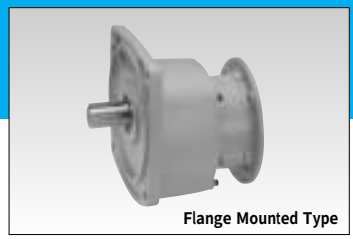
**Fig.A-326** G3LS-32-30〜100-（075）
CAD Data: G3LS-32-075

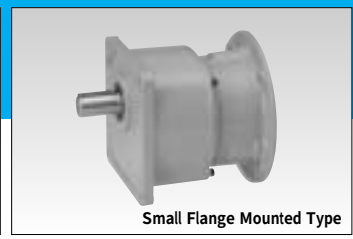



Round Weight 10kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78

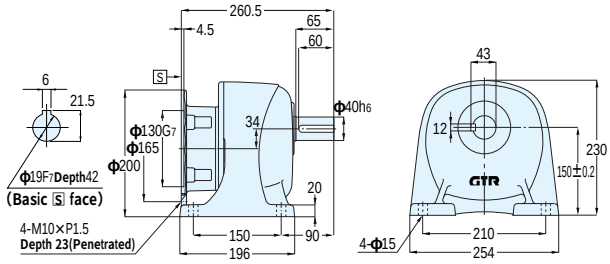

Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

## Fig.A-327 G3LS-40-100～200-（075）

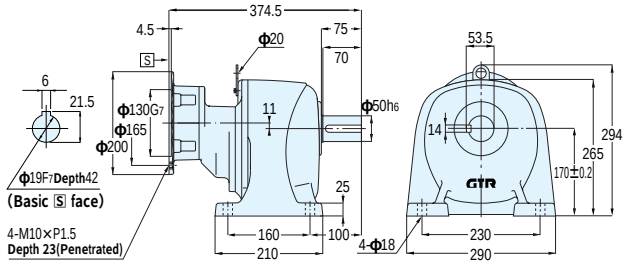
CAD Data: G3LS-40-075




Round Weight 16.5kg

## Fig.A-328 G3LS-50-300～450-（075）

CAD Data: G3LS-50-075

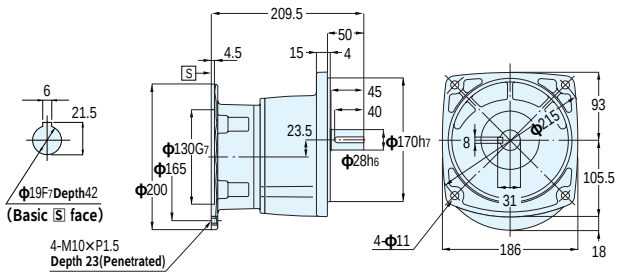



Round Weight 48kg

# Flange Mounted Type

## Fig.A-329 G3FS-28-5～25-（075）

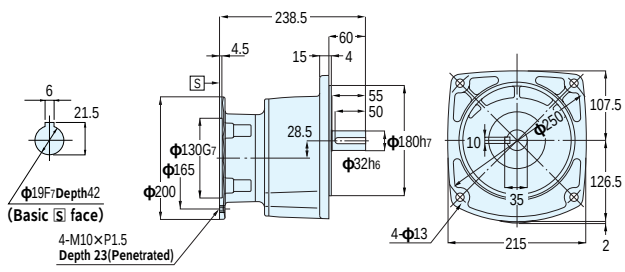
CAD Data: G3FS-28-075




Round Weight 7kg

## Fig.A-330 G3FS-32-30～100-（075）

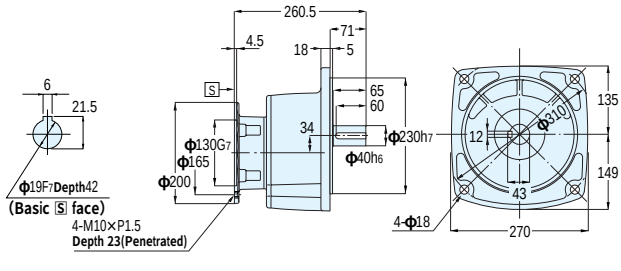
CAD Data: G3FS-32-075




Round Weight 10.5kg

## Fig.A-331 G3FS-40-100～200-（075）

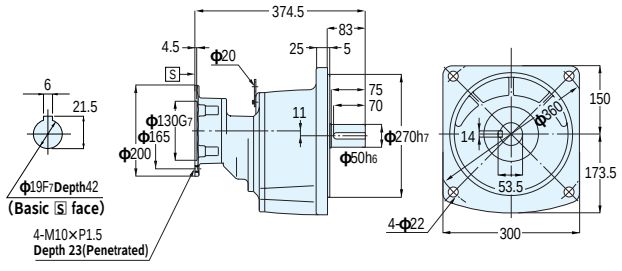
CAD Data: G3FS-40-075




Round Weight 18kg

## Fig.A-332 G3FS-50-300～450-（075）

CAD Data: G3FS-50-075




Round Weight 53kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

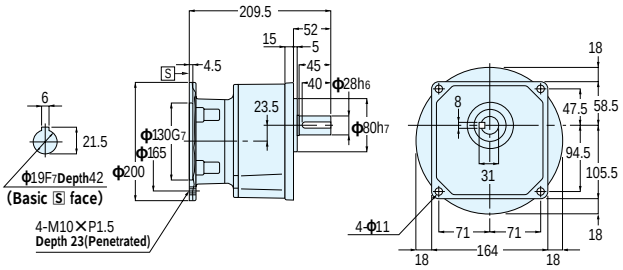
## G3 Series equiv 0.75kW

## Small Flange Mounted Type



**Fig.A-333** G3KS-28-5～25-（075）

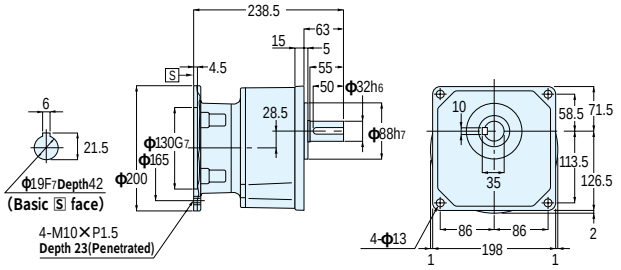
CAD Data: G3KS-28-075




Round Weight 7kg

**Fig.A-334** G3KS-32-30～100-（075）

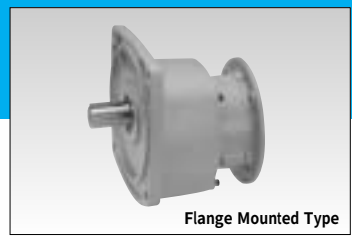
CAD Data: G3KS-32-075

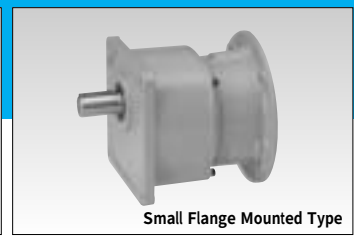



Round Weight 10.5kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## G3 Series equiv 1.5kW

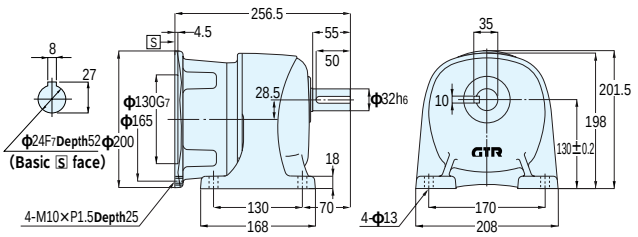


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3LS | G3FS | G3KS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5kW | 32 | 1/ 5 | 1/ 5 | 45 | 38 | 4.6 | 3.9 | 1760 | 180 | P.A150 Fig.A-335 11.5kg | P.A151 Fig.A-338 12kg | P.A151 Fig.A-341 12kg |
| | | 1/ 10 | 1/ 10 | 91 | 75 | 9.3 | 7.7 | 2450 | 250 | | | |
| | | 1/ 15 | 1/ 15 | 136 | 114 | 13.9 | 11.6 | 2840 | 290 | | | |
| | | 1/ 20 | 1/ 20 | 181 | 151 | 18.5 | 15.4 | 3230 | 330 | | | |
| | | 1/ 25 | 9/ 230 | 226 | 189 | 23.1 | 19.3 | 3820 | 390 | | | |
| | 40 | 1/ 30 | 1/ 30 | 272 | 226 | 27.8 | 23.1 | 5100 | 520 | P.A150 Fig.A-336 18.5kg | P.A151 Fig.A-339 20kg | |
| | | −1/ 40 | 13/ 540 | 351 | 293 | 35.8 | 29.9 | 5880 | 600 | | | |
| | | −1/ 50 | 11/ 564 | 439 | 366 | 44.8 | 37.3 | 7060 | 720 | | | |
| | | −1/ 60 | 91/ 5400 | 527 | 439 | 53.8 | 44.8 | 7060 | 720 | | | |
| | | −1/ 80 | 13/ 1080 | 703 | 585 | 71.7 | 59.7 | 7060 | 720 | | | |
| | | ＊−1/ 100 | 11/ 1128 | 724 | 603 | 73.9 | 61.5 | 7060 | 720 | | | |
| | 50 | −1/ 100 | 25/ 2618 | 878 | 732 | 89.6 | 74.7 | 9800 | 1000 | P.A150 Fig.A-337 48kg | P.A151 Fig.A-340 53kg | |
| | | −1/ 120 | 77/ 8993 | 1060 | 878 | 108 | 89.6 | 9800 | 1000 | | | |
| | | −1/ 160 | 33/ 5474 | 1230 | 1170 | 125 | 119 | 9800 | 1000 | | | |
| | | ＊−1/ 200 | 30/ 5831 | 1230 | 1230 | 125 | 125 | 9800 | 1000 | | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

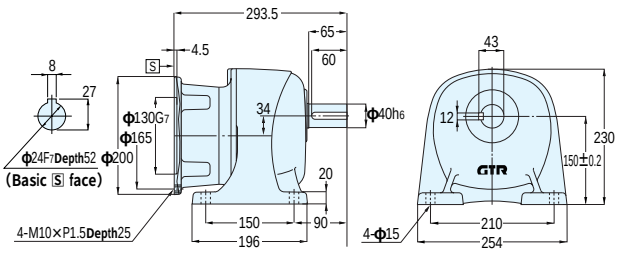
## Foot Mount Type

**Fig.A-335** G3LS-32-5〜25-(150)
CAD Data: G3LS-32-150



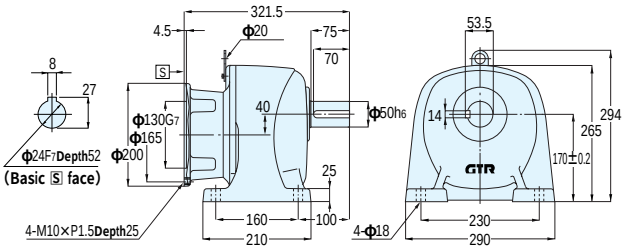

Round Weight 11.5kg

**Fig.A-336** G3LS-40-30〜100-(150)
CAD Data: G3LS-40-150




Round Weight 18.5kg

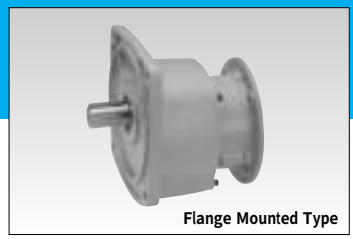
**Fig.A-337** G3LS-50-100〜200-(150)
CAD Data: G3LS-50-150

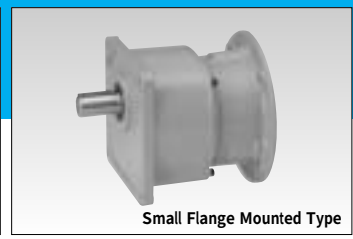



Round Weight 48kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type

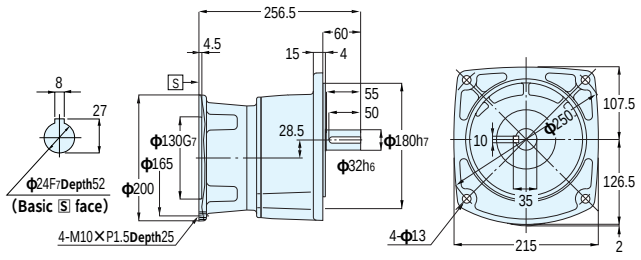

Flange Mounted Type


Small Flange Mounted Type

## Flange Mounted Type

### Fig.A-338 G3FS-32-5～25-（150）

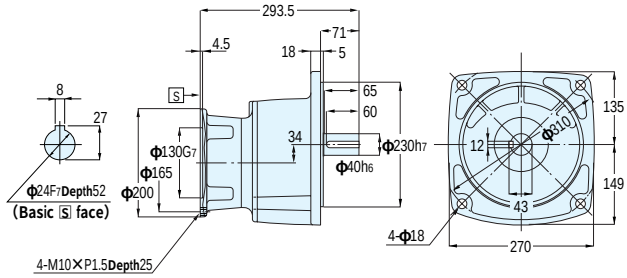
CAD Data: G3FS-32-150




Round Weight 12kg

### Fig.A-339 G3FS-40-30～100-（150）

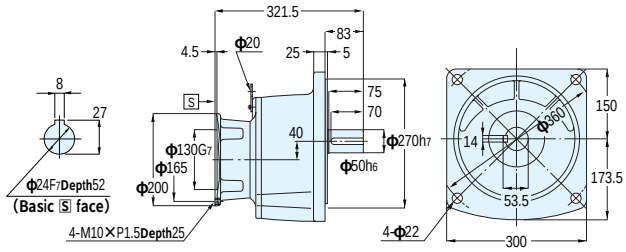
CAD Data: G3FS-40-150




Round Weight 20kg

### Fig.A-340 G3FS-50-100～200-（150）

CAD Data: G3FS-50-150

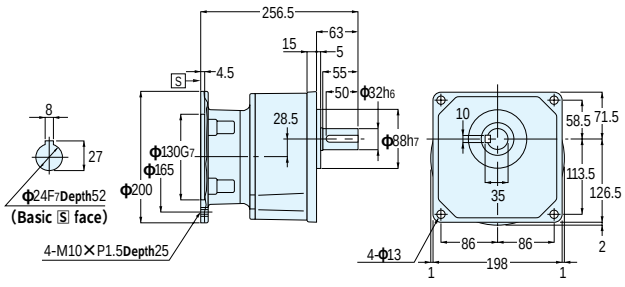



Round Weight 53kg

## Small Flange Mounted Type

### Fig.A-341 G3KS-32-5～25-（150）

CAD Data: G3KS-32-150




Round Weight 12kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## G3 Series equiv 2.2kW

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

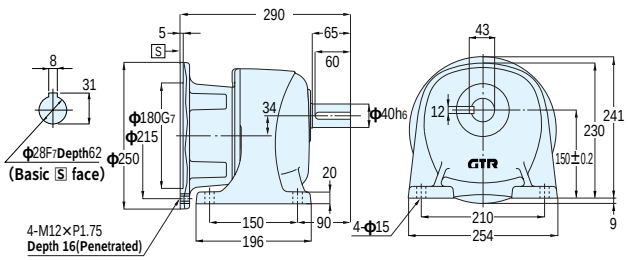
| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3LS | Page, Diagram No. of the Outer Dimension Diagram, Round Weight G3FS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.2kW | 40 | 1/ 5 | 7/ 36 | 67 | 56 | 6.8 | 5.7 | 2160 | 220 | P.A152 Fig.A-342 18kg | P.A152 Fig.A-344 19.5kg |
| | | 1/ 10 | 7/ 72 | 133 | 111 | 13.6 | 11.3 | 3140 | 320 | | |
| | | 1/ 15 | 49/ 720 | 200 | 167 | 20.4 | 17 | 3530 | 360 | | |
| | | 1/ 20 | 7/ 144 | 266 | 221 | 27.1 | 22.6 | 4020 | 410 | | |
| | | 1/ 25 | 7/ 180 | 332 | 277 | 33.9 | 28.3 | 4700 | 480 | | |
| | 50 | 1/ 30 | 5/ 154 | 399 | 332 | 40.7 | 33.9 | 6960 | 710 | P.A152 Fig.A-343 48kg | P.A152 Fig.A-345 53kg |
| | | −1/ 40 | 399/15488 | 515 | 429 | 52.6 | 43.8 | 7250 | 740 | | |
| | | −1/ 50 | 399/20240 | 644 | 537 | 65.7 | 54.8 | 8620 | 880 | | |
| | | −1/ 60 | 49/ 2904 | 773 | 644 | 78.9 | 65.7 | 9800 | 1000 | | |
| | | −1/ 80 | 49/ 3795 | 1029 | 858 | 105 | 87.6 | 9800 | 1000 | | |
| | | −1/ 100 | 21/ 2116 | 1230 | 1080 | 125 | 110 | 9800 | 1000 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

### Fig.A-342 G3LS-40-5〜25-（220）

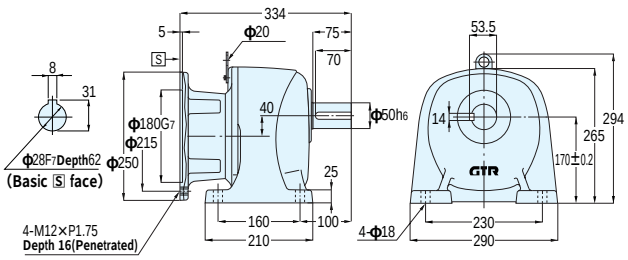
CAD Data: G3LS-40-220




Round Weight 18kg

### Fig.A-343 G3LS-50-30〜100-（220）

CAD Data: G3LS-50-220

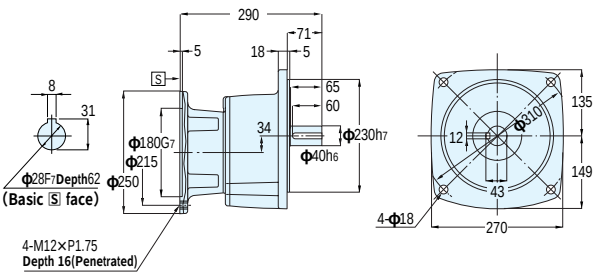



Round Weight 48kg

## Flange Mounted Type

### Fig.A-344 G3FS-40-5〜25-（220）

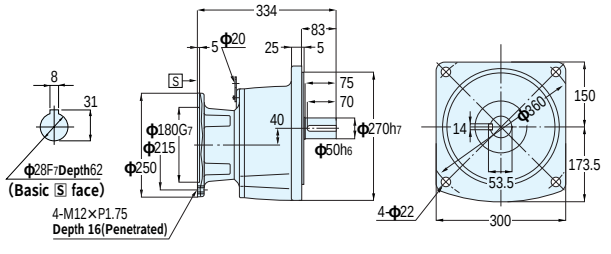
CAD Data: G3FS-40-220




Round Weight 19.5kg

### Fig.A-345 G3FS-50-30〜100-（220）

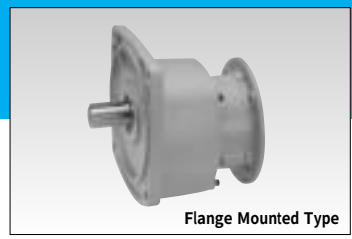
CAD Data: G3FS-50-220

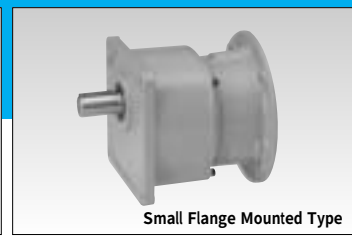



Round Weight 53kg

Model Code P.A130
Detailed Dimension Diagram of Input Shaft P.E48
Option P.E78


Foot Mount Type


Flange Mounted Type


Small Flange Mounted Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

# Right Angle Shaft

# H2 Series Gearmotor • Reducer

## Model • Type Designation Standard Model Lineup

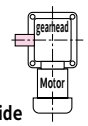
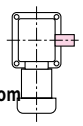
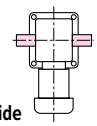
H2 Series


■Gearmotor/Gearmotor with Brake
Model and Type Designation/Standard Model Lineup ..... P. B7
3-phase Performance Table/Dimension Diagram ..... P. B11
Single-phase Performance Table/Dimension Diagram ..... P. B23
■Water-Resistant W/SUS Shaft•
Water-Resistant W/Carbon Steel Shaft (IP65)Gearmotor/
Gearmotor with Brake
Model and Type Designation/Standard Model Lineup ..... P. B31
Performance List/Dimension Diagram ..... P. B35
■Gearmotor with Clutch and Brake
(Standard Type/Heavy duty Type)
Model and Type Designation/Standard Model Lineup ..... P. B47
Performance Table/Dimension Diagram ..... P. B51
■Reducer (Double Shaft Type)
Model and Type Designation/Standard Model Lineup ..... P. B57
Performance List/Dimension Diagram ..... P. B61
■S-Type Reducer (Designated Motor Attachable Type)
Model and Type Designation/Standard Model Lineup ..... P. B71
Performance List/Dimension Diagram ..... P. B75

# Model and Type Designation H2 Series (Right Angle Shaft)

H2 Series gearmotors and reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Code | Spec. Code |
|---|---|---|---|---|---|---|---|---|---|---|
| H2 | L | M | – 32 | L | – 200 | – T040 | W | A | | |
| H2 | F | B | – 22 | T | – 50 | – S100 | | | X | T9 |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | |
|---|---|
| ①Series Name | H2 : H2 Series (Right Angle Shaft) |
| ②Classification by Mount Form | L : Leg Mount |
| | F : Foot Mount (Frame No. 22 only) |
| ③Classification by Motor Type | M : Motor only |
| | B : Brake-motor |
| | J : Brake Manual Release Device(Option) |
| | W : Water-Resistant Motor W/SUS Shaft (JIS:SUS420J2) |
| | V : Water-Resistant Brake Motor W/SUS Shaft (JIS:SUS420J2) |
| | G : Water-Rresistant Motor W/Carbon Steel Shaft (JIS:S43C) |
| | H : Water-Resistant Brake Motor W/Carbon Steel Shaft (JIS:S43C) |
| | E : Clutch/Brake Motor |
| | Blank : Without motor (Double Shaft) |
| | S : Designated Motor Attachable (S Type) |
| ④Frame Number and Diameter of Output Shaft Diameter of Output Shaft | Diameter of Output Shaft |
| ⑤Shaft Arrangement | L: Output shaft on the left viewing from Input shaft side   R: Output shaft on the right viewing from Input shaft side  T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1500 : 1／1500 |
| ⑦Motor Type and Capacity | T010 : 3-phase 0.1kW 010 : equiv 0.1kW(Double S-Type) |
| | T020 : 3-phase 0.2kW 020 : equiv 0.2kW(Double S-Type) |
| | T040 : 3-phase 0.4kW 040 : equiv 0.4kW(Double S-Type) |
| | 075 : 3-phase 0.75kW equiv 0.75kW(Double S-Type) |
| | 150 : 3-phase 1.5kW equiv 1.5kW(Double S-Type) |
| | 220 : 3-phase 2.2kW equiv 2.2kW(Double S-Type) |
| | S100 : 1-phase 100W |
| | 200 : 1-phase 200W |
| | 400 : 1-phase 400W |
| ⑧⑨Option | Blank : Standard voltage<br>3-phase : 200V／50Hz、200V／60Hz、220V／60Hz<br>0.1kW～0.4kW without terminal box (Note 1)<br>0.75kW～2.2kW terminal box attached<br>1-phase : 100V／50Hz、100V／60Hz<br>without terminal box (Note 2) |
| | W : High voltage<br>3-phase : 380V／50Hz、400V／50Hz、400V／60Hz、440V／60Hz<br>0.1kW～0.4kW without terminal box (Note 1)<br>0.75kW～2.2kW terminal box attached<br>1-phase : 200V／50Hz、200V／60Hz (custom specs.)<br>without terminal box (Note 2) |
| | A : Terminal box (option) |
| | Z : Rectifier built-in terminal box for 3ph brake motor (option) |
| | E : Terminal box for water-resistant, type (standard specs.) (Note 3) |
| ⑩Auxiliary Code | Blank : Standard specs. |
| | X : Code to identify additional special specs. |
| ⑪Specification Code | Instruction for terminal box lead wire position. Refer to the specification code list on page E35 for details. |

Note 1: For orders of gearmotors equipped with terminal box with the capacity of less than 0.4kW, specify " A " or " Z " at the end of the capacity code. However, since terminal box equipped is the standard specs. of the gearmotor with clutch/brake 0.4kW, be sure to specify " A " at the end of the capacity code. (Example: H2LE-32L-200-T40A) All the gearmotors with the capacity of 0.75～2.2kW are terminal box equipped and have no additional code. For rectifier built-in gearmotors, refer to page E26.

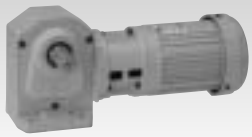
Note 2: Standard 1-phase gearmotors are not equipped with terminal box. Terminal box should be ordered additionally.

Note 3: Water-resistant outdoor gearmotors are equipped with E-Type terminal box as standard specs., therefore, for orders, specify " E " at the end of the capacity code.

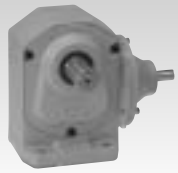
Note: Spec. code does not appear on the product type designation in the nameplate. It is indicated on the additional number column in the nameplate.



Gearmotor
Gearmotor with Brake



Gearmotor with Clutch and Brake



Reducer (Double Shaft Type)



S-Type Reducer


Parallel Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch/Brake
- Reducer (Double Shaft)
- S-Type Reducer

Right Angle Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch /Brake
- Reduce (Double Shaft)
- S-Type Reducer

Hollow Shaft Solid Shaft Performance Table/Dimension
- Gearmotor with Brake
- Water-Resistant, Outdoor Gearmotor with Brake
- Reduce (Double Shaft)
- S-Type Reducer

Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
- Gearmotor with Brake
- Water-Resistant, Outdoor Gearmotor with Brake
- Reducer (Parallel Shaft)
- S-Type Reducer

Technical Information

Standard Motors

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Option

GT-STEP Index Gearmotor

KOMPASS Gearbox

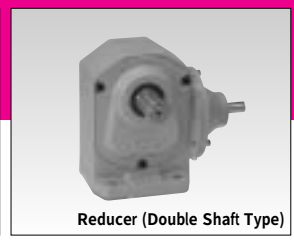
# Standard Model Lineup G3 Series (Right Angle Shaft)

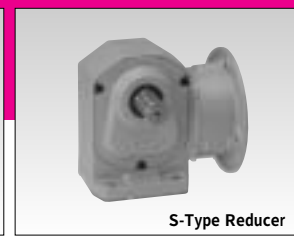


| Type | 4P Motor Capacity and Equiv. Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Gearmotor H2LM / Gearmotor with Brake H2LB / Gearmotor equipped with brake manual release device H2LJ (Optional Spec.) | 3-Phase 0.1kW / 1-Phase 100W (Note 2) | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 28 | L R T | 1/300 1/375 1/450 |
| | | 32 | L R T | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-Phase 0.2kW / 1-Phase 200W | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 28 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 32 | L R T | 1/300 1/375 1/450 |
| | | 40 | L R T | 1/600 1/750 1/900 1/1200 1/1500 |
| Gearmotor H2LM / Gearmotor with Brake H2LB / Gearmotor equipped with brake manual release device H2LJ (Optional Spec.) / Reducer (Double Shaft Type) H2L / S-Type Reducer H2LS | 3-Phase 0.4kW / 1-Phase 400W | 28 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 32 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 40 | L R T | 1/300 1/375 1/450 |
| | | 50 | L R T | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-Phase 0.75kW | 32 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 40 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 50 | L R T | 1/300 1/375 1/450 |
| | 3-Phase 1.5kW | 40 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 50 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-Phase 2.2kW | 50 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |


Gearmotor
Gearmotor with Brake


Gearmotor with Clutch and Brake


Reducer (Double Shaft Type)


S-Type Reducer

| Type | 4P Motor Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| 〈GT-PACK〉 Gearmotor with Clutch/Brake H2LE | 3-Phase 0.2kW | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 28 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-Phase 0.4kW | 28 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 32 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-Phase 0.75kW | 32 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 40 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |

Note 1) Flange mounted type (H2F) is also available only in the Frame Number 22.
2) High reduction ratio (greater than 1/300) is not available in single phase 100V motor.
3) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

# Right Angle Shaft

# Gearmotor
# Gearmotor with Brake

## Model • Type Designation
## Standard Model Lineup

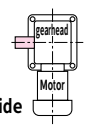
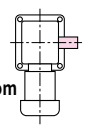
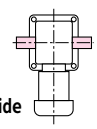
H2 Series

| | | | |
|---|---|---|---|
| Motor Part | Number of phase | 3-Phase | 1-Phase |
| | Capacity | 0.1kW～2.2kW | 100W～400W |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz | 100V 50/60Hz |
| | Insulation Classification | Class B | Class B(Class E for 100W) |
| | Starting Method | Direct start | Capacitor Start(100V:capacitor operation) |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed only for 0.1kW without brake) | Totally Enclosed fan-cooled |
| | Number of Pole | 4 | |
| | Rating | Continuous Rating | |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear | |
| | Lubrication | Grease Lubrication(Maintenance Free) | |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) | |
| | Output Shaft Material | S43C | |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron, 1.5kW Frame No.40: Cast aluminium) | |
| Ambient Conditions | Ambient Temperature | −10°C～40°C | |
| | Ambient Humidity | 85% max.(without any dew condensation) | |
| | Altitude | 1,000m max. | |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. | |
| | Installation Location | Indoors | |
| Painting | Painting Method | Anion painting, Acrylic paint | |
| | Painting Color | Grey(Mansel code: 9B6/0.5) | |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) | |

# Model and Type Designation G3 Series (Right Angle Shaft)

H2 series gearmotors and gearmotor with brake are classified by codes as shown below. Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Code | Spec. Code |
|---|---|---|---|---|---|---|---|---|---|---|
| H2 | L | M | – 32 | L | – 200 | – T040 | W | A | | |
| H2 | F | B | – 22 | T | – 50 | – S100 | | | X | T9 |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | |
|---|---|
| ①Series Name | H2 : H2 Series (Right Angle Shaft) |
| ②Classification by Mount Form | L : Leg Mount |
| | F : Foot Mount (Frame No. 22 only) |
| ③Classification by Motor Type | M : Motor only |
| | B : Brake-motor |
| | J : Brake Manual Release Device(Option) |
| ④Frame Number and Diameter of Output Shaft | Diameter of Output Shaft |
| ⑤Shaft Arrangement | L: Output shaft on the left viewing from Input shaft side   R: Output shaft on the right viewing from Input shaft side  T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1500 : 1／1500 |
| ⑦Motor Type and Capacity | T010 : 3-phase 0.1 kW |
| | T020 : 3-phase 0.2 kW |
| | T040 : 3-phase 0.4 kW |
| | 075 : 3-phase 0.75kW |
| | 150 : 3-phase 1.5 kW |
| | 220 : 3-phase 2.2 kW |
| | S100 : 1-phase 100W |
| | 200 : 1-phase 200W |
| | 400 : 1-phase 400W |
| ⑧⑨Option<br>Note 1: For orders of gearmotors equipped with terminal box with the capacity of less than 0.4kW, specify " A " or " Z " at the end of the capacity code. However, since terminal box equipped is the standard specs. All the gearmotors with the capacity of 0.75～2.2kW are terminal box equipped and have no additional code. For rectifier built-in gearmotors, refer to page E26.<br>Note 2: Standard 1-phase gearmotors are not equipped with terminal box. Terminal box should be ordered additionally. | Blank : Standard voltage<br>3-phase : 200V／50Hz、200V／60Hz、220V／60Hz<br>0.1kW～0.4kW without terminal box (Note 1)<br>0.75kW～2.2kW terminal box attached<br>1-phase : 100V／50Hz、100V／60Hz<br>without terminal box (Note 2) |
| | W : High voltage<br>3-phase : 380V／50Hz、400V／50Hz、400V／60Hz、440V／60Hz<br>0.1kW～0.4kW without terminal box (Note 1)<br>0.75kW～2.2kW terminal box attached<br>1-phase : 200V／50Hz、200V／60Hz (custom specs.)<br>without terminal box (Note 2) |
| | A : Terminal box (option) |
| | Z : Rectifier built-in terminal box for 3ph brake motor (option) |
| ⑩Auxiliary Code | Blank : Standard voltage |
| | X : Code to identify additional special specs. |
| ⑪Specification Code<br>Note: Spec. code does not appear on the product type designation in the nameplate. It is indicated on the additional number column in the nameplate. | Instruction for terminal box lead wire position.<br>Refer to the specification code list on page E35 for details. |

# Standard Model Lineup


Foot Mount Type


Flange Mount Type (Frame No. 22 only)

| Type | 4P Motor Capacity and Equiv. Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Gearmotor H2LM / Gearmotor with Brake H2LB / Gearmotor equipped with brake manual release device H2LJ (Optional Spec.) | 3-Phase 0.1kW / 1-Phase 100W (Note 2) | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 **1/240** |
| | | 28 | L R T | 1/300 1/375 1/450 |
| | | 32 | L R T | 1/600 1/750 1/900 **1/1200** **1/1500** |
| | 3-Phase 0.2kW / 1-Phase 200W | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 28 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 32 | L R T | 1/300 1/375 1/450 |
| | | 40 | L R T | 1/600 1/750 **1/900** **1/1200** **1/1500** |
| | 3-Phase 0.4kW / 1-Phase 400W | 28 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 32 | L R T | 1/80 1/100 1/120 1/160 1/200 **1/240** |
| | | 40 | L R T | 1/300 1/375 **1/450** |
| | | 50 | L R T | 1/600 **1/750** **1/900** **1/1200** **1/1500** |
| | 3-Phase 0.75kW | 32 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 40 | L R T | 1/80 1/100 1/120 1/160 1/200 **1/240** |
| | | 50 | L R T | 1/300 **1/375** **1/450** |
| | 3-Phase 1.5kW | 40 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 50 | L R T | 1/80 1/100 1/120 1/160 **1/200** **1/240** |
| | 3-Phase 2.2kW | 50 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) Flange mounted type (H2F) is also available only in the Frame Number 22.
2) High reduction ratio (greater than 1/300) is not available in single phase 100V motor.
3) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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Technical Information
Standard Motors
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

# Right Angle Shaft

# Gearmotor
# Gearmotor with Brake

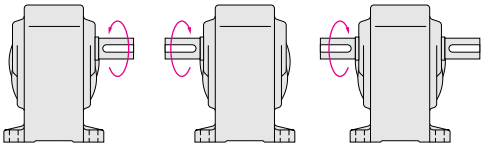
## Performance Table
## Dimension diagram

H2 Series

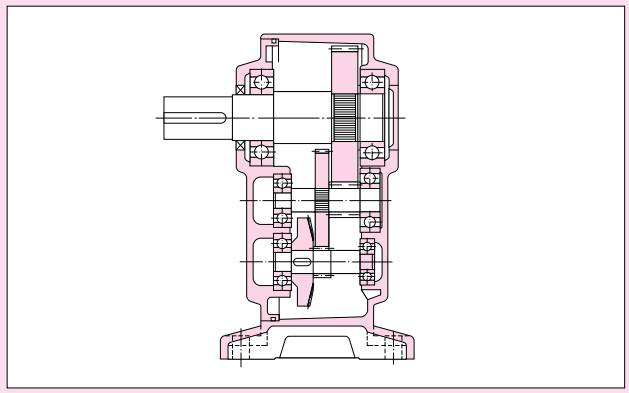
## 3-Phase

**【Remarks】**

- Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, L-shaft rotates clockwise while R and T-shafts rotate counterclockwise when viewing from output shaft side. (Refer to the diagram shown below.)





# Gearmotor
# Gearmotor with Brake
## H2 Series 3-Phase 0.1kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) |

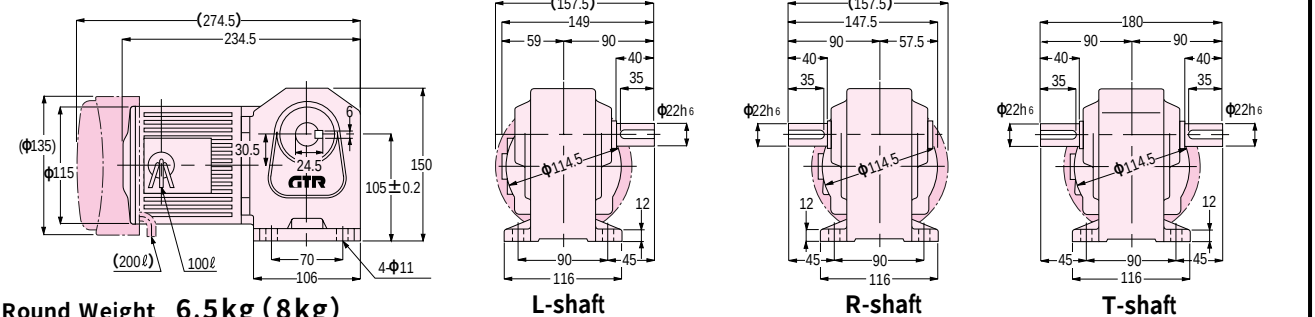
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LM (H2LB) | H2FM (H2FB) |
| 3-Phase 0.1kW | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 2.8 | 2.4 | 0.29 | 0.24 | 588 | 60 | P.B12 Fig.B-1 6.5kg (8kg) | P.B13 Fig.B-4 6.5kg (8kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 5.7 | 4.8 | 0.58 | 0.49 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 8.6 | 7.2 | 0.88 | 0.73 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 12 | 9.5 | 1.2 | 0.97 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 15 | 12 | 1.5 | 1.2 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 18 | 15 | 1.8 | 1.5 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 23 | 19 | 2.3 | 1.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 28 | 24 | 2.9 | 2.4 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 34 | 28 | 3.5 | 2.9 | 1760 | 180 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 44 | 37 | 4.5 | 3.8 | 1760 | 180 | | |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 55 | 46 | 5.6 | 4.7 | 1760 | 180 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 67 | 55 | 6.8 | 5.6 | 1760 | 180 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 88 | 74 | 9 | 7.5 | 1760 | 180 | | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 111 | 92 | 11.3 | 9.4 | 1760 | 180 | | |
| | | ∗1/ 240 | 1/ 236 | 6.3 | 7.5 | 118 | 111 | 12 | 11.3 | 1760 | 180 | | |
| | 28 | 1/ 300 | 7/ 2120 | 5 | 6 | 145 | 121 | 14.8 | 12.3 | 2840 | 290 | P.B13 Fig.B-2 10kg (11.5kg) | |
| | | 1/ 375 | 7/ 2650 | 4 | 4.8 | 181 | 151 | 18.5 | 15.4 | 2840 | 290 | | |
| | | 1/ 450 | 7/ 3127 | 3.3 | 4 | 218 | 181 | 22.2 | 18.5 | 2840 | 290 | | |
| | 32 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 286 | 238 | 29.2 | 24.3 | 4120 | 420 | P.B13 Fig.B-3 13kg (14.5kg) | |
| | | 1/ 750 | 7/ 5300 | 2 | 2.4 | 358 | 298 | 36.5 | 30.4 | 4120 | 420 | | |
| | | 1/ 900 | 7/ 6360 | 1.7 | 2 | 429 | 358 | 43.8 | 36.5 | 4120 | 420 | | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 431 | 431 | 44 | 44 | 4120 | 420 | | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 431 | 431 | 44 | 44 | 4120 | 420 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.B-1**

**H2LM-22$^{L}_{R}$-5～240-T010** CAD Data: H2LM-22(LRT)-T010
**(H2LB-22$^{L}_{R}$-5～240-T010)** (CAD Data: H2LB-22(LRT)-T010)




Round Weight 6.5kg (8kg)

L-shaft R-shaft T-shaft

Model Code P.B8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox



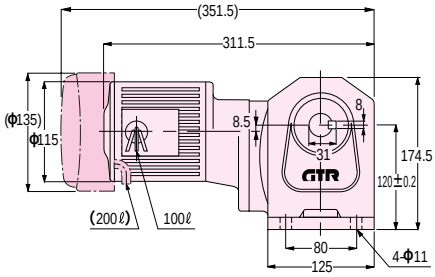
Foot Mount Type



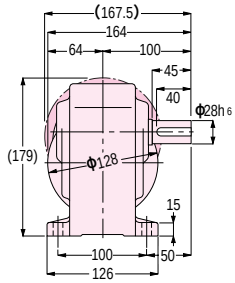
Flange Mount Type (Frame No. 22 only)

## Fig.B-2

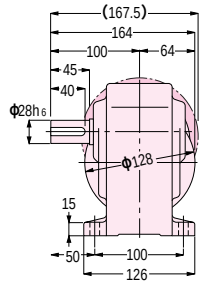
**H2LM-28$^{L}_{R}$-300～450-T010** CAD Data: H2LM-28(LRT)-T010
**(H2LB-28$^{L}_{R}$-300～450-T010)** (CAD Data: H2LB-28(LRT)-T010)



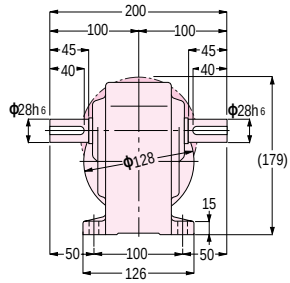

Round Weight 10kg (11.5kg)




L-shaft



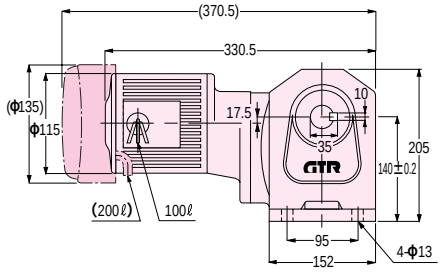

R-shaft



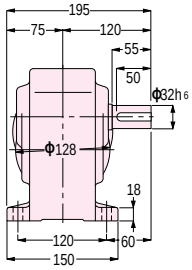

T-shaft

## Fig.B-3

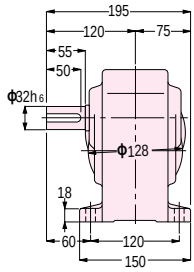
**H2LM-32$^{L}_{R}$-600～1500-T010** CAD Data: H2LM-32(LRT)-T010
**(H2LB-32$^{L}_{R}$-600～1500-T010)** (CAD Data: H2LB-32(LRT)-T010)



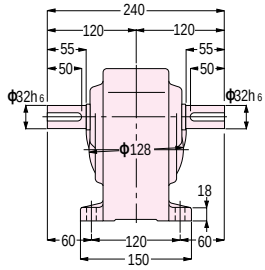

Round Weight 13kg (14.5kg)




L-shaft




R-shaft

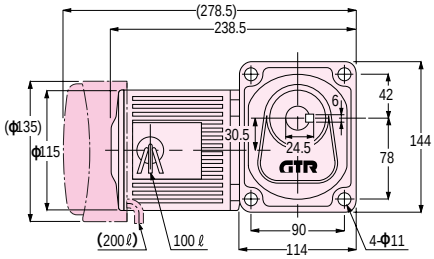



T-shaft

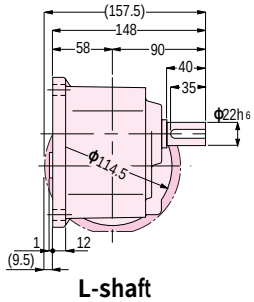
# Flange Mounted Type

## Fig.B-4

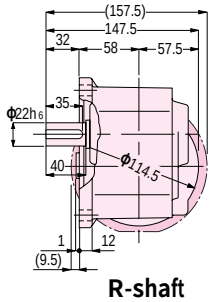
**H2FM-22$^{L}_{R}$-5～240-T010** CAD Data: H2FM-22(LRT)-T010
**(H2FB-22$^{L}_{R}$-5～240-T010)** (CAD Data: H2FB-22(LRT)-T010)



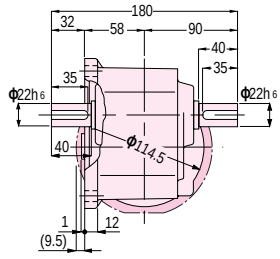

Round Weight 6.5kg (8kg)




L-shaft




R-shaft




T-shaft

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake

## H2 Series 3-Phase 0.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

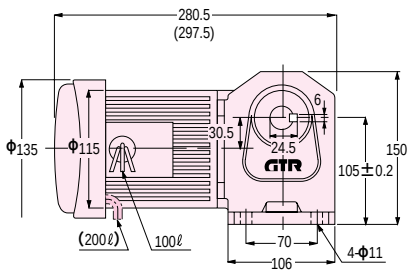
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LM (H2LB) | H2FM (H2FB) |
| 3-phase 0.2kW | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 5.7 | 4.8 | 0.58 | 0.49 | 588 | 60 | P.B14 Fig.B-5 7.5kg (9kg) | P.B15 Fig.B-9 7.5kg (9kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 18 | 15 | 1.8 | 1.5 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 28 | 24 | 2.9 | 2.4 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 34 | 28 | 3.5 | 2.9 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 46 | 38 | 4.7 | 3.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 57 | 48 | 5.8 | 4.9 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 69 | 57 | 7 | 5.8 | 1810 | 185 | | |
| | 28 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 88 | 74 | 9 | 7.5 | 2450 | 250 | P.B15 Fig.B-6 9.5kg (11kg) | |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 111 | 92 | 11.3 | 9.4 | 2650 | 270 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 133 | 111 | 13.6 | 11.3 | 2740 | 280 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 177 | 148 | 18.1 | 15.1 | 2840 | 290 | | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 221 | 184 | 22.6 | 18.8 | 2840 | 290 | | |
| | | 1/ 240 | 1/ 236 | 6.3 | 7.5 | 245 | 221 | 25 | 22.6 | 2840 | 290 | | |
| | 32 | 1/ 300 | 7/ 2120 | 5 | 6 | 294 | 245 | 30 | 25 | 3820 | 390 | P.B15 Fig.B-7 13.5kg (15kg) | |
| | | 1/ 375 | 7/ 2650 | 4 | 4.8 | 368 | 306 | 37.5 | 31.2 | 4120 | 420 | | |
| | | 1/ 450 | 7/ 3127 | 3.3 | 4 | 431 | 368 | 44 | 37.5 | 4120 | 420 | | |
| | 40 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 588 | 490 | 60 | 50 | 6760 | 690 | P.B15 Fig.B-8 22kg (23.5kg) | |
| | | 1/ 750 | 7/ 5300 | 2 | 2.4 | 735 | 613 | 75 | 62.5 | 6760 | 690 | | |
| | | ∗1/ 900 | 7/ 6360 | 1.7 | 2 | 764 | 735 | 78 | 75 | 6760 | 690 | | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 764 | 764 | 78 | 78 | 6760 | 690 | | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 764 | 764 | 78 | 78 | 6760 | 690 | | |

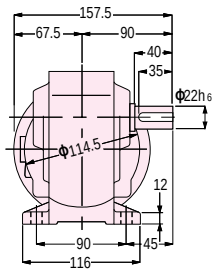
Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

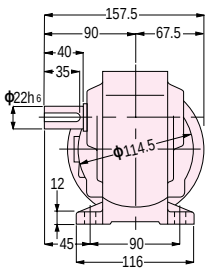
**Fig.B-5**

**H2LM-22$^{L}_{R}$-5～60-T020** CAD Data: H2LM-22(LRT)-T020
**(H2LB-22$^{L}_{R}$-5～60-T020)** (CAD Data: H2LB-22(LRT)-T020)

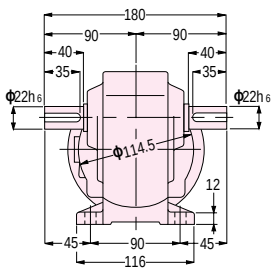



L-shaft




R-shaft




T-shaft

Round Weight 7.5kg (9kg)

Model Code P.B8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

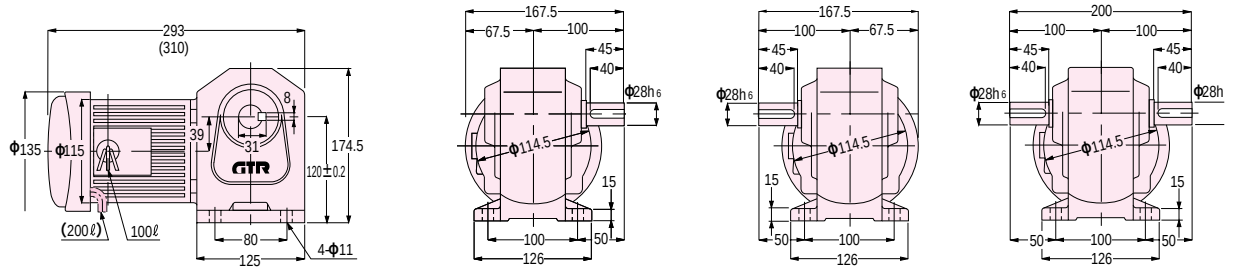
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mount Type (Frame No. 22 only)

## Fig.B-6

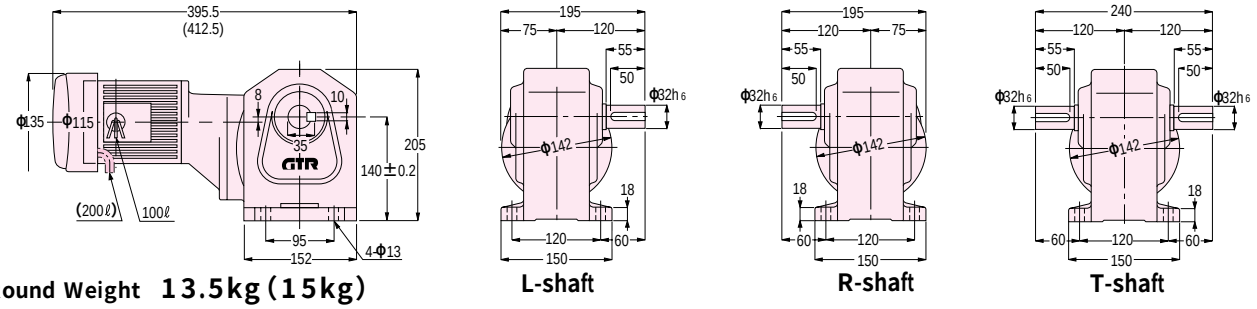
**H2LM-28□-80～240-T020** CAD Data: H2LM-28(LRT)-T020
**(H2LB-28□-80～240-T020)** (CAD Data: H2LB-28(LRT)-T020)




Round Weight 9.5kg(11kg)

## Fig.B-7

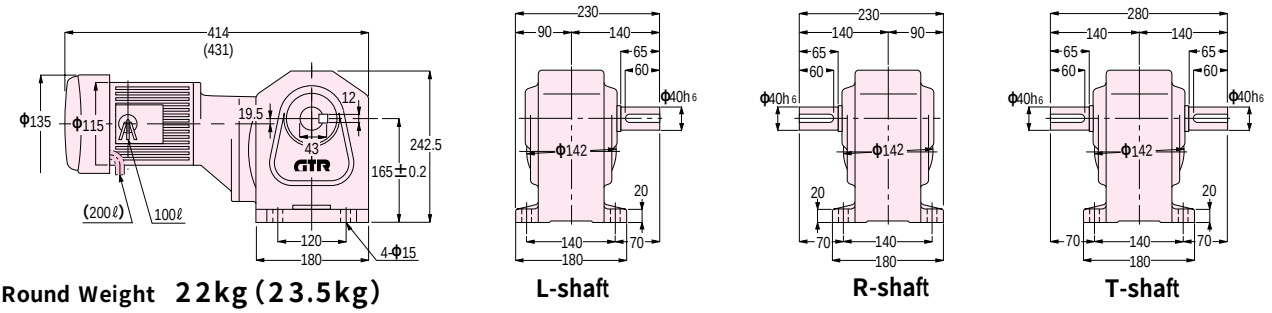
**H2LM-32□-300～450-T020** CAD Data: H2LM-32(LRT)-T020
**(H2LB-32□-300～450-T020)** (CAD Data: H2LB-32(LRT)-T020)




Round Weight 13.5kg(15kg)

## Fig.B-8

**H2LM-40□-600～1500-T020** CAD Data: H2LM-40(LRT)-T020
**(H2LB-40□-600～1500-T020)** (CAD Data: H2LB-40(LRT)-T020)

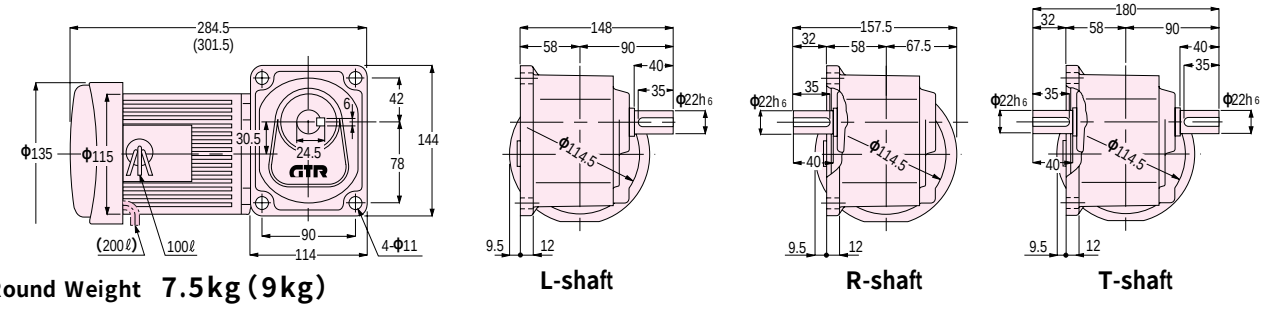



Round Weight 22kg(23.5kg)

# Flange Mounted Type

## Fig.B-9

**H2FM-22□-5～60-T020** CAD Data: H2FM-22(LRT)-T020
**(H2FB-22□-5～60-T020)** (CAD Data: H2FB-22(LRT)-T020)




Round Weight 7.5kg(9kg)

# Gearmotor
# Gearmotor with Brake

## H2 Series 3-Phase 0.4kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

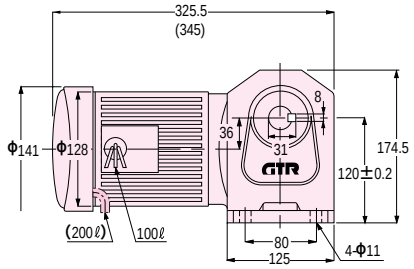
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) H2LM (H2LB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 3-phase 0.4kW | 28 | 1/ 5 | 1/ 5 | 300 | 360 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | P.B16 Fig.B-10 11kg (12.5kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1470 | 150 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 34 | 28 | 3.5 | 2.9 | 1670 | 170 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 46 | 38 | 4.7 | 3.9 | 1860 | 190 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 57 | 48 | 5.8 | 4.9 | 2010 | 205 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 69 | 57 | 7 | 5.8 | 2210 | 225 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 92 | 76 | 9.4 | 7.8 | 2450 | 250 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 115 | 95 | 11.7 | 9.7 | 2650 | 270 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 137 | 115 | 14 | 11.7 | 2740 | 280 | |
| | 32 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 177 | 148 | 18.1 | 15.1 | 3430 | 350 | P.B17 Fig.B-11 14kg (15.5kg) |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 221 | 184 | 22.6 | 18.8 | 3820 | 390 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 266 | 221 | 27.1 | 22.6 | 4120 | 420 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 355 | 295 | 36.2 | 30.1 | 4120 | 420 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 431 | 369 | 44 | 37.7 | 4120 | 420 | |
| | | ∗1/ 240 | 1/ 236 | 6.3 | 7.5 | 431 | 431 | 44 | 44 | 4120 | 420 | |
| | 40 | 1/ 300 | 7/ 2080 | 5 | 6 | 572 | 477 | 58.4 | 48.7 | 6760 | 690 | P.B17 Fig.B-12 24.5kg (26kg) |
| | | 1/ 375 | 7/ 2600 | 4 | 4.8 | 715 | 597 | 73 | 60.9 | 6760 | 690 | |
| | | ∗1/ 450 | 7/ 3120 | 3.3 | 4 | 764 | 715 | 78 | 73 | 6760 | 690 | |
| | 50 | 1/ 600 | 21/12220 | 2.5 | 3 | 1150 | 955 | 116.9 | 97.4 | 9510 | 970 | P.B17 Fig.B-13 54.5kg (56kg) |
| | | ∗1/ 750 | 1/ 728 | 2 | 2.4 | 1230 | 1190 | 125 | 121.7 | 9510 | 970 | |
| | | ∗1/ 900 | 7/ 6240 | 1.7 | 2 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1200 | 21/24440 | 1.3 | 1.5 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1500 | 1/ 1456 | 1 | 1.2 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

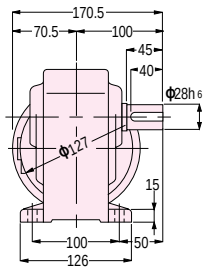
## Foot Mount Type

**Fig.B-10**

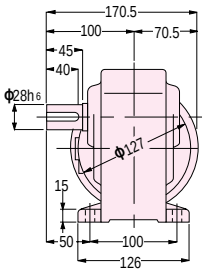
**H2LM-28$^{L}_{R}$-5～60-T040** CAD Data: H2LM-28(LRT)-T040
**(H2LB-28$^{L}_{R}$-5～60-T040)** (CAD Data: H2LB-28(LRT)-T040)



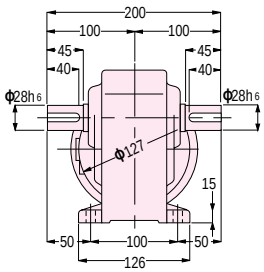

Round Weight 11kg (12.5kg)




L-shaft




R-shaft



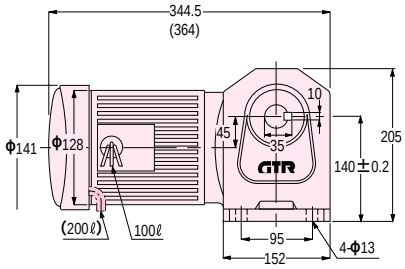

T-shaft

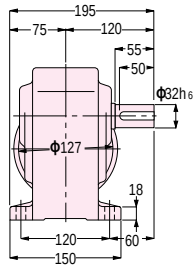
Model Code P.B8
Multipurpose Inverter P.E86～E92
Option P.E78～E93


Foot Mount Type

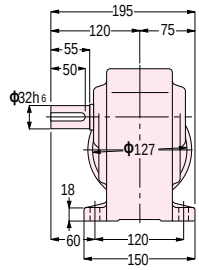
## Fig.B-11

**H2LM-32□-80～240-T040** CAD Data: H2LM-32(LRT)-T040
**(H2LB-32□-80～240-T040)** (CAD Data: H2LB-32(LRT)-T040)

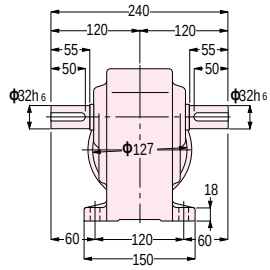


L-shaft



R-shaft

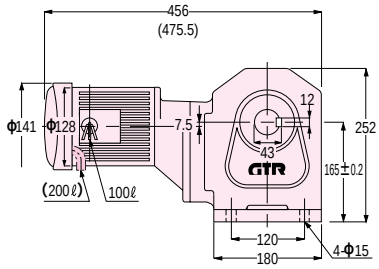


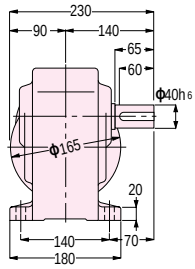
T-shaft

Round Weight 14kg (15.5kg)

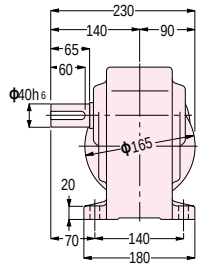
## Fig.B-12

**H2LM-40□-300～450-T040** CAD Data: H2LM-40(LRT)-T040
**(H2LB-40□-300～450-T040)** (CAD Data: H2LB-40(LRT)-T040)

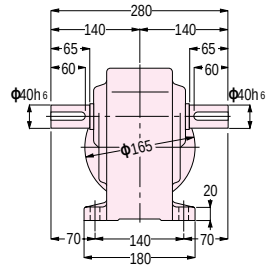


L-shaft



R-shaft

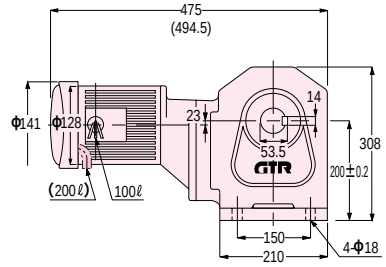


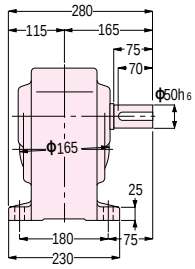
T-shaft

Round Weight 24.5kg (26kg)

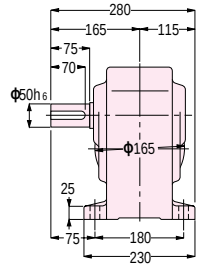
## Fig.B-13

**H2LM-50□-600～1500-T040** CAD Data: H2LM-50(LRT)-T040
**(H2LB-50□-600～1500-T040)** (CAD Data: H2LB-50(LRT)-T040)

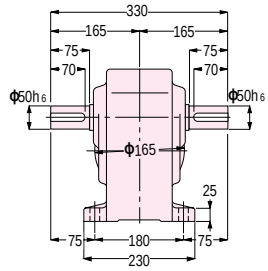


L-shaft



R-shaft



T-shaft

Round Weight 54.5kg (56kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake

## H2 Series 3-Phase 0.75kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

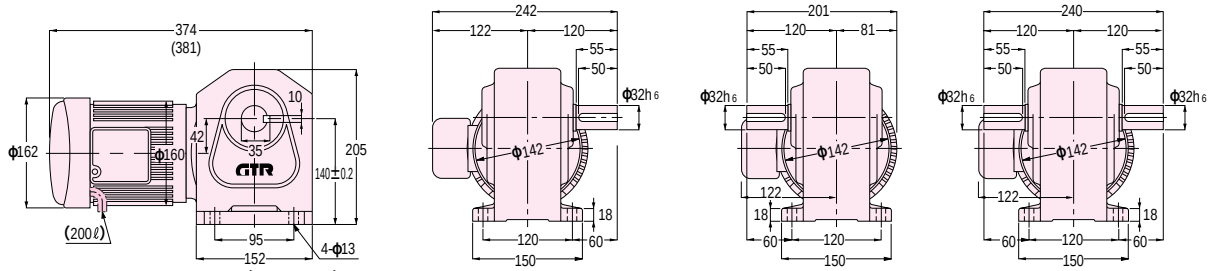
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) H2LM (H2LB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 3-phase 0.75kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 22 | 18 | 2.2 | 1.8 | 1520 | 155 | P.B18 Fig.B-14 17.5kg (20kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 43 | 36 | 4.4 | 3.7 | 2010 | 205 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 65 | 54 | 6.6 | 5.5 | 2210 | 225 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 86 | 72 | 8.8 | 7.3 | 2450 | 250 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 108 | 89 | 11 | 9.1 | 2740 | 280 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 128 | 107 | 13.1 | 11 | 2940 | 300 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 172 | 143 | 17.5 | 14.6 | 3430 | 350 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 215 | 179 | 21.9 | 18.3 | 3820 | 390 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 258 | 215 | 26.3 | 21.9 | 4120 | 420 | |
| | 40 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 332 | 277 | 33.9 | 28.3 | 5780 | 590 | P.B18 Fig.B-15 26kg (28.5kg) |
| | | 1/100 | 1/ 100 | 15 | 18 | 416 | 346 | 42.4 | 35.3 | 6080 | 620 | |
| | | 1/120 | 1/ 120 | 12.5 | 15 | 498 | 415 | 50.8 | 42.4 | 6270 | 640 | |
| | | 1/160 | 1/ 160 | 9.4 | 11.2 | 664 | 554 | 67.8 | 56.5 | 6470 | 660 | |
| | | 1/200 | 1/ 200 | 7.5 | 9 | 764 | 692 | 78 | 70.6 | 6660 | 680 | |
| | | ∗1/240 | 1/ 240 | 6.3 | 7.5 | 764 | 764 | 78 | 78 | 6660 | 680 | |
| | 50 | 1/300 | 7/2120 | 5 | 6 | 1070 | 895 | 109.6 | 91.3 | 7740 | 790 | P.B19 Fig.B-16 58.5kg (61kg) |
| | | ∗1/375 | 7/2650 | 4 | 4.8 | 1230 | 1120 | 125 | 114.1 | 8040 | 820 | |
| | | ∗1/450 | 7/3180 | 3.3 | 4 | 1230 | 1230 | 125 | 125 | 8530 | 870 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.B-14**

**H2LM-32□-5～60-075** CAD Data: H2LM-32(LRT)-075
**(H2LB-32□-5～60-075)** (CAD Data: H2LB-32(LRT)-075)

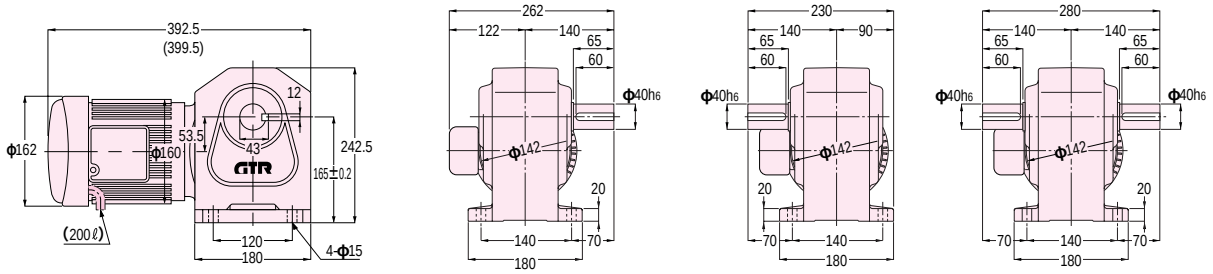



Round Weight 17.5kg (20kg)

L-shaft R-shaft T-shaft

**Fig.B-15**

**H2LM-40□-80～240-075** CAD Data: H2LM-40(LRT)-075
**(H2LB-40□-80～240-075)** (CAD Data: H2LB-40(LRT)-075)




Round Weight 26kg (28.5kg)

L-shaft R-shaft T-shaft

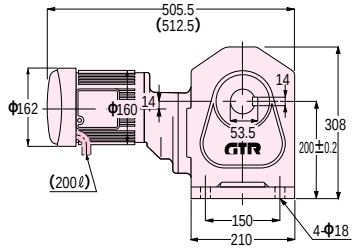
Model Code P.B8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

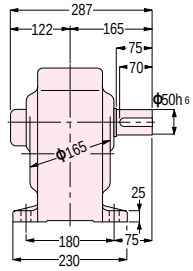
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type

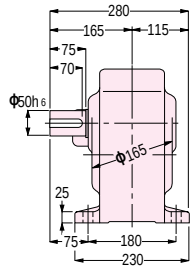
## Fig.B-16

**H2LM-50$^{L}_{R}$T-300～450-075** CAD Data: H2LM-50(LRT)-075
**(H2LB-50$^{L}_{R}$T-300～450-075)** (CAD Data: H2LB-50(LRT)-075)

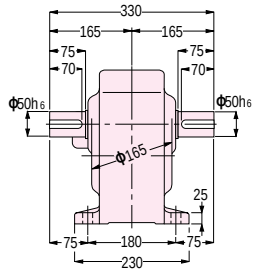


L-shaft



R-shaft



T-shaft

Round Weight 58.5kg(61kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## H2 Series 3-Phase 1.5kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

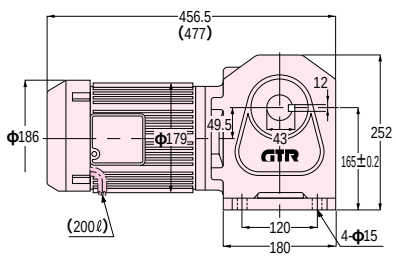
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) H2LM (H2LB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 3-phase 1.5kW | 40 | 1/ 5 | 1/ 5 | 300 | 360 | 43 | 36 | 4.4 | 3.7 | 2650 | 270 | P.B20 Fig.B-17 33kg (36.5kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 86 | 72 | 8.8 | 7.3 | 3530 | 360 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 128 | 107 | 13.1 | 11 | 4410 | 450 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 172 | 143 | 17.5 | 14.6 | 4700 | 480 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 215 | 179 | 21.9 | 18.3 | 5100 | 520 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 258 | 215 | 26.3 | 21.9 | 5290 | 540 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 344 | 277 | 35.1 | 28.3 | 5590 | 570 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 429 | 346 | 43.8 | 35.3 | 5880 | 600 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 515 | 415 | 52.6 | 42.4 | 6080 | 620 | |
| | 50 | 1/ 80 | 3/235 | 18.8 | 22.5 | 664 | 554 | 67.8 | 56.5 | 8530 | 870 | P.B20 Fig.B-18 62kg (65.5kg) |
| | | 1/100 | 1/ 98 | 15 | 18 | 830 | 692 | 84.7 | 70.6 | 8820 | 900 | |
| | | 1/120 | 1/120 | 12.5 | 15 | 1000 | 830 | 102 | 84.7 | 9020 | 920 | |
| | | 1/160 | 3/470 | 9.4 | 11.2 | 1230 | 1110 | 125 | 113 | 9310 | 950 | |
| | | ∗1/200 | 1/196 | 7.5 | 9 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/240 | 1/240 | 6.3 | 7.5 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

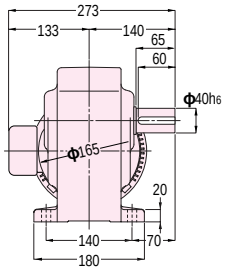
Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

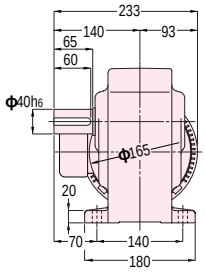
**Fig.B-17**

**H2LM-40$^{L}_{R}$-5～60-150** CAD Data: H2LM-40(LRT)-150
**(H2LB-40$^{L}_{R}$-5～60-150)** (CAD Data: H2LB-40(LRT)-150)

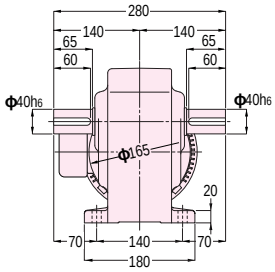



L-shaft




R-shaft

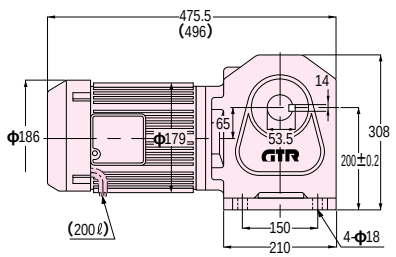


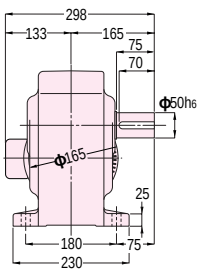

T-shaft

Round Weight 33kg (36.5kg)

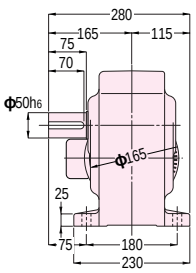
**Fig.B-18**

**H2LM-50$^{L}_{R}$-80～240-150** CAD Data: H2LM-50(LRT)-150
**(H2LB-50$^{L}_{R}$-80～240-150)** (CAD Data: H2LB-50(LRT)-150)

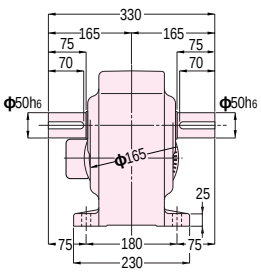



L-shaft




R-shaft




T-shaft

Round Weight 62kg (65.5kg)

Model Code P.B8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# H2 Series 3-Phase 2.2kW


Foot Mount Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 2.2kW | 220 | 50/60/60 | 200/200/220 | 9.0/8.6/8.0 | 1410/1690/1710 | B | Totally Enclosed Fan-cooled |

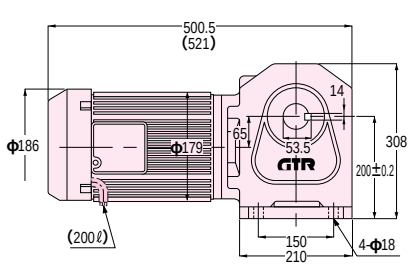
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | H2LM (H2LB) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 3-phase 2.2kW | 50 | 1/ 5 | 1/ 5 | 300 | 360 | 63 | 53 | 6.4 | 5.4 | 3920 | 400 | P.B21 Fig.B-19 65.5kg (69kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 126 | 105 | 12.9 | 10.7 | 4410 | 450 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 189 | 157 | 19.3 | 16.1 | 4900 | 500 | |
| | | 1/ 20 | 12/235 | 75 | 90 | 252 | 210 | 25.7 | 21.4 | 5490 | 560 | |
| | | 1/ 25 | 2/ 49 | 60 | 72 | 315 | 263 | 32.1 | 26.8 | 6080 | 620 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 378 | 315 | 38.6 | 32.1 | 6570 | 670 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 487 | 406 | 49.7 | 41.1 | 7060 | 720 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 609 | 507 | 62.1 | 51.8 | 7550 | 770 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 731 | 609 | 74.6 | 62.1 | 8130 | 830 | |
| | | 1/ 80 | 3/235 | 18.8 | 22.5 | 974 | 812 | 99.4 | 82.9 | 8430 | 860 | |
| | | 1/100 | 1/ 98 | 15 | 18 | 1220 | 1010 | 124 | 104 | 8820 | 900 | |
| | | 1/120 | 1/120 | 12.5 | 15 | 1230 | 1220 | 125 | 124 | 8820 | 900 | |

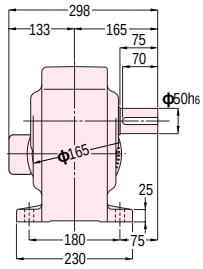
Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

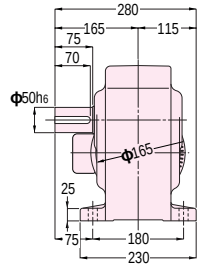
**Fig.B-19**

H2LM-50□-5～120-220 CAD Data: H2LM-50(LRT)-220
(H2LB-50□-5～120-220) (CAD Data: H2LB-50(LRT)-220)

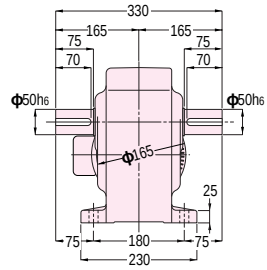


L-shaft



R-shaft



T-shaft

Round Weight 65.5kg (69kg)

Model Code P.B8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

GTR Gearmotor

# Right Angle Shaft

# Gearmotor
# Gearmotor with Brake

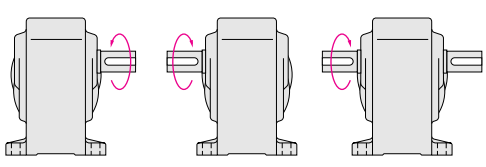
## Performance Table
## Dimension diagram

H2 Series

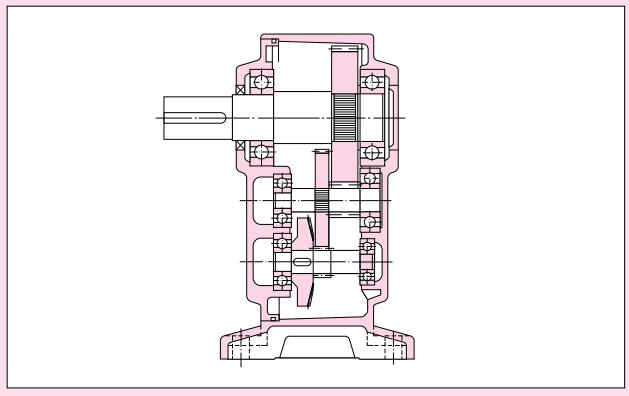
## 1-Phase

【Remarks】

- Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, L-shaft rotates clockwise while R and T-shafts rotate counterclockwise when viewing from output shaft side. (Refer to the diagram shown below.)
- The starting torque of the single-phase 100W motor will be 60～80%, since it employs capacitor-operate motor.





# Gearmotor
# Gearmotor with Brake
## H2 Series 1-Phase 100W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 100W | S100 | 50/60 | 100/100 | 1.7/1.9 | 1400/1700 | E | Totally Enclosed fan-cooled | Capacitor Start |

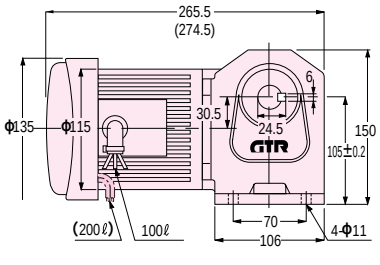
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LM (H2LB) | H2FM (H2FB) |
| 1-phase 100W | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 2.8 | 2.4 | 0.29 | 0.24 | 588 | 60 | P.B24 Fig.B-20 7kg (8kg) | P.B25 Fig.B-21 7kg (8kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 5.7 | 4.8 | 0.58 | 0.49 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 8.6 | 7.2 | 0.88 | 0.73 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 12 | 9.5 | 1.2 | 0.97 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 15 | 12 | 1.5 | 1.2 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 18 | 15 | 1.8 | 1.5 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 23 | 19 | 2.3 | 1.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 28 | 24 | 2.9 | 2.4 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 34 | 28 | 3.5 | 2.9 | 1760 | 180 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 44 | 37 | 4.5 | 3.8 | 1760 | 180 | | |
| | | 1/100 | 1/100 | 15 | 18 | 55 | 46 | 5.6 | 4.7 | 1760 | 180 | | |
| | | 1/120 | 1/120 | 12.5 | 15 | 67 | 55 | 6.8 | 5.6 | 1760 | 180 | | |
| | | 1/160 | 1/160 | 9.4 | 11.2 | 88 | 74 | 9 | 7.5 | 1760 | 180 | | |
| | | 1/200 | 1/200 | 7.5 | 9 | 111 | 92 | 11.3 | 9.4 | 1760 | 180 | | |
| | | ∗1/240 | 1/236 | 6.3 | 7.5 | 118 | 111 | 12 | 11.3 | 1760 | 180 | | |

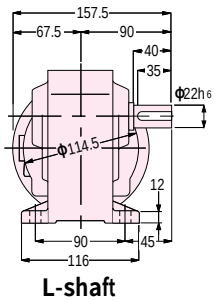
Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

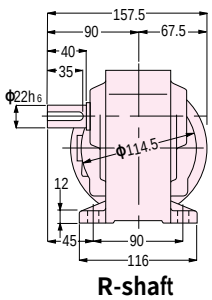
**Fig.B-20**

**H2LM-22□-5～240-S100** CAD Data: H2LM-22(LRT)-S100
**(H2LB-22□-5～240-S100)** (CAD Data: H2LB-22(LRT)-S100)

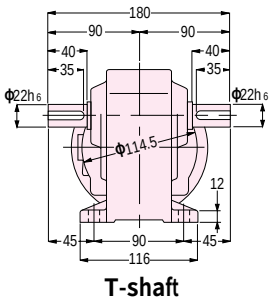



L-shaft




R-shaft




T-shaft

Round Weight 7kg (8kg)

Model Code P.B8
Option P.E78～E85

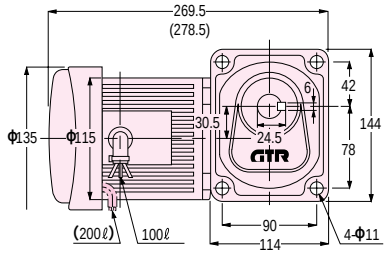

Foot Mount Type

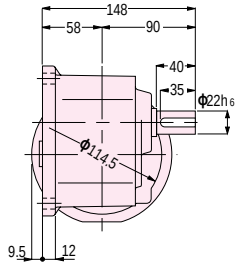

Flange Mount Type (Frame No. 22 only)

# Flange Mounted Type

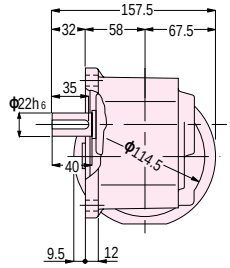
**Fig.B-21**

## H2FM-22$^{L}_{R}$T-5～240-S100 CAD Data: H2FM-22(LRT)-S100
## (H2FB-22$^{L}_{R}$T-5～240-S100) (CAD Data: H2FB-22(LRT)-S100)

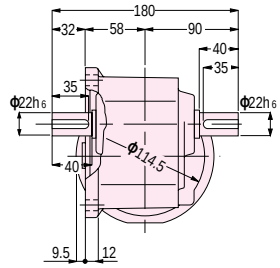


L-shaft



R-shaft



T-shaft

Round Weight 7kg (8kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake

## H2 Series 1-Phase 200W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 200W | 200 | 50/60 | 100/100 | 5.1/4.5 | 1420/1700 | B | Totally Enclosed fan-cooled | Capacitor Start |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LM (H2LB) | H2FM (H2FB) |
| 1-phase 200W | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 5.7 | 4.8 | 0.58 | 0.49 | 588 | 60 | P.B26 Fig.B-22 9.5kg (11kg) | P.B27 Fig.B-26 9.5kg (11kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 18 | 15 | 1.8 | 1.5 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 28 | 24 | 2.9 | 2.4 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 34 | 28 | 3.5 | 2.9 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 46 | 38 | 4.7 | 3.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 57 | 48 | 5.8 | 4.9 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 69 | 57 | 7 | 5.8 | 1810 | 185 | | |
| | 28 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 88 | 74 | 9 | 7.5 | 2450 | 250 | P.B27 Fig.B-23 11.5kg (13kg) | |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 111 | 92 | 11.3 | 9.4 | 2650 | 270 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 133 | 111 | 13.6 | 11.3 | 2740 | 280 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 177 | 148 | 18.1 | 15.1 | 2840 | 290 | | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 221 | 184 | 22.6 | 18.8 | 2840 | 290 | | |
| | | 1/ 240 | 1/ 236 | 6.3 | 7.5 | 245 | 221 | 25 | 22.6 | 2840 | 290 | | |
| | 32 | 1/ 300 | 7/ 2120 | 5 | 6 | 294 | 245 | 30 | 25 | 3820 | 390 | P.B27 Fig.B-24 15.5kg (17kg) | |
| | | 1/ 375 | 7/ 2650 | 4 | 4.8 | 368 | 306 | 37.5 | 31.2 | 4120 | 420 | | |
| | | 1/ 450 | 7/ 3127 | 3.3 | 4 | 431 | 368 | 44 | 37.5 | 4120 | 420 | | |
| | 40 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 588 | 490 | 60 | 50 | 6760 | 690 | P.B27 Fig.B-25 24kg (25.5kg) | |
| | | 1/ 750 | 7/ 5300 | 2 | 2.4 | 735 | 613 | 75 | 62.5 | 6760 | 690 | | |
| | | ∗1/ 900 | 7/ 6360 | 1.7 | 2 | 764 | 735 | 78 | 75 | 6760 | 690 | | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 764 | 764 | 78 | 78 | 6760 | 690 | | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 764 | 764 | 78 | 78 | 6760 | 690 | | |

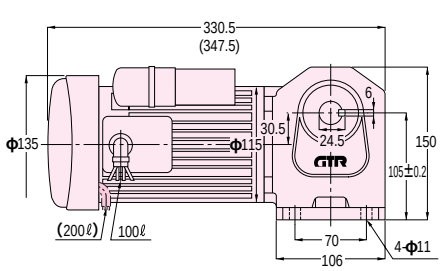
Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

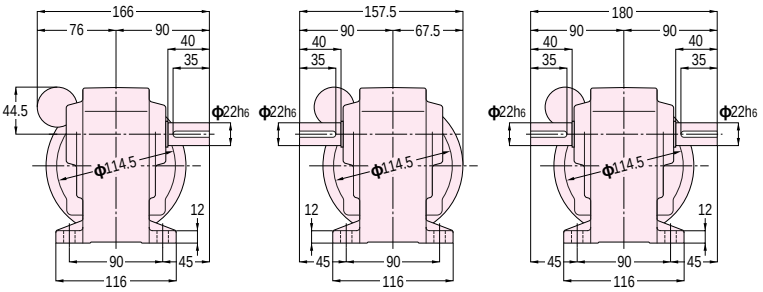
## Foot Mount Type

**Fig.B-22**

**H2LM-22$^{L}_{R}$-5～60-200**
**(H2LB-22$^{L}_{R}$-5～60-200)**

CAD Data: H2LM-22(LRT)-200
(CAD Data: H2LB-22(LRT)-200)



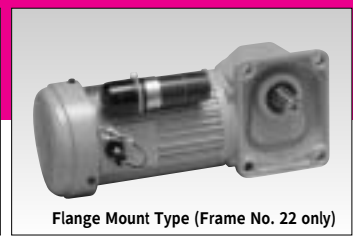

L-shaft R-shaft T-shaft

Round Weight 9.5kg (11kg)

Model Code P.B8

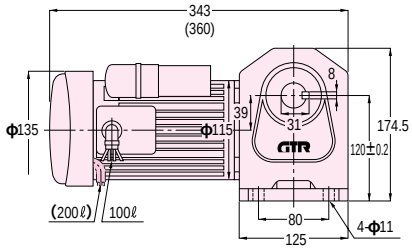
Option P.E78～E85

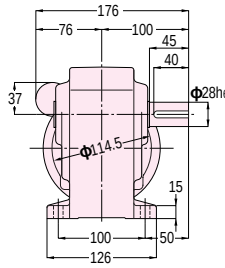

Foot Mount Type


Flange Mount Type (Frame No. 22 only)

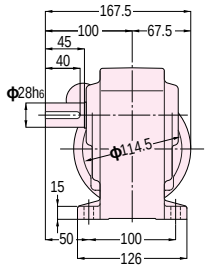
## Fig.B-23

**H2LM-28□-80～240-200**
**(H2LB-28□-80～240-200)**
CAD Data: H2LM-28 (LRT) -200
(CAD Data: H2LB-28 (LRT) -200)

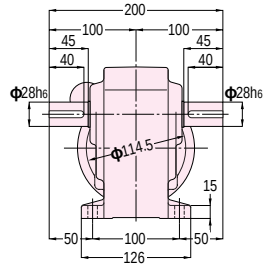


L-shaft



R-shaft

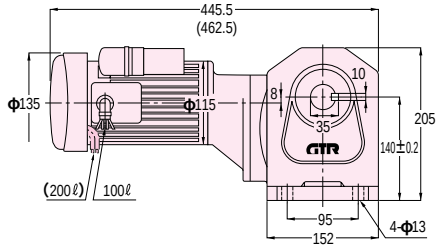


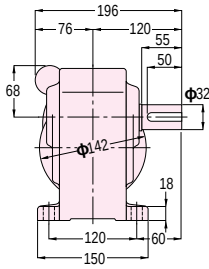
T-shaft

Round Weight 11.5kg (13kg)

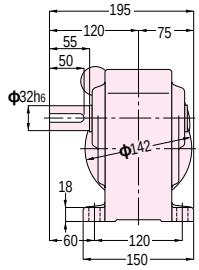
## Fig.B-24

**H2LM-32□-300～450-200**
**(H2LB-32□-300～450-200)**
CAD Data: H2LM-32 (LRT) -200
(CAD Data: H2LB-32 (LRT) -200)

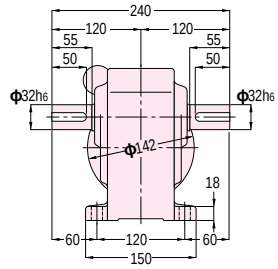


L-shaft



R-shaft

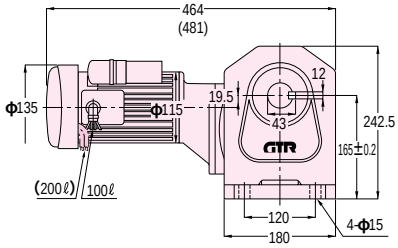


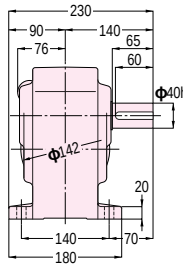
T-shaft

Round Weight 15.5kg (17kg)

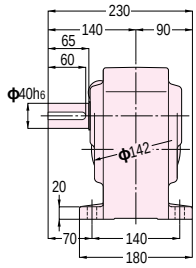
## Fig.B-25

**H2LM-40□-600～1500-200**
**(H2LB-40□-600～1500-200)**
CAD Data: H2LM-40 (LRT) -200
(CAD Data: H2LB-40 (LRT) -200)

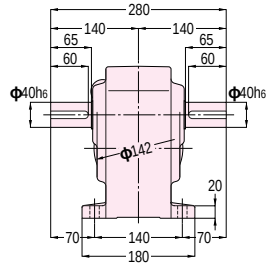


L-shaft



R-shaft



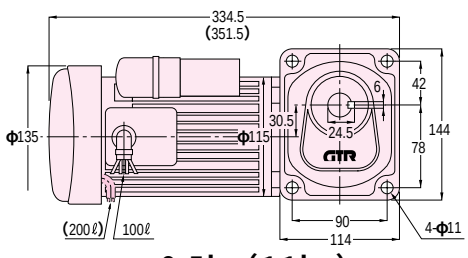
T-shaft

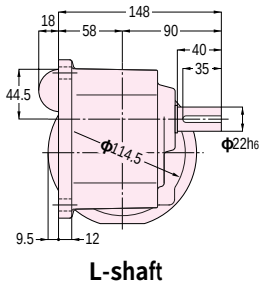
Round Weight 24kg (25.5kg)

# Flange Mounted Type

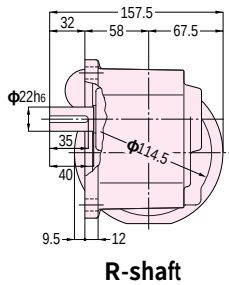
## Fig.B-26

**H2FM-22□-5～60-200**
**(H2FB-22□-5～60-200)**
CAD Data: H2FM-22 (LRT) -200
(CAD Data: H2FB-22 (LRT) -200)

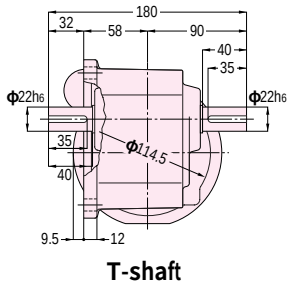


L-shaft



R-shaft



T-shaft

Round Weight 9.5kg (11kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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# Gearmotor
# Gearmotor with Brake

## H2 Series 1-Phase 400W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 400W | 400 | 50/60 | 100/100 | 8.7/7.9 | 1440/1730 | B | Totally Enclosed fan-cooled | Capacitor Start |

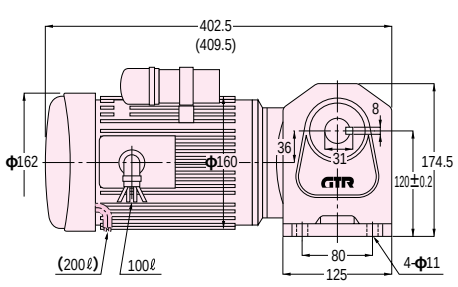
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) H2LM (H2LB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 1-phase 400W | 28 | 1/ 5 | 1/ 5 | 300 | 360 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | P.B28 Fig.B-27 16.5kg (19kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1470 | 150 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 34 | 28 | 3.5 | 2.9 | 1670 | 170 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 46 | 38 | 4.7 | 3.9 | 1860 | 190 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 57 | 48 | 5.8 | 4.9 | 2010 | 205 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 69 | 57 | 7 | 5.8 | 2210 | 225 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 92 | 76 | 9.4 | 7.8 | 2450 | 250 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 115 | 95 | 11.7 | 9.7 | 2650 | 270 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 137 | 115 | 14 | 11.7 | 2740 | 280 | |
| | 32 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 177 | 148 | 18.1 | 15.1 | 3430 | 350 | P.B29 Fig.B-28 19.5kg (22kg) |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 221 | 184 | 22.6 | 18.8 | 3820 | 390 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 266 | 221 | 27.1 | 22.6 | 4120 | 420 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 355 | 295 | 36.2 | 30.1 | 4120 | 420 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 431 | 369 | 44 | 37.7 | 4120 | 420 | |
| | | ∗1/ 240 | 1/ 236 | 6.3 | 7.5 | 431 | 431 | 44 | 44 | 4120 | 420 | |
| | 40 | 1/ 300 | 7/ 2080 | 5 | 6 | 572 | 477 | 58.4 | 48.7 | 6760 | 690 | P.B29 Fig.B-29 30kg (32.5kg) |
| | | 1/ 375 | 7/ 2600 | 4 | 4.8 | 715 | 597 | 73 | 60.9 | 6760 | 690 | |
| | | ∗1/ 450 | 7/ 3120 | 3.3 | 4 | 764 | 715 | 78 | 73 | 6760 | 690 | |
| | 50 | 1/ 600 | 21/12220 | 2.5 | 3 | 1150 | 955 | 116.9 | 97.4 | 9510 | 970 | P.B29 Fig.B-30 60kg (62.5kg) |
| | | ∗1/ 750 | 1/ 728 | 2 | 2.4 | 1230 | 1190 | 125 | 121.7 | 9510 | 970 | |
| | | ∗1/ 900 | 7/ 6240 | 1.7 | 2 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1200 | 21/24440 | 1.3 | 1.5 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1500 | 1/ 1456 | 1 | 1.2 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

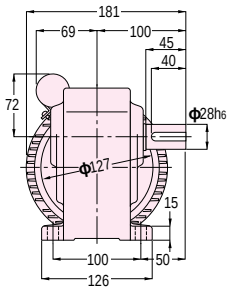
## Foot Mount Type

**Fig.B-27**

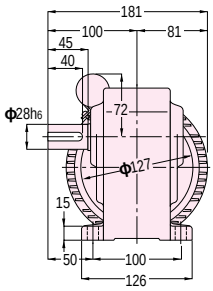
**H2LM-28$^{L}_{R}$-5〜60-400** CAD Data: H2LM-28(LRT)-400
**(H2LB-28$^{L}_{R}$-5〜60-400)** (CAD Data: H2LB-28(LRT)-400)



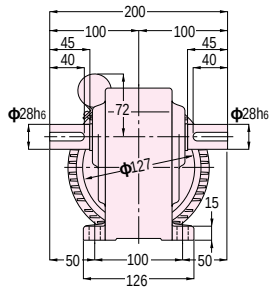

Round Weight 16.5kg (19kg)




L-shaft

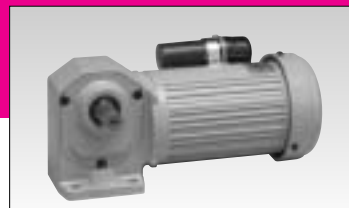



R-shaft




T-shaft

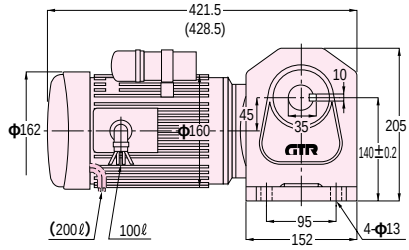
Model Code P.B8
Option P.E78〜E85

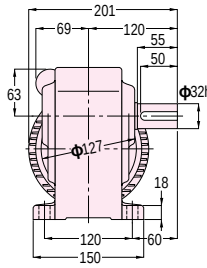


Foot Mount Type

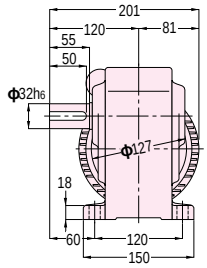
## Fig.B-28

**H2LM-32□-80～240-400** CAD Data: H2LM-32(LRT)-400
**(H2LB-32□-80～240-400)** (CAD Data: H2LB-32(LRT)-400)

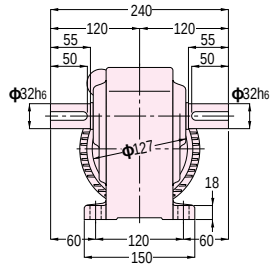



L-shaft




R-shaft

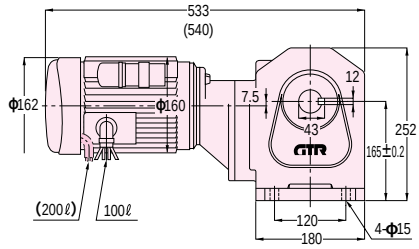


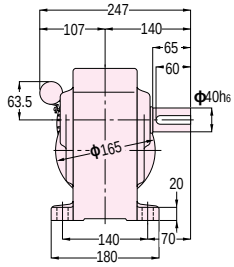

T-shaft

Round Weight 19.5kg (22kg)

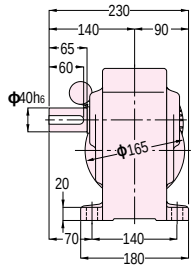
## Fig.B-29

**H2LM-40□-300～450-400** CAD Data: H2LM-40(LRT)-400
**(H2LB-40□-300～450-400)** (CAD Data: H2LB-40(LRT)-400)

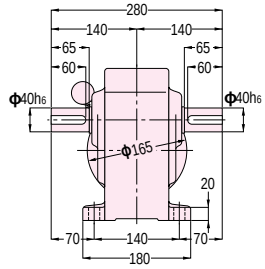



L-shaft




R-shaft

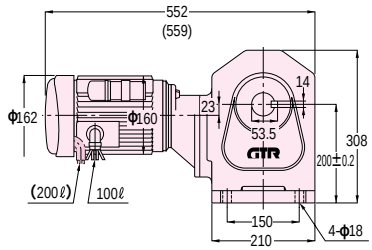


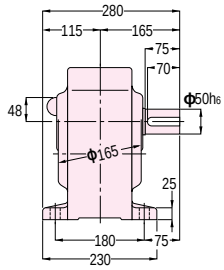

T-shaft

Round Weight 30kg (32.5kg)

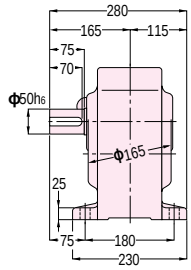
## Fig.B-30

**H2LM-50□-600～1500-400** CAD Data: H2LM-50(LRT)-400
**(H2LB-50□-600～1500-400)** (CAD Data: H2LB-50(LRT)-400)

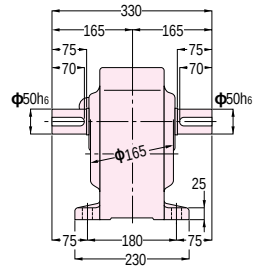



L-shaft




R-shaft




T-shaft

Round Weight 60kg (62.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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KOMPASS Gearbox

Right Angle Shaft IP-65

# Water-Resistant Gearmotor Gearmotor with Brake

## Model • Type Designation Standard Model Lineup

GTR Gearmotor

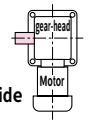
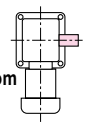
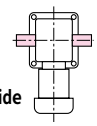
H2 Series

| | | |
|---|---|---|
| Motor Part | Number of phase | 3-Phase |
| | Capacity | 0.1kW～2.2kW |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed non-ventilated for 0.1kW) |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | SUS420J2 (Water-Resistant W/Carbon Steel Shaft is S43C) |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron, 1.5kW Frame No.40: Cast aluminium) |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 100% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas,<br>Should not be used in water and the place where high-hydrostatic pressure receives. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Right Angle Shaft)

H2 series Water-Resistant-Outdoor gearmotor are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | Terminal box | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|---|
| H2 | L | W | – 32 | L | – 200 | – T040 | W | E | | |
| H2 | F | V | – 22 | T | – 50 | – T010 | | E | X | AA |
| ① | ② | ③ | ④ | | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

| | | |
|---|---|---|
| ①Series Name | H2 | : H2 Series (Right Angle Shaft) |
| ②Classification by Mount Form | L | : Leg Mount |
| | F | : Foot Mount (Frame No. 22 only) |
| ③Classification by Motor Type | W | : With Water-resistant Motor W/SUS Shaft (JIS:SUS420J2) |
| | V | : With Water-resistant Brake Motor W/SUS Shaft material (JIS:SUS420J2) |
| | G | : With Water-resistant W/Carbon Steel Shaft (JIS:S43C) |
| | H | : With Water-resistant Brake W/Carbon Steel Shaft (JIS:S43C) |
| ④Frame Number and Diameter of Output Shaft Diameter of Output Shaft | Diameter of Output Shaft | |
| ⑤Shaft Arrangement | L: Output shaft on the left viewing from Input shaft side   | R: Output shaft on the right viewing from Input shaft side  T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1500 : 1／1500 | |
| ⑦Motor Type and Capacity | T010 | : 3-phase 0.1kW |
| | T020 | : 3-phase 0.2kW |
| | T040 | : 3-phase 0.4kW |
| | 075 | : 3-phase 0.75kW |
| | 150 | : 3-phase 1.5kW |
| | 220 | : 3-phase 2.2kW |
| ⑧Option | Blank | : Standard voltage<br>3-phase : 200V／50Hz, 200V／60Hz, 220V／60Hz |
| | W | : High voltage<br>3-phase : 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz |
| ⑨Terminal box | E | : Terminal box for water-resistant, outdoor motors (standard specs.) |
| ⑩Auxiliary Code | Blank | : Standard voltage |
| | X | : Code to identify additional special specs. |
| ⑪Specification Code<br>Note: Spec. code does not appear on the product type designation in the nameplate. It is indicated on the additional number column in the nameplate. | ●Specification Code for Rectifier built-in Wiring<br>For details, refer to the Specification Code Table on page E31.<br>●Indication of Terminal Box lead wire position<br>Refer to the indication mark list in P. E35 for details. | |

**Separated rectifier type is the standard specification of the terminal box in gearmotors with brake.**
**When you need the rectifier built-in type, contact us with the following manner.**
**We will do the wiring accordingly.For details, refer to page E31.**

| Type | Type Code when ordering(Example) (Indicate this type cord in your order.) |
|---|---|
| Standard (rectifier separated) | H2LV-32L-80-T040E |
| AC Switching A | H2LV-32L-80-T040EX-AA |
| AC Switching B | H2LV-32L-80-T040EX-AB |
| DC Switching | H2LV-32L-80-T040EX-DC |

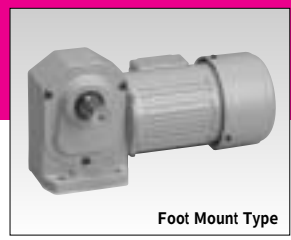
Note) The wiring method indication code does not appear on the product-type name. It appears in the supplemental number column on the nameplate.

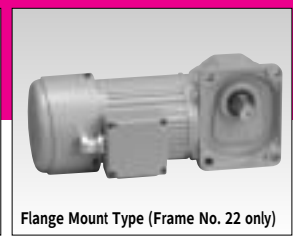
■Model and Type Designation (Option)

| Capacity•Option | | | |
|---|---|---|---|
| T040 | E | X | – AA |
| | ⑧ | ⑨ | ⑩ |

| | |
|---|---|
| ⑧Terminal box | Refer to the above table. |
| ⑨Auxiliary Code | Refer to the above table. |
| ⑩Wiring Method Indication Code(Note) | Refer to the table on the left. |

# Standard Model Lineup


Foot Mount Type


Flange Mount Type (Frame No. 22 only)

| Type | 4P Motor Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Water-Resistant Gearmotor W/SUS Shaft H2LW | 3-Phase 0.1kW | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 **1/240** |
| | | 28 | L R T | 1/300 1/375 1/450 |
| | | 32 (Note 1) | L R T | 1/600 1/750 1/900 **1/1200** **1/1500** |
| | 3-Phase 0.2kW | 22 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 28 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 32 | L R T | 1/300 1/375 1/450 |
| | | 40 | L R T | 1/600 1/750 **1/900** **1/1200** **1/1500** |
| Water-Resistant Brake Gearmotor W/SUS Shaft H2LV | | | | |
| Water-Resistant Gearmotor W/Carbon Steel Shaft H2LG | 3-Phase 0.4kW | 28 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 32 | L R T | 1/80 1/100 1/120 1/160 1/200 **1/240** |
| | | 40 | L R T | 1/300 1/375 **1/450** |
| | | 50 | L R T | 1/600 **1/750** **1/900** **1/1200** **1/1500** |
| Water-Resistant Brake Gearmotor W/Carbon Steel Shaft H2LH | 3-Phase 0.75kW | 32 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 40 | L R T | 1/80 1/100 1/120 1/160 1/200 **1/240** |
| | | 50 | L R T | 1/300 **1/375** **1/450** |
| Water-Resistant Gearmotor W/SUS Shaft H2LW | 3-Phase 1.5kW (Note 2) | 40 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 50 | L R T | 1/80 1/100 1/120 1/160 **1/200** **1/240** |
| Water-Resistant Gearmotor W/Carbon Steel Shaft H2LG | 3-Phase 2.2kW (Note 2) | 50 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) Flange mounted type (H2F) is also available only in the Frame Number 22.
2) Brake type is N/A for 1.5kW and 2.2kW.
3) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Right Angle Shaft IP-65

# Water-Resistant Gearmotor Gearmotor with Brake

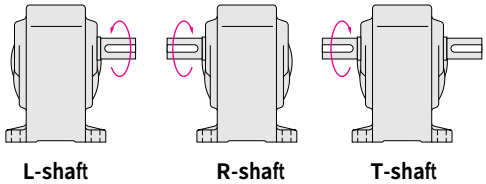
## Performance Table Dimension diagram

H2 Series

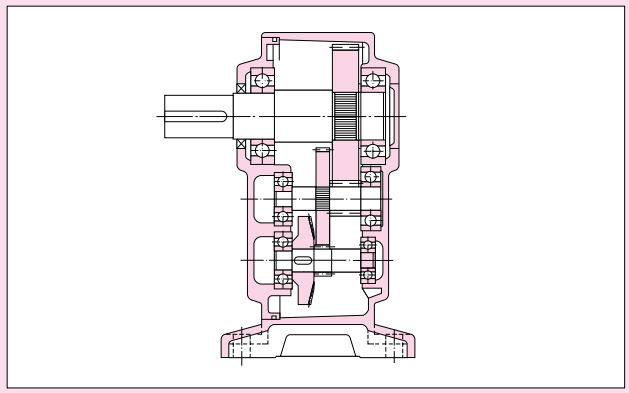
### 3-Phase

【Remarks】

- Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, L-shaft rotates clockwise while R and T-shafts rotate counterclockwise when viewing from output shaft side. (Refer to the diagram shown below.)





# Water-Resistant-Gearmotor
# Water-Resistant-Gearmotor with Brake

## H2 Series 3-Phase 0.1kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed |

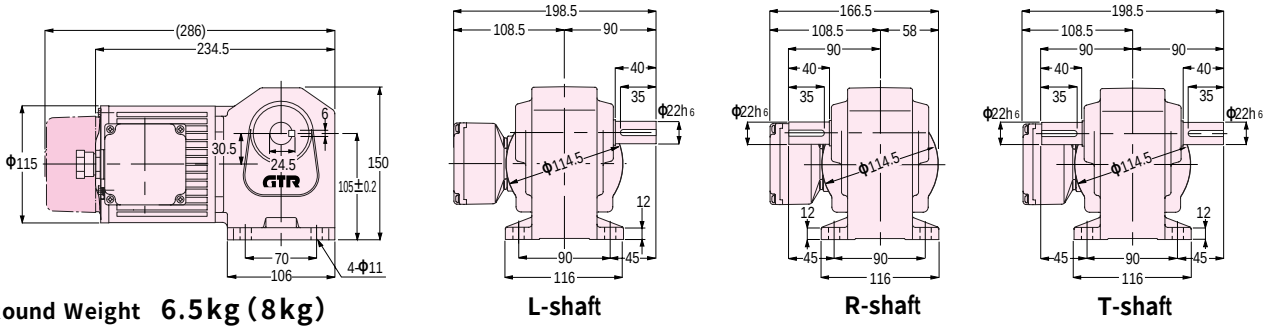
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2L$^{W}_{G}$ (H2L$^{V}_{H}$) | H2F$^{W}_{G}$ (H2F$^{V}_{H}$) |
| 3-phase 0.1kW | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 2.8 | 2.4 | 0.29 | 0.24 | 588 | 60 | P.B36 Fig.B-31 6.5kg (8kg) | P.B37 Fig.B-34 6.5kg (8kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 5.7 | 4.8 | 0.58 | 0.49 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 8.6 | 7.2 | 0.88 | 0.73 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 12 | 9.5 | 1.2 | 0.97 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 15 | 12 | 1.5 | 1.2 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 18 | 15 | 1.8 | 1.5 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 23 | 19 | 2.3 | 1.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 28 | 24 | 2.9 | 2.4 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 34 | 28 | 3.5 | 2.9 | 1760 | 180 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 44 | 37 | 4.5 | 3.8 | 1760 | 180 | | |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 55 | 46 | 5.6 | 4.7 | 1760 | 180 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 67 | 55 | 6.8 | 5.6 | 1760 | 180 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 88 | 74 | 9 | 7.5 | 1760 | 180 | | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 111 | 92 | 11.3 | 9.4 | 1760 | 180 | | |
| | | ∗1/ 240 | 1/ 236 | 6.3 | 7.5 | 118 | 111 | 12 | 11.3 | 1760 | 180 | | |
| | 28 | 1/ 300 | 7/ 2120 | 5 | 6 | 145 | 121 | 14.8 | 12.3 | 2840 | 290 | P.B37 Fig.B-32 10kg (11.5kg) | |
| | | 1/ 375 | 7/ 2650 | 4 | 4.8 | 181 | 151 | 18.5 | 15.4 | 2840 | 290 | | |
| | | 1/ 450 | 7/ 3127 | 3.3 | 4 | 218 | 181 | 22.2 | 18.5 | 2840 | 290 | | |
| | 32 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 286 | 238 | 29.2 | 24.3 | 4120 | 420 | P.B37 Fig.B-33 13kg (14.5kg) | |
| | | 1/ 750 | 7/ 5300 | 2 | 2.4 | 358 | 298 | 36.5 | 30.4 | 4120 | 420 | | |
| | | 1/ 900 | 7/ 6360 | 1.7 | 2 | 429 | 358 | 43.8 | 36.5 | 4120 | 420 | | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 431 | 431 | 44 | 44 | 4120 | 420 | | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 431 | 431 | 44 | 44 | 4120 | 420 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.B-31**

H2L$^{W}_{G}$-22$^{L}_{R}$$^{T}$-5～240-T010E (CAD Data: H2L$^{W}_{G}$-22(LRT)-T010E)
(H2L$^{V}_{H}$-22$^{L}_{R}$$^{T}$-5～240-T010E) (CAD Data: H2L$^{V}_{H}$-22(LRT)-T010E)




Round Weight 6.5kg (8kg)

L-shaft R-shaft T-shaft

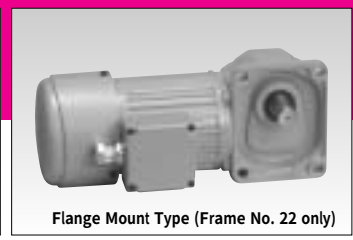
Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.B32
Multipurpose Inverter P.E86～E92
Option P.E78～E92



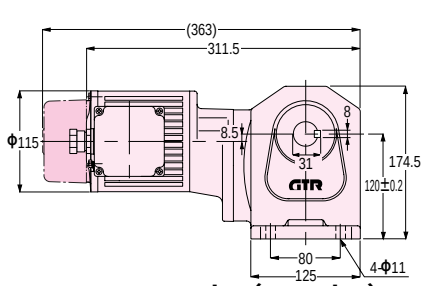
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

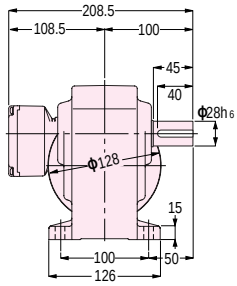

Foot Mount Type


Flange Mount Type (Frame No. 22 only)

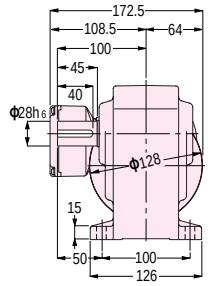
## Fig.B-32

**H2L$^{W}_{G}$-28$^{L}_{R}_{T}$-300～450-T010E** CAD Data: H2L$^{W}_{G}$-28(LRT)-T010E
**(H2L$^{V}_{H}$-28$^{L}_{R}_{T}$-300～450-T010E)** (CAD Data: H2L$^{V}_{H}$-28(LRT)-T010E)

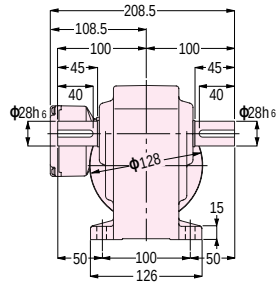


L-shaft



R-shaft

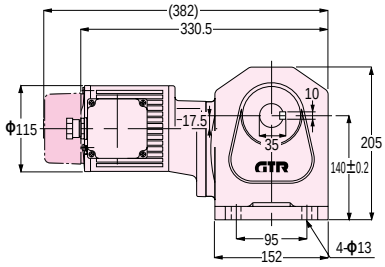


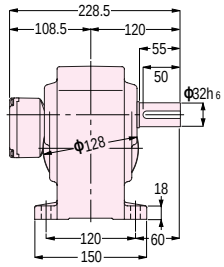
T-shaft

Round Weight 10kg (11.5kg)

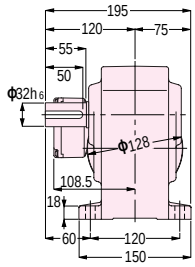
## Fig.B-33

**H2L$^{W}_{G}$-32$^{L}_{R}_{T}$-600～1500-T010E** CAD Data: H2L$^{W}_{G}$-32(LRT)-T010E
**(H2L$^{V}_{H}$-32$^{L}_{R}_{T}$-600～1500-T010E)** (CAD Data: H2L$^{V}_{H}$-32(LRT)-T010E)

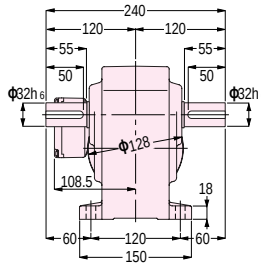


L-shaft



R-shaft



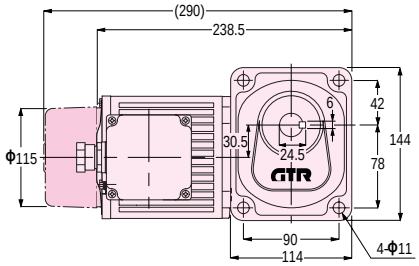
T-shaft

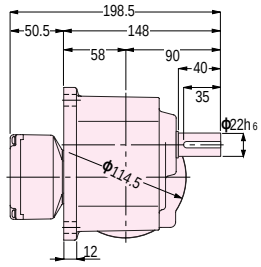
Round Weight 13kg (14.5kg)

# Flange Mounted Type

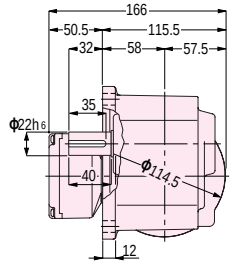
## Fig.B-34

**H2F$^{W}_{G}$-22$^{L}_{R}_{T}$-5～240-T010E** CAD Data: H2F$^{W}_{G}$-22(LRT)-T010E
**(H2F$^{V}_{H}$-22$^{L}_{R}_{T}$-5～240-T010E)** (CAD Data: H2F$^{V}_{H}$-22(LRT)-T010E)

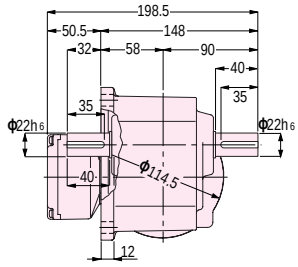


L-shaft



R-shaft



T-shaft

Round Weight 6.5kg (8kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## H2 Series 3-Phase 0.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

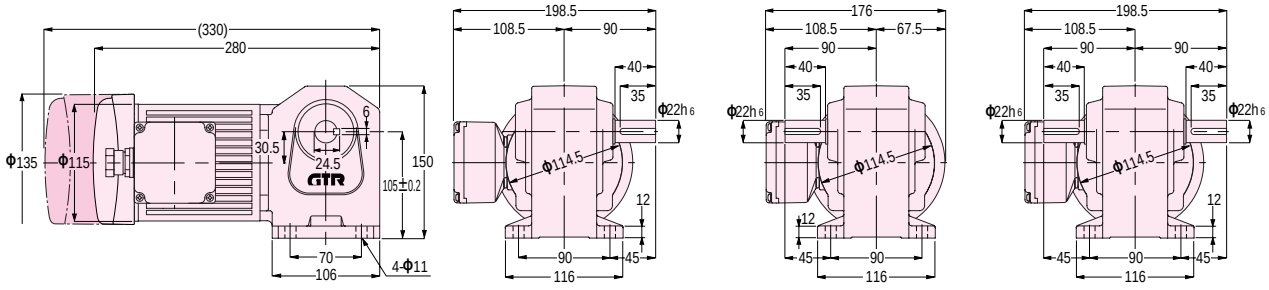
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LW (H2LX) | H2FW (H2FX) |
| 3-phase 0.2kW | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 5.7 | 4.8 | 0.58 | 0.49 | 588 | 60 | P.B38 Fig.B-35 7.5kg (9kg) | P.B39 Fig.B-39 7.5kg (9kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 18 | 15 | 1.8 | 1.5 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 28 | 24 | 2.9 | 2.4 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 34 | 28 | 3.5 | 2.9 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 46 | 38 | 4.7 | 3.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 57 | 48 | 5.8 | 4.9 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 69 | 57 | 7 | 5.8 | 1810 | 185 | | |
| | 28 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 88 | 74 | 9 | 7.5 | 2450 | 250 | P.B39 Fig.B-36 9.5kg (11kg) | |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 111 | 92 | 11.3 | 9.4 | 2650 | 270 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 133 | 111 | 13.6 | 11.3 | 2740 | 280 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 177 | 148 | 18.1 | 15.1 | 2840 | 290 | | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 221 | 184 | 22.6 | 18.8 | 2840 | 290 | | |
| | | 1/ 240 | 1/ 236 | 6.3 | 7.5 | 245 | 221 | 25 | 22.6 | 2840 | 290 | | |
| | 32 | 1/ 300 | 7/ 2120 | 5 | 6 | 294 | 245 | 30 | 25 | 3820 | 390 | P.B39 Fig.B-37 13.5kg (15kg) | |
| | | 1/ 375 | 7/ 2650 | 4 | 4.8 | 368 | 306 | 37.5 | 31.2 | 4120 | 420 | | |
| | | 1/ 450 | 7/ 3127 | 3.3 | 4 | 431 | 368 | 44 | 37.5 | 4120 | 420 | | |
| | 40 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 588 | 490 | 60 | 50 | 6760 | 690 | P.B39 Fig.B-38 22kg (23.5kg) | |
| | | 1/ 750 | 7/ 5300 | 2 | 2.4 | 735 | 613 | 75 | 62.5 | 6760 | 690 | | |
| | | ∗1/ 900 | 7/ 6360 | 1.7 | 2 | 764 | 735 | 78 | 75 | 6760 | 690 | | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 764 | 764 | 78 | 78 | 6760 | 690 | | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 764 | 764 | 78 | 78 | 6760 | 690 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.B-35**

**H2LW-22R-5～60-T020E** CAD Data: H2LW-22(LRT)-T020E
**(H2LV-22R-5～60-T020E)** (CAD Data: H2LV-22(LRT)-T020E)




Round Weight 7.5kg (9kg)

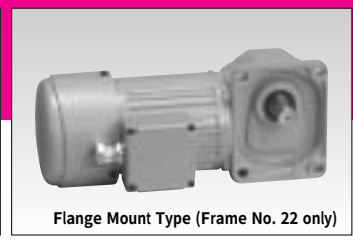
L-shaft R-shaft T-shaft

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.B32 | Multipurpose Inverter P.E86～E92 | Option P.E78～E92

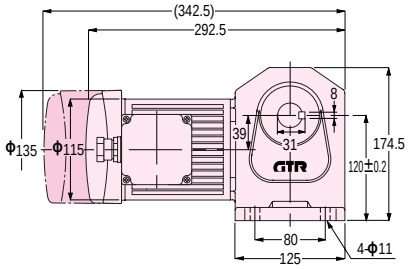
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

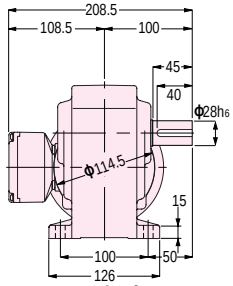

Foot Mount Type


Flange Mount Type (Frame No. 22 only)

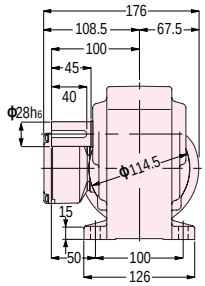
## Fig.B-36

**H2L$^{W}_{G}$-28$^{L}_{R}$-80～240-T020E** CAD Data: H2L$^{W}_{G}$-28(LRT)-T020E
**(H2L$^{V}_{H}$-28$^{L}_{R}$-80～240-T020E)** (CAD Data: H2L$^{V}_{H}$-28(LRT)-T020E)

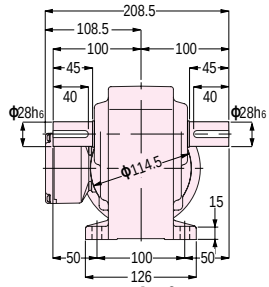


L-shaft



R-shaft

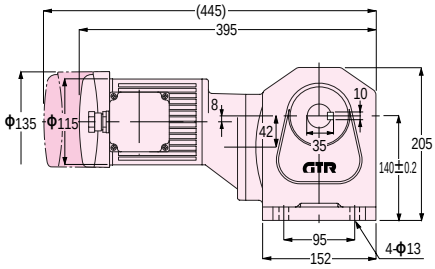


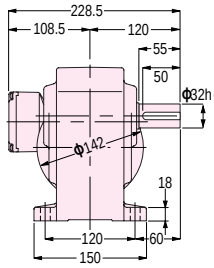
T-shaft

Round Weight 9.5kg(11kg)

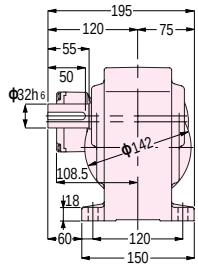
## Fig.B-37

**H2L$^{W}_{G}$-32$^{L}_{R}$-300～450-T020E** CAD Data: H2L$^{W}_{G}$-32(LRT)-T020E
**(H2L$^{V}_{H}$-32$^{L}_{R}$-300～450-T020E)** (CAD Data: H2L$^{V}_{H}$-32(LRT)-T020E)

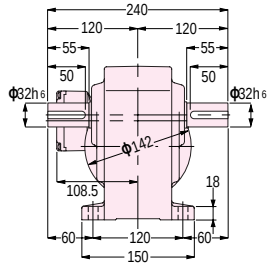


L-shaft



R-shaft

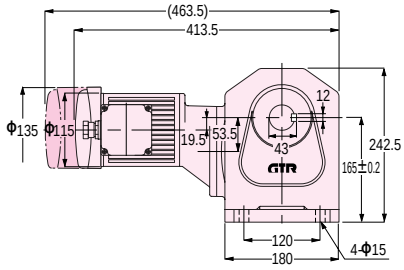


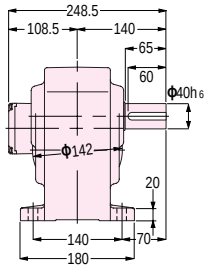
T-shaft

Round Weight 13.5kg(15kg)

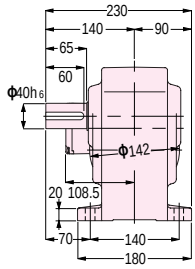
## Fig.B-38

**H2L$^{W}_{G}$-40$^{L}_{R}$-600～1500-T020E** CAD Data: H2L$^{W}_{G}$-40(LRT)-T020E
**(H2L$^{V}_{H}$-40$^{L}_{R}$-600～1500-T020E)** (CAD Data: H2L$^{V}_{H}$-40(LRT)-T020E)

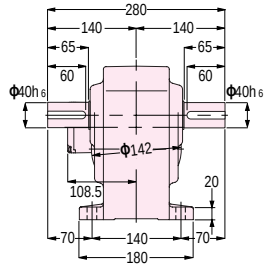


L-shaft



R-shaft



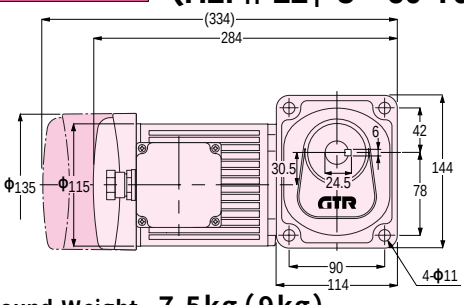
T-shaft

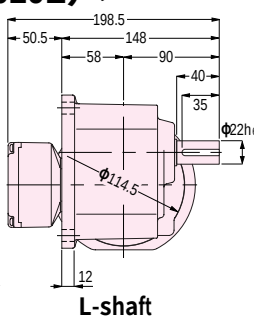
Round Weight 22kg(23.5kg)

# Flange Mounted Type

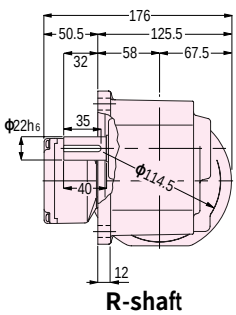
## Fig.B-39

**H2F$^{W}_{G}$-22$^{L}_{R}$-5～60-T020E** CAD Data: H2F$^{W}_{G}$-22(LRT)-T020E
**(H2F$^{V}_{H}$-22$^{L}_{R}$-5～60-T020E)** (CAD Data: H2F$^{V}_{H}$-22(LRT)-T020E)

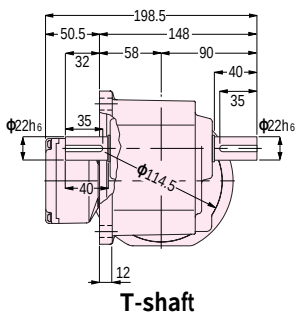


L-shaft



R-shaft



T-shaft

Round Weight 7.5kg(9kg)

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## H2 Series 3-Phase 0.4kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

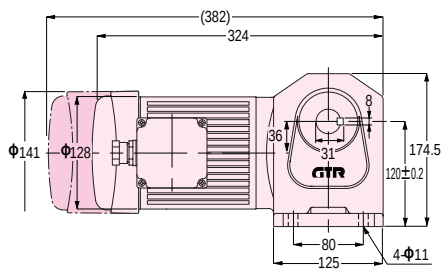
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) H2L$^{W}_{G}$ (H2L$^{V}_{H}$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 3-phase 0.4kW | 28 | 1/ 5 | 1/ 5 | 300 | 360 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | P.B40 Fig.B-40 11kg (12.5kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1470 | 150 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 34 | 28 | 3.5 | 2.9 | 1670 | 170 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 46 | 38 | 4.7 | 3.9 | 1860 | 190 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 57 | 48 | 5.8 | 4.9 | 2010 | 205 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 69 | 57 | 7 | 5.8 | 2210 | 225 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 92 | 76 | 9.4 | 7.8 | 2450 | 250 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 115 | 95 | 11.7 | 9.7 | 2650 | 270 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 137 | 115 | 14 | 11.7 | 2740 | 280 | |
| | 32 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 177 | 148 | 18.1 | 15.1 | 3430 | 350 | P.B41 Fig.B-41 14kg (15.5kg) |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 221 | 184 | 22.6 | 18.8 | 3820 | 390 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 266 | 221 | 27.1 | 22.6 | 4120 | 420 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 355 | 295 | 36.2 | 30.1 | 4120 | 420 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 431 | 369 | 44 | 37.7 | 4120 | 420 | |
| | | ∗1/ 240 | 1/ 236 | 6.3 | 7.5 | 431 | 431 | 44 | 44 | 4120 | 420 | |
| | 40 | 1/ 300 | 7/ 2080 | 5 | 6 | 572 | 477 | 58.4 | 48.7 | 6760 | 690 | P.B41 Fig.B-42 24.5kg (26kg) |
| | | 1/ 375 | 7/ 2600 | 4 | 4.8 | 715 | 597 | 73 | 60.9 | 6760 | 690 | |
| | | ∗1/ 450 | 7/ 3120 | 3.3 | 4 | 764 | 715 | 78 | 73 | 6760 | 690 | |
| | 50 | 1/ 600 | 21/12220 | 2.5 | 3 | 1150 | 955 | 116.9 | 97.4 | 9510 | 970 | P.B41 Fig.B-43 54.5kg (56kg) |
| | | ∗1/ 750 | 1/ 728 | 2 | 2.4 | 1230 | 1190 | 125 | 121.7 | 9510 | 970 | |
| | | ∗1/ 900 | 7/ 6240 | 1.7 | 2 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1200 | 21/24440 | 1.3 | 1.5 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1500 | 1/ 1456 | 1 | 1.2 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

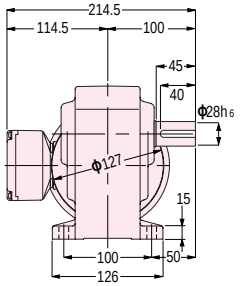
Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

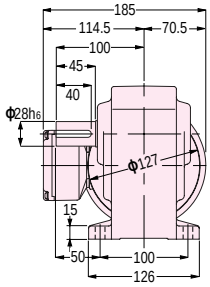
**Fig.B-40**

**H2L$^{W}_{G}$-28$^{LRT}$-5～60-T040E** CAD Data: H2L$^{W}_{G}$-28(LRT)-T040E
**(H2L$^{V}_{H}$-28$^{LRT}$-5～60-T040E)** (CAD Data: H2L$^{V}_{H}$-28(LRT)-T040E)

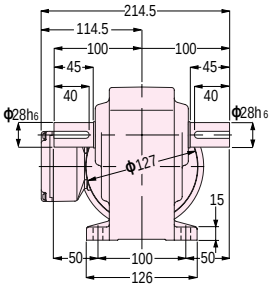



L-shaft




R-shaft

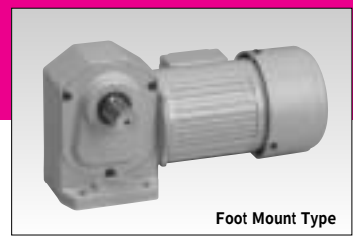



T-shaft

Round Weight 11kg (12.5kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

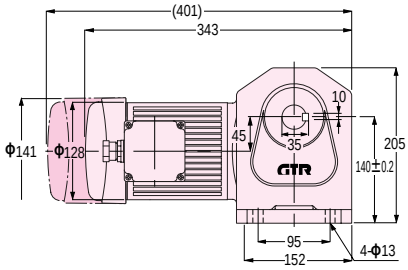
Model Code P.B32
Multipurpose Inverter P.E86～E92
Option P.E78～E92

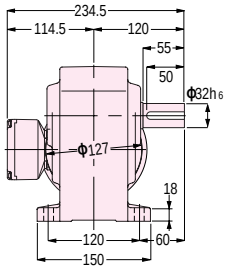


Foot Mount Type

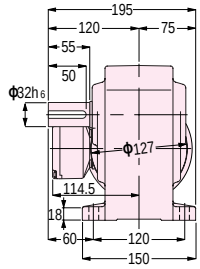
## Fig.B-41

**H2L$^{W}_{G}$-32$^{L}_{R}$-80～240-T040E** CAD Data: H2L$^{W}_{G}$-32(LRT)-T040E
**(H2L$^{V}_{H}$-32$^{L}_{R}$-80～240-T040E)** (CAD Data: H2L$^{V}_{H}$-32(LRT)-T040E)

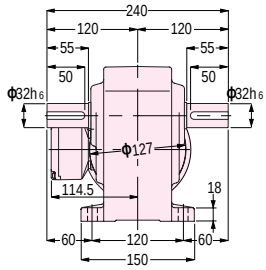



L-shaft




R-shaft

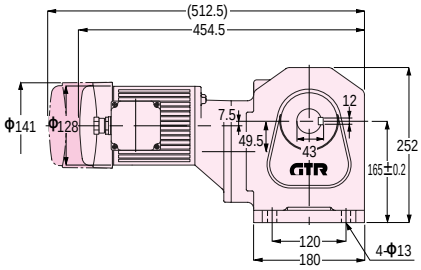


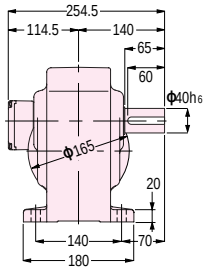

T-shaft

Round Weight 14kg (15.5kg)

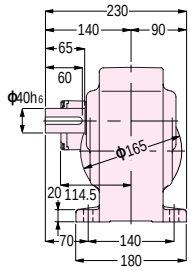
## Fig.B-42

**H2L$^{W}_{G}$-40$^{L}_{R}$-300～450-T040** CAD Data: H2L$^{W}_{G}$-40(LRT)-T040E
**(H2L$^{V}_{H}$-40$^{L}_{R}$-300～450-T040)** (CAD Data: H2L$^{V}_{H}$-40(LRT)-T040E)

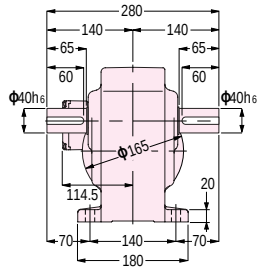



L-shaft




R-shaft

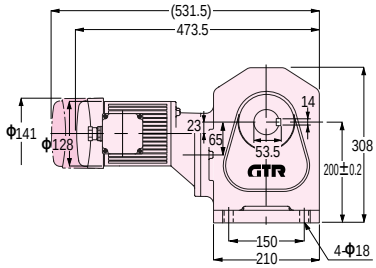


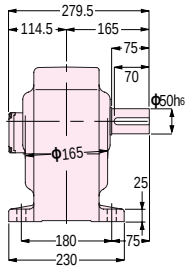

T-shaft

Round Weight 24.5kg (26kg)

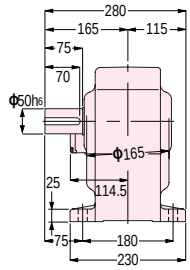
## Fig.B-43

**H2L$^{W}_{G}$-50$^{L}_{R}$-600～1500-T040E** CAD Data: H2L$^{W}_{G}$-50(LRT)-T040E
**(H2L$^{V}_{H}$-50$^{L}_{R}$-600～1500-T040E)** (CAD Data: H2L$^{V}_{H}$-50(LRT)-T040E)

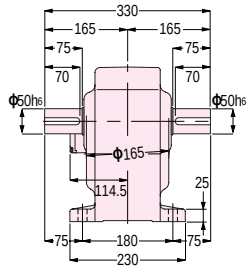



L-shaft




R-shaft




T-shaft

Round Weight 54.5kg (56kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor
# Water-Resistant Gearmotor with Brake

## H2 Series 3-Phase 0.75kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

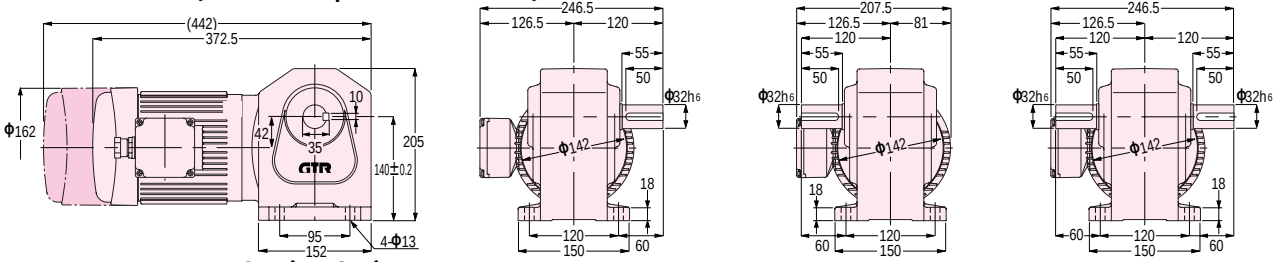
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor(Gearmotor with Brake) H2LW (H2LV) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | |
| 3-phase 0.75kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 22 | 18 | 2.2 | 1.8 | 1520 | 155 | P.B42 Fig.B-44 17.5kg (20kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 43 | 36 | 4.4 | 3.7 | 2010 | 205 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 65 | 54 | 6.6 | 5.5 | 2210 | 225 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 86 | 72 | 8.8 | 7.3 | 2450 | 250 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 108 | 89 | 11 | 9.1 | 2740 | 280 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 128 | 107 | 13.1 | 11 | 2940 | 300 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 172 | 143 | 17.5 | 14.6 | 3430 | 350 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 215 | 179 | 21.9 | 18.3 | 3820 | 390 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 258 | 215 | 26.3 | 21.9 | 4120 | 420 | |
| | 40 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 332 | 277 | 33.9 | 28.3 | 5780 | 590 | P.B42 Fig.B-45 26kg (28.5kg) |
| | | 1/ 100 | 1/ 100 | 15 | 18 | 416 | 346 | 42.4 | 35.3 | 6080 | 620 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 498 | 415 | 50.8 | 42.4 | 6270 | 640 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.2 | 664 | 554 | 67.8 | 56.5 | 6470 | 660 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 764 | 692 | 78 | 70.6 | 6660 | 680 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 764 | 764 | 78 | 78 | 6660 | 680 | |
| | 50 | 1/ 300 | 7/ 2120 | 5 | 6 | 1070 | 895 | 109.6 | 91.3 | 7740 | 790 | P.B43 Fig.B-46 58.5kg (61kg) |
| | | ∗1/ 375 | 7/ 2650 | 4 | 4.8 | 1230 | 1120 | 125 | 114.1 | 8040 | 820 | |
| | | ∗1/ 450 | 7/ 3180 | 3.3 | 4 | 1230 | 1230 | 125 | 125 | 8530 | 870 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

### Fig.B-44

H2LW-32LR-5～60-075E CAD Data: H2LW-32(LRT)-075E
(H2LV-32LR-5～60-075E) (CAD Data: H2LV-32(LRT)-075E)

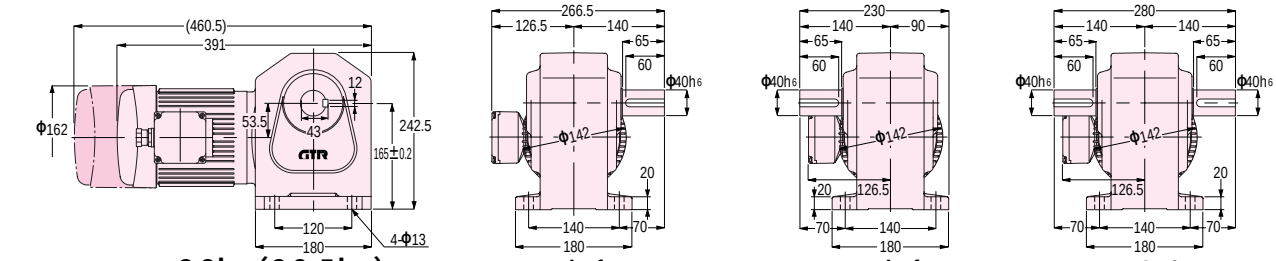



Round Weight 17.5kg (20kg)

L-shaft R-shaft T-shaft

### Fig.B-45

H2LW-40LR-80～240-075E CAD Data: H2LW-40(LRT)-075E
(H2LV-40LR-80～240-075E) (CAD Data: H2LV-40(LRT)-075E)



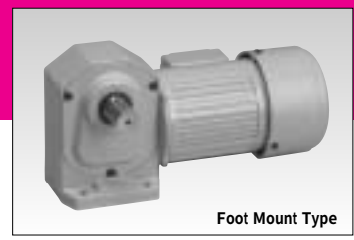

Round Weight 26kg (28.5kg)

L-shaft R-shaft T-shaft

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.B32 | Multipurpose Inverter P.E86～E92 | Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

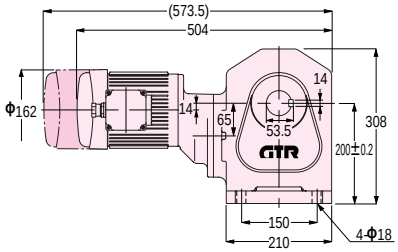


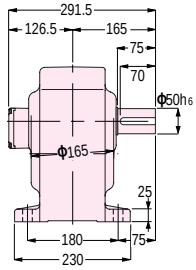
Foot Mount Type

## Fig.B-46

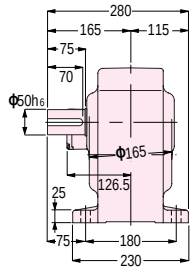
**H2L$^{W}_{G}$-50$^{L}_{R}$$^{T}$-300～450-075E** CAD Data: H2L$^{W}_{G}$-50(LRT)-075E

**(H2L$^{V}_{H}$-50$^{L}_{R}$$^{T}$-300～450-075E)** (CAD Data: H2L$^{V}_{H}$-50(LRT)-075E)

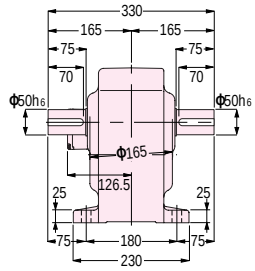



L-shaft




R-shaft




T-shaft

Round Weight 58.5kg(61kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Water-Resistant Gearmotor

## H2 Series 3-Phase 1.5kW



| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

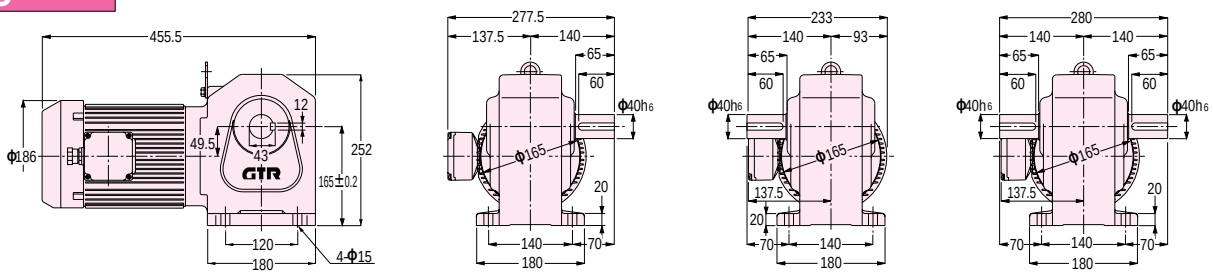
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight Gearmotor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2L□ |
| 3-phase 1.5kW | 40 | 1/ 5 | 1/ 5 | 300 | 360 | 43 | 36 | 4.4 | 3.7 | 2650 | 270 | P.B44 Fig.B-47 33kg (36.5kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 86 | 72 | 8.8 | 7.3 | 3530 | 360 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 128 | 107 | 13.1 | 11 | 4410 | 450 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 172 | 143 | 17.5 | 14.6 | 4700 | 480 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 215 | 179 | 21.9 | 18.3 | 5100 | 520 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 258 | 215 | 26.3 | 21.9 | 5290 | 540 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 344 | 277 | 35.1 | 28.3 | 5590 | 570 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 429 | 346 | 43.8 | 35.3 | 5880 | 600 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 515 | 415 | 52.6 | 42.4 | 6080 | 620 | |
| | 50 | 1/ 80 | 3/ 235 | 18.8 | 22.5 | 664 | 554 | 67.8 | 56.5 | 8530 | 870 | P.B44 Fig.B-48 62kg (65.5kg) |
| | | 1/ 100 | 1/ 98 | 15 | 18 | 830 | 692 | 84.7 | 70.6 | 8820 | 900 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 1000 | 830 | 102 | 84.7 | 9020 | 920 | |
| | | 1/ 160 | 3/ 470 | 9.4 | 11.2 | 1230 | 1110 | 125 | 113 | 9310 | 950 | |
| | | ∗1/ 200 | 1/ 196 | 7.5 | 9 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

### Fig.B-47 H2L□-40□-5～60-150E

CAD Data: H2L□-40(LRT)-150E

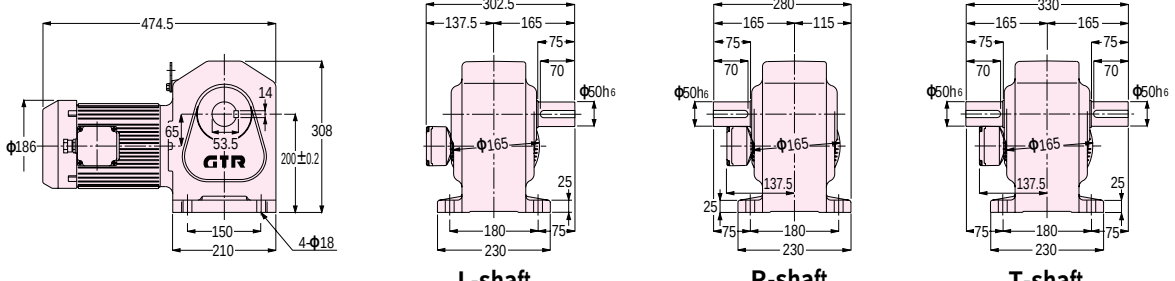



L-shaft R-shaft T-shaft

Round Weight 33kg (36.5kg)

### Fig.B-48 H2L□-50□-80～240-150E

CAD Data: H2L□-50(LRT)-150E




L-shaft R-shaft T-shaft

Round Weight 62kg (65.5kg)

Note) For the dimension of the key for the output shafts, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.B32
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# H2 Series 3-Phase 2.2kW


Foot Mount Type

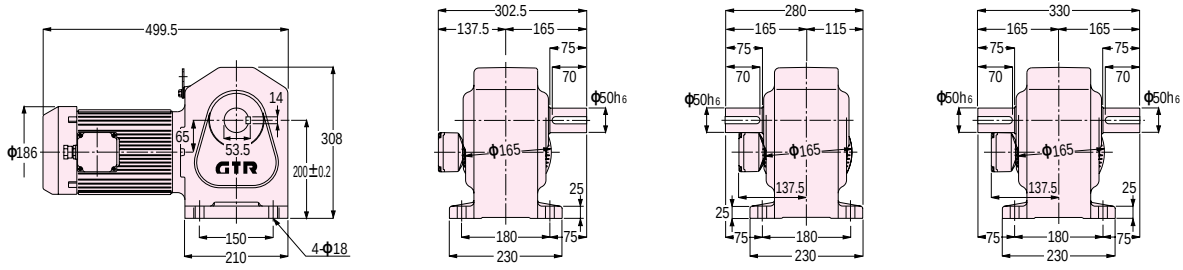
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 2.2kW | 220 | 50/60/60 | 200/200/220 | 9.0/8.6/8.0 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | Gearmotor |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LW |
| 3-phase 2.2kW | 50 | 1/ 5 | 1/ 5 | 300 | 360 | 63 | 53 | 6.4 | 5.4 | 3920 | 400 | P.B45 Fig.B-49 65.5kg (69kg) |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 126 | 105 | 12.9 | 10.7 | 4410 | 450 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 189 | 157 | 19.3 | 16.1 | 4900 | 500 | |
| | | 1/ 20 | 12/ 235 | 75 | 90 | 252 | 210 | 25.7 | 21.4 | 5490 | 560 | |
| | | 1/ 25 | 2/ 49 | 60 | 72 | 315 | 263 | 32.1 | 26.8 | 6080 | 620 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 378 | 315 | 38.6 | 32.1 | 6570 | 670 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 487 | 406 | 49.7 | 41.1 | 7060 | 720 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 609 | 507 | 62.1 | 51.8 | 7550 | 770 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 731 | 609 | 74.6 | 62.1 | 8130 | 830 | |
| | | 1/ 80 | 3/ 235 | 18.8 | 22.5 | 974 | 812 | 99.4 | 82.9 | 8430 | 860 | |
| | | 1/ 100 | 1/ 98 | 15 | 18 | 1220 | 1010 | 124 | 104 | 8820 | 900 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 1230 | 1220 | 125 | 124 | 8820 | 900 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

**Fig.B-49** H2LW-50LR-5～120-220E CAD Data: H2LW-50(LRT)-220E



L-shaft R-shaft T-shaft

Round Weight 65.5kg (69kg)

Note) For the dimension of the key for the output shaft, refer to the detailed dimensions common to output shafts on page E52.

Model Code P.B32 | Multipurpose Inverter P.E86～E92 | Option P.E78～E92

GTR Gearmotor

## Right Angle Shaft

# Gearmotor with Clutch and Brake

## Model • Type Designation
## Standard Model Lineup

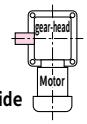
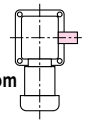
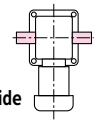
H2 Series

| | | |
|---|---|---|
| Motor Part | Number of phase | 3-Phase |
| | Capacity | 0.2kW～0.75kW |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed Outer Fan |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 85% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Right Angle Shaft)

H2 series gearmotors with Clutch and Brake are classified by codes as shown below. Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Code | Spec. Code |
|---|---|---|---|---|---|---|---|---|---|---|
| H2 | L | E | – 32 | L | – 200 | – T040 | A | | | |
| H2 | L | E | – 40 | T | – 80 | – 075 | W | | X | |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | | |
|---|---|---|
| ①Series Name | H2 : H2 Series (Right Angle Shaft) | |
| ②Classification by Mount Form | L : Leg Mount | |
| | F : Foot Mount (Frame No. 22 only) | |
| ③Classification by Motor Type | E : Clutch/Brake Motor | |
| ④Frame Number and Diameter of Output Shaft Diameter of Output Shaft | Diameter of Output Shaft | |
| ⑤Shaft Arrangement | L: Output shaft on the left viewing from Input shaft side   | R: Output shaft on the right viewing from Input shaft side  |
| | | T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 240 : 1／240 | |
| ⑦Motor Type and Capacity | T020 : 3ph, 0.2 kW | |
| | T040 : 3ph, 0.4 kW | |
| | 075 : 3ph, 0.75kW | |
| ⑧⑨Option<br>Note 1: When terminal box is required, please indicate "A" at the end of motor capacity. For 0.4kW type, with "A" box is the standard, so please indicate "A" at the end of motor capacity. (For example, H2LE-32L-200-T040A) Capacity of 0.75kW～2.2kW are terminal box equipped as standard and no additional code. | Blank : 3-phase : 200V／50Hz、200V／60Hz、220V／60Hz<br>0.2kW without terminal box (Note 1)<br>0.4kW～0.75kW terminal box attached | |
| | W : 3-phase : 380V／50Hz、400V／50Hz、400V／60Hz、440V／60Hz<br>0.2kW without terminal box (Note 1)<br>0.4kW～0.75kW terminal box attached | |
| | A : Terminal box (option) | |
| ⑩Auxiliary Code | Blank : Standard Specifications | |
| | X : Mark for Additional Specs. | |
| ⑪Specification Code<br>Note: Spec. code does not appear on the product type designation in the nameplate. It is indicated on the additional number column in the nameplate. | Blank : Standard Specifications | |

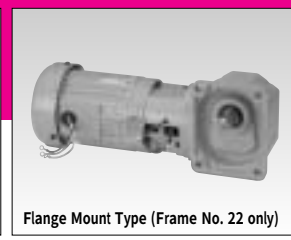
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup





Foot Mount Type



Flange Mount Type (Frame No. 22 only)

| Type | 4P Motor Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| 〈GT-PACK〉 Gearmotor with Clutch/Brake H2LE | 3-Phase 0.2kW | 22 (Note 1) | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | | 28 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | 3-Phase 0.4kW | 28 | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | | 32 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | 3-Phase 0.75kW | 32 | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | | 40 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |

Note 1) Flange mounted type (H2F) is also available only in the Frame Number 22.
2) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
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Reducer (Parallel Shaft)
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Right Angle Shaft

# Gearmotor with Clutch and Brake

## Performance Table
## Dimension diagram

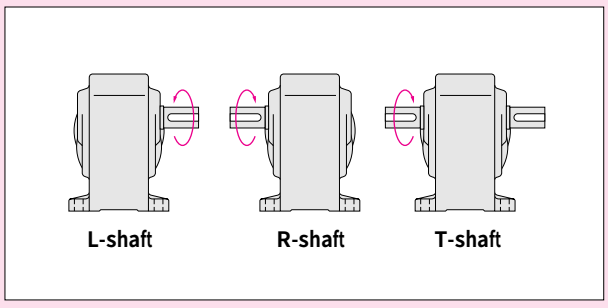
H2 Series

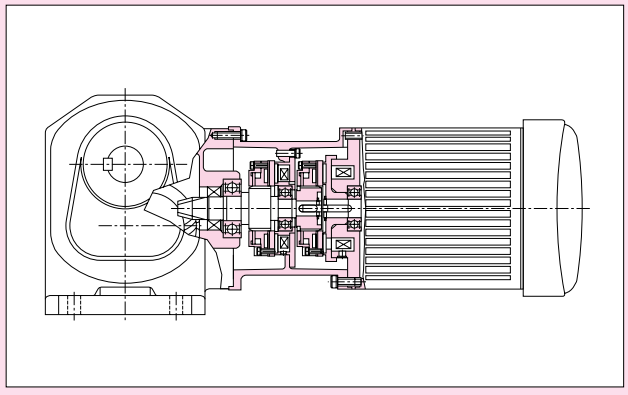
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E41, L-shaft rotates clockwise while R and T-shafts rotate counterclockwise when viewing from output shaft side. (Refer to the diagram shown below.)





# Gearmotor with Clutch and Brake

## H2 Series 3-Phase 0.2kW

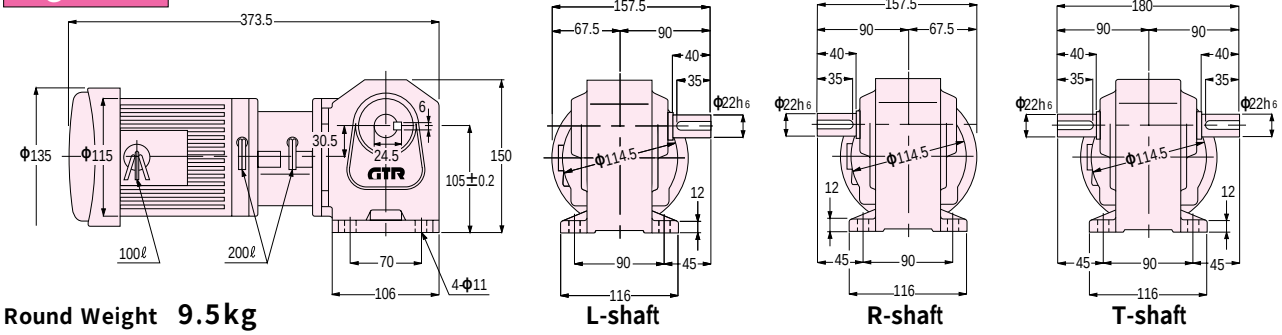
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LE | H2FE |
| 3-phase 0.2kW | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 5.7 | 4.8 | 0.58 | 0.49 | 588 | 60 | P.B52 Fig.B-50 9.5kg | P.B53 Fig.B-52 9.5kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 18 | 15 | 1.8 | 1.5 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 28 | 24 | 2.9 | 2.4 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 34 | 28 | 3.5 | 2.9 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 46 | 38 | 4.7 | 3.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 57 | 48 | 5.8 | 4.9 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 69 | 57 | 7 | 5.8 | 1810 | 185 | | |
| | 28 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 88 | 74 | 9 | 7.5 | 2450 | 250 | P.B52 Fig.B-51 11.5kg | |
| | | 1/100 | 1/100 | 15 | 18 | 111 | 92 | 11.3 | 9.4 | 2650 | 270 | | |
| | | 1/120 | 1/120 | 12.5 | 15 | 133 | 111 | 13.6 | 11.3 | 2740 | 280 | | |
| | | 1/160 | 1/160 | 9.4 | 11.2 | 177 | 148 | 18.1 | 15.1 | 2840 | 290 | | |
| | | 1/200 | 1/200 | 7.5 | 9 | 221 | 184 | 22.6 | 18.8 | 2840 | 290 | | |
| | | 1/240 | 1/236 | 6.3 | 7.5 | 245 | 221 | 25 | 22.6 | 2840 | 290 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

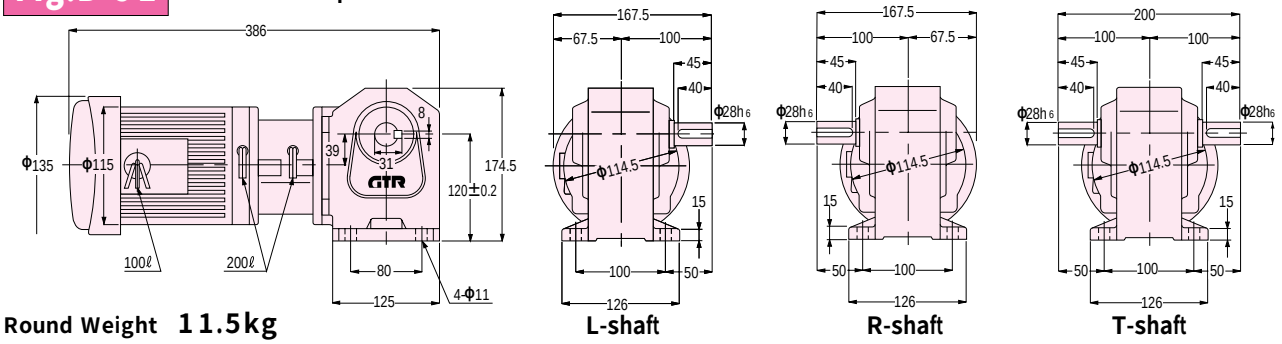
## Foot Mount Type

**Fig.B-50** H2LE-22□-5～60-T020 CAD Data: H2LE-22(LRT)-T020




Round Weight 9.5kg

**Fig.B-51** H2LE-28□-80～240-T020 CAD Data: H2LE-28(LRT)-T020



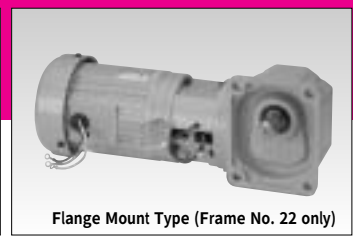

Round Weight 11.5kg

Model Code P.B48
Option P.E78～E79

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox



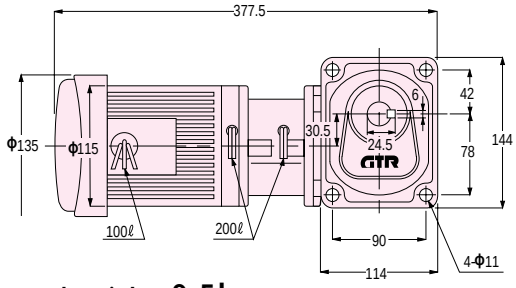
Foot Mount Type

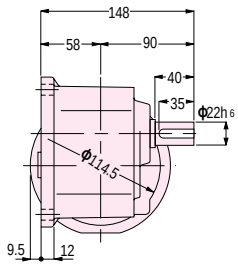


Flange Mount Type (Frame No. 22 only)

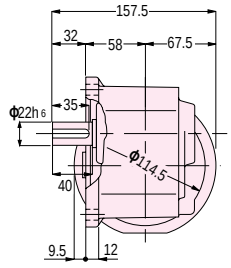
# Flange Mounted Type

**Fig.B-52** **H2FE-22$^{L}_{R}$-5〜60-T020** CAD Data: H2FE-22(LRT)-T020

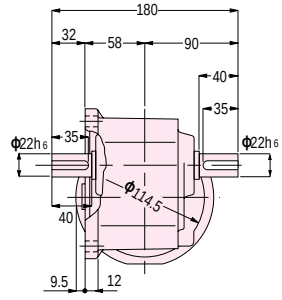



L-shaft




R-shaft




T-shaft

Round Weight 9.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor with Clutch and Brake

## H2 Series 3-Phase 0.4kW



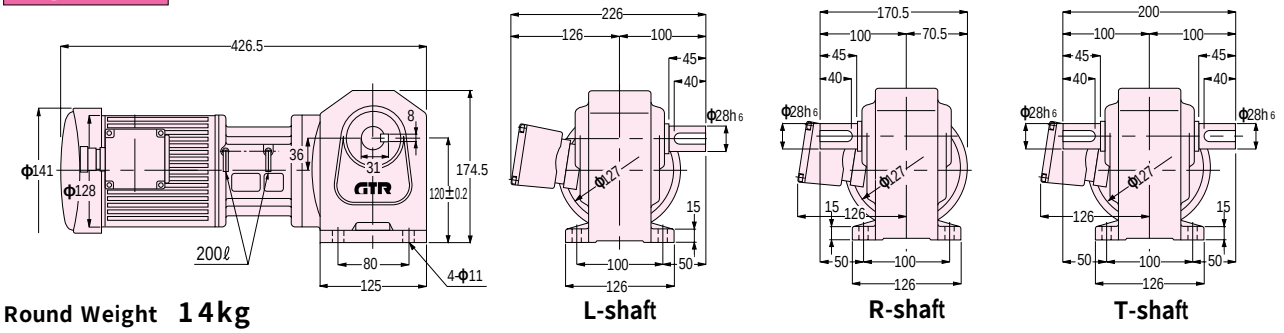
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LE |
| 3-phase 0.4kW | 28 | 1/ 5 | 1/ 5 | 300 | 360 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | P.B54 Fig.B-53 14kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1470 | 150 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 34 | 28 | 3.5 | 2.9 | 1670 | 170 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 46 | 38 | 4.7 | 3.9 | 1860 | 190 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 57 | 48 | 5.8 | 4.9 | 2010 | 205 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 69 | 57 | 7 | 5.8 | 2210 | 225 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 92 | 76 | 9.4 | 7.8 | 2450 | 250 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 115 | 95 | 11.7 | 9.7 | 2650 | 270 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 137 | 115 | 14 | 11.7 | 2740 | 280 | |
| | 32 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 177 | 148 | 18.1 | 15.1 | 3430 | 350 | P.B54 Fig.B-54 17kg |
| | | 1/100 | 1/100 | 15 | 18 | 221 | 184 | 22.6 | 18.8 | 3820 | 390 | |
| | | 1/120 | 1/120 | 12.5 | 15 | 266 | 221 | 27.1 | 22.6 | 4120 | 420 | |
| | | 1/160 | 1/160 | 9.4 | 11.2 | 355 | 295 | 36.2 | 30.1 | 4120 | 420 | |
| | | 1/200 | 1/200 | 7.5 | 9 | 431 | 369 | 44 | 37.7 | 4120 | 420 | |
| | | ∗1/240 | 1/236 | 6.3 | 7.5 | 431 | 431 | 44 | 44 | 4120 | 420 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

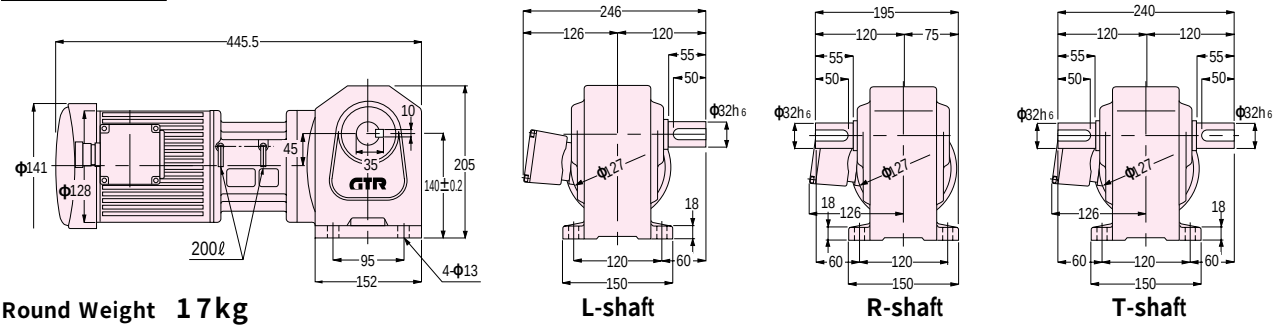
## Foot Mount Type

### Fig.B-53 H2LE-28□-5～60-T040A CAD Data: H2LE-28(LRT)-T040A




Round Weight 14kg

### Fig.B-54 H2LE-32□-80～240-T040A CAD Data: H2LE-32(LRT)-T040A




Round Weight 17kg

Model Code P.B48 | Option P.E78～E79

# H2 Series 3-Phase 0.75kW


Foot Mount Type

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

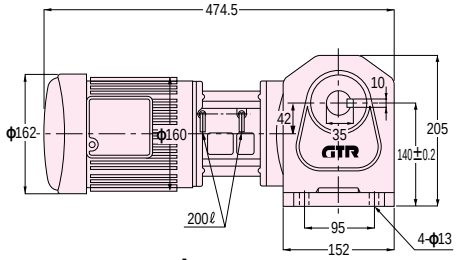
| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight 3-Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | H2LE |
| 3-phase 0.75kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 22 | 18 | 2.2 | 1.8 | 1520 | 155 | P.B55 Fig.B-55 21kg |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 43 | 36 | 4.4 | 3.7 | 2010 | 205 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 65 | 54 | 6.6 | 5.5 | 2210 | 225 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 86 | 72 | 8.8 | 7.3 | 2450 | 250 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 108 | 89 | 11 | 9.1 | 2740 | 280 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 128 | 107 | 13.1 | 11 | 2940 | 300 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 172 | 143 | 17.5 | 14.6 | 3430 | 350 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 215 | 179 | 21.9 | 18.3 | 3820 | 390 | |
| | | 1/ 60 | 1/ 59 | 25 | 30 | 258 | 215 | 26.3 | 21.9 | 4120 | 420 | |
| | 40 | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 332 | 277 | 33.9 | 28.3 | 5780 | 590 | P.B55 Fig.B-56 29.5kg |
| | | 1/100 | 1/100 | 15 | 18 | 416 | 346 | 42.4 | 35.3 | 6080 | 620 | |
| | | 1/120 | 1/120 | 12.5 | 15 | 498 | 415 | 50.8 | 42.4 | 6270 | 640 | |
| | | 1/160 | 1/160 | 9.4 | 11.2 | 664 | 554 | 67.8 | 56.5 | 6470 | 660 | |
| | | 1/200 | 1/200 | 7.5 | 9 | 764 | 692 | 78 | 70.6 | 6660 | 680 | |
| | | ※1/240 | 1/240 | 6.3 | 7.5 | 764 | 764 | 78 | 78 | 6660 | 680 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

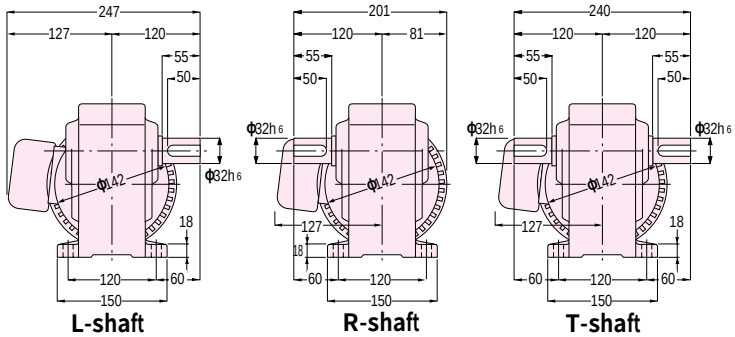
## Foot Mount Type

### Fig.B-55 H2LE-32[L/R]-5〜60-075

CAD Data: H2LE-32(LRT)-075

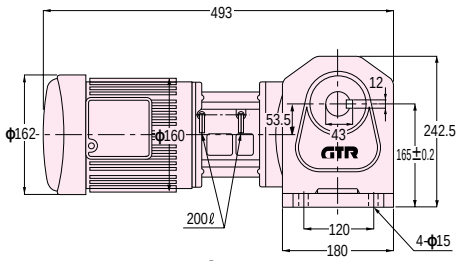



Round Weight 21kg

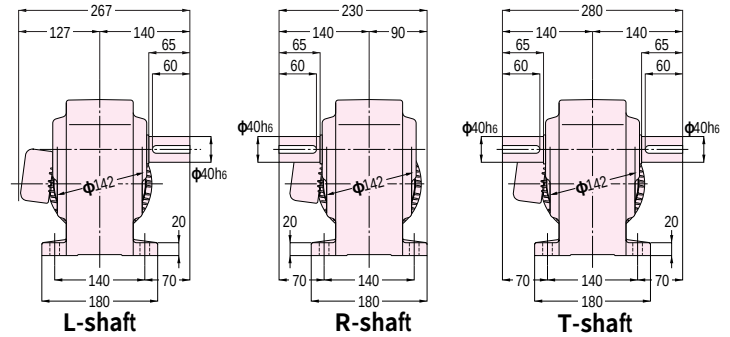



### Fig.B-56 H2LE-40[L/R]-80〜240-075

CAD Data: H2LE-40(LRT)-075




Round Weight 29.5kg




Model Code P.B48

Option P.E78〜E79

GTR Gearmotor

## Right Angle Shaft

# Reducer (Double Shaft Type)

## Model • Type Designation Standard Model Lineup

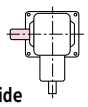
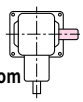
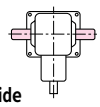
H2 Series

| | | |
|---|---|---|
| The capacity of 4P equivalent motor | | Equivalent of 0.2kW～2.2kW |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron, 1.5kW Frame No.40: Cast aluminium) |
| Ambient Conditions | Ambient Temperature | −10°C～40°C |
| | Ambient Humidity | 85%max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Right Angle Shaft)

H2 series Reducer(Double Shaft Type) are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Code | Spec. Code |
|---|---|---|---|---|---|---|---|---|---|---|
| H2 | L | | 32 | L | 200 | 040 | | | | |
| H2 | F | | 22 | T | 50 | 020 | | | X | |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | | |
|---|---|---|
| ①Series Name | H2 : H2 Series (Right Angle Shaft) | |
| ②Classification by Mount Form | L : Leg Mount | |
| | F : Foot Mount (Frame No. 22 only) | |
| ③Classification by Motor Type | S : Without motor (Double Shaft) | |
| ④Frame Number and Diameter of Output Shaft Diameter of Output Shaft | Diameter of Output Shaft | |
| ⑤Shaft Arrangement | L: Output shaft on the left viewing from Input shaft side  | R: Output shaft on the right viewing from Input shaft side  |
| | T: Output shaft on both side viewing from Input shaft side  | |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1500 : 1／1500 | |
| ⑦Motor Type and Capacity | 020 : equiv 0.2kW | |
| | 040 : equiv 0.4kW | |
| | 075 : equiv 0.75kW | |
| | 150 : equiv 1.5kW | |
| | 220 : equiv 2.2kW | |
| ⑧⑨Option | N/A | |
| ⑩Auxiliary Code | Blank : Standard voltage | |
| | X : Code to identify additional special specs. | |
| ⑪Specification Code<br>Note: Spec. code does not appear on the product type designation in the nameplate. It is indicated on the additional number column in the nameplate. | Blank : Standard voltage | |

# Standard Model Lineup




Foot Mount Type


Flange Mount Type (Frame No. 22 only)

| Type | Equivalent of 4P motor capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Reducer (Double Shaft Type) H2L | 3-Phase 0.2kW / 1-Phase 200W | 22 (Note 1) | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 28 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 32 | L R T | 1/300 1/375 1/450 |
| | | 40 | L R T | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-Phase 0.4kW / 1-Phase 400W | 28 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 32 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 40 | L R T | 1/300 1/375 1/450 |
| | | 50 | L R T | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-Phase 0.75kW | 32 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 40 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 50 | L R T | 1/300 1/375 1/450 |
| | 3-Phase 1.5kW | 40 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | 50 | L R T | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-Phase 2.2kW | 50 | L R T | 1/5 1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) Flange mounted type (H2F) is also available only in the Frame Number 22.
2) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Right Angle Shaft

# Reducer (Double Shaft Type)

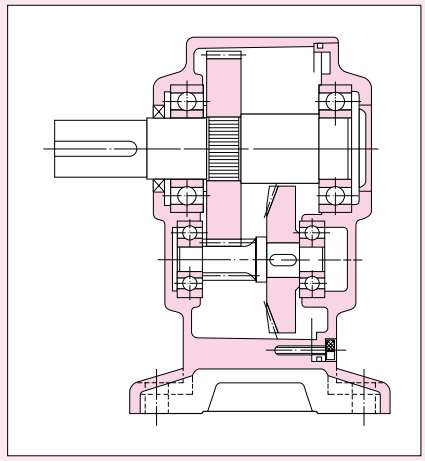
## Performance Table
## Dimension diagram

H2 Series

**【Remarks】**

- The corresponding motor capacities are the values when using 4-pole motor.
- The direction of rotation of the output shaft against the same of the output/input shaft are shown in the diagram below.

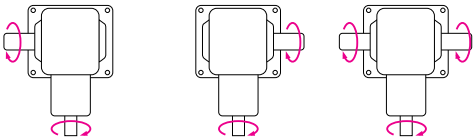




### Relation between shaft arrangement and rotation direction

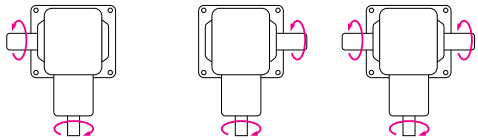
The rotation directions shown by arrow just show the rotation in input/output shaft, and do not limit the rotation direction.

| Capacity | Reduction Ratio |
|---|---|
| 0.2 kW | 1/5～1/60 and 1/600～1/1500 |
| 0.4・0.75kW | 1/5～1/60 and 1/300～1/1500 |
| 1.5・2.2 kW | 1/5～1/30 and 1/300～1/450 |



L-shaft R-shaft T-shaft

| Capacity | Reduction Ratio |
|---|---|
| 0.2 kW | 1/80～1/450 |
| 0.4・0.75kW | 1/80～1/240 |
| 1.5・2.2 kW | 1/40～1/240 |



L-shaft R-shaft T-shaft

# Reducer (Double Shaft Type)

## H2 Series equiv 0.2kW

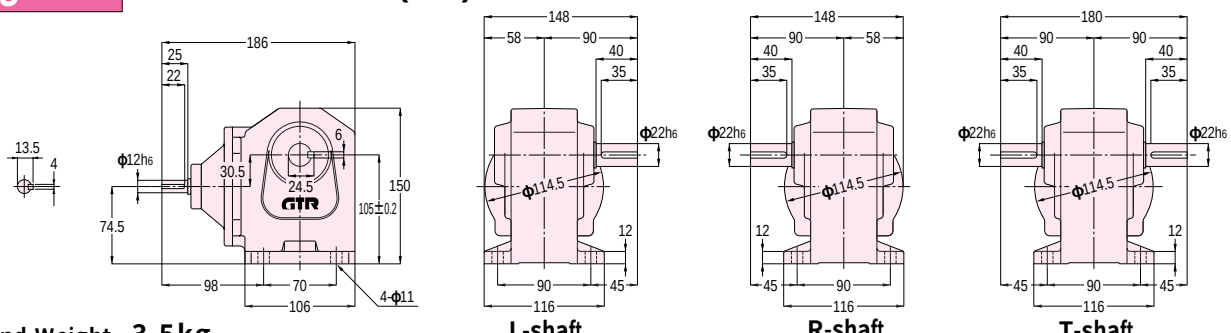


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | |
| | | | | N·m | kgf·m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | H2L | H2F |
| 0.2kW | 22 | 1/ 5 | 1/ 5 | 5.7 | 0.58 | 245 | 588 | 25 | 60 | P.B62 Fig.B-57 3.5kg | P.B63 Fig.B-61 3.5kg |
| | | 1/ 10 | 1/ 10 | 12 | 1.2 | | 931 | | 95 | | |
| | | 1/ 15 | 1/ 15 | 18 | 1.8 | | 1030 | | 105 | | |
| | | 1/ 20 | 1/ 20 | 23 | 2.3 | | 1180 | | 120 | | |
| | | 1/ 25 | 1/ 25 | 28 | 2.9 | | 1270 | | 130 | | |
| | | 1/ 30 | 1/ 30 | 34 | 3.5 | | 1370 | | 140 | | |
| | | 1/ 40 | 1/ 40 | 46 | 4.7 | | 1570 | | 160 | | |
| | | 1/ 50 | 1/ 50 | 57 | 5.8 | | 1720 | | 175 | | |
| | | 1/ 60 | 1/ 59 | 69 | 7 | | 1810 | | 185 | | |
| | 28 | 1/ 80 | 1/ 80 | 88 | 9 | 245 | 2450 | 25 | 250 | P.B63 Fig.B-58 5.5kg | |
| | | 1/ 100 | 1/ 100 | 111 | 11.3 | | 2650 | | 270 | | |
| | | 1/ 120 | 1/ 120 | 133 | 13.6 | | 2740 | | 280 | | |
| | | 1/ 160 | 1/ 160 | 177 | 18.1 | | 2840 | | 290 | | |
| | | 1/ 200 | 1/ 200 | 221 | 22.6 | | 2840 | | 290 | | |
| | | 1/ 240 | 1/ 236 | 245 | 25 | | 2840 | | 290 | | |
| | 32 | 1/ 300 | 7/ 2120 | 294 | 30 | 245 | 3820 | 25 | 390 | P.B63 Fig.B-59 9.5kg | |
| | | 1/ 375 | 7/ 2650 | 368 | 37.5 | | 4120 | | 420 | | |
| | | 1/ 450 | 7/ 3127 | 431 | 44 | | 4120 | | 420 | | |
| | 40 | 1/ 600 | 7/ 4240 | 588 | 60 | 245 | 6760 | 25 | 690 | P.B63 Fig.B-60 18kg | |
| | | 1/ 750 | 7/ 5300 | 735 | 75 | | 6760 | | 690 | | |
| | | 1/ 900 | 7/ 6360 | 764 | 78 | | 6760 | | 690 | | |
| | | ＊1/1200 | 7/ 8480 | 764 | 78 | | 6760 | | 690 | | |
| | | ＊1/1500 | 7/10600 | 764 | 78 | | 6760 | | 690 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

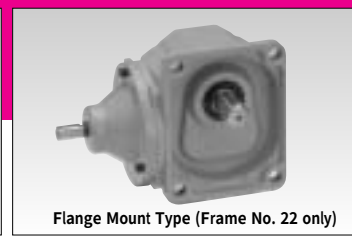
**Fig.B-57** **H2L-22[L/R]-5〜60- (020)** CAD Data: H2L-22(LRT)-020




Round Weight 3.5kg

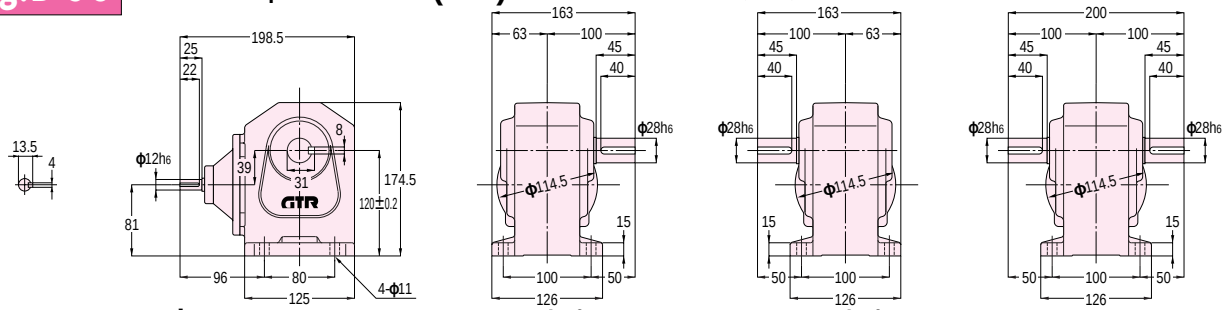
Model Code P.B58
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78


Foot Mount Type


Flange Mount Type (Frame No. 22 only)

## Fig.B-58 H2L-28[LRT]-80～240- (020)

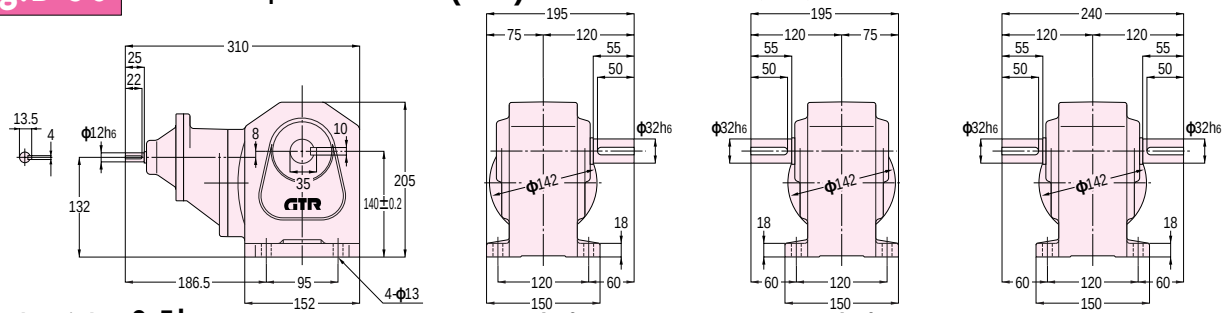
CAD Data: H2L-28 (LRT) -020




Round Weight 5.5kg

## Fig.B-59 H2L-32[LRT]-300～450- (020)

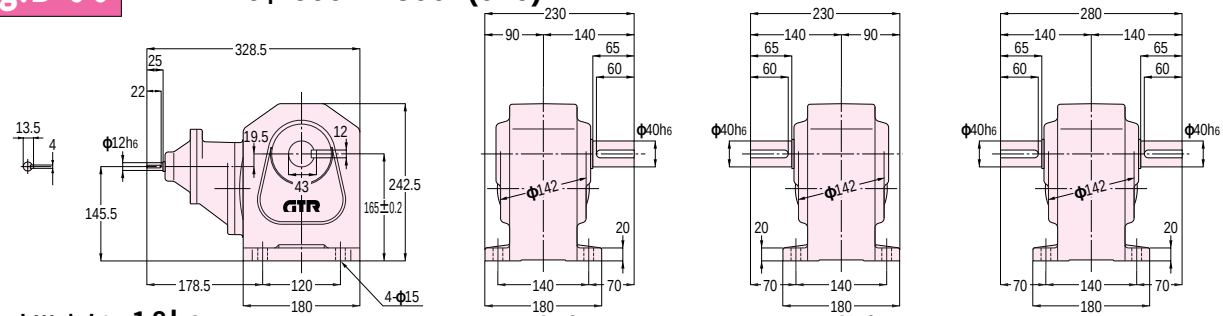
CAD Data: H2L-32 (LRT) -020




Round Weight 9.5kg

## Fig.B-60 H2L-40[LRT]-600～1500- (020)

CAD Data: H2L-40 (LRT) -020

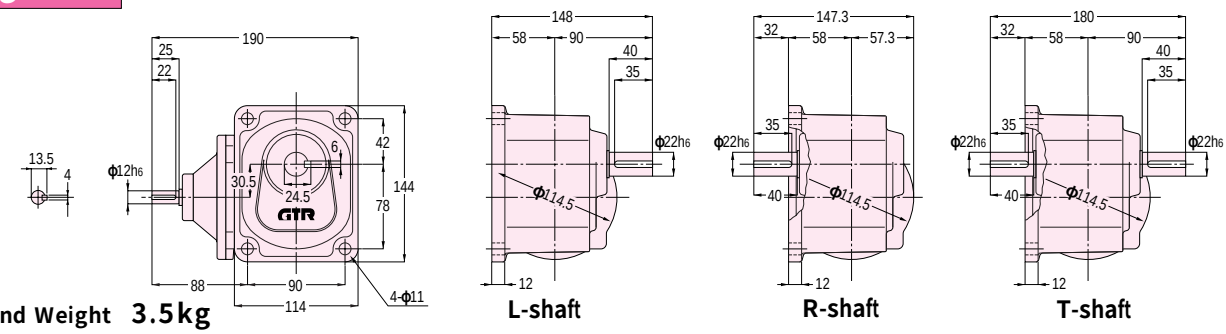



Round Weight 18kg

# Flange Mounted Type

## Fig.B-61 H2F-22[LRT]-5～60- (020)

CAD Data: H2F-22 (LRT) -020




Round Weight 3.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## H2 Series equiv 0.4kW



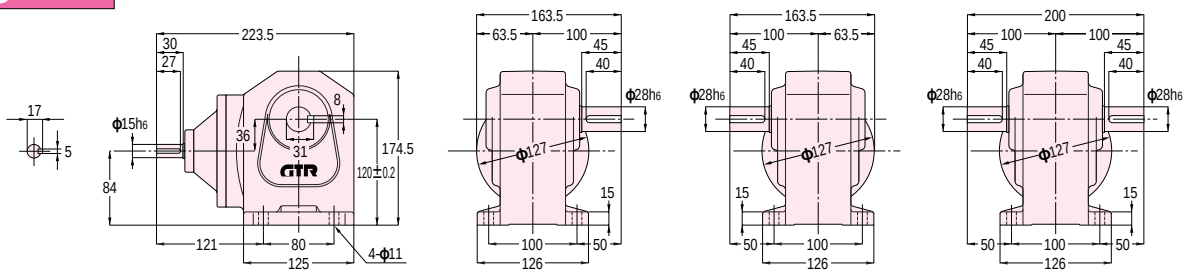
| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | H2L |
| 0.4kW | 28 | 1/ 5 | 1/ 5 | 12 | 1.2 | 294 | 931 | 30 | 95 | P.B64 Fig.B-62 5.5kg |
| | | 1/ 10 | 1/ 10 | 23 | 2.3 | | 1470 | | 150 | |
| | | 1/ 15 | 1/ 15 | 34 | 3.5 | | 1670 | | 170 | |
| | | 1/ 20 | 1/ 20 | 46 | 4.7 | | 1860 | | 190 | |
| | | 1/ 25 | 1/ 25 | 57 | 5.8 | | 2010 | | 205 | |
| | | 1/ 30 | 1/ 30 | 69 | 7 | | 2210 | | 225 | |
| | | 1/ 40 | 1/ 40 | 92 | 9.4 | | 2450 | | 250 | |
| | | 1/ 50 | 1/ 50 | 115 | 11.7 | | 2650 | | 270 | |
| | | 1/ 60 | 1/ 59 | 137 | 14 | | 2740 | | 280 | |
| | 32 | 1/ 80 | 1/ 80 | 177 | 18.1 | 294 | 3430 | 30 | 350 | P.B65 Fig.B-63 8.5kg |
| | | 1/ 100 | 1/ 100 | 221 | 22.6 | | 3820 | | 390 | |
| | | 1/ 120 | 1/ 120 | 266 | 27.1 | | 4120 | | 420 | |
| | | 1/ 160 | 1/ 160 | 355 | 36.2 | | 4120 | | 420 | |
| | | 1/ 200 | 1/ 200 | 431 | 44 | | 4120 | | 420 | |
| | | ＊1/ 240 | 1/ 236 | 431 | 44 | | 4120 | | 420 | |
| | 40 | 1/ 300 | 7/ 2080 | 572 | 58.4 | 294 | 6760 | 30 | 690 | P.B65 Fig.B-64 19kg |
| | | 1/ 375 | 7/ 2600 | 715 | 73 | | 6760 | | 690 | |
| | | ＊1/ 450 | 7/ 3120 | 764 | 78 | | 6760 | | 690 | |
| | 50 | 1/ 600 | 21/12220 | 1150 | 116.9 | 294 | 9510 | 30 | 970 | P.B65 Fig.B-65 48.5kg |
| | | ＊1/ 750 | 1/ 728 | 1230 | 125 | | 9510 | | 970 | |
| | | ＊1/ 900 | 7/ 6240 | 1230 | 125 | | 9510 | | 970 | |
| | | ＊1/1200 | 21/24440 | 1230 | 125 | | 9510 | | 970 | |
| | | ＊1/1500 | 1/ 1456 | 1230 | 125 | | 9510 | | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

### Fig.B-62

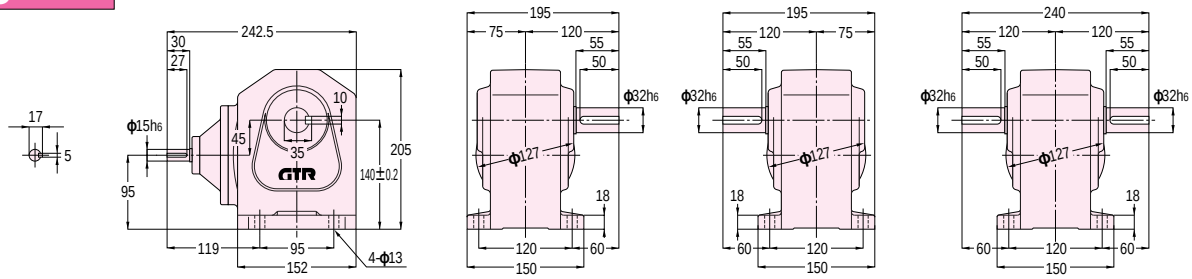
**H2L-28$^{L}_{R}$-5～60- (040)** CAD Data: H2L-28 (LRT) -040




Round Weight 5.5kg

### Fig.B-63

**H2L-32$^{L}_{R}$-80～240- (040)** CAD Data: H2L-32 (LRT) -040



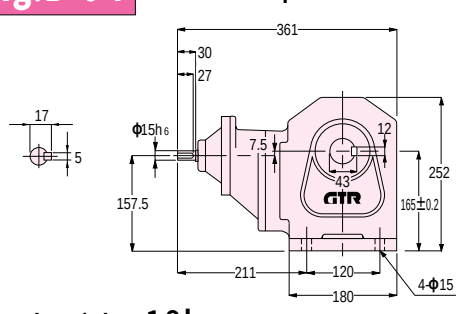

Round Weight 8.5kg

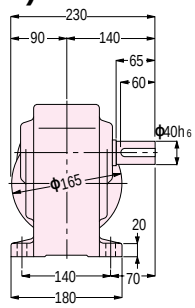
Model Code P.B58
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78


Foot Mount Type

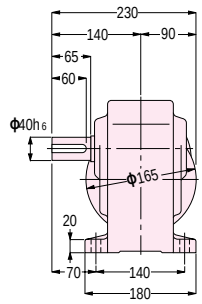
## Fig.B-64 H2L-40[LRT]-300～450- (040)

CAD Data: H2L-40 (LRT) -040

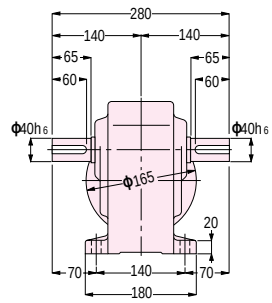


L-shaft



R-shaft

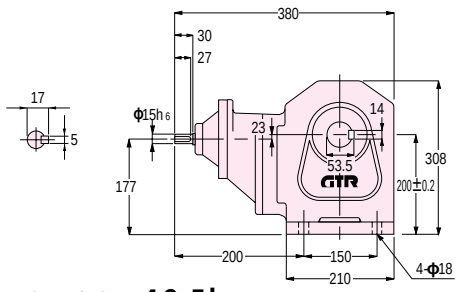


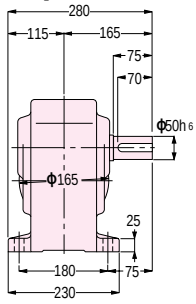
T-shaft

Round Weight 19kg

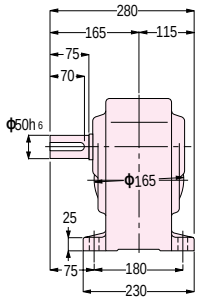
## Fig.B-65 H2L-50[LRT]-600～1500- (040)

CAD Data: H2L-50 (LRT) -040

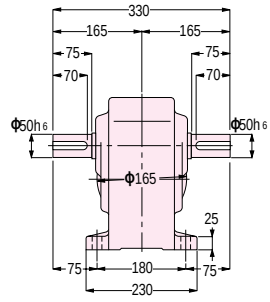


L-shaft



R-shaft



T-shaft

Round Weight 48.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## H2 Series equiv 0.75kW



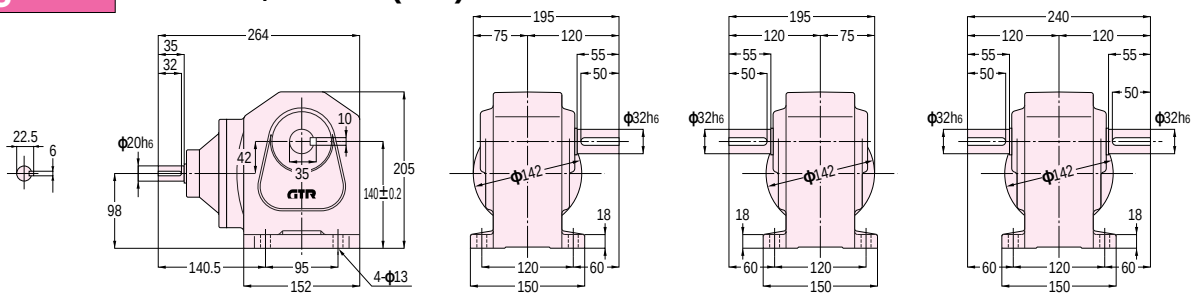
| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | H2L |
| 0.75kW | 32 | 1/ 5 | 1/ 5 | 22 | 2.2 | 392 | 1520 | 40 | 155 | P.B66 Fig.B-66 8.5kg |
| | | 1/ 10 | 1/ 10 | 43 | 4.4 | | 2010 | | 205 | |
| | | 1/ 15 | 1/ 15 | 65 | 6.6 | | 2210 | | 225 | |
| | | 1/ 20 | 1/ 20 | 86 | 8.8 | | 2450 | | 250 | |
| | | 1/ 25 | 1/ 25 | 108 | 11 | | 2740 | | 280 | |
| | | 1/ 30 | 1/ 30 | 128 | 13.1 | | 2940 | | 300 | |
| | | 1/ 40 | 1/ 40 | 172 | 17.5 | | 3430 | | 350 | |
| | | 1/ 50 | 1/ 50 | 215 | 21.9 | | 3820 | | 390 | |
| | | 1/ 60 | 1/ 59 | 258 | 26.3 | | 4120 | | 420 | |
| | 40 | 1/ 80 | 1/ 80 | 332 | 33.9 | 392 | 5780 | 40 | 590 | P.B66 Fig.B-67 17kg |
| | | 1/100 | 1/ 100 | 416 | 42.4 | | 6080 | | 620 | |
| | | 1/120 | 1/ 120 | 498 | 50.8 | | 6270 | | 640 | |
| | | 1/160 | 1/ 160 | 664 | 67.8 | | 6470 | | 660 | |
| | | 1/200 | 1/ 200 | 764 | 78 | | 6660 | | 680 | |
| | | ∗1/240 | 1/ 240 | 764 | 78 | | 6660 | | 680 | |
| | 50 | 1/300 | 7/2120 | 1070 | 109.6 | 392 | 7740 | 40 | 790 | P.B67 Fig.B-68 49.5kg |
| | | ∗1/375 | 7/2650 | 1230 | 125 | | 8040 | | 820 | |
| | | ∗1/450 | 7/3180 | 1230 | 125 | | 8530 | | 820 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

### Fig.B-66 H2L-32[L/R/T]-5〜60- (075)

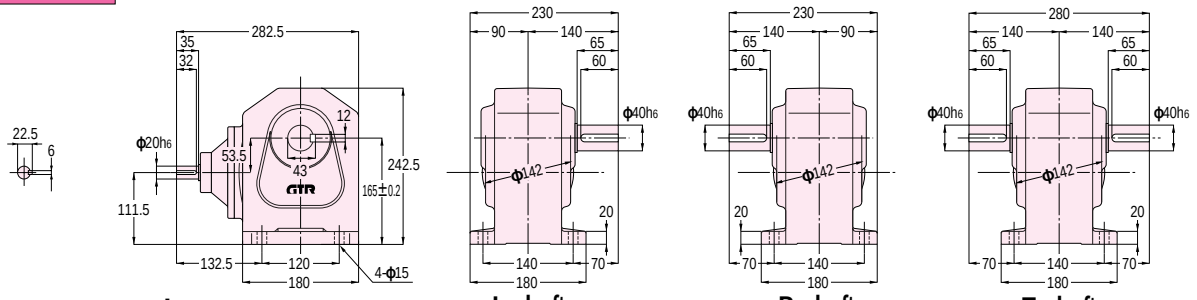
CAD Data: H2L-32(LRT)-075




Round Weight 8.5kg

### Fig.B-67 H2L-40[L/R/T]-80〜240- (075)

CAD Data: H2L-40(LRT)-075



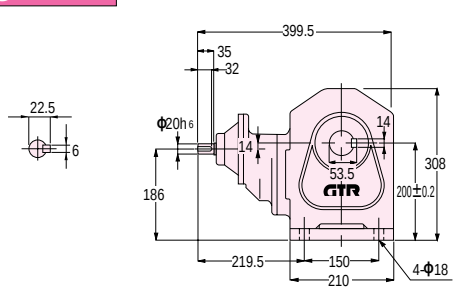

Round Weight 17kg

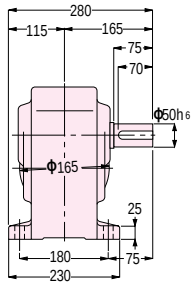
Model Code P.B58
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78


Foot Mount Type

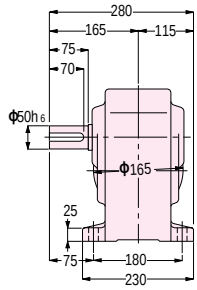
## Fig.B-68 H2L-50[L/R]-300～450- (075)

CAD Data: H2L-50(LRT)-075

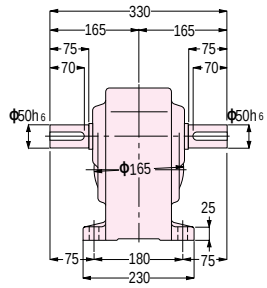


L-shaft



R-shaft



T-shaft

Round Weight 49.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Reducer (Double Shaft Type)

## H2 Series equiv 1.5kW



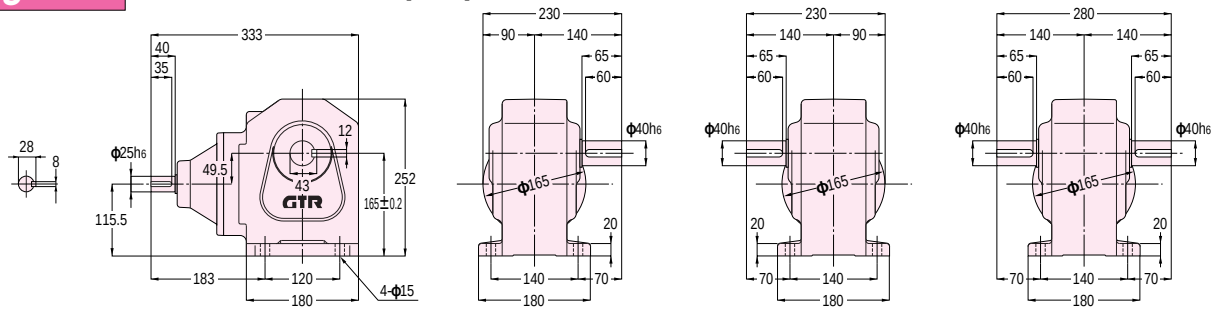
| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | H2L |
| 1.5kW | 40 | 1/ 5 | 1/ 5 | 43 | 4.4 | 392 | 2650 | 40 | 270 | P.B68 Fig.B-69 17.5kg |
| | | 1/ 10 | 1/ 10 | 86 | 8.8 | | 3530 | | 360 | |
| | | 1/ 15 | 1/ 15 | 128 | 13.1 | | 4410 | | 450 | |
| | | 1/ 20 | 1/ 20 | 172 | 17.5 | | 4700 | | 480 | |
| | | 1/ 25 | 1/ 25 | 215 | 21.9 | | 5100 | | 520 | |
| | | 1/ 30 | 1/ 30 | 258 | 26.3 | | 5290 | | 540 | |
| | | 1/ 40 | 1/ 40 | 344 | 35.1 | | 5590 | | 570 | |
| | | 1/ 50 | 1/ 50 | 429 | 43.8 | | 5880 | | 600 | |
| | | 1/ 60 | 1/ 60 | 515 | 52.6 | | 6080 | | 620 | |
| | 50 | 1/ 80 | 3/235 | 664 | 67.8 | 392 | 8530 | 40 | 870 | P.B68 Fig.B-70 47kg |
| | | 1/100 | 1/ 98 | 830 | 84.7 | | 8820 | | 900 | |
| | | 1/120 | 1/120 | 1000 | 102 | | 9020 | | 920 | |
| | | 1/160 | 3/470 | 1230 | 125 | | 9310 | | 950 | |
| | | ∗1/200 | 1/196 | 1230 | 125 | | 9510 | | 970 | |
| | | ∗1/240 | 1/240 | 1230 | 125 | | 9510 | | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

### Fig.B-69

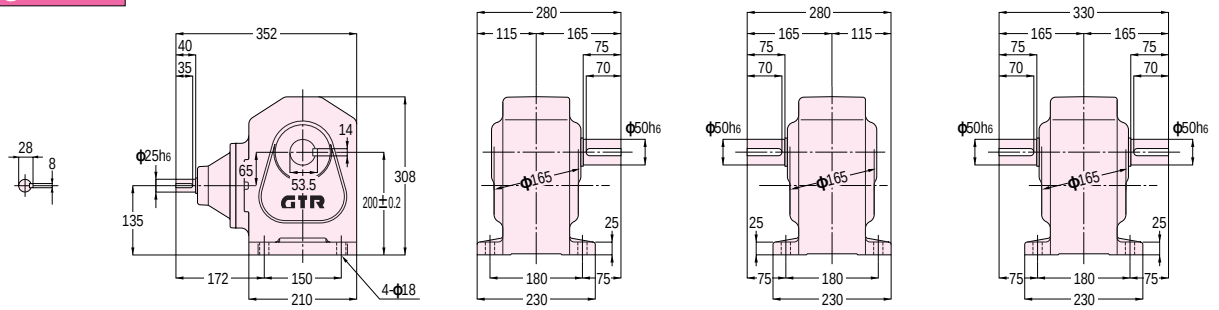
**H2L-40[L/R/T]-5〜60- (150)** CAD Data: H2L-40(LRT)-150




Round Weight 17.5kg

### Fig.B-70

**H2L-50[L/R/T]-80〜240- (150)** CAD Data: H2L-50(LRT)-150




Round Weight 47kg

Model Code P.B58
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78

# H2 Series equiv 2.2kW

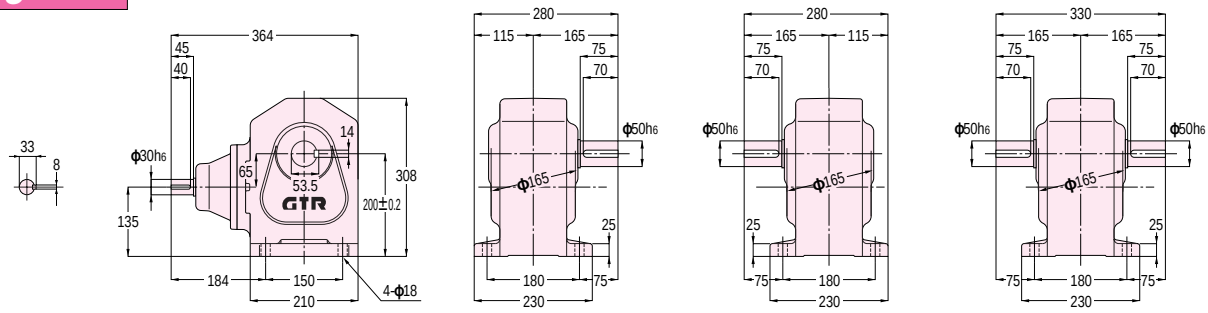

Foot Mount Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque (1500rpm) | | Allowable O.H.L | | | | Page, Diagram No. of the Outer Dimension Diagram, Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | |
| | | | | N•m | kgf•m | Input Shaft | Output Shaft | Input Shaft | Output Shaft | H2L |
| 2.2kW | 50 | 1/ 5 | 1/ 5 | 63 | 6.4 | 392 | 3920 | 40 | 400 | P.B69 Fig.B-71 47.5kg |
| | | 1/ 10 | 1/ 10 | 126 | 12.9 | | 4410 | | 450 | |
| | | 1/ 15 | 1/ 15 | 189 | 19.3 | | 4900 | | 500 | |
| | | 1/ 20 | 12/235 | 252 | 25.7 | | 5490 | | 560 | |
| | | 1/ 25 | 2/ 49 | 315 | 32.1 | | 6080 | | 620 | |
| | | 1/ 30 | 1/ 30 | 378 | 38.6 | | 6570 | | 670 | |
| | | 1/ 40 | 1/ 40 | 487 | 49.7 | | 7060 | | 720 | |
| | | 1/ 50 | 1/ 50 | 609 | 62.1 | | 7550 | | 770 | |
| | | 1/ 60 | 1/ 60 | 731 | 74.6 | | 8130 | | 830 | |
| | | 1/ 80 | 3/235 | 974 | 99.4 | | 8430 | | 860 | |
| | | 1/100 | 1/ 98 | 1220 | 124 | | 8820 | | 900 | |
| | | 1/120 | 1/120 | 1230 | 125 | | 8820 | | 900 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

**Fig.B-71** H2L-50[RT]-5～120- (220) CAD Data: H2L-50(LRT)-220




Round Weight 47.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Model Code P.B58
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78

Right Angle Shaft

# S-Type Reducer
## (Designated Motor Attachable Type)

# Model • Type Designation
# Standard Model Lineup

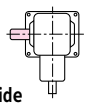
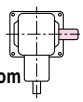
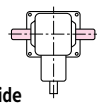
H2 Series

| | | |
|---|---|---|
| The capacity of 4P equivalent motor | | Equivalent of 0.2kW～2.2kW |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast(Frame No.50: Cast iron, 1.5kW Frame No.40: Cast aluminium) |
| Ambient Conditions | Ambient Temperature | −10°C～40°C |
| | Ambient Humidity | 85%max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation G3 Series (Right Angle Shaft)

H2 Series S-Type Reducer are classified by codes as shown below.
Specify these codes in your inquiry and order.

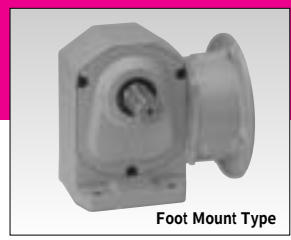
| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Auxiliary Code |
|---|---|---|---|---|---|---|---|
| H2 | L | S | 32 | L | 200 | 040 | |
| H2 | F | S | 22 | T | 50 | 020 | X |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |

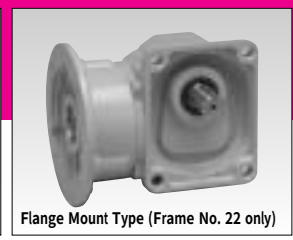
| | | |
|---|---|---|
| ①Series Name | H2 | : H2 Series (Right Angle Shaft) |
| ②Classification by Mount Form | L | : Leg Mount |
| | F | : Foot Mount (Frame No. 22 only) |
| ③Classification by Motor Type | S | : Designated motor attachable type (S-Type) |
| ④Frame Number and Diameter of Output Shaft Diameter of Output Shaft | Diameter of Output Shaft | |
| ⑤Shaft Arrangement | L: Output shaft on the left viewing from Input shaft side  | R: Output shaft on the right viewing from Input shaft side  |
| | T: Output shaft on both side viewing from Input shaft side  | |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1500 : 1／1500 | |
| ⑦Motor Type and Capacity | 020 | : equiv 0.2kW |
| | 040 | : equiv 0.4kW |
| | 075 | : equiv 0.75kW |
| | 150 | : equiv 1.5kW |
| | 220 | : equiv 2.2kW |
| ⑧Auxiliary Code | Blank | : Standard voltage |
| | X | : Code to identify additional special specs. |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup




Foot Mount Type


Flange Mount Type (Frame No. 22 only)

**Type** — **S-Type Reducer** **H2LS**

| Equivalent of 4P motor capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|
| 0.2kW | 22 (Note 1) | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | 28 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | 32 | L, R, T | 1/300, 1/375, 1/450 |
| | 40 | L, R, T | 1/600, 1/750, 1/900, 1/1200, 1/1500 |
| 0.4kW | 28 | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | 32 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | 40 | L, R, T | 1/300, 1/375, 1/450 |
| | 50 | L, R, T | 1/600, 1/750, 1/900, 1/1200, 1/1500 |
| 0.75kW | 32 | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | 40 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | 50 | L, R, T | 1/300, 1/375, 1/450 |
| 1.5kW | 40 | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60 |
| | 50 | L, R, T | 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| 2.2kW | 50 | L, R, T | 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120 |

Note 1) Flange mounted type (H2F) is also available only in the Frame Number 22.
2) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Right Angle Shaft

# S-Type Reducer

## (Designated Motor Attachable Type)

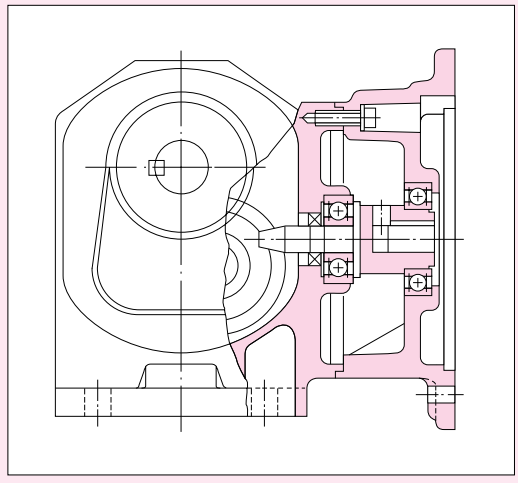
# Performance Table
# Dimension diagram

H2 Series

**【Remarks】**

- Output Shaft allowable torques are the values when using 4-pole motor.
- In case of using with motors other than 4-pole motor, the output allowable torque can be obtained by multiplying the torque correction coefficient indicated in page E46, to the written value.
- The rotation direction of the output shaft against the same of the input /output shaft can be referred to on page B61.





Designated Motor Attachable Type

# S-Type Reducer

## H2 Series equiv 0.2kW

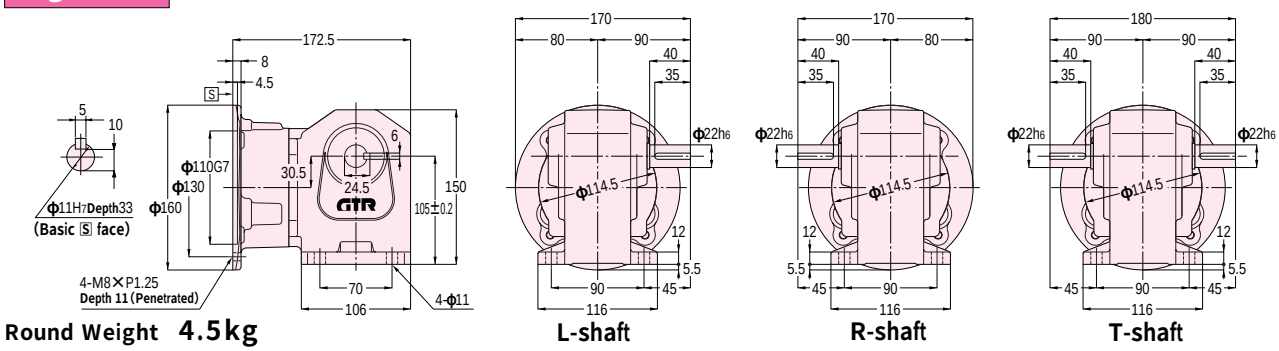


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight H2LS | Page, Diagram No. of the Outer Dimension Diagram, Round Weight H2FS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2kW | 22 | 1/ 5 | 1/ 5 | 5.7 | 4.8 | 0.58 | 0.49 | 588 | 60 | P.B76 Fig.B-72 4.5kg | P.B77 Fig.B-76 4.5kg |
| | | 1/ 10 | 1/ 10 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | | |
| | | 1/ 15 | 1/ 15 | 18 | 15 | 1.8 | 1.5 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 23 | 19 | 2.3 | 1.9 | 1180 | 120 | | |
| | | 1/ 25 | 1/ 25 | 28 | 24 | 2.9 | 2.4 | 1270 | 130 | | |
| | | 1/ 30 | 1/ 30 | 34 | 28 | 3.5 | 2.9 | 1370 | 140 | | |
| | | 1/ 40 | 1/ 40 | 46 | 38 | 4.7 | 3.9 | 1570 | 160 | | |
| | | 1/ 50 | 1/ 50 | 57 | 48 | 5.8 | 4.9 | 1720 | 175 | | |
| | | 1/ 60 | 1/ 59 | 69 | 57 | 7 | 5.8 | 1810 | 185 | | |
| | 28 | 1/ 80 | 1/ 80 | 88 | 74 | 9 | 7.5 | 2450 | 250 | P.B77 Fig.B-73 6.5kg | |
| | | 1/ 100 | 1/ 100 | 111 | 92 | 11.3 | 9.4 | 2650 | 270 | | |
| | | 1/ 120 | 1/ 120 | 133 | 111 | 13.6 | 11.3 | 2740 | 280 | | |
| | | 1/ 160 | 1/ 160 | 177 | 148 | 18.1 | 15.1 | 2840 | 290 | | |
| | | 1/ 200 | 1/ 200 | 221 | 184 | 22.6 | 18.8 | 2840 | 290 | | |
| | | 1/ 240 | 1/ 236 | 245 | 221 | 25 | 22.6 | 2840 | 290 | | |
| | 32 | 1/ 300 | 7/ 2120 | 294 | 245 | 30 | 25 | 3820 | 390 | P.B77 Fig.B-74 10.5kg | |
| | | 1/ 375 | 7/ 2650 | 368 | 306 | 37.5 | 31.2 | 4120 | 420 | | |
| | | 1/ 450 | 7/ 3127 | 431 | 368 | 44 | 37.5 | 4120 | 420 | | |
| | 40 | 1/ 600 | 7/ 4240 | 588 | 490 | 60 | 50 | 6760 | 690 | P.B77 Fig.B-75 19kg | |
| | | 1/ 750 | 7/ 5300 | 735 | 613 | 75 | 62.5 | 6760 | 690 | | |
| | | 1/ 900 | 7/ 6360 | 764 | 735 | 78 | 75 | 6760 | 690 | | |
| | | ∗1/1200 | 7/ 8480 | 764 | 764 | 78 | 78 | 6760 | 690 | | |
| | | ∗1/1500 | 7/10600 | 764 | 764 | 78 | 78 | 6760 | 690 | | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

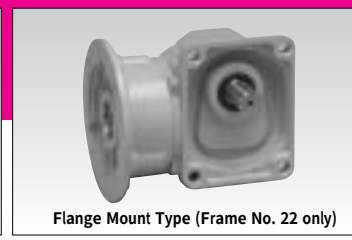
**Fig.B-72** H2LS-22[L/R]-5〜60- (020) CAD Data: H2LS-22(LRT)-020



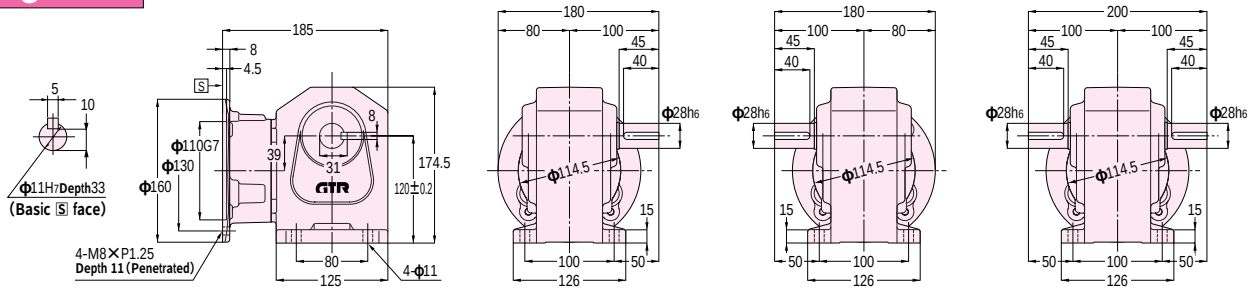

Round Weight 4.5kg

Model Code P.B72
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78


Foot Mount Type

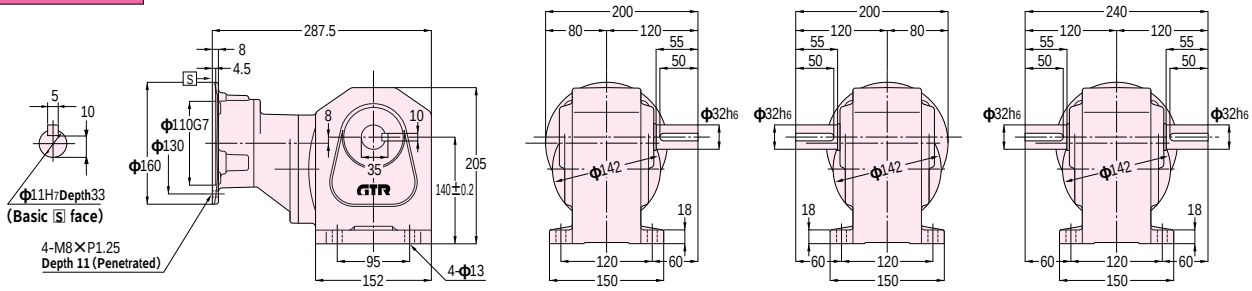

Flange Mount Type (Frame No. 22 only)

## Fig.B-73 H2LS-28ₖᵣ-80～240- (020) CAD Data: H2LS-28 (LRT) -020



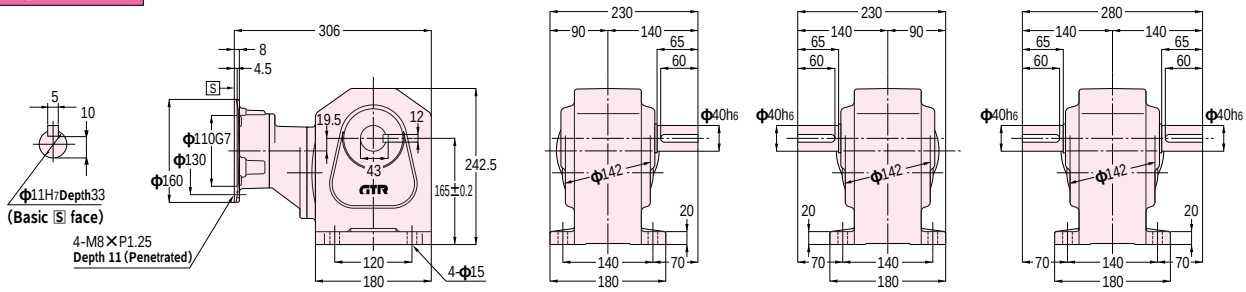

Round Weight 6.5kg

## Fig.B-74 H2LS-32ₖᵣ-300～450- (020) CAD Data: H2LS-32 (LRT) -020




Round Weight 10.5kg

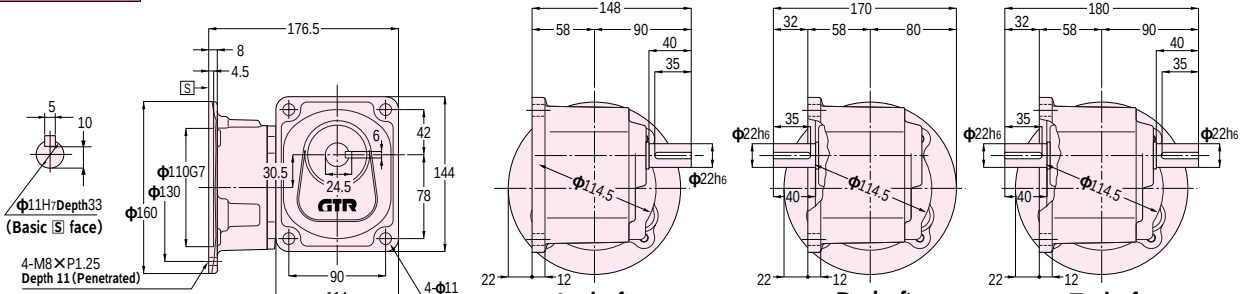
## Fig.B-75 H2LS-40ₖᵣ-600～1500- (020) CAD Data: H2LS-40 (LRT) -020




Round Weight 19kg

# Flange Mounted Type

## Fig.B-76 H2FS-22ₖᵣ-5～60- (020) CAD Data: H2FS-22 (LRT) -020




Round Weight 4.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## H2 Series equiv 0.4kW

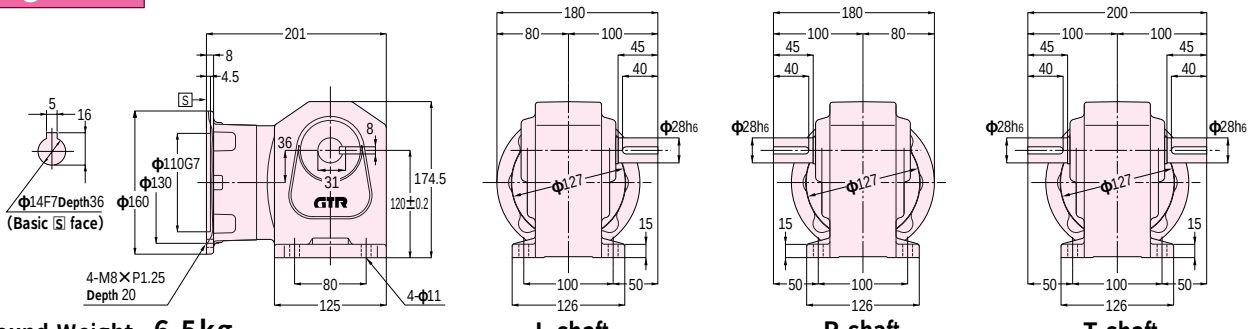


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight H2LS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.4kW | 28 | 1/ 5 | 1/ 5 | 12 | 9.5 | 1.2 | 0.97 | 931 | 95 | P.B78 Fig.B-77 6.5kg |
| | | 1/ 10 | 1/ 10 | 23 | 19 | 2.3 | 1.9 | 1470 | 150 | |
| | | 1/ 15 | 1/ 15 | 34 | 28 | 3.5 | 2.9 | 1670 | 170 | |
| | | 1/ 20 | 1/ 20 | 46 | 38 | 4.7 | 3.9 | 1860 | 190 | |
| | | 1/ 25 | 1/ 25 | 57 | 48 | 5.8 | 4.9 | 2010 | 205 | |
| | | 1/ 30 | 1/ 30 | 69 | 57 | 7 | 5.8 | 2210 | 225 | |
| | | 1/ 40 | 1/ 40 | 92 | 76 | 9.4 | 7.8 | 2450 | 250 | |
| | | 1/ 50 | 1/ 50 | 115 | 95 | 11.7 | 9.7 | 2650 | 270 | |
| | | 1/ 60 | 1/ 59 | 137 | 115 | 14 | 11.7 | 2740 | 280 | |
| | 32 | 1/ 80 | 1/ 80 | 177 | 148 | 18.1 | 15.1 | 3430 | 350 | P.B79 Fig.B-78 9.5kg |
| | | 1/ 100 | 1/ 100 | 221 | 184 | 22.6 | 18.8 | 3820 | 390 | |
| | | 1/ 120 | 1/ 120 | 266 | 221 | 27.1 | 22.6 | 4120 | 420 | |
| | | 1/ 160 | 1/ 160 | 355 | 295 | 36.2 | 30.1 | 4120 | 420 | |
| | | 1/ 200 | 1/ 200 | 431 | 369 | 44 | 37.7 | 4120 | 420 | |
| | | ∗1/ 240 | 1/ 236 | 431 | 431 | 44 | 44 | 4120 | 420 | |
| | 40 | 1/ 300 | 7/ 2080 | 572 | 477 | 58.4 | 48.7 | 6760 | 690 | P.B79 Fig.B-79 20kg |
| | | 1/ 375 | 7/ 2600 | 715 | 597 | 73 | 60.9 | 6760 | 690 | |
| | | ∗1/ 450 | 7/ 3120 | 764 | 715 | 78 | 73 | 6760 | 690 | |
| | 50 | 1/ 600 | 21/12220 | 1150 | 955 | 116.9 | 97.4 | 9510 | 970 | P.B79 Fig.B-80 49.5kg |
| | | ∗1/ 750 | 1/ 728 | 1230 | 1190 | 125 | 121.7 | 9510 | 970 | |
| | | ∗1/ 900 | 7/ 6240 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1200 | 21/24440 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/1500 | 1/ 1456 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Foot Mount Type

**Fig.B-77** H2LS-28[L/R]-5～60- (040) CAD Data: H2LS-28(LRT)-040



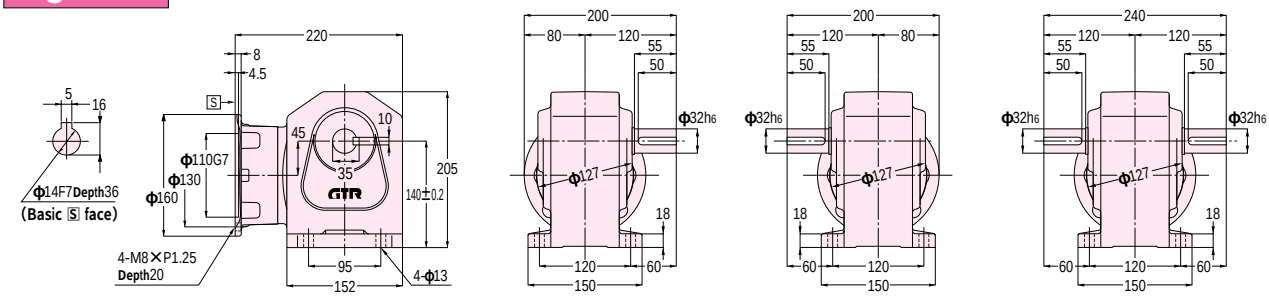

Round Weight 6.5kg

L-shaft R-shaft T-shaft

Model Code P.B72
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78


Foot Mount Type

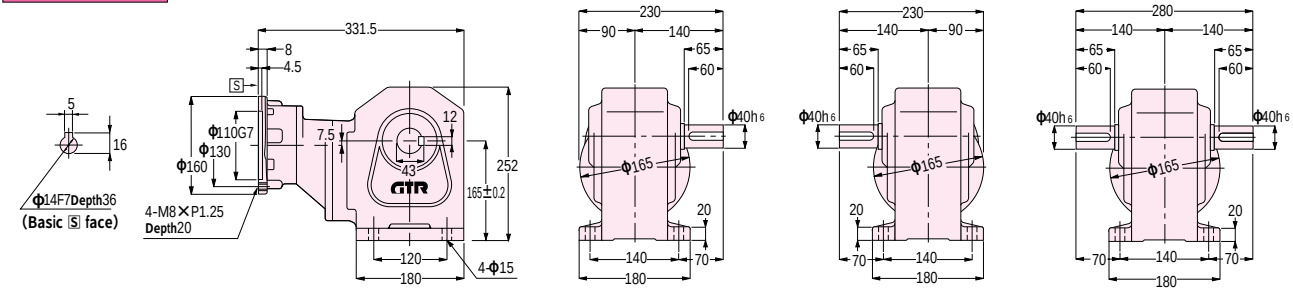
## Fig.B-78 H2LS-32[L/R]-80～240- (040) CAD Data: H2LS-32(LRT)-040




Round Weight 9.5kg

L-shaft R-shaft T-shaft

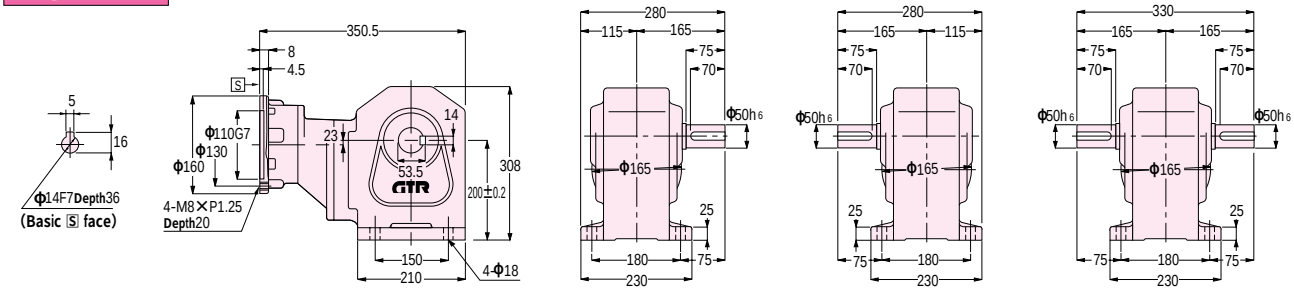
## Fig.B-79 H2LS-40[L/R]-300～450- (040) CAD Data: H2LS-40(LRT)-040




Round Weight 20kg

L-shaft R-shaft T-shaft

## Fig.B-80 H2LS-50[L/R]-600～1500- (040) CAD Data: H2LS-50(LRT)-040




Round Weight 49.5kg

L-shaft R-shaft T-shaft

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Designated Motor Attachable Type

# S-Type Reducer

## H2 Series equiv 0.75kW

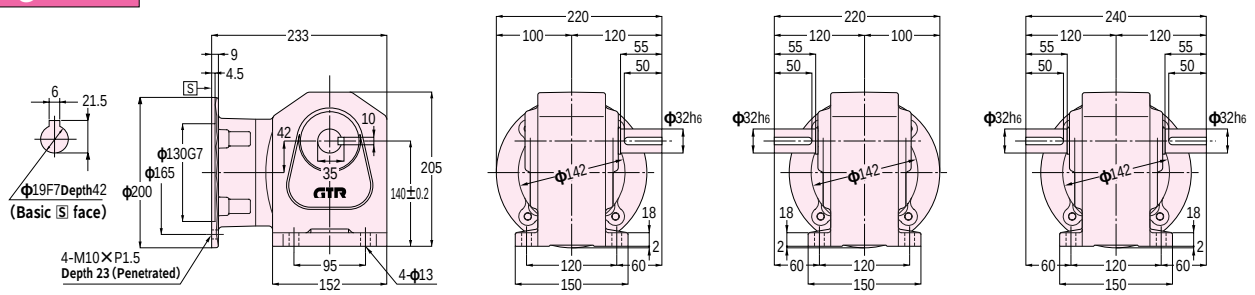


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight H2LS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.75kW | 32 | 1/ 5 | 1/ 5 | 22 | 18 | 2.2 | 1.8 | 1520 | 155 | P.B80 Fig.B-81 9kg |
| | | 1/ 10 | 1/ 10 | 43 | 36 | 4.4 | 3.7 | 2010 | 205 | |
| | | 1/ 15 | 1/ 15 | 65 | 54 | 6.6 | 5.5 | 2210 | 225 | |
| | | 1/ 20 | 1/ 20 | 86 | 72 | 8.8 | 7.3 | 2450 | 250 | |
| | | 1/ 25 | 1/ 25 | 108 | 89 | 11 | 9.1 | 2740 | 280 | |
| | | 1/ 30 | 1/ 30 | 128 | 107 | 13.1 | 11 | 2940 | 300 | |
| | | 1/ 40 | 1/ 40 | 172 | 143 | 17.5 | 14.6 | 3430 | 350 | |
| | | 1/ 50 | 1/ 50 | 215 | 179 | 21.9 | 18.3 | 3820 | 390 | |
| | | 1/ 60 | 1/ 59 | 258 | 215 | 26.3 | 21.9 | 4120 | 420 | |
| | 40 | 1/ 80 | 1/ 80 | 332 | 277 | 33.9 | 28.3 | 5780 | 590 | P.B80 Fig.B-82 17.5kg |
| | | 1/100 | 1/ 100 | 416 | 346 | 42.4 | 35.3 | 6080 | 620 | |
| | | 1/120 | 1/ 120 | 498 | 415 | 50.8 | 42.4 | 6270 | 640 | |
| | | 1/160 | 1/ 160 | 664 | 554 | 67.8 | 56.5 | 6470 | 660 | |
| | | 1/200 | 1/ 200 | 764 | 692 | 78 | 70.6 | 6660 | 680 | |
| | | ∗1/240 | 1/ 240 | 764 | 764 | 78 | 78 | 6660 | 680 | |
| | 50 | 1/300 | 7/2120 | 1070 | 895 | 109.6 | 91.3 | 7740 | 790 | P.B81 Fig.B-83 50.5kg |
| | | ∗1/375 | 7/2650 | 1230 | 1120 | 125 | 114.1 | 8040 | 820 | |
| | | ∗1/450 | 7/3180 | 1230 | 1230 | 125 | 125 | 8530 | 870 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

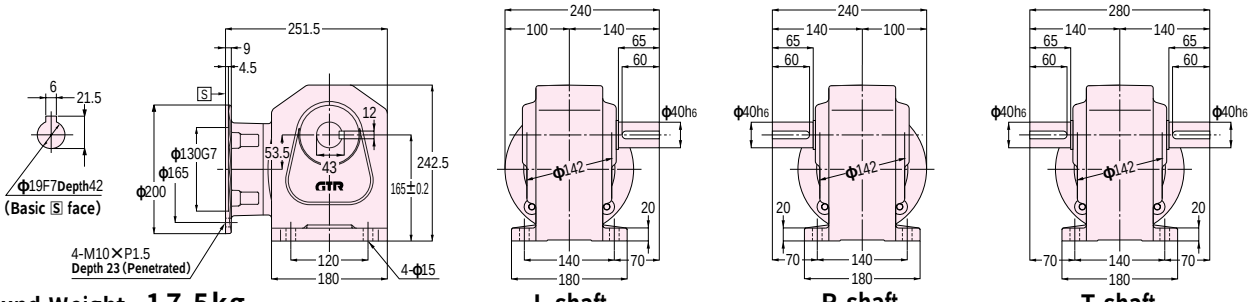
## Foot Mount Type

**Fig.B-81** H2LS-32段-5～60- (075) CAD Data: H2LS-32 (LRT) -075




Round Weight 9kg

**Fig.B-82** H2LS-40段-80～240- (075) CAD Data: H2LS-40 (LRT) -075

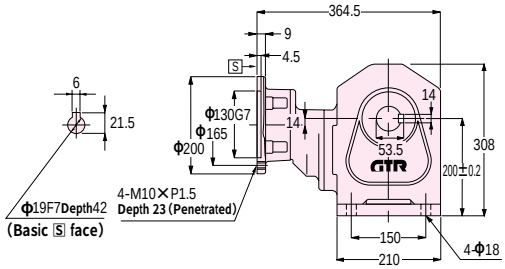


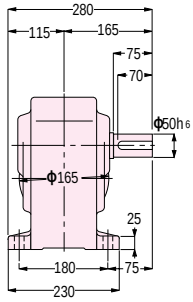

Round Weight 17.5kg

Model Code P.B72
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78

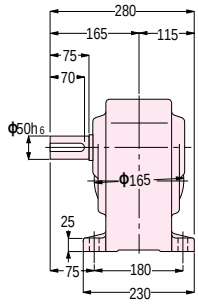

Foot Mount Type

## Fig.B-83 H2LS-50[L/R]-300～450- (075) CAD Data: H2LS-50(LRT)-075

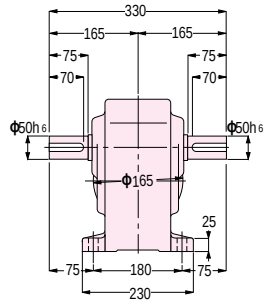


L-shaft



R-shaft



T-shaft

Round Weight 50.5kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Designated Motor Attachable Type

# S-Type Reducer

## H2 Series equiv 1.5kW

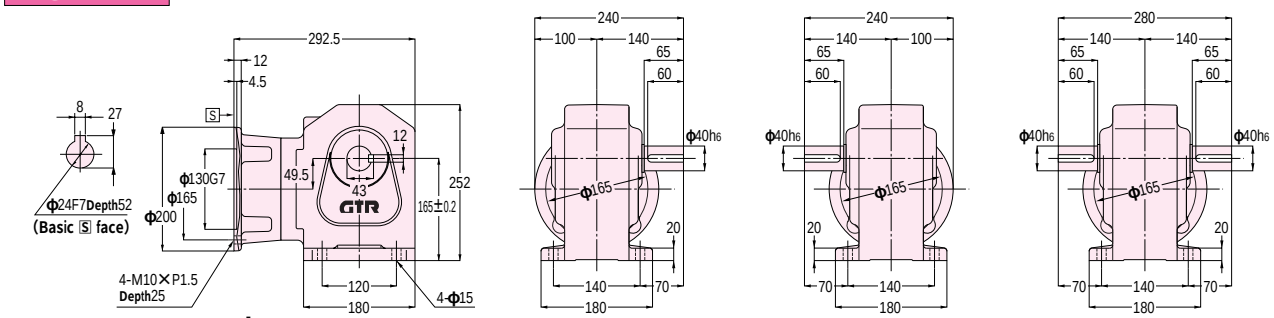


| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight H2LS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.5kW | 40 | 1/ 5 | 1/ 5 | 43 | 36 | 4.4 | 3.7 | 2650 | 270 | P.B82 Fig.B-84 19.5kg |
| | | 1/ 10 | 1/ 10 | 86 | 72 | 8.8 | 7.3 | 3530 | 360 | |
| | | 1/ 15 | 1/ 15 | 128 | 107 | 13.1 | 11 | 4410 | 450 | |
| | | 1/ 20 | 1/ 20 | 172 | 143 | 17.5 | 14.6 | 4700 | 480 | |
| | | 1/ 25 | 1/ 25 | 215 | 179 | 21.9 | 18.3 | 5100 | 520 | |
| | | 1/ 30 | 1/ 30 | 258 | 215 | 26.3 | 21.9 | 5290 | 540 | |
| | | 1/ 40 | 1/ 40 | 344 | 277 | 35.1 | 28.3 | 5590 | 570 | |
| | | 1/ 50 | 1/ 50 | 429 | 346 | 43.8 | 35.3 | 5880 | 600 | |
| | | 1/ 60 | 1/ 60 | 515 | 415 | 52.6 | 42.4 | 6080 | 620 | |
| | 50 | 1/ 80 | 3/235 | 664 | 554 | 67.8 | 56.5 | 8530 | 870 | P.B82 Fig.B-85 49kg |
| | | 1/100 | 1/ 98 | 830 | 692 | 84.7 | 70.6 | 8820 | 900 | |
| | | 1/120 | 1/120 | 1000 | 830 | 102 | 84.7 | 9020 | 920 | |
| | | 1/160 | 3/470 | 1230 | 1110 | 125 | 113 | 9310 | 950 | |
| | | ∗1/200 | 1/196 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |
| | | ∗1/240 | 1/240 | 1230 | 1230 | 125 | 125 | 9510 | 970 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

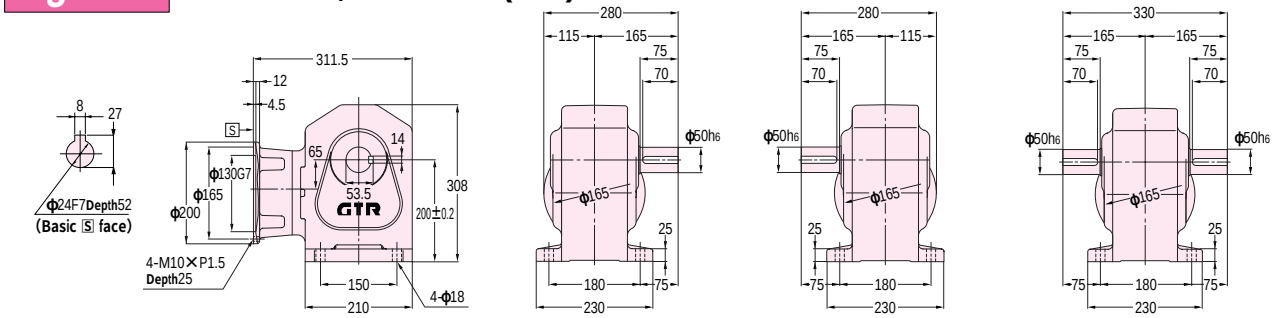
## Foot Mount Type

**Fig.B-84** H2LS-40ₖₜ-5～60- (150) CAD Data: H2LS-40(LRT)-150




Round Weight 19.5kg

**Fig.B-85** H2LS-50ₖₜ-80～240- (150) CAD Data: H2LS-50(LRT)-150




Round Weight 49kg

Model Code P.B72
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78

# H2 Series equiv 2.2kW

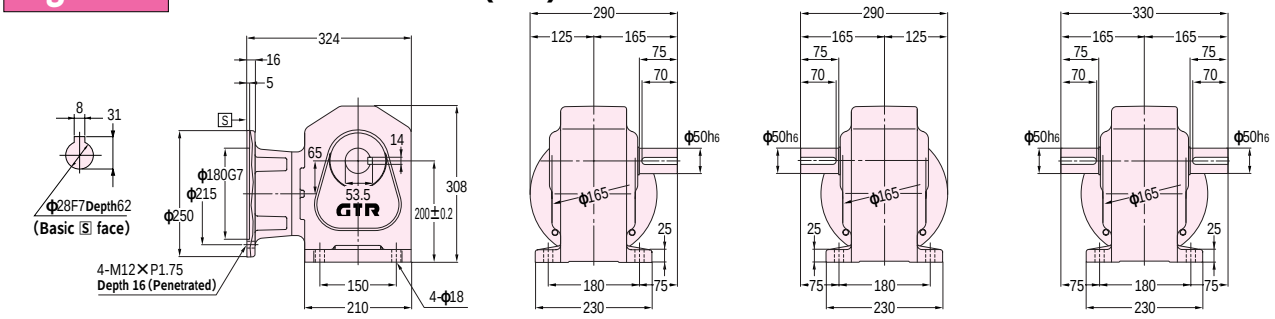

Foot Mount Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L N | Output Shaft Allowable O.H.L kgf | Page, Diagram No. of the Outer Dimension Diagram, Round Weight H2LS |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.2kW | 50 | 1/ 5 | 1/ 5 | 63 | 53 | 6.4 | 5.4 | 3920 | 400 | P.B83 Fig.B-86 49.5kg |
| | | 1/ 10 | 1/ 10 | 126 | 105 | 12.9 | 10.7 | 4410 | 450 | |
| | | 1/ 15 | 1/ 15 | 189 | 157 | 19.3 | 16.1 | 4900 | 500 | |
| | | 1/ 20 | 12/235 | 252 | 210 | 25.7 | 21.4 | 5490 | 560 | |
| | | 1/ 25 | 2/ 49 | 315 | 263 | 32.1 | 26.8 | 6080 | 620 | |
| | | 1/ 30 | 1/ 30 | 378 | 315 | 38.6 | 32.1 | 6570 | 670 | |
| | | 1/ 40 | 1/ 40 | 487 | 406 | 49.7 | 41.4 | 7060 | 720 | |
| | | 1/ 50 | 1/ 50 | 609 | 507 | 62.1 | 51.8 | 7550 | 770 | |
| | | 1/ 60 | 1/ 60 | 731 | 609 | 74.6 | 62.1 | 8130 | 830 | |
| | | 1/ 80 | 3/235 | 974 | 812 | 99.4 | 82.9 | 8430 | 860 | |
| | | 1/100 | 1/ 98 | 1220 | 1010 | 124 | 104 | 8820 | 900 | |
| | | 1/120 | 1/120 | 1230 | 1220 | 125 | 124 | 8820 | 900 | |

Note) The allowable O.H.L indicated are the values in the central position of the output shaft.

## Foot Mount Type

**Fig.B-86** H2LS-50[L/R]-5～120- (220) CAD Data: H2LS-50(LRT)-220




Round Weight 49.5kg

L-shaft R-shaft T-shaft

Model Code P.B72
Detailed Dimension Diagram of Input Shaft P.E49
Option P.E78

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Hollow Shaft • Solid Shaft

# F Series
# Gearmotor • Reducer

## Model • Type Designation
## Standard Model Lineup

F Series

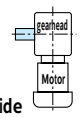
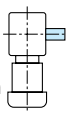
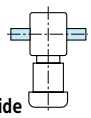

■ Gearmotor/Gearmotor with Brake
Model•Type Designation/Standard Model Lineup ····· P. C9
Hollow Shaft 3-Phase Performance Table/Dimension Diagram ····· P. C15
Hollow Shaft 1-Phase Performance Table/Dimension Diagram ····· P. C31
Solid Shaft 1-Phase Performance Table/Dimension Diagram ····· P. C39
■ Water-Resistant W/SUS Shaft•
Water-Resistant W/Carbon Steel Shaft (IP65)Gearmotor/
Gearmotor with Brake
Model•Type Designation/Standard Model Lineup ····· P. C47
Performance Table/Dimension Diagram ····· P. C51
■ Reducer(Double Shaft)
Model•Type Designation/Standard Model Lineup ····· P. C63
Performance Table/Dimension Diagram ····· P. C67
■ S-Type Reducer(Designated Motor Attachable)
Model•Type Designation/Standard Model Lineup ····· P. C75
Performance Table/Dimension diagram ····· P. C79

# Model and Type Designation F Series

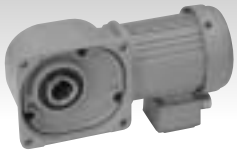
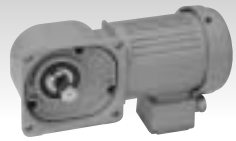
## FS Type(Hollow Shaft)
## FF Type(Solid Shaft)

F Series gearmotors and reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|---|
| F | S | MN | – 35 | | – 50 | – T040 | W | A | | |
| F | F | M | – 22 | T | – 100 | – T010 | A | | X | TZH3 |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | | |
|---|---|---|
| ①Series Name | F | : F Series(Hollow Shaft•Solid Shaft) |
| ②Classification by Mount Form | S | : Hollow Shaft Type |
| | F | : Solid Shaft Type |
| ③Classification by Motor Type | M | : With Motor |
| | MN | : With Brake-motor |
| | J | : With Brake Manual Release Device(Option) |
| | W | : With Water-resistant Motor W/SUS Shaft (JIS:SUS420J2) Only Hollow Shaft Type |
| | V | : With Water-resistant Brake Motor W/SUS Shaft (JIS:SUS420J2) Only Hollow Shaft Type |
| | G | : With Water-resistant Motor W/Carbon Steel Shaft(JIS:S43C) Only Hollow Shaft Type |
| | H | : With Water-resistant Brake Motor (JIS:S43C) Only Hollow Shaft Type |
| | Blank | : Without Motor(Double Shaft Type) Only Hollow Shaft Type |
| | S | : Designated Motor Attachable Type(S Type) Only Hollow Shaft Type |
| ④Frame Number and Diameter of Output Shaft | Output Shaft Diameter (Hollow Shaft type is the bore and Solid Shaft type is the outside diameter.) | |
| ⑤Shaft Arrangement for Solid Shaft | L: Output shaft on the left viewing from Input shaft side   | R: Output shaft on the right viewing from Input shaft side  T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1800 : 1／1800 | |
| ⑦Motor Type and Capacity | T50 | : 3-phase 50 W |
| | T010 | : 3-phase 0.1 kW 010:0.1 kW or equiv. (Double S-Type) |
| | T020 | : 3-phase 0.2 kW 020:0.2 kW or equiv. (Double S-Type) |
| | T040 | : 3-phase 0.4 kW 040:0.4 kW or equiv. (Double S-Type) |
| | 075 | : 3-phase 0.75kW 0.75kW or equiv. (Double S-Type) |
| | 150 | : 3-phase 1.5 kW 1.5 kW or equiv. (Double S-Type) |
| | 220 | : 3-phase 2.2 kW 2.2 kW or equiv. (Double S-Type) |
| | S100 | : 1-phase 100W Only Hollow Shaft Type |
| | 200 | : 1-phase 200W Only Hollow Shaft Type |
| | 400 | : 1-phase 400W Only Hollow Shaft Type |
| ⑧⑨Option<br>Note 1: For the capacity of 50W～0.4kW, with "A" box is the Standard for all voltage, so please indicate "A" at the end of motor capacity. Blank means without terminal box(fly lead). For rectifier insert type Terminal box, please indicate "Z" at the end of the motor capacity. All the gearmotors with the capacity of 0.75～2.2kW are terminal box equipped and have no additional code. For rectifier built-in gearmotors, refer to page E26.<br>Note 2: Standard single-phase gearmotors are not equipped with terminal box. Terminal box should be ordered additionally.<br>Note 3: Water-resistant outdoor gearmotors are equipped with E-Type terminal box as standard specs., therefore, for orders, specify " E " at the end of the capacity code. | Blank | : Standard Voltage<br>3-phase : 200V／50Hz, 200V／60Hz, 220V／60Hz (Note 1)<br>1-phase : 100V／50Hz, 100V／60Hz<br>without terminal box (Note 2) |
| | W | : High Voltage<br>3-phase : 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz<br>1-phase : 200V／50Hz, 200V／60Hz (Custom design Specs.) |
| | A | : Terminal box(50W～0.4kW standard specs.) (Note 1) |
| | Z | : For 3-phase Brake Motor,Terminal Box with a built-in rectifier(option for 50W～0.4kW) (Note 1) |
| | E | : Terminal box for water-resistant, type (Standard Specs.) (Note 3) |
| ⑩Auxiliary Code | Blank | : Standard Specs. |
| | X | : Code to identify additional special specs. |
| ⑪Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Instruction for terminal box position.<br>Refer to the specification code list on page E37 for details. | |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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| | Gearmotor Gearmotor with Brake | Reducer (Double Shaft Type) | S-Type Reducer | Gearmotor Gearmotor with Brake |
|---|---|---|---|---|
| FS Type |  |  |  | FF Type  |


Parallel Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch/Brake
- Reducer (Double Shaft)
- S-Type Reducer

Right Angle Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch /Brake
- Reduce (Double Shaft)
- S-Type Reducer

Hollow Shaft Solid Shaft Performance Table/Dimension
- Gearmotor with Brake
- Water-Resistant, Outdoor Gearmotor with Brake
- Reduce (Double Shaft)
- S-Type Reducer

Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
- Gearmotor with Brake
- Water-Resistant, Outdoor Gearmotor with Brake
- Reducer (Parallel Shaft)
- S-Type Reducer

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KOMPASS Gearbox

# Standard Model Lineup F Series FS Type (Hollow Shaft)

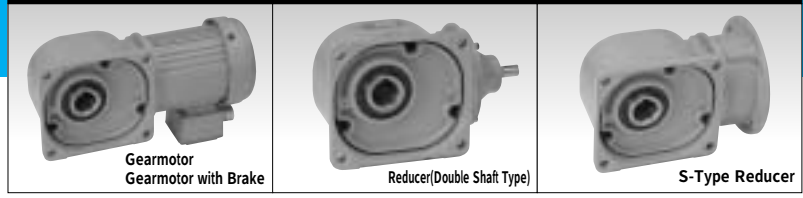
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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## FS Type (Hollow Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Gearmotor FSM / Gearmotor with Brake FSMN / Gearmotor equipped with brake manual release device FSJ (Note 1) (Optional Spec.) | 3-phase 50W | 20 | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 25 | 1/300 1/375 1/450 |
| | | 30 | 1/600 1/750 1/900 |
| | | 35 | 1/1200 1/1500 1/1800 |
| | 3-phase 0.1kW / 1-phase 100W (Note 2) | 25 | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 30 | 1/300 1/375 1/450 |
| | | 35 | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-phase 0.2kW / 1-phase 200W | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 35 | 1/300 1/375 1/450 |
| | | 45 | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-phase 0.4kW / 1-phase 400W | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 45 | 1/300 1/375 1/450 |
| | | 55 | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-phase 0.75kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 55 | 1/300 1/375 1/450 |
| | 3-phase 1.5kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-phase 2.2kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) Brake Manual Release type is not available in three phase 50W motor.
2) High reduction ratio (greater than 1/300) is not available in single phase 100V motor.
3) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.

## F Series FS Type




## FS (Hollow Shaft) Model Lineup

| Type | Equivalent of 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Reducer (Double Shaft Type) FS | 0.1kW | 25 | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.2kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.4kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| S-Type Reducer FSS | 0.75kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 1.5kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 2.2kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

# Standard Model Lineup F Series FF Type (Solid Shaft)

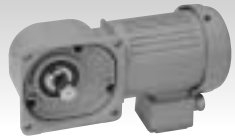
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

## FF Type(Solid Shaft)Model Lineup

| Type | 4P Motor Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Gearmotor FFM | 3-phase 50W | 18 | L R T | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-phase 0.1kW | 22 | L R T | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| Gearmotor with Brake FFMN | 3-phase 0.2kW | 28 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| Gearmotor equipped with brake manual release device FFJ (Note 1) (Optional Spec.) | 3-phase 0.4kW | 32 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-phase 0.75kW | 40 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |

Note 1) Manual release type is not available in three phase 50W motor.
2) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.

## F Series FF Type



Gearmotor
Gearmotor with Brake

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
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Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
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Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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Hollow Shaft • Solid Shaft

# Gearmotor
# Gearmotor with Brake

## Model • Type Designation
## Standard Model Lineup

GTR Gearmotor

F Series

| | | | |
|---|---|---|---|
| Motor Part | Number of phase | 3-phase | 1-phase |
| | Capacity | 50W, 0.1kW～2.2kW | 100W～400W |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz | 100V 50/60Hz |
| | Insulation Classification | Class B(Class E for 50W) | Class B(Class E for 100W) |
| | Starting Method | Direct start | Capacitor Start(100V:capacitor operation) |
| | Protective cooling Method | Totally Enclosed fan-cooled (Note) | Totally Enclosed fan-cooled |
| | Number of Pole | 4 | |
| | Rating | Continuous Rating | |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear | |
| | Lubrication | Grease Lubrication(Maintenance Free) | |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) | |
| | Output Shaft Material | S43C | |
| | Case Material | Aluminium die-cast(Frame No.55: Cast iron) | |
| Ambient Conditions | Ambient Temperature | −10°C～40°C | |
| | Ambient Humidity | 85% max.(without any dew condensation) | |
| | Altitude | 1,000m max. | |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. | |
| | Installation Location | Indoors | |
| Painting | Painting Method | Anion painting, Acrylic paint | |
| | Painting Color | Grey(Mansel code: 9B6/0.5) | |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) | |

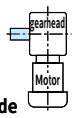
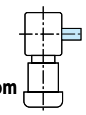
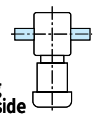
Note) The models shown below are of " Totally Enclosed ".
- ●Gearmotors of 50W without brake, with the reduction ratio of less than 1/240 and the one of more than 1/1200.
- ●Gearmotors of 0.1kW without brake (3-phase)

# Model and Type Designation F Series

## FS Type(Hollow Shaft)
## FF Type(Solid Shaft)

F Series gearmotors and Gearmotor with Brake are classified by codes as shown below. Specify these codes in your inquiry and order.

| Type | | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| F | S | MN | – | 35 | | 50 | T040 | W | A | | |
| F | F | M | – | 22 | T | 100 | T010 | A | | X | TZH3 |
| ① | ② | ③ | | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | |
|---|---|
| ①Series Name | F : F Series(Hollow Shaft•Solid Shaft) |
| ②Classification by Mount Form | S : Hollow Shaft Type<br>F : Solid Shaft Type |
| ③Classification by Motor Type | M : With Motor<br>MN : With Brake-motor<br>J : With Brake Manual Release Device(Option) |
| ④Frame Number and Diameter of Output Shaft | Output Shaft Diameter (Hollow Shaft type is the bore and Solid Shaft type is the outside diameter.) |
| ⑤Shaft Arrangement for Solid Shaft | L: Output shaft on the left viewing from Input shaft side  <br>R: Output shaft on the right viewing from Input shaft side <br>T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 1800 : 1／1800 |
| ⑦Motor Type and Capacity | T50 : 3-phase 50W<br>T010 : 3-phase 0.1 kW<br>T020 : 3-phase 0.2 kW<br>T040 : 3-phase 0.4 kW<br>075 : 3-phase 0.75kW<br>150 : 3-phase 1.5 kW<br>220 : 3-phase 2.2 kW<br>S100 : 1-phase 100W Only Hollow Shaft Type<br>200 : 1-phase 200W Only Hollow Shaft Type<br>400 : 1-phase 400W Only Hollow Shaft Type |
| ⑧⑨Option<br>Note 1: For the capacity of 50W～0.4kW, with "A" box is the standard for all voltage, so please indicate "A" at the end of motor capacity. Blank means without terminal box (fly lead). For rectifer insert type terminal box, please indicate "Z" at the end of the capacity. For the capacity 0.75kW～2.2kW are terminal box equipped and have no additional code, For rectifier built-in type, please refer to page E26.<br>Note 2: Standard 1-phase gearmotors are not equipped with terminal box. Terminal box should be ordered additionally. | Blank : Standard Voltage<br>3-phase: 200V／50Hz, 200V／60Hz, 220V／60Hz (Note 1)<br>1-phase: 100V／50Hz, 100V／60Hz<br>without terminal box (Note 2) |
| | W : High Voltage<br>3-phase: 380V／50Hz, 400V／50Hz, 400V／60Hz、440V／60Hz (Note 1)<br>1-phase: 200V／50Hz, 200V／60Hz(Custom design Specs.)<br>without terminal box (Note 2) |
| | A : Terminal box(50W～0.4kW standard specs.) (Note 1) |
| | Z : For 3-phase Brake Motor,Terminal Box with a built-in rectifier(option for 50W～0.4kW) (Note 1) |
| ⑩Auxiliary Code | Blank : Standard Specs.<br>X : Code to identify additional special specs. |
| ⑪Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Instruction for terminal box position.<br>Refer to the specification code list on page E37 for details. |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
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## Gearmotor•Gearmotor with Brake

FS Type



FF Type



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
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Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

# Standard Model Lineup F Series FS Type (Solid Shaft)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

## FS Type (Hollow Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Gearmotor FSM / Gearmotor with Brake FSMN / Gearmotor equipped with brake manual release device FSJ (Note 1) (Optional Spec.) | 3-phase 50W | 20 | 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | | 25 | 1/300, 1/375, 1/450 |
| | | 30 | 1/600, 1/750, 1/900 |
| | | 35 | 1/1200, 1/1500, 1/1800 |
| | 3-phase 0.1kW / 1-phase 100W (Note 2) | 25 | 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | | 30 | 1/300, 1/375, 1/450 |
| | | 35 | 1/600, 1/750, 1/900, 1/1200, 1/1500 |
| | 3-phase 0.2kW / 1-phase 200W | 30 | 1/5, 1/7.5, 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | | 35 | 1/300, 1/375, 1/450 |
| | | 45 | 1/600, 1/750, 1/900, 1/1200, 1/1500 |
| | 3-phase 0.4kW / 1-phase 400W | 35 | 1/5, 1/7.5, 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | | 45 | 1/300, 1/375, 1/450 |
| | | 55 | 1/600, 1/750, 1/900, 1/1200, 1/1500 |
| | 3-phase 0.75kW | 45 | 1/5, 1/7.5, 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | | 55 | 1/300, 1/375, 1/450 |
| | 3-phase 1.5kW | 55 | 1/5, 1/7.5, 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120, 1/160, 1/200, 1/240 |
| | 3-phase 2.2kW | 55 | 1/5, 1/7.5, 1/10, 1/12.5, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/120 |

Note 1) Brake Manual Release type is not available in three phase 50W motor.
2) High reduction ratio (greater than 1/300) is not available in single phase 100V motor.
3) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.

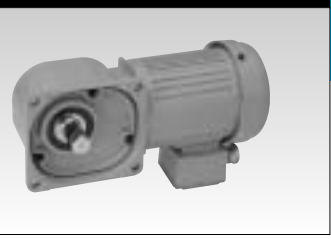
# F Series
# FF Type (Solid Shaft)

Gearmotor・Gearmotor with Brake

FS Type



FF Type



## FF Type (Solid Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Gearmotor FFM | 3-phase 50W | 18 | L R T | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-phase 0.1kW | 22 | L R T | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| Gearmotor with Brake FFMN | 3-phase 0.2kW | 28 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| Gearmotor equipped with brake manual release device FFJ (Note 1) (Optional Spec.) | 3-phase 0.4kW | 32 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 3-phase 0.75kW | 40 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |

Note 1) Brake Manual Release type is not available in three phase 50W motor.
2) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
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# Hollow Shaft

# Gearmotor
# Gearmotor with Brake

## Performance Table
## Dimension diagram

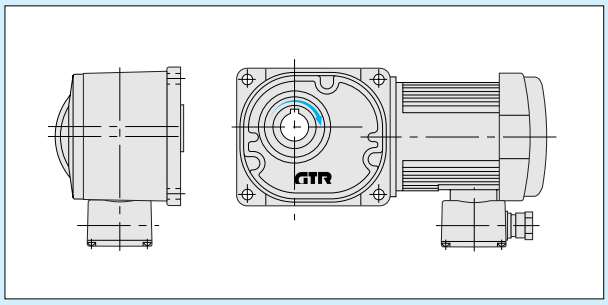
F Series
FS Type

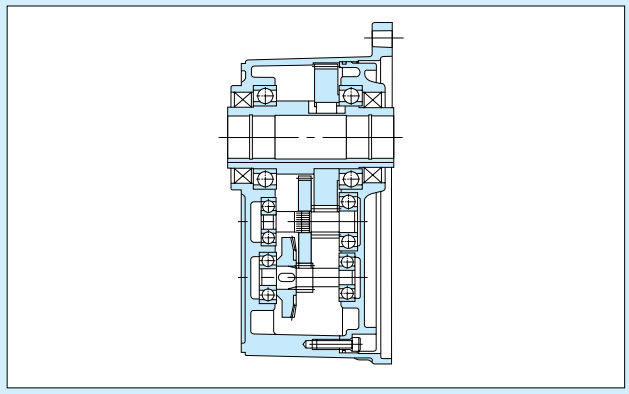
## 3-Phase

【Remarks】

- ●Values in the parenthesis in the performance table/dimension diagram are the values of gearmotor with brake.
- ●The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- ●The shade areas ▭ in the peformance table shows that in case gearmotors are wired according to the diagram shown on page E16, the shaft rotates clockwise when viewing from flange side. (Refer to the diagram shown below.)





# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 50W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

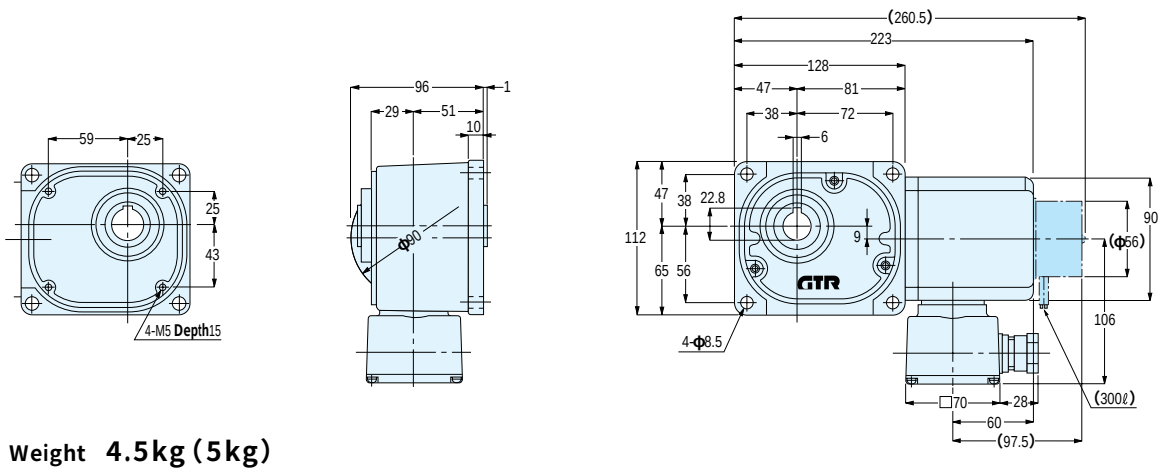
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Sped (rpm) | Insulation Classification | Protective Cooling system | Reduction Ratio |
|---|---|---|---|---|---|---|---|---|---|
| | 50W | T50 | 50/60/60 | 200/200/220 | 0.40/0.36/0.36 | 1350/1550/1600 | E | Totally Enclosed non-ventilated | 1/240以下 |
| | | T50 | 50/60/60 | 200/200/220 | 0.42/0.39/0.39 | 1350/1550/1550 | E | Totally Enclosed fan-cooled | 1/300～1/900 |
| | | T50 | 50/60/60 | 200/200/220 | 0.40/0.36/0.36 | 1350/1550/1600 | E | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) | 1/1200以上 |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 50W | 20 | 1/ 10 | 4/ 41 | 150 | 180 | 2.5 | 2.2 | 0.26 | 0.22 | 1180 | 120 | 294 | 30 | P.C16 Fig.C-1 4.5kg (5kg) |
| | | 1/ 12.5 | 100/ 1271 | 120 | 144 | 3.2 | 2.6 | 0.33 | 0.27 | 1270 | 130 | 324 | 33 | |
| | | 1/ 15 | 8/ 123 | 100 | 120 | 3.8 | 3.2 | 0.39 | 0.33 | 1320 | 135 | 333 | 34 | |
| | | 1/ 20 | 2/ 41 | 75 | 90 | 5.2 | 4.3 | 0.53 | 0.44 | 1470 | 150 | 373 | 38 | |
| | | 1/ 25 | 8/ 205 | 60 | 72 | 6.5 | 5.4 | 0.66 | 0.55 | 1570 | 160 | 392 | 40 | |
| | | 1/ 30 | 4/ 123 | 50 | 60 | 7.7 | 6.5 | 0.79 | 0.66 | 1670 | 170 | 422 | 43 | |
| | | 1/ 40 | 1/ 41 | 37.5 | 45 | 11 | 8.6 | 1.1 | 0.88 | 1810 | 185 | 451 | 46 | |
| | | 1/ 50 | 4/ 205 | 30 | 36 | 13 | 11 | 1.3 | 1.1 | 1860 | 190 | 471 | 48 | |
| | | 1/ 60 | 40/ 2419 | 25 | 30 | 16 | 13 | 1.6 | 1.3 | 1860 | 190 | 471 | 48 | |
| | | 1/ 80 | 1/ 82 | 18.8 | 22.5 | 20 | 17 | 2 | 1.7 | 1860 | 190 | 471 | 48 | |
| | | 1/ 100 | 2/ 205 | 15 | 18 | 25 | 21 | 2.5 | 2.1 | 1860 | 190 | 471 | 48 | |
| | | 1/ 120 | 1/ 123 | 12.5 | 15 | 29 | 25 | 3 | 2.5 | 1860 | 190 | 471 | 48 | |
| | | 1/ 160 | 1/ 164 | 9.4 | 11.3 | 39 | 32 | 4 | 3.3 | 1860 | 190 | 471 | 48 | |
| | | 1/ 200 | 1/ 205 | 7.5 | 9 | 49 | 41 | 5 | 4.2 | 1860 | 190 | 471 | 48 | |
| | | ＊1/ 240 | 10/ 2419 | 6.3 | 7.5 | 54 | 49 | 5.5 | 5 | 1860 | 190 | 471 | 48 | |
| | 25 | 1/ 300 | 1/ 300 | 5 | 6 | 66 | 55 | 6.7 | 5.6 | 2550 | 260 | 637 | 65 | P.C17 Fig.C-2 7kg (7.5kg) |
| | | 1/ 375 | 1/ 375 | 4 | 4.8 | 82 | 69 | 8.4 | 7 | 2550 | 260 | 637 | 65 | |
| | | 1/ 450 | 1/ 450 | 3.3 | 4 | 99 | 82 | 10.1 | 8.4 | 2550 | 260 | 637 | 65 | |
| | 30 | 1/ 600 | 1/ 600 | 2.5 | 3 | 124 | 104 | 12.7 | 10.6 | 3140 | 320 | 785 | 80 | P.C17 Fig.C-3 9kg (9.5kg) |
| | | 1/ 750 | 19/14100 | 2 | 2.4 | 155 | 129 | 15.8 | 13.2 | 3140 | 320 | 785 | 80 | |
| | | 1/ 900 | 1/ 900 | 1.7 | 2 | 186 | 155 | 19 | 15.8 | 3140 | 320 | 785 | 80 | |
| | 35 | 1/1200 | 1/ 1200 | 1.3 | 1.5 | 248 | 207 | 25.3 | 21.1 | 3630 | 370 | 912 | 93 | P.C17 Fig.C-4 12kg (12.5kg) |
| | | 1/1500 | 19/28200 | 1 | 1.2 | 311 | 259 | 31.7 | 26.4 | 3630 | 370 | 912 | 93 | |
| | | 1/1800 | 1/ 1800 | 0.8 | 1 | 372 | 311 | 38 | 31.7 | 3630 | 370 | 912 | 93 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

### Fig.C-1

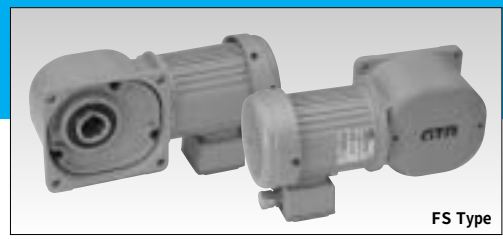
**FSM-20-10～240-T50A** CAD Data: FSM-20-T50A
**(FSMN-20-10～240-T50A)** (CAD Data: FSMN-20-T50A)




Round Weight 4.5kg (5kg)

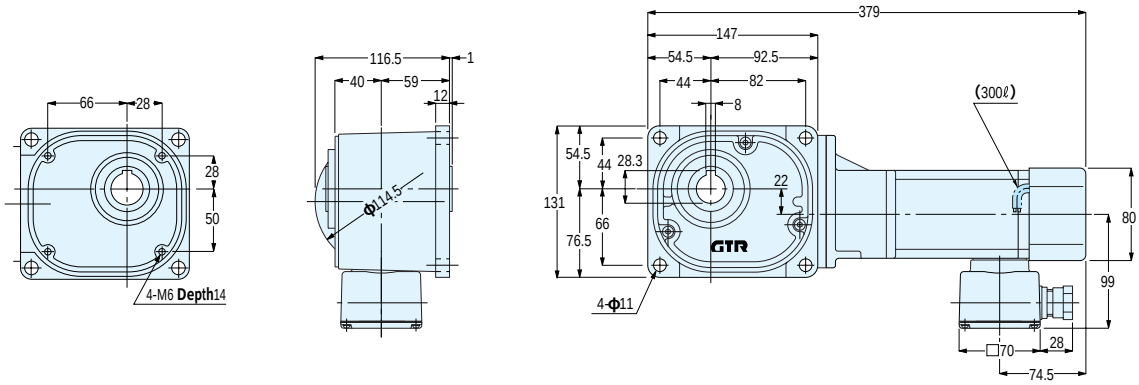
Model Code P.C10

Option P.E78～E85




## Fig.C-2

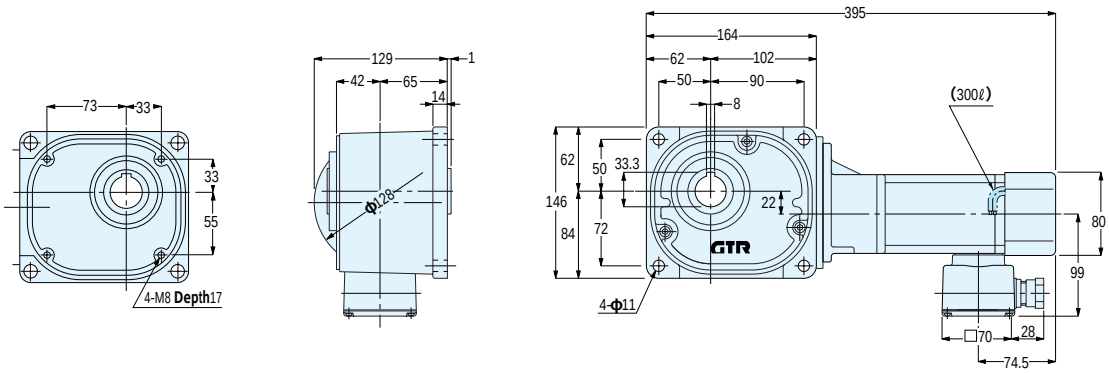
**FSM-25-300～450-T50A** CAD Data: FSM-25-T50A
**(FSMN-25-300～450-T50A)** (CAD Data: FSMN-25-T50A)




Round Weight 7kg (7.5kg)

## Fig.C-3

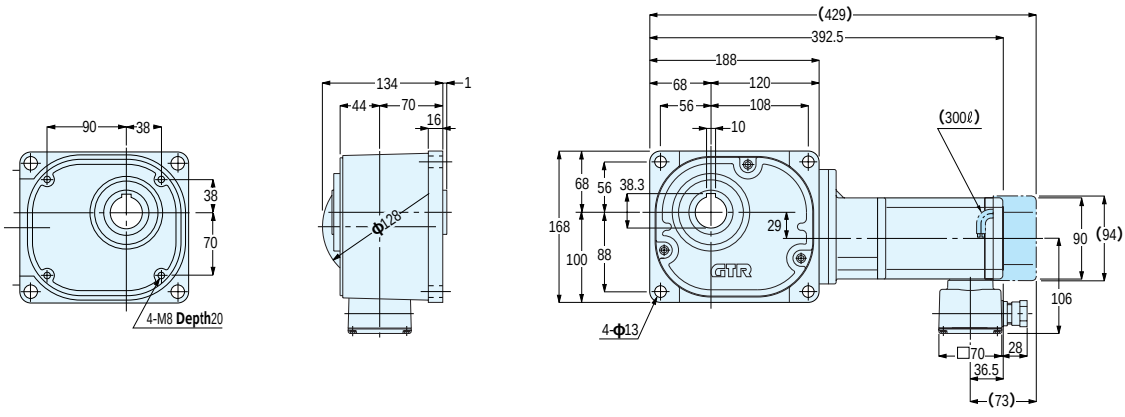
**FSM-30-600～900-T50A** CAD Data: FSM-30-T50A
**(FSMN-30-600～900-T50A)** (CAD Data: FSMN-30-T50A)




Round Weight 9kg (9.5kg)

## Fig.C-4

**FSM-35-1200～1800-T50A** CAD Data: FSM-35-T50A
**(FSMN-35-1200～1800-T50A)** (CAD Data: FSMN-35-T50A)



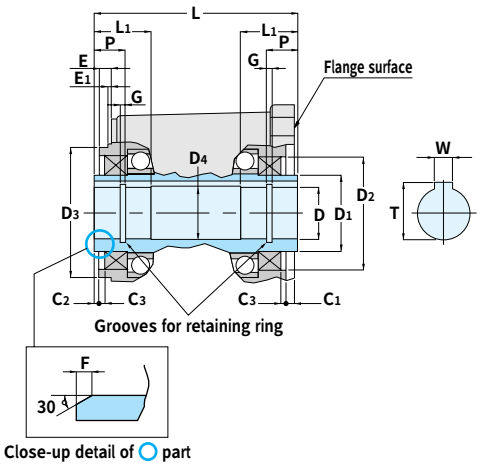

Round Weight 12kg (12.5kg)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 50W

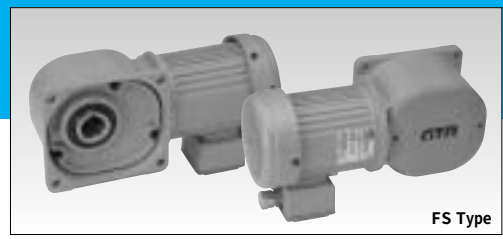
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

### Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | ϕ20 | ϕ29 | ϕ46 | ϕ53 | ϕ21 | 6 | 22.8 | 91 | 24 | 13 | 1 | 2 | 3 | 8 | 0 | 2 | 1.15 |
| 25 | ϕ25 | ϕ39 | ϕ58 | ϕ66 | ϕ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.



FS Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 0.1kW

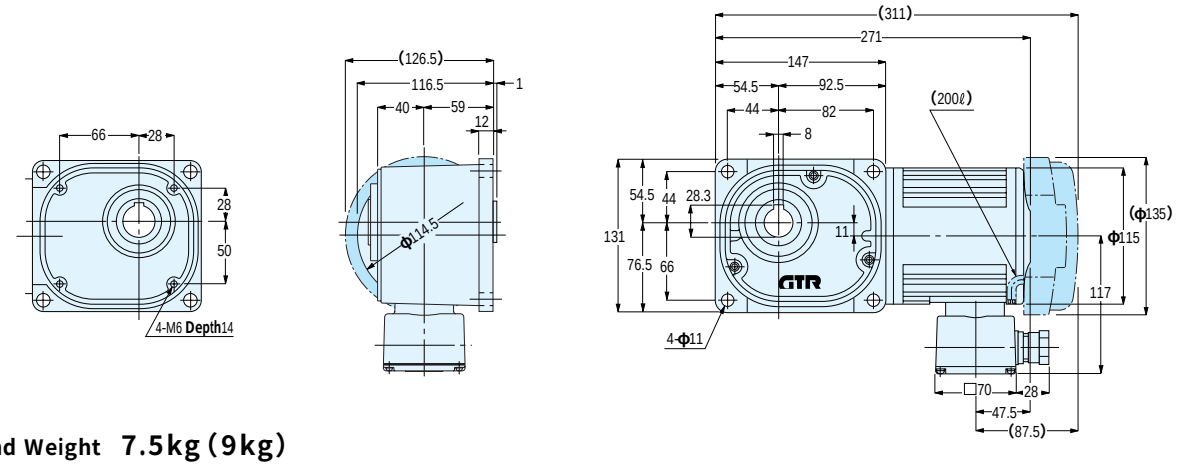
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 0.1kW | 25 | 1/ 10 | 1/ 10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1520 | 155 | 382 | 39 | P.C20 Fig.C-5 7.5kg (9kg) |
| | | 1/ 12.5 | 2/ 25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1620 | 165 | 402 | 41 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1720 | 175 | 431 | 44 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1860 | 190 | 471 | 48 | |
| | | 1/ 25 | 19/ 470 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 2010 | 205 | 500 | 51 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 2110 | 215 | 530 | 54 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 2300 | 235 | 579 | 59 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 2450 | 250 | 618 | 63 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 2550 | 260 | 637 | 65 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 39 | 32 | 4 | 3.3 | 2550 | 260 | 637 | 65 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 49 | 41 | 5 | 4.2 | 2550 | 260 | 637 | 65 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 59 | 49 | 6 | 5 | 2550 | 260 | 637 | 65 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 78 | 66 | 8 | 6.7 | 2550 | 260 | 637 | 65 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 98 | 81 | 10 | 8.3 | 2550 | 260 | 637 | 65 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 101 | 98 | 10.3 | 10 | 2550 | 260 | 637 | 65 | |
| | 30 | 1/ 300 | 7/ 2120 | 5 | 6 | 131 | 110 | 13.4 | 11.2 | 3140 | 320 | 785 | 80 | P.C21 Fig.C-6 11.5kg (13kg) |
| | | 1/ 375 | 133/49820 | 4 | 4.8 | 165 | 137 | 16.8 | 14 | 3140 | 320 | 785 | 80 | |
| | | 1/ 450 | 7/ 3180 | 3.3 | 4 | 198 | 165 | 20.2 | 16.8 | 3140 | 320 | 785 | 80 | |
| | 35 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 248 | 207 | 25.3 | 21.1 | 3630 | 370 | 912 | 93 | P.C21 Fig.C-7 13.5kg (15kg) |
| | | 1/ 750 | 133/99640 | 2 | 2.4 | 311 | 259 | 31.7 | 26.4 | 3630 | 370 | 912 | 93 | |
| | | 1/ 900 | 7/ 6360 | 1.7 | 2 | 372 | 311 | 38 | 31.7 | 3630 | 370 | 912 | 93 | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 372 | 372 | 38 | 38 | 3630 | 370 | 912 | 93 | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 372 | 372 | 38 | 38 | 3630 | 370 | 912 | 93 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

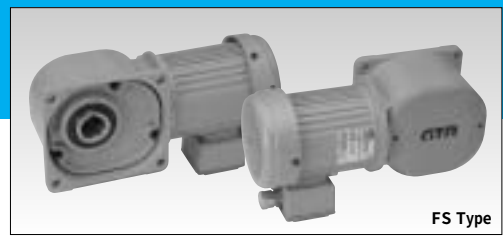
**Fig.C-5** FSM-25-10～240-T010A (FSMN-25-10～240-T010A) CAD Data: FSM-25-T010A (CAD Data: FSMN-25-T010A)




Round Weight 7.5kg (9kg)

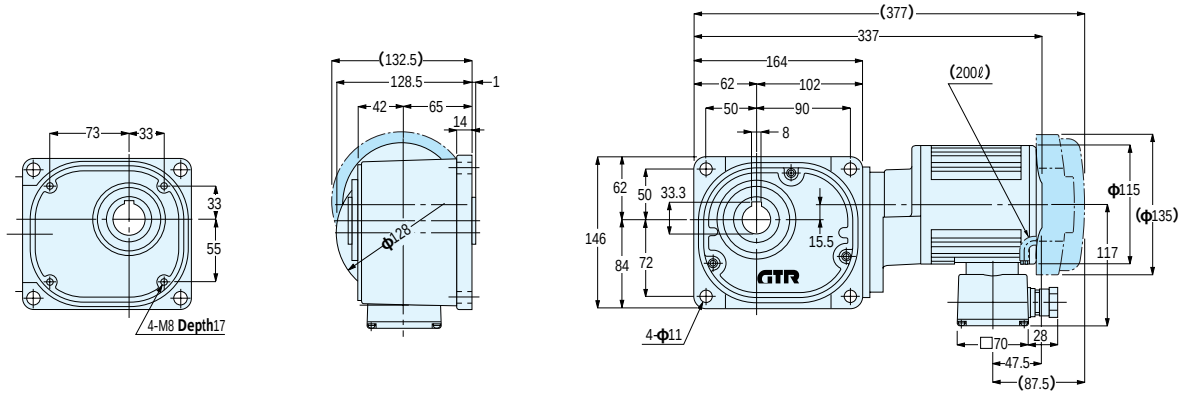
Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox




## Fig.C-6 FSM-30-300～450-T010A (FSMN-30-300～450-T010A)

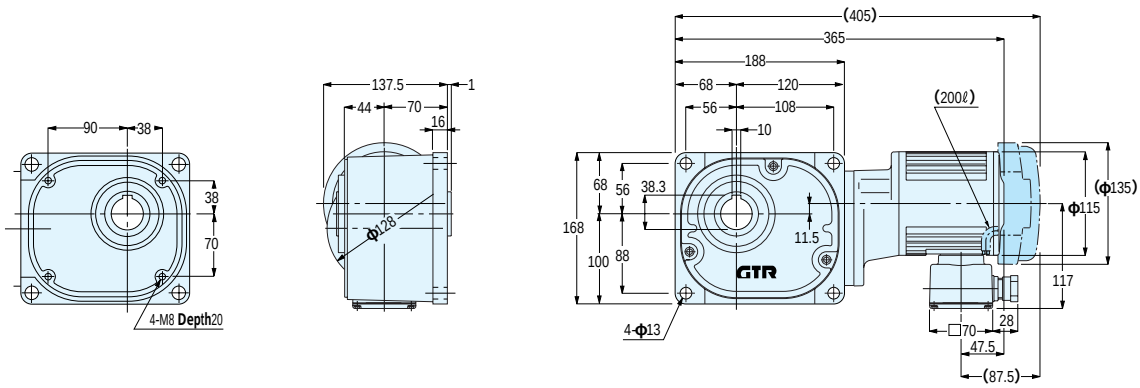
CAD Data: FSM-30-T010A (CAD Data: FSMN-30-T010A)




Round Weight 11.5kg (13kg)

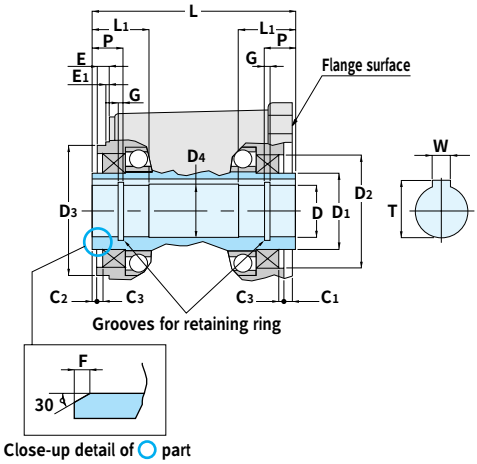
## Fig.C-7 FSM-35-600～1500-T010A (FSMN-35-600～1500-T010A)

CAD Data: FSM-35-T010A (CAD Data: FSMN-35-T010A)




Round Weight 13.5kg (15kg)

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | ϕ25 | ϕ39 | ϕ58 | ϕ66 | ϕ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 0.2kW

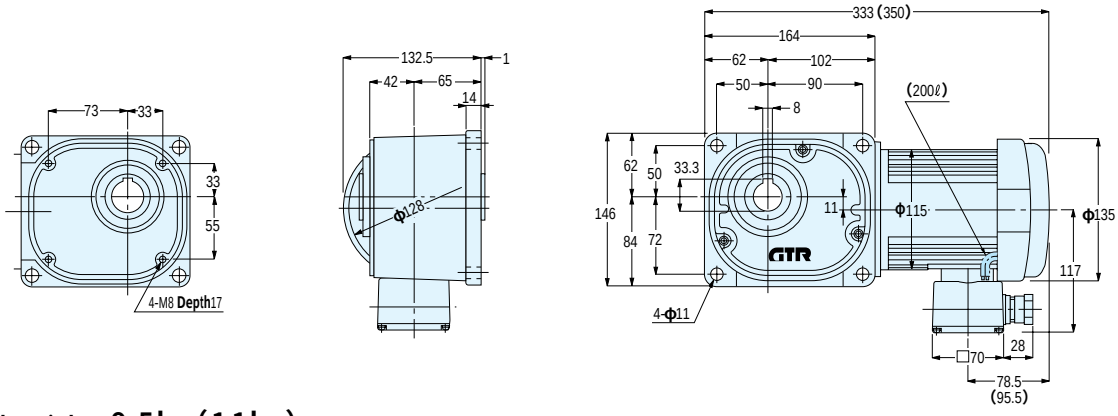
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 0.2kW | 30 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1520 | 155 | 382 | 39 | P.C22 Fig.C-8 9.5kg (11kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7 | 0.85 | 0.71 | 1760 | 180 | 441 | 45 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1910 | 195 | 481 | 49 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 2060 | 210 | 520 | 53 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 2160 | 220 | 539 | 55 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 2400 | 245 | 598 | 61 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2550 | 260 | 637 | 65 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2650 | 270 | 667 | 68 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2840 | 290 | 716 | 73 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2990 | 305 | 745 | 76 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 3090 | 315 | 775 | 79 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 84 | 71 | 8.6 | 7.2 | 3090 | 315 | 775 | 79 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 105 | 87 | 10.7 | 8.9 | 3140 | 320 | 785 | 80 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 126 | 105 | 12.9 | 10.7 | 3140 | 320 | 785 | 80 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 169 | 140 | 17.2 | 14.3 | 3140 | 320 | 785 | 80 | |
| | | ∗1/ 200 | 1/ 200 | 7.5 | 9 | 184 | 175 | 18.8 | 17.9 | 3140 | 320 | 785 | 80 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 184 | 184 | 18.8 | 18.8 | 3140 | 320 | 785 | 80 | |
| | 35 | 1/ 300 | 7/ 2120 | 5 | 6 | 282 | 235 | 28.8 | 24 | 3630 | 370 | 912 | 93 | P.C23 Fig.C-9 14.5kg (16kg) |
| | | 1/ 375 | 133/49820 | 4 | 4.8 | 353 | 294 | 36 | 30 | 3630 | 370 | 912 | 93 | |
| | | ∗1/ 450 | 7/ 3180 | 3.3 | 4 | 372 | 353 | 38 | 36 | 3630 | 370 | 912 | 93 | |
| | 45 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 534 | 446 | 54.5 | 45.5 | 5190 | 530 | 1275 | 130 | P.C23 Fig.C-10 20kg (21.5kg) |
| | | 1/ 750 | 133/99640 | 2 | 2.4 | 668 | 557 | 68.2 | 56.8 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/ 900 | 7/ 6360 | 1.7 | 2 | 713 | 668 | 72.8 | 68.2 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 713 | 713 | 72.8 | 72.8 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 713 | 713 | 72.8 | 72.8 | 5190 | 530 | 1275 | 130 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

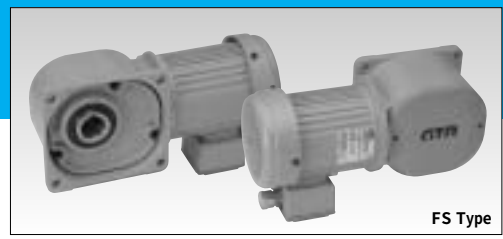
**Fig.C-8** FSM-30-5～240-T020A (FSMN-30-5～240-T020A) CAD Data: FSM-30-T020A (CAD Data: FSMN-30-T020A)




Round Weight 9.5kg (11kg)

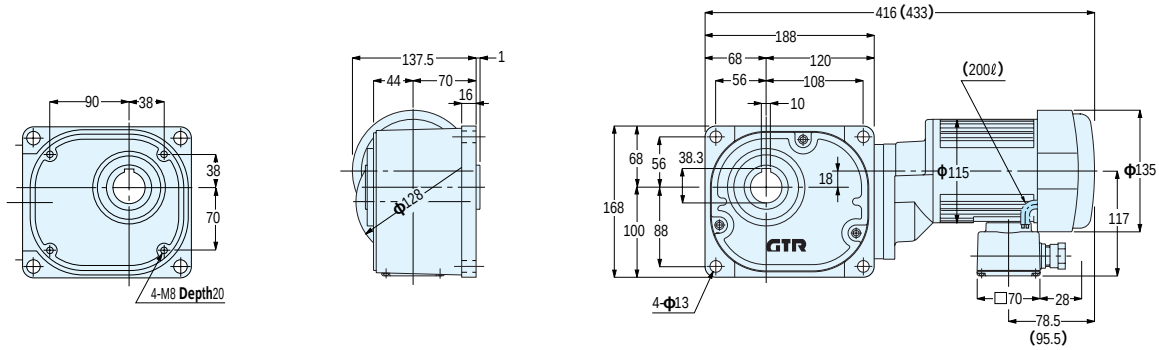
Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox




## Fig.C-9 FSM-35-300～450-T020A (FSMN-35-300～450-T020A)

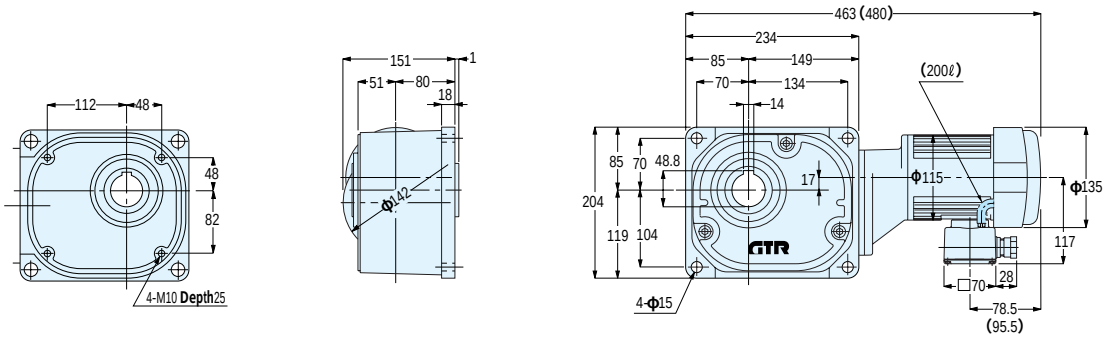
CAD Data: FSM-35-T020A (CAD Data: FSMN-35-T020A)




Round Weight 14.5kg (16kg)

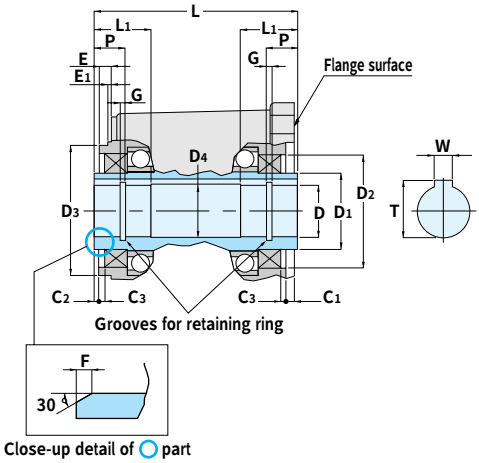
## Fig.C-10 FSM-45-600～1500-T020A (FSMN-45-600～1500-T020A)

CAD Data: FSM-45-T020A (CAD Data: FSMN-45-T020A)




Round Weight 20kg (21.5kg)

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 0.4kW

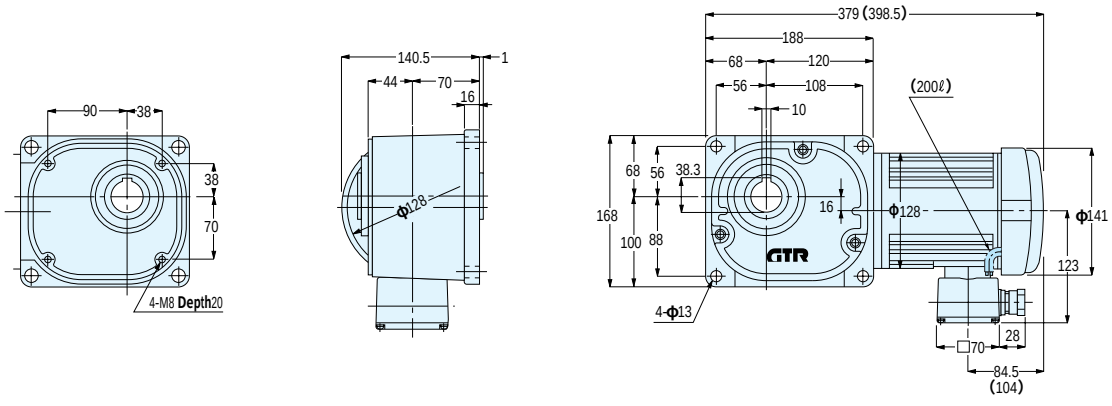
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 0.4kW | 35 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1960 | 200 | 490 | 50 | P.C24 Fig.C-11 14kg (16kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 2250 | 230 | 569 | 58 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 2450 | 250 | 618 | 63 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 2600 | 265 | 647 | 66 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2740 | 280 | 686 | 70 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2990 | 305 | 745 | 76 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 3190 | 325 | 794 | 81 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 3280 | 335 | 824 | 84 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 3480 | 355 | 873 | 89 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 3480 | 355 | 873 | 89 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3480 | 355 | 873 | 89 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 169 | 140 | 17.2 | 14.3 | 3480 | 355 | 873 | 89 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 211 | 175 | 21.5 | 17.9 | 3530 | 360 | 883 | 90 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 253 | 211 | 25.8 | 21.5 | 3530 | 360 | 883 | 90 | |
| | | ＊1/ 160 | 1/ 160 | 9.4 | 11.3 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | | ＊1/ 200 | 1/ 200 | 7.5 | 9 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | 45 | 1/ 300 | 7/ 2080 | 5 | 6 | 565 | 471 | 57.7 | 48.1 | 5190 | 530 | 1275 | 130 | P.C25 Fig.C-12 22.5k (24kg) |
| | | 1/ 375 | 133/48880 | 4 | 4.8 | 707 | 589 | 72.1 | 60.1 | 5190 | 530 | 1275 | 130 | |
| | | ＊1/ 450 | 7/ 3120 | 3.3 | 4 | 713 | 707 | 72.8 | 72.1 | 5190 | 530 | 1275 | 130 | |
| | 55 | ＊1/ 600 | 49/28600 | 2.5 | 3 | 1030 | 891 | 105 | 90.9 | 9800 | 1000 | 2452 | 250 | P.C25 Fig.C-13 60.5kg (62kg) |
| | | ＊1/ 750 | 11/ 8320 | 2 | 2.4 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ＊1/ 900 | 7/ 6136 | 1.7 | 2 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ＊1/1200 | 49/57200 | 1.3 | 1.5 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ＊1/1500 | 11/16640 | 1 | 1.2 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

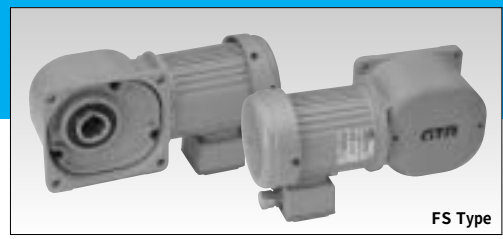
**Fig.C-11** FSM-35-5～240-T040A (FSMN-35-5～240-T040A) CAD Data: FSM-35-T040A (CAD Data: FSMN-35-T040A)




Round Weight 14kg (16kg)

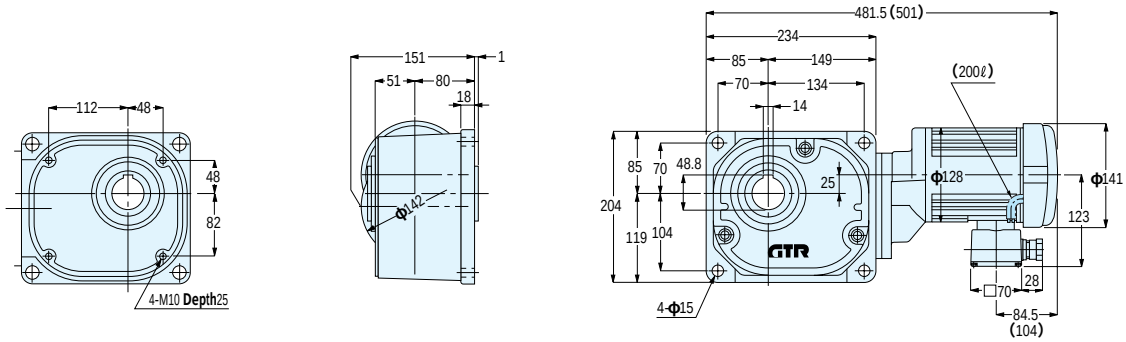
Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox




## Fig.C-12 FSM-45-300～450-T040A (FSMN-45-300～450-T040A)

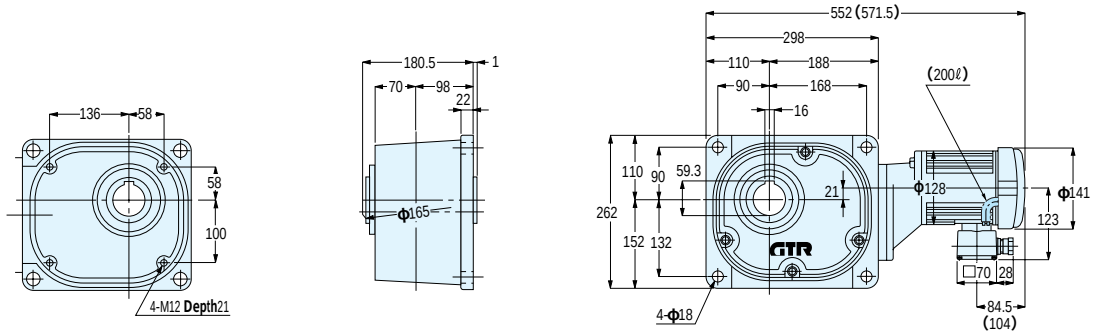
CAD Data: FSM-45-T040A (CAD Data: FSMN-45-T040A)




Round Weight 22.5kg (24kg)

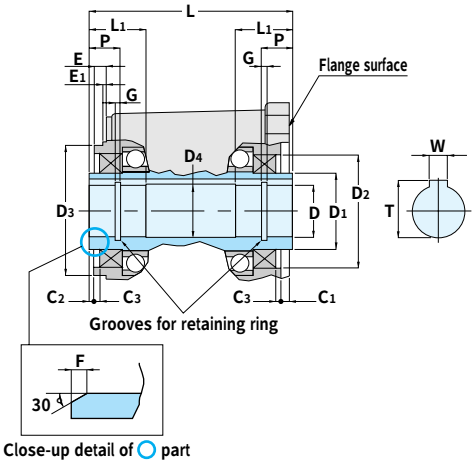
## Fig.C-13 FSM-55-600～1500-T040A (FSMN-55-600～1500-T040A)

CAD Data: FSM-55-T040A (CAD Data: FSMN-55-T040A)




Round Weight 60.5kg (62kg)

## Detailed dimension diagram for FS-Type output shaft




Close-up detail of ○ part

| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 0.75kW

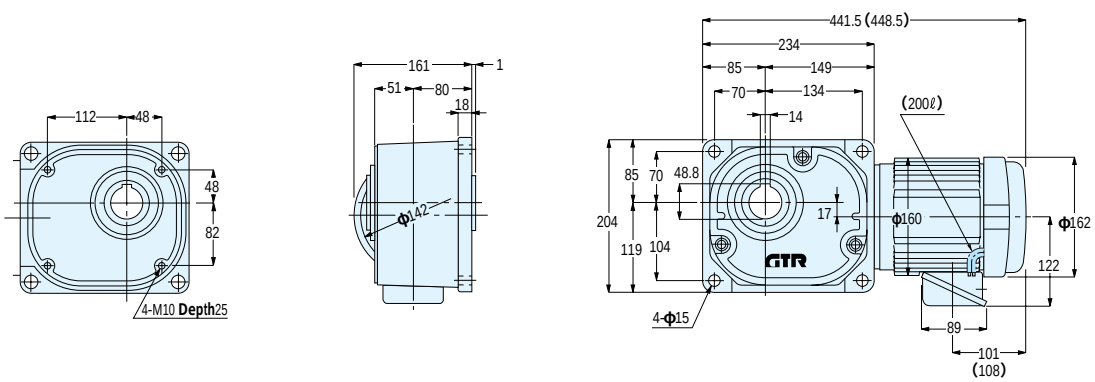
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 0.75kW | 45 | 1/ 5 | 1/ 5 | 300 | 360 | 21 | 18 | 2.1 | 1.8 | 2940 | 300 | 735 | 75 | P.C26 C-14 24kg (27kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 31 | 25 | 3.2 | 2.6 | 3330 | 340 | 834 | 85 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 41 | 34 | 4.2 | 3.5 | 3630 | 370 | 912 | 93 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 52 | 43 | 5.3 | 4.4 | 3920 | 400 | 980 | 100 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 63 | 52 | 6.4 | 5.3 | 4070 | 415 | 1030 | 105 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 83 | 70 | 8.5 | 7.1 | 4460 | 455 | 1079 | 110 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 104 | 86 | 10.6 | 8.8 | 4700 | 480 | 1177 | 120 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 124 | 104 | 12.7 | 10.6 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 166 | 138 | 16.9 | 14.1 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 208 | 173 | 21.2 | 17.7 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 316 | 263 | 32.2 | 26.8 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 100 | 19/1880 | 15 | 18 | 395 | 328 | 40.3 | 33.5 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 473 | 395 | 48.3 | 40.3 | 4750 | 485 | 1177 | 120 | |
| | | ∗1/ 160 | 1/ 160 | 9.4 | 11.3 | 554 | 526 | 56.5 | 53.7 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/ 200 | 1/ 200 | 7.5 | 9 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | 1275 | 130 | |
| | 55 | ∗1/ 300 | 7/2120 | 5 | 6 | 1030 | 883 | 105 | 90.1 | 9800 | 1000 | 2452 | 250 | P.C27 Fig.C-15 65kg (67.5kg) |
| | | ∗1/ 375 | 1/ 371 | 4 | 4.8 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ∗1/ 450 | 7/3180 | 3.3 | 4 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

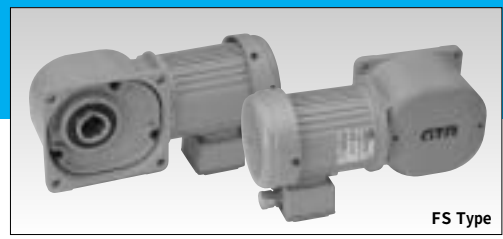
**Fig.C-14** FSM-45-5〜240-075 CAD Data: FSM-45-075
(FSMN-45-5〜240-075) (CAD Data: FSMN-45-075)




Round Weight 24kg (27kg)

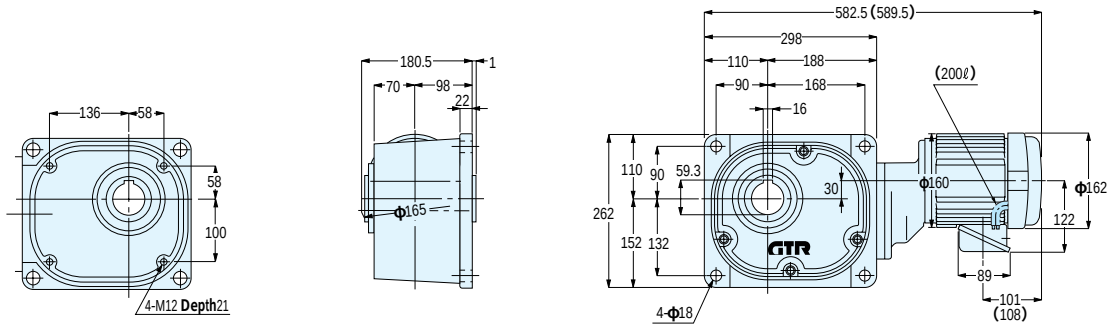
Model Code P.C10
Multipurpose Inverter P.E86〜E92
Option P.E78〜E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox



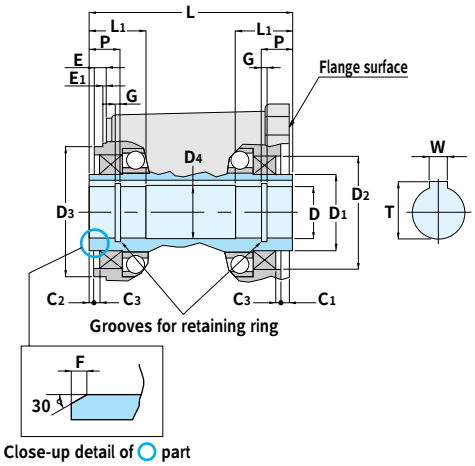

## Fig.C-15 FSM-55-300〜450-075 (FSMN-55-300〜450-075)

CAD Data: FSM-55-075 (CAD Data: FSMN-55-075)




Round Weight 65kg (67.5kg)

## Detailed dimension diagram for FS-Type output shaft




Close-up detail of ○ part

| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 3-Phase 1.5kW



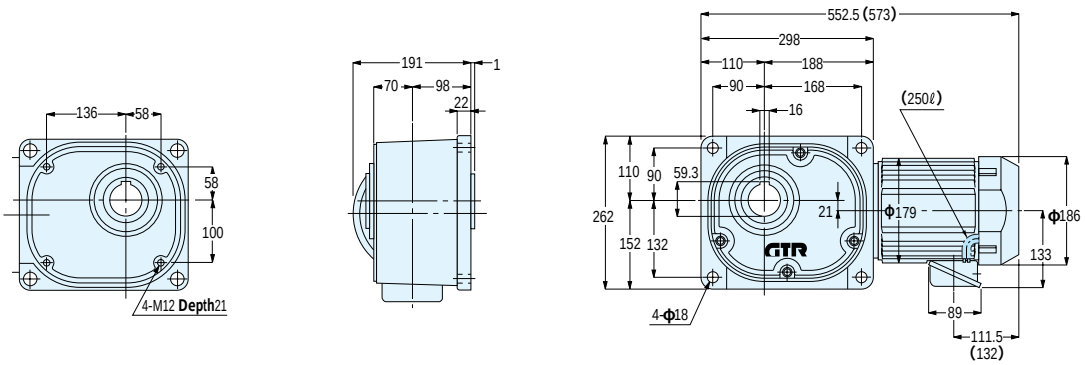
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 1.5kW | 55 | 1/ 5 | 1/ 5 | 300 | 360 | 41 | 34 | 4.2 | 3.5 | 4700 | 480 | 1177 | 120 | P.C28 Fig.C-16 71kg (74kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 63 | 52 | 6.4 | 5.3 | 5340 | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 83 | 70 | 8.5 | 7.1 | 5780 | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 120 | 144 | 104 | 86 | 10.6 | 8.8 | 6130 | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 124 | 104 | 12.7 | 10.6 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 75 | 90 | 166 | 138 | 16.9 | 14.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 60 | 72 | 208 | 173 | 21.2 | 17.7 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 50 | 60 | 249 | 208 | 25.4 | 21.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 332 | 276 | 33.9 | 28.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 30 | 36 | 416 | 345 | 42.4 | 35.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 498 | 416 | 50.8 | 42.4 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 18.8 | 22.5 | 631 | 526 | 64.4 | 53.7 | 6420 | 655 | 1618 | 165 | |
| | | 1/ 100 | 11/1120 | 15 | 18 | 789 | 658 | 80.5 | 67.1 | 6420 | 655 | 1618 | 165 | |
| | | 1/ 120 | 1/ 118 | 12.5 | 15 | 947 | 789 | 96.6 | 80.5 | 7500 | 765 | 1863 | 190 | |
| | | ＊1/ 160 | 7/1100 | 9.4 | 11.3 | 1030 | 1030 | 105 | 105 | 8330 | 850 | 2059 | 210 | |
| | | ＊1/ 200 | 11/2240 | 7.5 | 9 | 1030 | 1030 | 105 | 105 | 9020 | 920 | 2256 | 230 | |
| | | ＊1/ 240 | 1/ 236 | 6.3 | 7.5 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-16** FSM-55-5〜240-150 CAD Data: FSM-55-150
(FSMN-55-5〜240-150) (CAD Data: FSMN-55-150)

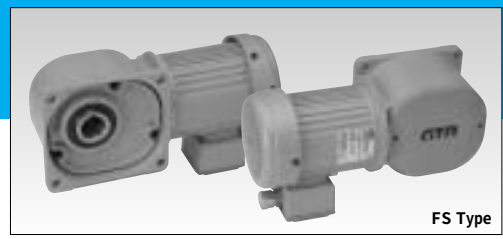



Round Weight 71kg (74kg)

Please refer to page C29 for the detail spec of output shaft.

Model Code P.C10
Multipurpose Inverter P.E86〜E92
Option P.E78〜E93

# F Series 3-Phase 2.2kW


FS Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

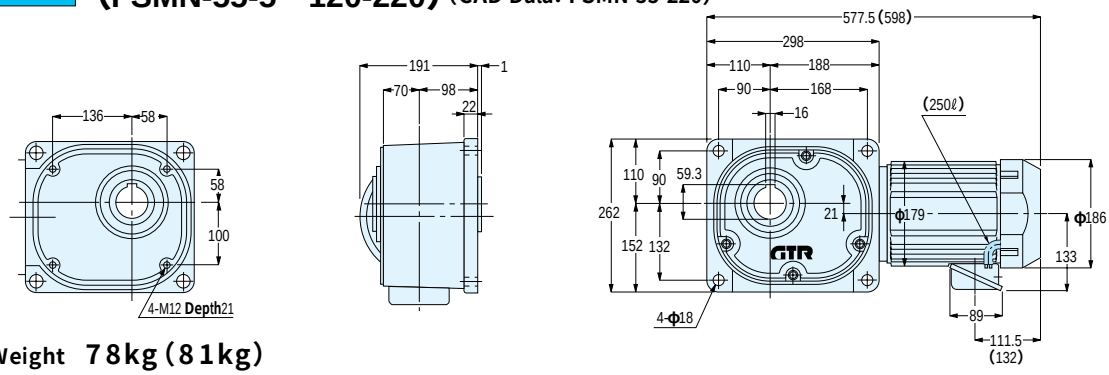
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 2.2kW | 220 | 50/60/60 | 200/200/220 | 9.0/8.6/8.0 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 3-phase 2.2kW | 55 | 1/ 5 | 1/ 5 | 300 | 360 | 61 | 51 | 6.2 | 5.2 | 4700 | 480 | 1177 | 120 | P.C29 Fig.C-17 78kg (81kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 91 | 76 | 9.3 | 7.8 | 5340 | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 122 | 102 | 12.4 | 10.4 | 5780 | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 120 | 144 | 152 | 126 | 15.5 | 12.9 | 6130 | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 182 | 152 | 18.6 | 15.5 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 75 | 90 | 244 | 203 | 24.9 | 20.7 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 60 | 72 | 305 | 254 | 31.1 | 25.9 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 50 | 60 | 366 | 305 | 37.3 | 31.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 487 | 406 | 49.7 | 41.4 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 30 | 36 | 609 | 508 | 62.1 | 51.8 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 731 | 609 | 74.6 | 62.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 18.8 | 22.5 | 926 | 771 | 94.5 | 78.7 | 6420 | 655 | 1618 | 165 | |
| | | ＊1/ 100 | 11/1120 | 15 | 18 | 1030 | 964 | 105 | 98.4 | 6420 | 655 | 1618 | 165 | |
| | | ＊1/ 120 | 1/ 118 | 12.5 | 15 | 1030 | 1030 | 105 | 105 | 7500 | 765 | 1863 | 190 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

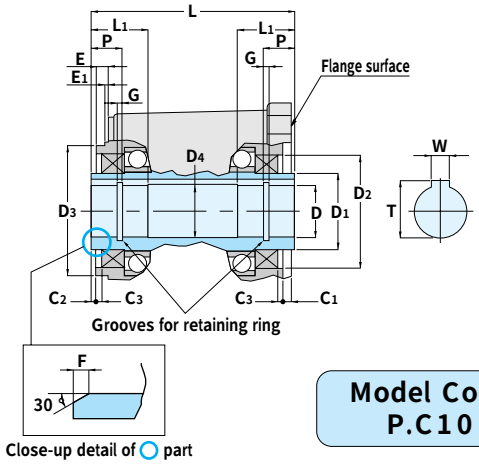
## Fig.C-17

**FSM-55-5～120-220 (FSMN-55-5～120-220)** CAD Data: FSM-55-220 (CAD Data: FSMN-55-220)




Round Weight 78kg (81kg)

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E93

GTR Gearmotor

# Hollow Shaft

# Gearmotor
# Gearmotor with Brake

## Performance Table
## Dimension diagram

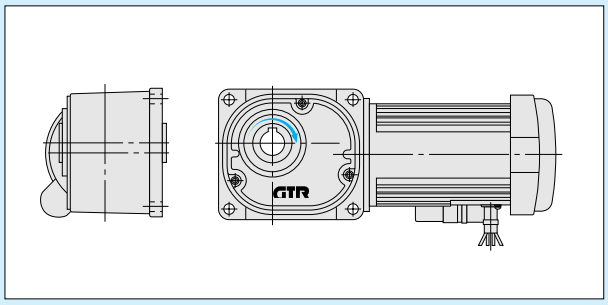
F Series
FS Type

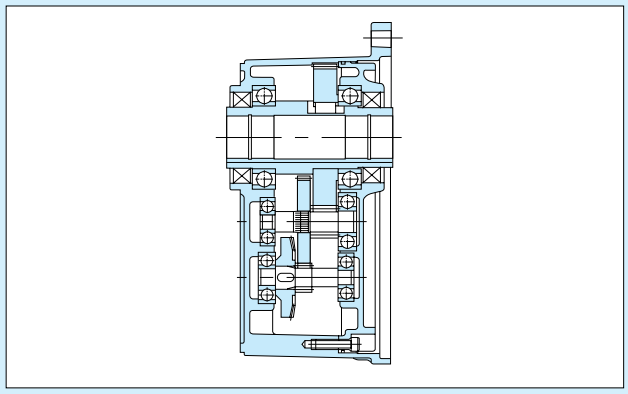
## 1-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shade areas ▭ in the peformance table shows that in case gearmotors are wired according to the diagram shown on page E16, the shaft rotates clockwise when viewing from flange side. (Refer to the diagram shown below.)
- The starting torque of the single-phase 100W motor will be 60～80%, since it employs capacitor-operate motor.





# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 1-phase 100W

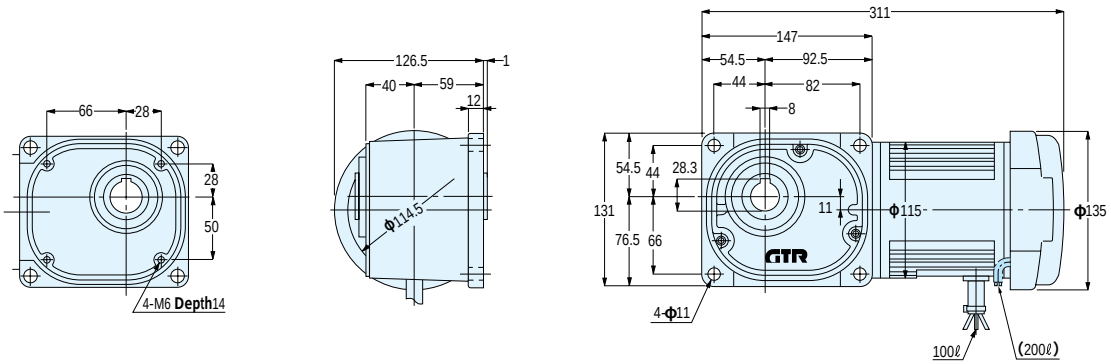
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 100W | S100 | 50/60 | 100/100 | 1.7/1.9 | 1400/1700 | E | Totally Enclosed fan-cooled | Capacitor Start |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 1-phase 100W | 25 | 1/ 10 | 1/ 10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1520 | 155 | 382 | 39 | P.C32 Fig.C-18 8kg (9kg) |
| | | 1/ 12.5 | 2/ 25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1620 | 165 | 402 | 41 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1720 | 175 | 431 | 44 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1860 | 190 | 471 | 48 | |
| | | 1/ 25 | 19/ 470 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 2010 | 205 | 500 | 51 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 2110 | 215 | 530 | 54 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 2300 | 235 | 579 | 59 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 2450 | 250 | 618 | 63 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 2550 | 260 | 637 | 65 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 39 | 32 | 4 | 3.3 | 2550 | 260 | 637 | 65 | |
| | | 1/ 100 | 19/1880 | 15 | 18 | 49 | 41 | 5 | 4.2 | 2550 | 260 | 637 | 65 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 59 | 49 | 6 | 5 | 2550 | 260 | 637 | 65 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 78 | 66 | 8 | 6.7 | 2550 | 260 | 637 | 65 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 98 | 81 | 10 | 8.3 | 2550 | 260 | 637 | 65 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 101 | 98 | 10.3 | 10 | 2550 | 260 | 637 | 65 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

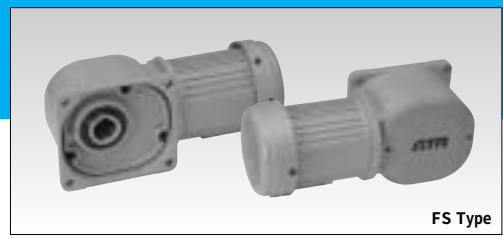
**Fig.C-18** FSM-25-10～240-S100 (FSMN-25-10～240-S100) CAD Data: FSM-25-S100 (CAD Data: FSMN-25-S100)



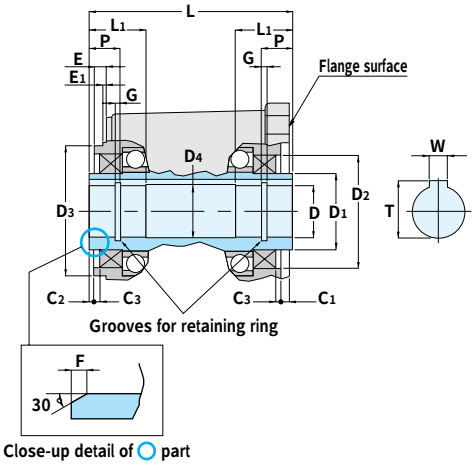

Round Weight 8kg (9kg)

Model Code P.C10
Option P.E78～E85

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


FS Type

## Detailed dimension diagram for FS-Type output shaft



Close-up detail of ○ part

| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | ϕ25 | ϕ39 | ϕ58 | ϕ66 | ϕ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 1-phase 200W

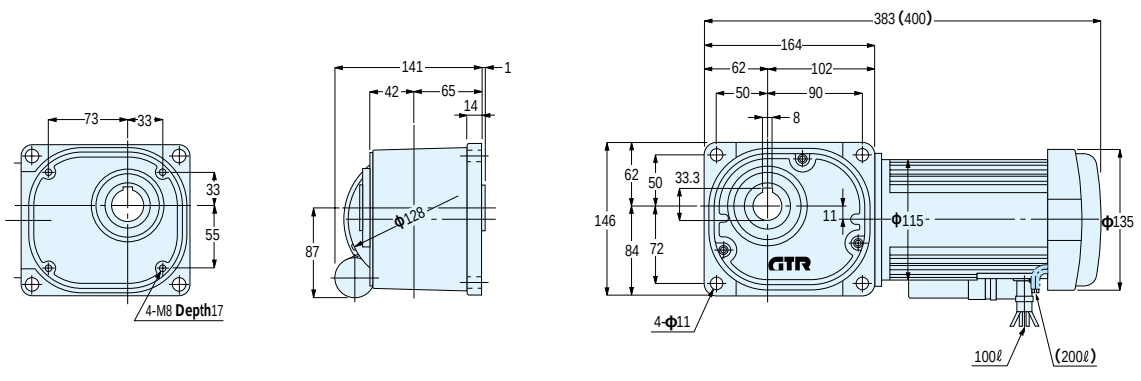
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 200W | 200 | 50/60 | 100/100 | 5.1/4.5 | 1420/1700 | B | Totally Enclosed fan-cooled | Capacitor Start |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSM (FSMN) |
| 1-phase 200W | 30 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1520 | 155 | 382 | 39 | P.C34 Fig.C-19 12.5kg (14kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7 | 0.85 | 0.71 | 1760 | 180 | 441 | 45 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1910 | 195 | 481 | 49 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 2060 | 210 | 520 | 53 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 2160 | 220 | 539 | 55 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 2400 | 245 | 598 | 61 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2550 | 260 | 637 | 65 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2650 | 270 | 667 | 68 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2840 | 290 | 716 | 73 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2990 | 305 | 745 | 76 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 3090 | 315 | 775 | 79 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 84 | 71 | 8.6 | 7.2 | 3090 | 315 | 775 | 79 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 105 | 87 | 10.7 | 8.9 | 3140 | 320 | 785 | 80 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 126 | 105 | 12.9 | 10.7 | 3140 | 320 | 785 | 80 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 169 | 140 | 17.2 | 14.3 | 3140 | 320 | 785 | 80 | |
| | | ∗1/ 200 | 1/ 200 | 7.5 | 9 | 184 | 175 | 18.8 | 17.9 | 3140 | 320 | 785 | 80 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 184 | 184 | 18.8 | 18.8 | 3140 | 320 | 785 | 80 | |
| | 35 | 1/ 300 | 7/ 2120 | 5 | 6 | 282 | 235 | 28.8 | 24 | 3630 | 370 | 912 | 93 | P.C35 Fig.C-20 16.5kg (18kg) |
| | | 1/ 375 | 133/49820 | 4 | 4.8 | 353 | 294 | 36 | 30 | 3630 | 370 | 912 | 93 | |
| | | ∗1/ 450 | 7/ 3180 | 3.3 | 4 | 372 | 353 | 38 | 36 | 3630 | 370 | 912 | 93 | |
| | 45 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 534 | 446 | 54.5 | 45.5 | 5190 | 530 | 1275 | 130 | P.C35 Fig.C-21 22kg (23.5kg) |
| | | 1/ 750 | 133/99640 | 2 | 2.4 | 668 | 557 | 68.2 | 56.8 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/ 900 | 7/ 6360 | 1.7 | 2 | 713 | 668 | 72.8 | 68.2 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/1200 | 7/ 8480 | 1.3 | 1.5 | 713 | 713 | 72.8 | 72.8 | 5190 | 530 | 1275 | 130 | |
| | | ∗1/1500 | 7/10600 | 1 | 1.2 | 713 | 713 | 72.8 | 72.8 | 5190 | 530 | 1275 | 130 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

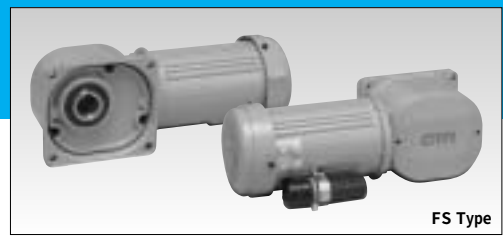
**Fig.C-19** FSM-30-5～240-200 (FSMN-30-5～240-200) CAD Data: FSM-30-200 (CAD Data: FSMN-30-200)




Round Weight 12.5kg (14kg)

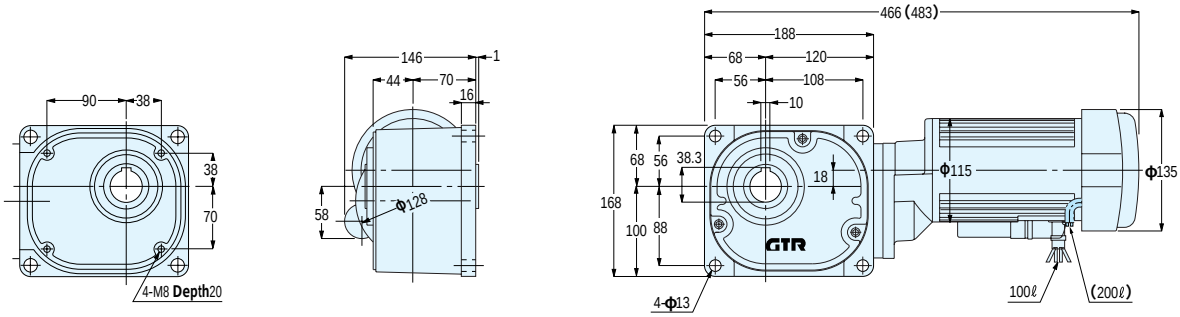
Model Code P.C10 | Option P.E78～E85

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox




## Fig.C-20 FSM-35-300～450-200 (FSMN-35-300～450-200)

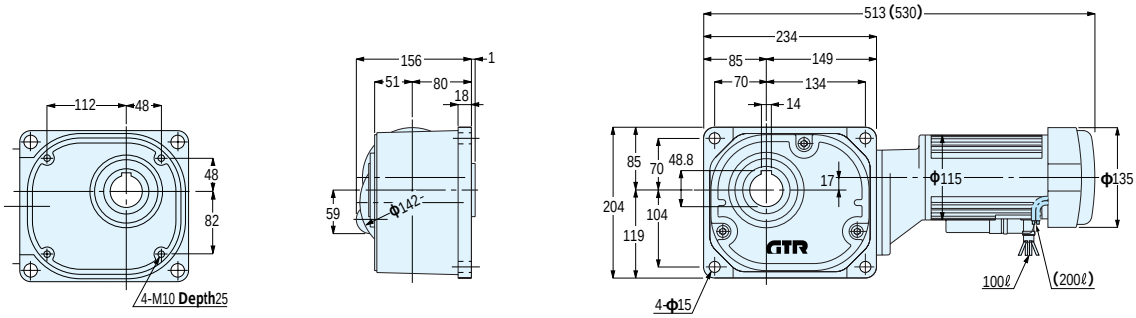
CAD Data: FSM-35-200 (CAD Data: FSMN-35-200)




Round Weight 16.5kg (18kg)

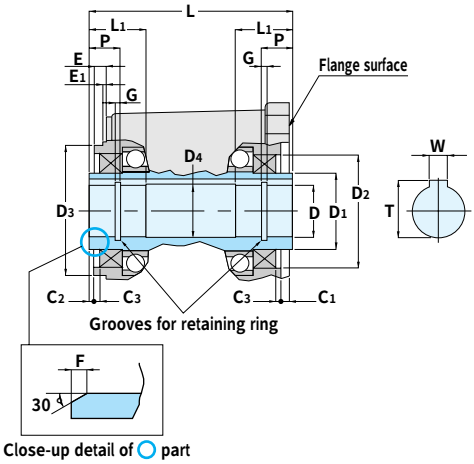
## Fig.C-21 FSM-45-600～1500-200 (FSMN-45-600～1500-200)

CAD Data: FSM-45-200 (CAD Data: FSMN-45-200)




Round Weight 22kg (23.5kg)

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FS Type(Hollow Shaft)
## F Series 1-phase 400W

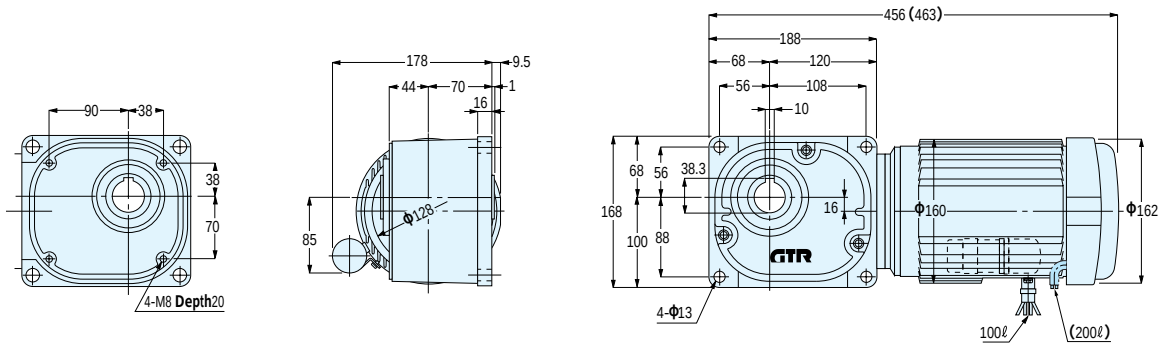
**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system | Start System |
|---|---|---|---|---|---|---|---|---|---|
| | 400W | 400 | 50/60 | 100/100 | 8.7/7.9 | 1440/1730 | B | Totally Enclosed fan-cooled | Capacitor Start |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) FSM (FSMN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | |
| 1-phase 400W | 35 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1960 | 200 | 490 | 50 | P.C36 Fig.C-22 20kg (22.5kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 2250 | 230 | 569 | 58 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 2450 | 250 | 618 | 63 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 2600 | 265 | 647 | 66 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2740 | 280 | 686 | 70 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2990 | 305 | 745 | 76 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 3190 | 325 | 794 | 81 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 3280 | 335 | 824 | 84 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 3480 | 355 | 873 | 89 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 3480 | 355 | 873 | 89 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3480 | 355 | 873 | 89 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 169 | 140 | 17.2 | 14.3 | 3480 | 355 | 873 | 89 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 211 | 175 | 21.5 | 17.9 | 3530 | 360 | 883 | 90 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 253 | 211 | 25.8 | 21.5 | 3530 | 360 | 883 | 90 | |
| | | ＊1/ 160 | 1/ 160 | 9.4 | 11.3 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | | ＊1/ 200 | 1/ 200 | 7.5 | 9 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | 45 | 1/ 300 | 7/ 2080 | 5 | 6 | 565 | 471 | 57.7 | 48.1 | 5190 | 530 | 1275 | 130 | P.C37 Fig.C-23 28kg (30.5kg) |
| | | 1/ 375 | 133/48880 | 4 | 4.8 | 707 | 589 | 72.1 | 60.1 | 5190 | 530 | 1275 | 130 | |
| | | ＊1/ 450 | 7/ 3120 | 3.3 | 4 | 713 | 707 | 72.8 | 72.1 | 5190 | 530 | 1275 | 130 | |
| | 55 | ＊1/ 600 | 49/28600 | 2.5 | 3 | 1030 | 891 | 105 | 90.9 | 9800 | 1000 | 2452 | 250 | P.C37 Fig.C-24 66kg (68.5kg) |
| | | ＊1/ 750 | 11/ 8320 | 2 | 2.4 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ＊1/ 900 | 7/ 6136 | 1.7 | 2 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ＊1/1200 | 49/57200 | 1.3 | 1.5 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |
| | | ＊1/1500 | 11/16640 | 1 | 1.2 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |

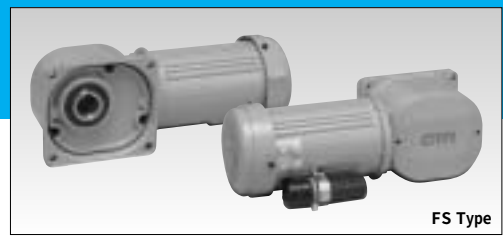
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-22** FSM-35-5～240-400 (FSMN-35-5～240-400) CAD Data: FSM-35-400 (CAD Data: FSMN-35-400)



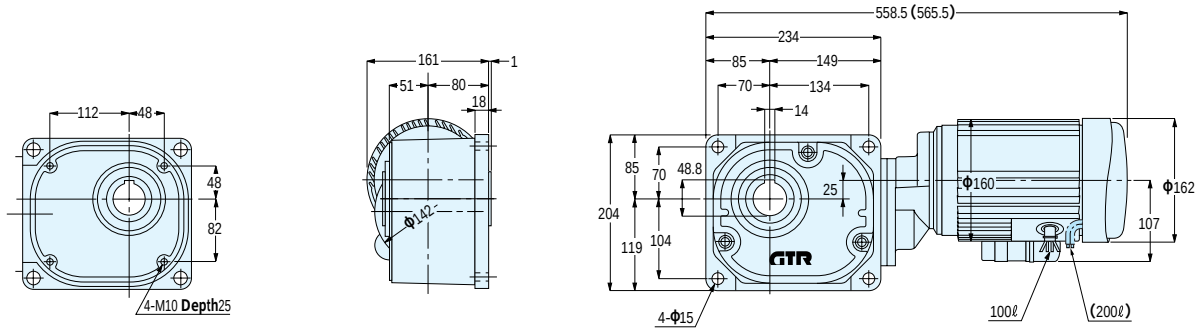

Round Weight 20kg (22.5kg)

Model Code P.C10 | Option P.E78～E85




## Fig.C-23 FSM-45-300～450-400 (FSMN-45-300～450-400)

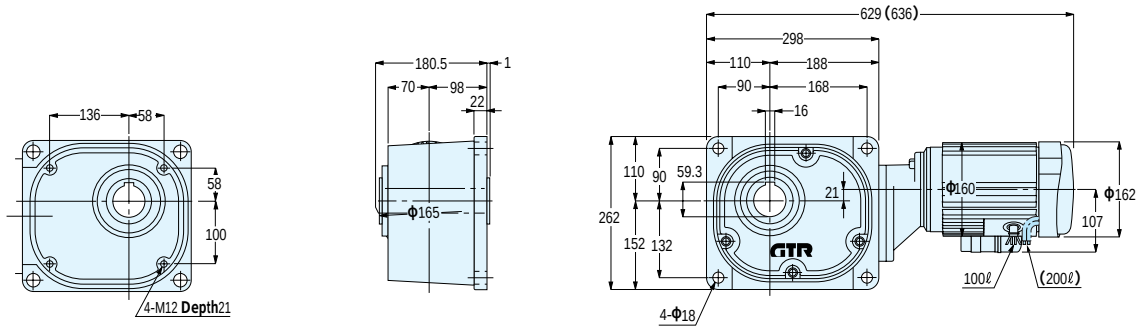
CAD Data: FSM-45-400 (CAD Data: FSMN-45-400)




Round Weight 28kg (30.5kg)

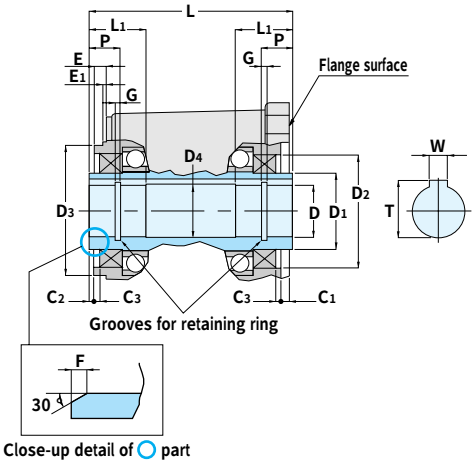
## Fig.C-24 FSM-55-600～1500-400 (FSMN-55-600～1500-400)

CAD Data: FSM-55-400 (CAD Data: FSMN-55-400)




Round Weight 66kg (68.5kg)

## ■Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | φ35 | φ49 | φ72 | φ85 | φ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | φ45 | φ64 | φ85 | φ100 | φ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | φ55 | φ79 | φ100 | φ120 | φ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Solid Shaft

# Gearmotor
# Gearmotor with Brake

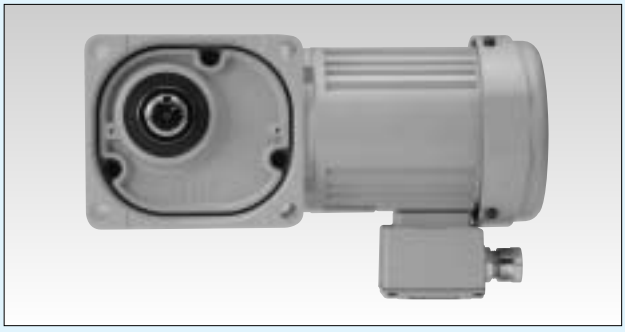
## Performance Table
## Dimension diagram

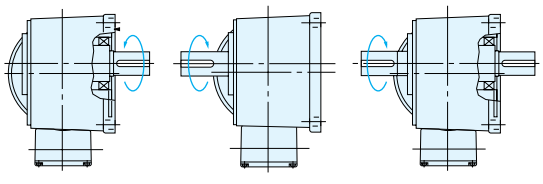
F Series
FF Type

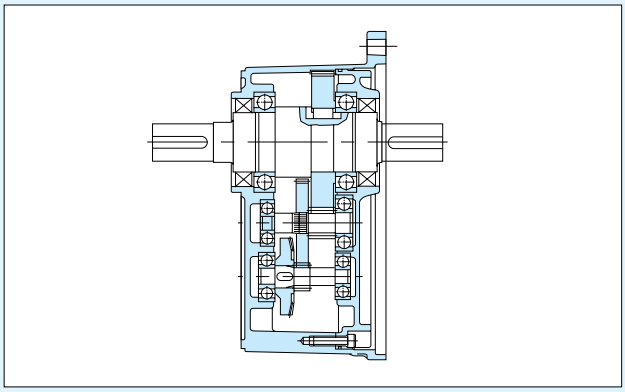
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, L-shaft rotates clockwise while R and T-shafts rotate counterclockwise when viewing from output shaft side. (Refer to the diagram shown below.)





# Gearmotor
# Gearmotor with Brake FF Type(Solid Shaft)
## F Series 50W



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

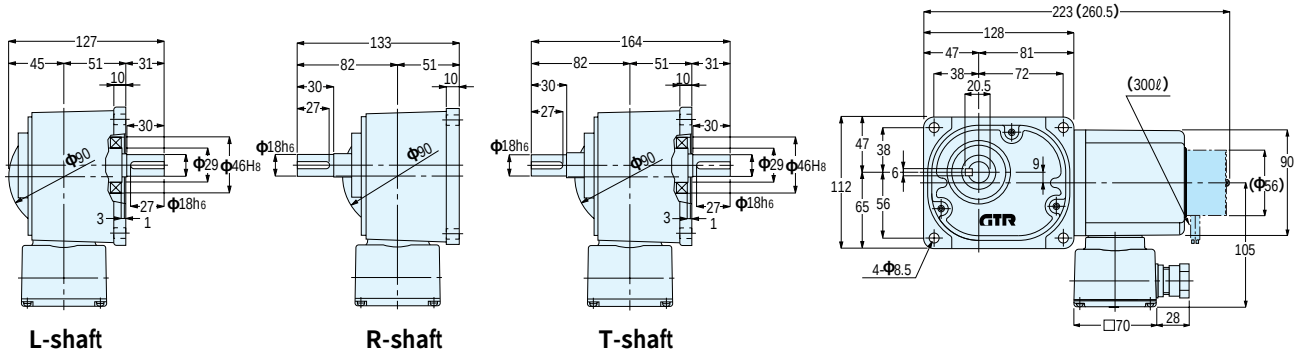
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation, | Frequency, (Hz) | Voltage, (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling System |
|---|---|---|---|---|---|---|---|---|
| | 50W | T50 | 50/60/60 | 200/200/220 | 0.40/0.36/0.36 | 1350/1550/1600 | E | Totally Enclosed non-ventilated |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | FFM (FFMN) |
| 50W | 18 | 1/ 10 | 4/ 41 | 150 | 180 | 2.5 | 2.2 | 0.26 | 0.22 | 1080 | 110 | P.C40 Fig.C-51 5kg (5.5kg) |
| | | 1/ 12.5 | 100/ 1271 | 120 | 144 | 3.2 | 2.6 | 0.33 | 0.27 | 1180 | 120 | |
| | | 1/ 15 | 8/ 123 | 100 | 120 | 3.8 | 3.2 | 0.39 | 0.33 | 1230 | 125 | |
| | | 1/ 20 | 2/ 41 | 75 | 90 | 5.2 | 4.3 | 0.53 | 0.44 | 1370 | 140 | |
| | | 1/ 25 | 8/ 205 | 60 | 72 | 6.5 | 5.4 | 0.66 | 0.55 | 1470 | 150 | |
| | | 1/ 30 | 4/ 123 | 50 | 60 | 7.7 | 6.5 | 0.79 | 0.66 | 1570 | 160 | |
| | | 1/ 40 | 1/ 41 | 37.5 | 45 | 11 | 8.6 | 1.1 | 0.88 | 1720 | 175 | |
| | | 1/ 50 | 4/ 205 | 30 | 36 | 13 | 11 | 1.3 | 1.1 | 1860 | 190 | |
| | | 1/ 60 | 40/ 2419 | 25 | 30 | 16 | 13 | 1.6 | 1.3 | 1860 | 190 | |
| | | 1/ 80 | 1/ 82 | 18.8 | 22.5 | 20 | 17 | 2 | 1.7 | 1860 | 190 | |
| | | 1/ 100 | 2/ 205 | 15 | 18 | 25 | 21 | 2.5 | 2.1 | 1860 | 190 | |
| | | 1/ 120 | 1/ 123 | 12.5 | 15 | 29 | 25 | 3 | 2.5 | 1860 | 190 | |
| | | 1/ 160 | 1/ 164 | 9.4 | 11.3 | 39 | 32 | 4 | 3.3 | 1860 | 190 | |
| | | 1/ 200 | 1/ 205 | 7.5 | 9 | 49 | 41 | 5 | 4.2 | 1860 | 190 | |
| | | ∗1/ 240 | 10/ 2419 | 6.3 | 7.5 | 54 | 49 | 5.5 | 5 | 1860 | 190 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-51**

**FFM-18[L/R/T]-10～240-T50A** CAD Data: FFM-18(LRT)-T50A
**(FFMN-18[L/R/T]-10～240-T50A)** (CAD Data: FFMN-18(LRT)-T50A)

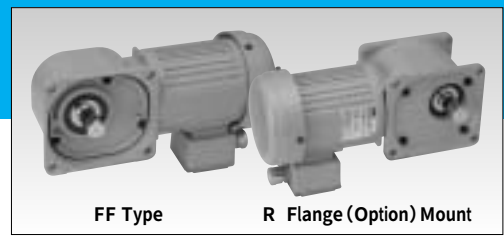



L-shaft R-shaft T-shaft

Round Weight 5kg (5.5kg)

Model Code P.C10
Option P.E78～E85

# F Series 0.1kW



FF Type R Flange (Option) Mount

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

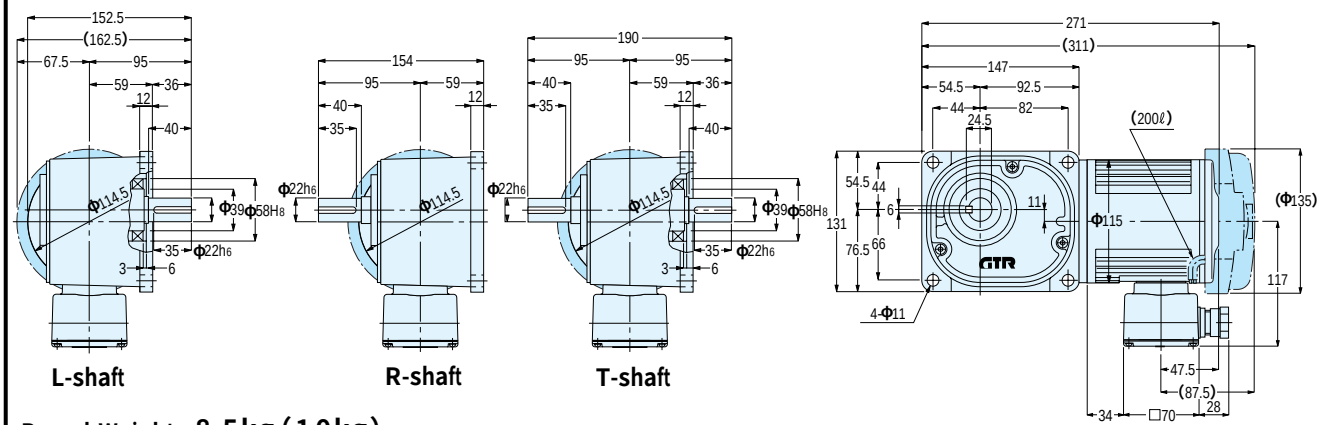
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation, | Frequency, (Hz) | Voltage, (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling System |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | FFM (FFMN) |
| 0.1kW | 22 | 1/ 10 | 1/ 10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1520 | 155 | P.C41 Fig.C-52 8.5kg (10kg) |
| | | 1/ 12.5 | 2/ 25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1620 | 165 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1720 | 175 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1910 | 195 | |
| | | 1/ 25 | 19/ 470 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 2060 | 210 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 2160 | 220 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 2400 | 245 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 2550 | 260 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 2550 | 260 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 39 | 32 | 4 | 3.3 | 2550 | 260 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 49 | 41 | 5 | 4.2 | 2550 | 260 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 59 | 49 | 6 | 5 | 2550 | 260 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 78 | 66 | 8 | 6.7 | 2550 | 260 | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 98 | 81 | 10 | 8.3 | 2550 | 260 | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 101 | 98 | 10.3 | 10 | 2550 | 260 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-52

**FFM-22$^{L}_{R}$-10～240-T010A** CAD Data: FFM-22(LRT)-T010A
**(FFMN-22$^{L}_{R}$-10～240-T010A)** (CAD Data: FFMN-22(LRT)-T010A)




L-shaft R-shaft T-shaft

Round Weight 8.5kg (10kg)

Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake FF Type(Solid Shaft)
## F Series 0.2kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

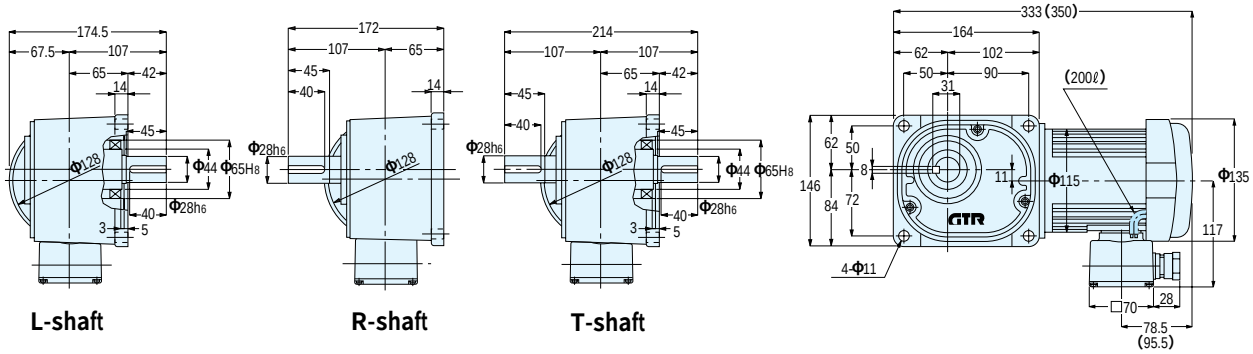
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation, | Frequency, (Hz) | Voltage, (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling System |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | FFM (FFMN) |
| 0.2kW | 28 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1470 | 150 | P.C42 Fig.C-53 10.5kg (12kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7.0 | 0.85 | 0.71 | 1670 | 170 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1810 | 185 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 1960 | 200 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 2060 | 210 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 2300 | 235 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2450 | 250 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2600 | 265 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2790 | 285 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2990 | 305 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 3090 | 315 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 84 | 71 | 8.6 | 7.2 | 3090 | 315 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 105 | 87 | 10.7 | 8.9 | 3140 | 320 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 126 | 105 | 12.9 | 10.7 | 3140 | 320 | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 169 | 140 | 17.2 | 14.3 | 3140 | 320 | |
| | | ＊1/ 200 | 1/ 200 | 7.5 | 9 | 184 | 175 | 18.8 | 17.9 | 3140 | 320 | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 184 | 184 | 18.8 | 18.8 | 3140 | 320 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-53**

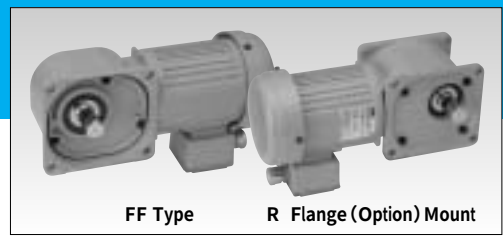
**FFM-28$^{LRT}_{T}$-5～240-T020A** CAD Data: FFM-28(LRT)-T020A
**(FFMN-28$^{LRT}_{T}$-5～240-T020A)** (CAD Data: FFMN-28(LRT)-T020A)




Round Weight 10.5kg (12kg)

Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# F Series 0.4kW



FF Type R Flange (Option) Mount

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

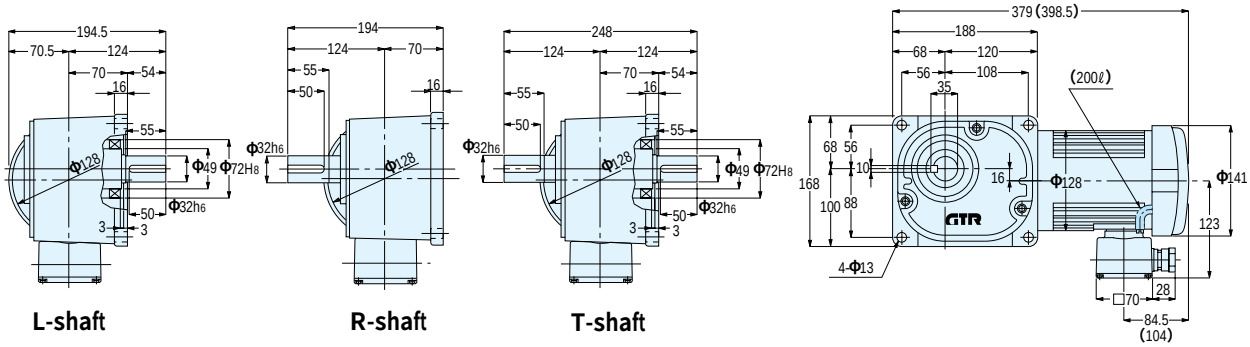
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation, | Frequency, (Hz) | Voltage, (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling System |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | FFM (FFMN) |
| 0.4kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1760 | 180 | P.C43 Fig.C-54 16kg (18kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 2010 | 205 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 2210 | 225 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 2350 | 240 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2500 | 255 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2700 | 275 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 2890 | 295 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 3040 | 310 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 3280 | 335 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 3330 | 340 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3330 | 340 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 169 | 140 | 17.2 | 14.3 | 3330 | 340 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 211 | 175 | 21.5 | 17.9 | 3380 | 345 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 253 | 211 | 25.8 | 21.5 | 3380 | 345 | |
| | | ＊1/ 160 | 1/ 160 | 9.4 | 11.3 | 270 | 270 | 27.6 | 27.6 | 3580 | 365 | |
| | | ＊1/ 200 | 1/ 200 | 7.5 | 9 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-54

**FFM-32[LRT]-5～240-T040A** CAD Data: FFM-32(LRT)-T040A
**(FFMN-32[LRT]-5～240-T040A)** (CAD Data: FFMN-32(LRT)-T040A)




L-shaft R-shaft T-shaft

Round Weight 16kg (18kg)

Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# Gearmotor
# Gearmotor with Brake FS Type(Solid Shaft)
## F Series 0.75kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

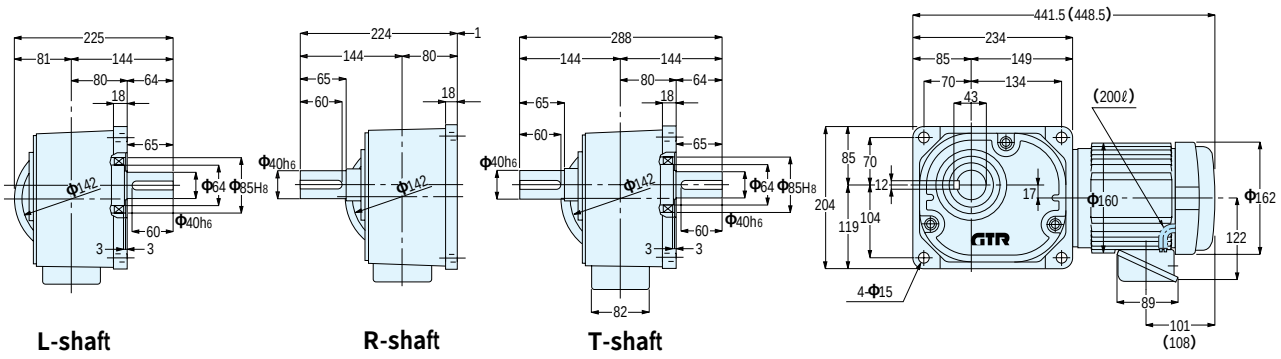
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation, | Frequency, (Hz) | Voltage, (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling System |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | FFM (FFMN) |
| 0.75kW | 40 | 1/ 5 | 1/ 5 | 300 | 360 | 21 | 18 | 2.1 | 1.8 | 2500 | 255 | P.C44 Fig.C-55 28kg (31kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 31 | 25 | 3.2 | 2.6 | 2840 | 290 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 41 | 34 | 4.2 | 3.5 | 3140 | 320 | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 52 | 43 | 5.3 | 4.4 | 3380 | 345 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 63 | 52 | 6.4 | 5.3 | 3530 | 360 | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 83 | 70 | 8.5 | 7.1 | 3870 | 395 | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 104 | 86 | 10.6 | 8.8 | 4170 | 425 | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 124 | 104 | 12.7 | 10.6 | 4310 | 440 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 166 | 138 | 16.9 | 14.1 | 4460 | 455 | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 208 | 173 | 21.2 | 17.7 | 4460 | 455 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 249 | 208 | 25.4 | 21.2 | 4460 | 455 | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 316 | 263 | 32.2 | 26.8 | 4460 | 455 | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 395 | 328 | 40.3 | 33.5 | 4460 | 455 | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 473 | 395 | 48.3 | 40.3 | 4460 | 455 | |
| | | ∗1/ 160 | 1/ 160 | 9.4 | 11.3 | 554 | 526 | 56.5 | 53.7 | 4850 | 495 | |
| | | ∗1/ 200 | 1/ 200 | 7.5 | 9 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-55**

**FFM-40□-5～240-075** CAD Data: FFM-40(LRT)-075
**(FFMN-40□-5～240-075)** (CAD Data: FFMN-40(LRT)-075)

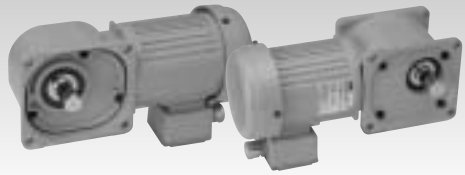



Round Weight 28kg(31kg)

Model Code P.C10
Multipurpose Inverter P.E86～E92
Option P.E78～E92



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox



FF Type R Flange (Option) Mount

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Hollow Shaft IP-65

# Water-Resistant Gearmotor Gearmotor with Brake

## Model • Type Designation Standard Model Lineup

GTR Gearmotor

F Series FS Type

| | | |
|---|---|---|
| Motor Part | Number of phase | 3-phase |
| | Capacity | 0.1kW～2.2kW |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed non-ventilated for 0.1kW) |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | SUS420J2 (Water-Resistant W/Carbon Steel Shaft is S43C) |
| | Case Material | Aluminium die-cast(Frame No.55: Cast iron) |
| Ambient Conditions | Ambient Temperature | −10°C～40°C |
| | Ambient Humidity | 100% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas,<br>Should not be used in water and the place where high-hydrostatic pressure receives. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F Series FS Type (Hollow Shaft)

F Series Water-resistant-Outdoor gearmotor are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | Terminal box | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| F | S | W | – 35 | – 50 | – T040 | W | E | | |
| F | S | V | – 45 | – 100 | – T010 | | E | X | AA |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

| | | |
|---|---|---|
| ①Series Name | F | : F Series(Hollow Shaft) |
| ②Classification by Mount Form | S | : Hollow Shaft Type (Note 1) |
| ③Classification by Motor Type | W | : With Water-resistant Motor W/SUS Shaft(JIS SUS420J2) |
| | V | : With Water-resistant Brake Motor W/SUS Shaft (JIS SUS420J2) |
| | G | : With Water-resistant Motor W/Carbon Steel Shaft(JIS:S43C) |
| | H | : With Water-resistant Brake Motor W/Carbon Steel Shaft (JIS:S43C) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter (bore) | |
| ⑤Reduction Ratio | 5 : 1／5 ～ 1500 : 1／1500 | |
| ⑥Motor Designation and Capacity | T010 | : 3-phase 0.1 kW |
| | T020 | : 3-phase 0.2 kW |
| | T040 | : 3-phase 0.4 kW |
| | 075 | : 3-phase 0.75kW |
| | 150 | : 3-phase 1.5 kW |
| | 220 | : 3-phase 2.2 kW |
| ⑦Option | Blank | : Standard Voltage<br>3-phase : 200V／50Hz, 200V／60Hz, 220V／60Hz |
| | W | : High Voltage<br>3-phase : 380V／50Hz, 400V／50Hz, 400V／60Hz, 440V／60Hz |
| ⑧Terminal box | E | : Terminal Box for with Water-resistant, type only. (Standard Specs.) |
| ⑨Auxiliary Mark | Blank | : Standard Specs. |
| | X | : Code to identify additional special specs. |
| ⑩Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | ●Specification Code for Rectifier built-in Wiring<br>For details, refer to the Specification Code Table on page E31.<br>●Instruction for terminal box position.<br>Refer to the specification code list on page E37 for details. | |

Note 1) Please note that only FS Type(hollow shaft) is available and FF Type(solid shaft) is not available in the F-Series water-resistant･outdoor type.

**Separated rectifier type is the standard specification of the terminal box in gearmotors with brake.
When you need the rectifier built-in type, contact us with the following manner. We will do the wiring accordingly.
For details, refer to page E31.**

| Type | Type Code when ordering(Example) (Indicate this type cord in your order.) |
|---|---|
| Standard (rectifier separated) | FSV-35-50-T040E |
| AC Switching A | FSV-35-50-T040EX-AA |
| AC Switching B | FSV-35-50-T040EX-AB |
| DC Switching | FSV-35-50-T040EX-DC |

(Note) ⑩The wiring method indication code does not appear on the product-type name. It appears in the supplemental number column on the nameplate.

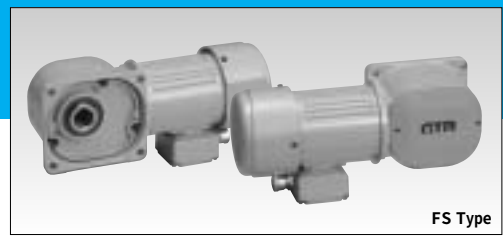
## ■Model･Type Code (Option)

| Capacity･Option | | | | |
|---|---|---|---|---|
| T040 | E | X | – | AA |
| | ⑧ | ⑨ | | ⑩ |

| | |
|---|---|
| ⑧Terminal box | Refer to the above table. |
| ⑨Auxiliary Code | Refer to the above table. |
| ⑩Wiring Method Indication Code (Note) | Refer to the table on the left. |

When ordering gearmotors with brake, indicate the wiring method too as stated above.

# Standard Model Lineup


FS Type

## FS Type (Hollow Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Water-Resistant W/SUS Shaft Gearmotor FSW | 3-phase 0.1kW | 25 | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | | | 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 30 | 1/300 1/375 1/450 |
| | | 35 | 1/600 1/750 1/900 1/1200 1/1500 |
| | 3-phase 0.2kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 |
| | | | 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 35 | 1/300 1/375 1/450 |
| | | 45 | 1/600 1/750 1/900 1/1200 1/1500 |
| Water-Resistant W/SUS Shaft Brake Gearmotor FSV | | | |
| Water-Resistant W/Carbon Steel Shaft Gearmotor FSG | 3-phase 0.4kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 |
| | | | 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 45 | 1/300 1/375 1/450 |
| | | 55 | 1/600 1/750 1/900 1/1200 1/1500 |
| Water-Resistant W/Carbon Steel Shaft Brake Gearmotor FSH | | | |
| | 3-phase 0.75kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 |
| | | | 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | | 55 | 1/300 1/375 1/450 |
| Water-Resistant W/SUS Shaft Gearmotor FSW | 3-phase 1.5kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 |
| | | | 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| Water-Resistant W/Carbon Steel Shaft Gearmotor FSG | 3-phase 2.2kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 |
| | | | 1/50 1/60 1/80 1/100 1/120 |

Note 1) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.

Hollow Shaft IP-65

# Water-Resistant Gearmotor
# Gearmotor with Brake

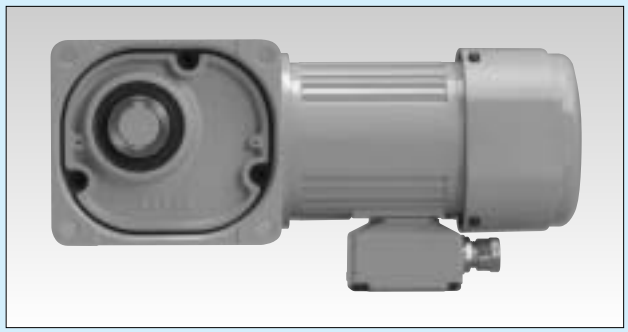
## Performance Table
## Dimension diagram

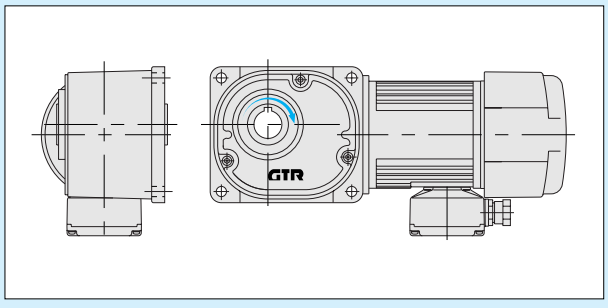
F Series
FS Type

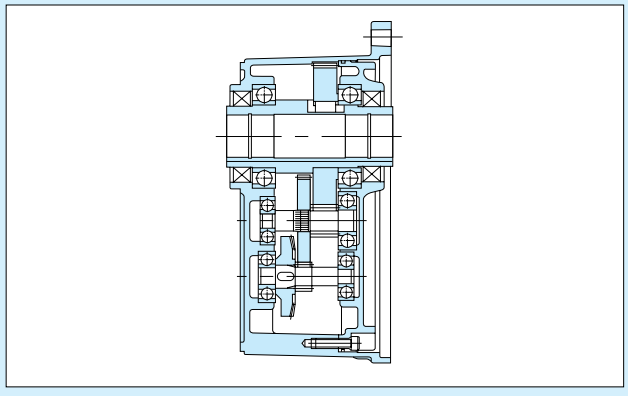
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shade areas ▭ in the peformance table shows that in case gearmotors are wired according to the diagram shown on page E28, the shaft rotates clockwise when viewing from flange side. (Refer to the diagram shown below.)





# Gearmotor
# Gearmotor with Brake
## Water-Resistant IP65 FS Type(Hollow Shaft)

## F Series 3-phase 0.1kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

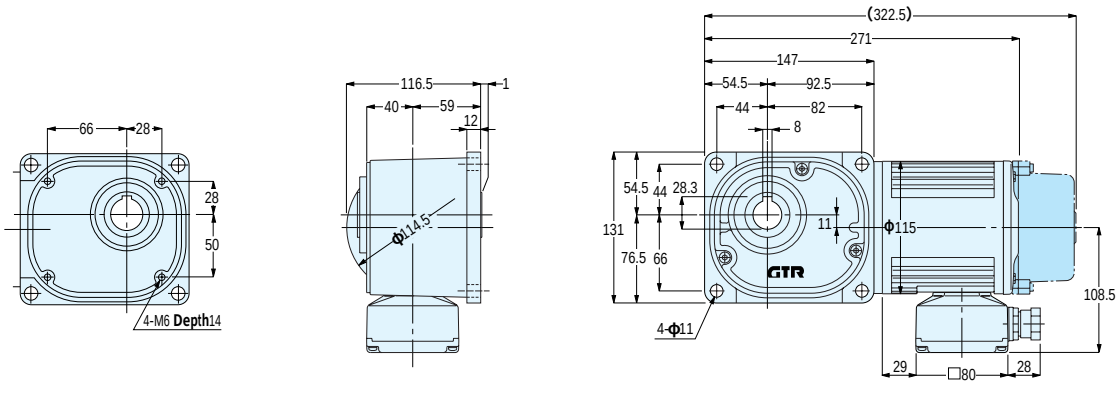
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | | | FSW (FSV) | FSG (FSH) |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | | |
| 3-phase 0.1kW | 25 | 1/ 10 | 1/ 10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1520 | 155 | 382 | 39 | P.C52 Fig.C-25 7.5kg (9kg) | |
| | | 1/ 12.5 | 2/ 25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1620 | 165 | 402 | 41 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1720 | 175 | 431 | 44 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1860 | 190 | 471 | 48 | | |
| | | 1/ 25 | 19/ 470 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 2010 | 205 | 500 | 51 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 2110 | 215 | 530 | 54 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 2300 | 235 | 579 | 59 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 2450 | 250 | 618 | 63 | | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 2550 | 260 | 637 | 65 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 39 | 32 | 4 | 3.3 | 2550 | 260 | 637 | 65 | | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 49 | 41 | 5 | 4.2 | 2550 | 260 | 637 | 65 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 59 | 49 | 6 | 5 | 2550 | 260 | 637 | 65 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 78 | 66 | 8 | 6.7 | 2550 | 260 | 637 | 65 | | |
| | | 1/ 200 | 1/ 200 | 7.5 | 9 | 98 | 81 | 10 | 8.3 | 2550 | 260 | 637 | 65 | | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 101 | 98 | 10.3 | 10 | 2550 | 260 | 637 | 65 | | |
| | 30 | 1/ 300 | 7/ 2120 | 5 | 6 | 131 | 110 | 13.4 | 11.2 | 3140 | 320 | 785 | 80 | P.C53 Fig.C-26 11.5kg (13kg) | |
| | | 1/ 375 | 133/49820 | 4 | 4.8 | 165 | 137 | 16.8 | 14 | 3140 | 320 | 785 | 80 | | |
| | | 1/ 450 | 7/ 3180 | 3.3 | 4 | 198 | 165 | 20.2 | 16.8 | 3140 | 320 | 785 | 80 | | |
| | 35 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 248 | 207 | 25.3 | 21.1 | 3630 | 370 | 912 | 93 | P.C53 Fig.C-27 13.5kg (15kg) | |
| | | 1/ 750 | 133/99640 | 2 | 2.4 | 311 | 259 | 31.7 | 26.4 | 3630 | 370 | 912 | 93 | | |
| | | 1/ 900 | 7/ 6360 | 1.7 | 2 | 372 | 311 | 38 | 31.7 | 3630 | 370 | 912 | 93 | | |
| | | ＊1/1200 | 7/ 8480 | 1.3 | 1.5 | 372 | 372 | 38 | 38 | 3630 | 370 | 912 | 93 | | |
| | | ＊1/1500 | 7/10600 | 1 | 1.2 | 372 | 372 | 38 | 38 | 3630 | 370 | 912 | 93 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

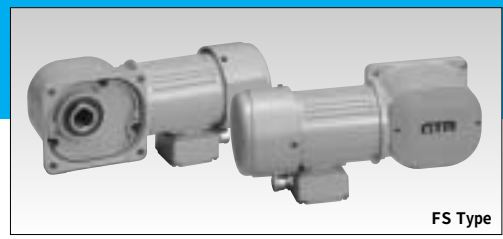
### Fig.C-25

FS$^{W}_{G}$-25-10～240-T010E (CAD Data: FS$^{W}_{G}$-25-T010E)
(FS$^{V}_{H}$-25-10～240-T010E) (CAD Data: FS$^{V}_{H}$-25-T010E)



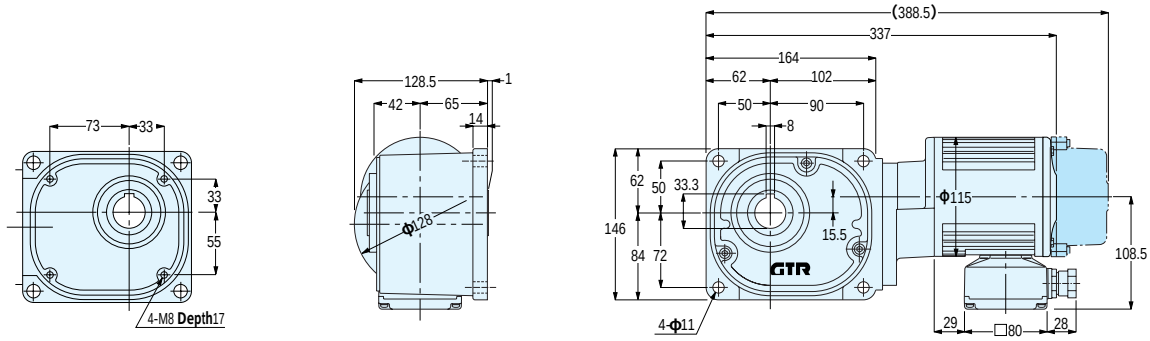

Round Weight 7.5kg (9kg)

Model Code P.C48
Multipurpose Inverter P.E86～E92
Option P.E78～E92


FS Type

## Fig.C-26

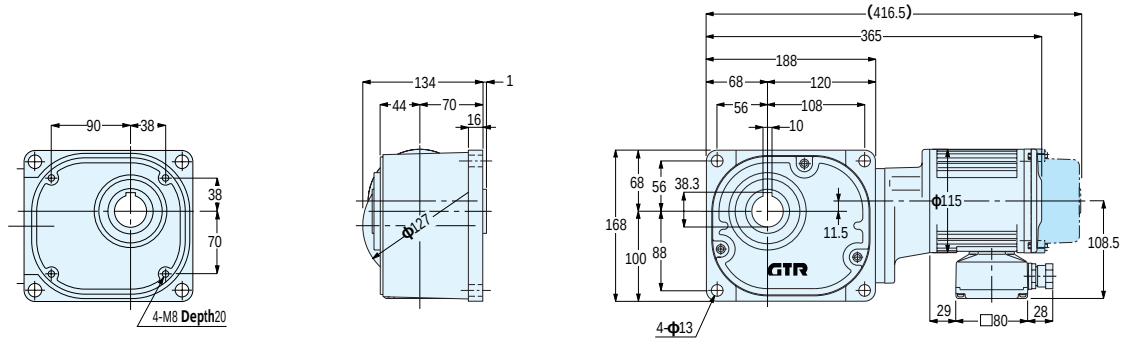
FS$^{W}_{G}$-30-300～450-T010E (FS$^{V}_{H}$-30-300～450-T010E) CAD Data: FS$^{W}_{G}$-30-T010E (CAD Data: FS$^{V}_{H}$-30-T010E)




Round Weight 11.5kg (13kg)

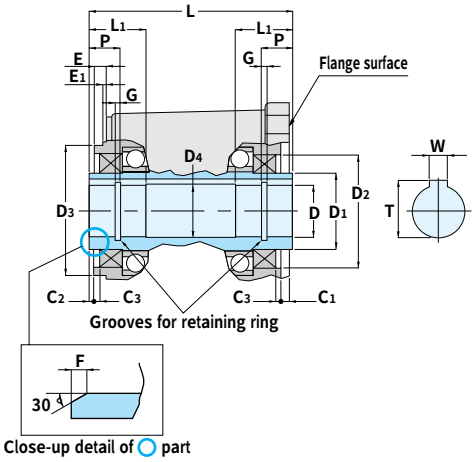
## Fig.C-27

FS$^{W}_{G}$-35-600～1500-T010E (FS$^{V}_{H}$-35-600～1500-T010E) CAD Data: FS$^{W}_{G}$-35-T010E (CAD Data: FS$^{V}_{H}$-35-T010E)




Round Weight 13.5kg (15kg)

## ■Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | φ25 | φ39 | φ58 | φ66 | φ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |
| 30 | φ30 | φ44 | φ65 | φ75 | φ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | φ35 | φ49 | φ72 | φ85 | φ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake
## Water-Resistant IP65 FS Type(Hollow Shaft)

## F Series 3-phase 0.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

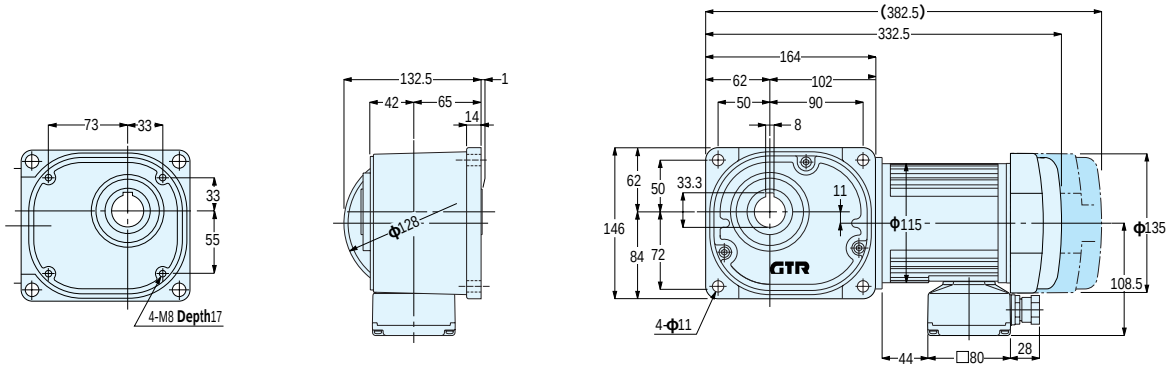
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSW (FSV) | FSG (FSH) |
| 3-phase 0.2kW | 30 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1520 | 155 | 382 | 39 | P.C54 Fig.C-28 9.5kg (11kg) | |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7 | 0.85 | 0.71 | 1760 | 180 | 441 | 45 | | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1910 | 195 | 481 | 49 | | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 2060 | 210 | 520 | 53 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 2160 | 220 | 539 | 55 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 2400 | 245 | 598 | 61 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2550 | 260 | 637 | 65 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2650 | 270 | 667 | 68 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2840 | 290 | 716 | 73 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2990 | 305 | 745 | 76 | | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 3090 | 315 | 775 | 79 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 84 | 71 | 8.6 | 7.2 | 3090 | 315 | 775 | 79 | | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 105 | 87 | 10.7 | 8.9 | 3140 | 320 | 785 | 80 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 126 | 105 | 12.9 | 10.7 | 3140 | 320 | 785 | 80 | | |
| | | 1/ 160 | 1/ 160 | 9.4 | 11.3 | 169 | 140 | 17.2 | 14.3 | 3140 | 320 | 785 | 80 | | |
| | | ＊1/ 200 | 1/ 200 | 7.5 | 9 | 184 | 175 | 18.8 | 17.9 | 3140 | 320 | 785 | 80 | | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 184 | 184 | 18.8 | 18.8 | 3140 | 320 | 785 | 80 | | |
| | 35 | 1/ 300 | 7/ 2120 | 5 | 6 | 282 | 235 | 28.8 | 24 | 3630 | 370 | 912 | 93 | P.C55 Fig.C-29 14.5kg (16kg) | |
| | | 1/ 375 | 133/49820 | 4 | 4.8 | 353 | 294 | 36 | 30 | 3630 | 370 | 912 | 93 | | |
| | | ＊1/ 450 | 7/ 3180 | 3.3 | 4 | 372 | 353 | 38 | 36 | 3630 | 370 | 912 | 93 | | |
| | 45 | 1/ 600 | 7/ 4240 | 2.5 | 3 | 534 | 446 | 54.5 | 45.5 | 5190 | 530 | 1275 | 130 | P.C55 Fig.C-30 20kg (21.5kg) | |
| | | 1/ 750 | 133/99640 | 2 | 2.4 | 668 | 557 | 68.2 | 56.8 | 5190 | 530 | 1275 | 130 | | |
| | | ＊1/ 900 | 7/ 6360 | 1.7 | 2 | 713 | 668 | 72.8 | 68.2 | 5190 | 530 | 1275 | 130 | | |
| | | ＊1/1200 | 7/ 8480 | 1.3 | 1.5 | 713 | 713 | 72.8 | 72.8 | 5190 | 530 | 1275 | 130 | | |
| | | ＊1/1500 | 7/10600 | 1 | 1.2 | 713 | 713 | 72.8 | 72.8 | 5190 | 530 | 1275 | 130 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-28**

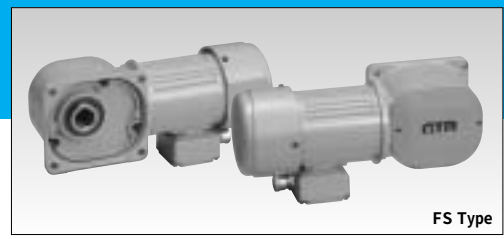
**FS$^{W}_{G}$-30-5～240-T020E** CAD Data: FS$^{W}_{G}$-30-T020E
**(FS$^{V}_{H}$-30-5～240-T020E)** (CAD Data: FS$^{V}_{H}$-30-T020E)




Round Weight 9.5kg (11kg)

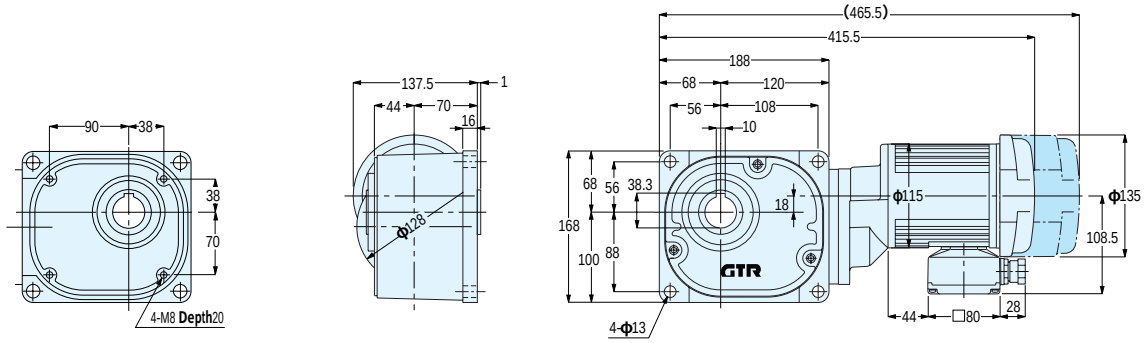
Model Code P.C48
Multipurpose Inverter P.E86～E92
Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox




## Fig.C-29

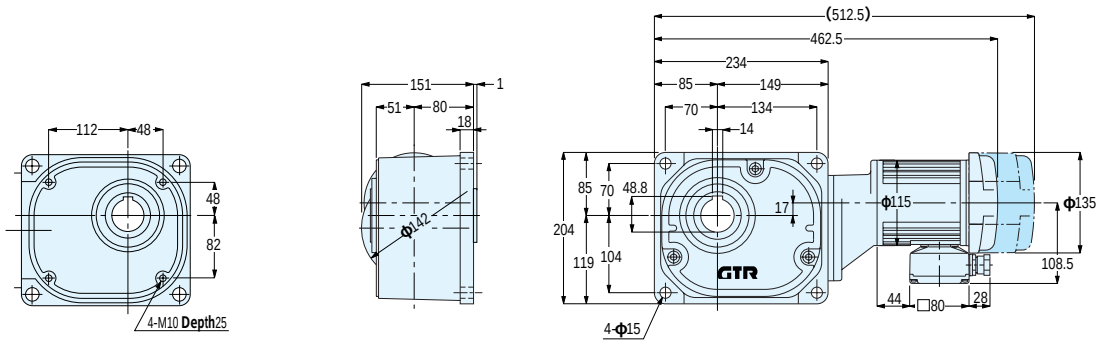
FS$^{W}_{G}$-35-300～450-T020E CAD Data: FS$^{W}_{G}$-35-T020E
(FS$^{V}_{H}$-35-300～450-T020E) (CAD Data: FS$^{V}_{H}$-35-T020E)




Round Weight 14.5kg (16kg)

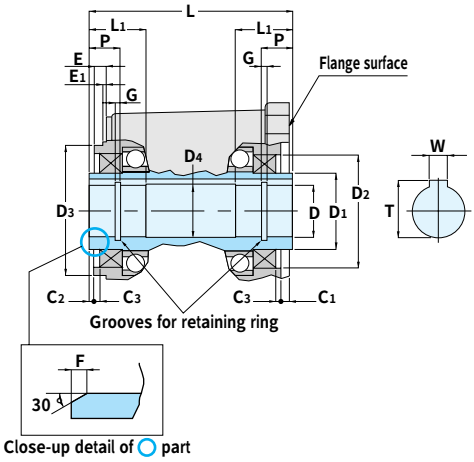
## Fig.C-30

FS$^{W}_{G}$-45-600～1500-T020E CAD Data: FS$^{W}_{G}$-45-T020E
(FS$^{V}_{H}$-45-600～1500-T020E) (CAD Data: FS$^{V}_{H}$-45-T020E)




Round Weight 20kg (21.5kg)

## ■Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake

## Water-Resistant IP65 FS Type(Hollow Shaft)

## F Series 3-phase 0.4kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

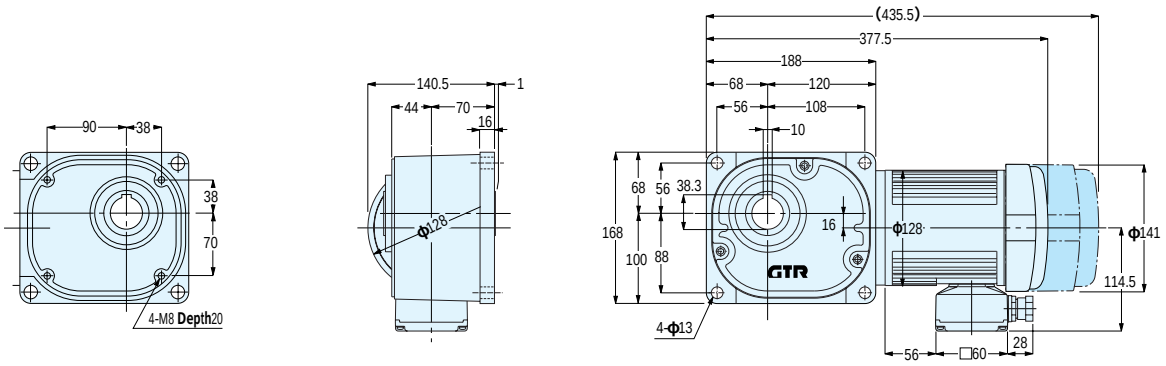
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSW (FSV) | FSG (FSH) |
| 3-phase 0.4kW | 35 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1960 | 200 | 490 | 50 | P.C56 Fig.C-31 14kg (16kg) | |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 2250 | 230 | 569 | 58 | | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 2450 | 250 | 618 | 63 | | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 2600 | 265 | 647 | 66 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2740 | 280 | 686 | 70 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2990 | 305 | 745 | 76 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 3190 | 325 | 794 | 81 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 3280 | 335 | 824 | 84 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 3480 | 355 | 873 | 89 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 3480 | 355 | 873 | 89 | | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3480 | 355 | 873 | 89 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 169 | 140 | 17.2 | 14.3 | 3480 | 355 | 873 | 89 | | |
| | | 1/ 100 | 19/ 1880 | 15 | 18 | 211 | 175 | 21.5 | 17.9 | 3530 | 360 | 883 | 90 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 253 | 211 | 25.8 | 21.5 | 3530 | 360 | 883 | 90 | | |
| | | ＊1/ 160 | 1/ 160 | 9.4 | 11.3 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | | |
| | | ＊1/ 200 | 1/ 200 | 7.5 | 9 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | | |
| | | ＊1/ 240 | 1/ 240 | 6.3 | 7.5 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | | |
| | 45 | 1/ 300 | 7/ 2080 | 5 | 6 | 565 | 471 | 57.7 | 48.1 | 5190 | 530 | 1275 | 130 | P.C57 Fig.C-32 22.5kg (24kg) | |
| | | 1/ 375 | 133/ 48880 | 4 | 4.8 | 707 | 589 | 72.1 | 60.1 | 5190 | 530 | 1275 | 130 | | |
| | | ＊1/ 450 | 7/ 3120 | 3.3 | 4 | 713 | 707 | 72.8 | 72.1 | 5190 | 530 | 1275 | 130 | | |
| | 55 | ＊1/ 600 | 49/ 28600 | 2.5 | 3 | 1030 | 891 | 105 | 90.9 | 9800 | 1000 | 2452 | 250 | P.C57 Fig.C-33 60.5kg (62kg) | |
| | | ＊1/ 750 | 11/ 8320 | 2 | 2.4 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | | |
| | | ＊1/ 900 | 7/ 6136 | 1.7 | 2 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | | |
| | | ＊1/1200 | 49/ 57200 | 1.3 | 1.5 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | | |
| | | ＊1/1500 | 11/ 16640 | 1 | 1.2 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

### Fig.C-31

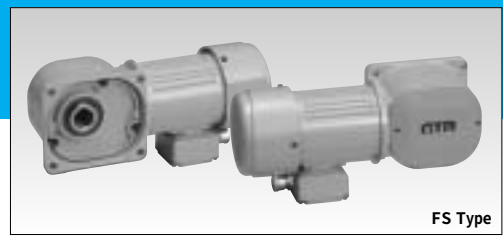
FS$^{W}_{G}$-35-5～240-T040E (CAD Data: FS$^{W}_{G}$-35-T040E)
(FS$^{V}_{H}$-35-5～240-T040E) (CAD Data: FS$^{V}_{H}$-35-T040E)




Round Weight 14kg (16kg)

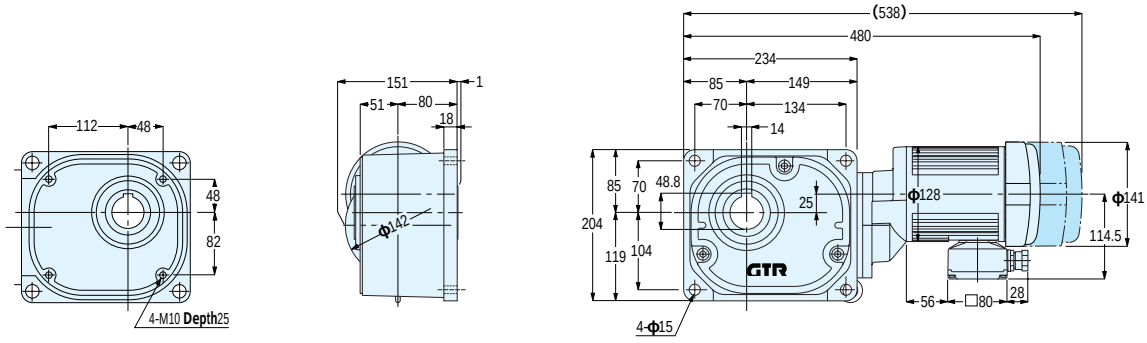
Model Code P.C48
Multipurpose Inverter P.E86～E92
Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox




## Fig.C-32

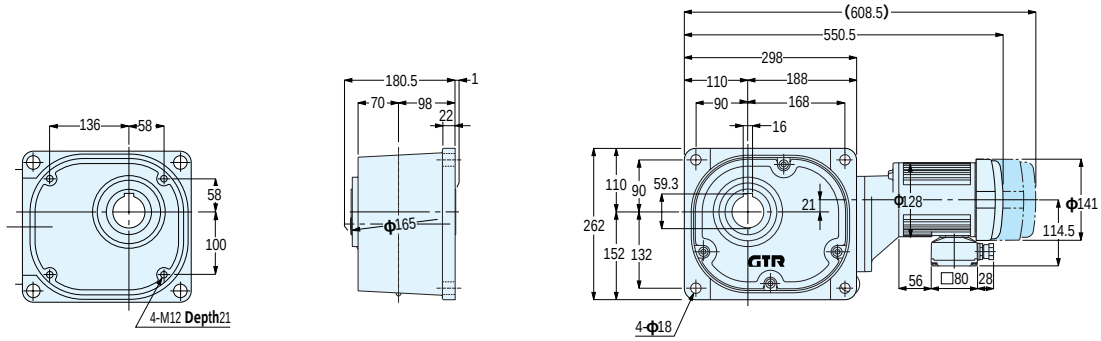
**FS$^{W}_{G}$-45-300～450-T040E** CAD Data: FS$^{W}_{G}$-45-T040E
**(FS$^{V}_{H}$-45-300～450-T040E)** (CAD Data: FS$^{V}_{H}$-45-T040E)




Round Weight 22.5kg (24kg)

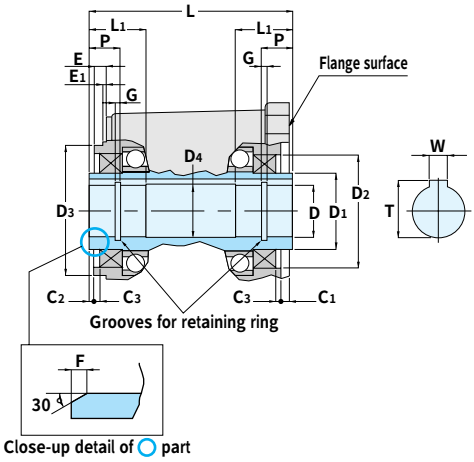
## Fig.C-33

**FS$^{W}_{G}$-55-600～1500-T040E** CAD Data: FS$^{W}_{G}$-55-T040E
**(FS$^{V}_{H}$-55-600～1500-T040E)** (CAD Data: FS$^{V}_{H}$-55-T040E)




Round Weight 60.5kg (62kg)

## ■Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake

## Water-Resistant IP65 FS Type(Hollow Shaft)

## F Series 3-phase 0.75kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

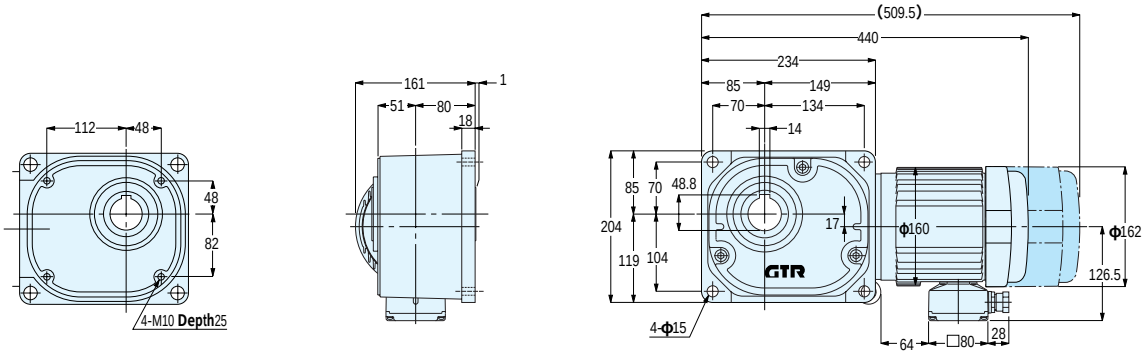
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor(Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSW (FSV) | FSG (FSH) |
| 3-phase 0.75kW | 45 | 1/ 5 | 1/ 5 | 300 | 360 | 21 | 18 | 2.1 | 1.8 | 2940 | 300 | 735 | 75 | P.C58 Fig.C-34 24kg (27kg) | |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 31 | 25 | 3.2 | 2.6 | 3330 | 340 | 834 | 85 | | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 41 | 34 | 4.2 | 3.5 | 3630 | 370 | 912 | 93 | | |
| | | 1/ 12.5 | 19/ 235 | 120 | 144 | 52 | 43 | 5.3 | 4.4 | 3920 | 400 | 980 | 100 | | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 63 | 52 | 6.4 | 5.3 | 4070 | 415 | 1030 | 105 | | |
| | | 1/ 20 | 1/ 20 | 75 | 90 | 83 | 70 | 8.5 | 7.1 | 4460 | 455 | 1079 | 110 | | |
| | | 1/ 25 | 1/ 25 | 60 | 72 | 104 | 86 | 10.6 | 8.8 | 4700 | 480 | 1177 | 120 | | |
| | | 1/ 30 | 1/ 30 | 50 | 60 | 124 | 104 | 12.7 | 10.6 | 4750 | 485 | 1177 | 120 | | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 166 | 138 | 16.9 | 14.1 | 4750 | 485 | 1177 | 120 | | |
| | | 1/ 50 | 1/ 50 | 30 | 36 | 208 | 173 | 21.2 | 17.7 | 4750 | 485 | 1177 | 120 | | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | 1177 | 120 | | |
| | | 1/ 80 | 1/ 80 | 18.8 | 22.5 | 316 | 263 | 32.2 | 26.8 | 4750 | 485 | 1177 | 120 | | |
| | | 1/ 100 | 19/1880 | 15 | 18 | 395 | 328 | 40.3 | 33.5 | 4750 | 485 | 1177 | 120 | | |
| | | 1/ 120 | 1/ 120 | 12.5 | 15 | 473 | 395 | 48.3 | 40.3 | 4750 | 485 | 1177 | 120 | | |
| | | ∗1/ 160 | 1/ 160 | 9.4 | 11.3 | 554 | 526 | 56.5 | 53.7 | 5190 | 530 | 1275 | 130 | | |
| | | ∗1/ 200 | 1/ 200 | 7.5 | 9 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | 1275 | 130 | | |
| | | ∗1/ 240 | 1/ 240 | 6.3 | 7.5 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | 1275 | 130 | | |
| | 55 | ∗1/ 300 | 7/2120 | 5 | 6 | 1030 | 883 | 105 | 90.1 | 9800 | 1000 | 2452 | 250 | P.C59 Fig.C-35 65kg (67.5kg) | |
| | | ∗1/ 375 | 1/ 371 | 4 | 4.8 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | | |
| | | ∗1/ 450 | 7/3180 | 3.3 | 4 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

### Fig.C-34

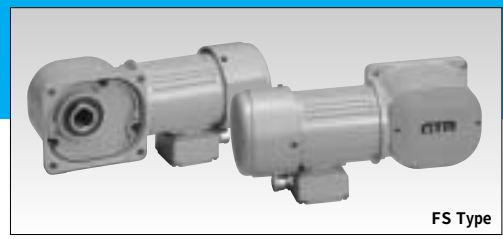
FS$^{W}_{G}$-45-5～240-075E (CAD Data: FS$^{W}_{G}$-45-075E)
(FS$^{V}_{H}$-45-5～240-075E) (CAD Data: FS$^{V}_{H}$-45-075E)




Round Weight 24kg (27kg)

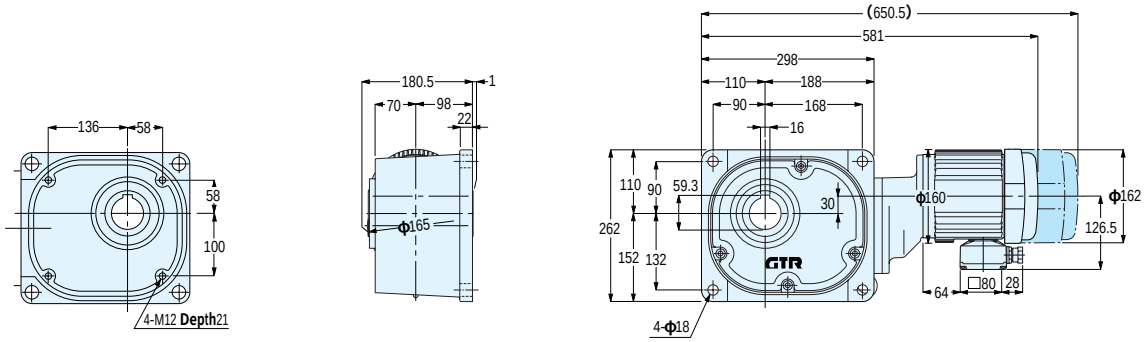
Model Code P.C48
Multipurpose Inverter P.E86～E92
Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


FS Type

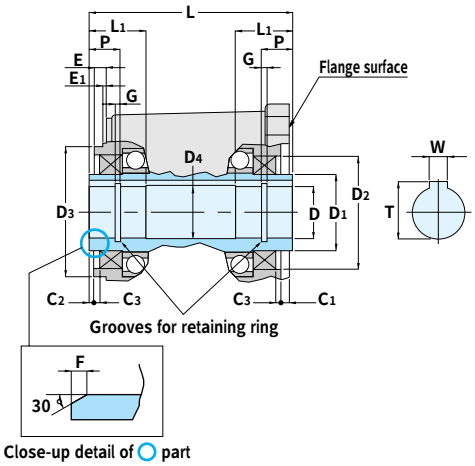
## Fig.C-35 FS$^{W}_{G}$-55-300～450-075E (FS$^{V}_{H}$-55-300～450-075E)

CAD Data: FS$^{W}_{G}$-55-075E (CAD Data: FS$^{V}_{H}$-55-075E)




Round Weight 65kg (67.5kg)

## Detailed dimension diagram for FS-Type output shaft



Close-up detail of ○ part

| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

# Gearmotor Water-Resistant IP65 FS Type(Hollow Shaft)

## F Series 3-phase 1.5kW

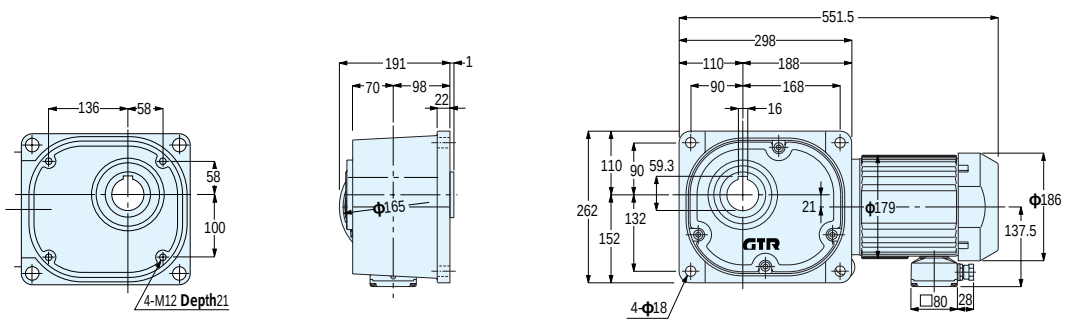


| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque | | | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N•m | | kgf•m | | | | | | Gearmotor |
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FS$^{W}_{G}$ |
| 3-phase 1.5kW | 55 | 1/ 5 | 1/ 5 | 300 | 360 | 41 | 34 | 4.2 | 3.5 | 4700 | 480 | 1177 | 120 | P.C60 Fig.C-36 71kg |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 63 | 52 | 6.4 | 5.3 | 5340 | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 83 | 70 | 8.5 | 7.1 | 5780 | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 120 | 144 | 104 | 86 | 10.6 | 8.8 | 6130 | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 124 | 104 | 12.7 | 10.6 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 75 | 90 | 166 | 138 | 16.9 | 14.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 60 | 72 | 208 | 173 | 21.2 | 17.7 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 50 | 60 | 249 | 208 | 25.4 | 21.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 332 | 276 | 33.9 | 28.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 30 | 36 | 416 | 345 | 42.4 | 35.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 498 | 416 | 50.8 | 42.4 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 18.8 | 22.5 | 631 | 526 | 64.4 | 53.7 | 6420 | 655 | 1618 | 165 | |
| | | 1/ 100 | 11/ 1120 | 15 | 18 | 789 | 658 | 80.5 | 67.1 | 6420 | 655 | 1618 | 165 | |
| | | 1/ 120 | 1/ 118 | 12.5 | 15 | 947 | 789 | 96.6 | 80.5 | 7500 | 765 | 1863 | 190 | |
| | | ＊1/ 160 | 7/ 1100 | 9.4 | 11.3 | 1030 | 1030 | 105 | 105 | 8330 | 850 | 2059 | 210 | |
| | | ＊1/ 200 | 11/ 2240 | 7.5 | 9 | 1030 | 1030 | 105 | 105 | 9020 | 920 | 2256 | 230 | |
| | | ＊1/ 240 | 1/ 236 | 6.3 | 7.5 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-36** FS$^{W}_{G}$-55-5～240-150E CAD Data: FS$^{W}_{G}$-55-150E

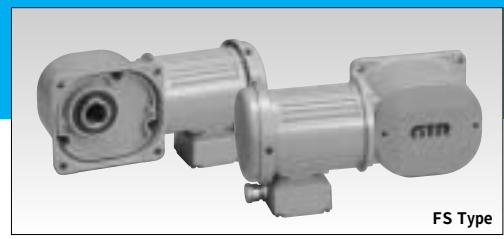



Round Weight 71kg

Please refer to page C61 for the detail spec of output shaft.

Model Code P.C48
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# F Series 3-phase 2.2kW

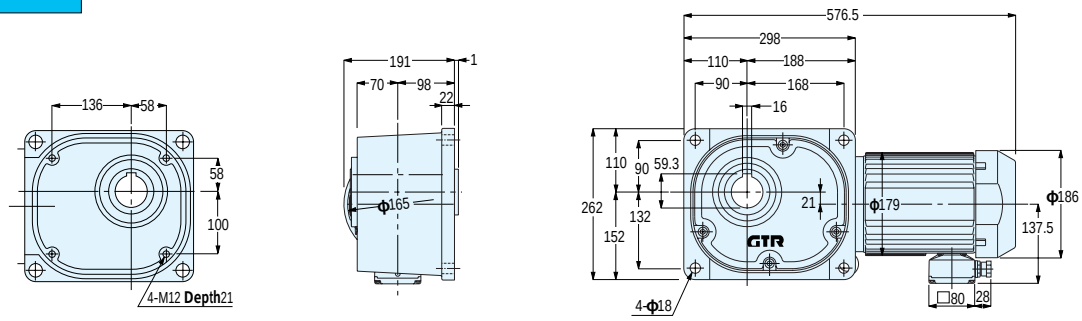



| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current, (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 2.2kW | 220 | 50/60/60 | 200/200/220 | 9.0/8.6/8.0 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | FSW |
| 3-phase 2.2kW | 55 | 1/ 5 | 1/ 5 | 300 | 360 | 61 | 51 | 6.2 | 5.2 | 4700 | 480 | 1177 | 120 | P.C61 Fig.C-37 78kg |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 91 | 76 | 9.3 | 7.8 | 5340 | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 150 | 180 | 122 | 102 | 12.4 | 10.4 | 5780 | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 120 | 144 | 152 | 126 | 15.5 | 12.9 | 6130 | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 100 | 120 | 182 | 152 | 18.6 | 15.5 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 75 | 90 | 244 | 203 | 24.9 | 20.7 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 60 | 72 | 305 | 254 | 31.1 | 25.9 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 50 | 60 | 366 | 305 | 37.3 | 31.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 37.5 | 45 | 487 | 406 | 49.7 | 41.4 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 30 | 36 | 609 | 508 | 62.1 | 51.8 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 25 | 30 | 731 | 609 | 74.6 | 62.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 18.8 | 22.5 | 926 | 771 | 94.5 | 78.7 | 6420 | 655 | 1618 | 165 | |
| | | ＊1/ 100 | 11/1120 | 15 | 18 | 1030 | 964 | 105 | 98.4 | 6420 | 655 | 1618 | 165 | |
| | | ＊1/ 120 | 1/ 118 | 12.5 | 15 | 1030 | 1030 | 105 | 105 | 7500 | 765 | 1863 | 190 | |

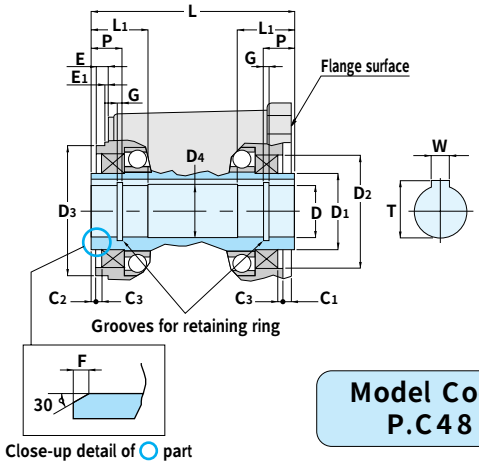
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-37 FSW-55-5～120-220E CAD Data: FSW-55-220E




Round Weight 78kg

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C48
Multipurpose Inverter P.E86～E92
Option P.E78～E92

GTR Gearmotor

Hollow Shaft

# Reducer (Double Shaft Type)

## Model・Type Designation
## Standard Model Lineup

F Series
FS Type

| | | |
|---|---|---|
| Equivalent 4P motor capacity | | Equiv 0.1kW～Equiv2.2kW |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast(Frame No.55: Cast iron) |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 85% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F Series FS Type (Hollow Shaft)

F Series Double Shaft type reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|
| F | S | | 35 | 50 | 040 | | |
| F | S | | 25 | 100 | 010 | X | |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |

| | |
|---|---|
| ①Series Name | F : F Series (Concentric Hollow Shaft・Concentric Solid Shaft) |
| ②Classification by Mount Form | S : Hollow Shaft Type (Note 1) |
| ③Classification by Motor Type | Blank : Without Motor(Double Shaft Type) |
| ④Frame No. and Diameter of Output shaft | Diameter of Output shaft (bore) |
| ⑤Reduction Ratio | 5 : 1／5 ～ 240 : 1／240 |
| ⑥Motor Designation and Capacity | 010 : Equiv 0.1 kW |
| | 020 : Equiv 0.2 kW |
| | 040 : Equiv 0.4 kW |
| | 075 : Equiv 0.75kW |
| | 150 : Equiv 1.5 kW |
| | 220 : Equiv 2.2 kW |
| ⑦Auxiliary Mark | Blank : Standard Specs. |
| | X : Code to identify additional special specs. |
| ⑧Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Blank : Standard Specs. |

Note 1) F Series Double Shaft type reducer is FS type (hollow shaft) only, FF type (solid shaft) is not appllciable.

# Standard Model Lineup F Series FF Type (Hollow Shaft)


FS Type

## FS Type (Hollow Shaft) Model Lineup

| Type | Equivalent of 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Reducer (Double Shaft Type) FS | 0.1kW | 25 | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.2kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.4kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.75kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 1.5kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 2.2kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.



Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

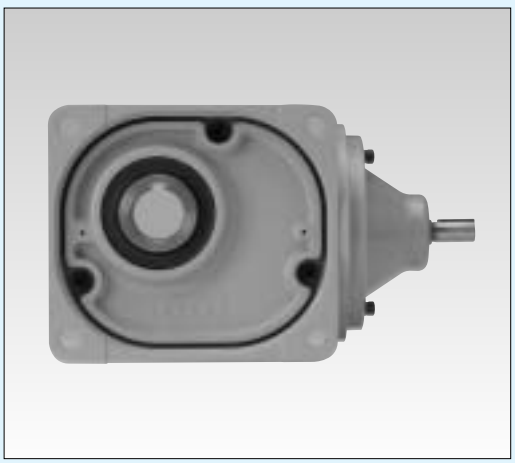
Hollow Shaft

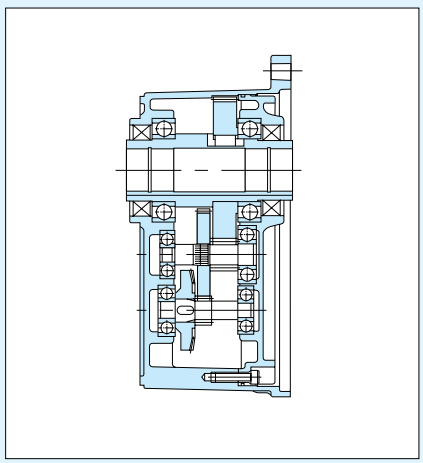
# Reducer (Double Shaft Type)

## Performance Table
## Dimension diagram

F Series
FS Type

【Remark】
●The motor capacities are the values when 4 pole motor is applied.

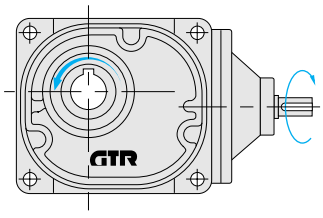




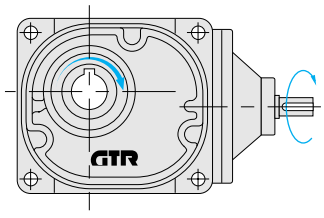
### Relation for Rotating Direction (Viewed from Flange Surface)

The rotation directions shown by arrow just show the rotation in input/output shaft, and do not limit the rotation direction.

| | Motor Capacity | Reduction ratio |
|---|---|---|
| FS Type | 0.1～0.75kW | 1/5～1/60 |
| | 1.5～2.2 kW | 1/5～1/30 |




| | Motor Capacity | Reduction ratio |
|---|---|---|
| FS Type | 0.1～0.75kW | 1/80～1/240 |
| | 1.5～2.2 kW | 1/40～1/240 |



# Reducer (Double Shaft Type) FS Type(Hollow Shaft)

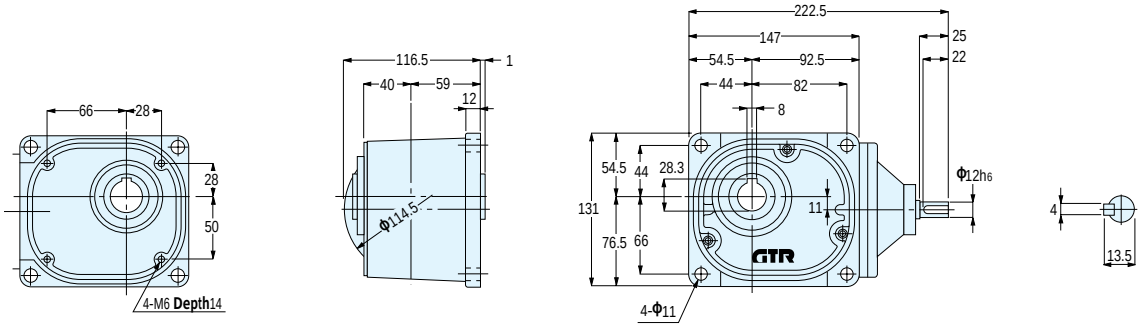
## F Series equiv 0.1kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | FS |
| 0.1kW | 25 | 1/ 10 | 1/ 10 | 5.2 | 0.53 | 196 | 1520 | 20 | 155 | 382 | 39 | P.C68 Fig.C-38 5kg |
| | | 1/ 12.5 | 2/ 25 | 6.5 | 0.66 | | 1620 | | 165 | 402 | 41 | |
| | | 1/ 15 | 1/ 15 | 7.7 | 0.79 | | 1720 | | 175 | 431 | 44 | |
| | | 1/ 20 | 1/ 20 | 11 | 1.1 | | 1860 | | 190 | 471 | 48 | |
| | | 1/ 25 | 19/ 470 | 13 | 1.3 | | 2010 | | 205 | 500 | 51 | |
| | | 1/ 30 | 1/ 30 | 16 | 1.6 | | 2110 | | 215 | 530 | 54 | |
| | | 1/ 40 | 1/ 40 | 21 | 2.1 | | 2300 | | 235 | 579 | 59 | |
| | | 1/ 50 | 1/ 50 | 25 | 2.6 | | 2450 | | 250 | 618 | 63 | |
| | | 1/ 60 | 1/ 60 | 31 | 3.2 | | 2550 | | 260 | 637 | 65 | |
| | | 1/ 80 | 1/ 80 | 39 | 4 | | 2550 | | 260 | 637 | 65 | |
| | | 1/ 100 | 19/1880 | 49 | 5 | | 2550 | | 260 | 637 | 65 | |
| | | 1/ 120 | 1/ 120 | 59 | 6 | | 2550 | | 260 | 637 | 65 | |
| | | 1/ 160 | 1/ 160 | 78 | 8 | | 2550 | | 260 | 637 | 65 | |
| | | 1/ 200 | 1/ 200 | 98 | 10 | | 2550 | | 260 | 637 | 65 | |
| | | ∗1/ 240 | 1/ 240 | 101 | 10.3 | | 2550 | | 260 | 637 | 65 | |

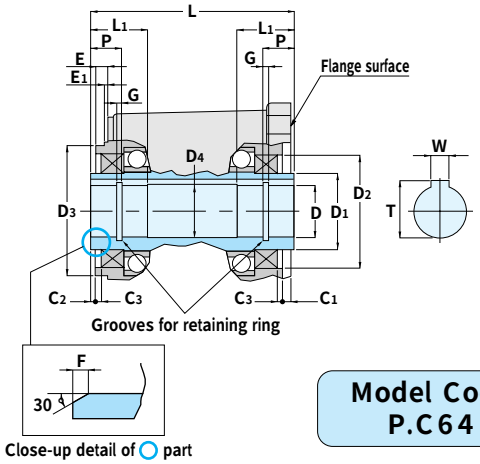
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

### Fig.C-38 FS-25-10～240-（010） CAD Data: FS-25-010




Round Weight 5kg

## Detailed dimension diagram for FS-Type output shaft

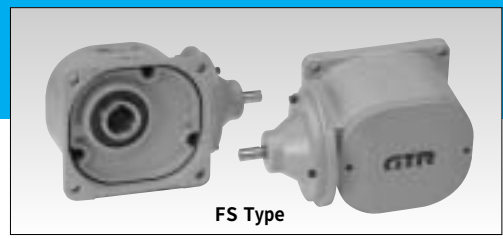



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | ϕ25 | ϕ39 | ϕ58 | ϕ66 | ϕ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C64
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

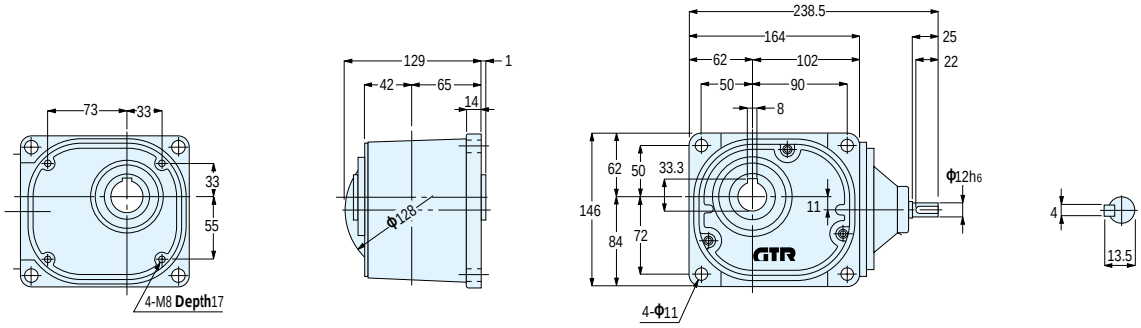
# F Series equiv 0.2kW


FS Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. N | | Allowable O.H.L. kgf | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N•m | kgf•m | input shaft | output shaft | input shaft | output shaft | N | kgf | FS |
| 0.2kW | 30 | 1/ 5 | 1/ 5 | 5.5 | 0.56 | 245 | 1520 | 25 | 155 | 382 | 39 | P.C69 Fig.C-39 7kg |
| | | 1/ 7.5 | 2/ 15 | 8.3 | 0.85 | | 1760 | | 180 | 441 | 45 | |
| | | 1/ 10 | 1/ 10 | 11 | 1.1 | | 1910 | | 195 | 481 | 49 | |
| | | 1/ 12.5 | 19/ 235 | 14 | 1.4 | | 2060 | | 210 | 520 | 53 | |
| | | 1/ 15 | 1/ 15 | 17 | 1.7 | | 2160 | | 220 | 539 | 55 | |
| | | 1/ 20 | 1/ 20 | 23 | 2.3 | | 2400 | | 245 | 598 | 61 | |
| | | 1/ 25 | 1/ 25 | 27 | 2.8 | | 2550 | | 260 | 637 | 65 | |
| | | 1/ 30 | 1/ 30 | 33 | 3.4 | | 2650 | | 270 | 667 | 68 | |
| | | 1/ 40 | 1/ 40 | 44 | 4.5 | | 2840 | | 290 | 716 | 73 | |
| | | 1/ 50 | 1/ 50 | 55 | 5.6 | | 2990 | | 305 | 745 | 76 | |
| | | 1/ 60 | 1/ 60 | 67 | 6.8 | | 3090 | | 315 | 775 | 79 | |
| | | 1/ 80 | 1/ 80 | 84 | 8.6 | | 3090 | | 315 | 775 | 79 | |
| | | 1/ 100 | 19/1880 | 105 | 10.7 | | 3140 | | 320 | 785 | 80 | |
| | | 1/ 120 | 1/ 120 | 126 | 12.9 | | 3140 | | 320 | 785 | 80 | |
| | | 1/ 160 | 1/ 160 | 169 | 17.2 | | 3140 | | 320 | 785 | 80 | |
| | | ∗1/ 200 | 1/ 200 | 184 | 18.8 | | 3140 | | 320 | 785 | 80 | |
| | | ∗1/ 240 | 1/ 240 | 184 | 18.8 | | 3140 | | 320 | 785 | 80 | |

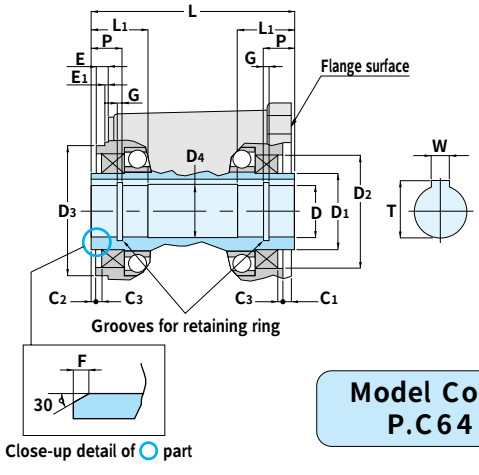
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-39 FS-30-5～240-（020） CAD Data: FS-30-020




Round Weight 7kg

## ■Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | φ30 | φ44 | φ65 | φ75 | φ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C64
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

# Reducer (Double Shaft Type) FS Type(Hollow Shaft)

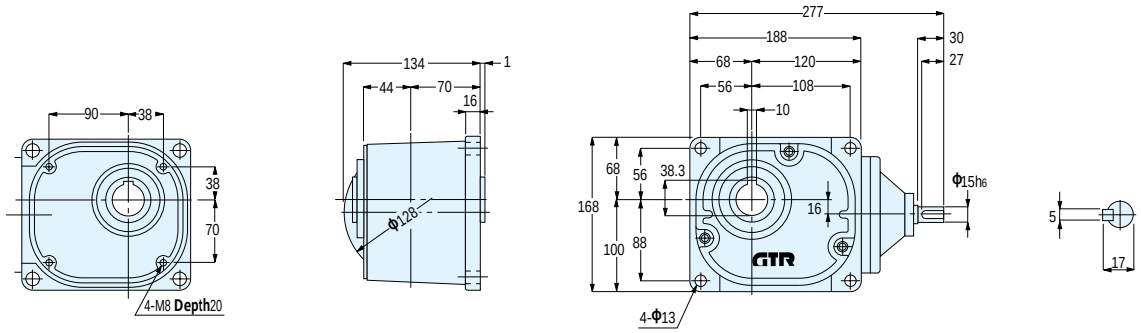
## F Series equiv 0.4kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | FS |
| 0.4kW | 35 | 1/ 5 | 1/ 5 | 11 | 1.1 | 294 | 1960 | 30 | 200 | 490 | 50 | P.C70 Fig.C-40 9kg |
| | | 1/ 7.5 | 2/ 15 | 17 | 1.7 | | 2250 | | 230 | 569 | 58 | |
| | | 1/ 10 | 1/ 10 | 23 | 2.3 | | 2450 | | 250 | 618 | 63 | |
| | | 1/ 12.5 | 19/ 235 | 27 | 2.8 | | 2600 | | 265 | 647 | 66 | |
| | | 1/ 15 | 1/ 15 | 33 | 3.4 | | 2740 | | 280 | 686 | 70 | |
| | | 1/ 20 | 1/ 20 | 44 | 4.5 | | 2990 | | 305 | 745 | 76 | |
| | | 1/ 25 | 1/ 25 | 55 | 5.6 | | 3190 | | 325 | 794 | 81 | |
| | | 1/ 30 | 1/ 30 | 67 | 6.8 | | 3280 | | 335 | 824 | 84 | |
| | | 1/ 40 | 1/ 40 | 88 | 9 | | 3480 | | 355 | 873 | 89 | |
| | | 1/ 50 | 1/ 50 | 111 | 11.3 | | 3480 | | 355 | 873 | 89 | |
| | | 1/ 60 | 1/ 60 | 133 | 13.6 | | 3480 | | 355 | 873 | 89 | |
| | | 1/ 80 | 1/ 80 | 169 | 17.2 | | 3480 | | 355 | 873 | 89 | |
| | | 1/ 100 | 19/1880 | 211 | 21.5 | | 3530 | | 360 | 883 | 90 | |
| | | 1/ 120 | 1/ 120 | 253 | 25.8 | | 3530 | | 360 | 883 | 90 | |
| | | ∗1/ 160 | 1/ 160 | 270 | 27.6 | | 3630 | | 370 | 912 | 93 | |
| | | ∗1/ 200 | 1/ 200 | 270 | 27.6 | | 3630 | | 370 | 912 | 93 | |
| | | ∗1/ 240 | 1/ 240 | 270 | 27.6 | | 3630 | | 370 | 912 | 93 | |

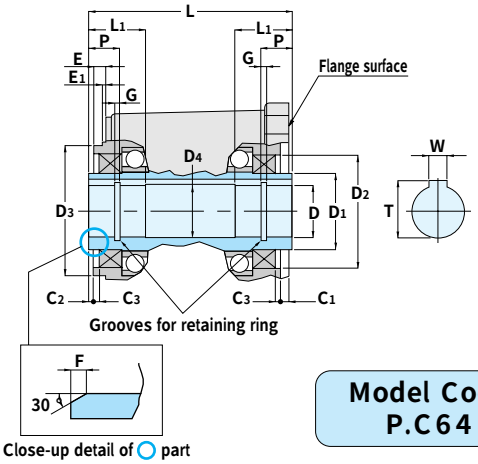
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-40** FS-35-10～240-（040） CAD Data: FS-35-040




Round Weight 9kg

## Detailed dimension diagram for FS-Type output shaft

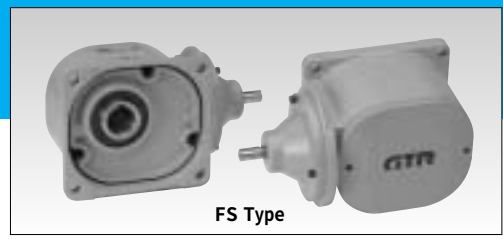



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | φ35 | φ49 | φ72 | φ85 | φ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C64
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

# F Series equiv 0.75kW

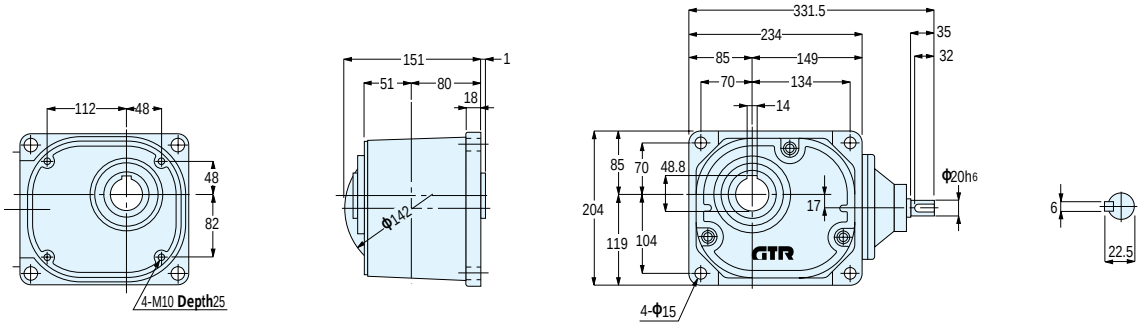


FS Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. N | | Allowable O.H.L. kgf | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N•m | kgf•m | input shaft | output shaft | input shaft | output shaft | N | kgf | FS |
| 0.75kW | 45 | 1/ 5 | 1/ 5 | 21 | 2.1 | 392 | 2940 | 40 | 300 | 735 | 75 | P.C71 Fig.C-41 15kg |
| | | 1/ 7.5 | 2/ 15 | 31 | 3.2 | | 3330 | | 340 | 834 | 85 | |
| | | 1/ 10 | 1/ 10 | 41 | 4.2 | | 3630 | | 370 | 912 | 93 | |
| | | 1/ 12.5 | 19/ 235 | 52 | 5.3 | | 3920 | | 400 | 980 | 100 | |
| | | 1/ 15 | 1/ 15 | 63 | 6.4 | | 4070 | | 415 | 1030 | 105 | |
| | | 1/ 20 | 1/ 20 | 83 | 8.5 | | 4460 | | 455 | 1079 | 110 | |
| | | 1/ 25 | 1/ 25 | 104 | 10.6 | | 4700 | | 480 | 1177 | 120 | |
| | | 1/ 30 | 1/ 30 | 124 | 12.7 | | 4750 | | 485 | 1177 | 120 | |
| | | 1/ 40 | 1/ 40 | 166 | 16.9 | | 4750 | | 485 | 1177 | 120 | |
| | | 1/ 50 | 1/ 50 | 208 | 21.2 | | 4750 | | 485 | 1177 | 120 | |
| | | 1/ 60 | 1/ 60 | 249 | 25.4 | | 4750 | | 485 | 1177 | 120 | |
| | | 1/ 80 | 1/ 80 | 316 | 32.2 | | 4750 | | 485 | 1177 | 120 | |
| | | 1/ 100 | 19/1880 | 395 | 40.3 | | 4750 | | 485 | 1177 | 120 | |
| | | 1/ 120 | 1/ 120 | 473 | 48.3 | | 4750 | | 485 | 1177 | 120 | |
| | | ＊1/ 160 | 1/ 160 | 554 | 56.5 | | 5190 | | 530 | 1275 | 130 | |
| | | ＊1/ 200 | 1/ 200 | 554 | 56.5 | | 5190 | | 530 | 1275 | 130 | |
| | | ＊1/ 240 | 1/ 240 | 554 | 56.5 | | 5190 | | 530 | 1275 | 130 | |

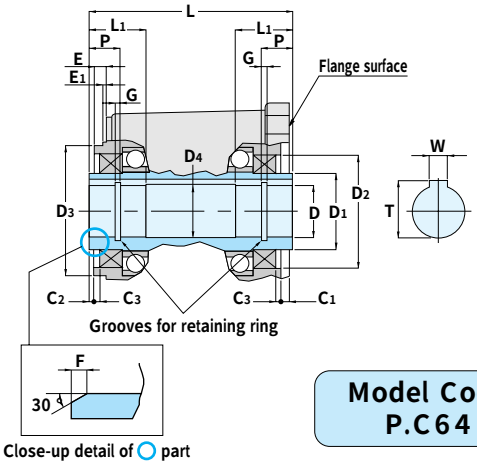
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-41 FS-45-5〜240-（075） CAD Data: FS-45-075




Round Weight 15kg

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | φ45 | φ64 | φ85 | φ100 | φ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C64
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78〜E85

# Reducer (Double Shaft Type) FS Type(Hollow Shaft)

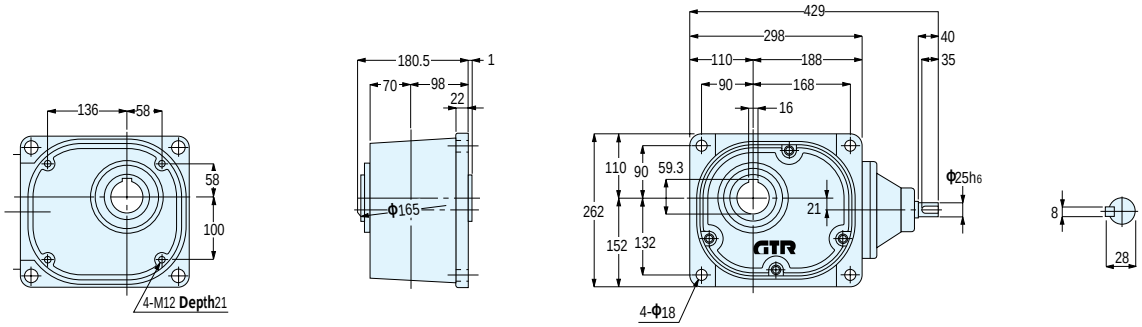
## F Series equiv 1.5kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | FS |
| 1.5kW | 55 | 1/ 5 | 1/ 5 | 41 | 4.2 | 392 | 4700 | 40 | 480 | 1177 | 120 | P.C72 Fig.C-42 54kg |
| | | 1/ 7.5 | 2/ 15 | 63 | 6.4 | | 5340 | | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 83 | 8.5 | | 5780 | | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 104 | 10.6 | | 6130 | | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 124 | 12.7 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 166 | 16.9 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 208 | 21.2 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 249 | 25.4 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 332 | 33.9 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 416 | 42.4 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 498 | 50.8 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 631 | 64.4 | | 6420 | | 655 | 1618 | 165 | |
| | | 1/ 100 | 11/1120 | 789 | 80.5 | | 6420 | | 655 | 1618 | 165 | |
| | | 1/ 120 | 1/ 118 | 947 | 96.6 | | 7500 | | 765 | 1863 | 190 | |
| | | ∗1/ 160 | 7/1100 | 1030 | 105 | | 8330 | | 850 | 2059 | 210 | |
| | | ∗1/ 200 | 11/2240 | 1030 | 105 | | 9020 | | 920 | 2256 | 230 | |
| | | ∗1/ 240 | 1/ 236 | 1030 | 105 | | 9800 | | 1000 | 2452 | 250 | |

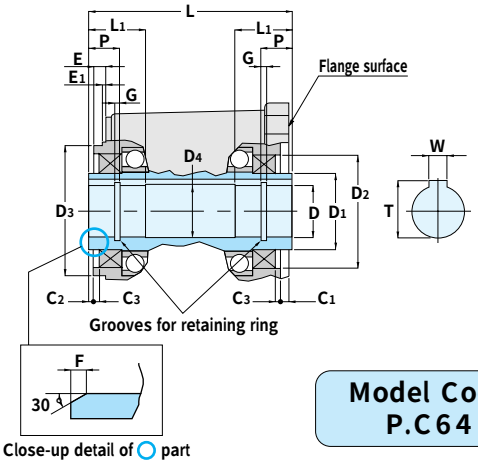
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-42** FS-55-5～240-（150） CAD Data: FS-55-150




Round Weight 54kg

## Detailed dimension diagram for FS-Type output shaft

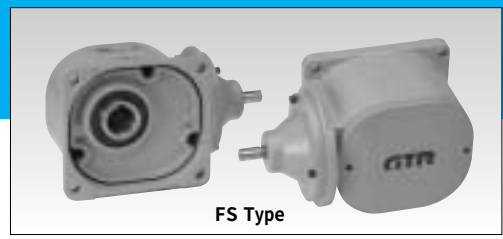



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C64
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

# F Series equiv 2.2kW

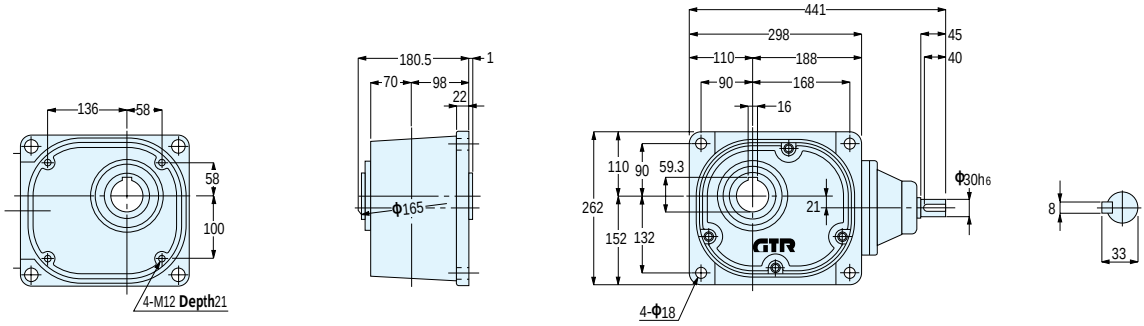


FS Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N•m | kgf•m | input shaft | output shaft | input shaft | output shaft | N | kgf | FS |
| 2.2kW | 55 | 1/ 5 | 1/ 5 | 61 | 6.2 | 392 | 4700 | 40 | 480 | 1177 | 120 | P.C73 Fig.C-43 55kg |
| | | 1/ 7.5 | 2/ 15 | 91 | 9.3 | | 5340 | | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 122 | 12.4 | | 5780 | | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 152 | 15.5 | | 6130 | | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 182 | 18.6 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 244 | 24.9 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 305 | 31.1 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 366 | 37.3 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 487 | 49.7 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 609 | 62.1 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 731 | 74.6 | | 6320 | | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 926 | 94.5 | | 6420 | | 655 | 1618 | 165 | |
| | | ∗1/ 100 | 11/1120 | 1030 | 105 | | 6420 | | 655 | 1618 | 165 | |
| | | ∗1/ 120 | 1/ 118 | 1030 | 105 | | 7500 | | 765 | 1863 | 190 | |

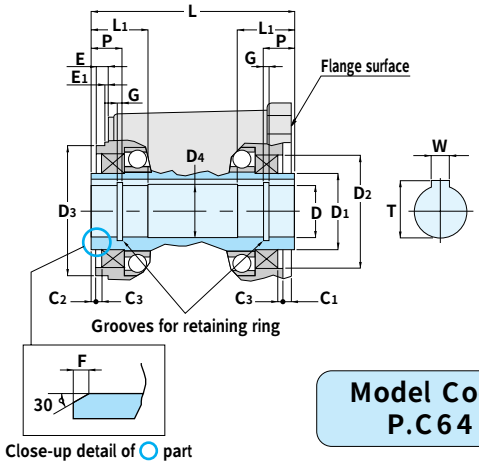
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-43 FS-55-5〜120-（220） CAD Data: FS-55-220




Round Weight 55kg

## ■Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C64
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78〜E85

GTR Gearmotor

Hollow Shaft

# S-Type Reducer
## (Designated Motor Attachable)

## Model・Type Designation
## Standard Model Lineup

F Series
FS Type

| | | |
|---|---|---|
| Equivalent 4P motor capacity | | Equiv 0.1kW～Equiv2.2kW |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast(Frame No.55: Cast iron) |
| Ambient Conditions | Ambient Temperature | −10℃～40℃ |
| | Ambient Humidity | 85% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F Series FS Type (Hollow Shaft)

F Series S-Type Reducer are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Auxiliary Mark |
|---|---|---|---|---|---|---|
| F | S | S | 35 | 50 | 040 | |
| F | S | S | 25 | 100 | 010 | X |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | |
|---|---|---|
| ①Series Name | F | : F Series (Concentric Hollow Shaft・Concentric Solid Shaft) |
| ②Classification by Mount Form | S | : Hollow Shaft Type (Note 1) |
| ③Classification by Motor Type | S | : Designated Motor Attachable (S-Type) |
| ④Frame No. and Diameter of Output shaft | Diameter of Output shaft (bore) | |
| ⑤Reduction Ratio | 5 : 1／5 ～ 240 : 1／240 | |
| ⑥Motor Designation and Capacity | 010 | : Equiv 0.1 kW |
| | 020 | : Equiv 0.2 kW |
| | 040 | : Equiv 0.4 kW |
| | 075 | : Equiv 0.75 kW |
| | 150 | : Equiv 1.5 kW |
| | 220 | : Equiv 2.2 kW |
| ⑦Auxiliary Mark | Blank | : Standard Specs. |
| | X | : Code to identify additional special specs. |

Note 1) F Series Double Shaft type reducer is FS type (hollow shaft) only, FF type (solid shaft) is not appllciable.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup F Series FS Type (Hollow Shaft)


FS Type

## FS Type (Hollow Shaft) Model Lineup

| Type | Equivalent of 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| S-Type Reducer FSS | 0.1kW | 25 | 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.2kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.4kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 0.75kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 1.5kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 1/160 1/200 1/240 |
| | 2.2kW | 55 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 1/80 1/100 1/120 |

Note 1) The models enclosed with ▭ are limited torque type.
Be sure to check allowable torque in the performance table.


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Hollow Shaft

# S-Type Reducer
## (Designated Motor Attachable)

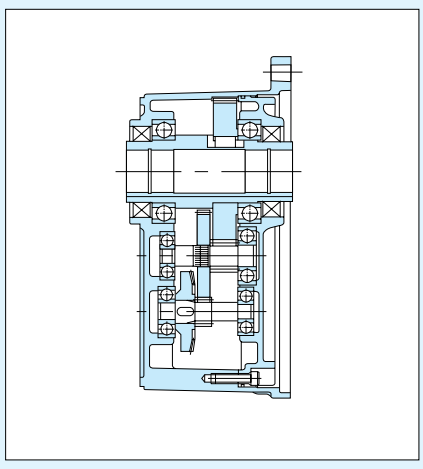
## Performance Table
## Dimension diagram

F Series
FS Type

**【Remarks】**

- Output Shaft allowable torques are the values when using 4-pole motor.
- In case of using with motors other than 4-pole motor, the output allowable torque can be obtained by multiplying the torque correction coefficient indicated in page E46, to the written value.
- The direction of rotation of the output shaft against the same of the output/input shaft are shown in the page C67.





Designated Motor Attachable

# S-Type Reducer FS Type (Hollow Shaft)

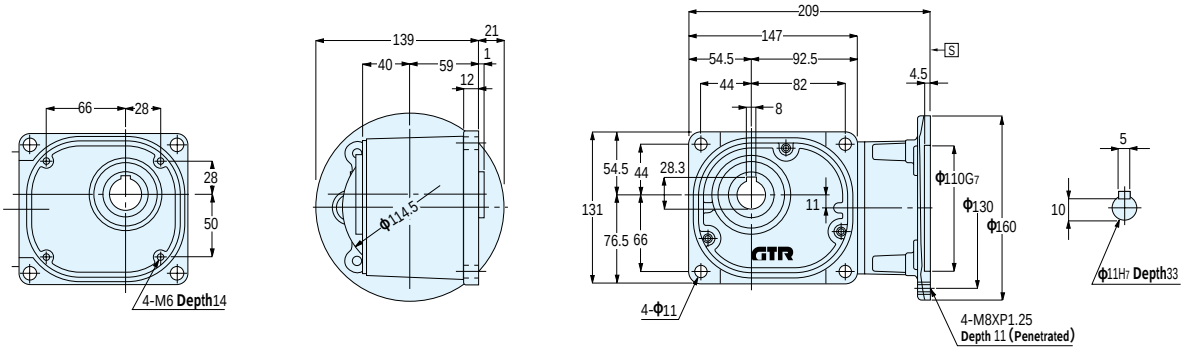
## F Series equiv 0.1kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight FSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.1kW | 25 | 1/ 10 | 1/ 10 | 5.2 | 4.3 | 0.53 | 0.44 | 1520 | 155 | 382 | 39 | P.C80 Fig.C-44 5.5kg |
| | | 1/ 12.5 | 2/ 25 | 6.5 | 5.4 | 0.66 | 0.55 | 1620 | 165 | 402 | 41 | |
| | | 1/ 15 | 1/ 15 | 7.7 | 6.5 | 0.79 | 0.66 | 1720 | 175 | 431 | 44 | |
| | | 1/ 20 | 1/ 20 | 11 | 8.6 | 1.1 | 0.88 | 1860 | 190 | 471 | 48 | |
| | | 1/ 25 | 19/ 470 | 13 | 11 | 1.3 | 1.1 | 2010 | 205 | 500 | 51 | |
| | | 1/ 30 | 1/ 30 | 16 | 13 | 1.6 | 1.3 | 2110 | 215 | 530 | 54 | |
| | | 1/ 40 | 1/ 40 | 21 | 18 | 2.1 | 1.8 | 2300 | 235 | 579 | 59 | |
| | | 1/ 50 | 1/ 50 | 25 | 22 | 2.6 | 2.2 | 2450 | 250 | 618 | 63 | |
| | | 1/ 60 | 1/ 60 | 31 | 25 | 3.2 | 2.6 | 2550 | 260 | 637 | 65 | |
| | | 1/ 80 | 1/ 80 | 39 | 32 | 4 | 3.3 | 2550 | 260 | 637 | 65 | |
| | | 1/ 100 | 19/1880 | 49 | 41 | 5 | 4.2 | 2550 | 260 | 637 | 65 | |
| | | 1/ 120 | 1/ 120 | 59 | 49 | 6 | 5 | 2550 | 260 | 637 | 65 | |
| | | 1/ 160 | 1/ 160 | 78 | 66 | 8 | 6.7 | 2550 | 260 | 637 | 65 | |
| | | 1/ 200 | 1/ 200 | 98 | 81 | 10 | 8.3 | 2550 | 260 | 637 | 65 | |
| | | ∗1/ 240 | 1/ 240 | 101 | 98 | 10.3 | 10 | 2550 | 260 | 637 | 65 | |

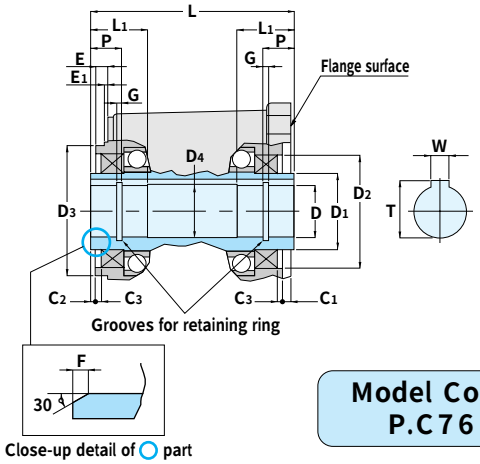
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-44** FSS-25-10～240-（010） CAD Data: FSS-25-010




Round Weight 5.5kg

## Detailed dimension diagram for FS-Type output shaft

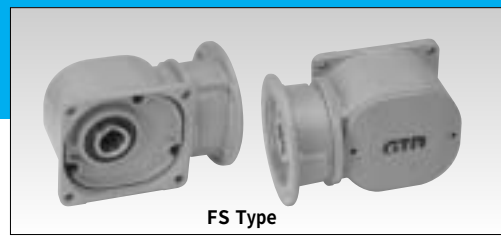



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | φ25 | φ39 | φ58 | φ66 | φ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C76
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

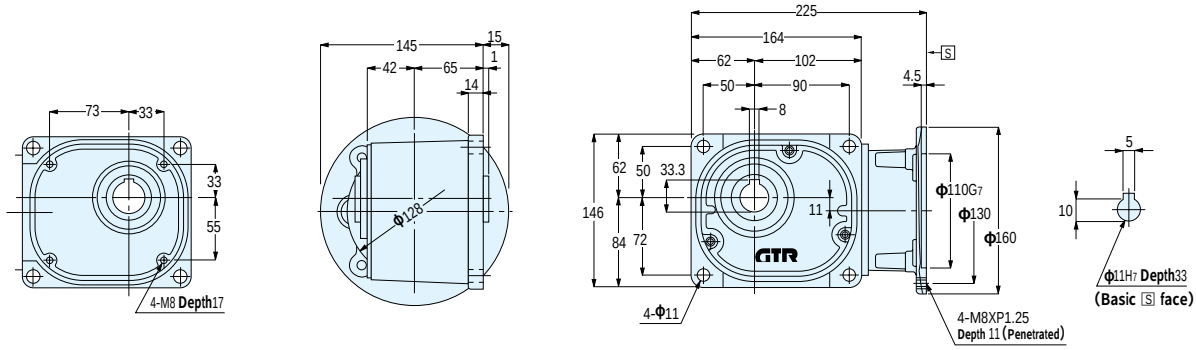
# F Series equiv 0.2kW


FS Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight FSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2kW | 30 | 1/ 5 | 1/ 5 | 5.5 | 4.6 | 0.56 | 0.47 | 1520 | 155 | 382 | 39 | P.C81 Fig.C-45 7.5kg |
| | | 1/ 7.5 | 2/ 15 | 8.3 | 7 | 0.85 | 0.71 | 1760 | 180 | 441 | 45 | |
| | | 1/ 10 | 1/ 10 | 11 | 9.2 | 1.1 | 0.94 | 1910 | 195 | 481 | 49 | |
| | | 1/ 12.5 | 19/ 235 | 14 | 12 | 1.4 | 1.2 | 2060 | 210 | 520 | 53 | |
| | | 1/ 15 | 1/ 15 | 17 | 14 | 1.7 | 1.4 | 2160 | 220 | 539 | 55 | |
| | | 1/ 20 | 1/ 20 | 23 | 19 | 2.3 | 1.9 | 2400 | 245 | 598 | 61 | |
| | | 1/ 25 | 1/ 25 | 27 | 24 | 2.8 | 2.4 | 2550 | 260 | 637 | 65 | |
| | | 1/ 30 | 1/ 30 | 33 | 27 | 3.4 | 2.8 | 2650 | 270 | 667 | 68 | |
| | | 1/ 40 | 1/ 40 | 44 | 37 | 4.5 | 3.8 | 2840 | 290 | 716 | 73 | |
| | | 1/ 50 | 1/ 50 | 55 | 46 | 5.6 | 4.7 | 2990 | 305 | 745 | 76 | |
| | | 1/ 60 | 1/ 60 | 67 | 55 | 6.8 | 5.6 | 3090 | 315 | 775 | 79 | |
| | | 1/ 80 | 1/ 80 | 84 | 71 | 8.6 | 7.2 | 3090 | 315 | 775 | 79 | |
| | | 1/ 100 | 19/1880 | 105 | 87 | 10.7 | 8.9 | 3140 | 320 | 785 | 80 | |
| | | 1/ 120 | 1/ 120 | 126 | 105 | 12.9 | 10.7 | 3140 | 320 | 785 | 80 | |
| | | 1/ 160 | 1/ 160 | 169 | 140 | 17.2 | 14.3 | 3140 | 320 | 785 | 80 | |
| | | ∗1/ 200 | 1/ 200 | 184 | 175 | 18.8 | 17.9 | 3140 | 320 | 785 | 80 | |
| | | ∗1/ 240 | 1/ 240 | 184 | 184 | 18.8 | 18.8 | 3140 | 320 | 785 | 80 | |

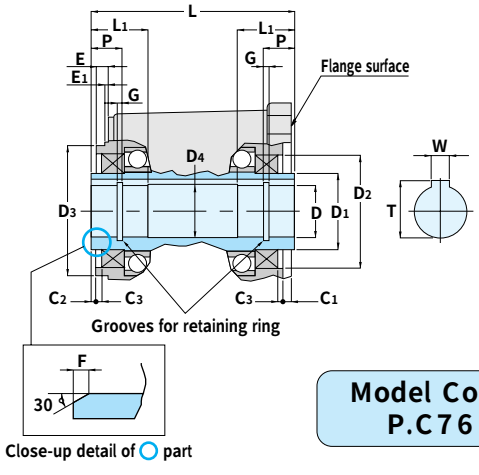
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-45 FSS-30-5～240-（020） CAD Data: FSS-30-020




Round Weight 7.5kg

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | φ30 | φ44 | φ65 | φ75 | φ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C76
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

Designated Motor Attachable

# S-Type Reducer FS Type (Hollow Shaft)

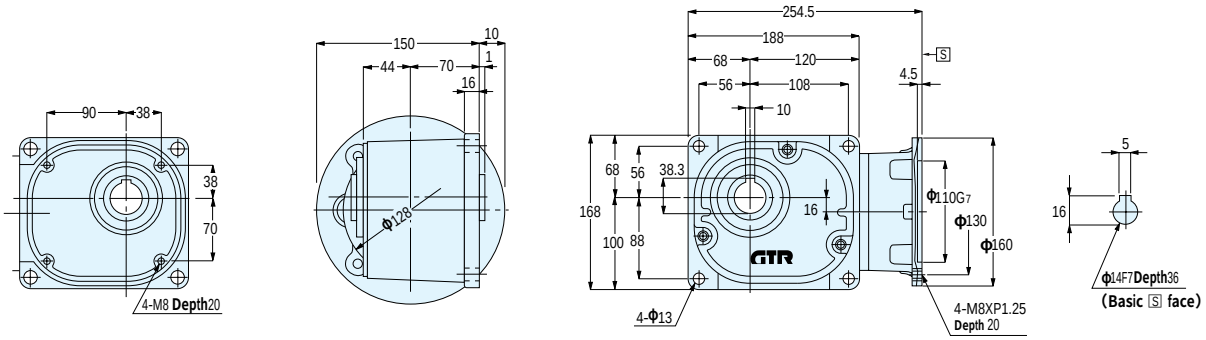
## F Series equiv 0.4kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight FSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.4kW | 35 | 1/ 5 | 1/ 5 | 11 | 9.2 | 1.1 | 0.94 | 1960 | 200 | 490 | 50 | P.C82 Fig.C-46 10kg |
| | | 1/ 7.5 | 2/ 15 | 17 | 14 | 1.7 | 1.4 | 2250 | 230 | 569 | 58 | |
| | | 1/ 10 | 1/ 10 | 23 | 19 | 2.3 | 1.9 | 2450 | 250 | 618 | 63 | |
| | | 1/ 12.5 | 19/ 235 | 27 | 24 | 2.8 | 2.4 | 2600 | 265 | 647 | 66 | |
| | | 1/ 15 | 1/ 15 | 33 | 27 | 3.4 | 2.8 | 2740 | 280 | 686 | 70 | |
| | | 1/ 20 | 1/ 20 | 44 | 37 | 4.5 | 3.8 | 2990 | 305 | 745 | 76 | |
| | | 1/ 25 | 1/ 25 | 55 | 46 | 5.6 | 4.7 | 3190 | 325 | 794 | 81 | |
| | | 1/ 30 | 1/ 30 | 67 | 55 | 6.8 | 5.6 | 3280 | 335 | 824 | 84 | |
| | | 1/ 40 | 1/ 40 | 88 | 74 | 9 | 7.5 | 3480 | 355 | 873 | 89 | |
| | | 1/ 50 | 1/ 50 | 111 | 92 | 11.3 | 9.4 | 3480 | 355 | 873 | 89 | |
| | | 1/ 60 | 1/ 60 | 133 | 111 | 13.6 | 11.3 | 3480 | 355 | 873 | 89 | |
| | | 1/ 80 | 1/ 80 | 169 | 140 | 17.2 | 14.3 | 3480 | 355 | 873 | 89 | |
| | | 1/ 100 | 19/1880 | 211 | 175 | 21.5 | 17.9 | 3530 | 360 | 883 | 90 | |
| | | 1/ 120 | 1/ 120 | 253 | 211 | 25.8 | 21.5 | 3530 | 360 | 883 | 90 | |
| | | ∗1/ 160 | 1/ 160 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | | 1/ 200 | 1/ 200 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |
| | | 1/ 240 | 1/ 240 | 270 | 270 | 27.6 | 27.6 | 3630 | 370 | 912 | 93 | |

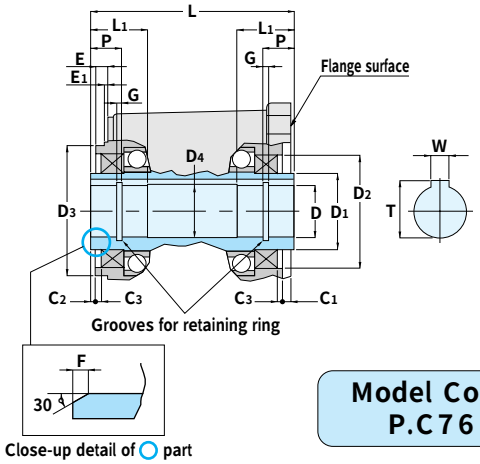
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ∗ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-46** FSS-35-5～240-（040） CAD Data: FSS-35-040




Round Weight 10kg

## Detailed dimension diagram for FS-Type output shaft

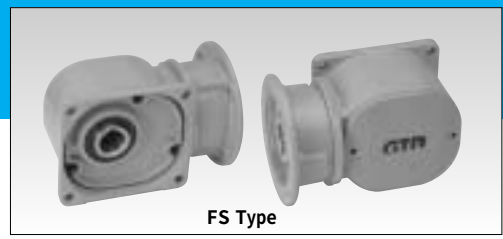



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C76
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

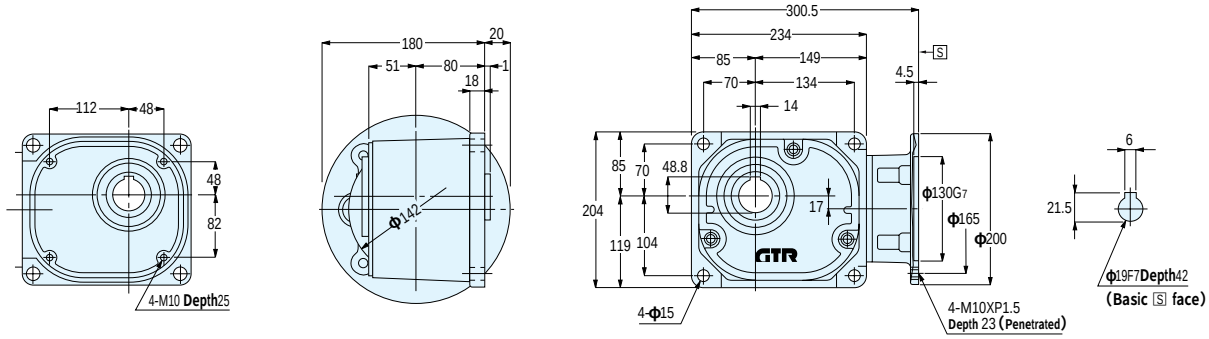
# F Series equiv 0.75kW


FS Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight FSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.75kW | 45 | 1/ 5 | 1/ 5 | 21 | 18 | 2.1 | 1.8 | 2940 | 300 | 735 | 75 | P.C83 Fig.C-47 16kg |
| | | 1/ 7.5 | 2/ 15 | 31 | 25 | 3.2 | 2.6 | 3330 | 340 | 834 | 85 | |
| | | 1/ 10 | 1/ 10 | 41 | 34 | 4.2 | 3.5 | 3630 | 370 | 912 | 93 | |
| | | 1/ 12.5 | 19/ 235 | 52 | 43 | 5.3 | 4.4 | 3920 | 400 | 980 | 100 | |
| | | 1/ 15 | 1/ 15 | 63 | 52 | 6.4 | 5.3 | 4070 | 415 | 1030 | 105 | |
| | | 1/ 20 | 1/ 20 | 83 | 70 | 8.5 | 7.1 | 4460 | 455 | 1079 | 110 | |
| | | 1/ 25 | 1/ 25 | 104 | 86 | 10.6 | 8.8 | 4700 | 480 | 1177 | 120 | |
| | | 1/ 30 | 1/ 30 | 124 | 104 | 12.7 | 10.6 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 40 | 1/ 40 | 166 | 138 | 16.9 | 14.1 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 50 | 1/ 50 | 208 | 173 | 21.2 | 17.7 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 60 | 1/ 60 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 80 | 1/ 80 | 316 | 263 | 32.2 | 26.8 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 100 | 19/1880 | 395 | 328 | 40.3 | 33.5 | 4750 | 485 | 1177 | 120 | |
| | | 1/ 120 | 1/ 120 | 473 | 395 | 48.3 | 40.3 | 4750 | 485 | 1177 | 120 | |
| | | ＊1/ 160 | 1/ 160 | 554 | 526 | 56.5 | 53.7 | 5190 | 530 | 1275 | 130 | |
| | | ＊1/ 200 | 1/ 200 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | 1275 | 130 | |
| | | ＊1/ 240 | 1/ 240 | 554 | 554 | 56.5 | 56.5 | 5190 | 530 | 1275 | 130 | |

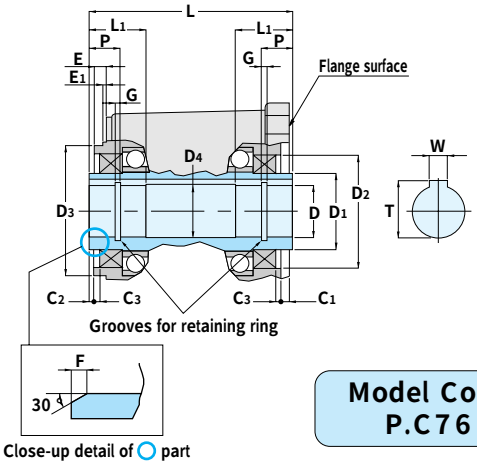
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-47 FSS-45-5～240-（075） CAD Data: FSS-45-075




Round Weight 16kg

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | φ45 | φ64 | φ85 | φ100 | φ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C76
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

Designated Motor Attachable

# S-Type Reducer FS Type (Hollow Shaft)

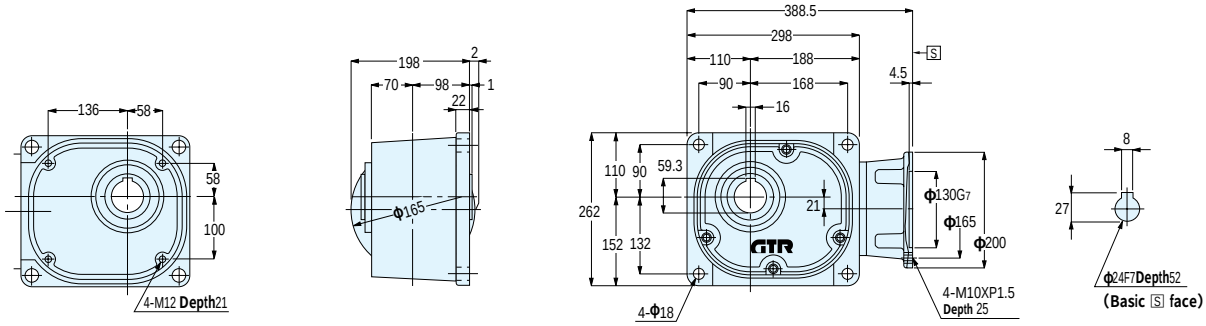
## F Series equiv 1.5kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight FSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5kW | 55 | 1/ 5 | 1/ 5 | 41 | 34 | 4.2 | 3.5 | 4700 | 480 | 1177 | 120 | P.C84 Fig.C-48 55.5kg |
| | | 1/ 7.5 | 2/ 15 | 63 | 52 | 6.4 | 5.3 | 5340 | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 83 | 70 | 8.5 | 7.1 | 5780 | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 104 | 86 | 10.6 | 8.8 | 6130 | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 124 | 104 | 12.7 | 10.6 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 166 | 138 | 16.9 | 14.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 208 | 173 | 21.2 | 17.7 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 249 | 208 | 25.4 | 21.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 332 | 276 | 33.9 | 28.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 416 | 345 | 42.4 | 35.2 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 498 | 416 | 50.8 | 42.4 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 631 | 526 | 64.4 | 53.7 | 6420 | 655 | 1618 | 165 | |
| | | 1/ 100 | 11/1120 | 789 | 658 | 80.5 | 67.1 | 6420 | 655 | 1618 | 165 | |
| | | 1/ 120 | 1/ 118 | 947 | 789 | 96.6 | 80.5 | 7500 | 765 | 1863 | 190 | |
| | | ＊1/ 160 | 7/1100 | 1030 | 1030 | 105 | 105 | 8330 | 850 | 2059 | 210 | |
| | | ＊1/ 200 | 11/2240 | 1030 | 1030 | 105 | 105 | 9020 | 920 | 2256 | 230 | |
| | | ＊1/ 240 | 1/ 236 | 1030 | 1030 | 105 | 105 | 9800 | 1000 | 2452 | 250 | |

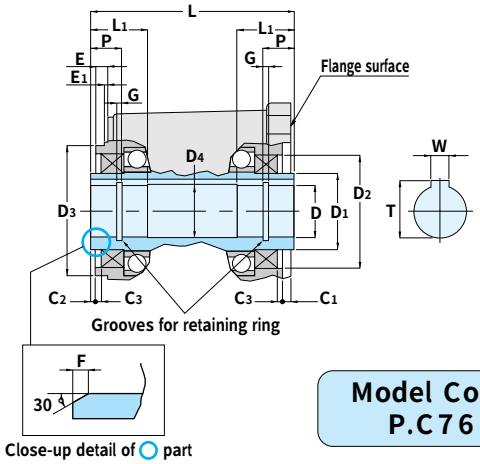
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

**Fig.C-48** FSS-55-5～240-（150） CAD Data: FSS-55-150




Round Weight 55.5kg

## Detailed dimension diagram for FS-Type output shaft

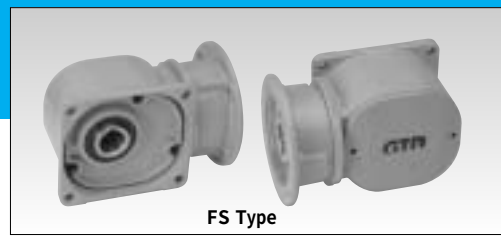



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C76
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

# F Series equiv 2.2kW

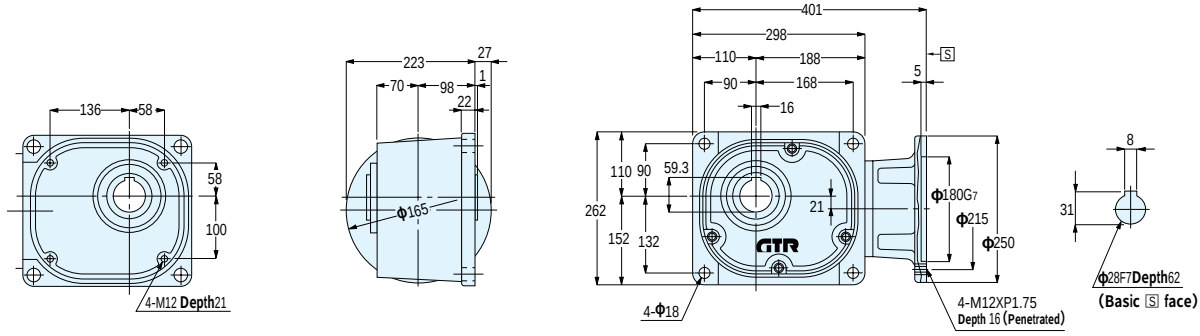


FS Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight FSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.2kW | 55 | 1/ 5 | 1/ 5 | 61 | 51 | 6.2 | 5.2 | 4700 | 480 | 1177 | 120 | P.C85 Fig.C-49 56.5kg |
| | | 1/ 7.5 | 2/ 15 | 91 | 76 | 9.3 | 7.8 | 5340 | 545 | 1324 | 135 | |
| | | 1/ 10 | 1/ 10 | 122 | 102 | 12.4 | 10.4 | 5780 | 590 | 1422 | 145 | |
| | | 1/ 12.5 | 4/ 49 | 152 | 126 | 15.5 | 12.9 | 6130 | 625 | 1520 | 155 | |
| | | 1/ 15 | 1/ 15 | 182 | 152 | 18.6 | 15.5 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 20 | 14/ 275 | 244 | 203 | 24.9 | 20.7 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 25 | 11/ 280 | 305 | 254 | 31.1 | 25.9 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 30 | 2/ 59 | 366 | 305 | 37.3 | 31.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 40 | 1/ 40 | 487 | 406 | 49.7 | 41.4 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 50 | 1/ 49 | 609 | 508 | 62.1 | 51.8 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 60 | 1/ 60 | 731 | 609 | 74.6 | 62.1 | 6320 | 645 | 1569 | 160 | |
| | | 1/ 80 | 7/ 550 | 926 | 771 | 94.5 | 78.7 | 6420 | 655 | 1618 | 165 | |
| | | ＊1/ 100 | 11/1120 | 1030 | 964 | 105 | 98.4 | 6420 | 655 | 1618 | 165 | |
| | | ＊1/ 120 | 1/ 118 | 1030 | 1030 | 105 | 105 | 7500 | 765 | 1863 | 190 | |

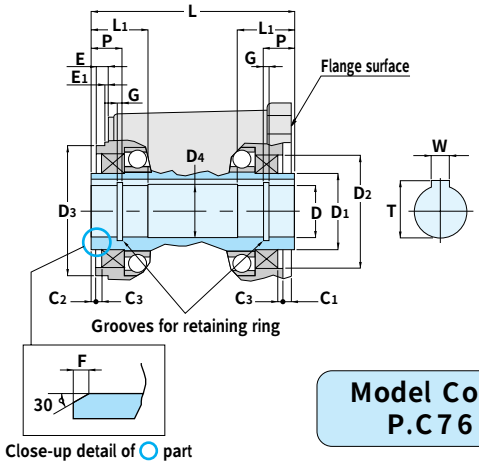
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.
The models marked with ＊ are limited torque type. Be sure to refer to the allowable torque in the Performance Table.

## Fig.C-49 FSS-55-5〜120-（220） CAD Data: FSS-55-220




Round Weight 56.5kg

## Detailed dimension diagram for FS-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.C76
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78〜E93

Concentric Hollow Shaft • Concentric Solid Shaft

# F2 Series Gearmotor • Reducer

## Model • Type Designation Standard Model Lineup

F2 Series

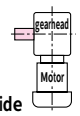
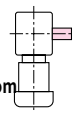
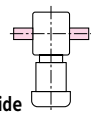

■Gearmotor/Gearmotor with Brake
Model•Type Designation/Standard Model Lineup ····· P. D7
Concentric Hollow Shaft 3-Phase Performance Table/Dimension Diagram ····· P. D11
Concentric Solid Shaft 3-Phase Performance Table/Dimension Diagram ····· P. D19
■Water-Resistant W/SUS Shaft•
Water-Resistant W/Carbon Steel Shaft (IP65)Gearmotor/
Gearmotor with Brake
Model•Type Designation/Standard Model Lineup ····· P. D27
Performance Table/Dimension Diagram ····· P. D31
■Reducer(Double Shaft)
Model•Type Designation/Standard Model Lineup ····· P. D39
Performance Table/Dimension Diagram ····· P. D43
■S-Type Reducer(Designated Motor Attachable)
Model•Type Designation/Standard Model Lineup ····· P. D51
Performance Table/Dimension diagram ····· P. D55

# Model and Type Designation F2 Series

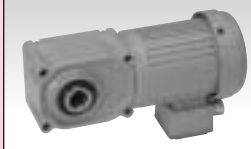
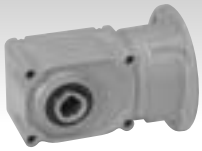
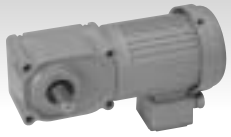
F2S Type(Concentric Hollow Shaft)
F2F Type(Concentric Solid Shaft)

F2 Series gearmotors and reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|---|
| F2 | S | B | – 30 | | – 50 | – T040 | W | A | | |
| F2 | F | M | – 18 | T | – 30 | – T010 | A | | X | TZH3 |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

| | | |
|---|---|---|
| ①Series Name | F2 | : F2 Series(Concentric Hollow Shaft･Concentric Solid Shaft) |
| ②Classification by Mount Form | S | : Hollow Shaft Type |
| | F | : Solid Shaft Type |
| ③Classification by Motor Type | M | : With Motor |
| | B | : With Brake-motor |
| | J | : With Brake Manual Release Device(Option) |
| | W | : With Water-resistant Motor W/SUS Shaft(JIS SUS420J2) Only Hollow Shaft Type |
| | V | : With Water-resistant W/SUS Shaft Brake Motor(JIS SUS420J2) Only Hollow Shaft Type |
| | G | : With Water-resistant Motor W/Carbon Steel Shaft(JIS:S43C) Only Hollow Shaft Type |
| | H | : With Water-resistant W/Carbon Steel Shaft Brake Motor(JIS:S43C) Only Hollow Shaft Type |
| | Blank | : Without Motor(Double Shaft Type) Only Hollow Shaft Type |
| | S | : Designated Motor Attachable Type(S Type) Only Hollow Shaft Type |
| ④Frame Number and Diameter of Output Shaft | Output Shaft Diameter (Hollow Shaft type is the bore and Solid Shaft type is the outside diameter.) | |
| ⑤Shaft Arrangement for Solid Shaft | L: Output shaft on the left viewing from Input shaft side   | R: Output shaft on the right viewing from Input shaft side  |
| | | T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 60 : 1／60 | |
| ⑦Motor Type and Capacity | T010 | : 3-phase 0.1 kW 010:0.1 kW or equiv. (Double S-Type) |
| | T020 | : 3-phase 0.2 kW 020:0.2 kW or equiv. (Double S-Type) |
| | T040 | : 3-phase 0.4 kW 040:0.4 kW or equiv. (Double S-Type) |
| | 075 | : 3-phase 0.75kW 0.75kW or equiv. (Double S-Type) |
| | 150 | : 3-phase 1.5 kW 1.5 kW or equiv. (Double S-Type) |
| ⑧⑨Option<br>Note 1: For the capacity of 50W～0.4kW, with "A" box is the Standard for all voltage, so please indicate "A" at the end of motor capacity. Blank means without terminal box(fly lead). For rectifier insert type Terminal box, please indicate "Z" at the end of the motor capacity. All the gearmotors with the capacity of 0.75～2.2kW are terminal box equipped and have no additional code. For rectifier built-in gearmotors, refer to page E26.<br>Note 2: Water-resistant outdoor gearmotors are equipped with E-Type terminal box as standard specs., therefore, for orders, specify " E " at the end of the capacity code. | Blank | : Standard Voltage<br>3-phase : 200V／50Hz、200V／60Hz、220V／60Hz (Note 1) |
| | W | : High Voltage<br>3-phase : 380V／50Hz、400V／50Hz、400V／60Hz、440V／60Hz (Note 1) |
| | A | : Terminal box (0.1kW～0.4kW standard specs.) (Note 1) |
| | Z | : For 3-phase Brake Motor,Terminal Box with a built-in rectifier(Option for 0.1kW～0.4kW) (Note 1) |
| | E | : Terminal box for water-resistant, type (Standard Specs.) (Note 2) |
| ⑩Auxiliary Code | Blank | : Standard Specs. |
| | X | : Code to identify additional special specs. |
| ⑪Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Instruction for terminal box position.<br>Refer to the specification code list on page E39 for details. | |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

| | Gearmotor Gearmotor with Brake | Reducer (Double Shaft Type) | S-Type Reducer | | Gearmotor Gearmotor with Brake |
|---|---|---|---|---|---|
| F2S Type |  |  |  | F2F Type |  |


Parallel Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch/Brake
- Reducer (Double Shaft)
- S-Type Reducer

Right Angle Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch /Brake
- Reduce (Double Shaft)
- S-Type Reducer

Hollow Shaft Solid Shaft Performance Table/Dimension
- Gearmotor with Brake
- Water-Resistant, Outdoor Gearmotor with Brake
- Reduce (Double Shaft)
- S-Type Reducer

Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
- Gearmotor with Brake
- Water-Resistant, Outdoor Gearmotor with Brake
- Reducer (Parallel Shaft)
- S-Type Reducer

Technical Information

Standard Motors

Cautions for Safety

Option

GT-STEP Index Gearmotor

KOMPASS Gearbox

# Standard Model Lineup F2 Series

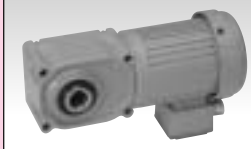
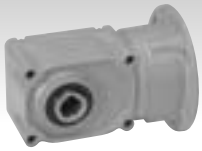
F2S Type(Concentric Hollow Shaft)
F2F Type(Concentric Solid Shaft)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

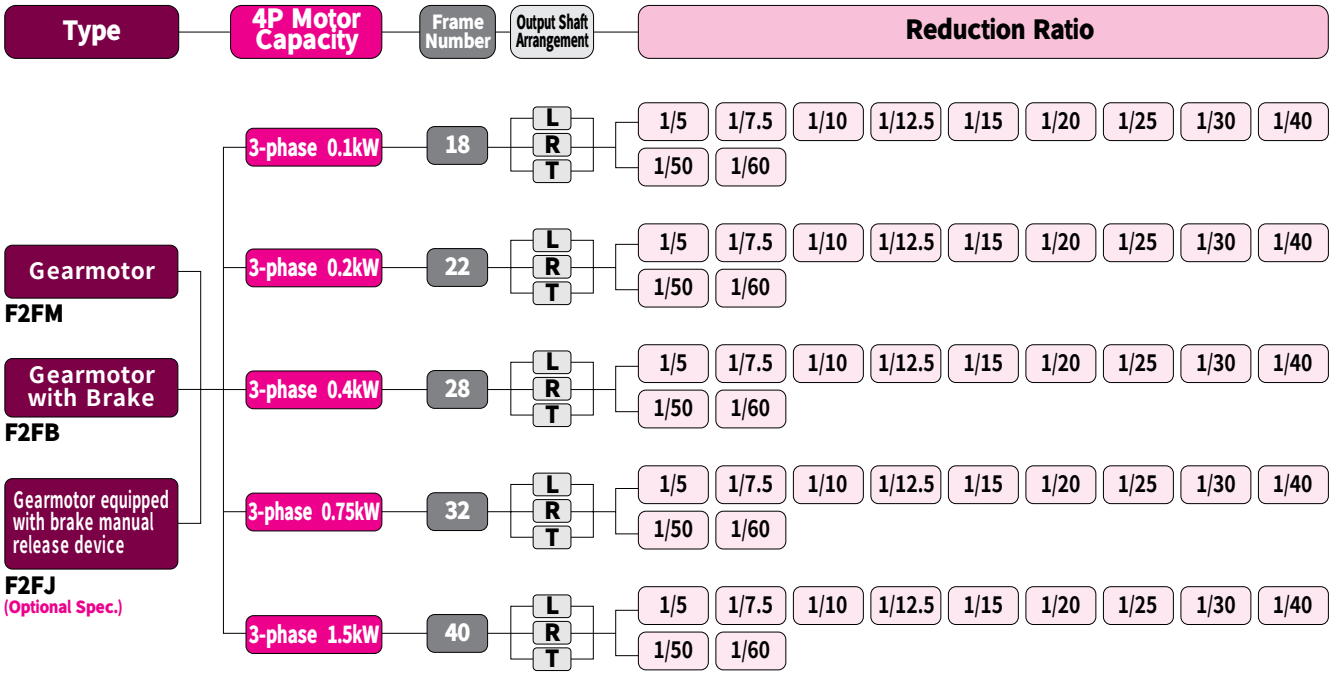
## F2S Type (Hollow Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Gearmotor F2SM / Gearmotor with Brake F2SB / Gearmotor equipped with brake manual release device F2SJ (Optional Spec.) | 3-phase 0.1kW | 20 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.2kW | 25 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.4kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.75kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 1.5kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |

| Type | Equivalent of 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Reducer (Double Shaft Type) F2S / S-Type Reducer F2SS | 0.1kW | 20 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.2kW | 25 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.4kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.75kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 1.5kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |

| F2S Type | Gearmotor<br>Gearmotor with Brake | Reducer<br>(Double Shaft Type) | S-Type Reducer | F2F Type | Gearmotor<br>Gearmotor with Brake |
|---|---|---|---|---|---|
| |  |  |  | |  |

## F2F Type (Solid Shaft) Model Lineup




Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Concentric Hollow Shaft • Concentric Solid Shaft

# Gearmotor
# Gearmotor with Brake

## Model • Type Designation
## Standard Model Lineup

GTR Gearmotor

F2 Series

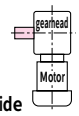
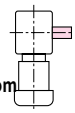
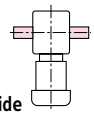
| | | |
|---|---|---|
| Motor Part | Number of phase | 3-phase |
| | Capacity | 0.1kW～1.5kW |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed non-ventilated only for 0.1kW without brake) |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS B 1301-1976 class) |
| | Output Shaft Material | S43C |
| | Case Material | Aluminium die-cast |
| Ambient Conditions | Ambient Temperature | −10°C～40°C |
| | Ambient Humidity | 85% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | Installation Location | Indoors |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F2 Series

F2S Type(Concentric Hollow Shaft)
F2F Type(Concentric Solid Shaft)

F2 Series gearmotors and Gearmotor with Brake are classified by codes as shown below. Specify these codes in your inquiry and order.

| Type | | | Frame Number | Shaft Arrangement | Reduction Ratio | Motor Capacity | Option | | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|---|
| F2 | S | B | 30 | | 50 | T040 | W | A | | |
| F2 | F | M | 18 | T | 30 | T010 | A | | X | TZH3 |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

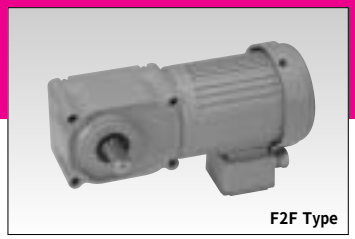
| | | |
|---|---|---|
| ①Series Name | F2 | : F2 Series(Concentric Hollow Shaft･Concentric Solid Shaft) |
| ②Classification by Mount Form | S | : Hollow Shaft Type |
| | F | : Solid Shaft Type |
| ③Classification by Motor Type | M | : With Motor |
| | B | : With Brake-motor |
| | J | : With Brake Manual Release Device(Option) |
| ④Frame Number and Diameter of Output Shaft | Output Shaft Diameter (Hollow Shaft type is the bore and Solid Shaft type is the outside diameter.) | |
| ⑤Shaft Arrangement for Solid Shaft | L: Output shaft on the left viewing from Input shaft side   | R: Output shaft on the right viewing from Input shaft side  |
| | | T: Output shaft on both side viewing from Input shaft side  |
| ⑥Reduction Ratio | 5 : 1／5 ～ 60 : 1／60 | |
| ⑦Motor Type and Capacity | T010 | : 3-phase 0.1 kW |
| | T020 | : 3-phase 0.2 kW |
| | T040 | : 3-phase 0.4 kW |
| | 075 | : 3-phase 0.75kW |
| | 150 | : 3-phase 1.5 kW |
| ⑧⑨Option<br>Note 1: For the capacity 0.1kW～0.4kW, with "A" box is the Standard for all voltage, so please indicate "A" at the end of motor capacity. Blank means without terminal box(fly lead). All of 0.75～1.5kW are terminal box equipped and have no additional code. For rectifier built-in, please refer to page E26. | Blank | : Standard Voltage<br>3-phase : 200V／50Hz、200V／60Hz、220V／60Hz (Note 1) |
| | W | : High Voltage<br>3-phase : 380V／50Hz、400V／50Hz、400V／60Hz、440V／60Hz (Note 1) |
| | A | : Terminal box (0.1kW～0.4kW Standard Specs.) (Note 1) |
| | Z | : For 3-phase Brake Motor,Terminal Box with a built-in rectifier(Option for 0.1kW～0.4kW) (Note 1) |
| ⑩Auxiliary Code | Blank | : Standard Specs. |
| | X | : Code to identify additional special specs. |
| ⑪Spec. Designation<br>Note : Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Instruction for terminal box position.<br>Refer to the specification code list on page E39 for details. | |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup




F2S Type


F2F Type

## F2S Type (Hollow Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Gearmotor F2SM<br>Gearmotor with Brake F2SB<br>Gearmotor equipped with brake manual release device F2SJ (Optional Spec.) | 3-phase 0.1kW | 20 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.2kW | 25 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.4kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.75kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 1.5kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |

## F2F Type (Solid Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Output Shaft Arrangement | Reduction Ratio |
|---|---|---|---|---|
| Gearmotor F2FM<br>Gearmotor with Brake F2FB<br>Gearmotor equipped with brake manual release device F2FJ (Optional Spec.) | 3-phase 0.1kW | 18 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.2kW | 22 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.4kW | 28 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.75kW | 32 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 1.5kW | 40 | L R T | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Concentric Hollow Shaft

# Gearmotor
# Gearmotor with Brake

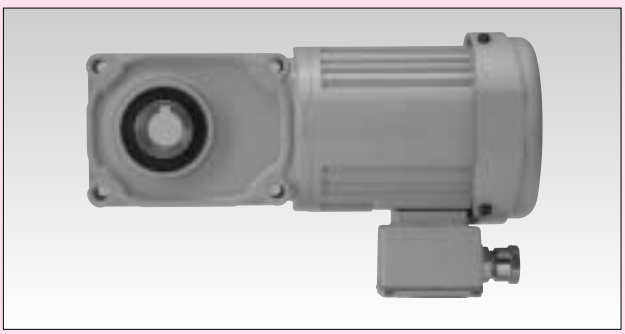
## Performance Table
## Dimension diagram

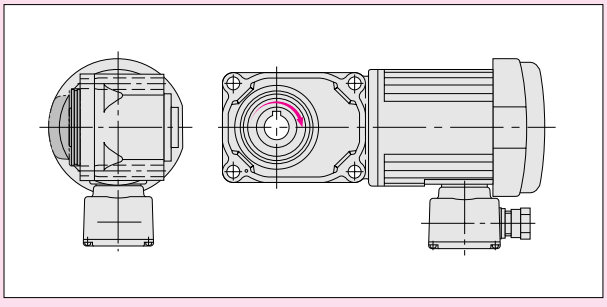
F2 Series
F2S Type

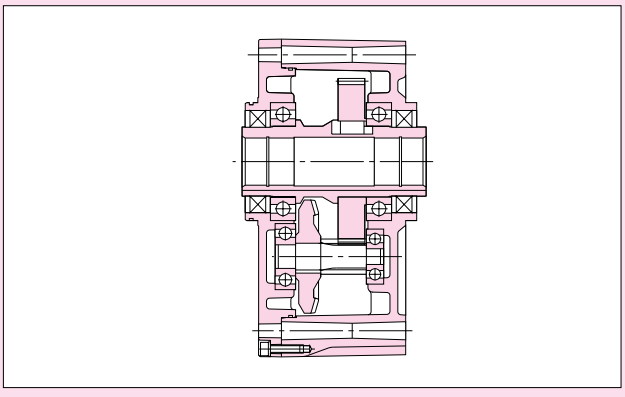
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded area ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, the shaft rotates clockwise when viewing from flange side. (Refer to the diagram shown below.)







# Gearmotor
# Gearmotor with Brake F2S Type (Concentric Hollow Shaft)
## F2 Series 3-phase 0.1kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

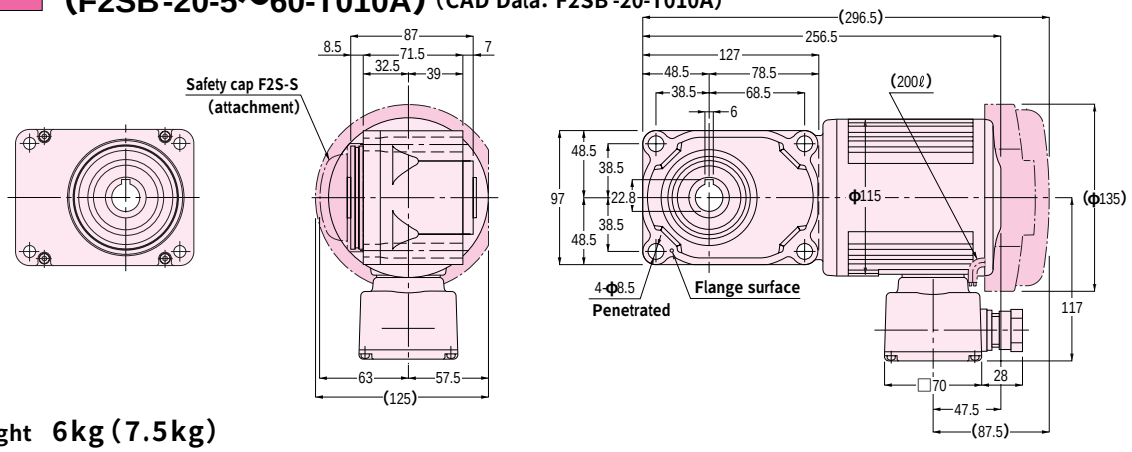
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated (Totally Enclosed fan-cooled) |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SM (F2SB) |
| 3-phase 0.1kW | 20 | 1/ 5 | 1/ 5 | 300 | 360 | 2.5 | 2.2 | 0.26 | 0.22 | 980 | 100 | 244 | 25 | P.D12 Fig.D-1 6kg (7.5kg) |
| | | 1/ 7.5 | 2/15 | 200 | 240 | 3.8 | 3.2 | 0.39 | 0.33 | 1080 | 110 | 270 | 28 | |
| | | 1/10 | 1/10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1180 | 120 | 294 | 30 | |
| | | 1/12.5 | 2/25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1270 | 130 | 316 | 32 | |
| | | 1/15 | 1/15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1320 | 135 | 333 | 34 | |
| | | 1/20 | 1/20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1470 | 150 | 373 | 38 | |
| | | 1/25 | 1/25 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 1570 | 160 | 392 | 40 | |
| | | 1/30 | 2/59 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 1670 | 170 | 422 | 43 | |
| | | 1/40 | 1/40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 1810 | 185 | 451 | 46 | |
| | | 1/50 | 1/50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 1860 | 190 | 471 | 48 | |
| | | 1/60 | 1/59 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 1860 | 190 | 471 | 48 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-1**

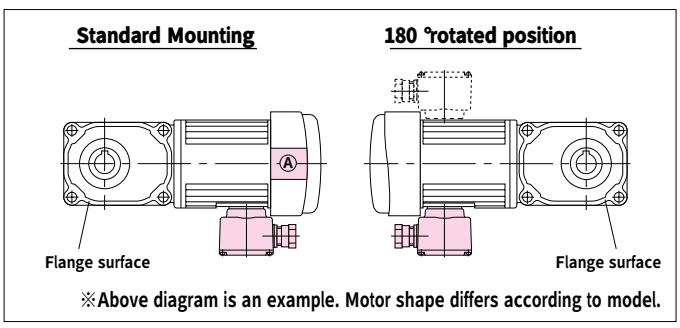
F2SM-20-5～60-T010A CAD Data: F2SM-20-T010A
(F2SB-20-5～60-T010A) (CAD Data: F2SB-20-T010A)




Round Weight 6kg (7.5kg)

## Remarks on Positioning between Terminal box and Flange Surface in F2S Type.

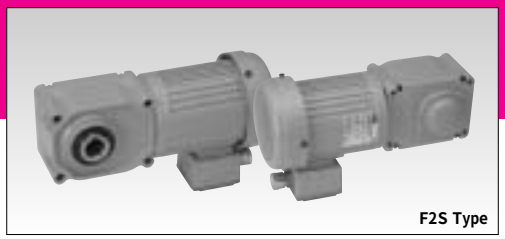
Positioning between the terminal box and the flange surface in F2S Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# F2 Series 3-phase 0.2kW


F2S Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

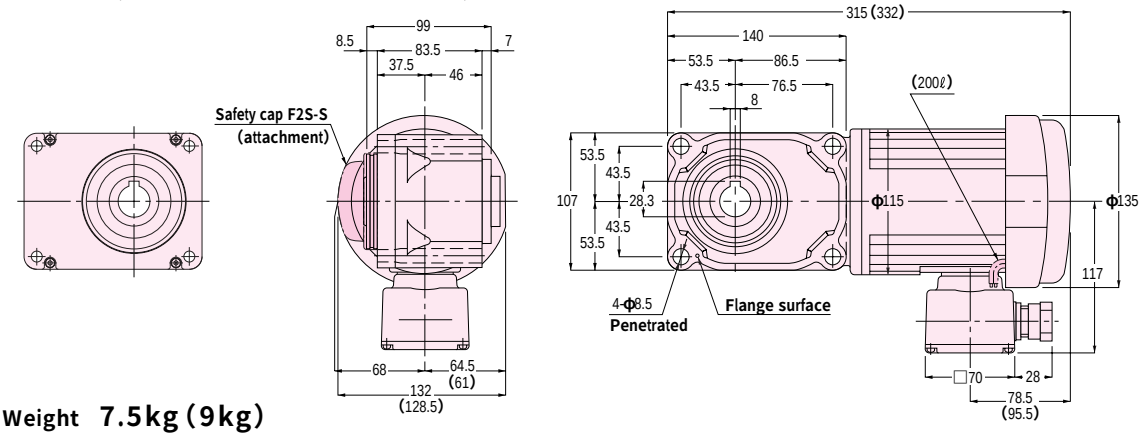
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SM (F2SB) |
| 3-phase 0.2kW | 25 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1230 | 125 | 307 | 31 | P.D13 Fig.D-2 7.5kg (9kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7 | 0.85 | 0.71 | 1370 | 140 | 342 | 35 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | 380 | 39 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 1620 | 165 | 405 | 41 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 1720 | 175 | 429 | 44 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1860 | 190 | 466 | 48 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2010 | 205 | 502 | 51 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2110 | 215 | 527 | 54 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2300 | 235 | 576 | 59 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2450 | 250 | 613 | 63 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 2550 | 260 | 637 | 65 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

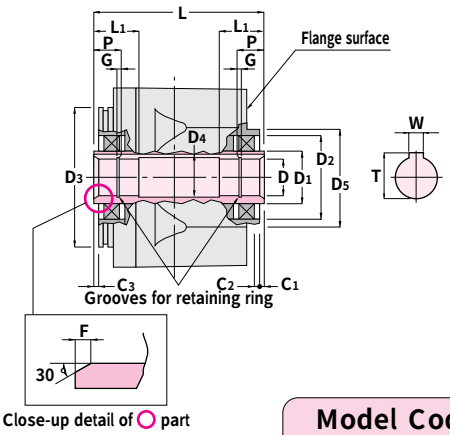
## Fig.D-2

**F2SM-25-5～60-T020A** CAD Data: F2SM-25-T020A
**(F2SB-25-5～60-T020A)** (CAD Data: F2SB-25-T020A)




Round Weight 7.5kg (9kg)

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | φ20 | φ29 | φ46 | φ75 | φ21 | φ53 | 6 | 22.8 | 91 | 24 | 13 | 2 | 3 | 2 | 2 | 1.15 |
| 25 | φ25 | φ39 | φ58 | φ75 | φ26 | φ66 | 8 | 28.3 | 108 | 27 | 14 | 7 | 3 | 2 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor
# Gearmotor with Brake F2S Type (Concentric Hollow Shaft)
## F2 Series 3-phase 0.4kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

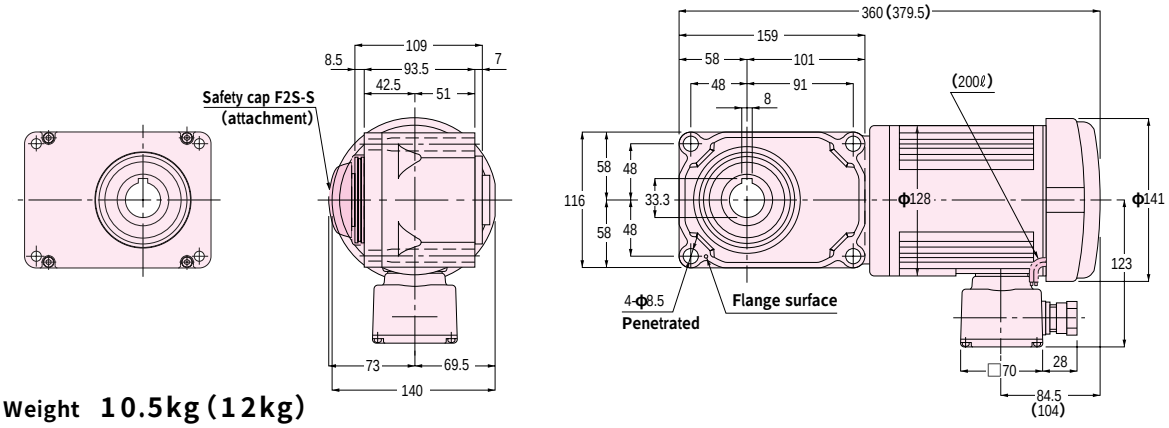
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SM (F2SB) |
| 3-phase 0.4kW | 30 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | 375 | 38 | P.D14 Fig.D-3 10.5kg (12kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 1760 | 180 | 438 | 45 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1910 | 195 | 475 | 48 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 2060 | 210 | 506 | 52 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2160 | 220 | 539 | 55 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2400 | 245 | 600 | 61 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 2550 | 260 | 637 | 65 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 2650 | 270 | 662 | 68 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 2840 | 290 | 711 | 73 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 2990 | 305 | 747 | 76 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3090 | 315 | 767 | 78 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-3**

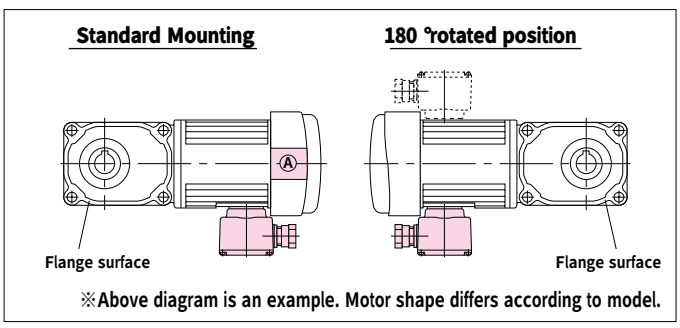
**F2SM-30-5～60-T040A** CAD Data: F2SM-30-T040A
**(F2SB-30-5～60-T040A)** (CAD Data: F2SB-30-T040A)




Round Weight 10.5kg (12kg)

### Remarks on Positioning between Terminal box and Flange Surface in F2S Type.

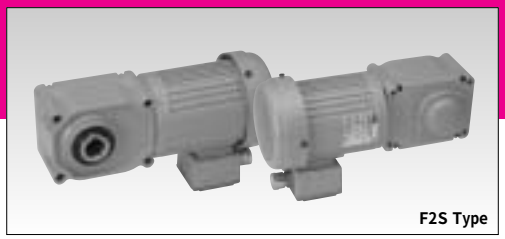
Positioning between the terminal box and the flange surface in F2S Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# F2 Series 3-phase 0.75kW


F2S Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

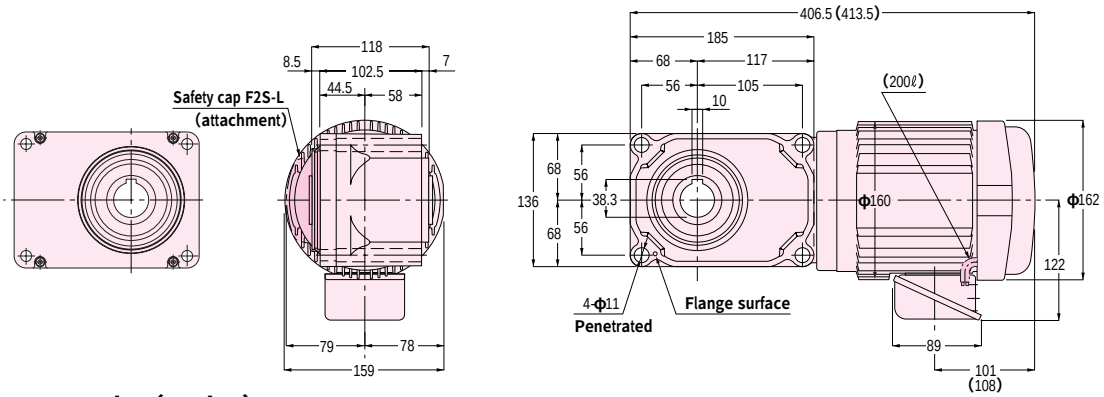
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SM (F2SB) |
| 3-phase 0.75kW | 35 | 1/ 5 | 1/ 5 | 300 | 360 | 21 | 18 | 2.1 | 1.8 | 1960 | 200 | 500 | 51 | P.D15 Fig.D-4 17kg (19kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 31 | 25 | 3.2 | 2.6 | 2250 | 230 | 567 | 58 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 41 | 34 | 4.2 | 3.5 | 2450 | 250 | 613 | 63 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 52 | 43 | 5.3 | 4.4 | 2600 | 265 | 669 | 68 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 63 | 52 | 6.4 | 5.3 | 2740 | 280 | 686 | 70 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 83 | 70 | 8.5 | 7.1 | 2990 | 305 | 747 | 76 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 104 | 86 | 10.6 | 8.8 | 3190 | 325 | 796 | 81 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 124 | 104 | 12.7 | 10.6 | 3280 | 335 | 821 | 84 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 166 | 138 | 16.9 | 14.1 | 3480 | 355 | 870 | 89 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 208 | 173 | 21.2 | 17.7 | 3480 | 355 | 870 | 89 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 249 | 208 | 25.4 | 21.2 | 3480 | 355 | 870 | 89 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

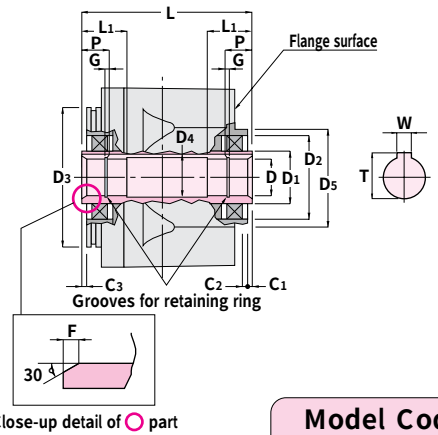
## Fig.D-4

**F2SM-35-5～60-075** CAD Data: F2SM-35-075
**(F2SB-35-5～60-075)** (CAD Data: F2SB-35-075)




Round Weight 17kg (19kg)

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | ϕ75 | 8 | 33.3 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ100 | ϕ36 | ϕ85 | 10 | 38.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# Gearmotor
# Gearmotor with Brake F2S Type (Concentric Hollow Shaft)
## F2 Series 3-phase 1.5kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

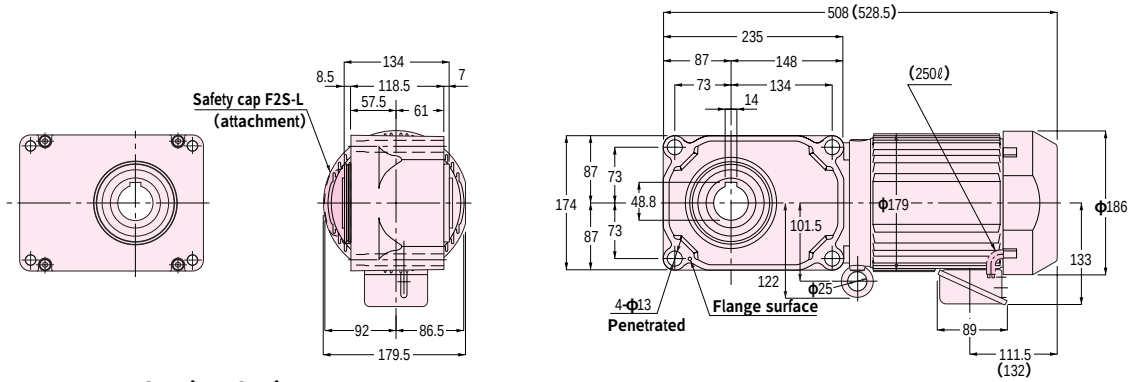
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SM (F2SB) |
| 3-phase 1.5kW | 45 | 1/ 5 | 1/ 5 | 300 | 360 | 41 | 34 | 4.2 | 3.5 | 2940 | 300 | 800 | 82 | P.D16 Fig.D-5 30kg (33kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 63 | 52 | 6.4 | 5.3 | 3330 | 340 | 900 | 92 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 83 | 70 | 8.5 | 7.1 | 3630 | 370 | 967 | 99 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 104 | 86 | 10.6 | 8.8 | 3920 | 400 | 1040 | 106 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 124 | 104 | 12.7 | 10.6 | 4070 | 415 | 1067 | 109 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 166 | 138 | 16.9 | 14.1 | 4460 | 455 | 1067 | 109 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 208 | 173 | 21.2 | 17.7 | 4700 | 480 | 1067 | 109 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 332 | 276 | 33.9 | 28.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 416 | 345 | 42.4 | 35.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 498 | 416 | 50.8 | 42.4 | 4750 | 485 | 1067 | 109 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-5**

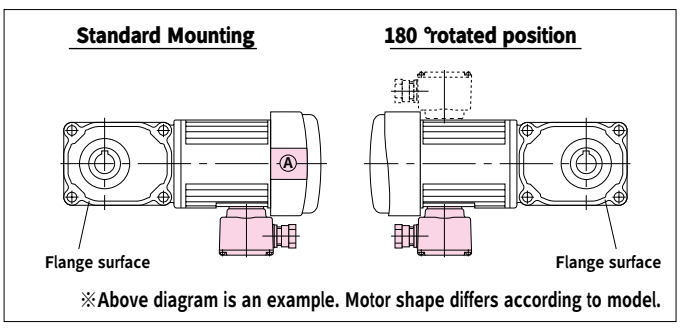
**F2SM-45-5～60-150** CAD Data: F2SM-45-150
**(F2SB-45-5～60-150)** (CAD Data: F2SB -45-150)




Round Weight 30kg (33kg)

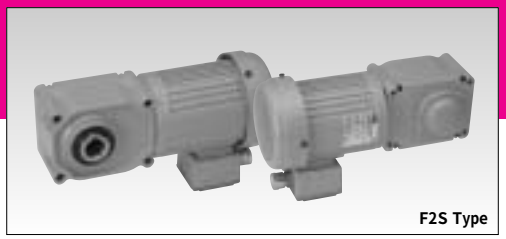
## Remarks on Positioning between Terminal box and Flange Surface in F2S Type.

Positioning between the terminal box and the flange surface in F2S Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.

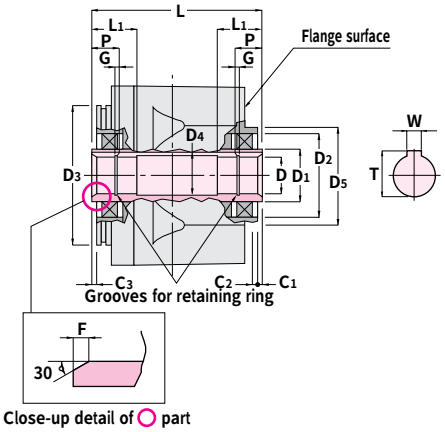



※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93


F2S Type

## Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | ϕ100 | 14 | 48.8 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Concentric Solid Shaft

# Gearmotor
# Gearmotor with Brake

## Performance Table
## Dimension diagram

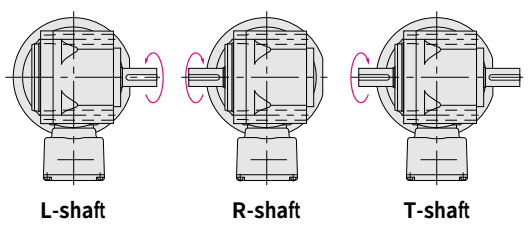
F2 Series
F2F Type

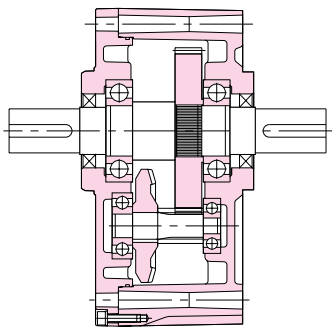
### 3-Phase

**【Remarks】**

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E16, L-shaft rotates clockwise while R and T-shafts rotate counterclockwise when viewing from output shaft side. (Refer to the diagram shown below.)





# Gearmotor
# Gearmotor with Brake F2F Type (Concentric Solid Shaft)
## F2 Series 3-phase 0.1kW

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

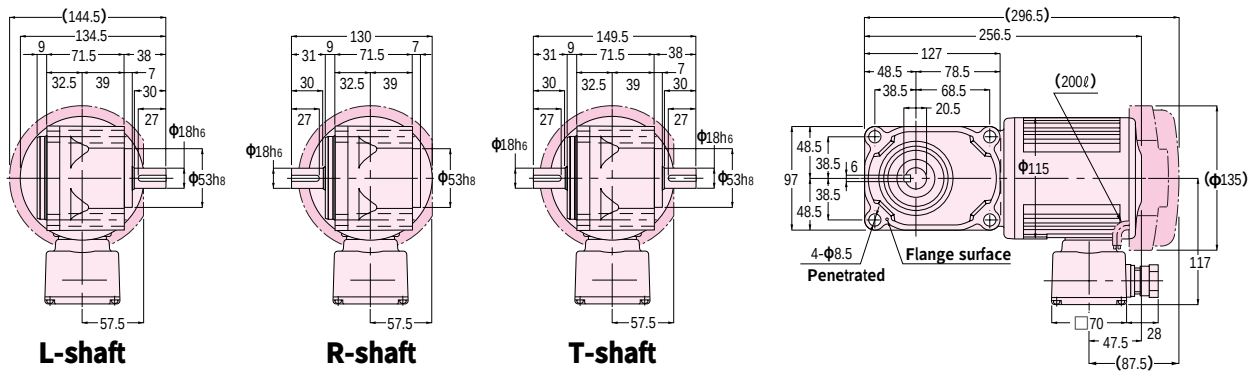
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | F2FM (F2FB) |
| 3-phase 0.1kW | 18 | 1/ 5 | 1/ 5 | 300 | 360 | 2.5 | 2.2 | 0.26 | 0.22 | 880 | 90 | P.D20 Fig.D-6 6kg (7.5kg) |
| | | 1/ 7.5 | 2/15 | 200 | 240 | 3.8 | 3.2 | 0.39 | 0.33 | 980 | 100 | |
| | | 1/10 | 1/10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1080 | 110 | |
| | | 1/12.5 | 2/25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1180 | 120 | |
| | | 1/15 | 1/15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1230 | 125 | |
| | | 1/20 | 1/20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1370 | 140 | |
| | | 1/25 | 1/25 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 1470 | 150 | |
| | | 1/30 | 2/59 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 1570 | 160 | |
| | | 1/40 | 1/40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 1720 | 175 | |
| | | 1/50 | 1/50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 1860 | 190 | |
| | | 1/60 | 1/59 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 1860 | 190 | |

Note) The allowable O.H.L. are the values calculated at the center of the output shaft.

**Fig.D-6**

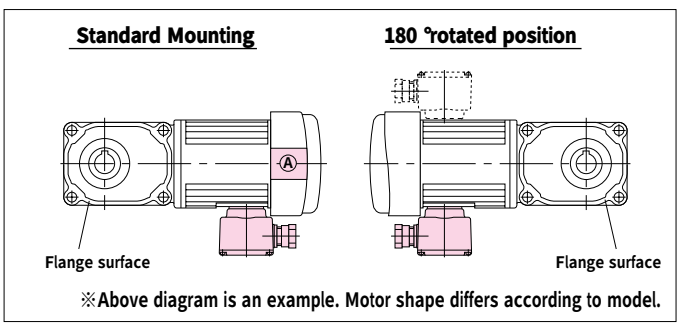
F2FM-18[L/R/T]-5～60-T010A (CAD Data: F2FM-18(LRT)-T010A)
(F2FB-18[L/R/T]-5～60-T010A) (CAD Data: F2FB-18(LRT)-T010A)




Round Weight 6kg (7.5kg) ※ The bore for attachment is provided only in the flange surface(L-shaft side).

### Remarks on Positioning between Terminal box and Flange Surface in F2F Type.

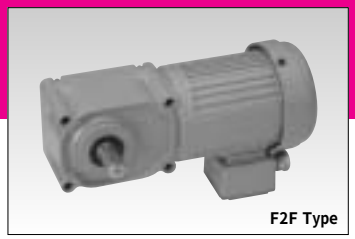
Positioning between the terminal box and the flange surface in F2F Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# F2 Series 3-phase 0.2kW


F2F Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

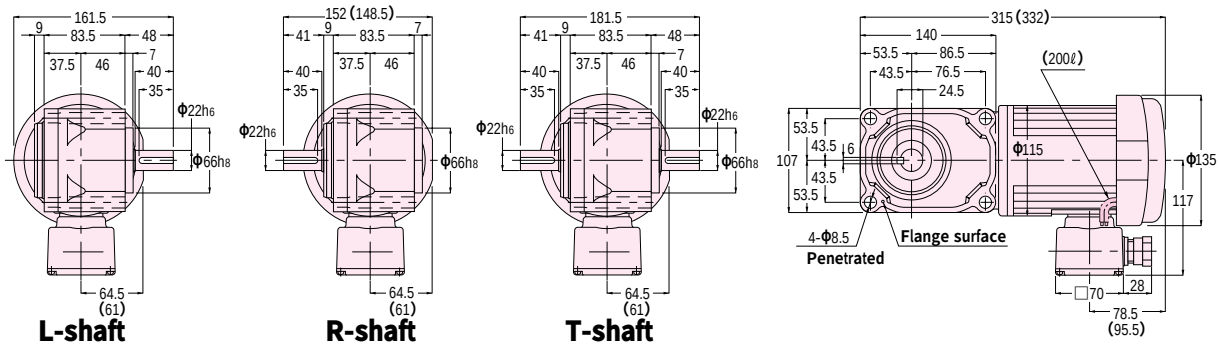
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | F2SM (F2SB) |
| 3-phase 0.2kW | 22 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1270 | 130 | P.D21 Fig.D-7 7.5kg (9kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7.0 | 0.85 | 0.71 | 1420 | 145 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 1620 | 165 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 1720 | 175 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1910 | 195 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2060 | 210 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2160 | 220 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2400 | 245 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2550 | 260 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 2550 | 260 | |

Note) The allowable O.H.L. are the values calculated at the center of the output shaft.

## Fig.D-7

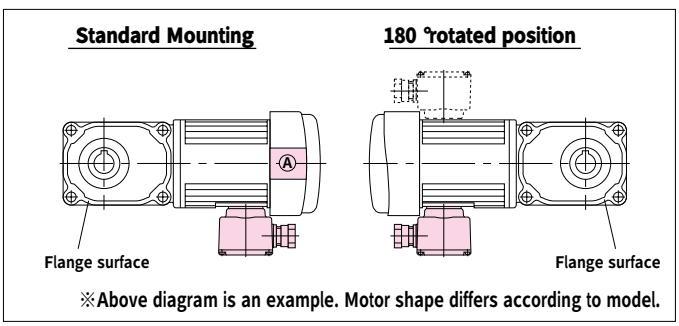
**F2FM-22$^{L}_{R}$-5～60-T020A** CAD Data: F2FM-22(LRT)-T020A
**(F2FB-22$^{L}_{R}$-5～60-T020A)** (CAD Data: F2FB-22(LRT)-T020A)




Round Weight 7.5kg (9kg) ※ The bore for attachment is provided only in the flange surface(L-shaft side).

## Remarks on Positioning between Terminal box and Flange Surface in F2F Type.

Positioning between the terminal box and the flange surface in F2F Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# Gearmotor
# Gearmotor with Brake F2F Type (Concentric Solid Shaft)

## F2 Series 3-phase 0.4kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

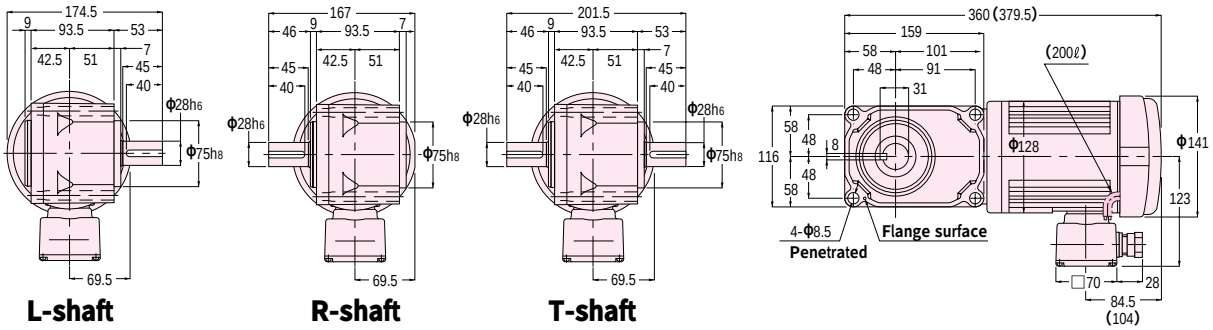
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | F2FM (F2FB) |
| 3-phase 0.4kW | 28 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1470 | 150 | P.D22 Fig.D-8 11kg (12.5kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 1670 | 170 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1810 | 185 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 1960 | 200 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2060 | 210 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2300 | 235 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 2450 | 250 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 2600 | 265 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 2790 | 285 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 2990 | 305 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3090 | 315 | |

Note) The allowable O.H.L. are the values calculated at the center of the output shaft.

**Fig.D-8**

F2FM-28[LRT]-5～60-T040A (CAD Data: F2FM-28(LRT)-T040A)
(F2FB-28[LRT]-5～60-T040A) (CAD Data: F2FB-28(LRT)-T040A)

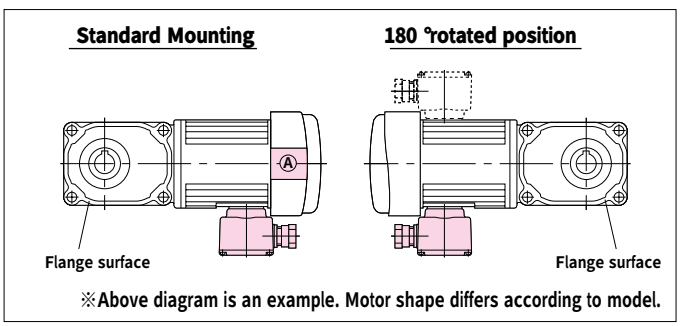



L-shaft R-shaft T-shaft

Round Weight 11kg (12.5kg) ※ The bore for attachment is provided only in the flange surface(L-shaft side).

## Remarks on Positioning between Terminal box and Flange Surface in F2F Type.

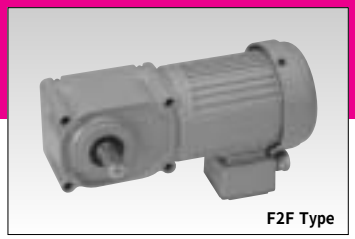
Positioning between the terminal box and the flange surface in F2F Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# F2 Series 3-phase 0.75kW


F2F Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

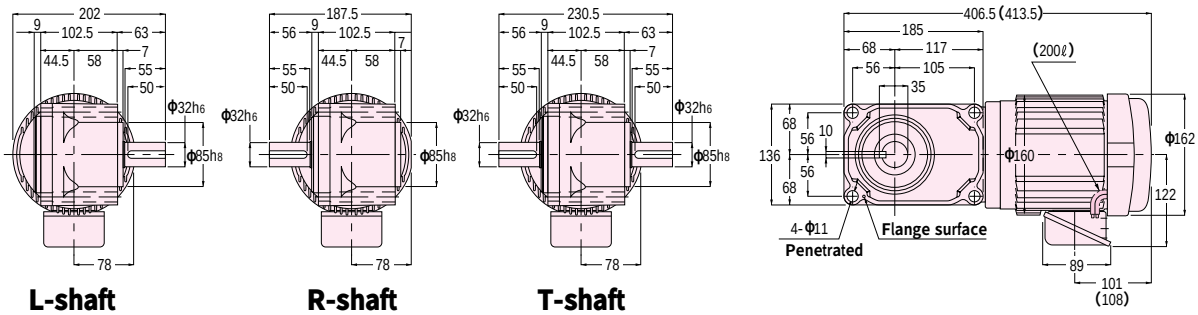
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | F2FM (F2FB) |
| 3-phase 0.75kW | 32 | 1/ 5 | 1/ 5 | 300 | 360 | 21 | 18 | 2.1 | 1.8 | 1760 | 180 | P.D23 Fig.D-9 18kg (20kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 31 | 25 | 3.2 | 2.6 | 2010 | 205 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 41 | 34 | 4.2 | 3.5 | 2210 | 225 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 52 | 43 | 5.3 | 4.4 | 2350 | 240 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 63 | 52 | 6.4 | 5.3 | 2500 | 255 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 83 | 70 | 8.5 | 7.1 | 2700 | 275 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 104 | 86 | 10.6 | 8.8 | 2890 | 295 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 124 | 104 | 12.7 | 10.6 | 3040 | 310 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 166 | 138 | 16.9 | 14.1 | 3280 | 335 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 208 | 173 | 21.2 | 17.7 | 3330 | 340 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 249 | 208 | 25.4 | 21.2 | 3330 | 340 | |

Note) The allowable O.H.L. are the values calculated at the center of the output shaft.

## Fig.D-9

**F2FM-32$^{L}_{R}$-5～60-075** CAD Data: F2FM-32(LRT)-075
**(F2FB-32$^{L}_{R}$-5～60-075)** (CAD Data: F2FB-32(LRT)-075)

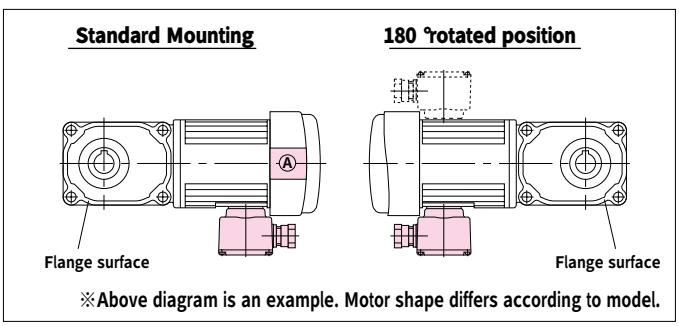



**L-shaft** **R-shaft** **T-shaft**

Round Weight 18kg (20kg) ※ The bore for attachment is provided only in the flange surface(L-shaft side).

## Remarks on Positioning between Terminal box and Flange Surface in F2F Type.

Positioning between the terminal box and the flange surface in F2F Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93

# Gearmotor
# Gearmotor with Brake F2F Type (Concentric Solid Shaft)
## F2 Series 3-phase 1.5kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

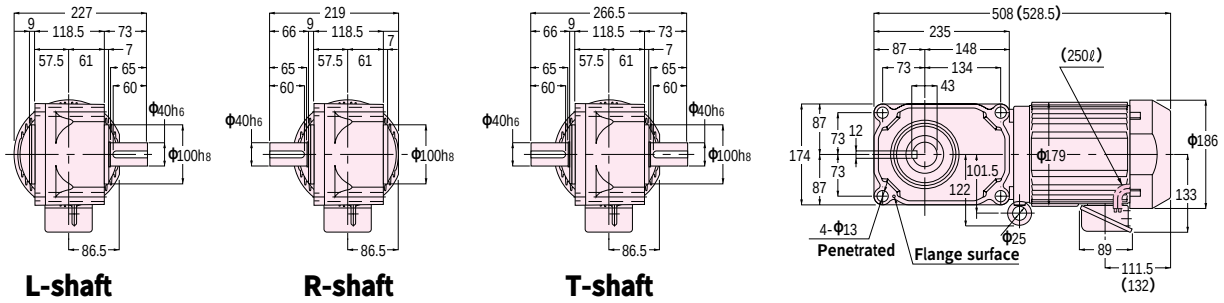
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | F2FM (F2FB) |
| 3-phase 1.5kW | 40 | 1/ 5 | 1/ 5 | 300 | 360 | 41 | 34 | 4.2 | 3.5 | 2940 | 300 | P.D24 Fig.D-10 31kg (35kg) |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 63 | 52 | 6.4 | 5.3 | 3330 | 340 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 83 | 70 | 8.5 | 7.1 | 3630 | 370 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 104 | 86 | 10.6 | 8.8 | 3920 | 400 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 124 | 104 | 12.7 | 10.6 | 4070 | 415 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 166 | 138 | 16.9 | 14.1 | 4460 | 455 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 208 | 173 | 21.2 | 17.7 | 4700 | 480 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 332 | 276 | 33.9 | 28.2 | 4750 | 485 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 416 | 346 | 42.4 | 35.3 | 4750 | 485 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 498 | 416 | 50.8 | 42.4 | 4750 | 485 | |

Note) The allowable O.H.L. are the values calculated at the center of the output shaft.

**Fig.D-10**

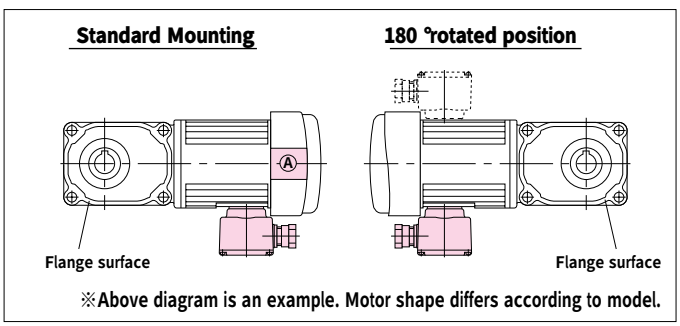
**F2FM-40□-5～60-150** CAD Data: F2FM-40(LRT)-150
**(F2FB-40□-5～60-150)** (CAD Data: F2FB-40(LRT)-150)




Round Weight 31kg (35kg) ※ The bore for attachment is provided only in the flange surface(L-shaft side).

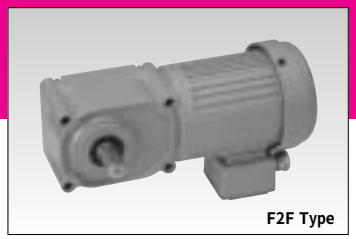
### Remarks on Positioning between Terminal box and Flange Surface in F2F Type.

Positioning between the terminal box and the flange surface in F2F Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D8
Multipurpose Inverter P.E86～E92
Option P.E78～E93



F2F Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

Concentric Hollow Shaft IP-65

# Water-Resistant Gearmotor Gearmotor with Brake

## Model • Type Designation

GTR Gearmotor

F2 Series F2S Type

| | | |
|---|---|---|
| Motor Part | Number of phase | 3-phase |
| | Capacity | 0.1kW～1.5kW |
| | Power Source | 3 Rated Power Source 200V 50/60Hz, 220V/60Hz |
| | Insulation Classification | Class B |
| | Starting Method | Direct start |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed non-ventilated only for 0.1kW) |
| | Number of Pole | 4 |
| | Rating | Continuous Rating |
| Speed Reduction Part | Reduction Method | Hypoid gear and Helical gear |
| | Lubrication | Grease Lubrication(Maintenance Free) |
| | Output Shaft | New JIS Key(JIS B 1301-1976 class) |
| | Output Shaft Material | SUS420J2 (Water-Resistant W/Carbon Steel Shaft is S43C) |
| | Case Material | Aluminium die-cast |
| Ambient Conditions | Ambient Temperature | −10°C～40°C |
| | Ambient Humidity | 100% max.(without any dew condensation) |
| | Altitude | 1,000m max. |
| | Environment | Well ventilated place free from corrosive gas,<br>Should not be used in water and the place where high-hydrostatic pressure receives. |
| | Installation Location | Indoor/Outdoor |
| Painting | Painting Method | Anion painting, Acrylic paint |
| | Painting Color | Grey(Mansel code: 9B6/0.5) |
| Mounting Direction | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F2 Series

F2S Type(Concentric Hollow Shaft)
F2F Type(Concentric Solid Shaft)

F2 Series Water-resistant-Outdoor gearmotor are classified by codes as shown below. Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Option | Terminal box | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|---|---|
| F2 | S | W | 30 | 50 | T040 | W | E | | |
| F2 | S | V | 35 | 20 | 075 | | E | X | AA |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

| | |
|---|---|
| ①Series Name | F2 : F2 Series (Concentric Hollow Shaft) |
| ②Classification by Mount Form | S : Hollow Shaft Type (Note 1) |
| ③Classification by Motor Type | W : With Water-resistant Motor W/SUS Shaft(JIS SUS420J2) |
| | V : With Water-resistant Brake Motor W/SUS Shaft (JIS SUS420J2) |
| | G : With Water-resistant Motor W/Carbon Steel Shaft(JIS:S43C) |
| | H : With Water-resistant Brake Motor W/Carbon Steel Shaft (JIS:S43C) |
| ④Frame No. and Diameter of Output shaft | Output Shaft Diameter (bore) |
| ⑤Reduction Ratio | 5 : 1／5 ～ 60 : 1／60 |
| ⑥Motor Designation and Capacity | T010 : 3-phase 0.1 kW |
| | T020 : 3-phase 0.2 kW |
| | T040 : 3-phase 0.4 kW |
| | 075 : 3-phase 0.75kW |
| | 150 : 3-phase 1.5 kW |
| ⑦Option | Blank : Standard Voltage<br>3-phase : 200V／50Hz、200V／60Hz, 220V／60Hz |
| | W : High Voltage<br>3-phase : 380V／50Hz、400V／50Hz, 400V／60Hz, 440V／60Hz |
| ⑧Terminal box | E : Terminal Box for Water-resistant, type only. (Standard Specs.) |
| ⑨Auxiliary Mark | Blank : Standard Specs. |
| | X : Code to identify additional special specs. |
| ⑩Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | ●Specification Code for Rectifier built-in Wiring<br>For details, refer to the Specification Code Table on page E31.<br>●Instruction for terminal box position.<br>Refer to the specification code list on page E35 for details. |

(Note 1)Please note that only F2S Type(hollow shaft) is available and F2F Type(solid shaft) is not available in the F2-Series water-resistant•outdoor type.

**Separated rectifier type is the standard specification of the terminal box in gearmotors with brake. When you need the rectifier built-in type, contact us with the following manner. We will do the wiring accordingly. For details, refer to page E31.**

| Type | Type Code when ordering(Example) (Indicate this type cord in your order.) |
|---|---|
| Standard (rectifier separated) | FSV-35-50-T040E |
| AC Switching A | FSV-35-50-T040EX-AA |
| AC Switching B | FSV-35-50-T040EX-AB |
| DC Switching | FSV-35-50-T040EX-DC |

(Note) ⑩The wiring method indication code does not appear on the product-type name. It appears in the supplemental number column on the nameplate.

## ■Model•Type Code (Option)

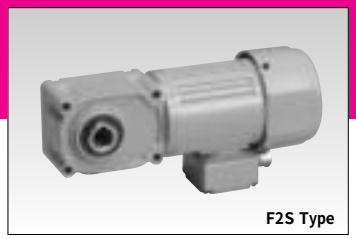
| Capacity•Option | | | | |
|---|---|---|---|---|
| T040 | E | X | - | AA |
| | ⑧ | ⑨ | | ⑩ |

| | |
|---|---|
| ⑧Terminal box | Refer to the above table. |
| ⑨Auxiliary Code | Refer to the above table. |
| ⑩Wiring Method Indication Code (Note) | Refer to the table on the left. |

When ordering gearmotors with brake, indicate the wiring method too as stated above.

# Standard Model Lineup





F2S Type

## F2S Type (Hollow Shaft) Model Lineup

| Type | 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Water-Resistant W/SUS Shaft Gearmotor F2SW<br>Water-Resistant W/SUS Shaft Brake Gearmotor F2SV<br>Water-Resistant W/Carbon Steel Shaft Gearmotor F2SG<br>Water-Resistant W/Carbon Steel Shaft Brake Gearmotor F2SH | 3-phase 0.1kW | 20 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.2kW | 25 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.4kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 3-phase 0.75kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| Water-Resistant W/SUS Shaft Gearmotor F2SW<br>Water-Resistant W/Carbon Steel Shaft Gearmotor F2SG | 3-phase 1.5kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

Concentric Hollow Shaft IP-65

# Water-Resistant Gearmotor
# Gearmotor with Brake

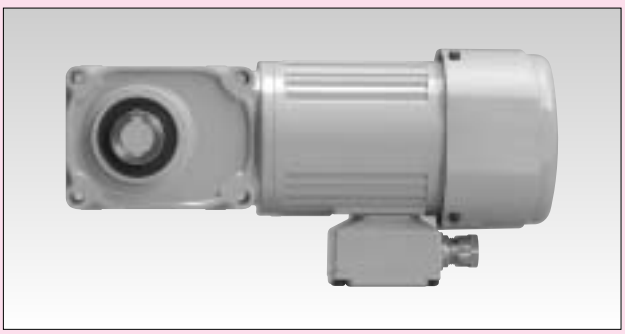
## Performance Table
## Dimension diagram

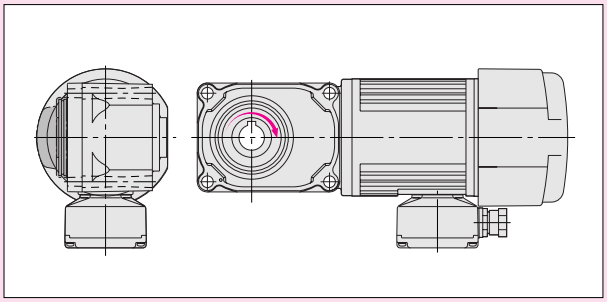
F2 Series
F2S Type

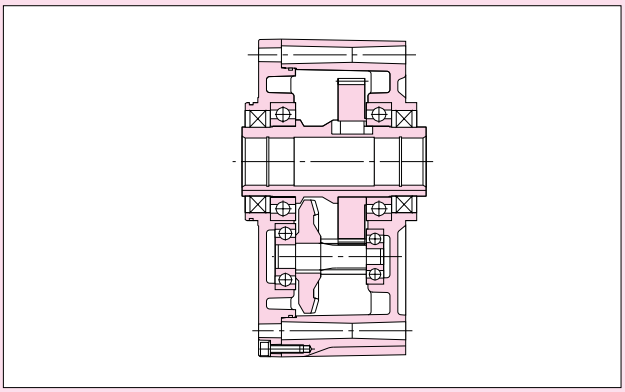
### 3-Phase

【Remarks】

- The output rotation speed is the value corresponds to the motor synchronous speed and the nominal reduction ratio.
- The shaded areas ▭ in the performance table shows that in case gearmotors are wired according to the diagram shown on page E28, the shaft rotates clockwise when viewing from flange side. (Refer to the diagram shown below.)







# Gearmotor
# Gearmotor with Brake
# Water-Resistant IP65 F2S Type (Concentric Hollow Shaft)

## F2 Series 3-phase 0.1kW



**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

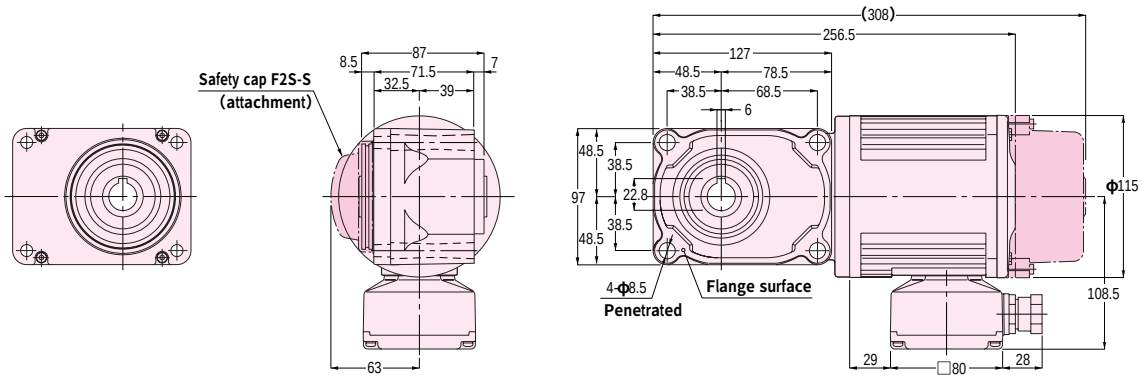
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.1kW | T010 | 50/60/60 | 200/200/220 | 0.61/0.54/0.54 | 1420/1700/1720 | B | Totally Enclosed non-ventilated |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SW (F2SV) | F2SG (F2SH) |
| 3-phase 0.1kW | 20 | 1/ 5 | 1/ 5 | 300 | 360 | 2.5 | 2.2 | 0.26 | 0.22 | 980 | 100 | 244 | 25 | P.D32 Fig.D-11 6kg (7.5kg) | |
| | | 1/ 7.5 | 2/15 | 200 | 240 | 3.8 | 3.2 | 0.39 | 0.33 | 1080 | 110 | 270 | 28 | | |
| | | 1/10 | 1/10 | 150 | 180 | 5.2 | 4.3 | 0.53 | 0.44 | 1180 | 120 | 294 | 30 | | |
| | | 1/12.5 | 2/25 | 120 | 144 | 6.5 | 5.4 | 0.66 | 0.55 | 1270 | 130 | 316 | 32 | | |
| | | 1/15 | 1/15 | 100 | 120 | 7.7 | 6.5 | 0.79 | 0.66 | 1320 | 135 | 333 | 34 | | |
| | | 1/20 | 1/20 | 75 | 90 | 11 | 8.6 | 1.1 | 0.88 | 1470 | 150 | 373 | 38 | | |
| | | 1/25 | 1/25 | 60 | 72 | 13 | 11 | 1.3 | 1.1 | 1570 | 160 | 392 | 40 | | |
| | | 1/30 | 2/59 | 50 | 60 | 16 | 13 | 1.6 | 1.3 | 1670 | 170 | 422 | 43 | | |
| | | 1/40 | 1/40 | 37.5 | 45 | 21 | 18 | 2.1 | 1.8 | 1810 | 185 | 451 | 46 | | |
| | | 1/50 | 1/50 | 30 | 36 | 25 | 22 | 2.6 | 2.2 | 1860 | 190 | 471 | 48 | | |
| | | 1/60 | 1/59 | 25 | 30 | 31 | 25 | 3.2 | 2.6 | 1860 | 190 | 471 | 48 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-11**

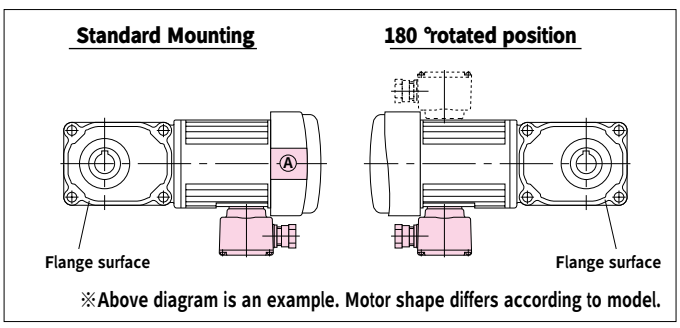
**F2S$^{W}_{G}$-20-5～60-T010E** CAD Data: F2S$^{W}_{G}$-20-T010E
**(F2S$^{V}_{H}$-20-5～60-T010E)** (CAD Data: F2S$^{V}_{H}$-20-T010E)




Round Weight 6kg (7.5kg)

## Remarks on Positioning between Terminal box and Flange Surface in F2S Type.

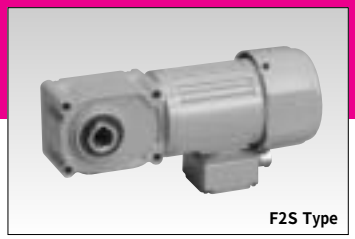
Positioning between the terminal box and the flange surface in F2S Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D28
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# F2 Series 3-phase 0.2kW


F2S Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

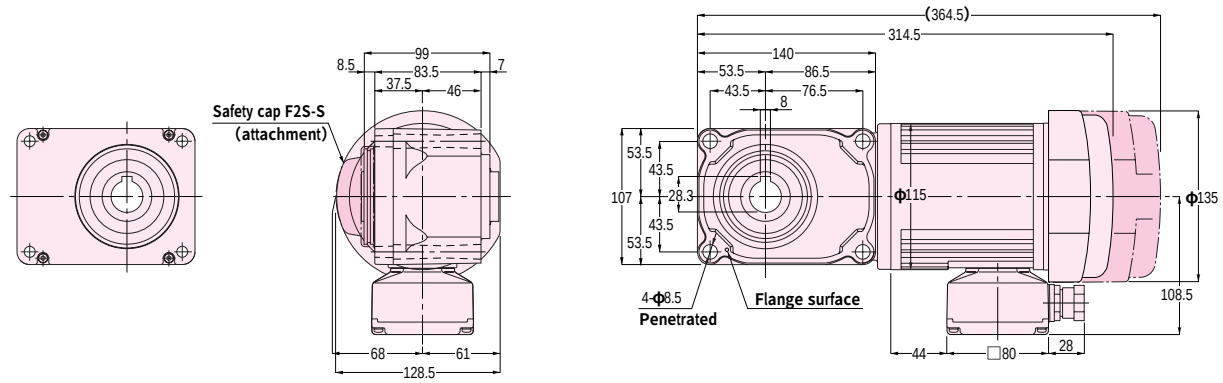
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.2kW | T020 | 50/60/60 | 200/200/220 | 1.1/1.0/1.0 | 1420/1710/1720 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SW (F2SV) | F2SG (F2SH) |
| 3-phase 0.2kW | 25 | 1/ 5 | 1/ 5 | 300 | 360 | 5.5 | 4.6 | 0.56 | 0.47 | 1230 | 125 | 307 | 31 | P.D33 Fig.D-12 7.5kg (9kg) | |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 8.3 | 7 | 0.85 | 0.71 | 1370 | 140 | 342 | 35 | | |
| | | 1/10 | 1/ 10 | 150 | 180 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | 380 | 39 | | |
| | | 1/12.5 | 19/235 | 120 | 144 | 14 | 12 | 1.4 | 1.2 | 1620 | 165 | 405 | 41 | | |
| | | 1/15 | 1/ 15 | 100 | 120 | 17 | 14 | 1.7 | 1.4 | 1720 | 175 | 429 | 44 | | |
| | | 1/20 | 1/ 20 | 75 | 90 | 23 | 19 | 2.3 | 1.9 | 1860 | 190 | 466 | 48 | | |
| | | 1/25 | 1/ 25 | 60 | 72 | 27 | 24 | 2.8 | 2.4 | 2010 | 205 | 502 | 51 | | |
| | | 1/30 | 1/ 30 | 50 | 60 | 33 | 27 | 3.4 | 2.8 | 2110 | 215 | 527 | 54 | | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 44 | 37 | 4.5 | 3.8 | 2300 | 235 | 576 | 59 | | |
| | | 1/50 | 1/ 50 | 30 | 36 | 55 | 46 | 5.6 | 4.7 | 2450 | 250 | 613 | 63 | | |
| | | 1/60 | 1/ 60 | 25 | 30 | 67 | 55 | 6.8 | 5.6 | 2550 | 260 | 637 | 65 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

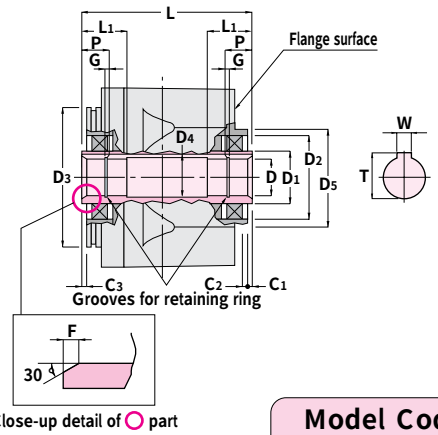
## Fig.D-12

**F2S$^{W}_{G}$-25-5～60-T020E** CAD Data: F2S$^{W}_{G}$-25-T020E
**(F2S$^{V}_{H}$-25-5～60-T020E)** (CAD Data: F2S$^{V}_{H}$-25-T020E)




Round Weight 7.5kg (9kg)

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | ϕ20 | ϕ29 | ϕ46 | ϕ75 | ϕ21 | ϕ53 | 6 | 22.8 | 91 | 24 | 13 | 2 | 3 | 2 | 2 | 1.15 |
| 25 | ϕ25 | ϕ39 | ϕ58 | ϕ75 | ϕ26 | ϕ66 | 8 | 28.3 | 108 | 27 | 14 | 7 | 3 | 2 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D28
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# Gearmotor
# Gearmotor with Brake
# Water-Resistant IP65 F2S Type (Concentric Hollow Shaft)

## F2 Series 3-phase 0.4kW

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

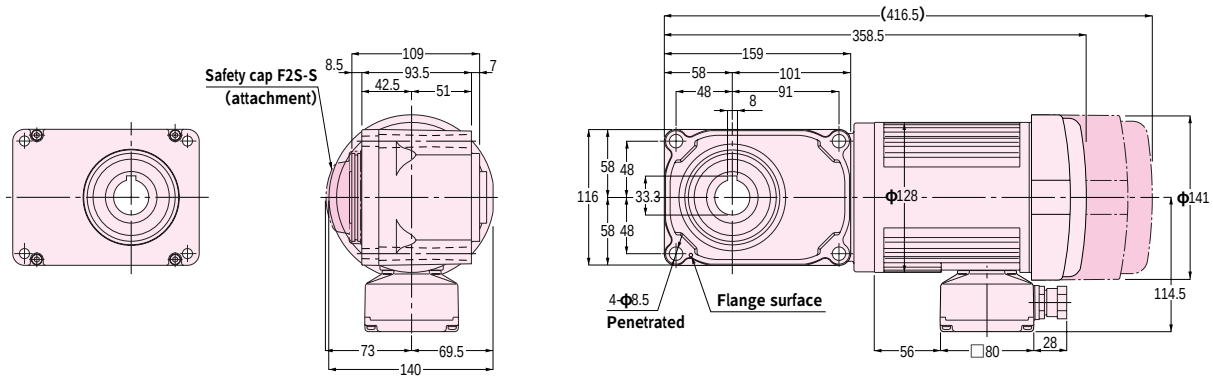
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.4kW | T040 | 50/60/60 | 200/200/220 | 2.1/1.8/1.8 | 1410/1690/1710 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SW (F2SV) | F2SG (F2SH) |
| 3-phase 0.4kW | 30 | 1/ 5 | 1/ 5 | 300 | 360 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | 375 | 38 | P.D34 Fig.D-13 10.5kg (12kg) | |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 17 | 14 | 1.7 | 1.4 | 1760 | 180 | 438 | 45 | | |
| | | 1/10 | 1/ 10 | 150 | 180 | 23 | 19 | 2.3 | 1.9 | 1910 | 195 | 475 | 48 | | |
| | | 1/12.5 | 19/235 | 120 | 144 | 27 | 24 | 2.8 | 2.4 | 2060 | 210 | 506 | 52 | | |
| | | 1/15 | 1/ 15 | 100 | 120 | 33 | 27 | 3.4 | 2.8 | 2160 | 220 | 539 | 55 | | |
| | | 1/20 | 1/ 20 | 75 | 90 | 44 | 37 | 4.5 | 3.8 | 2400 | 245 | 600 | 61 | | |
| | | 1/25 | 1/ 25 | 60 | 72 | 55 | 46 | 5.6 | 4.7 | 2550 | 260 | 637 | 65 | | |
| | | 1/30 | 1/ 30 | 50 | 60 | 67 | 55 | 6.8 | 5.6 | 2650 | 270 | 662 | 68 | | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 88 | 74 | 9 | 7.5 | 2840 | 290 | 711 | 73 | | |
| | | 1/50 | 1/ 50 | 30 | 36 | 111 | 92 | 11.3 | 9.4 | 2990 | 305 | 747 | 76 | | |
| | | 1/60 | 1/ 60 | 25 | 30 | 133 | 111 | 13.6 | 11.3 | 3090 | 315 | 767 | 78 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-13**

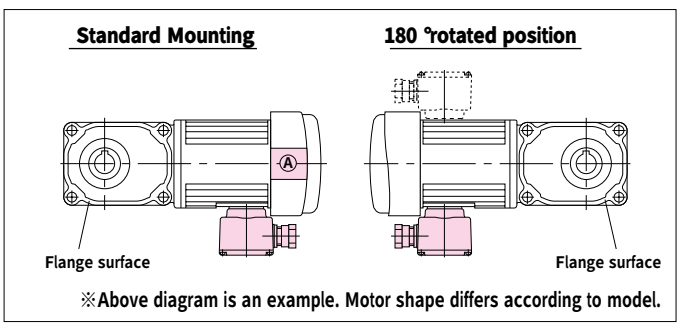
**F2S$^{W}_{G}$-30-5～60-T040E** CAD Data: F2S$^{W}_{G}$-30-T040E
**(F2S$^{V}_{H}$-30-5～60-T040E)** (CAD Data: F2S$^{V}_{H}$-30-T040E)




Round Weight 10.5kg (12kg)

## Remarks on Positioning between Terminal box and Flange Surface in F2S Type.

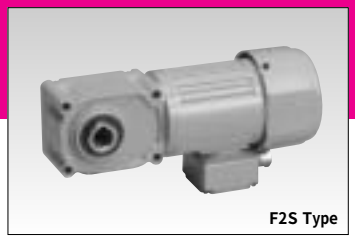
Positioning between the terminal box and the flange surface in F2S Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.




※Above diagram is an example. Motor shape differs according to model.

Model Code P.D28
Multipurpose Inverter P.E86～E92
Option P.E78～E92

# F2 Series 3-phase 0.75kW


F2S Type

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

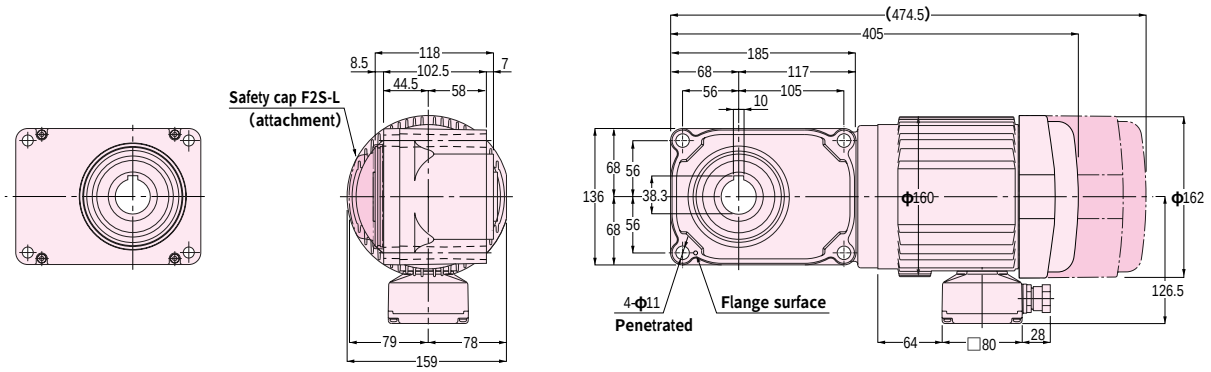
| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 0.75kW | 075 | 50/60/60 | 200/200/220 | 3.7/3.3/3.2 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor (Gearmotor with Brake) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SW (F2SV) | F2SG (F2SH) |
| 3-phase 0.75kW | 35 | 1/ 5 | 1/ 5 | 300 | 360 | 21 | 18 | 2.1 | 1.8 | 1960 | 200 | 500 | 51 | P.D35 Fig.D-14 17kg (19kg) | |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 31 | 25 | 3.2 | 2.6 | 2250 | 230 | 567 | 58 | | |
| | | 1/10 | 1/ 10 | 150 | 180 | 41 | 34 | 4.2 | 3.5 | 2450 | 250 | 613 | 63 | | |
| | | 1/12.5 | 19/235 | 120 | 144 | 52 | 43 | 5.3 | 4.4 | 2600 | 265 | 669 | 68 | | |
| | | 1/15 | 1/ 15 | 100 | 120 | 63 | 52 | 6.4 | 5.3 | 2740 | 280 | 686 | 70 | | |
| | | 1/20 | 1/ 20 | 75 | 90 | 83 | 70 | 8.5 | 7.1 | 2990 | 305 | 747 | 76 | | |
| | | 1/25 | 1/ 25 | 60 | 72 | 104 | 86 | 10.6 | 8.8 | 3190 | 325 | 796 | 81 | | |
| | | 1/30 | 1/ 30 | 50 | 60 | 124 | 104 | 12.7 | 10.6 | 3280 | 335 | 821 | 84 | | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 166 | 138 | 16.9 | 14.1 | 3480 | 355 | 870 | 89 | | |
| | | 1/50 | 1/ 50 | 30 | 36 | 208 | 173 | 21.2 | 17.7 | 3480 | 355 | 870 | 89 | | |
| | | 1/60 | 1/ 60 | 25 | 30 | 249 | 208 | 25.4 | 21.2 | 3480 | 355 | 870 | 89 | | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

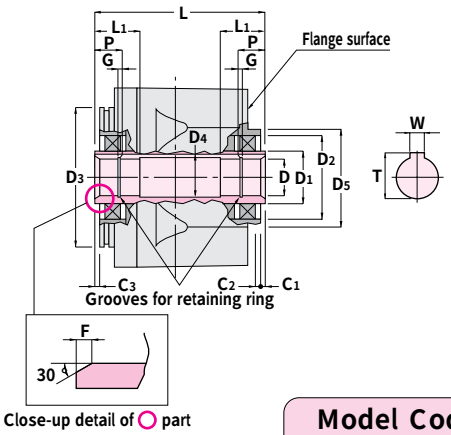
## Fig.D-14

**F2S$^{W}_{G}$-35-5～60-075E (F2S$^{V}_{H}$-35-5～60-075E)** CAD Data: F2S$^{W}_{G}$-35-075E (CAD Data: F2S$^{V}_{H}$-35-075E)




Round Weight 17kg (19kg)

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ75 | ϕ31 | ϕ75 | 8 | 33.3 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ100 | ϕ36 | ϕ85 | 10 | 38.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D28
Multipurpose Inverter P.E86～E92
Option P.E78～E92

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor Water-Resistant IP65 F2S Type(Concentric Hollow Shaft)

## F2 Series 3-phase 1.5kW

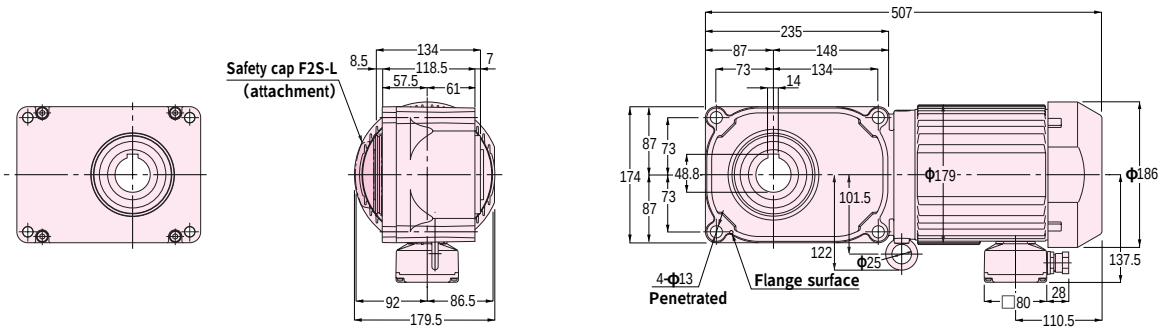


| Motor Specs. Standard Voltage (Continuous Rated 4 Poles) | Capacity | Motor Capacity Designation | Frequency (Hz) | Voltage (V) | Rated Current (A) | Rated Rotation Speed (rpm) | Insulation Classification | Protective Cooling system |
|---|---|---|---|---|---|---|---|---|
| | 1.5kW | 150 | 50/60/60 | 200/200/220 | 6.6/6.1/5.8 | 1430/1720/1730 | B | Totally Enclosed fan-cooled |

| Motor Capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio (Fraction) | Output Shaft Rotation Speed (rpm) | | Output Shaft Allowable Torque N•m | | Output Shaft Allowable Torque kgf•m | | Output Shaft Allowable O.H.L | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight Gearmotor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2S$^{W}_{G}$ |
| 3-phase 1.5kW | 45 | 1/ 5 | 1/ 5 | 300 | 360 | 41 | 34 | 4.2 | 3.5 | 2940 | 300 | 800 | 82 | P.D36 Fig.D-15 30kg |
| | | 1/ 7.5 | 2/ 15 | 200 | 240 | 63 | 52 | 6.4 | 5.3 | 3330 | 340 | 900 | 92 | |
| | | 1/10 | 1/ 10 | 150 | 180 | 83 | 70 | 8.5 | 7.1 | 3630 | 370 | 967 | 99 | |
| | | 1/12.5 | 19/235 | 120 | 144 | 104 | 86 | 10.6 | 8.8 | 3920 | 400 | 1040 | 106 | |
| | | 1/15 | 1/ 15 | 100 | 120 | 124 | 104 | 12.7 | 10.6 | 4070 | 415 | 1067 | 109 | |
| | | 1/20 | 1/ 20 | 75 | 90 | 166 | 138 | 16.9 | 14.1 | 4460 | 455 | 1067 | 109 | |
| | | 1/25 | 1/ 25 | 60 | 72 | 208 | 173 | 21.2 | 17.7 | 4700 | 480 | 1067 | 109 | |
| | | 1/30 | 1/ 30 | 50 | 60 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/40 | 1/ 40 | 37.5 | 45 | 332 | 276 | 33.9 | 28.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/50 | 1/ 50 | 30 | 36 | 416 | 345 | 42.4 | 35.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/60 | 1/ 60 | 25 | 30 | 498 | 416 | 50.8 | 42.4 | 4750 | 485 | 1067 | 109 | |

Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

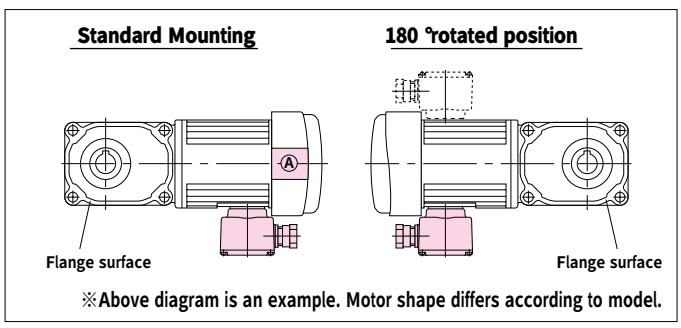
**Fig.D-15** F2S$^{W}_{G}$-45-5～60-150E CAD Data: F2S$^{W}_{G}$-45-150E




Round Weight 30kg

### Remarks on Positioning between Terminal box and Flange Surface in F2S Type.

Positioning between the terminal box and the flange surface in F2S Type is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as drawn in dotted line). In this case, the position of terminal box can be rotated down to 90 °or to 180 °(as drawn in solid line). Therefore, when ordering, indicate the proper code referring to page E39. Be sure to remember that customers cannot modify the position of terminal box for the reason of its construction. As for the models with 0.1kW or 0.2kW motor in opposite mounting, the flat surface of the fan cover cannot be positioned to the flange side when the box being rotated to 180 °.

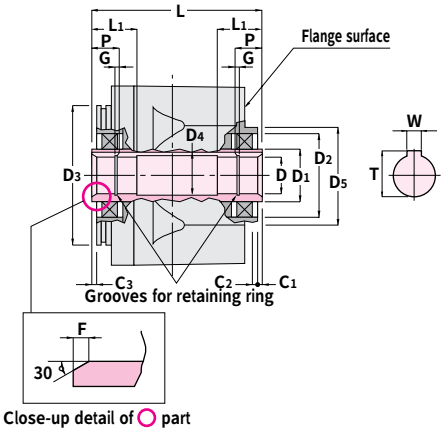



※Above diagram is an example. Motor shape differs according to model.

Model Code P.D28
Multipurpose Inverter P.E86～E92
Option P.E78～E92


F2S Type

## Detailed dimension diagram for F2S-Type output shaft



Close-up detail of ○ part

| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | ϕ100 | 14 | 48.8 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Concentric Hollow Shaft

# Reducer (Double Shaft Type)

## Model • Type Designation
## Standard Model Lineup

F2 Series

| | | |
|---|---|---|
| **Equivalent 4P motor capacity** | | Equiv 0.1kW～Equiv 1.5kW |
| **Speed Reduction Part** | **Reduction Method** | Hypoid gear and Helical gear |
| | **Lubrication** | Grease Lubrication(Maintenance Free) |
| | **Output Shaft** | New JIS Key(JIS B 1301-1976 class) |
| | **Output Shaft Material** | S43C |
| | **Case Material** | Aluminium die-cast |
| **Ambient Conditions** | **Ambient Temperature** | −10°C～40°C |
| | **Ambient Humidity** | 85% max.(without any dew condensation) |
| | **Altitude** | 1,000m max. |
| | **Environment** | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | **Installation Location** | Indoors |
| **Painting** | **Painting Method** | Anion painting, Acrylic paint |
| | **Painting Color** | Grey(Mansel code: 9B6/0.5) |
| **Mounting Direction** | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F2 Series F2S Type (Hollow Shaft)

F2 Series Double shaft type reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | Reduction Ratio | Motor Capacity | Auxiliary Mark | Spec. Designation |
|---|---|---|---|---|---|---|---|
| F2 | S | | – 30 | – 50 | – 040 | | |
| F2 | S | | – 20 | – 30 | – 010 | X | |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |

| | |
|---|---|
| ①Series Name | F2 : F2 Series (Concentric Hollow Shaft・Concentric Solid Shaft) |
| ②Classification by Mount Form | S : Hollow Shaft Type (Note 1) |
| ③Classification by Motor Type | Blank : Without Motor(Double Shaft Type) |
| ④Frame No. and Diameter of Output shaft | Diameter of Output shaft (bore) |
| ⑤Reduction Ratio | 5 : 1／5 ～ 60 : 1／60 |
| ⑥Motor Designation and Capacity | 010 : Equiv 0.1 kW |
| | 020 : Equiv 0.2 kW |
| | 040 : Equiv 0.4 kW |
| | 075 : Equiv 0.75kW |
| | 150 : Equiv 1.5 kW |
| ⑦Auxiliary Mark | Blank : Standard Specs. |
| | X : Code to identify additional special specs. |
| ⑧Spec. Designation<br>Note: Spec. Designation does not appear on the product type designation in the nameplate. It is specified on the additional numbers in the nameplate. | Blank : Standard Specs. |

(Note 1) F2 Series Double shaft type reducer is F2S type (hollow shaft) only, F2F type (solid shaft) is not appllciable.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Standard Model Lineup




F2S Type

## F2S Type (Hollow Shaft) Model Lineup

| Type | Equivalent of 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| Reducer (Double Shaft Type) F2S | 0.1kW | 20 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.2kW | 25 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.4kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.75kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 1.5kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Concentric Hollow Shaft

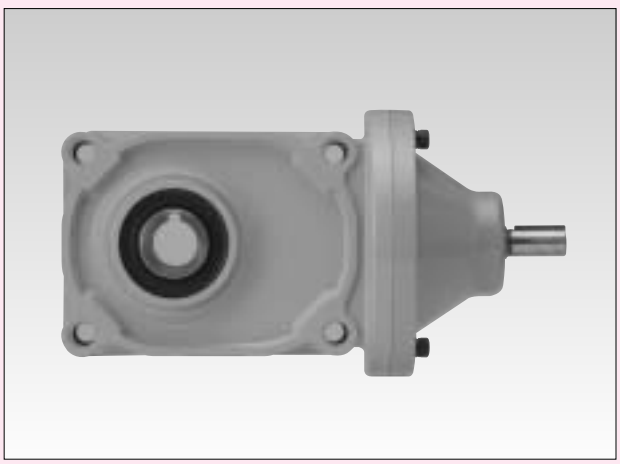
# Reducer (Double Shaft Type)

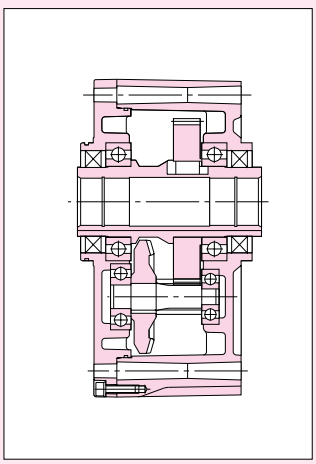
## Performance Table Dimension diagram

F2 Series F2S Type

【Remarks】

●The motor capacities are the values when 4 pole motor is applied.

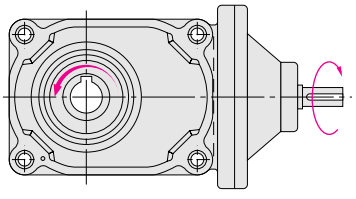




### ■Relation for Rotating Direction (Viewed from Flange Surface)

The rotation directions shown by arrow just show the rotation in input/output shaft, and do not limit the rotation direction.

| | Capacity | Reduction Ratio |
|---|---|---|
| F2S Type | 0.1～1.5 kW | 1/5～1/60 |



# Reducer (Double Shaft Type) F2S Type (Concentric Hollow Shaft)

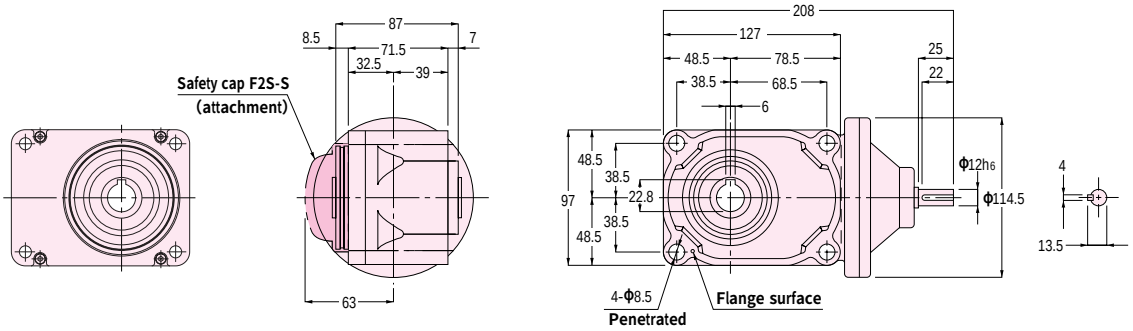
## F2 Series equiv 0.1kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | F2S |
| 0.1kW | 20 | 1/ 5 | 1/ 5 | 2.5 | 0.26 | 196 | 980 | 20 | 100 | 244 | 25 | P.D44 Fig.D-16 3kg |
| | | 1/ 7.5 | 2/15 | 3.8 | 0.39 | | 1080 | | 110 | 270 | 28 | |
| | | 1/10 | 1/10 | 5.2 | 0.53 | | 1180 | | 120 | 294 | 30 | |
| | | 1/12.5 | 2/25 | 6.5 | 0.66 | | 1270 | | 130 | 316 | 32 | |
| | | 1/15 | 1/15 | 7.7 | 0.79 | | 1320 | | 135 | 333 | 34 | |
| | | 1/20 | 1/20 | 11 | 1.1 | | 1470 | | 150 | 373 | 38 | |
| | | 1/25 | 1/25 | 13 | 1.3 | | 1570 | | 160 | 392 | 40 | |
| | | 1/30 | 2/59 | 16 | 1.6 | | 1670 | | 170 | 422 | 43 | |
| | | 1/40 | 1/40 | 21 | 2.1 | | 1810 | | 185 | 451 | 46 | |
| | | 1/50 | 1/50 | 25 | 2.6 | | 1860 | | 190 | 471 | 48 | |
| | | 1/60 | 1/59 | 31 | 3.2 | | 1860 | | 190 | 471 | 48 | |

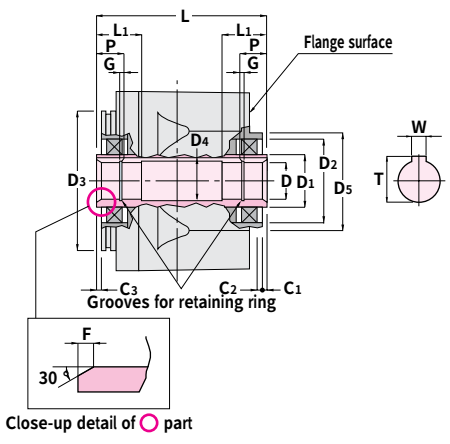
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-16** F2S-20-5～60-（010） CAD Data: F2S-20-010




Round Weight 3kg

## ■Detailed dimension diagram for F2S-Type output shaft

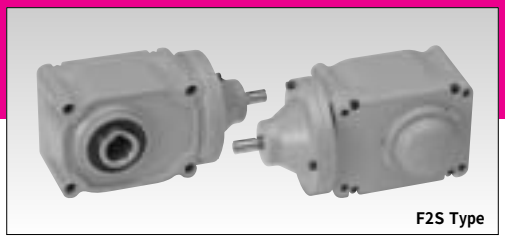



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | φ20 | φ29 | φ46 | φ75 | φ21 | φ53 | 6 | 22.8 | 91 | 24 | 13 | 2 | 3 | 2 | 2 | 1.15 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D40
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

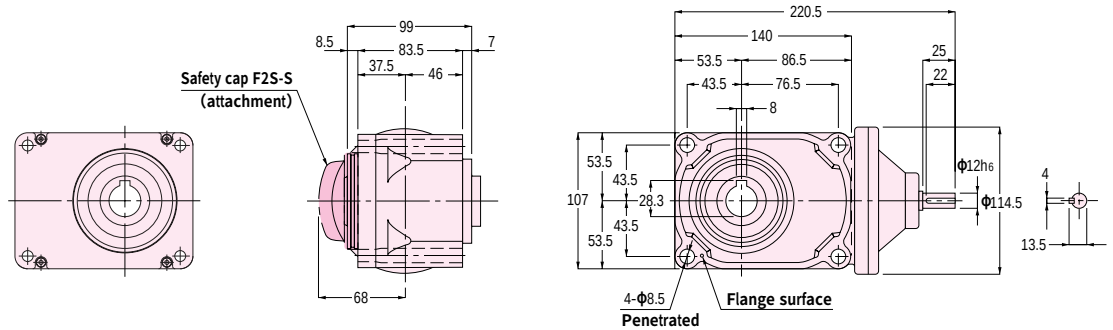
# F2 Series equiv 0.2kW


F2S Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | F2S |
| 0.2kW | 25 | 1/ 5 | 1/ 5 | 5.5 | 0.56 | 245 | 1230 | 25 | 125 | 307 | 31 | P.D45 Fig.D-17 4kg |
| | | 1/ 7.5 | 2/ 15 | 8.3 | 0.85 | | 1370 | | 140 | 342 | 35 | |
| | | 1/10 | 1/ 10 | 11 | 1.1 | | 1520 | | 155 | 380 | 39 | |
| | | 1/12.5 | 19/235 | 14 | 1.4 | | 1620 | | 165 | 405 | 41 | |
| | | 1/15 | 1/ 15 | 17 | 1.7 | | 1720 | | 175 | 429 | 44 | |
| | | 1/20 | 1/ 20 | 23 | 2.3 | | 1860 | | 190 | 466 | 48 | |
| | | 1/25 | 1/ 25 | 27 | 2.8 | | 2010 | | 205 | 502 | 51 | |
| | | 1/30 | 1/ 30 | 33 | 3.4 | | 2110 | | 215 | 527 | 54 | |
| | | 1/40 | 1/ 40 | 44 | 4.5 | | 2300 | | 235 | 576 | 59 | |
| | | 1/50 | 1/ 50 | 55 | 5.6 | | 2450 | | 250 | 613 | 63 | |
| | | 1/60 | 1/ 60 | 67 | 6.8 | | 2550 | | 260 | 637 | 65 | |

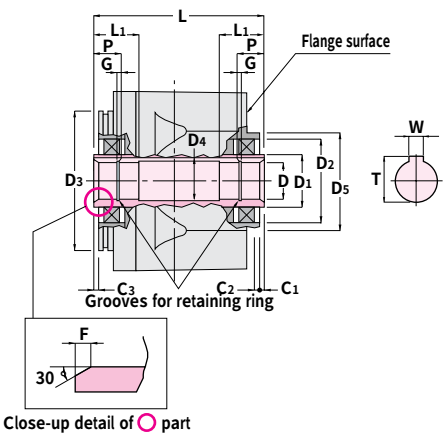
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

## Fig.D-17 F2S-25-5～60-（020） CAD Data: F2S-25-020




Round Weight 4kg

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | Φ25 | Φ39 | Φ58 | Φ75 | Φ26 | Φ66 | 8 | 28.3 | 108 | 27 | 14 | 7 | 3 | 2 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D40
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

# Reducer (Double Shaft Type) F2S Type (Concentric Hollow Shaft)

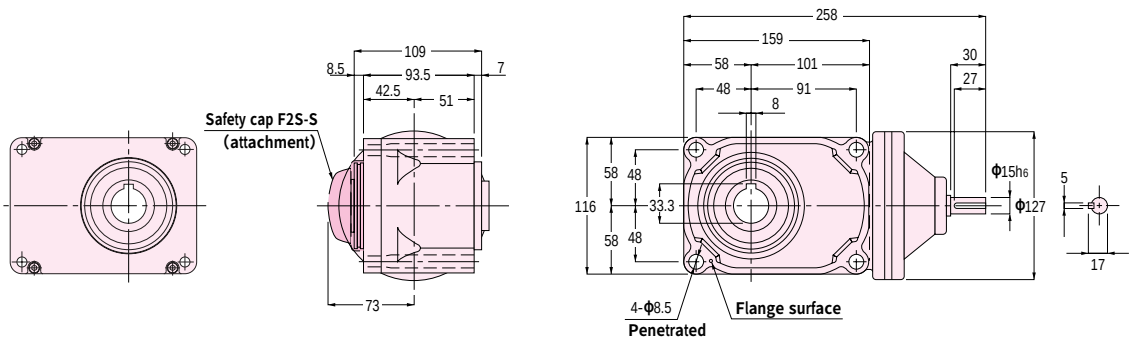
## F2 Series equiv 0.4kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | F2S |
| 0.4kW | 30 | 1/ 5 | 1/ 5 | 11 | 1.1 | 294 | 1520 | 30 | 155 | 375 | 38 | P.D46 Fig.D-18 5kg |
| | | 1/ 7.5 | 2/ 15 | 17 | 1.7 | | 1760 | | 180 | 438 | 45 | |
| | | 1/10 | 1/ 10 | 23 | 2.3 | | 1910 | | 195 | 475 | 48 | |
| | | 1/12.5 | 19/235 | 27 | 2.8 | | 2060 | | 210 | 506 | 52 | |
| | | 1/15 | 1/ 15 | 33 | 3.4 | | 2160 | | 220 | 539 | 55 | |
| | | 1/20 | 1/ 20 | 44 | 4.5 | | 2400 | | 245 | 600 | 61 | |
| | | 1/25 | 1/ 25 | 55 | 5.6 | | 2550 | | 260 | 637 | 65 | |
| | | 1/30 | 1/ 30 | 67 | 6.8 | | 2650 | | 270 | 662 | 68 | |
| | | 1/40 | 1/ 40 | 88 | 9 | | 2840 | | 290 | 711 | 73 | |
| | | 1/50 | 1/ 50 | 111 | 11.3 | | 2990 | | 305 | 747 | 76 | |
| | | 1/60 | 1/ 60 | 133 | 13.6 | | 3090 | | 315 | 767 | 78 | |

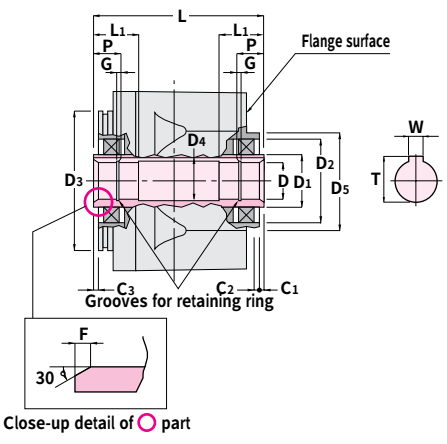
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-18** F2S-30-5～60-(040) CAD Data: F2S-30-040




Round Weight 5kg

## ■Detailed dimension diagram for F2S-Type output shaft

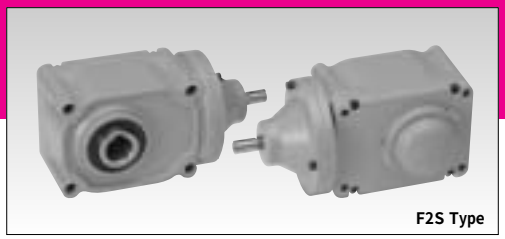



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | φ30 | φ44 | φ65 | φ75 | φ31 | φ75 | 8 | 33.3 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D40
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

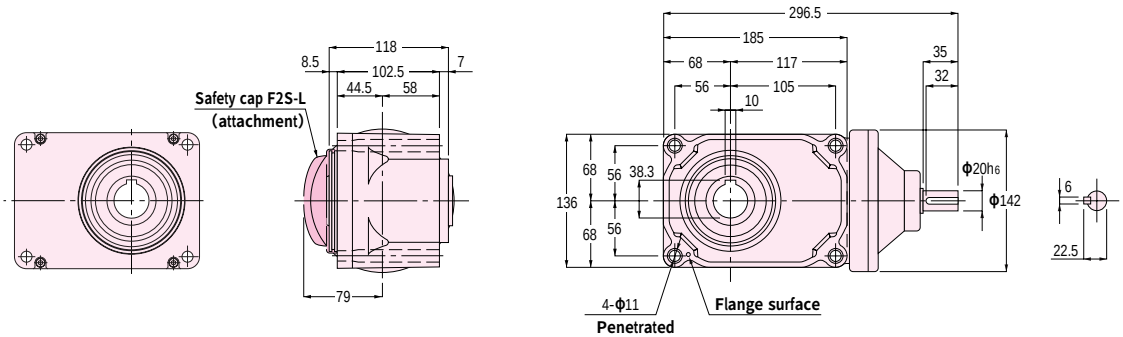
# F2 Series equiv 0.75kW


F2S Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | F2S |
| 0.75kW | 35 | 1/ 5 | 1/ 5 | 21 | 2.1 | 392 | 1960 | 40 | 200 | 500 | 51 | P.D47 Fig.D-19 7.5kg |
| | | 1/ 7.5 | 2/ 15 | 31 | 3.2 | | 2250 | | 230 | 567 | 58 | |
| | | 1/10 | 1/ 10 | 41 | 4.2 | | 2450 | | 250 | 613 | 63 | |
| | | 1/12.5 | 19/235 | 52 | 5.3 | | 2600 | | 265 | 669 | 68 | |
| | | 1/15 | 1/ 15 | 63 | 6.4 | | 2740 | | 280 | 686 | 70 | |
| | | 1/20 | 1/ 20 | 83 | 8.5 | | 2990 | | 305 | 747 | 76 | |
| | | 1/25 | 1/ 25 | 104 | 10.6 | | 3190 | | 325 | 796 | 81 | |
| | | 1/30 | 1/ 30 | 124 | 12.7 | | 3280 | | 335 | 821 | 84 | |
| | | 1/40 | 1/ 40 | 166 | 16.9 | | 3480 | | 355 | 870 | 89 | |
| | | 1/50 | 1/ 50 | 208 | 21.2 | | 3480 | | 355 | 870 | 89 | |
| | | 1/60 | 1/ 60 | 249 | 25.4 | | 3480 | | 355 | 870 | 89 | |

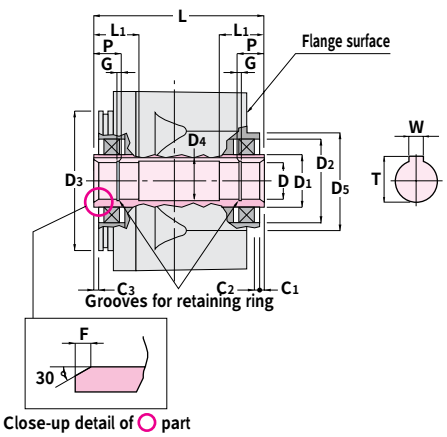
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

## Fig.D-19 F2S-35-5～60-(075) CAD Data: F2S-35-075




Round Weight 7.5kg

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | φ35 | φ49 | φ72 | φ100 | φ36 | φ85 | 10 | 38.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D40
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85

# Reducer (Double Shaft Type) F2S Type (Concentric Hollow Shaft)

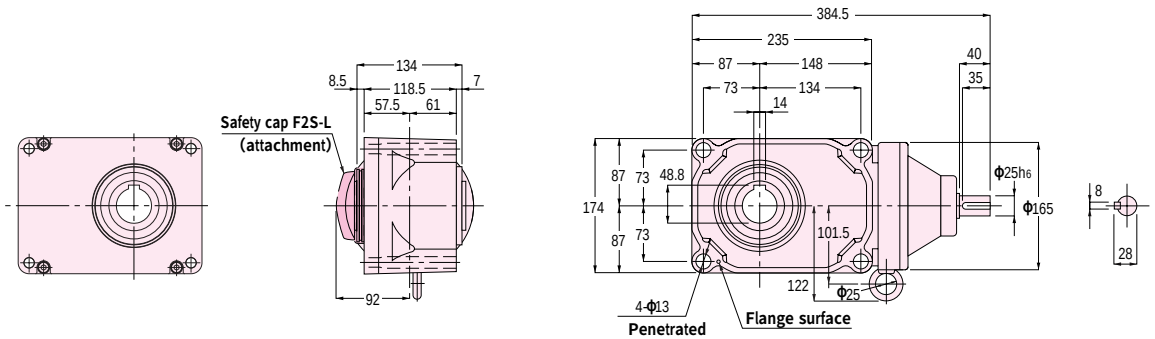
## F2 Series equiv 1.5kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque Input (1500rpm) | | Allowable O.H.L. | | | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | | kgf | | | | |
| | | | | N·m | kgf·m | input shaft | output shaft | input shaft | output shaft | N | kgf | F2S |
| 1.5kW | 45 | 1/ 5 | 1/ 5 | 41 | 4.2 | 392 | 2940 | 40 | 300 | 800 | 82 | P.D48 Fig.D-20 15kg |
| | | 1/ 7.5 | 2/ 15 | 63 | 6.4 | | 3330 | | 340 | 900 | 92 | |
| | | 1/10 | 1/ 10 | 83 | 8.5 | | 3630 | | 370 | 967 | 99 | |
| | | 1/12.5 | 19/235 | 104 | 10.6 | | 3920 | | 400 | 1040 | 106 | |
| | | 1/15 | 1/ 15 | 124 | 12.7 | | 4070 | | 415 | 1067 | 109 | |
| | | 1/20 | 1/ 20 | 166 | 16.9 | | 4460 | | 455 | 1067 | 109 | |
| | | 1/25 | 1/ 25 | 208 | 21.2 | | 4700 | | 480 | 1067 | 109 | |
| | | 1/30 | 1/ 30 | 249 | 25.4 | | 4750 | | 485 | 1067 | 109 | |
| | | 1/40 | 1/ 40 | 332 | 33.9 | | 4750 | | 485 | 1067 | 109 | |
| | | 1/50 | 1/ 50 | 416 | 42.4 | | 4750 | | 485 | 1067 | 109 | |
| | | 1/60 | 1/ 60 | 498 | 50.8 | | 4750 | | 485 | 1067 | 109 | |

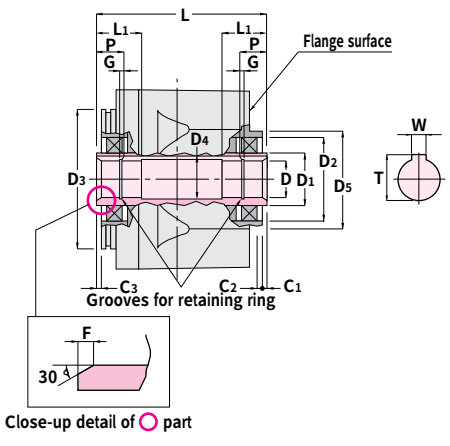
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

### Fig.D-20 F2S-45-5～60-(150) CAD Data: F2S-45-150




Round Weight 15kg

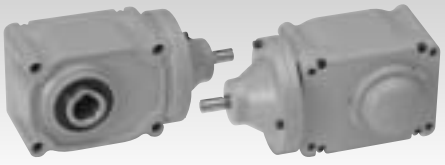
## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | φ45 | φ64 | φ85 | φ100 | φ46 | φ100 | 14 | 48.8 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D40
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E85



F2S Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Concentric Hollow Shaft

# S-Type Reducer
# (Designated Motor Attachable)

## Model・Type Designation
## Standard Model Lineup

F2 Series

| | | |
|---|---|---|
| **Equivalent 4P motor capacity** | | Equiv 0.1kW～Equiv 1.5kW |
| **Speed Reduction Part** | **Reduction Method** | Hypoid gear and Helical gear |
| | **Lubrication** | Grease Lubrication(Maintenance Free) |
| | **Output Shaft** | New JIS Key(JIS B 1301-1976 class) |
| | **Output Shaft Material** | S43C |
| | **Case Material** | Aluminium die-cast |
| **Ambient Conditions** | **Ambient Temperature** | −10°C～40°C |
| | **Ambient Humidity** | 85% max.(without any dew condensation) |
| | **Altitude** | 1,000m max. |
| | **Environment** | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. |
| | **Installation Location** | Indoors |
| **Painting** | **Painting Method** | Anion painting, Acrylic paint |
| | **Painting Color** | Grey(Mansel code: 9B6/0.5) |
| **Mounting Direction** | | No restriction in the mounting angle.(horizontally, vertically or heeling angle) |

# Model and Type Designation F2 Series F2S Type (Hollow Shaft)

F2 Series S type reducers are classified by codes as shown below.
Specify these codes in your inquiry and order.

| Type | | | Frame Number | | Reduction Ratio | | Motor Capacity | Auxiliary Mark |
|---|---|---|---|---|---|---|---|---|
| F2 | S | S | – 30 | – | 50 | – | 040 | |
| F2 | S | S | – 25 | – | 30 | – | 020 | X |
| ① | ② | ③ | ④ | | ⑤ | | ⑥ | ⑦ |

| | | |
|---|---|---|
| ①Series Name | F2 | : F2 Series (Concentric Hollow Shaft・Concentric Solid Shaft) |
| ②Classification by Mount Form | S | : Hollow Shaft Type (Note 1) |
| ③Classification by Motor Type | S | : Designated Motor Attachable (S-Type) |
| ④Frame No. and Diameter of Output shaft | Diameter of Output shaft (bore) | |
| ⑤Reduction Ratio | 5 : 1／5 ～ 60 : 1／60 | |
| ⑥Motor Designation and Capacity | 010 | : Equiv 0.1 kW |
| | 020 | : Equiv 0.2 kW |
| | 040 | : Equiv 0.4 kW |
| | 075 | : Equiv 0.75kW |
| | 150 | : Equiv 1.5 kW |
| ⑦Auxiliary Mark | Blank | : Standard Specs. |
| | X | : Code to identify additional special specs. |

(Note 1) F2 Series S type reducer is F2S type (hollow shaft) only, F2F type (solid shaft) is not appllciable.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


F2S Type

## F2S Type (Hollow Shaft) Model Lineup

| Type | Equivalent of 4P Motor Capacity | Frame Number | Reduction Ratio |
|---|---|---|---|
| S-Type Reducer F2SS | 0.1kW | 20 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.2kW | 25 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.4kW | 30 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 0.75kW | 35 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |
| | 1.5kW | 45 | 1/5 1/7.5 1/10 1/12.5 1/15 1/20 1/25 1/30 1/40 1/50 1/60 |


Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

GTR Gearmotor

## Concentric Hollow Shaft

# S-Type Reducer
# (Designated Motor Attachable)

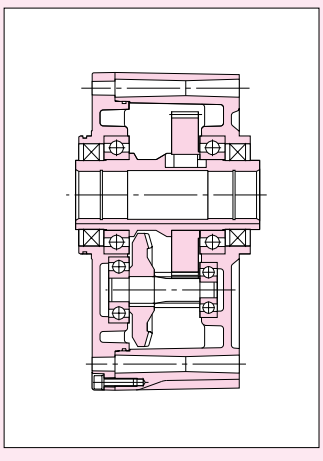
## Performance Table
## Dimension diagram

F2 Series
F2S Type

**【Remarks】**

- ●Output Shaft allowable torques are the values when using 4-pole motor.
- ●In case of using with motors other than 4-pole motor, the output allowable torque can be obtained by multiplying the torque correction coefficient indicated in page E46, to the written value.
- ●The direction of rotation of the output shaft against the same of the output/input shaft are shown in the page D43.





Designated Motor Attachable

# S-Type Reducer F2S Type (Concentric Hollow Shaft)

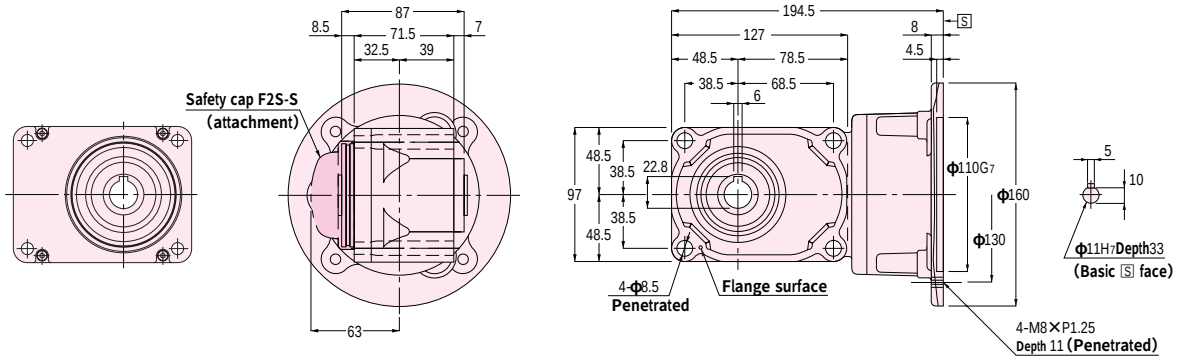
## F2 Series equiv 0.1kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SS |
| 0.1kW | 20 | 1/ 5 | 1/ 5 | 2.5 | 2.2 | 0.26 | 0.22 | 980 | 100 | 244 | 25 | P.D56 Fig.D-20 3.5kg |
| | | 1/ 7.5 | 2/15 | 3.8 | 3.2 | 0.39 | 0.33 | 1080 | 110 | 270 | 28 | |
| | | 1/10 | 1/10 | 5.2 | 4.3 | 0.53 | 0.44 | 1180 | 120 | 294 | 30 | |
| | | 1/12.5 | 2/25 | 6.5 | 5.4 | 0.66 | 0.55 | 1270 | 130 | 316 | 32 | |
| | | 1/15 | 1/15 | 7.7 | 6.5 | 0.79 | 0.66 | 1320 | 135 | 333 | 34 | |
| | | 1/20 | 1/20 | 11 | 8.6 | 1.1 | 0.88 | 1470 | 150 | 373 | 38 | |
| | | 1/25 | 1/25 | 13 | 11 | 1.3 | 1.1 | 1570 | 160 | 392 | 40 | |
| | | 1/30 | 2/59 | 16 | 13 | 1.6 | 1.3 | 1670 | 170 | 422 | 43 | |
| | | 1/40 | 1/40 | 21 | 18 | 2.1 | 1.8 | 1810 | 185 | 451 | 46 | |
| | | 1/50 | 1/50 | 25 | 22 | 2.6 | 2.2 | 1860 | 190 | 471 | 48 | |
| | | 1/60 | 1/59 | 31 | 25 | 3.2 | 2.6 | 1860 | 190 | 471 | 48 | |

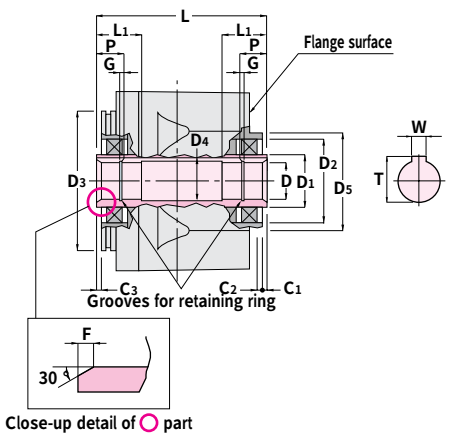
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-20** F2SS-20-5～60-（010） CAD Data: F2SS-20-010




Round Weight 3.5kg

## ■Detailed dimension diagram for F2S-Type output shaft

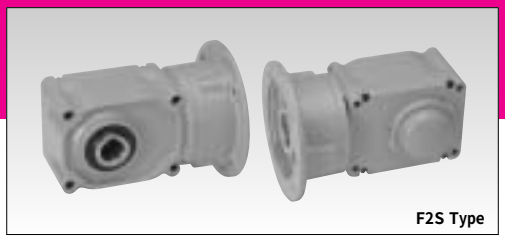



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | φ20 | φ29 | φ46 | φ75 | φ21 | φ53 | 6 | 22.8 | 91 | 24 | 13 | 2 | 3 | 2 | 2 | 1.15 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D52
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

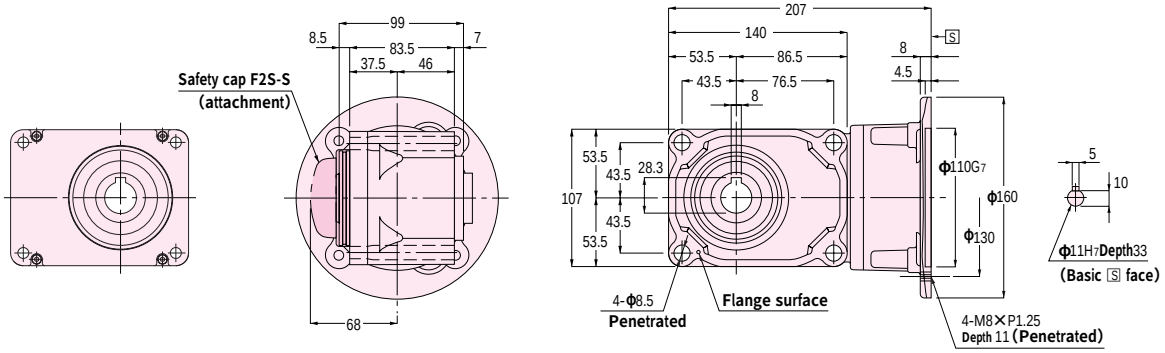
# F2 Series equiv 0.2kW


F2S Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight F2SS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2kW | 25 | 1/ 5 | 1/ 5 | 5.5 | 4.6 | 0.56 | 0.47 | 1230 | 125 | 307 | 31 | P.D57 Fig.D-21 4.5kg |
| | | 1/ 7.5 | 2/ 15 | 8.3 | 7 | 0.85 | 0.71 | 1370 | 140 | 342 | 35 | |
| | | 1/10 | 1/ 10 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | 380 | 39 | |
| | | 1/12.5 | 19/235 | 14 | 12 | 1.4 | 1.2 | 1620 | 165 | 405 | 41 | |
| | | 1/15 | 1/ 15 | 17 | 14 | 1.7 | 1.4 | 1720 | 175 | 429 | 44 | |
| | | 1/20 | 1/ 20 | 23 | 19 | 2.3 | 1.9 | 1860 | 190 | 466 | 48 | |
| | | 1/25 | 1/ 25 | 27 | 24 | 2.8 | 2.4 | 2010 | 205 | 502 | 51 | |
| | | 1/30 | 1/ 30 | 33 | 27 | 3.4 | 2.8 | 2110 | 215 | 527 | 54 | |
| | | 1/40 | 1/ 40 | 44 | 37 | 4.5 | 3.8 | 2300 | 235 | 576 | 59 | |
| | | 1/50 | 1/ 50 | 55 | 46 | 5.6 | 4.7 | 2450 | 250 | 613 | 63 | |
| | | 1/60 | 1/ 60 | 67 | 55 | 6.8 | 5.6 | 2550 | 260 | 637 | 65 | |

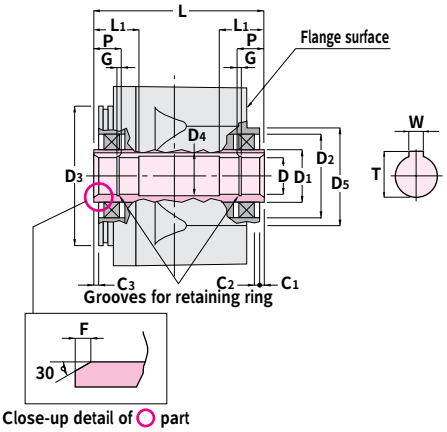
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

## Fig.D-21 F2SS-25-5～60-（020） CAD Data: F2SS-25-020




Round Weight 4.5kg

## Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | Φ25 | Φ39 | Φ58 | Φ75 | Φ26 | Φ66 | 8 | 28.3 | 108 | 27 | 14 | 7 | 3 | 2 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D52
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

Designated Motor Attachable

# S-Type Reducer F2S Type (Concentric Hollow Shaft)

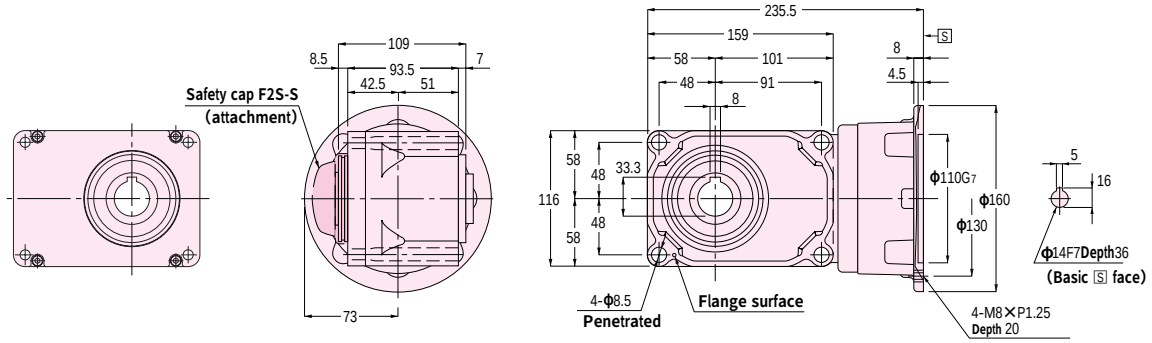
## F2 Series equiv 0.4kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N·m | | Output Shaft Allowable Torque kgf·m | | Output Shaft Allowable O.H.L. | | Output shaft Allowable Thrust Load | | Page of Dimension Diagram shown, Fig. No. and Round Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50Hz | 60Hz | 50Hz | 60Hz | N | kgf | N | kgf | F2SS |
| 0.4kW | 30 | 1/ 5 | 1/ 5 | 11 | 9.2 | 1.1 | 0.94 | 1520 | 155 | 375 | 38 | P.D58 Fig.D-22 6kg |
| | | 1/ 7.5 | 2/ 15 | 17 | 14 | 1.7 | 1.4 | 1760 | 180 | 438 | 45 | |
| | | 1/10 | 1/ 10 | 23 | 19 | 2.3 | 1.9 | 1910 | 195 | 475 | 48 | |
| | | 1/12.5 | 19/235 | 27 | 24 | 2.8 | 2.4 | 2060 | 210 | 506 | 52 | |
| | | 1/15 | 1/ 15 | 33 | 27 | 3.4 | 2.8 | 2160 | 220 | 539 | 55 | |
| | | 1/20 | 1/ 20 | 44 | 37 | 4.5 | 3.8 | 2400 | 245 | 600 | 61 | |
| | | 1/25 | 1/ 25 | 55 | 46 | 5.6 | 4.7 | 2550 | 260 | 637 | 65 | |
| | | 1/30 | 1/ 30 | 67 | 55 | 6.8 | 5.6 | 2650 | 270 | 662 | 68 | |
| | | 1/40 | 1/ 40 | 88 | 74 | 9 | 7.5 | 2840 | 290 | 711 | 73 | |
| | | 1/50 | 1/ 50 | 111 | 92 | 11.3 | 9.4 | 2990 | 305 | 747 | 76 | |
| | | 1/60 | 1/ 60 | 133 | 111 | 13.6 | 11.3 | 3090 | 315 | 767 | 78 | |

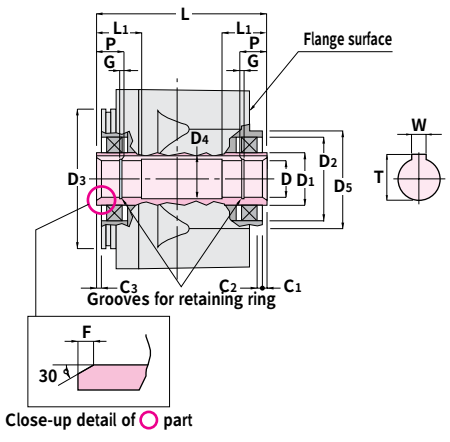
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-22** F2SS-30-5～60-(040) CAD Data: F2SS-30-040




Round Weight 6kg

## ■Detailed dimension diagram for F2S-Type output shaft

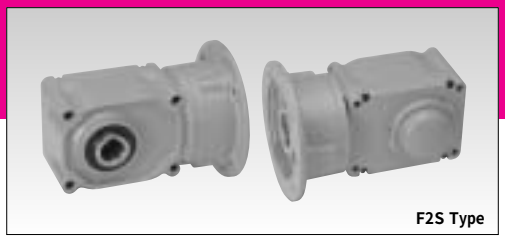



| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | φ30 | φ44 | φ65 | φ75 | φ31 | φ75 | 8 | 33.3 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.35 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D52
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

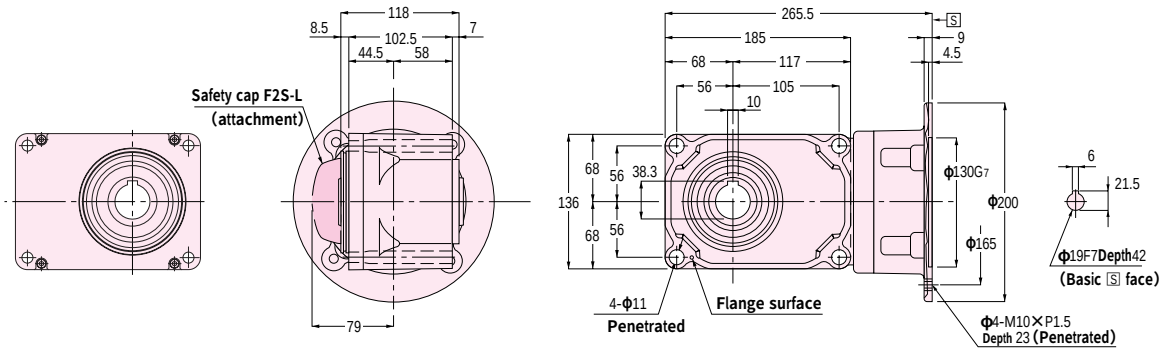
# F2 Series equiv 0.75kW


F2S Type

| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N•m 50Hz | Output Shaft Allowable Torque N•m 60Hz | Output Shaft Allowable Torque kgf•m 50Hz | Output Shaft Allowable Torque kgf•m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight F2SS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.75kW | 35 | 1/ 5 | 1/ 5 | 21 | 18 | 2.1 | 1.8 | 1960 | 200 | 500 | 51 | P.D59 Fig.D-23 8.5kg |
| | | 1/ 7.5 | 2/ 15 | 31 | 25 | 3.2 | 2.6 | 2250 | 230 | 567 | 58 | |
| | | 1/10 | 1/ 10 | 41 | 34 | 4.2 | 3.5 | 2450 | 250 | 613 | 63 | |
| | | 1/12.5 | 19/235 | 52 | 43 | 5.3 | 4.4 | 2600 | 265 | 669 | 68 | |
| | | 1/15 | 1/ 15 | 63 | 52 | 6.4 | 5.3 | 2740 | 280 | 686 | 70 | |
| | | 1/20 | 1/ 20 | 83 | 70 | 8.5 | 7.1 | 2990 | 305 | 747 | 76 | |
| | | 1/25 | 1/ 25 | 104 | 86 | 10.6 | 8.8 | 3190 | 325 | 796 | 81 | |
| | | 1/30 | 1/ 30 | 124 | 104 | 12.7 | 10.6 | 3280 | 335 | 821 | 84 | |
| | | 1/40 | 1/ 40 | 166 | 138 | 16.9 | 14.1 | 3480 | 355 | 870 | 89 | |
| | | 1/50 | 1/ 50 | 208 | 173 | 21.2 | 17.7 | 3480 | 355 | 870 | 89 | |
| | | 1/60 | 1/ 60 | 249 | 208 | 25.4 | 21.2 | 3480 | 355 | 870 | 89 | |

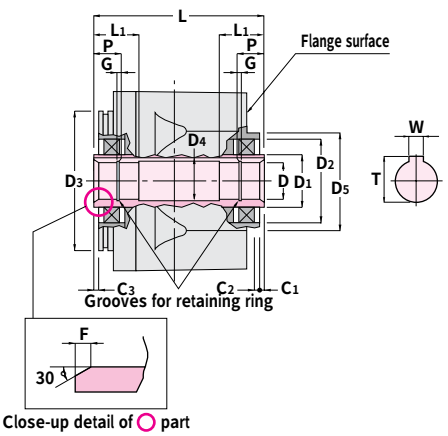
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

## Fig.D-23 F2SS-35-5～60-（075） CAD Data: F2SS-35-075




Round Weight 8.5kg

## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | φ35 | φ49 | φ72 | φ100 | φ36 | φ85 | 10 | 38.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.75 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D52
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93

# Designated Motor Attachable S-Type Reducer F2S Type (Concentric Hollow Shaft)

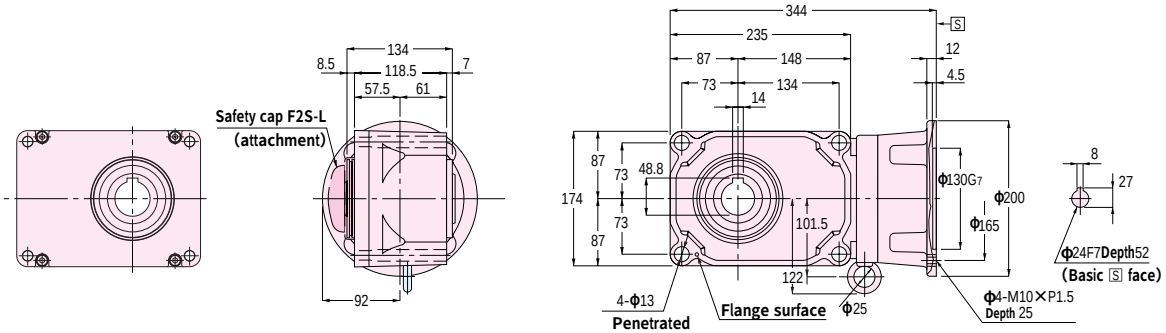
## F2 Series equiv 1.5kW



| Equivalent 4P motor capacity | Frame No. | Reduction Ratio | Actual Reduction Ratio | Output Shaft Allowable Torque N·m 50Hz | Output Shaft Allowable Torque N·m 60Hz | Output Shaft Allowable Torque kgf·m 50Hz | Output Shaft Allowable Torque kgf·m 60Hz | Output Shaft Allowable O.H.L. N | Output Shaft Allowable O.H.L. kgf | Output shaft Allowable Thrust Load N | Output shaft Allowable Thrust Load kgf | Page of Dimension Diagram shown, Fig. No. and Round Weight F2SS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5kW | 45 | 1/ 5 | 1/ 5 | 41 | 34 | 4.2 | 3.5 | 2940 | 300 | 800 | 82 | P.D60 Fig.D-24 17kg |
| | | 1/ 7.5 | 2/ 15 | 63 | 52 | 6.4 | 5.3 | 3330 | 340 | 900 | 92 | |
| | | 1/10 | 1/ 10 | 83 | 70 | 8.5 | 7.1 | 3630 | 370 | 967 | 99 | |
| | | 1/12.5 | 19/235 | 104 | 86 | 10.6 | 8.8 | 3920 | 400 | 1040 | 106 | |
| | | 1/15 | 1/ 15 | 124 | 104 | 12.7 | 10.6 | 4070 | 415 | 1067 | 109 | |
| | | 1/20 | 1/ 20 | 166 | 138 | 16.9 | 14.1 | 4460 | 455 | 1067 | 109 | |
| | | 1/25 | 1/ 25 | 208 | 173 | 21.2 | 17.7 | 4700 | 480 | 1067 | 109 | |
| | | 1/30 | 1/ 30 | 249 | 208 | 25.4 | 21.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/40 | 1/ 40 | 332 | 276 | 33.9 | 28.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/50 | 1/ 50 | 416 | 345 | 42.4 | 35.2 | 4750 | 485 | 1067 | 109 | |
| | | 1/60 | 1/ 60 | 498 | 416 | 50.8 | 42.4 | 4750 | 485 | 1067 | 109 | |

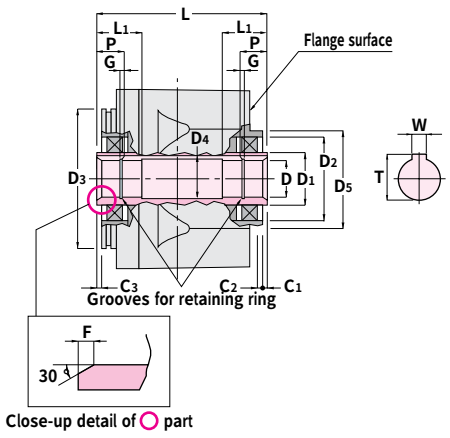
Note) The allowable O.H.L. are the values measured at the position of 20mm from the edge of output shaft.

**Fig.D-24** F2SS-45-5～60-(150) CAD Data: F2SS-45-150




Round Weight 17kg

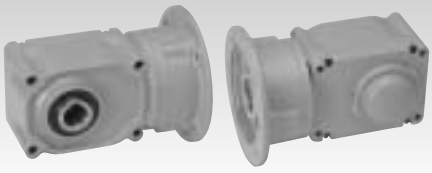
## ■Detailed dimension diagram for F2S-Type output shaft




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | φ45 | φ64 | φ85 | φ100 | φ46 | φ100 | 14 | 48.8 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.95 |

Note) New JIS Size Key applied: JIS B1301-1976(Standard)
Note) The key for the output shaft is not attached to this model.
Note) C-Type retaining ring conform to JIS B2804-1978.
Note) C-Type retaining ring is not attached to this model.

Model Code P.D52
Detailed Dimension Diagram of Input Shaft P.E50
Option P.E78～E93



F2S Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Standard Motors
Cautions for Safety
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GT-STEP Index Gearmotor
KOMPASS Gearbox

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- Caution for Safe Operation ..... P. E76
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  Multipurpose Inverter ..... P. E86

  Explosion-proof Gearmotor ..... P. E94

# Process of selection and example of selection

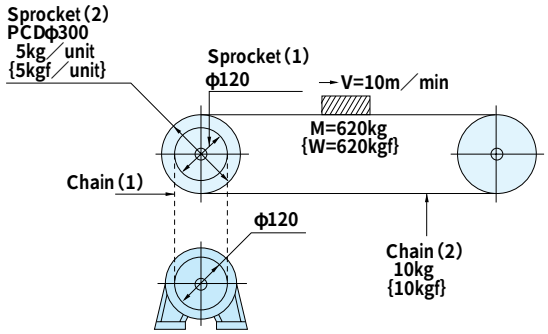


## An example of Selection

In Case of Foot or Flange Mount

**Application** ····· **Conveyor (Moderate shock load)**
**Conveyor Speed** ····· **10m/min**
**Weight of Work** ····· **620Kg**
**(Mass of Work** ····· **620kgf)**
**Type of Drive** ····· **Chain(Located on the center of shaft)**
**Operating Time** ····· **12 hours/day**
**Starting & Stopping Frequency**··· **720 times/day**
**Area of Use** ····· **Area of Power Supply Frequency of 60Hz**
**Coefficient of Friction** ····· **Supposed to be 0.2**

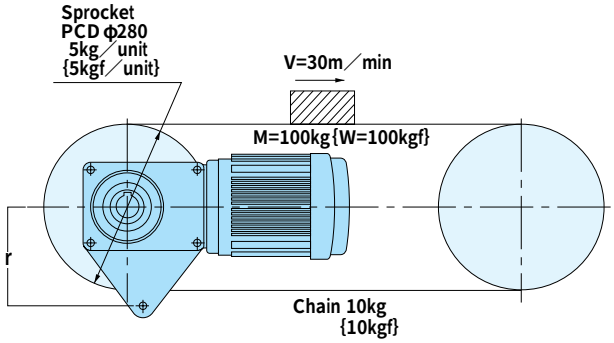
Chain(1), Sprocket(1) and other conditions were neglected for this calculation.




| Process of Selection | | Example of Selection | |
|---|---|---|---|
| | | SI Unit | Gravimetric Unit |
| Deciding Type | Decide on Parallel Shaft, Right Angle Shaft or Hollow Shaft | Decide on a G3 Series(parallel shaft) considering the mounting space. | |
| Determining Reduction Ratio | Determine Reduction Ratio:<br>$i = \frac{\text{Required Rotation Speed of Output Shaft}}{\text{Power Supply Frequency x 30}}$ | Required Rotation Speed of Conveyor Shaft $= \frac{10\times1000}{300\times\pi}$ 10.6 rpm<br>Since the diameter of sprocket for conveyor shaft and that of reducer output shaft are the same, we obtain.<br>$i = \frac{10.6}{60\times30}$ $\frac{1}{160}$ | |
| Checking Torque | Calculate Actual Load Torque($T_L$) | $T_L=9.8\times(620+2\times5+10)\times0.2\times\frac{300}{2\times1000}=188N\cdot m$ | $T_L=(620+2\times5+10)\times0.2\times\frac{300}{2\times1000}=19.2kgf\cdot m$ |
| | Calculate equivalent torque($T_{LE}$) of output shaft from service factor: (sf given in Table-1 on page E24)<br>$T_{LE}=T_L\times Sf$ | Adjust Actual Load Torque($T_L$) using a Service Factor (Sf). | |
| | | $T_{LE}=188\times1.25=235N\cdot m$ | $T_{LE}=19.2\times1.25=24kgf\cdot m$ |
| | Choose the allowable torque($T_A$) of output shaft from the performance table, which should be greater than $T_{LE}$ | Select an appropriate model of $T_{LE}\leqq T_A$ G3LM-32-160-T040 | |
| Checking Inertia | Calculate Actual Load Inertia | Calculate Actual Load Inertia Moment($I_L$)<br>$I_L=\{620\times(\frac{0.3}{2})^2\}+\{\frac{1}{2}\times5\times(\frac{0.3}{2})^2\times2\}+\{10\times(\frac{0.3}{2})^2\}$<br>$=14.29kg\cdot m^2$ | Calculate Actual Load $GD^2$ ($GD_L^2$)<br>$GD_L^2=(620\times0.3^2)+(\frac{1}{2}\times5\times0.3^2\times2)+(10\times0.3^2)$<br>$=57.15kgf\cdot m^2$ |
| | Calculate Load Inertia converted to Motor Shaft | Convert IL into the equivalent value at the motor shaft ($I_\ell$)<br>$I_\ell=I_L\times(i)^2$<br>$I_\ell=14.29\times(\frac{1}{160})^2$<br>$0.000558kg\cdot m^2$ | Convert $GD_L^2$ into the equivalent value at the motor shaft ($GD_\ell^2$)<br>$GD_\ell^2=GD_L^2\times(i)^2$<br>$GD_\ell^2=57.15\times(\frac{1}{160})^2$<br>$0.00223kgf\cdot m^2$ |
| | Calculate Equivalent Inertia using the correction factor corresponding to the operating condition. | Correction factor from the operating condition is 3. | |
| | | Calculate Equivalent Inertia Moment I($I_{\ell E}$)<br>$I_{\ell E}=I_\ell\times$(Correction factor) ⟨Table-3 on page E-3⟩<br>$I_{\ell E}=0.000558\times3=0.001674kg\cdot m^2$<br>Choose the model which satisfy $I_{\ell E}\leqq$ Allowable Inertia Moment($I_A$) | Calculate Equivalent $GD^2$ ($GD_{\ell E}^2$)<br>$GD_{\ell E}^2=GD_\ell^2\times$(Correction factor) ⟨Table-3 on page E-3⟩<br>$GD_{\ell E}^2=0.00223\times3=0.0067kgf\cdot m^2$<br>Choose the model which satisfy $GD_{\ell E}^2\leqq$Allowable $GD^2$ ($GD_A^2$) |
| | From Table-2 on page E4, choose the model which satisfy Equivalent Inertia ≦ Allowable Inertia. | G3LM-40-160-075 | |
| Checking O.H.L. | Determine K1 by the type of drive ⟨Table 4 on page E6⟩<br>Determine k2 by the location of the load ⟨Table-5 on page E6⟩ | $K_1=1$<br>$K_2=1$ | |
| | O.H.L.$=\frac{T_{LE}\times K_1\times K_2}{R}$<br>*R: Pitch Circle Radius of sprocket, etc. equipped to reducer shaft | O.H.L.$=\frac{235\times1\times1}{\frac{120}{2\times1000}}=3917N$ | O.H.L.$=\frac{24\times1\times1}{\frac{120}{2\times1000}}=400kgf$ |
| | Select O.H.L.≦Allowable O.H.L. from the performance table | Select the model which satisfy O.H.L.≦Allowable O.H.L., then found G3LM-32-160-T040 | |
| Final Decision | Select the most appropriate model which satisfy all the conditions required from torque, inertia and O.H.L. | The most appropriate model is G3LM-40-160-075 | |

## Example of Selection — In case of Shaft Mount

**Application** ····· Conveyor (Moderate shock load)
**Conveyor Speed** ····· 30m／min
**Weight of Work** ····· 100kg
**{Mass of Work** ····· 100kgf}
**Type of Drive** ····· Chain
**Operating Time** ····· 12 hours/day
**Starting & Stopping Frequency** ··· 720 times/day
**Area of Use** ····· Area of Power Supply Frequency of 60Hz
**Coefficient of Friction** ····· Supposed to be 0.2




Conditions other than above stated were not considered in this calculation.

| Process of Selection | | Example of Selection | |
|---|---|---|---|
| | | SI Unit | Gravimetric Unit |
| Deciding Type | Selection of hollow shaft, right angle shaft, or parallel shaft | Decide on F2-Series, F2S-Type (hollow shaft) model considering from the shaft mounting. | |
| Determining Reduction Ratio | Determine Reduction Ratio: | Required Rotation Speed of Conveyor Shaft $=\frac{30\times1000}{280\times\pi}$ 34.1 rpm<br>Since the rotation speed of the conveyor shaft and that of the reducer1s output shaft are the same.<br>$i=\frac{34.1}{60\times30}$ $\frac{1}{50}$ | |
| Checking Torque | Calculate Actual Load Torque($T_L$) | $T_L=9.8\times(100+2\times5+10)\times0.2\times\frac{280}{2\times1000}=32.9N\cdot m$ | $T_L=(100+2\times5+10)\times0.2\times\frac{280}{2\times1000}=3.36kgf\cdot m$ |
| | Calculate equivalent torque($T_{LE}$) of output shaft from service factor: (sf given in Table-1 on page E24)<br>$T_{LE}=T_L\times Sf$ | Adjust Actual Load Torque($T_L$) using a Service Factor (Sf). | |
| | | $T_{LE}=32.9\times1.25=41.1N\cdot m$ | $T_{LE}=3.36\times1.25=4.2kgf\cdot m$ |
| | Choose the allowable torque($T_A$) of output shaft from the performance table, which should be greater than $T_{LE}$ | Select an appropriate model of $T_{LE}\leqq T_A$ F2SM-25-50-T020A | |
| Checking Inertia | Calculate Actual Load Inertia | Calculate Actual Load Inertia Moment($I_L$)<br>$I_L=\{100\times(\frac{0.28}{2})^2\}+\{\frac{1}{2}\times5\times(\frac{0.28}{2})^2\times2\}+\{10\times(\frac{0.28}{2})^2\}$<br>$=2.25kg\cdot m^2$ | Calculate Actual load $GD^2$ ($GD^2_L$)<br>$GD^2_L=(100\times0.28^2)+(\frac{1}{2}\times5\times0.28^2\times2)+(10\times0.28^2)$<br>$=9.02kgf\cdot m^2$ |
| | Calculate Load Inertia converted to Motor Shaft | Convert IL into the equivalent value at the motor shaft ($I_\ell$)<br>$I_\ell=I_L\times(i)^2$<br>$I_\ell=2.25\times(\frac{1}{50})^2$<br>$=0.0009kg\cdot m^2$ | Convert $GD^2_L$ into the equivalent value at the motor shaft ($GD^2_\ell$)<br>$GD^2_\ell=GD^2_L\times(i)^2$<br>$GD^2_\ell=9.02\times(\frac{1}{50})^2$<br>$0.00361kgf\cdot m^2$ |
| | Calculate Equivalent Inertia using the correction factor corresponding to the operating condition. | Correction factor from the operating condition is 3. | |
| | | $I_{\ell E}=I_\ell\times$(Correction factor) ⟨Table-3 on page E-3⟩<br>$I_{\ell E}=0.0009\times3=0.0027kg\cdot m^2$ | Calculate Equivalent $GD^2$ ($GD^2_{\ell E}$)<br>$GD^2_{\ell E}=GD^2_\ell\times$(Correction factor) ⟨Table-3 on page E-3⟩<br>$GD^2_{\ell E}=0.00361\times3=0.0108kgf\cdot m^2$<br>Choose the model which satisfy $GD^2_{\ell E}\leqq$Allowable $GD^2$ ($GD^2_A$) |
| | From Table-2 on page E4, choose the model which satisfy Equivalent Inertia ≦ Allowable Inertia. | F2SM-35-50-075 | |
| Final Decision | Select the most appropriate model which satisfy all the conditions required from torque, inertia and O.H.L. | Finally we can determine the model F2SM-35-50-075<br>Torque Arm TAF2S-35(Option Number) is recommended. Refer to page E61.<br>In case the torque arm is to be made by customer, the distance(r) from the center of the output shaft to the fixing point, should be no less than 12.4mm by the calculation below:<br>$r\geqq\frac{\text{Actual Load Torque}\times1000}{\text{Allowable O.H.L.}-\text{mass of Reducer}}=\frac{41.1\{4.2\}\times1000}{3480\{355\}-9.8\times17\{17\}}=12.4$<br>＊For the calculation formula of Torque Arm, refer to page E62. | |

# Technical Note



## Service Factor (Sf)

G3 Series, H2 Series and F-F2 Series gearmotors and reducers are designed for the operation of 10 hrs/day with moderate shock loads. In case of using in severer condition, adjust the load torque with the Table-1 below.

〈Table-1〉

| Load Condition | Service Factor(Sf) | | | Application |
|---|---|---|---|---|
| | Under 3 hrs/day | 3~10 hrs./day | Over 10 hrs/day | |
| Uniform Load | 1 | 1 | 1 | Conveyors(uniform load), Screens, Agitators(low viscosity), Sewage Disposal Equipments(light load), Machine Tools(feed shaft), Elevators, Extruders, Distillers |
| Moderate Shock Load | 1 | 1 | 1.25 | Conveyors(non-uniform or heavy load), Agitators(high viscosity), Machines for Vehicles, Sewage Disposal Equipments(moderate load), Hoists(light load), Paper Mills, Feeders, Food Machines, Pumps, Sugar Mills, Textile Machines |
| Heavy Shock Load | 1 | 1.25 | 1.5 | Hoists(heavy load), Hammer Mills, Metal Mills, Crushers, Tumblers |

## Allowable Inertia Moment ($I_A$) Allowable $GD^2$ ($GD^2_A$)

When operating gearmotors intermittently under high inertia load, critical torque may instantaneously arise at the starting(or stopping in brake gearmotor). This may cause unexpected accident, therefore, be sure that the inertia of the connecting machine should be within the allowable value listed in the Table below, which may vary according to the connecting type and/or starting frequency.

### Allowable Inertia Moment I by Capacity {$GD^2$}

(Motor shaft or Input Shaft Equivalent)

Unit: Inertia Moment I (kg•m²) {$GD^2$ (kgf•m²)} 〈Table-2〉

| 3-Phase | 1-Phase | Allowable Inertia Moment ($I_A$) {Allowable $GD^2$ ($GD^2_A$)} | |
|---|---|---|---|
| 50W Reduction Ratio 1/10~1/240 | — | 0.0002 | {0.0008} |
| 50W Reduction Ratio 1/300~1/900 | — | 0.0001 | {0.0004} |
| 50W Reduction Ratio 1/1200~1/1800 | — | 0.0002 | {0.0008} |
| 0.1kW | 100W | 0.0008 | {0.003} |
| 0.2kW | 200W | 0.0010 (0.0013) | {0.004 (0.005)} |
| 0.4kW | 400W | 0.0015 (0.0019) | {0.006 (0.0075)} |
| 0.75kW | — | 0.0030 (0.0038) | {0.012 (0.015)} |
| 1.5kW | — | 0.008 | {0.032} |
| 2.2kW | — | 0.011 | {0.042} |

Note 1) In case of reducers, operating with the input rotation speed of over 1800rpm, the allowable inertia moment I ($GD^2$) can be obtained by multiplying the value in the left by $(1800/\text{Input rpm})^2$. (Example: In case the input shaft rpm is 3600, the allowable inertia moment I ($GD^2$) will be 1/4).

2) Motor shaft(input shaft) equivalent inertia moment I
= Output shaft inertia moment I × $(\text{reduction ratio})^2$
(Motor shaft(input shaft) equivalent $GD^2$ = Output shaft $GD^2$ ×$(\text{reduction ratio})^2$)
(Example: In case the reduction ratio is 1/20, the answer is 1/400.)

3) The values in ( ) in the Allowable Inertia Moment (Allowable $GD^2$) in the Table are the ones of gearmotors with reinforced clutch/brake.

### Correction Factor for Allowable Inertia Moment I by Operating Condition {Allowable $GD^2$}

〈Table-3〉

| Connection Type | Starting Frequency | Correction Factor |
|---|---|---|
| Direct Coupling (without slack) | Under 70 times/day | 1 |
| | Over 70 times/day | 1.5 |
| By Chain (with slack) | Under 70 times/day | 2 |
| | Over 70 times/day | 3 |

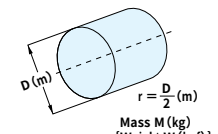
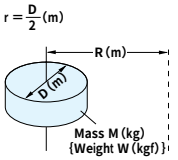
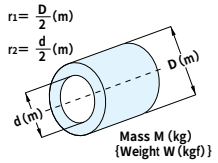
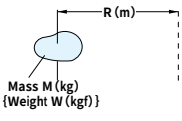
# Calculation of Inertia Moment I (GD² (Flywheel Effect)

The conversion between the inertia moment(kg•m²)-(SI units) and the gravimetric units GD² (kg•m²) are calculated as follows:

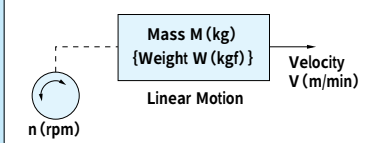
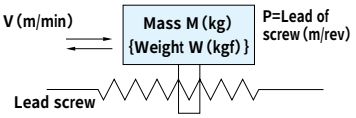
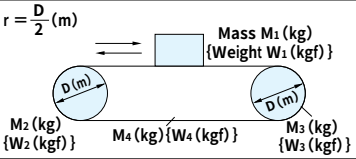
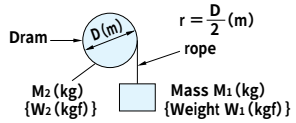
$$I = \frac{GD^2}{4}$$

G : Gravity (kgf)
D : Rotation Diameter (m)
I : Inertia Moment (kg•m²)

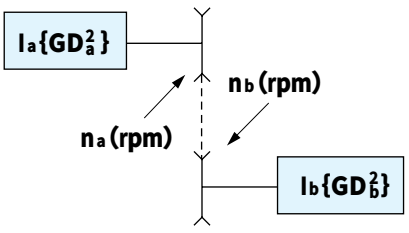
## Inertia Moment in Rotation {GD²}

| When the center of rotation is concentric with the center of gravity | | | When the center of rotation is not concentric with the center of gravity | | |
|---|---|---|---|---|---|
| | SI Unit | Gravimetric Unit | | SI Unit | Gravimetric Unit |
|  | $I = \frac{1}{2}Mr^2$ (kg•m²) | $GD^2 = \frac{1}{2}WD^2$ {kgf•m²} |  | $I = \frac{1}{2}Mr^2 + MR^2$ (kg•m²) | $GD^2 = \frac{1}{2}WD^2 + 4WR^2$ {kgf•m²} |
|  | $I = \frac{1}{2}M(r_1^2 + r_2^2)$ (kg•m²) | $GD^2 = \frac{1}{2}W(D^2 + d^2)$ {kgf•m²} |  | (when you can ignore size) $I = MR^2$ (kg•m²) | (when you can ignore size) $GD^2 = 4WR^2$ {kgf•m²} |

## Inertia Moment in Linear Motion {GD²}

| | | SI Unit | Gravimetric Unit |
|---|---|---|---|
| Ordinary Use |  | $I = \frac{1}{4}M \cdot \left(\frac{V}{\pi \cdot n}\right)^2$ (kg•m²) | $GD^2 = W \cdot \left(\frac{V}{\pi \cdot n}\right)^2$ {kgf•m²} |
| Horizontal Linear Motion (driven with lead screw) |  | $I = \frac{1}{4}M \cdot \left(\frac{P}{\pi}\right)^2 = \frac{1}{4}M \cdot \left(\frac{V}{\pi \cdot n}\right)^2$ (kg•m²) | $GD^2 = W \cdot \left(\frac{P}{\pi}\right)^2 = W \cdot \left(\frac{V}{\pi \cdot n}\right)^2$ {kgf•m²} |
| Horizontal Linear Motion (conveyors, etc.) |  | $I = M_1r^2 + \frac{1}{2}M_2r^2 + \frac{1}{2}M_3r^2 + M_4r^2$ (kg•m²) | $GD^2 = W_1D^2 + \frac{1}{2}W_2D^2 + \frac{1}{2}W_3D^2 + W_4D^2$ {kgf•m²} |
| Vertical Linear Motion (cranes, winches, etc.) |  | $I = M_1r^2 + \frac{1}{2}M_2r^2$ (kg•m²) | $GD^2 = W_1D^2 + \frac{1}{2}W_2D^2$ {kgf•m²} |

## Conversion of Inertia Moment when Speed Ratio is available




The inertia moment Ib (GD$_b^2$) of the load can be converted into the equivalent value at the na shaft as shown below:

$$I = I_a + \left(\frac{n_b}{n_a}\right)^2 \times I_b$$

$$\{GD^2 = GD_a^2 + \left(\frac{n_b}{n_a}\right)^2 \times GD_b^2\}$$

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Technical Note

## Overhung Load (O.H.L.)

An overhung load is a suspending load imposed on a shaft. In the coupling of reducer shaft and other machine, if chains, belts and gears are used, this O.H.L. must be taken into consideration.

$$O.H.L. = \frac{T_{LE} \times K_1 \times K_2}{R} \text{ (N) \{kgf\}}$$

- $T_{LE}$ : Equivalent output torque imposed on reducer shaft (N•m) {kgf•m}
- R : Pitch Circle Radius(m) of sprocket, pulley, gear, etc. attached to reducer shaft.
- $K_1$ : Factor for the connecting method (Refer to Table-4)
- $K_2$ : Factor for the load point (Refer to Table-5)

Be sure that the OHL value calculated by above formula should not exceed the allowable OHL value listed in the performance table.

### Factor $K_1$

〈Table-4〉

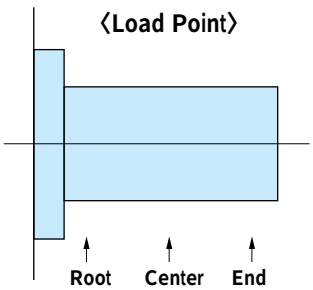
| Connecting Method | $K_1$ |
|---|---|
| Chain, Timing Belt | 1.00 |
| Gear | 1.25 |
| V-Belt | 1.50 |

### Factor $K_2$

〈Table-5〉

| Load Point | $K_2$ |
|---|---|
| Root of the shaft | 0.75 |
| Center of the shaft | 1.00 |
| End of the shaft | 1.50 |

〈Load Point〉




## Thrust Load

The thrust load values of F and F2 Series hollow shaft type are listed in the performance table. If there is a possibility of having excessive thrust load in the operating condition, consult us.

# Overhung Load on a Hollow Shaft(O.H.L.)

## ■Flange Mounting

### (1) Load Point of O.H.L.

Allowable OHL is calculated at the point 20mm off from the end of output shaft.

### (2)-1 Adjustment of O.H.L. without any support by pillow

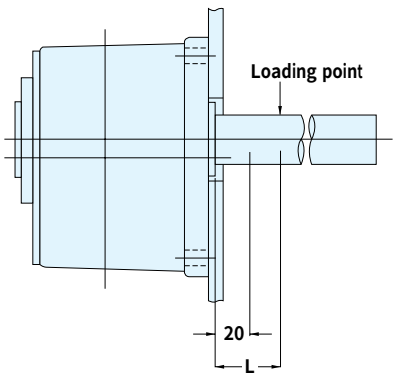
When load point of O.H.L. (L) become greater than 20mm,
the allowable O.H.L. can be corrected by the following formula:

$$\text{Bearable O.H.L (N) \{kgf\}} = \frac{A+20}{A+L} \times \text{Allowable O.H.L (N) \{kgf\}}$$

Note) Refer Table-6 for A.

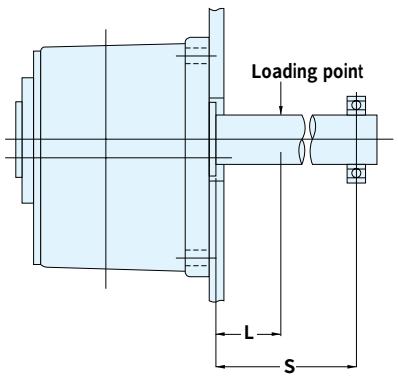
〈Table-6〉

| Frame Number | A (mm) |
|---|---|
| 20 | 68.5 |
| 25 | 84.5 |
| 30 | 91 |
| 35 | 98 |
| 45 | 113 |
| 55 | 150 |




### (2)-2 Correction of O.H.L. when supported by pillow at one end

$$\text{Bearable O.H.L (N) \{kgf\}} = \frac{S}{S-L} \times \text{Allowable O.H.L (N) \{kgf\}}$$



# Technical Note

## Sample Calculation for Gearmotor with Brake/Gearmotor with Clutch/Brake

| | SI Unit | Gravimetric Unit | Notes |
|---|---|---|---|
| **Braking Time• Gearing Time of Clutch (ttb)** | $t_{tb}=t_{ab}+t_a$ (s)<br>$t_{ab}=\frac{(I_r+I_\ell)\times n}{9.57\times(Td\pm T\ell)}$ (s) | $t_{tb}=t_{ab}+t_a$ (s)<br>$t_{ab}=\frac{(GD_r^2+GD_\ell^2)\times n}{375\times(Td\pm T\ell)}$ (s) | Note ❶ When the load torque become negative such as winding down, Tℓ should be (−Tℓ ).<br>❷ For the mark「±」, Clutch should be「−」and B rake should be「+」. |
| **Geared Total Work (E)** | **Geared Total Work (E) of clutch brake or brake**<br>$E=\frac{(I_r+I_\ell)\times n^2}{183}\times\frac{Td}{Td\pm T\ell}$ (N•m) | $E=\frac{(GD_r^2+GD_\ell^2)\times n^2}{7160}\times\frac{Td}{Td\pm T\ell}$ (kgf•m) | Note ❶ When the load torque become negative such as winding down, Tℓ should be (−Tℓ ).<br>❷ For the mark「±」, Clutch should be「−」and B rake should be「+」. |
| **Life** | The life of clutch/brake lining varies according to surface pressure, temperature, slip speed, etc. Therefore, it is not possible to obtain exact value, however, the round number of life-time braking frequency can be estimated by the following formula:<br>$Z=\frac{Emax}{E}$ (times of braking) | | |

### 【Explanations of Code】

ta ····· Brake delay time of gearmotor with brake ····· 〈Refer Table-21 on page E21〉
Armature braking time of gearmotor with clutch/brake ····· 〈Refer Table-16•17 on page E40〉
Ir{GDr²} ····· Gearmotor with brake ····· 〈Refer Table-8-1 o Table-8-2 on page E14〉
Gearmotor with clutch/brake ····· 〈Refer Table 9 or 10 on page E14〉
Iℓ{GDℓ²} ····· Inertia Moment of load I Motor shaft or reducer Input Shaft Equivalent of ($GD^2$) (kg•m²) {kgf•m²}
n ····· Rotation speed of clutch shaft or brake shaft (rpm)
Td ····· Dynamic friction torque against the corresponding rotation speed of clutch/brake (N•m) {kgf•m}
Gearmotor with brake ····· 〈Refer Table-13-1 or Table-13-2 on page E18〉
Gearmotor with clutch/brake ····· 〈Refer Table-16•17 on page E40〉
Tℓ ····· Equivalent load torque converted to reducer input shaft (N•m) {kgf•m}
Emax ····· Allowable total work(N•m)(kgf•m) of clutch/brake
Gearmotor with clutch ····· 〈Refer Table-13-1 or Table-13-2 on page E18〉
Gearmotor with clutch/brake ····· 〈Refer Table-16•17 on page E40〉

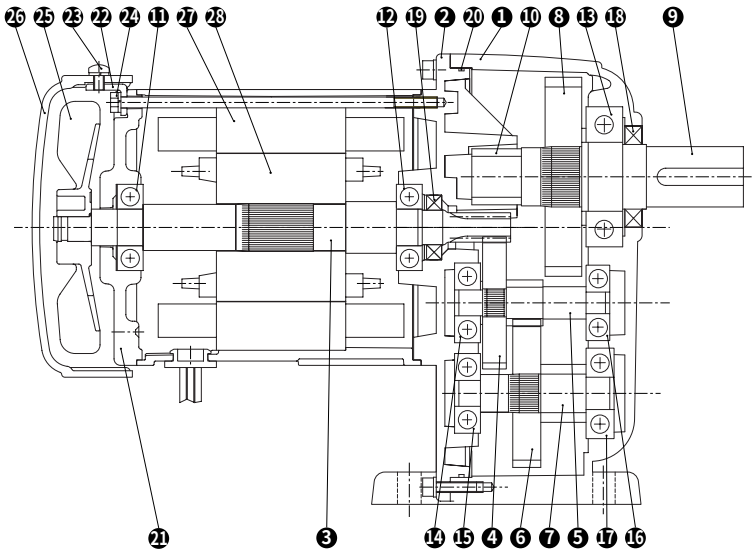
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
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# Structural chart and Nameplate

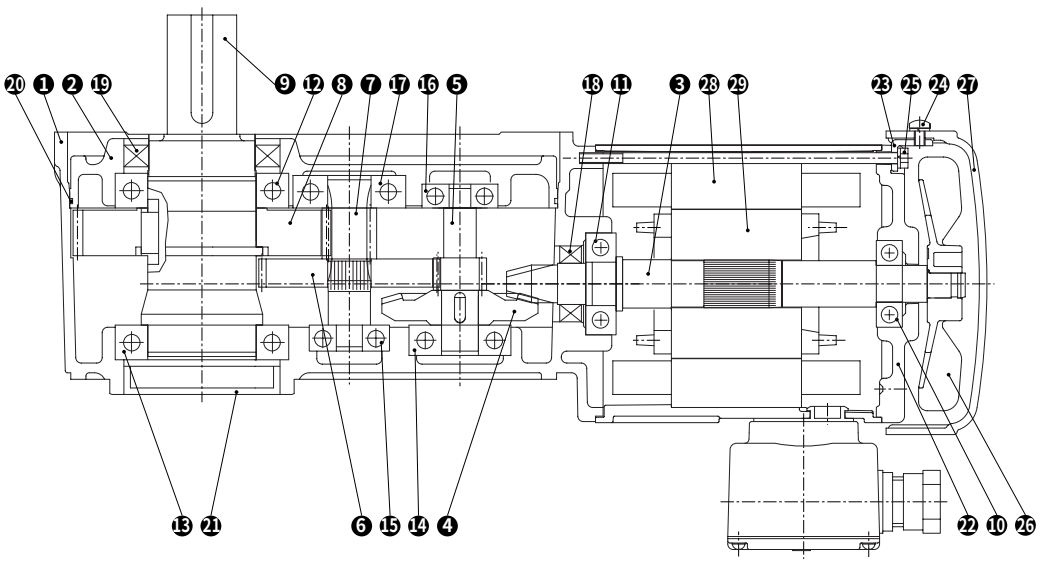
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
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## Parallel Shaft



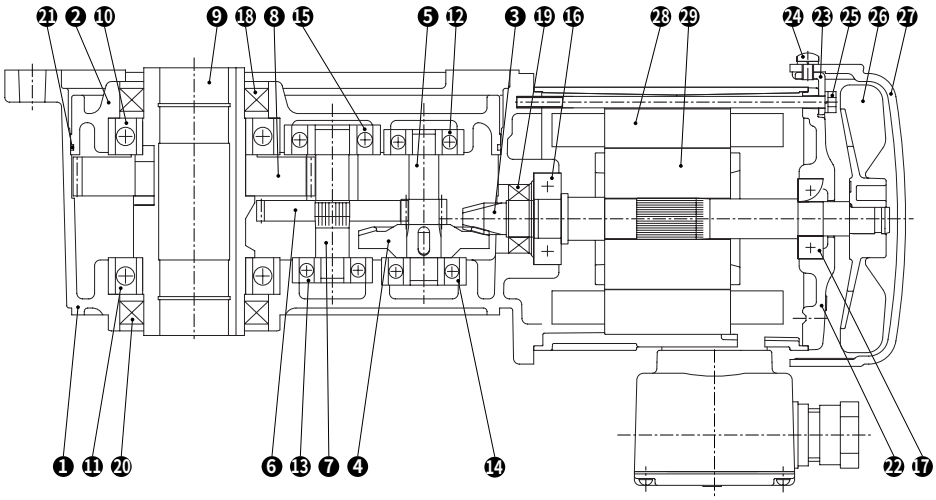

| | | | | | |
|---|---|---|---|---|---|
| ❶ Case | ❻ 2 Shaft Gear | ⓫ Bearing | ⓰ Bearing | ㉑ Motor Bracket | ㉖ Fan Cover |
| ❷ Bracket | ❼ 2 Shaft Pinion | ⓬ Bearing | ⓱ Bearing | ㉒ Stay | ㉗ Stationary Core |
| ❸ Input Shaft | ❽ Output Shaft Gear | ⓭ Bearing | ⓲ Oil seal | ㉓ Attaching Screw | ㉘ Rotor Core |
| ❹ 1 Shaft Gear | ❾ Output Shaft | ⓮ Bearing | ⓳ Oil seal | ㉔ Eye Bolt | |
| ❺ 1 Shaft Pinion | ❿ Metal | ⓯ Bearing | ⓴ O-ring | ㉕ Fan | |

## Right Angle Shaft (Solid Shaft type)



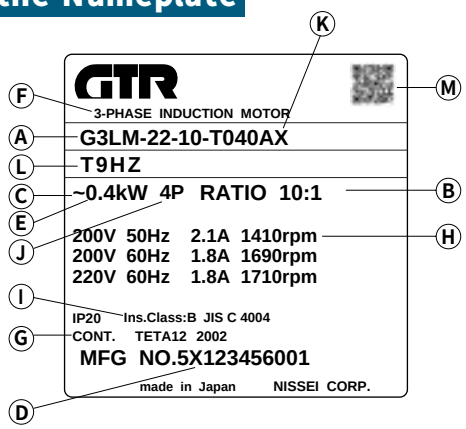

| | | | | | |
|---|---|---|---|---|---|
| ❶ Case | ❻ 2 Shaft Gear | ⓫ Bearing | ⓰ Bearing | ㉑ Seal cap | ㉖ Fan |
| ❷ Case Cover | ❼ 2 Shaft Pinion | ⓬ Bearing | ⓱ Bearing | ㉒ Motor Bracket | ㉗ Fan Cover |
| ❸ Input Shaft | ❽ Output Shaft Gear | ⓭ Bearing | ⓲ Oil seal | ㉓ Stay | ㉘ Stationary Core |
| ❹ 1 Shaft Gear | ❾ Output Shaft | ⓮ Bearing | ⓳ Oil seal | ㉔ Attaching Screw | ㉙ Rotor Core |
| ❺ 1 Shaft Pinion | ❿ Bearing | ⓯ Bearing | ⓴ O-ring | ㉕ Eye Bolt | |

# Right Angle Shaft (Hollow shaft type)



| | | | | | |
|---|---|---|---|---|---|
| ❶ Case | ❻ 2 Shaft Gear | ⓫ Bearing | ⓰ Bearing | ㉑ O-ring | ㉖ Fan |
| ❷ Case Cover | ❼ 2 Shaft Pinion | ⓬ Bearing | ⓱ Bearing | ㉒ Motor Bracket | ㉗ an Cover |
| ❸ Input Shaft | ❽ Output Shaft Gear | ⓭ Bearing | ⓲ Oil seal | ㉓ Stay | ㉘ Stationary Core |
| ❹ 1 Shaft Gear | ❾ Output Shaft | ⓮ Bearing | ⓳ Oil seal | ㉔ Attaching Screw | ㉙ Rotor Core |
| ❺ 1 Shaft Pinion | ❿ Bearing | ⓯ Bearing | ⓴ Oil seal | ㉕ Eye Bolt | |

## How to read the Nameplate




- Ⓐ Product type name
- Ⓑ Reduction Ratio
- Ⓒ Motor capacity or Equivalent motor capacity
- Ⓓ Manufacturing number
- Ⓔ Motor capacity
- Ⓕ Number of phase
- Ⓖ Rating
- Ⓗ Motor characteristic
- Ⓘ Insulation classification
- Ⓙ Number of pole
- Ⓚ Auxiliary code
- Ⓛ Additional number
- Ⓜ QR code (Nissei private controlling code)

## How to read the namufacturing number

5 X 1 2 3 4 5 6 0 0 1

- 5 — date of namufacture (year) (last one digit of dominical year)
- X — date of namufacture (month) 1 : January ~ 9 : September, X : October, Y : November, Z : December
- 123456 — Nissei's control number
- 001 — Unit number (Serial number)

# Motor Specifications

## 3-Phase Standard Voltage(3 Rated)

Characteristics for motor itself

| Capacity | Motor Capacity | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristic | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque | |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) | |
| 50W | T50 | 200 | 50 | 1350 | 0.40 | 1.04 | 264 | 270 | Reduction ratio of less than 1/240 and over 1/1200 |
| | | 200 | 60 | 1550 | 0.36 | 0.97 | 241 | 246 | |
| | | 220 | 60 | 1600 | 0.36 | 1.07 | 303 | 309 | |
| | | 200 | 50 | 1350 | 0.42 | 0.94 | 194 | 198 | Reduction ratio of 1/300～1/900 |
| | | 200 | 60 | 1550 | 0.39 | 0.86 | 168 | 175 | |
| | | 220 | 60 | 1550 | 0.39 | 1.00 | 218 | 227 | |
| 0.1kW | T010 | 200 | 50 | 1420 | 0.61 | 2.39 | 215 | 258 | |
| | | 200 | 60 | 1700 | 0.54 | 2.27 | 190 | 238 | |
| | | 220 | 60 | 1720 | 0.54 | 2.52 | 245 | 300 | |
| 0.2kW | T020 | 200 | 50 | 1420 | 1.1 | 4.70 | 215 | 248 | |
| | | 200 | 60 | 1710 | 1.0 | 4.35 | 195 | 225 | |
| | | 220 | 60 | 1720 | 1.0 | 4.85 | 238 | 279 | |
| 0.4kW | T040 | 200 | 50 | 1410 | 2.1 | 9.50 | 220 | 265 | |
| | | 200 | 60 | 1690 | 1.8 | 8.60 | 190 | 234 | |
| | | 220 | 60 | 1710 | 1.8 | 9.60 | 236 | 289 | |
| 0.75kW | 075 | 200 | 50 | 1430 | 3.7 | 17.7 | 246 | 266 | |
| | | 200 | 60 | 1720 | 3.3 | 16.7 | 228 | 244 | |
| | | 220 | 60 | 1730 | 3.2 | 17.7 | 258 | 297 | |
| 1.5kW | 150 | 200 | 50 | 1430 | 6.6 | 37.0 | 264 | 280 | |
| | | 200 | 60 | 1720 | 6.1 | 33.5 | 232 | 248 | |
| | | 220 | 60 | 1730 | 5.8 | 34.9 | 254 | 301 | |
| 2.2kW | 220 | 200 | 50 | 1410 | 9.0 | 46.6 | 245 | 252 | |
| | | 200 | 60 | 1690 | 8.6 | 41.2 | 202 | 225 | |
| | | 220 | 60 | 1710 | 8.0 | 45.6 | 251 | 275 | |

## 1-Phase Standard Voltage

Characteristics for motor itself

| Capacity | Motor Capacity | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristic | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) |
| 100W | S100 Note 1 | 100 | 50 | 1400 | 1.7 | 4.40 | 60 | 165 |
| | | 100 | 60 | 1700 | 1.9 | 4.07 | 70 | 172 |
| | 100 Note 1 | 100 | 50 | 1420 | 2.7 | 10.5 | 220 | 188 |
| | | 100 | 60 | 1710 | 2.4 | 10.5 | 204 | 184 |
| 200W | 200 | 100 | 50 | 1420 | 5.1 | 20.0 | 276 | 194 |
| | | 100 | 60 | 1700 | 4.5 | 20.0 | 294 | 187 |
| 400W | 400 | 100 | 50 | 1440 | 8.7 | 32.0 | 210 | 189 |
| | | 100 | 60 | 1730 | 7.9 | 32.0 | 205 | 178 |

Note 1) Corresponding models for the motor capacity code S100W are F-Series and H2-Series, and that for 100W is G3-Series.

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## 3-Phase High Voltage (4 Rated)

Characteristics for motor itself

| Capacity | Motor Capacity | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristic | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque | |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) | |
| 50W | T50W | 380 | 50 | 1300 | 0.20 | 0.46 | 183 | 192 | Ratio 1/240 and below |
| | | 400 | 50 | 1300 | 0.20 | 0.48 | 216 | 219 | |
| | | 400 | 60 | 1550 | 0.18 | 0.46 | 190 | 201 | |
| | | 440 | 60 | 1600 | 0.18 | 0.50 | 258 | 260 | |
| | | 380 | 50 | 1250 | 0.20 | 0.38 | 155 | 171 | Reduction ratio of 1/300～1/900 |
| | | 400 | 50 | 1300 | 0.20 | 0.40 | 174 | 191 | |
| | | 400 | 60 | 1500 | 0.20 | 0.38 | 155 | 178 | |
| | | 440 | 60 | 1550 | 0.20 | 0.41 | 193 | 215 | |
| | | 380 | 50 | 1300 | 0.17 | 0.43 | 167 | 169 | Ratio 1/1200 and above |
| | | 400 | 50 | 1350 | 0.17 | 0.45 | 194 | 200 | |
| | | 400 | 60 | 1550 | 0.17 | 0.43 | 170 | 183 | |
| | | 440 | 60 | 1600 | 0.17 | 0.47 | 222 | 230 | |
| 0.1kW | T010W | 380 | 50 | 1410 | 0.31 | 1.12 | 180 | 224 | |
| | | 400 | 50 | 1420 | 0.31 | 1.18 | 199 | 250 | |
| | | 400 | 60 | 1700 | 0.28 | 1.12 | 180 | 233 | |
| | | 440 | 60 | 1720 | 0.28 | 1.22 | 217 | 285 | |
| 0.2kW | T020W | 380 | 50 | 1420 | 0.56 | 2.29 | 192 | 230 | |
| | | 400 | 50 | 1430 | 0.56 | 2.38 | 220 | 257 | |
| | | 400 | 60 | 1710 | 0.50 | 2.29 | 214 | 239 | |
| | | 440 | 60 | 1730 | 0.50 | 2.48 | 258 | 294 | |
| 0.4kW | T040W | 380 | 50 | 1410 | 1.0 | 4.35 | 194 | 225 | |
| | | 400 | 50 | 1420 | 1.0 | 4.65 | 216 | 258 | |
| | | 400 | 60 | 1700 | 0.9 | 4.30 | 184 | 232 | |
| | | 440 | 60 | 1720 | 0.9 | 4.75 | 221 | 286 | |
| 0.75kW | 075W | 380 | 50 | 1430 | 1.8 | 8.15 | 202 | 233 | |
| | | 400 | 50 | 1440 | 1.8 | 8.65 | 228 | 258 | |
| | | 400 | 60 | 1730 | 1.7 | 8.15 | 207 | 236 | |
| | | 440 | 60 | 1740 | 1.6 | 8.95 | 252 | 287 | |
| 1.5kW | 150W | 380 | 50 | 1430 | 3.3 | 17.5 | 218 | 258 | |
| | | 400 | 50 | 1440 | 3.3 | 18.5 | 245 | 278 | |
| | | 400 | 60 | 1730 | 3.0 | 16.5 | 200 | 245 | |
| | | 440 | 60 | 1740 | 2.9 | 18.3 | 248 | 298 | |
| 2.2kW | 220W | 380 | 50 | 1410 | 4.6 | 22.3 | 215 | 226 | |
| | | 400 | 50 | 1420 | 4.5 | 23.6 | 243 | 252 | |
| | | 400 | 60 | 1700 | 4.3 | 20.9 | 200 | 224 | |
| | | 440 | 60 | 1720 | 4.0 | 23.1 | 247 | 273 | |

## 1-Phase High Voltage

Characteristics for motor itself

| Capacity | Motor Capacity | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristic | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) |
| 100W | S100W Note 1 | 200 | 50 | 1410 | 0.82 | 2.10 | 65 | 163 |
| | | 200 | 60 | 1700 | 0.96 | 2.00 | 81 | 178 |
| | 100W Note 1 | 200 | 50 | 1420 | 1.3 | 5.4 | 222 | 194 |
| | | 200 | 60 | 1710 | 1.2 | 5.4 | 200 | 182 |
| 200W | 200W | 200 | 50 | 1420 | 2.5 | 10.0 | 254 | 203 |
| | | 200 | 60 | 1700 | 2.2 | 10.0 | 250 | 205 |
| 400W | 400W | 200 | 50 | 1440 | 4.3 | 19.0 | 181 | 240 |
| | | 200 | 60 | 1730 | 3.9 | 18.0 | 190 | 217 |

Note 1) Corresponding models for the motor capacity code S100W are F-Series and H2-Series, and that for 100W is G3-Series.

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# Inertia Moment of Gearmotor

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Gearmotor with Clutch/Brake
Reducer (Double Shaft)
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Right Angle Shaft (Performance Table/Dimension)
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## Inertia Moment I {GD²} of Gearmotor (Motor+Reducer) Itself

(Motor Shaft Equivalent, Common to Every Reduction Ratio)

〈Table-7-1〉

| Motor Capacity | 3-Phase 50W | 3-Phase 50W | 3-Phase 50W | 3-Phase 0.1kW | 3-Phase 0.2kW | 3-Phase 0.4kW | 3-Phase 0.75kW | 3-Phase 1.5kW | 3-Phase 2.2kW |
|---|---|---|---|---|---|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | ∗1 0.00010 {0.00040} | ∗2 0.00008 {0.00033} | ∗3 0.00010 {0.00040} | 0.00048 {0.0019 } | 0.00073 {0.0029 } | 0.0012 {0.0046} | 0.0025 {0.010 } | 0.0065 {0.026 } | 0.0085 {0.034 } |

〈Table-7-2〉

| Motor Capacity | 1-Phase 100W | 1-Phase 100W | 1-Phase 200W | 1-Phase 400W |
|---|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | ∗4 0.00055 {0.0022 } | 0.00080 {0.0032 } | 0.00100 {0.0040 } | 0.0028 {0.011 } |

Note) ∗1 is for F Series/ratio 1/240 and below.
∗2 is for F Series/ratio 1/300～1/900.
∗3 is for F Series/ratio 1/1200 and above.
∗4 is for motor capacity type S100・S100W.

## Inertia Moment I ({GD²}of Gearmotor with Brake (Motor +Reducer)

(Motor Shaft Equivalent, Common to Every Reduction Ratio)

〈Table-8-1〉

| Motor Capacity | 3-Phase 50W | 3-Phase 50W | 3-Phase 50W | 3-Phase 0.1kW | 3-Phase 0.2kW | 3-Phase 0.4kW | 3-Phase 0.75kW | 3-Phase 1.5kW | 3-Phase 2.2kW |
|---|---|---|---|---|---|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | ∗1 0.00012 {0.00048} | ∗2 0.00009 {0.00037} | ∗3 0.00012 {0.00048} | 0.00070 {0.0028 } | 0.00088 {0.0035 } | 0.0013 {0.0052} | 0.0028 {0.011 } | 0.0070 {0.028 } | 0.0093 {0.037 } |

〈Table-8-2〉

| Motor Capacity | 1-Phase 100W | 1-Phase 100W | 1-Phase 200W | 1-Phase 400W |
|---|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | ∗4 0.00070 {0.0028 } | 0.00103 {0.0041 } | 0.00115 {0.0046 } | 0.0030 {0.012 } |

Note) ∗1 is for F Series/ratio 1/240 and below.
∗2 is for F Series/ratio 1/300～1/900.
∗3 is for F Series/ratio 1/1200 and above.
∗4 is for motor capacity type S100・S100W.

## Inertia Moment I {GD²} of Gearmotor with Clutch/Brake (Clutch/Brake +Reducer)

(Motor Shaft Equivalent)

**Standard Type**

〈Table-9〉

| Motor Capacity | 3-Phase 0.1kW 0.2kW | 3-Phase 0.4kW | 3-Phase 0.75kW |
|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | 0.00035 {0.0014 } | 0.00085 {0.0034 } | 0.0011 {0.0042} |

**Reinforced Type**

〈Table-10〉

| Motor Capacity | 3-Phase 0.2kW | 3-Phase 0.4kW | 3-Phase 0.75kW |
|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | 0.00085 {0.0034 } | 0.0011 {0.0042} | 0.0015 {0.0059} |

## Inertia Moment I {GD²} of Reducer(Parallel Shaft)

(Input Shaft Equivalent)

〈Table-11〉

| Equivalent Capacity of 4P motor | 0.1kW | 0.2kW | 0.4kW | 0.75kW | 1.5kW | 2.2kW |
|---|---|---|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | 0.000006 {0.000023} | 0.000007 {0.000029} | 0.000017 {0.000068} | 0.00006 {0.00023} | 0.00018 {0.00070} | 0.0003 {0.0011} |

## Inertia Moment I {GD²} of S-Type Reducer

(Input Shaft Equivalent)

〈Table-12〉

| Equivalent Capacity of 4P motor | 0.1kW | 0.2kW | 0.4kW | 0.75kW | 1.5kW | 2.2kW |
|---|---|---|---|---|---|---|
| Inertia Moment I (kg·m²) {GD² (kgf·m²)} | 0.000023 {0.000093} | 0.000025 {0.00010 } | 0.00003 {0.00012} | 0.000073 {0.00029 } | 0.00019 {0.00077} | 0.0004 {0.0016} |

Parallel Shaft (Performance Table/Dimension)
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Water-resistant, Outdoor Gearmotor with Brake
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Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Gearmotor Wiring・Terminal Box

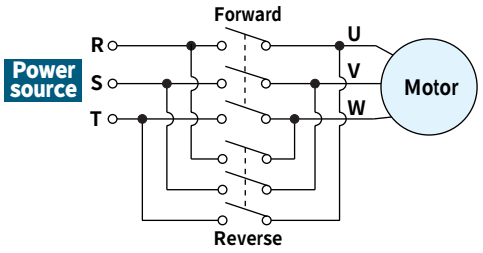
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
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GT-STEP Index Gearmotor
KOMPASS Gearbox

## Wiring Gearmotor

Wirings shown in the diagrams below are for the standard gearmotor. The rotation direction of the output shaft in the wiring below is shown in the performance table respectively for each model.

### ■3-Phase Motor (Common to F・F2・H2・G3 Series)

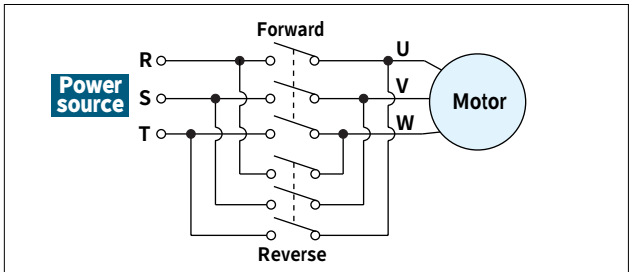
Motor capacity designations T50 ・T010 ・T020 ・T040
T50W ・T010W・T020W・T040W




| Mark in the Diagram | Lead Wire Type | | Terminal Box Type |
|---|---|---|---|
| | 200V | 400V | Terminal Code |
| U | Black | Black | U |
| V | Grey | Brown | V |
| W | White | White | W |

### ■3-Phase Motor (Common to F・F2・H2・G3 Series)

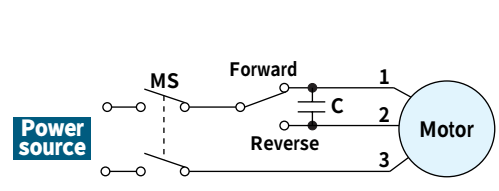
Motor capacity designations 075 ・150 ・220
075W・150W・220W




| Mark in the Diagram | Terminal Box |
|---|---|
| | Terminal Code |
| U | U |
| V | V |
| W | W |

### ■1-Phase Motor/F・H2 Series

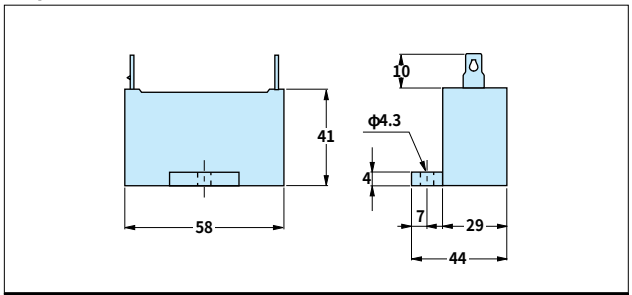
Motor capacity designations S100 (100V)・S100W (200V)




| Mark in the Diagram | Lead Wire Type | | Terminal Box Type |
|---|---|---|---|
| | 100V | 200V | Terminal Code |
| 1 | Blue | Brown | 1 |
| 2 | Black | Black | 2 |
| 3 | Grey | Grey | 3 |

Capacitor is needed for use in single-phase S100・S100W motors. Use the attached capacitor properly wired. Refer to the diagram on the right.

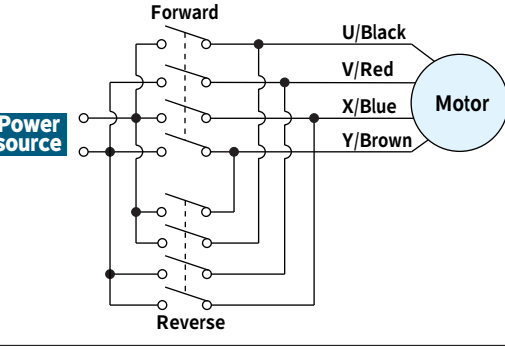
Capacitor




| Voltage | Withstand Voltage | Capacity | Round Weight |
|---|---|---|---|
| 100V | 220V | 30μF | 100g |
| 200V | 440V | 7μF | 100g |

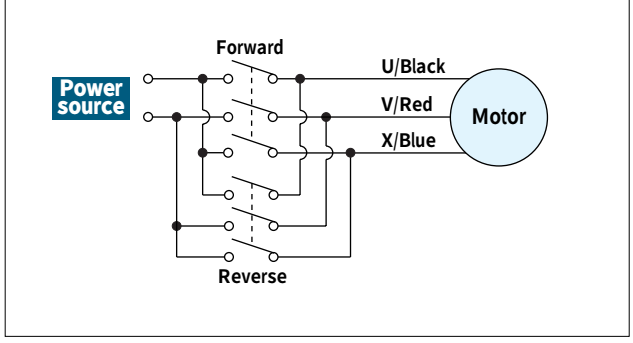
### ■1-Phase Motor (100V)

F Series ／Motor capacity designations 200 ・400
H2 Series／Motor capacity designations 200 ・400
G3 Series／Motor capacity designations 100 ・200 ・400




### ■1-Phase Motor (200V)

F Series ／Motor capacity designations 200W・400W
H2 Series／Motor capacity designations 200W・400W
G3 Series／Motor capacity designations 100W・200W・400W



# Terminal box for Gearmotor (with motor type)

## Terminal Boxes for GTR Gearmotor are as listed below:

| Series | No. of Phase | Motor capacity designation | Terminal Box | | |
|---|---|---|---|---|---|
| | | | Standard or optional spec | | Box Type |
| | | | F-Series | F2-Series | |
| F-Series FS Type (hollow shaft) F2-Series F2S Type (hollow shaft) | 3-Phase | T50•T50W | ○ | — | A |
| | | T010•T010W | ○ | ○ | A |
| | | T020•T020W | ○ | ○ | A |
| | | T040•T040W | ○ | ○ | A |
| | | 075•075W | ○ | ○ | T |
| | | 150•150W | ○ | ○ | T |
| | | 220•220W | ○ | — | T |
| | | | | | |
| | 1-Phase | S100•S100W | △ | — | A |
| | | 200•200W | ＊ | — | (A) |
| | | 400•400W | ＊ | — | (T) |
| F-Series FF Type (solid shaft) F2-Series F2F Type (solid shaft) | 3-Phase | T50•T50W | ○ | — | A |
| | | T010•T010W | ○ | ○ | A |
| | | T020•T020W | ○ | ○ | A |
| | | T040•T040W | ○ | ○ | A |
| | | 075•075W | ○ | ○ | T |
| | | 150•150W | — | ○ | T |

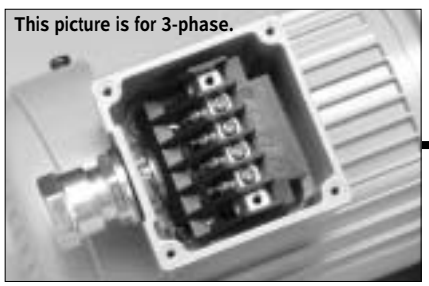
| Series | No. of Phase | Motor capacity designation | Terminal Box | |
|---|---|---|---|---|
| | | | Standard or optional spec | Box Type |
| H2-Series (Right Angle Shaft) | 3-Phase | T010•T010W | △ | A |
| | | T020•T020W | △ | A |
| | | T040•T040W | △ | A |
| | | 075•075W | ○ | T |
| | | 150•150W | ○ | T |
| | | 220•220W | ○ | T |
| | | | | |
| | 1-Phase | S100•S100W | △ | A |
| | | 200•200W | ＊ | (A) |
| | | 400•400W | ＊ | (T) |
| G3-Series (Parallel Shaft) | 3-Phase | T010•T010W | △ | A |
| | | T020•T020W | △ | A |
| | | T040•T040W | △ | A |
| | | 075•075W | ○ | T |
| | | 150•150W | ○ | T |
| | | 220•220W | ○ | T |
| | | | | |
| | 1-Phase | 100•100W | ＊ | (A) |
| | | 200•200W | ＊ | (A) |
| | | 400•400W | ＊ | (T) |

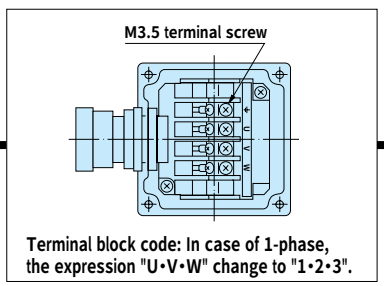
Note 1) ○ mark in the Table: Terminal Box attached is the standard △ mark in the Table: Optional specification
＊ mark in the Table: models for special order
2) If terminal box position is needed or position other than standard is required, refer to Page E34～E-39.

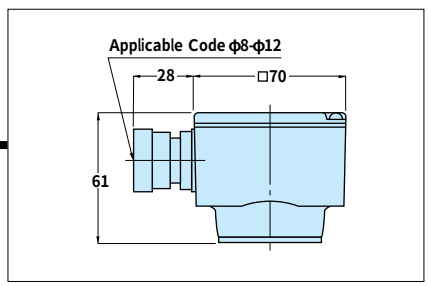
## Types and Configurations

### A-Type Terminal Box

3-Phase／200V•400V　　1-Phase／100V•200V



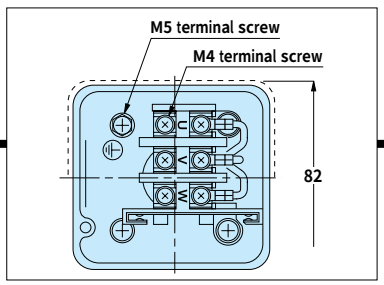



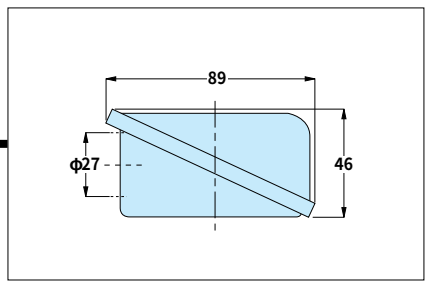




### T-Type Terminal Box

3-Phase／200V•400V





# Gearmotor with Brake Specifications・Structure



## Brake Specifications

〈Table-13-1〉

| Items \ Motor Capacity | 3-Phase | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 50W | | 0.1kW | 0.2kW | 0.4kW | 0.75kW | 1.5kW | 2.2kW |
| Motor Capacity Designation | T50・T50W ratio 1/240 and below | T50・T50W ratio 1/300 and above | T010 T010W | T020 T020W | T040 T040W | 075 075W | 150 150W | 220 220W |
| Brake Type | "Power-off, Brake-on" Type (Spring Close) | | | | | | | |
| Static Friction Torque Ts (N・m) {kgf・m} | 0.26{0.027} | 0.46{0.047} | 0.98{0.10} | 1.96{0.20} | 3.92{0.40} | 7.35{0.75} | 14.7{1.50} | 21.6{2.20} |
| Dynamic Friction Torque Td (N・m) {kgf・m} | 0.22{0.022} | 0.37{0.038} | 0.78{0.08} | 1.57{0.16} | 3.14{0.32} | 5.88{0.60} | 11.8{1.20} | 17.2{1.76} |
| Voltage DC (Average) Rectifier Attached (V) | 90 | | | | | | | |
| Power (at 75°C) (W) | 4.5 | 12 | 14 | 14 | 16 | 24 | 46 | 46 |
| Current (at 75°C) (A) | 0.05 | 0.13 | 0.15 | 0.15 | 0.18 | 0.27 | 0.51 | 0.51 |
| Allowable Total Work Emax (J) | $1.5\times10^7$ | $3.0\times10^7$ | $1.5\times10^8$ | $1.5\times10^8$ | $1.5\times10^8$ | $4.0\times10^8$ | $6.0\times10^8$ | $6.0\times10^8$ |
| {kgf・m} | $1.5\times10^6$ | $3.0\times10^6$ | $1.5\times10^7$ | $1.5\times10^7$ | $1.5\times10^7$ | $4.0\times10^7$ | $6.0\times10^7$ | $6.0\times10^7$ |
| Allowable Braking Frequency (times/minute) | 10 | | | | | | | |

〈Table-13-2〉

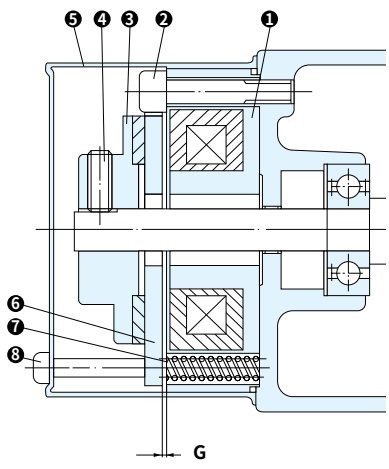
| Items \ Motor Capacity | 1-Phase | | |
|---|---|---|---|
| | 100W | 200W | 400W |
| Motor Capacity Designation | S100 ・100 S100W・100W | 200 200W | 400 400W |
| Brake Type | "Power-off, Brake-on" Type (Spring Close) | | |
| Static Friction Torque Ts (N・m) {kgf・m} | 0.98{0.10} | 1.96{0.20} | 3.92{0.40} |
| Dynamic Friction Torque Td (N・m) {kgf・m} | 0.78{0.08} | 1.57{0.16} | 3.14{0.32} |
| Voltage DC (Average) Rectifier Attached | 90 | 90 | |
| Power (at 75°C) (W) | 14 | 14 | 24 |
| Current (at 75°C) (A) | 0.15 | 0.15 | 0.27 |
| Allowable Total Work Emax (J) | $1.5\times10^8$ | $1.5\times10^8$ | $4.0\times10^8$ |
| {kgf・m} | $1.5\times10^7$ | $1.5\times10^7$ | $4.0\times10^7$ |
| Allowable Braking Frequency (times/minute) | 6 | | |

Note 1) Allowable braking frequencies are guideline values to avoid excessive motor temperature rise. The braking frequency can be increased when loads are light or motor is sufficiently cooled. ( Be sure to maintain the motor surface temperature below 80°C.)
2) Avoid continuous energizing to the brake coil while the motor stops.
3) Use the attached rectifier for the brake power supply. if other type of rectifier is to be sued for power supply, consult us.
4) The life of the contacting point of the 1-phase motor centrifugal switch is 300,000 times as a guideline.
5) Static friction torque/Dynamic friction torque are guideline values and not guaranteed ones.

## Brake Structure

### ■Motor Capacity Designation

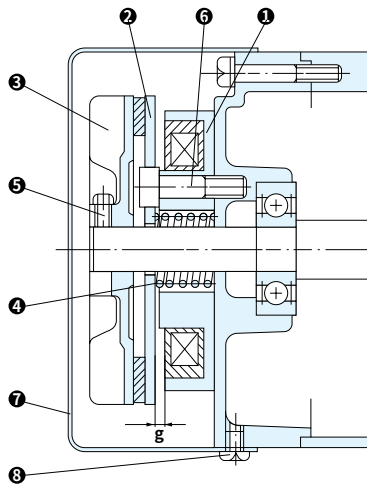
3-Phase/T50・T50W Reduction Ratio Below 1/240 〈Figure-1〉




❶ Field
❷ Hexagon socket head bolt
❸ Friction Disk Assembly
❹ Hexagon socket head locking screw
❺ Brake Cover
❻ Armature
❼ Spring
❽ Brake Cover Screw
G: Gap

### ■Motor Capacity Designation

3-Phase/T50・T50W Reduction Ratio Below 1/300 〈Figure-2〉



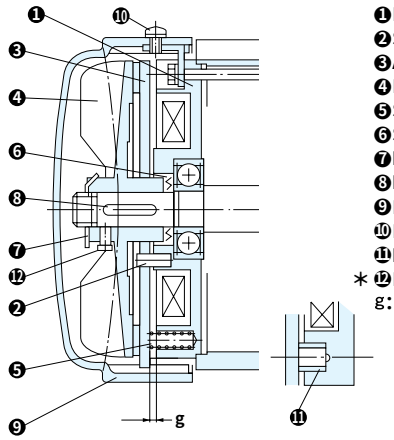

❶ Field
❷ Armature
❸ Fan Kit
❹ Spring
❺ Hexagon socket head bolt
❻ Hexagon socket head bolt
❼ Fan cover
❽ Fan cover fixing screw
g: Gap

# Brake Structure

## ■Motor Capacity Designation

3-Phase／T010•T020•T040•075•T010W•T020W•T040W•075W
1-Phase／S100•100•200•400•S100W•100W•200W•400W

〈Figure-3〉

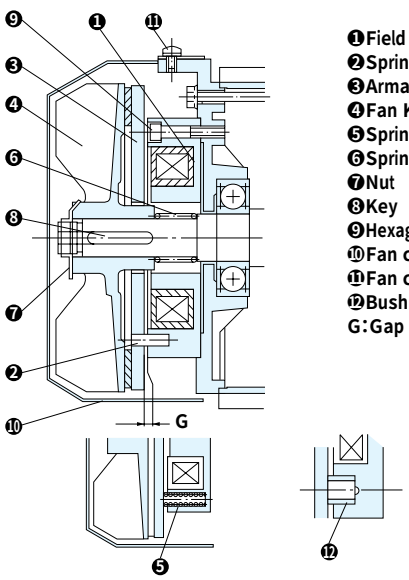



＊mark ⓬ is only for capacity S100,100,200,400,S100W, 100W,200W, and 400W

## ■Motor Capacity Designation

3-Phase／150•220•150W•220W

〈Figure-4〉




## ■Brake Gap

As a result of using brake for an extended period of time, naturally brake gap grew and finally brake releasing become impossible. To avoid this trouble, be sure to adjust brake gap periodically (Every one year or every 1～1.5 million cycles). Refer to Page E33 for the dimension necessary for the space when taking off the motor fan cover at brake gap adjustment.

〈Table-14〉

| Figure No. | Motor Capacity Designation | | Gap for Suction Limit | Proper Gap |
|---|---|---|---|---|
| | 3-Phase | 1-Phase | | |
| Figure-1 | T50•T50W ratio 1/240 and below | —— | G:0.5 and below | G:0.2±0.1 |
| Figure-2 | T50•T50W ratio 1/300 and above | —— | g:0.8 and below | g:0.4±0.1 |
| Figure-3 | T010•T020•T010W•T020W | S100•100•200•S100W•100W•200W | g:2.3 and below | g:1.9±0.1 |
| | T040•T040W | —— | g:1.8 and below | g:1.4±0.1 |
| | 0.75•0.75W | 400•400W | g:2.4 and below | g:2.0±0.1 |
| Figure-4 | 150•220•150W•220W | —— | G:1.0 and below | G:0.4±0.1 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
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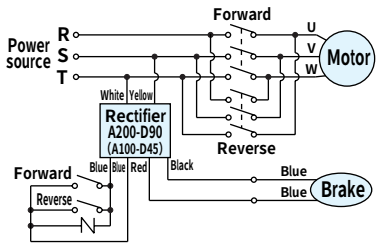
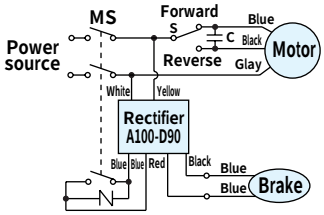
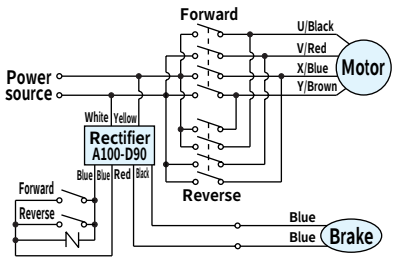
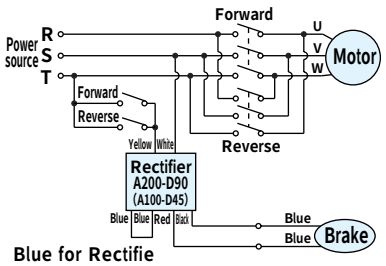
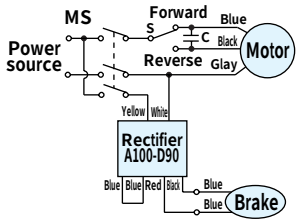
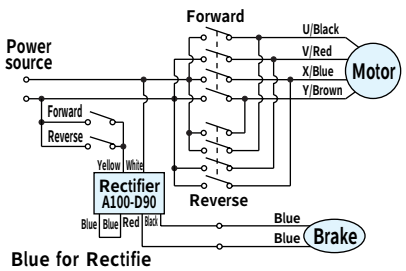
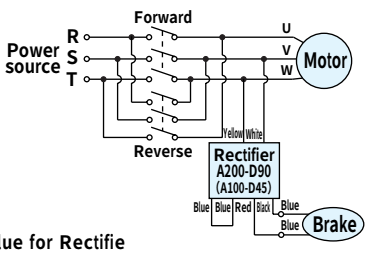
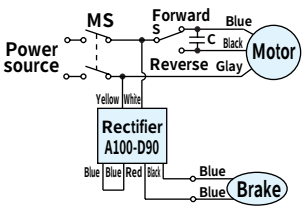
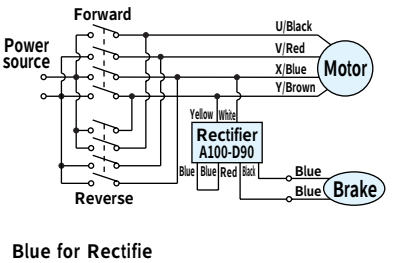
# Gearmotor with Brake Wiring

## Types of Wiring and Selecting Points

| Wiring | Selecting Point | Inverter | Hoisting Operation | Wire Saving | Braking Delay |
|---|---|---|---|---|---|
| DC Switching | Because of the shortest braking delay time, most appropriate for the application which needs sudden braking such as hoisting operation. | ○(Usable) | ◎(Optimum) | △ | ◎ |
| AC Switching (A) | Separate circuit can be employed for motor and brake. Therefore, most appropriate for inverter drive operation. | ◎(Optimum) | ○(Usable) | ○ | ○ |
| AC Switching (B) | This is the simplest way. Operation can be done only by connecting to the power source. You can save wiring. | ×(Unusable) | ×(Unusable) | ◎ | △ |

Note) Braking delay time indicates interval between switching off and brake on. (Not the braking time.)
For braking delay time by wiring method, refer to Table-15 on page E21.
In case braking time is needed, refer to the calculation method on page E8.

## ■Wiring Method 〔Standard Voltage〕

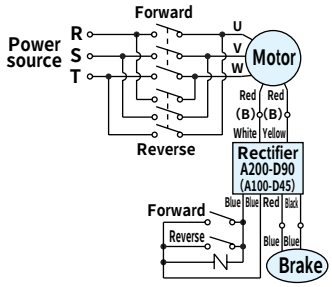
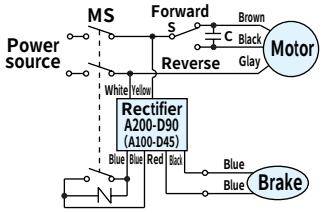
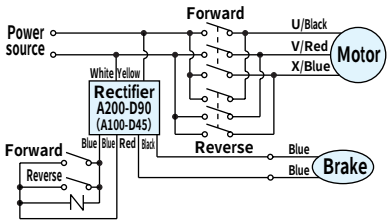
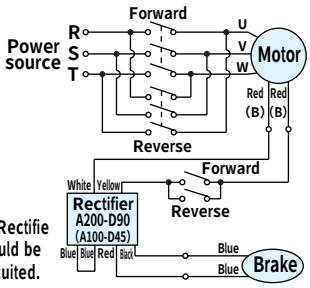
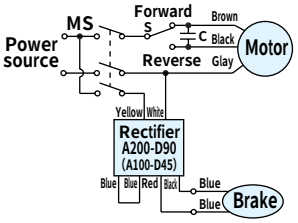
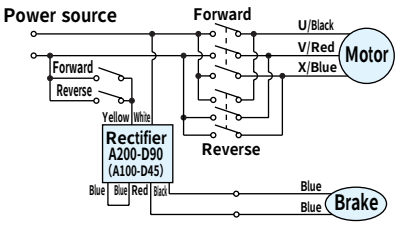
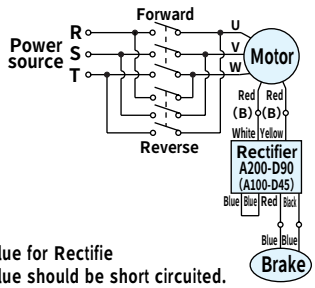
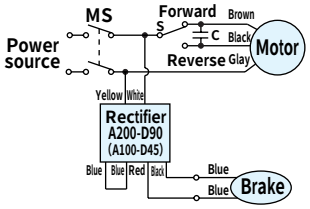
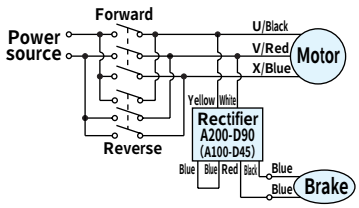
| No. | Motor Capacity Designation 3-Phase〔T50～T040･075～220〕 | Motor Capacity Designation 1-Phase〔S100〕 | Motor Capacity Designation 1-Phase〔100～400〕 |
|---|---|---|---|
| 1.DC Switching |  |  |  |
| 2.AC Switching(A) | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. |
| 3.AC Switching(B) | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. |

S: Rotation Changeover Switch C: Capacitor MS: Electro-Magnetic Switch -N- : Surge Suppressor (option)

Note 1) For the application of vertical motion such as lifting, DC Switching wiring should be employed.
2) It is recommended to insert surge suppressor between contact points in DC Switching circuit. (Varistor Voltage 423～517V)
3) The electro-magnetic switch with the rated current of over 6A(AC200V) is recommended for the relay for brake circuit. In case DC Switching wiring is employed, in order to sield the inductive load (DC coil), DC110V, DC13 class is recommended. Also, in case of employing a noncontact relay, it is recommended to use the rated voltage of AC240V equivalent (half-wave rectification switching available).
4) Since the rectifier contains diodes, improper wiring may cause fatal short-circuiting. Therefore, special care should be given to the wiring.
5) For wirings and cautions in case of inverter drive, refer to page E44.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

## Wiring Method (High Voltage)

| No. | Motor Capacity Designation 3-Phase (T50～T040W･075W～220W) | Motor Capacity Designation 1-Phase (S100W) | Motor Capacity Designation 1-Phase (100W～400W) |
|---|---|---|---|
| 1.DC Switching |  |  |  |
| 2.AC Switching(A) | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. |
| 3.AC Switching(B) | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. | <br>Blue for Rectifie<br>Blue should be short circuited. |

S: Rotation Changeover Switch C: Capacitor MS: Electro-Magnetic Switch ⊣N⊢ : Surge Suppressor (option)

Note 1) For the application of vertical motion such as lifting, DC Switching wiring should be employed.
2) It is recommended to insert surge suppressor between contact points in DC Switching circuit. (Varistor Voltage 423～517V)
3) The electro-magnetic switch with the rated current of over 6A(AC200V) is recommended for the relay for brake circuit. In case DC Switching wiring is employed, in order to sield the inductive load (DC coil), DC110V, DC13 class is recommended. Also, in case of employing a noncontact relay, it is recommended to use the rated voltage of AC240V equivalent (half-wave rectification switching available).
4) Since the rectifier contains diodes, improper wiring may cause fatal short-circuiting. Therefore, special care should be given to the wiring.
5) AS for the 3-phase/double voltage model or over 230V model, be sure to connect 200V leads(red, 0.75～2.2kW for B terminal), which are extended out from the motor for the brake supply, to the input of rectifier.
In case of the operation by inverter drive, the 200V terminal extended out from the motor is not feasible. For details, contact us. For cautions in case of inverter drive, refer to page E44.

## Braking Delay Time: $T_a$

Braking delay time indicates interval (second) between switching off and brake on.
(Not the braking time.)

〈Table-15〉

| No. | Motor Capacity Designation 3-Phase (T50 ～T040 ･075) 3-Phase (T50W～T040W･075W) | Motor Capacity Designation 3-Phase (150 ･220) 3-Phase (150W･220W) | Motor Capacity Designation 1-Phase (S100 ･100 ～400) 1-Phase (S100W･100W～400W) |
|---|---|---|---|
| 1.DC Switching | 0.005～0.015 | 0.005～0.020 | 0.005～0.015 |
| 2.AC Switching(A) | 0.03～0.10 | 0.05～0.15 | 0.03～0.10 |
| 3.AC Switching(B) | 0.1～0.2 | 0.2～0.4 | 0.1～0.2 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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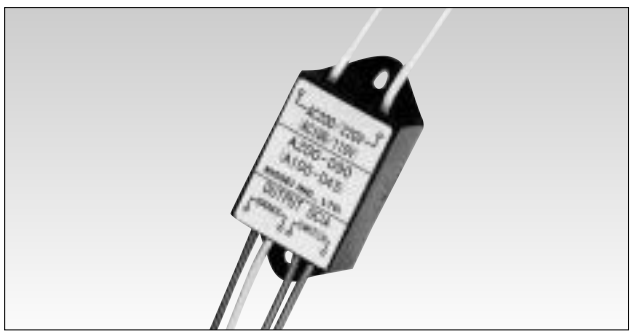
# Gearmotor with Brake Rectifier・Terminal Box

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
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Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

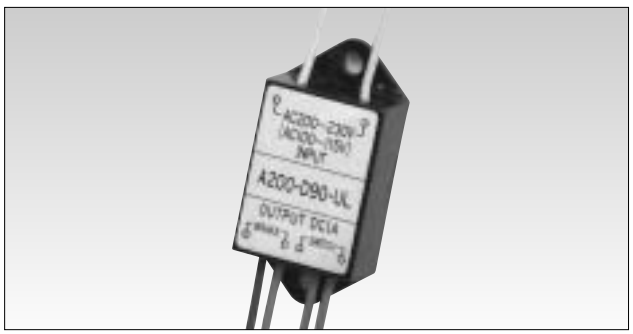
## Rectifier

The supplied rectifier A200-D90 (A100-D45) or A100-D90 is required for the brake operation of the gearmotor with brake. Since the braking delay time differs according to the brake wiring, select the most appropriate wiring method for the application, referring to page E20～E22.
The rectifier basically contains a surge absorber. However, if a risk is foreseen, add another surge absorber or noise filter for safety sake.

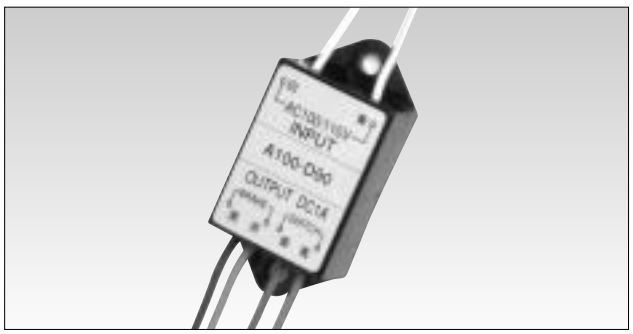
### A200－D90 (A100－D45) For 3-phase/standard voltage motor For 1-phase High voltage motor



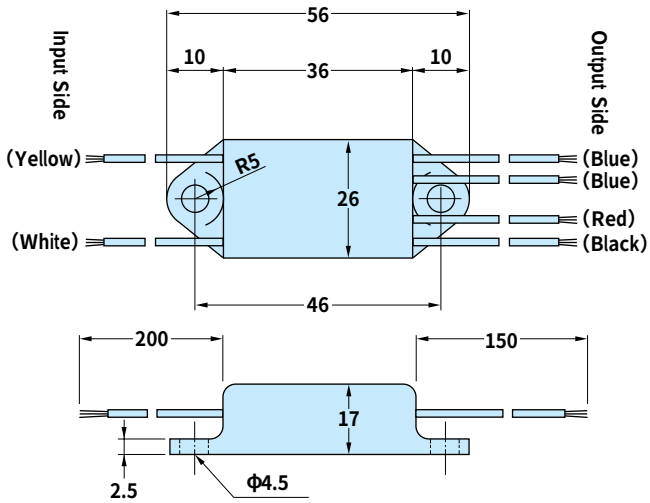
### A200－D90－UL For 3-Phase Water-Resistant Outdoor Motor



### A100－D90 For 1-Phase Standard Voltage Motor

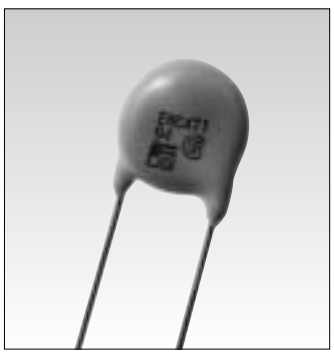


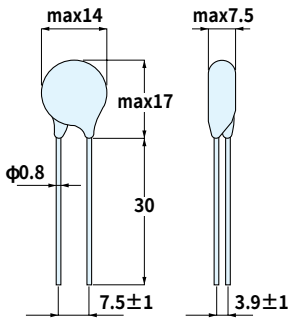
### A200－D90・A100－D90 Dimension Diagram (A100－D45) 〈Round weight: 40g〉




## Surge Suppressor/ Option No. OP-ENC471D-10A

For use in cutting off the sparks of a brake switch for DC switching or AC line switching.





# Terminal Box for Gearmotor with Brake

## ■Terminal Boxes for GTR Gearmotor with brake are as listed below:

| Series | No. of Phase | Motor capacity designation | Terminal Box | | |
|---|---|---|---|---|---|
| | | | Standard or optional spec | | Box Type |
| | | | F-Series | F2-Series | |
| F-Series FS Type (hollow shaft) F2-Series F2S Type (hollow shaft) | 3-Phase | T50•T50W | ○ | — | A |
| | | T010•T010W | ○ | ○ | A |
| | | T020•T020W | ○ | ○ | A |
| | | T040•T040W | ○ | ○ | A |
| | | 075•075W | ○ | ○ | T |
| | | 150•150W | ○ | ○ | T |
| | | 220•220W | ○ | — | T |
| | | | | | |
| | 1-Phase | S100•S100W | △ | — | A |
| | | 200•200W | ＊ | — | (A) |
| | | 400•400W | ＊ | — | (T) |
| F-Series FF Type (solid shaft) F2-Series F2F Type (solid shaft) | 3-Phase | T50•T50W | ○ | — | A |
| | | T010•T010W | ○ | ○ | A |
| | | T020•T020W | ○ | ○ | A |
| | | T040•T040W | ○ | ○ | A |
| | | 075•075W | ○ | ○ | T |
| | | 150•150W | — | ○ | T |

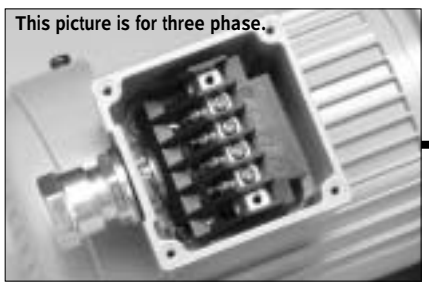
| Series | No. of Phase | Motor capacity designation | Terminal Box | |
|---|---|---|---|---|
| | | | Standard or optional spec | Box Type |
| H2-Series (Right Angle Shaft) | 3-Phase | T010•T010W | △ | A |
| | | T020•T020W | △ | A |
| | | T040•T040W | △ | A |
| | | 075•075W | ○ | T |
| | | 150•150W | ○ | T |
| | | 220•220W | ○ | T |
| | | | | |
| | 1-Phase | S100•S100W | △ | A |
| | | 200•200W | ＊ | (A) |
| | | 400•400W | ＊ | (T) |
| G3-Series (Parallel Shaft) | 3-Phase | T010•T010W | △ | A |
| | | T020•T020W | △ | A |
| | | T040•T040W | △ | A |
| | | 075•075W | ○ | T |
| | | 150•150W | ○ | T |
| | | 220•220W | ○ | T |
| | | | | |
| | 1-Phase | 100•100W | ＊ | (A) |
| | | 200•200W | ＊ | (A) |
| | | 400•400W | ＊ | (T) |

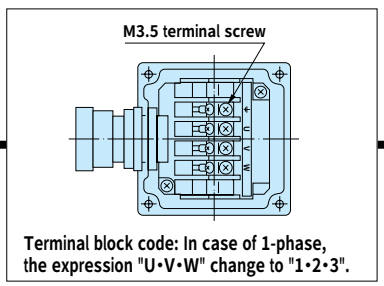
Note 1) ○ mark in the Table: Terminal Box attached is the standard △ mark in the Table: Optional specification
＊ mark in the Table: models for special order
2) If terminal box position is needed or position other than standard is required, refer to Page E34～E-39.
3) Although independent rectifier is the standard, rectifier built-in terminal box is also available. If you request so, direct us when ordering. In this case, the type of the terminal box will be "Z" in "A" Type box only. (Refer to page E24～E26) Please note that built-in rectifier is not feasible in S100-S100W.

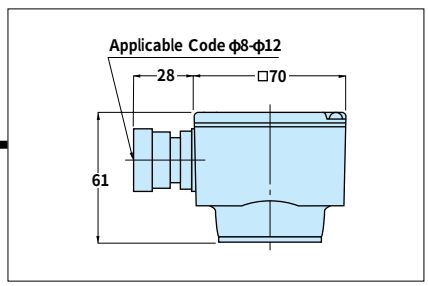
## ■Types and Configurations

### ●A-Type Terminal Box

3-Phase／200V•400V
1-Phase／100V•200V

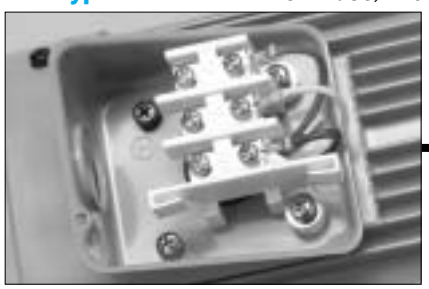


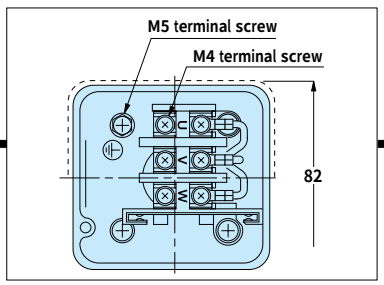



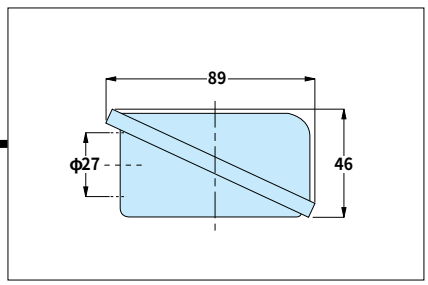




### ●T-Type Terminal Box

3-Phase／200V•400V






Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Gearmotor with Brake built in rectifier



## ■Motor Capacity Designation

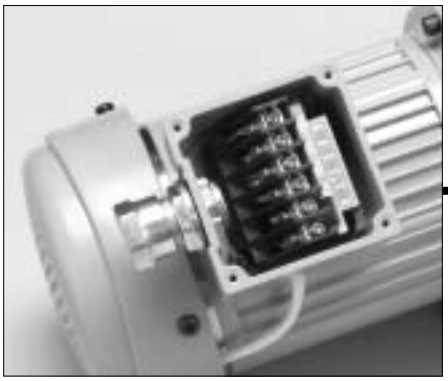
3-Phase ／T50 •T010 •T020 •T040
／T50W•T010W•T020W•T040W

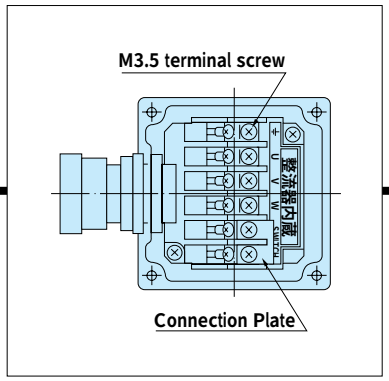
Z-Type terminal box with built-in rectifier can be attached to the brake motors with the designation codes listed on the left. If you need this spec., direct us when ordering.

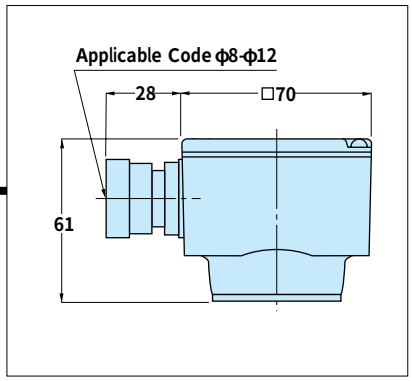
**In case of rectifier built-in type, the code of the terminal box will change from "A" to "Z". Direct us for the wiring method.**

### ● Z-Type Terminal Box

3-Phase ／Standard Specifications•High voltage






## ■Z-Type Terminal Box Wiring Types, Specifications and Selecting Points

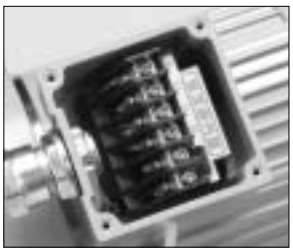
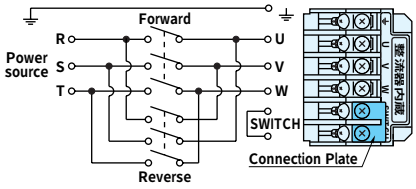
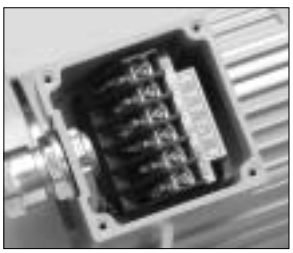
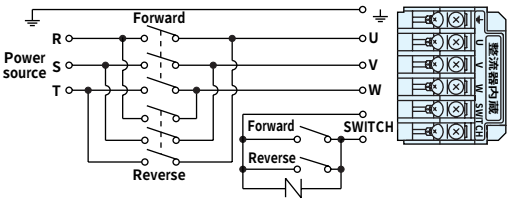
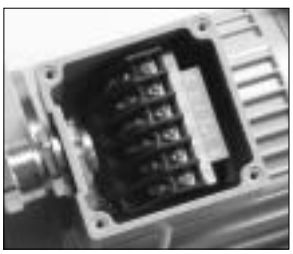
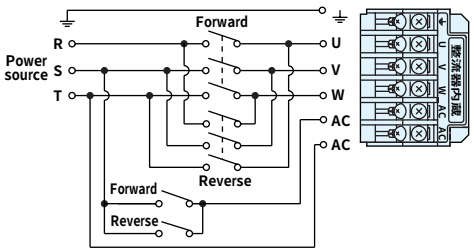
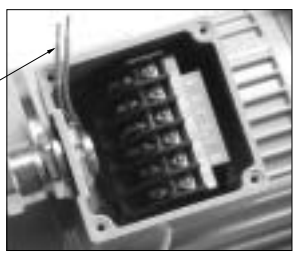
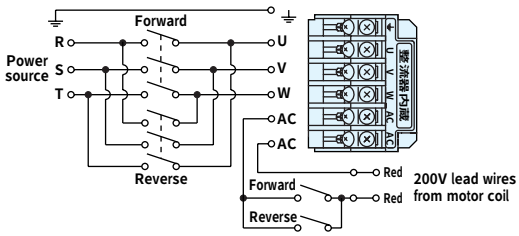
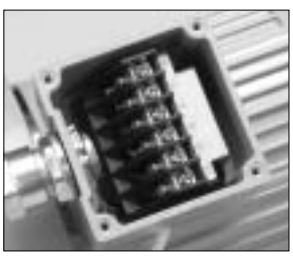
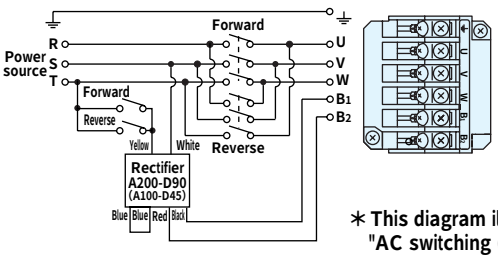
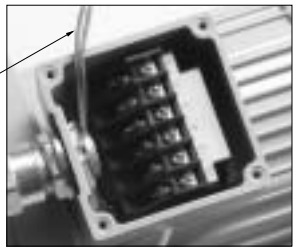
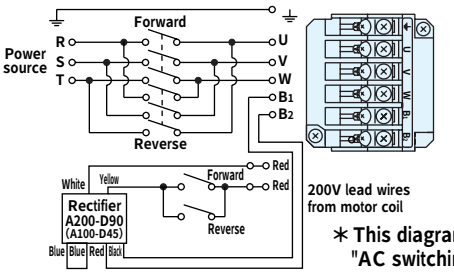
| Wiring | Specs. and Selecting Points | Inverter | Hoisting Operation | Wire Saving | Braking Delay |
|---|---|---|---|---|---|
| AC Switching(B) | Z-Type terminal box contains built-in rectifier and is connected in "AC Switching(B)". Therefore, just connect power supply source to the terminals for start operation. Also you can modify to "DC Switching" by just taking off the connecting plate. | × (Unusable) | × (Unusable) | ◎ | △ |
| DC Switching | Because of the shortest braking delay time, This is appropriate for the application which needs sudden braking such as hoisting operation. | × (Unusable) | ◎ (Optimum) | △ | ◎ |
| AC Switching(A) | Separate circuit can be employed for motor and brake. Therefore, most appropriate for inverter drive operation. Wiring with 200V supply is appropriate for the standard voltage. As for the double voltage supply, use the 200V terminal (red lead wire, 0.75～2.2kW for B terminal) which is extended out from the motor. (Not fixed to the terminal block.) Since the AC Switching(A) wiring is a custom specification, direct us when ordering. | ◎ (Optimum) | ○ (Usable) | ○ | ○ |
| Independent Rectifier | The brake lead wire is taken into the terminal box and fixed in the terminal block. Rectifier is not built-in. Any wiring can be feasible according to the customer1s specification, for example, putting the rectifier within the switchboard, etc. As for the double voltage supply, use the 200V terminal (red lead wire, 0.75～2.2kW for B terminal) which is extended out from the motor. (Not fixed to the terminal block.) Since the model with independent rectifier is a custom specification, direct us when ordering. As the rectifier is attached, select the most appropriate wiring method, referring the wiring diagram on page E20. | Application differs according to the wiring method in the switchboard of the rectifier. (AC Switching(A), AC Switching (B) or DC Switching) | | —— | —— |

Note 1) "braking delay time" means the time from turn off switch to start braking motion, not the total time for braking.
For braking delay time cause of wiring method, please reter to page E21, chart-15.
Please reter to calculated data according to page E8.
2) In case of inverter drive, "AC Switching(B)" wiring and "DC Switching" wiring are not feasible, while "AC Switching(A)" wiring is feasible. (Custom specs.) However, the lead wire 200V terminal extended out from the motor body cannot be used. Contact us for details. For cautions for inverter drive, refer to page E44.

### ●Rated Current

The rated current values listed on the motor performance table on page E12 are the ones for motor itself. For rectifier built-in type terminal box, the current value through brake should be taken into account. For details, consult us.

## Wiring Z type Terminal Box

| Wiring | 3-Phase | | |
|---|---|---|---|
| AC Switching(B) | Standard Specifications/ High voltage |  |   |
| DC Switching | Standard Specifications/ High voltage |  |   |
| AC Switching(A) (Specific wiring) | Standard Specifications |  |   |
| | High voltage 200V lead wires from motor coil |  |   |
| Independent Rectifier (Specific wiring) | Standard Specifications |  |   ∗This diagram illustrates "AC switching (A)" |
| | High voltage 200V lead wires from motor coil |  |   200V lead wires from motor coil ∗This diagram illustrates "AC switching (A)" |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
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Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
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Gearmotor with Brake
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Reducer (Parallel Shaft)
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KOMPASS Gearbox

# Gearmotor with Brake built in rectifier

## ■Motor Capacity Designation

3-Phase／075•150•220

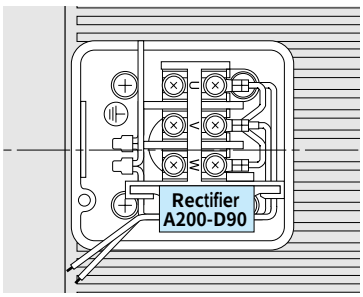
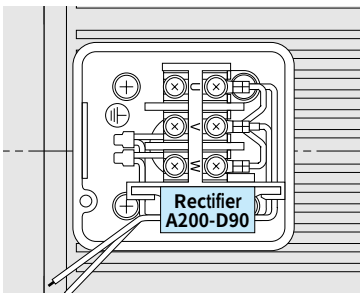
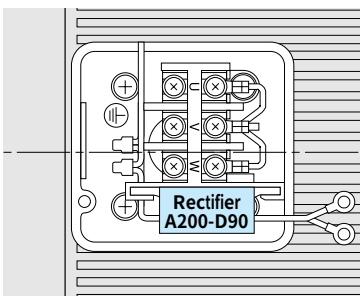
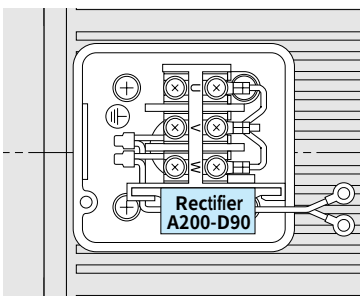
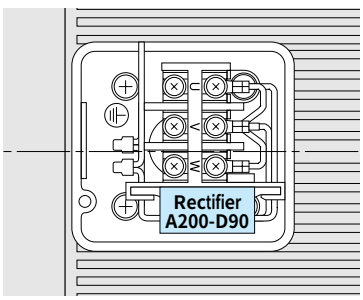
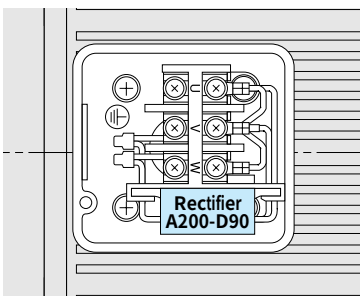
Please let me know if you need built in rectifier type terminal box when you order.

＊When high voltage is required, please ask us on a head.

**In case of rectifier built-in motor, inform us of the wiring method together with the type name.**

For example : G3LB-32-30-075　AC switching (A)

## ■Wiring metbod

| Wiring | Motor Capacity Designation (075) | Motor Capacity Designation (150•220) |
|---|---|---|
| DC Switching |  |  |
| AC Switching (A) |  |  |
| AC Switching (B) |  |  |

### ●Incase of changing speed by inverter drive

In case of rectifier built-in terminal box in combination with inverter, wirings other than AC Switching (A) are not feasible. Also, in the case of AC Switching (A) wiring, power supply to the rectifier should be done through the primary input of the inverter. Refer to page E44.

### ●Rated Current

The rated current values listed on the motor performance table on page E12 are the ones for motor itself. For rectifier built-in type terminal box, the current value through brake should be taken into account. For details, consult us.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
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Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
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Reducer (Parallel Shaft)
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KOMPASS Gearbox

# Manual Release Device

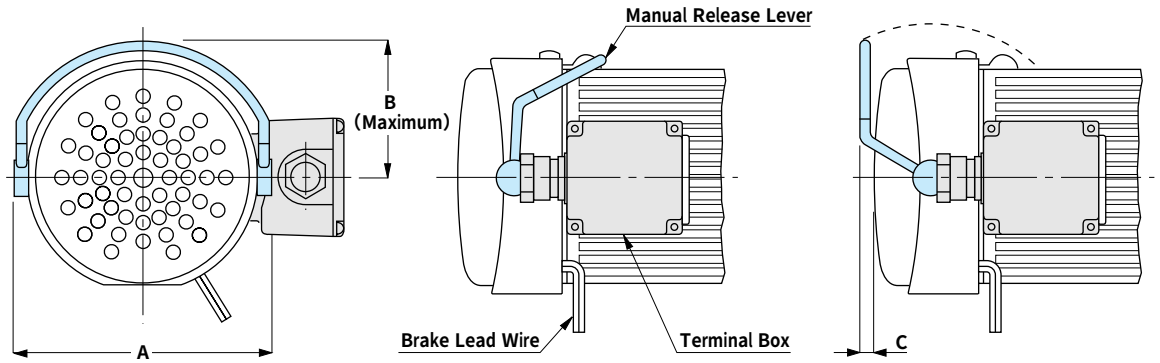
If requested, the brake manual release device can be attached. The terminal box and the manual release lever are basically in the same positioning.

* The manual release device cannot be attached to the F-Series, Motor Capacity Designation of T50 and T50W.
* The manual release device cannot be attached to the water-resistant, outdoor specs gearmotors.

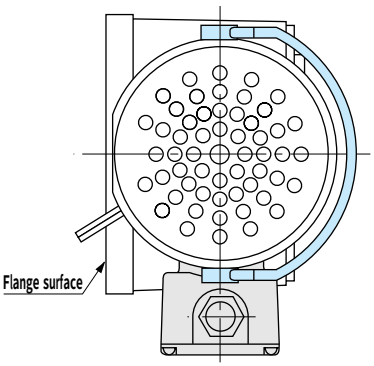
## G3•H2 Series

●At Operation

●At Brake Released




## F Series•F2 Series




* Above diagram is just a representative. In case of F2-Series, the shape of the gear head is different.

## Dimensions by Motor Capacity

Common to F•F2•H2•G3 Series

| Motor Capacity Designation | 3-Phase T010•T010W 1-Phase S100•S100W | 3-PhaseT020 •T020W 1-Phase100 •200 1-Phase100W•200W | 3-Phase T040•T040W | 3-Phase 075•075W 1-Phase 400•400W | 3-Phase 150•220 3-Phase 150W•220W |
|---|---|---|---|---|---|
| A | 156 | 156 | 156 | 180 | 212 |
| B | 83 | 83 | 83 | 102 | 124 |
| C | 8 | 0 | 0 | 2 | 6 |

Note 1) The terminal box and the manual release lever are basically in the same positioning.
2) When built in rectifier terminal box with manual release needs to change position, some direction is impossible as for technical reason. please ask us about detail.
3) In case the position of terminal box has been changed, the positioning with the flat surface of the fan cover can be referred in page E34～39.

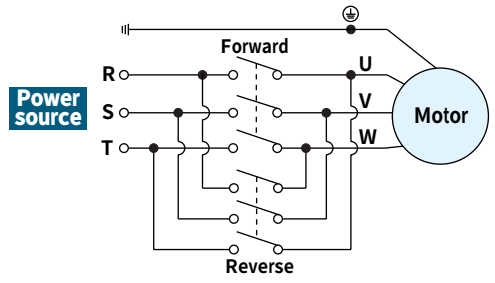
# Water-Resistant Specifications Gearmotor Wiring・Terminal Box



## Wiring for Water-Resistant, Gearmotors

The wiring shown below is recommended for water-resistant, outdoor type gearmoters. The rotation direction of the output shaft in the wiring below is shown in the performance table respectively for each model.

### 3-Phase Motor/Common to F・F2・H2・G3 series

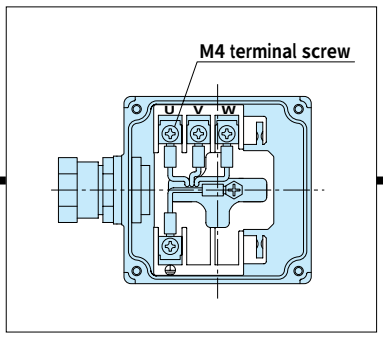


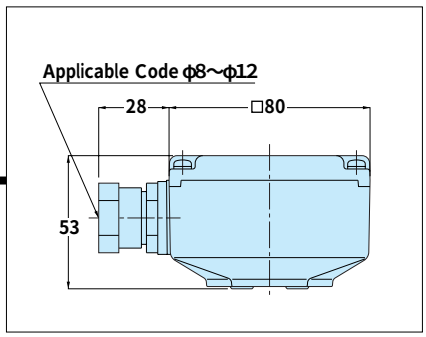

| Mark in the Diagram | Terminal Code |
|---|---|
| U | U |
| V | V |
| W | W |
| ⏚ | ⏚ |

### Types and Structures

**● E-Type Terminal Box** 0.1kW～2.2kW
3-Phase/Standard Voltage・High Voltage






Note) For the E-Type terminal box for gearmotors with brake, refer to page E30.

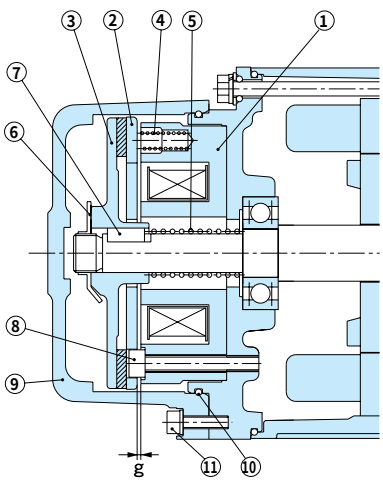
# Water-Resistant Specifications Gearmotor with Brake Specifications・Structure

## Brake Specifications

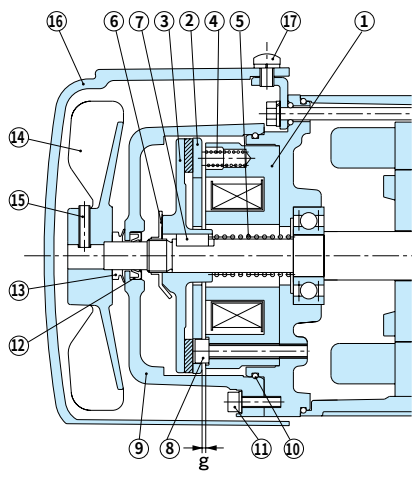
| Items \ Motor Capacity | 3-Phase | | | |
|---|---|---|---|---|
| | 0.1kW | 0.2kW | 0.4kW | 0.75kW |
| Motor Capacity Designation | T010<br>T010W | T020<br>T020W | T040<br>T040W | 075<br>075W |
| Brake Type | "Power-off, Brake-on" Type (Spring Close) | | | |
| Static Friction Torque Ts (N・m) {kgf・m} | 0.98{0.10} | 1.96{0.20} | 3.92{0.40} | 7.35{0.75} |
| Dynamic Friction Torque Td (N・m) {kgf・m} | 0.78{0.08} | 1.57{0.16} | 3.14{0.32} | 5.88{0.60} |
| Voltage DC (Average) Rectifier Attached (V) | 90 | | | |
| Power (at 75°C) (W) | 10 | 16 | 18 | 22 |
| Current (at 75°C) (A) | 0.11 | 0.18 | 0.20 | 0.25 |
| Allowable Total Work Emax (J) | $1.5\times10^8$ | $1.5\times10^8$ | $1.5\times10^8$ | $4.0\times10^8$ |
| {kgf・m} | $1.5\times10^7$ | $1.5\times10^7$ | $1.5\times10^7$ | $4.0\times10^7$ |
| Allowable Braking Frequency (times/minute) | 10 | | | |

## Brake Structure

0.1kW Outer Disk Type 〈Figure-6〉




0.2kW～0.75kW Fan Attached Type 〈Figure-7〉




### ■Brake Gap

As a result of using brake for an extended period of time, naturally brake gap grew and finally brake releasing become impossible. To avoid this trouble, be sure to adjust brake gap periodically (Every one year or every 1~1.5 million cycles). Refer to Page E33 for the necessary space when taking off the brake cover/motor fan cover at brake gap adjustment.

| Figure No. | Motor Capacity Designation 3-Phase | Gap for Suction | Limit Proper Gap |
|---|---|---|---|
| Fig.6 | T010・T010W | g:0.8以下 | g:0.3±0.1 |
| Fig.7 | T020・T040・T020W・T040W | g:0.7以下 | g:0.3±0.1 |
| Fig.7 | 075・075W | g:0.9以下 | g:0.3±0.1 |

Gap adjustment should strictly be done according to the handling manual. Failure to observe this warning may cause unexpected trouble such as water getting through

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Water-resistant, Outdoor Gearmotor with Brake
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S-Type Reducer
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Gearmotor with Brake
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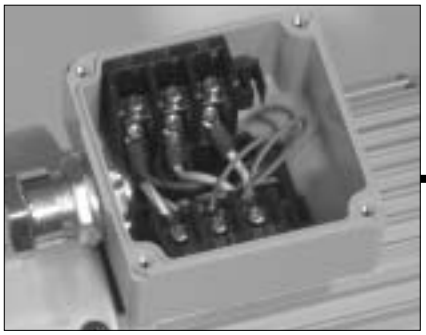
# Water-Resistant Specifications Gearmotor with Brake Wiring・Rectifier

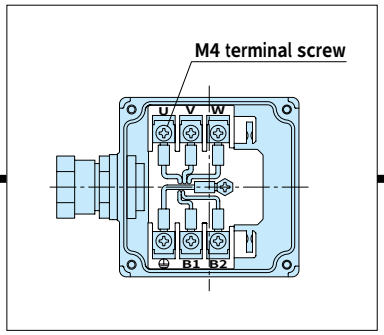
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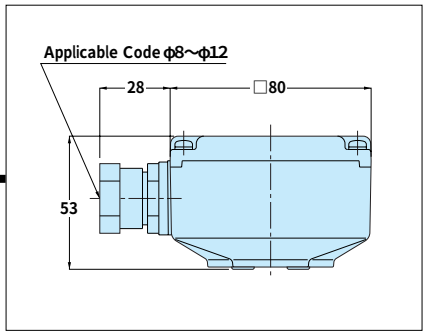
## ● E-Type Terminal Box

3-Phase/Standard Voltage・High Voltage

Separated rectifier type is the standard specification of the terminal box in gearmotor with brake. please refer to page E31 for rectifier built-in type.

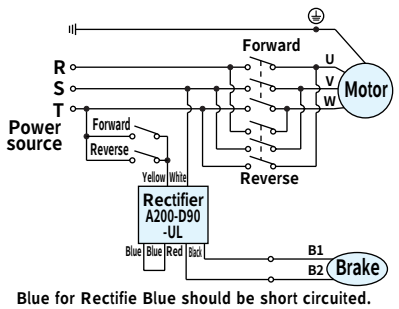
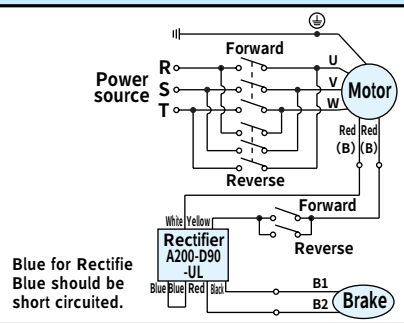
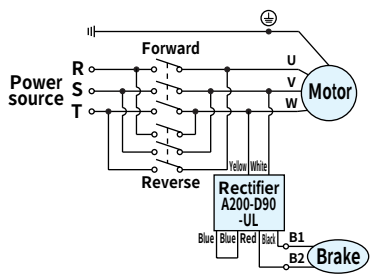
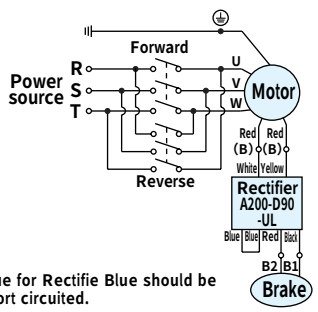
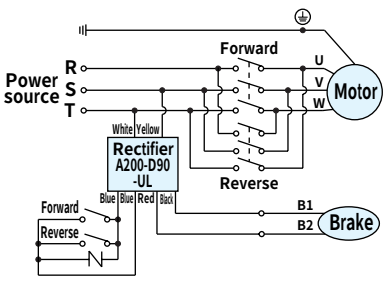
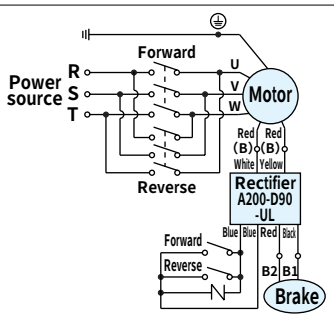





## Wiring for Water-Resistant, Outdoor Gearmotors with Brake

### ■Wiring Method

| Wiring | Motor capacity designation | | Braking Delay Time: ta Braking delay time indicates interval (second) between switching off and brake on. (Not the braking time.) |
|---|---|---|---|
| | Standard Voltage 3-Phase (T010～T040・075) | High Voltage 3-Phase (T010W～T040W・075W) | |
| AC Switching (A) |  Blue for Rectifie Blue should be short circuited. |  Blue for Rectifie Blue should be short circuited. | 0.03～0.13 |
| AC Switching (B) |  Blue for Rectifie Blue should be short circuited. |  Blue for Rectifie Blue should be short circuited. | 0.1～0.3 |
| DC Switching |  |  | 0.005～0.015 |

S: Rotation Changeover Switch C: Capacitor MS: Electro-Magnetic Switch ⊣N⊢ : Surge Suppressor (option)

Note 1) For the application of vertical motion such as lifting, DC Switching wiring should be employed.
2) It is recommended to insert surge suppressor between contact points in DC Switching circuit. (Varistor Voltage 423～517V)
3) The electro-magnetic switch with the rated current of over 6A(AC200V) is recommended for the relay for brake circuit. In case DC Switching wiring is employed, in order to sield the inductive load (DC coil), DC110V, DC13 class is recommended. Also, in case of employing a noncontact relay, it is recommended to use the rated voltage of AC240V equivalent (half-wave rectification switching available).
4) Since the rectifier contains diodes, improper wiring may cause fatal short-circuiting. Therefore, special care should be given to the wiring.
5) For 3 phase High voltage or 230V and above special voltage, please use and connect with AC 200V terminal which is sepalately take out from the motor, (Red wires, and 0.75kW type is B terminal) and input terminal of rectifier. However, separated 200V terminal cannot be used for use of inverter, Please contact as for more information. For wiring or notes for use of inverter, Please refer to page E44.

# Water-Resistant Specifications Gearmotor with Brake Wiring•Built-in Rectifier Terminal Box

**Separated rectifier type is the standard specification of the terminal box in gearmotors with brake.**
**When you need the rectifier built-in type, contact us with the following manner.**

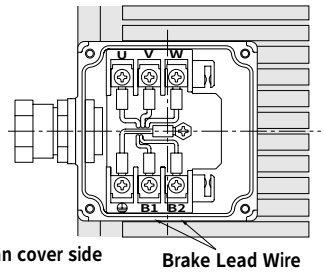
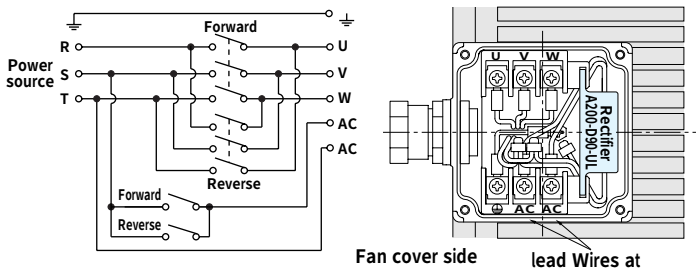
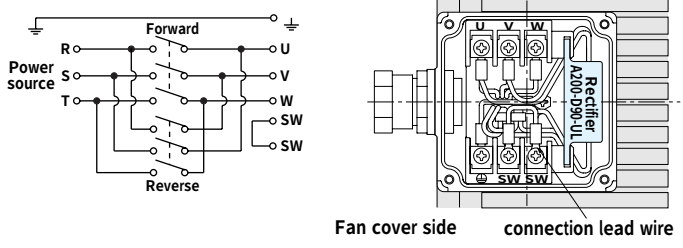
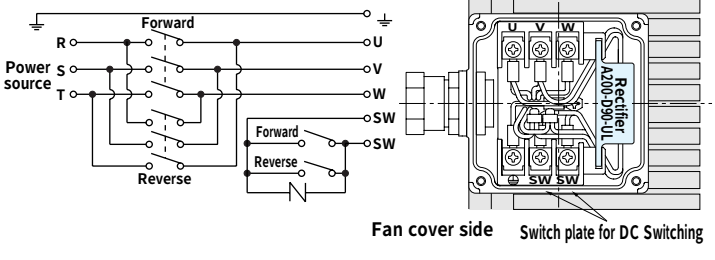
| Type | Type Code when ordering(Example) (Indicate this type cord in your order.) |
|---|---|
| AC Switching A | EX-AA |
| AC Switching B | EX-AB |
| DC Switching | EX-DC |

The wiring method indication code does not appear on the product-type name.
It appears in the supplemental number column on the nameplate.

## Explanations of Type Designation

E X – AA
- AA: wiring method ("AA" means AC Switching A)
- X: Auxiliary Mark (X)
- E: E-Type Terminal Box

## Wiring Method

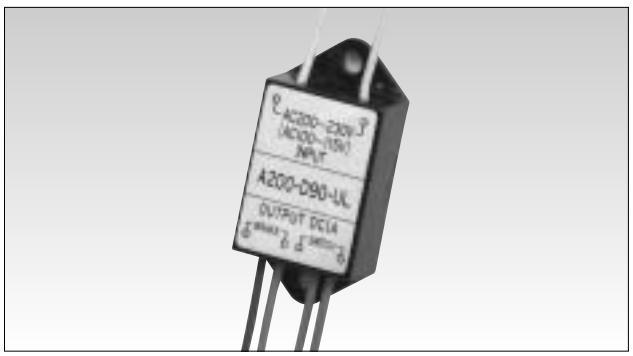
| Wiring | Inverter Operation | Hoisting Operation | Point | Ordered Type |
|---|---|---|---|---|
| **Standard**<br>Please refer to diagram of page E30<br> | Application differs according to the wiring method in the switchboard of the rectifier. (AC Switching(A), AC Switching (B) or DC Switching) | | Any wiring can be possible according to the customer1s specification, for example, putting the rectifier inside of the switchboard, etc. Brake lead wire is extended out to the terminal block. | End of type **E** |
| **AC Switching (A)**<br> | ◎ (Optimum) | ○ (Usable) | Wiring enables inverter operation. Also, the power supply input lead wire for rectifier is extended out to the terminal block. | End of type **EX-AA** |
| **AC Switching (B)**<br> | × (Unusable) | × (Unusable) | Easy wiring. Start operation only by connecting the power source (U•V•W). (Modification to DC Switching wiring can be done only by taking out the connecting lead wire.) | End of type **EX-AB** |
| **DC Switching**<br> | × (Unusable) | ◎ (Optimum) | Because of the shortest braking delay time, most appropriate for the application such as hoisting operation. the DC Switching terminal is extended out to the terminal block. | End of type **EX-DC** |

# Water-Resistant Specifications Gearmotor with Brake Wiring・Rectifier

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

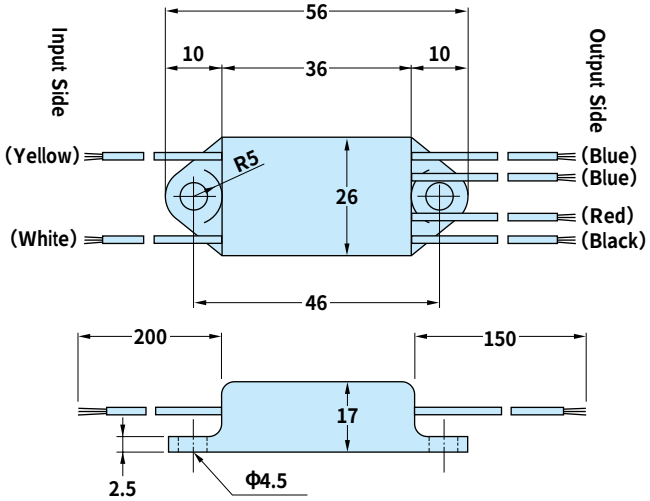
## Rectifier

The supplied rectifier A200-D90-UL is required for the brake operation of the gearmotor with brake. Since the braking delay time differs according to the brake wiring, select the most appropriate wiring method for the application, referring to page E30.
The rectifier basically contains a surge absorber. However, if a risk is foreseen, add another surge absorber or noise filter for safety sake.



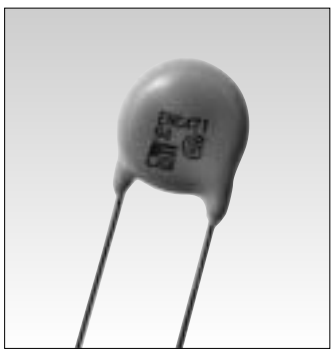

### A200−D90−UL Dimension Diagram

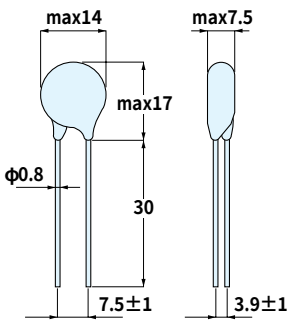
(A100−D45) 〈Round weight: 40g〉




## Surge Suppressor Z／Option No.OP-ENC471D-10A

For use in cutting off the sparks of a brake switch for DC switching or AC line switching.





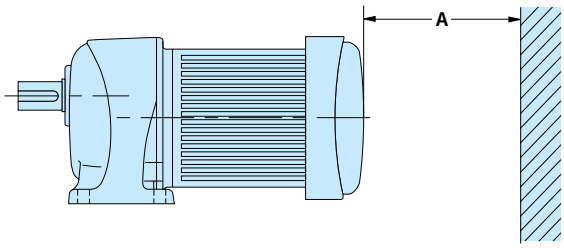
# Open space size necessary for taking off the Motor Fan Cover



The values indicated below are the necessary open space sizes for doing brake gap adjustment of the installed motor. These are the open space sizes needed for taking off the fan cover from the installed motor. When you consider ventilation, add more than 20mm to each value.

## Indoor Specification

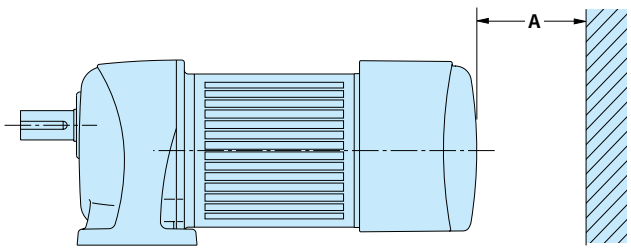
**Location dimension A (mm)**




| Specifications / Series | 3-Phase | | | | | | | | | 1-Phase | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T50 1/240 and below | T50 1/300 and below | T010 | T020 | T040 | 075 | 150 | 220 | | S100 | 100 | 200 | 400 |
| F | 32 | 45 | 44 | 59 | 56 | 59 | 81 | 81 | | 44 | | 59 | 59 |
| F2 | | | 44 | 59 | 56 | 59 | 81 | 81 | | | | | |
| H2 | | | 44 | 59 | 56 | 59 | 81 | 81 | | 44 | | 59 | 59 |
| G3 | | | 44 | 59 | 56 | 59 | 81 | 81 | | | 59 | 59 | 59 |

## Water-Resistant, Outdoor Specification

**Location dimension A (mm)**




| Specifications / Series | 3-Phase | | | |
|---|---|---|---|---|
| | T010 | T020 | T040 | 075 |
| All models of brake motors | 44 | 82 | 96 | 117 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
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Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Terminal Box Measure and position
## Gearmotor•Gearmotor with Brake in common

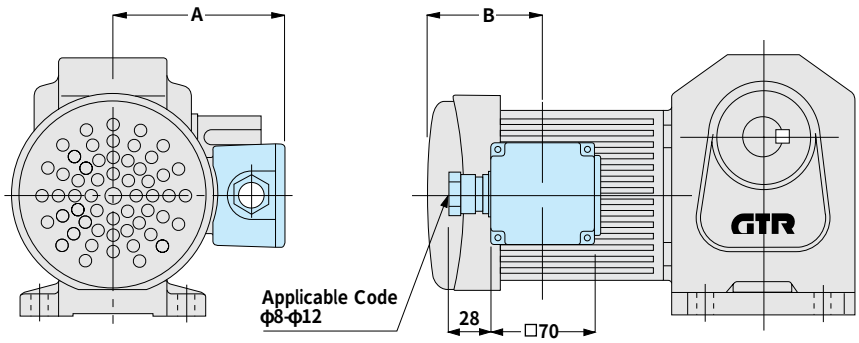


## Terminal Box for G3 Series(Parallel Shaft) and H2 Series(Right Angle Shaft)

In the G3 Series and H2 Series, models of single/3-phase motor with the capacity of less than 0.4kW have no terminal box.
If desired, terminal box can be attached. Instruct us when ordering.

### Dimension Diagram When Terminal Box Attached

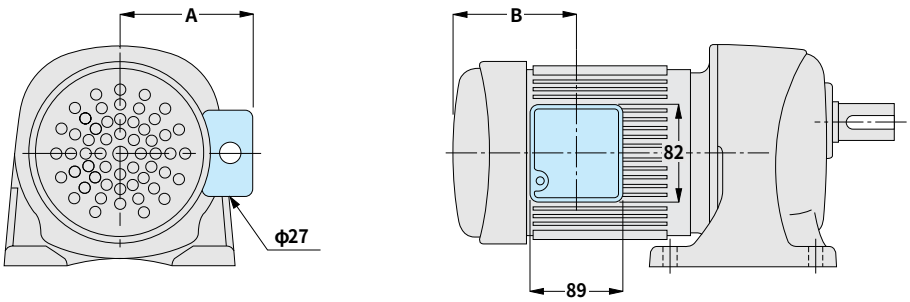
**G3•H2 in common**




| Motor capacity designation | Box Type | A | B | | Modification of Box Position |
|---|---|---|---|---|---|
| | | | Gearmotor | Brake Gearmotor | |
| T010•T010W | A (Z) | 117 | 47.5 | 87.5 | 90 °dividing |
| T020•T020W | A (Z) | 117 | 78.5 | 95.5 | 90 °dividing |
| T040•T040W | A (Z) | 123 | 84.5 | 104 | 90 °dividing |
| S100•S100W | A | 117 | 78.5 | 87.5 | 90 °dividing |

Note 1) Figures above illustrates the standard position of terminal box. For the modification of position, direct us when ordering. Refer to page E35.
2) (Z) in the Box Type column indicates the brake motor with built-in rectifier. Nevertheless , built-in rectifier type is not available in S100• S100W.
3) Above figure is just a representative. There are different motor shapes at the gear head.

**G3•H2 in common**




| Motor capacity designation | Box Type | A | B | | Modification of Box Position |
|---|---|---|---|---|---|
| | | | | | |
| 075•075W | T | 122 | 101 | 108 | 90 °dividing |
| 150•220•150W•220W | T | 133 | 111.5 | 132 | 90 °dividing |

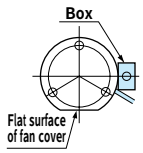
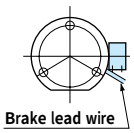
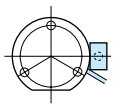
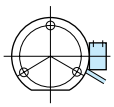
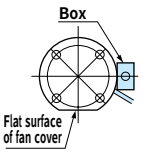
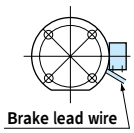
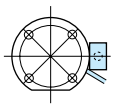
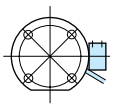
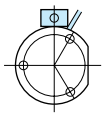
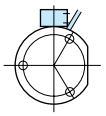
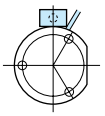
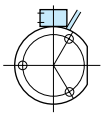
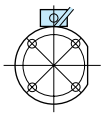
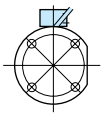
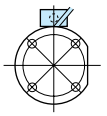
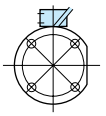
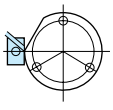
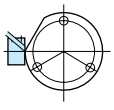
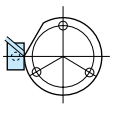
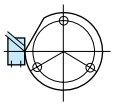
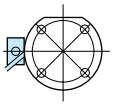
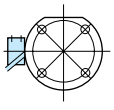
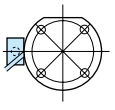
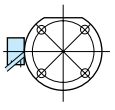
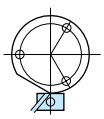
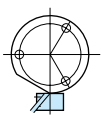
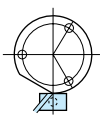
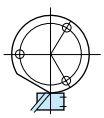
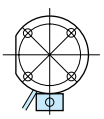
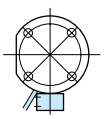
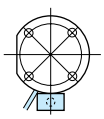
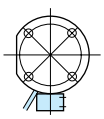
Note 1) Figures above illustrates the standard position of terminal box. For the modification of position, direct us when ordering. Refer to page E35.
2) Above figure is just a representative. There are different motor shapes at the gear head.

# Change position
## Gearmotor・Gearmotor with Brake in common

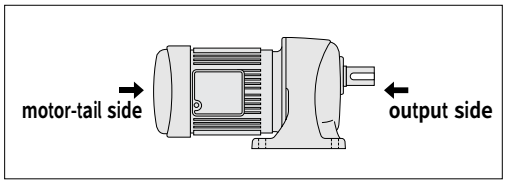
### Direction method when modifying the position of lead wire type terminal box of the G3・H2 Series

If non-standard positioning of the lead wire and terminal box is needed, direct us with the code enclosed with ▭ in the table below:

### Direction Method

| Motor capacity designation T010 ・T020 ・S100 T010W ・T020W ・S100W (Lead wire only) | | | | Motor capacity designation T040 ・075 ・150 ・220 T040W ・075W ・150W ・220W | | | |
|---|---|---|---|---|---|---|---|
| fly lead type with Terminal Box | | | | fly lead type with Terminal Box | | | |
| Modification of Box Position and Power Source Inlet Position | | | | Modification of Box Position and Power Source Inlet Position | | | |
|  Standard |  Hole (lower) |  Hole (negative) |  Hole (upper) |  Standard |  Hole (lower) |  Hole (negative) |  Hole (upper) |
| Standard | H6 | H3 | HZ | Standard | H6 | H3 | HZ |
|  T (upper) |  T (upper) Hole (right) |  T (upper) Hole (negative) |  T (upper) Hole (left) |  T (upper) |  T (upper) Hole (right) |  T (upper) Hole (negative) |  T (upper) Hole (left) |
| TZ | TZ H6 | TZ H3 | TZ HZ | TZ | TZ H6 | TZ H3 | TZ HZ |
|  T (left) |  T (left) Hole (upper) |  T (left) Hole (negative) |  T (left) Hole (lower) |  T (left) |  T (left) Hole (upper) |  T (left) Hole (negative) |  T (left) Hole (lower) |
| T9 | T9 H6 | T9 H3 | T9 HZ | T9 | T9 H6 | T9 H3 | T9 HZ |
|  T (lower) |  T (lower) Hole (left) |  T (lower) Hole (negative) |  T (lower) Hole (right) |  T (lower) |  T (lower) Hole (left) |  T (lower) Hole (negative) |  T (lower) Hole (right) |
| T6 | T6 H6 | T6 H3 | T6 HZ | T6 | T6 H6 | T6 H3 | T6 HZ |

Note 1) All the diagrams show the profile viewed from anti-load side of the motor.
2) No need to direct for standard position.
3) Be sure that customers cannot modify the position of the models 0.1kW～0.2kW for the reason of its construction. If modification of position is needed, direct us beforehand with the code in the above diagram.
4) In case of brake motor, the brake lead wire is basically positioned in the same direction as the terminal box.
5) Only in the frame No. 28 in G3 Series, 0.1kW・0.2kW, the position of terminal box does not come to the right above or right below of the motor. The terminal box will be moved 17 degrees clockwise from the centerline, in "TZ"(above) and in "T6"(below).
6) As for with clutch brake type please be careful not to get exogenous materials in the apertural are of clutch brake.
7) No need to direct the hole position in the lead wire type model.




●Meanings of Designations
1) "T" indictaes "Terminal Box".
2) "H" indicates the supply inlet hole.

# Terminal Box Measure and position
## Gearmotor•Gearmotor with Brake in common

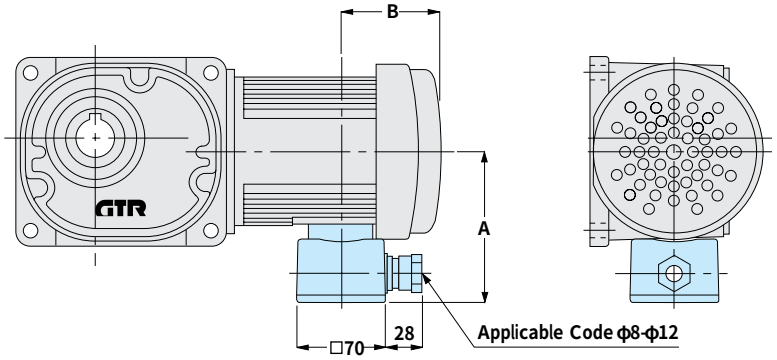


## Terminal Box for F Series (Hollow Shaft•Solid Shaft)

Terminal Box attached is the standard spec. of F Series 3-Phase motors. If requested, terminal box can also be attached to the S100 Single-phase motors. Direct us when ordering.

### Dimension Diagram When Terminal Box Attached

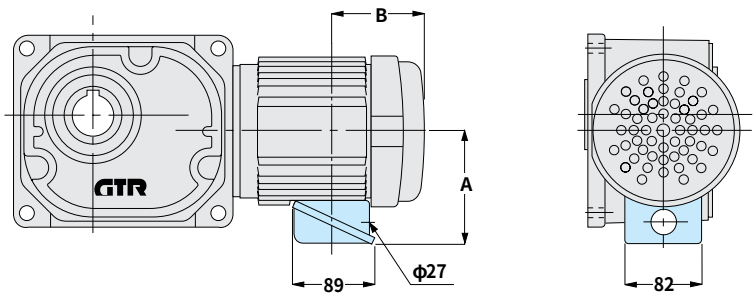
**FS•FF in common**




| Motor capacity designation | Box Type | A | B | | Modification of Box Position |
|---|---|---|---|---|---|
| | | | Gearmotor | Brake Gearmotor | |
| T50•T50W | A (Z) | 105 | 62 | 99.5 | 180 °dividing |
| T010•T010W | A (Z) | 117 | 47.5 | 87.5 | 90 °dividing |
| T020•T020W | A (Z) | 117 | 78.5 | 95.5 | 90 °dividing |
| T040•T040W | A (Z) | 123 | 84.5 | 104 | 90 °dividing |
| S100•S100W | A | 117 | 87.5 | 87.5 | 90 °dividing |

Note 1) Figures above illustrates the standard position of terminal box. For the modification of position, direct us when ordering. Refer to page E37.
2) (Z) in the Box Type column indicates the brake motor with built-in rectifier. Nevertheless , built-in rectifier type is not available in S100•S100W.
3) Above figure is just a representative. There are different motor shapes at the gear head.

**FS•FF in common**




| Motor capacity designation | Box Type | A | B | | Modification of Box Position |
|---|---|---|---|---|---|
| | | | Gearmotor | Brake Gearmotor | |
| 075•750W | T | 122 | 101 | 108 | 90 °dividing |
| 150•220•150W•220W | T | 133 | 111.5 | 132 | 90 °dividing |

Note 1) Figures above illustrates the standard position of terminal box. For the modification of position, direct us when ordering. Refer to page E37.
2) Above figure is just a representative. There are different motor shapes.

# Change position
## Gearmotor・Gearmotor with Brake in common

## Direction method when modifying the position of lead wire type terminal box F series.

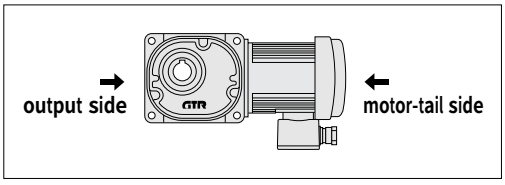
If non-standard positioning of the terminal box is needed, direct us with the code enclosed with ▭ in the table below:

### Direction Method

| Motor capacity designation (T50・T50W) with Terminal Box / Modification of Box Position and Power Source Inlet Position | Flange side / Terminal Box | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Standard | Hole (left) | Hole (negative) | Hole (right) | T (upper) | T (upper) Hole (left) | T (upper) Hole (negative) | T (upper) Hole (right) |
| | Standard | H6 | H3 | HZ | TZ | TZ HZ | TZH3 | TZ H6 |

| Motor capacity designation (T010 ・T020 ・S100 T010W・T020W・S100W) with Terminal Box / Modification of Box Position and Power Source Inlet Position | | | | Motor capacity designation (T040 ・075 ・150 ・220 T040W・075W・150W・220W) with Terminal Box / Modification of Box Position and Power Source Inlet Position | | | |
|---|---|---|---|---|---|---|---|
| Flat surface of fan cover / Box | Brake lead wire | | | Flat surface of fan cover / Box | Brake lead wire | | |
| Standard | Hole (left) | Hole (negative) | Hole (right) | Standard | Hole (left) | Hole (negative) | Hole (right) |
| Standard | H6 | H3 | HZ | Standard | H6 | H3 | HZ |
| T (right) | T (right) Hole (lower) | T (right) Hole (negative) | T (right) Hole (upper) | T (right) | T (right) Hole (lower) | T (right) Hole (negative) | T (right) Hole (upper) |
| T3 ＊ | T3 H6 ＊ | T3 H3 ＊ | T3 HZ ＊ | T3 ＊ | T3 H6 ＊ | T3 H3 ＊ | T3 HZ ＊ |
| T (upper) | T (upper) Hole (right) | T (upper) Hole (negative) | T (upper) Hole (left) | T (upper) | T (upper) Hole (right) | T (upper) Hole (negative) | T (upper) Hole (left) |
| TZ ＊ | TZ H6 ＊ | TZ H3 ＊ | TZ HZ ＊ | TZ ＊ | TZ H6 ＊ | TZ H3 ＊ | TZ HZ ＊ |
| T (left) | T (left) Hole (upper) | T (left) Hole (negative) | T (left) Hole (lower) | T (left) | T (left) Hole (upper) | T (left) Hole (negative) | T (left) 穴 (lower) |
| T9 ＊ | T9 H6 ＊ | T9 H3 ＊ | T9 HZ ＊ | T9 ＊ | T9 H6 ＊ | T9 H3 ＊ | T9 HZ ＊ |

Note 1) All the diagrams show the profile viewed from anti-load side of the motor.
2) No need to direct for standard position.
3) Be sure that customers cannot modify the position of the models 0.1kW～0.2kW for the reason of its construction. If modification of position is needed, direct us beforehand with the code in the above diagram.
4) In case of brake motor, the brake lead wire is basically positioned in the same direction as the terminal box.
5) No need to direct the hole position in the lead wire type model.
6) ＊ This mark indicates that the fan cover will extrude from the flange surface. For detailed measurement of the extruded part, refer to page E66.




●Meanings of Designations
1) "T" indictaes "Terminal Box".
2) "H" indicates the supply inlet hole.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Terminal Box Measure and Position
## Gearmotor•Gearmotor with Brake in common

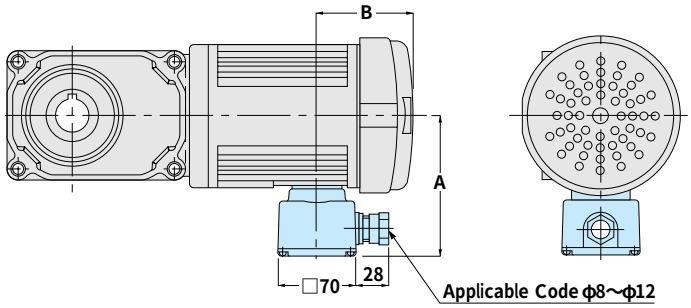
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

## Terminal Box for F2 Series (Hollow shaft and Solid Shaft)

Terminal Box attached is the standard spec. of F2 Series 3-Phase motors.

### Dimension Diagram When Terminal Box Attached (Standard)

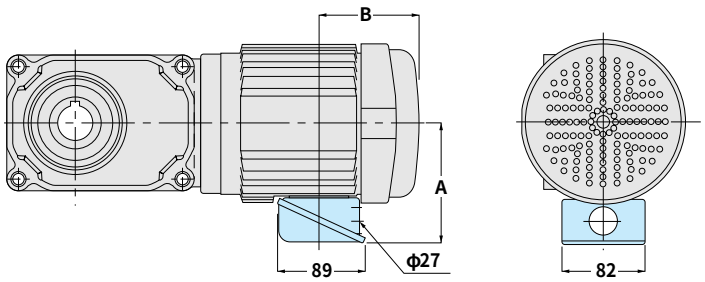
**F2S•F2F in common**




| Motor capacity designation | Box Type | A | B | | Modification of Box Position |
|---|---|---|---|---|---|
| | | | Gearmotor | Brake Gearmotor | |
| T010•T010W | A (Z) | 117 | 47.5 | 87.5 | 90 °dividing |
| T020•T020W | A (Z) | 117 | 78.5 | 95.5 | 90 °dividing |
| T040•T040W | A (Z) | 123 | 84.5 | 104 | 90 °dividing |

Note 1) Figures above illustrates the standard position of terminal box. For the modification of position, direct us when ordering. Refer to page E39.
2) (Z) in the Box Type column indicates the brake motor with built-in rectifier.
3) Above figure is just a representative. There are different motor shapes at the gear head.

**F2S•F2F in common**




| Motor capacity designation | Box Type | A | B | | Modification of Box Position |
|---|---|---|---|---|---|
| | | | Gearmotor | Brake Gearmotor | |
| 075•075W | T | 122 | 101 | 108 | 90 °dividing |
| 150•150W | T | 133 | 111.5 | 132 | 90 °dividing |

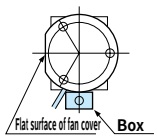
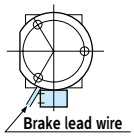
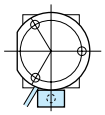
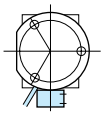
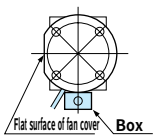
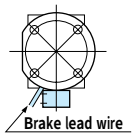
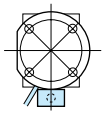
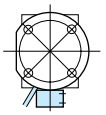
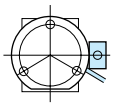
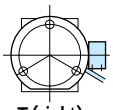
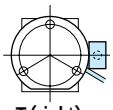
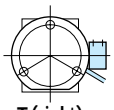
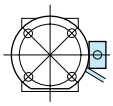
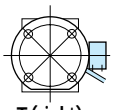
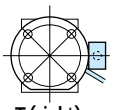
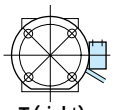
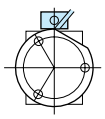
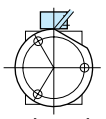
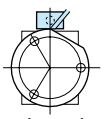
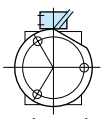
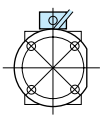
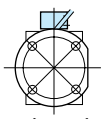
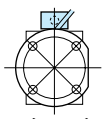
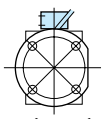
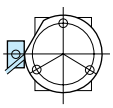
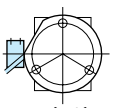
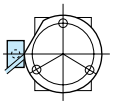
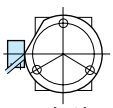
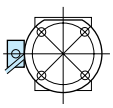
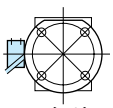
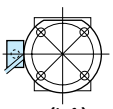
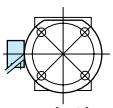
Note 1) Figures above illustrates the standard position of terminal box. For the modification of position, direct us when ordering. Refer to page E39.
2) Above figure is just a representative. There are different motor shapes.

# Position Change
## Gearmotor・Gearmotor with Brake in common

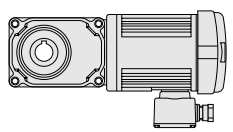
## Direction method when modifying the position of lead wire type terminal box F2 series.

If non-standard positioning of the terminal box is needed, direct us with the code enclosed with ▭ in the table below:

### Direction Method

| Motor capacity designation (T010 ・T020 T010W・T020W) | | | | Motor capacity designation (T040 ・075 ・150 T040W・075W・150W) | | | |
|---|---|---|---|---|---|---|---|
| Modification of Box Position and Power Source Inlet Position | | | | Modification of Box Position and Power Source Inlet Position | | | |
|  Standard |  Hole (left) |  Hole (negative) |  Hole (right) |  Standard |  Hole (left) |  Hole (negative) |  Hole (right) |
| Standard | H6 | H3 | HZ | Standard | H6 | H3 | HZ |
|  T (right) |  T (right) Hole (lower) |  T (right) Hole (negative) |  T (right) Hole (upper) |  T (right) |  T (right) Hole (lower) |  T (right) Hole (negative) |  T (right) Hole (upper) |
| T3 | T3 H6 | T3 H3 | T3 HZ | T3 | T3 H6 | T3 H3 | T3 HZ |
|  T (upper) |  T (upper) Hole (right) |  T (upper) Hole (negative) |  T (upper) Hole (left) |  T (upper) |  T (upper) Hole (right) |  T (upper) Hole (negative) |  T (upper) Hole (left) |
| TZ | TZ H6 | TZ H3 | TZ HZ | TZ | TZ H6 | TZ H3 | TZ HZ |
|  T (left) |  T (left) Hole (upper) |  T (left) Hole (negative) |  T (left) Hole (lower) |  T (left) |  T (left) Hole (upper) |  T (left) Hole (negative) |  T (left) Hole (lower) |
| T9 | T9 H6 | T9 H3 | T9 HZ | T9 | T9 H6 | T9 H3 | T9 HZ |

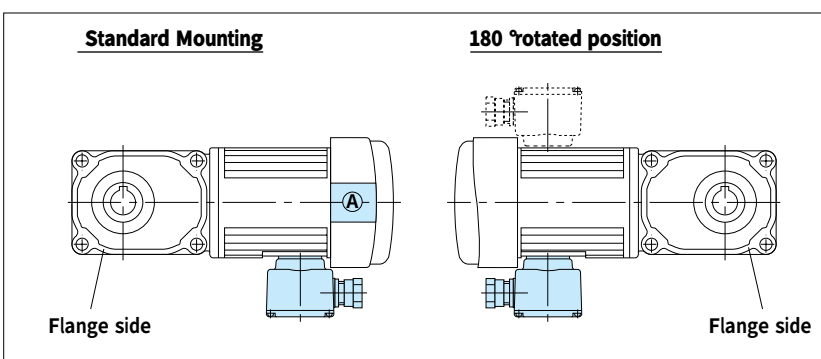
Note 1) All the diagrams show the profile viewed from anti-load side of the motor.
2) No need to direct for standard position.
3) Be sure that customers cannot modify the position of the models 0.1kW～0.2kW for the reason of its construction. If modification of position is needed, direct us beforehand with the code in the above diagram.
4) In case of brake motor, the brake lead wire is basically positioned in the same direction as the terminal box.
5) No need to direct the hole position in the lead wire type model.




●Meanings of Designations
1) "T" indictaes "Terminal Box".
2) "H" indicates the supply inlet hole.

## Warning on Positioning between Terminal Box and Flange Surface

Positioning between the terminal box of F2S Type and the flange surface is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as seen in dotted line). In this case, the position of terminal box can be rotated down to 90 or 180 °(as seen in solid line). Therefore, when you order, direct the required position, referring to page E39. Be sure that customers cannot modify the position for the reason of its structure. As for the models with the capacity of 0.1kW or 0.2kW, the flat surface of the fan cover Ⓐ cannot be positioned to the flange side when the box being rotated down to180 °.




∗Above diagram is an example. Motor shape differs according to model.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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# Gearmotor with Clutch and Brake
## Specifications・Structure・Wiring



## Specifications of clutch and brake 〈Standard Type〉

〈Table-16〉

| Item \ Motor Capacity | 3-Phase 0.1kW | 3-Phase 0.2kW | 3-Phase 0.4kW | 3-Phase 0.75kW |
|---|---|---|---|---|
| Motor Capacity Designation | T010・T010W | T020・T020W | T040・T040W | 075・075W |
| Brake Type | Magnet close | | | |
| Static Friction Torque (N・m){kgf・m} | 1.96{0.20} | 1.96{0.20} | 3.92{0.40} | 7.35{0.75} |
| Dynamic Friction Torque (N・m){kgf・m} | 1.57{0.16} | 1.57{0.16} | 3.14{0.32} | 5.88{0.60} |
| Exciting Voltage DC (Average) Rectifier Attached (V) | 90 | | | |
| Power (at 75°C Clutch/Brake) (W) | 10/12 | 10/12 | 14/16 | 13/19 |
| Current (at 75°C Clutch/Brake) (A) | 0.11/0.14 | 0.11/0.14 | 0.15/0.18 | 0.14/0.21 |
| Armature Braking Time ta(s) | 0.010 | 0.010 | 0.015 | 0.020 |
| Torque Buildup Time (s) | 0.020 | 0.020 | 0.050 | 0.070 |
| Torque Extinction Time (s) | 0.015 | 0.015 | 0.020 | 0.040 |
| Allowable Continuous Works (per time) (J){kgf・m} | 15{1.5} | 15{1.5} | 27{2.7} | 49{4.9} |
| Allowable Total Work Emax (J) | $1.2\times10^8$ | $1.2\times10^8$ | $2.2\times10^8$ | $4.3\times10^8$ |
| {kgf・m} | $1.2\times10^7$ | $1.2\times10^7$ | $2.2\times10^7$ | $4.3\times10^7$ |
| Allowable Braking Frequency (times/minute) | 50 | | | |

Note) The allowable braking frequency is a guideline value and it differs according to the using condition.

## Specifications of clutch and brake 〈Reinforced Type〉

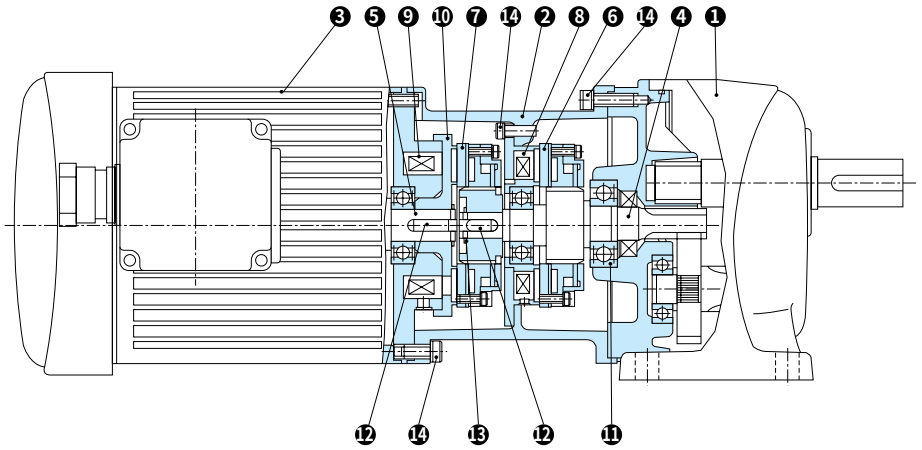
〈Table-17〉

| Item \ Motor Capacity | 3-Phase 0.2kW | 3-Phase 0.4kW | 3-Phase 0.75kW |
|---|---|---|---|
| Motor Capacity Designation | T020・T020W | T040・T040W | 075・075W |
| Brake Type | Magnet close | | |
| Static Friction Torque (N・m){kgf・m} | 1.96{0.20} | 3.92{0.40} | 7.35{0.75} |
| Dynamic Friction Torque (N・m){kgf・m} | 1.57{0.16} | 3.14{0.32} | 5.88{0.60} |
| Exciting Voltage DC (Average) Rectifier Attached (V) | 90 | | |
| Power (at 75°C Clutch/Brake) (W) | 14/15 | 13/18 | 11/12 |
| Current (at 75°C Clutch/Brake) (A) | 0.15/0.17 | 0.14/0.20 | 0.13/0.13 |
| Armature Braking Time ta(s) | 0.010 | 0.015 | 0.020 |
| Torque Buildup Time (s) | 0.020 | 0.050 | 0.070 |
| Torque Extinction Time (s) | 0.015 | 0.020 | 0.040 |
| Allowable Continuous Works (per time) (J){kgf・m} | 15{1.5} | 27{2.7} | 49{4.9} |
| Allowable Total Work Emax (J) | $2.2\times10^8$ | $4.3\times10^8$ | $5.5\times10^8$ |
| {kgf・m} | $2.2\times10^7$ | $4.3\times10^7$ | $5.5\times10^7$ |
| Allowable Braking Frequency (times/minute) | 50 | | |

Note 1) The allowable braking frequency is a guideline value to avoid excessive motor temperature rise. Braking frequency can be increased when load is light or motor is sufficiently cooled. (Be sure to maintain the motor surface temperature below 80°C.)
2) Be sure to avoid continuous energizing to the clutch/brake coil during the motor stops.
3) Use the rectifier attached for the power supply to the clutch/brake. If different type of rectifier is to be used, consult us.
4) The values of the static and dynamic friction torques are just guidelines and not guaranteed ones.

Note) The allowable braking frequency is a guideline value and it differs according to the using condition.

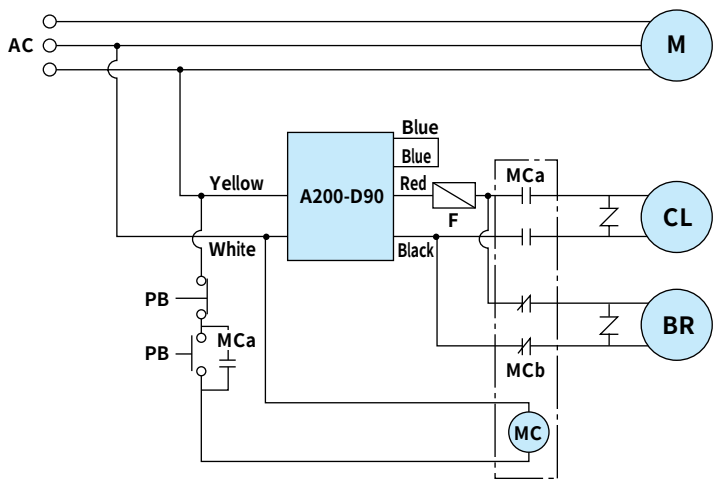
## Structure



❶ Gear head
❷ Bracket
❸ Motor
❹ OSP (spline moving type)
❺ Motor shaft
❻ Armature (for brake)
❼ Armature (for clutch)
❽ Field (for brake)
❾ Field (for clutch)
❿ Clutch rotor
⓫ Bearing
⓬ Key
⓭ Retaining ring
⓮ Hex socket head bolt

## Wiring Method

For the brake operation of this clutch/brake motor, DC voltage 90V should be employed. Connect the attached rectifier A200-D90 and the surge suppressor (ENC471D-10A) for quenching spark, according to the wiring method described below. For the dimension of the rectifier, refer to page E22.




Ⓜ : Motor
Ⓒ : Clutch
Ⓑ : Brake
Ⓜ : Relay Coil
MCa : Magnetic Contact POC a
MCb : Magnetic Contact POC b
Z : Surge Suppressor (attached ENC471D-10A)
PB : Push Button Switch
F : Fuse

Note 1) For protecting the rectifier, put a fuse (capacity 1A) in the input or output side.
2) As the rectifier contains diodes, improper wiring may cause fatal short-circuiting. So special care should be given to the wiring.
3) For the relay capacity for the clutch/brake circuit, DC110V, DC13 class is recommended for its ability of cutting off the inductive load (DC coil). In case of using non-contact relay, apply the rated voltage of AC240V equivalent(half-wave rectification switchable)
4) As for the wiring for 3-phase double voltage or a special voltage of over 230V model, be sure to connect 200V terminal (red lead wire, 0.75 kW for B terminal) which are extended out from the motor, to the input terminal of the rectifier.

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Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
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Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Gearmotor with Clutch and Brake
## Structure and position of terminal box



## Terminal Box for clutch and brake type.

■**Following assortments are available in the terminal box for GTR gearmotors with clutch/brake.**

| Series | No. of Phase | Motor capacity designation | Terminal Box | |
|---|---|---|---|---|
| | | | Standard or optional spec | Box Type |
| H2-Series (Right Angle Shaft) | 3-Phase | T020•T020W | △ | A |
| | | T040•T040W | ○ | A |
| | | 075•075W | ○ | T |

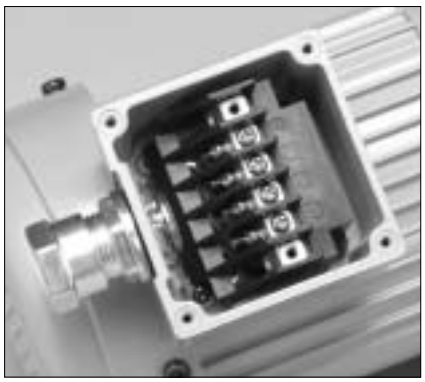
| Series | No. of Phase | Motor capacity designation | Terminal Box | |
|---|---|---|---|---|
| | | | Standard or optional spec | Box Type |
| G3-Series (Parallel Shaft) | 3-Phase | T010•T010W | △ | A |
| | | T020•T020W | △ | A |
| | | T040•T040W | ○ | A |
| | | 075•075W | ○ | T |

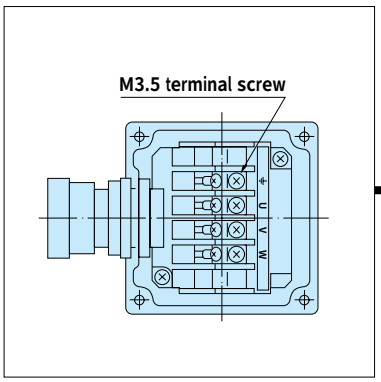
Note 1) "○" : Terminal box attached is the standard spec.
"△": Terminal box attached is the optional spec.

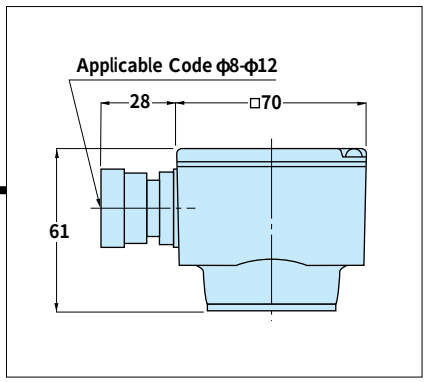
### ■Types and Structures

#### ●A-Type Terminal Box

3-Phase/Standard Voltage•High Voltage

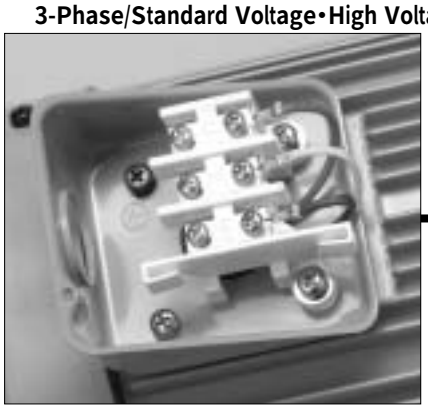


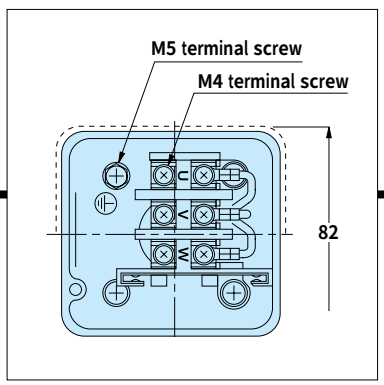


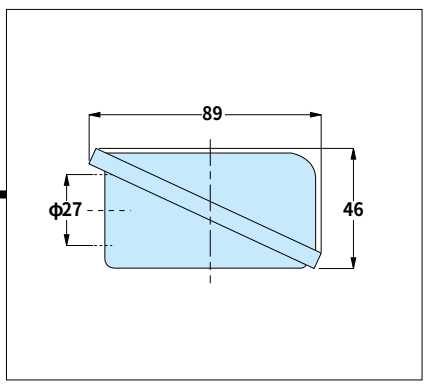




#### ●T-Type Terminal Box

3-Phase/Standard Voltage•High Voltage



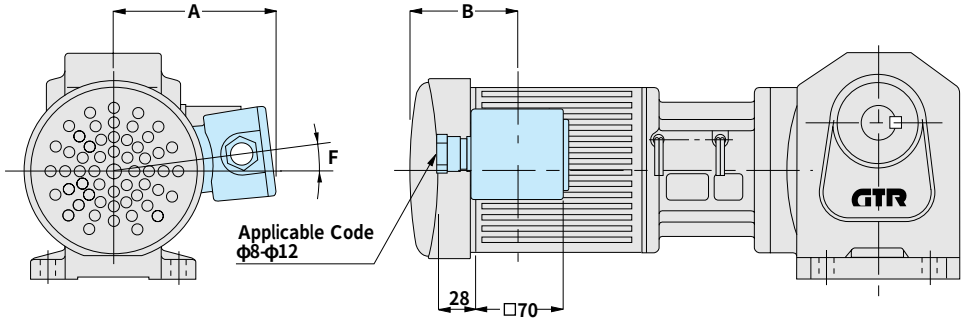


## Dimensions of Terminal Box and Position Change

Both H2 Series and G3 Series with the capacity below 0.2kW are the models without terminal box. However, if required, terminal box can be attached. Direct us when ordering.

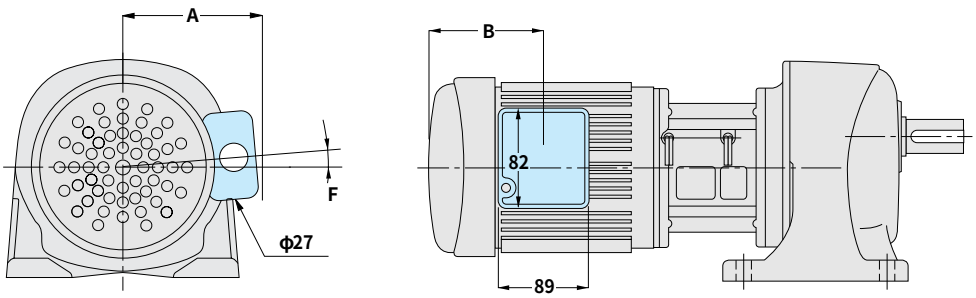
### H2•G3 in common




| Motor capacity designation | Type | A | B | F | Modification of Box Position |
|---|---|---|---|---|---|
| T010•T010W | A | 117 | 47.5 | 0 ° | Please ask us for detail. |
| T020•T020W | A | 117 | 78.5 | 0 ° | Please ask us for detail. |
| Standard Type T040•T040W | A | 126 | 84.5 | 7.5 ° | Please ask us for detail. |
| Reinforced Type T040•T040W | A | 123 | 84.5 | 0 ° | Please ask us for detail. |

Note 1) The position of the box illustrated above is the standard spec. For changing the position of the box, refer to page E35.
2) Above figure is just a representative. Gear head part and/or motor shape differs according to it's capacity.
3) No strengthened type is available in the H2 Series.

### H2•G3 in common




| Motor capacity designation | Type | A | B | F | Modification of Box Position |
|---|---|---|---|---|---|
| Standard Type 075•075W | T | 127 | 101 | 7.5 ° | Please ask us for detail. |
| Reinforced Type 075•075W | T | 122 | 101 | 0 ° | Please ask us for detail. |

Note 1) The position of the box illustrated above is the standard spec. For changing the position of the box, refer to page E35.
2) It you ask to change the position of terminal box, the clutch brake lead wires come same direction with terminal box. Please be careful not to get exogenous materials in the apertural area of clutch brake.
3) Above figure is just a representative. Gear head part and/or motor shape differs according to it's capacity.
4) No strengthened type is available in the H2 Series.

# On Combination of Gearmotor and Inverter

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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1. Range of Frequency to be Effective

In general, frequency of 5~120Hz is recommended.

＊For gearmotors with clutch/brake, frequency of 5～60Hz is recommended.

(1) Cautions for high speed operations of more than 60Hz.:

In the high speed operations of more than 60Hz, vibration and noise will increase. Also, circumferential velocity increased, which may result in shortening of oil seal life.

(2) Cautions for low speed operations:

In the low speed operation, the cooling effect may decrease, which may result in abnormal temperature rise in motor. Therefore, care should be given to the low speed operations. ( Be sure to maintain the temperature of the motor surface below 80℃.)

2. Torque Characteristics of the motor (Operation Limit)

The torque characteristics of the motor (operation limit) differ according to the inverter to be combined with and/or controlling method. We have ready made inverter set (set with the inverter "VS mini J7 Series" produced by Yasukawa Denki) The employment of this set provides you continuous low speed operation. For more details, refer to the "Range of continuous rated operation" on page E86.

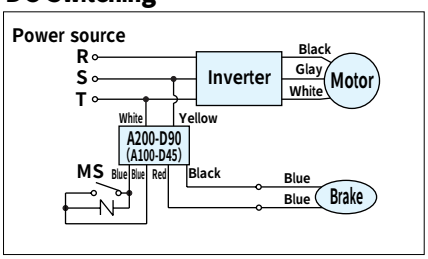
3. In case of gearmotors with brake:

For wiring the brake, be sure to bypass the inverter. (Power supply should be from the primary side of the inverter)

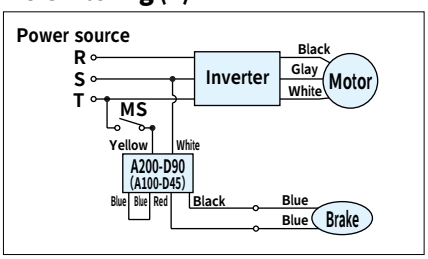
Fluctuations of the voltage may result in braking failure.

Refer to the wiring diagram below:

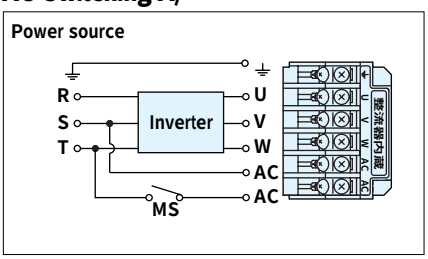
**DC Switching**




**AC Switching (A)**




**Z-Type Terminal Box (Rectifier built-in) AC Switching A)**




4. Correction of the Allowable Value (selection)

At high-speed operation, correction of the allowable value is necessary. To determine the value, multiply the correction coefficient referring to the "Allowable Torque Coefficient by reducer's input rotation speed".

5. In case of driving 400V class motor with inverter

Surge voltage may arise between the terminals of the motor, which may weaken the insulation effect of the motor. In general, there are two ways to suppress the surge voltage, namely, one for suppressing the voltage at the initial stage(output reactor) and the other for suppressing the crest value (output filter).

(1) Output Reactor

If the wiring length is relatively short, install the AC reactor in the inverter output side and suppress the crest value. This enables the surge voltage reduced. Suppression of the crest value of the surge voltage may be difficult if the wiring is long.

(2) Output filter

Install the filter in the inverter output side and suppress the crest value of the terminal voltage of the motor.

Since the explanations stated above are the general handling methods, we recommend you to consult with the inverter manufacturer for more details.

# Specification of Motor Lead Wire



### 3-Phase Standard Voltage (3Rated)

| Capacity | Motor Capacity Designation | Lead Wire Spec |
|---|---|---|
| 50W | T50 | UL3266 AWG20 |
| 0.1kW | T010 | UL3271 AWG18 |
| 0.2kW | T020 | |
| 0.4kW | T040 | |
| 0.75kW | 075 | UL3398 AWG16 |
| 1.5kW | 150 | |
| 2.2kW | 220 | |

### 1-Phase Standard Voltage

| Capacity | Motor Capacity Designation | Lead Wire Spec |
|---|---|---|
| 100W | S100 Note1 | UL3271 AWG18 |
| | 100 Note1 | UL3398 AWG16 |
| 200W | 200 | |
| 400W | 400 | |

Note 1) The corresponding models for the motor capacity designation S100 are F-Series and H2-Series. Also the corresponding models for the motor capacity designation 100 are G3-Series.

### 3-Phase High Voltage (4Rated)

| Capacity | Motor Capacity Designation | Lead Wire Spec |
|---|---|---|
| 50W | T50W | UL3271 AWG24 |
| 0.1kW | T010W | UL3271 AWG18 |
| 0.2kW | T020W | |
| 0.4kW | T040W | |
| 0.75kW | 075W | UL3289 AWG20 |
| 1.5kW | 150W | |
| 2.2kW | 220W | |

Note) In case of gearmotor with brake, the 200V terminal is extended out from the motor. In the 200V terminal, the specifications are UL3266 AWG20 for the models with the capacity of 50W~0.4kW and UL3289 AWG20 for the models with the capacity of 0.75~2.2kW.

### 1-Phase High Voltage

| Capacity | Motor Capacity Designation | Lead Wire Spec |
|---|---|---|
| 100W | S100W Note1 | UL3271 AWG18 |
| | 100W Note1 | UL3398 AWG16 |
| 200W | 200W | |
| 400W | 400W | |

Note 1) The corresponding models for the motor capacity designation S100 are F-Series and H2-Series. Also the corresponding models for the motor capacity designation 100 are G3-Series.

### Others

The Specifications of brake and clutch brake wire is UL3266 AWG20.

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Gearmotor with Clutch/Brake
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Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
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S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
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Gearmotor with Brake
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# Reducer

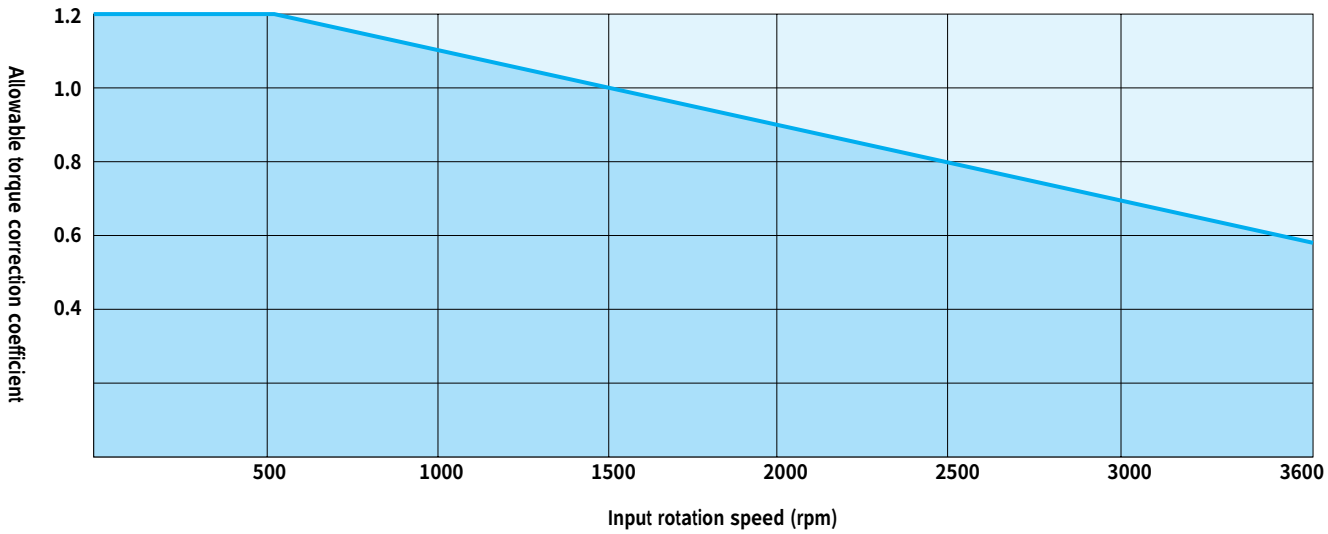
Independent Reducer consists of the reducer part of GTR gearmotors. Use this reducer in the following cases:

1. When required reducer unit only.
2. In case of driving reducer with special motor or with motors other than electric motor.
3. In case input rotation speeds of reducer and motor are different.

## Relation between the Input Rotation Speed and the Output Shaft Allowable Torque

The values of output shaft allowable torque in the performance table are the values when the input rotation speed is 1500rpm. In case of using the motor with the different rotation speed, the output allowable torque can be obtained by multiplying the torque correction coefficient in the diagram below

### Allowable Torque Coefficient by Reducer Input Rotation speed




1) The allowable O.H.L. can also be obtained by the correction coefficient shown above.
2) As for the allowable inertia moment I {allowable GD$^2$}, in case of using with the input rotation speed of over 1800rpm, it can be obtained by multiplying (1800/input•rpm)_ to the allowable inertia moment in the Table-2 on page E4.

### Example

In case of using the model H2L-32L-40-075 with the input rotation speed of 2500rpm, the output shaft allowable torque, input/output shaft allowable O.H.L., and output shaft allowable inertia moment {GD$^2$} can be obtained as follows.
From the above table, the correction coefficient at the input rotation speed of 2500rpm is 0.8, therefore values can be obtained as follows:

Output shaft allowable torque =172×0.8=138N•m
{17.5×0.8=14kgf•m}
Input shaft allowable O.H.L. =392×0.8=314N
{40×0.8=32kgf}
Output shaft allowable O.H.L. =3430×0.8=2744N
{350×0.8=280kgf}

Also, the output shaft allowable inertia moment I{GD$^2$} can be obtained by
0.003× (1800/2500)$^2$×40$^2$ 2.5kg•m$^2$
{0.012× (1800/2500)$^2$×40$^2$ 10.0kgf•m$^2$}

## Designated Motor Attachable Type

# S-Type Reducer

All the motors of GTR gearmotor are supplied from the specific manufacturer. In case motors and/or special motors (outdoor motor or increased safety explosion-proof motor, etc) of different manufacturer are requested to be installed, we recommend this S-Type Reducer.
This reducer can be attached if the motor attaching part conforms to JEM1401-1991, with the same dimension as that of the low pressure 3-phase basket-shape inductive motor with flange shape for general use.

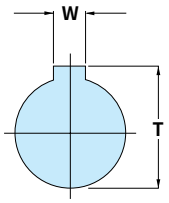
- ✻ In case of using a motor like servo motor which has special motor torque characteristics, care should be given to the selection of the reducer model.
- ✻ Motor for the S-Type Reducer should be prepared and attached by customer.
- ✻ The color of the motor for the S-Type Reducer will be chosen by the motor manufacturer.

## Motor Installing Procedure

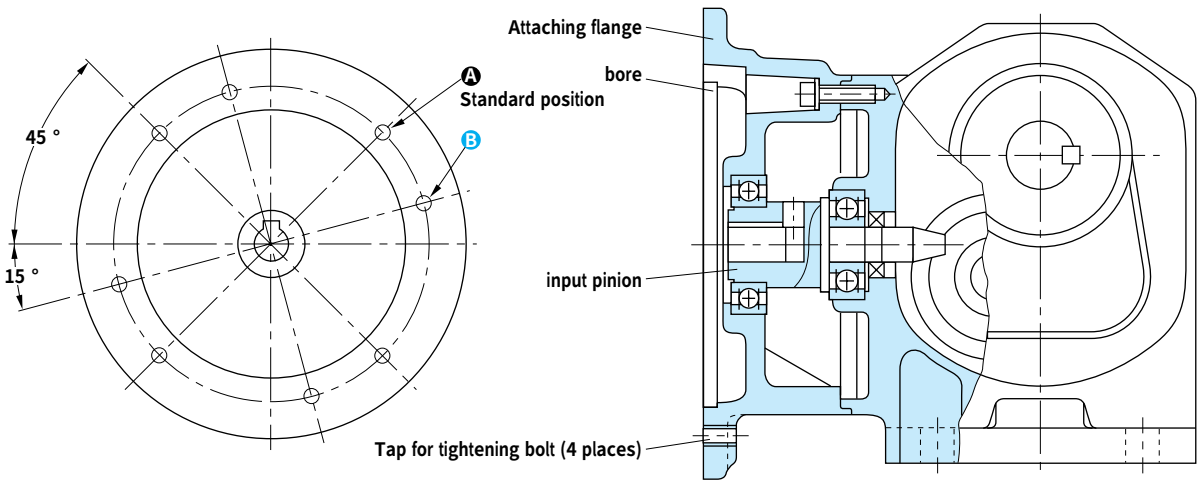
1. Confirm if the key is precisely set in the input pinion. (equiv. 4P motor capacity: 0.1•0.2kW)
2. Fit the key position to the flat part of the motor shaft or key groove and insert it.
3. Confirm if the bore of the motor perfectly fit in, and then tighten with 4 bolts.

Note) Be sure to read the cautions on page E77.

### 4 Detailed dimension of input pinion key groove




| Equiv. capacity 4P motor | W | | T | |
|---|---|---|---|---|
| | Standard Dimension | Dimension Tolerance | Standard Dimension | Dimension Tolerance |
| 0.1kW | 5 | +0.05 +0.01 | 13 | +0.1 0 |
| 0.2kW | 5 | +0.05 +0.01 | 13 | +0.1 0 |
| 0.4kW | 5 | +0.05 +0.01 | 16 | +0.2 0 |
| 0.75kW | 6 | +0.05 +0.01 | 21.5 | +0.2 0 |
| 1.5kW | 8 | +0.05 +0.01 | 27 | +0.2 0 |
| 2.2kW | 8 | +0.05 +0.01 | 31 | +0.2 0 |




Note) The position of the tap for tightening bolt is Ⓑ in case of the model with the equivalent capacity of 0.4kW, flame number 40•50. For cautions when installing motor to the S-Type Reducer, refer to page E77.

## Information about Explosion-Proof Gearmotors

Gearmotor with the combination of S-Type Reducer and Special Motor is available in our production line.

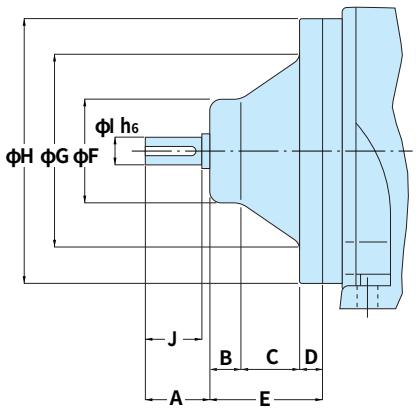
- ● Increased safety explosion-proof type
- ● Pressure & explosion-proof type
- ● Pressure & explosion-proof type with brake

For more details, refer to page E94.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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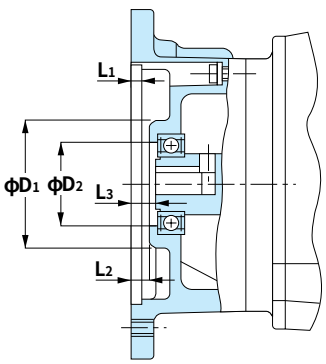
# Detailed Dimension Diagram of Input/Output Shaft

## G3 Double Shaft Type




| Motor Capacity Designation \ Dimension | A | B | C | D | E | F | G | H | I | J | キー |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 010 | 28 | 13.5 | 25.5 | 10 | 49 | 45 | 80 | 115 | 12 | 25 | 4×4×22 |
| 020 | 28 | 13.5 | 25.5 | 10 | 49 | 45 | 80 | 115 | 12 | 25 | 4×4×22 |
| 040 | 32 | 13.5 | 27.5 | 12.5 | 53.5 | 52 | 92 | 128 | 15 | 30 | 5×5×27 |
| 075 | 37 | 17 | 28.5 | 11 | 56.5 | 64 | 108 | 142 | 20 | 35 | 6×6×32 |
| 150 | 42 | 21 | 42.5 | 11 | 74.5 | 74 | 129 | 165 | 25 | 40 | 8×7×35 |
| 220 | 48 | 26 | 41.5 | 13 | 80.5 | 90 | 130 | 165 | 30 | 45 | 8×7×40 |

## G3 S-Type Reducer

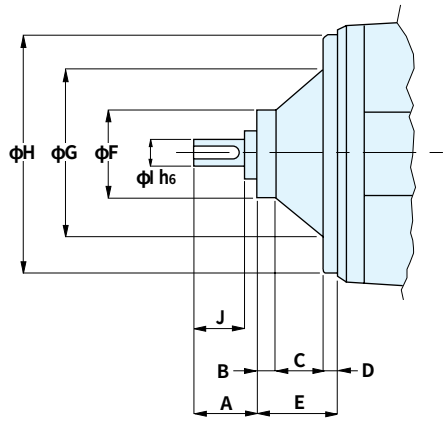



| Motor Capacity Designation \ Dimension | $L_1$ | $L_2$ | $L_3$ | $D_1$ | $D_2$ |
|---|---|---|---|---|---|
| 010 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 020 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 040 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 075 | 4.5 | 5.5 | 10 | 67 | 47 |
| 150 | 4.5 | 6.5 | 12.5 | 88 | 62 |
| 220 | 5 | 7 | 13 | 96 | 70 |

Note) Each dimension indicated shows standard value. It is recommended to have enough allowance especially for the $L^2$, $D^1$ and $D^2$ parts for their rough surfaces.

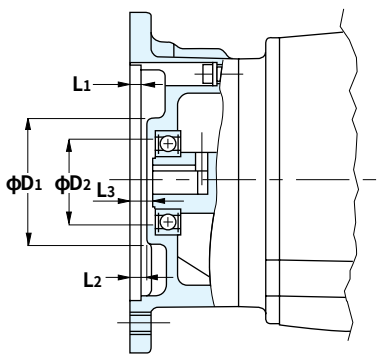
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
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Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# H2 Double Shaft Type




| Dimension / Motor Capacity Designation | A | B | C | D | E | F | G | H | I | J | キー |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 020 Frame No. 22～28 | 28 | 10 | 22 | 8 | 40 | 43 | 80 | 114.5 | 12 | 25 | 4×4×22 |
| 020 Frame No. 32～40 | 28 | 13.5 | 25.5 | 10 | 49 | 45 | 80 | 115 | 12 | 25 | 4×4×22 |
| 040 | 32 | 10 | 26.5 | 10 | 46.5 | 48 | 92 | 127 | 15 | 30 | 5×5×27 |
| 075 | 37 | 17 | 25.5 | 10 | 52.5 | 62 | 105 | 142 | 20 | 35 | 6×6×32 |
| 150 | 42 | 21 | 42.5 | 11 | 74.5 | 74 | 129 | 165 | 25 | 40 | 8×7×35 |
| 220 | 48 | 26 | 41.5 | 13 | 80.5 | 90 | 130 | 165 | 30 | 45 | 8×7×40 |

# H2 S-Type Reducer




| Dimension / Motor Capacity Designation | L1 | L2 | L3 | D1 | D2 |
|---|---|---|---|---|---|
| 010 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 020 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 040 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 075 | 4.5 | 5.5 | 10 | 67 | 47 |
| 150 | 4.5 | 6.5 | 12.5 | 88 | 62 |
| 220 | 5 | 7 | 13 | 96 | 70 |

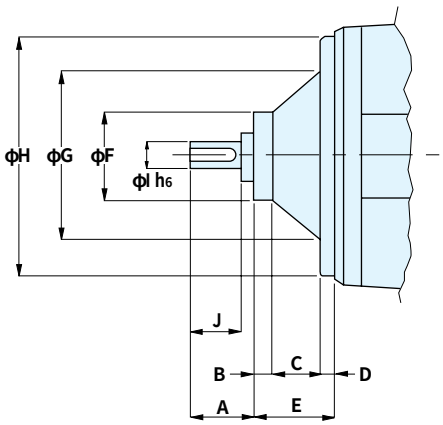
Note) Each dimension indicated shows standard value. It is recommended to have enough allowance especially for the $L^2$, $D^1$ and $D^2$ parts for their rough surfaces.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Detailed Dimension Diagram of Input Shaft

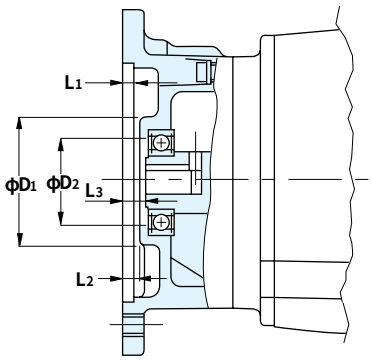


## F/F2 Double Shaft Type




| Dimension / Motor Capacity Designation | A | B | C | D | E | F | G | H | I | J | key |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 010 | 28 | 10 | 22 | 8 | 40 | 43 | 80 | 114.5 | 12 | 25 | 4×4×22 |
| 020 | 28 | 10 | 22 | 8 | 40 | 43 | 80 | 114.5 | 12 | 25 | 4×4×22 |
| 040 | 32 | 10 | 26.5 | 10 | 46.5 | 48 | 92 | 127 | 15 | 30 | 5×5×27 |
| 075 | 37 | 17 | 25.5 | 10 | 52.5 | 62 | 105 | 142 | 20 | 35 | 6×6×32 |
| 150 | 42 | 21 | 42.5 | 11 | 74.5 | 74 | 129 | 165 | 25 | 40 | 8×7×35 |
| 220 | 48 | 26 | 41.5 | 13 | 80.5 | 90 | 130 | 165 | 30 | 45 | 8×7×40 |

## F/F2 S-Type Reducer

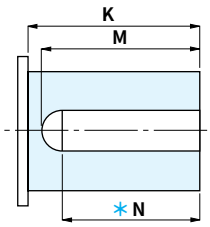


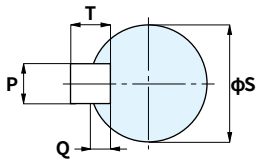

| Dimension / Motor Capacity Designation | L1 | L2 | L3 | D1 | D2 |
|---|---|---|---|---|---|
| 010 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 020 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 040 | 4.5 | 5.5 | 8.5 | 59 | 39 |
| 075 | 4.5 | 5.5 | 10 | 67 | 47 |
| 150 | 4.5 | 6.5 | 12.5 | 88 | 62 |
| 220 | 5 | 7 | 13 | 96 | 70 |

Note) Each dimension indicated shows standard value. It is recommended to have enough allowance especially for the $L^2$, $D^1$ and $D^2$ parts for their rough surfaces.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

# Detailed Dimension Diagram of out put shaft for common




- G3 Series
- H2 Series
- F Series FF Type (Solid Shaft)
- F2 Series F2F Type (Concentric Solid Shaft)

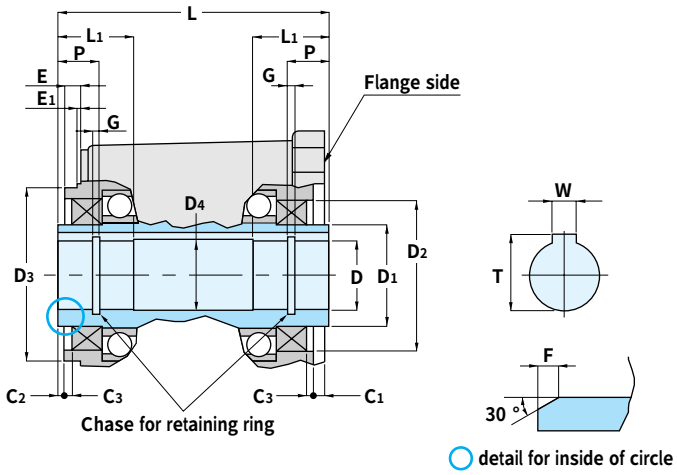
| Dimension / Frame Number | K | M | N | S ($h_6$) | | Key P ($h_9$) | | Key T | | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 30 | 27 | 24 | 18 | 0 −0.011 | 6 | 0 −0.030 | 6 | 0 −0.030 | 3.5 |
| 22 | 40 | 35 | 32 | 22 | 0 −0.013 | | | | | |
| 28 | 45 | 40 | 36 | 28 | | 8 | 0 −0.036 | 7 | 0 −0.090 | 4 |
| 32 | 55 | 50 | 45 | 32 | 0 −0.016 | 10 | | 8 | | 5 |
| 40 | 65 | 60 | 54 | 40 | | 12 | 0 −0.043 | | | |
| 50 | 75 | 70 | 63 | 50 | | 14 | | 9 | | 5.5 |

∗distance N is the key length for water-resistance type.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

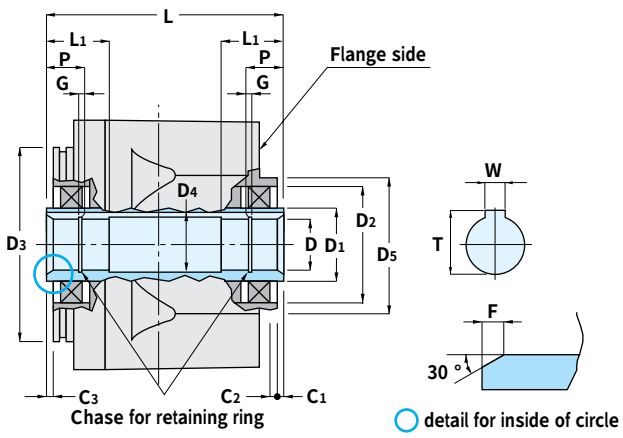
# Detailed Dimension of Hollow Shaft

## FS Type




| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | ϕ20 | ϕ29 | ϕ 46 | ϕ 53 | ϕ21 | 6 | 22.8 | 91 | 24 | 13 | 1 | 2 | 3 | 8 | 0 | 2 | 1.15 |
| 25 | ϕ25 | ϕ39 | ϕ 58 | ϕ 66 | ϕ26 | 8 | 28.3 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.35 |
| 30 | ϕ30 | ϕ44 | ϕ 65 | ϕ 75 | ϕ31 | 8 | 33.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ 72 | ϕ 85 | ϕ36 | 10 | 38.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ 85 | ϕ100 | ϕ46 | 14 | 48.8 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | ϕ55 | ϕ79 | ϕ100 | ϕ120 | ϕ56 | 16 | 59.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

## F2S Type



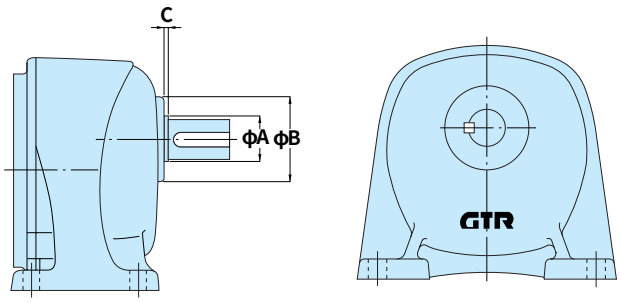

| Frame Number | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | ϕ20 | ϕ29 | ϕ46 | ϕ 75 | ϕ21 | ϕ 53 | 6 | 22.8 | 91 | 24 | 13 | 2 | 3 | 2 | 2 | 1.15 |
| 25 | ϕ25 | ϕ39 | ϕ58 | ϕ 75 | ϕ26 | ϕ 66 | 8 | 28.3 | 108 | 27 | 14 | 7 | 3 | 2 | 2 | 1.35 |
| 30 | ϕ30 | ϕ44 | ϕ65 | ϕ 75 | ϕ31 | ϕ 75 | 8 | 33.3 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.35 |
| 35 | ϕ35 | ϕ49 | ϕ72 | ϕ100 | ϕ36 | ϕ 85 | 10 | 38.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.75 |
| 45 | ϕ45 | ϕ64 | ϕ85 | ϕ100 | ϕ46 | ϕ100 | 14 | 48.8 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.95 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
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S-Type Reducer
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Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
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S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

# Dimensions around Output Shaft

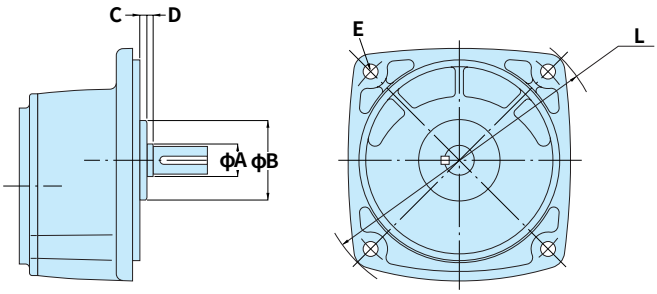
## G3 Series

### G3L (Foot Mount)



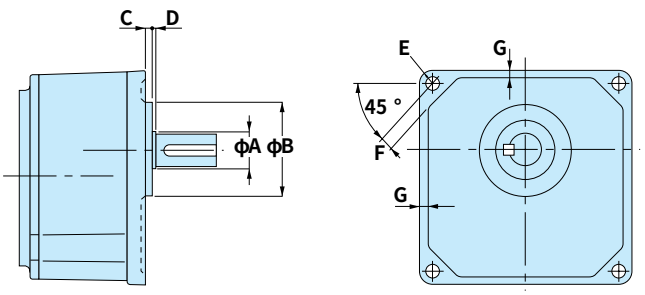

| Frame Number \ Dimension | A | B | C |
|---|---|---|---|
| 18 | 20 | 43 | 2 |
| 22 | 24 | 50 | 2 |
| 28 | 30 | 60 | 2 |
| 32 | 34 | 68 | 3 |
| 40 | 42 | 90 | 3 |
| 50 | 53 | 105 | 3 |

### G3F (Flange Mounted)




| Frame Number \ Dimension | A | B | C | D | E | L |
|---|---|---|---|---|---|---|
| 18 | 20 | 50 | 0 | 2 | 14 | ϕ198 |
| 22 | 24 | 60 | +1 | 2 | 12.5 | ϕ214 |
| 28 | 30 | 80 | −1 | 2 | 12.5 | ϕ214 |
| 32 | 34 | 88 | −2 | 3 | 15 | ϕ282 |
| 40 | 42 | 100 | −2 | 3 | 19 | ϕ350 |
| 50 | 53 | 120 | 0 | 3 | 20 | ϕ412 |

### G3K (Small Flange Mounted)

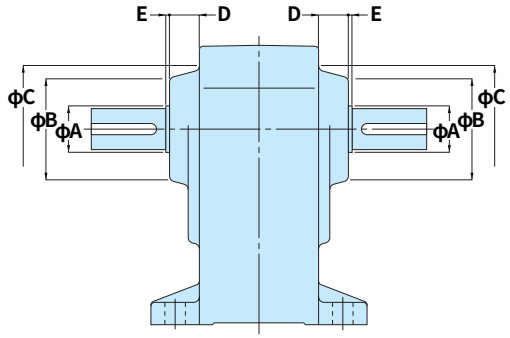



| Frame Number \ Dimension | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 18 | 20 | 50h7 | 4 | 2 | 9 | 9 | 5 |
| 22 | 24 | 60h7 | 5 | 2 | 9 | 9 | 5 |
| 28 | 30 | 80h7 | 5 | 2 | 11 | 11 | 7 |
| 32 | 34 | 88h7 | 5 | 3 | 13 | 13 | 8 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
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Reduce (Double Shaft)
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Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
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KOMPASS Gearbox

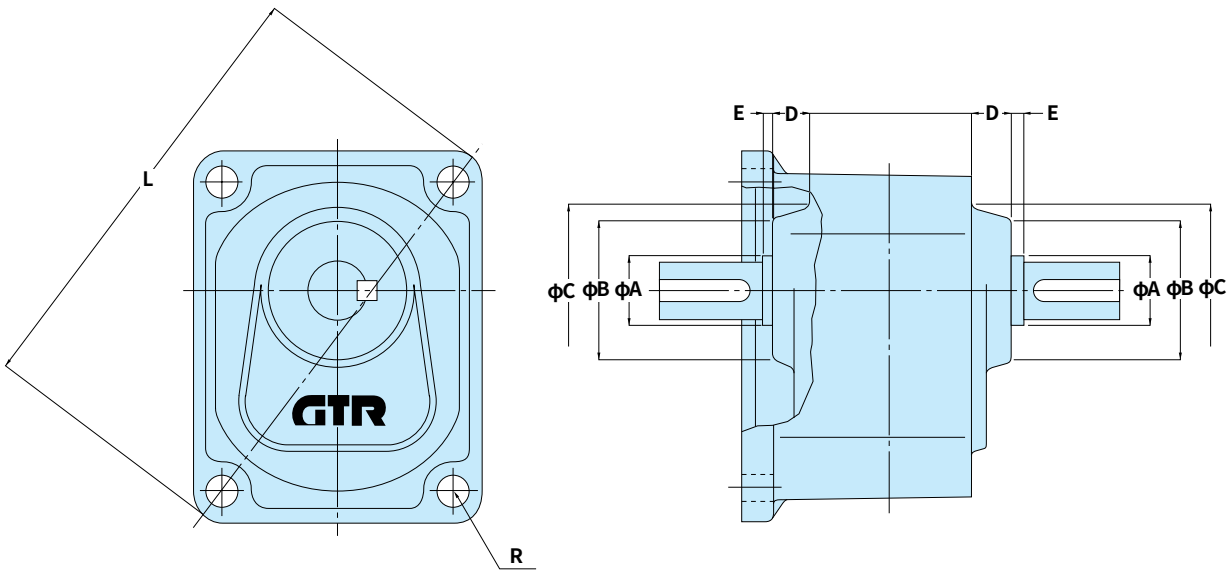
# H2 Series

## H2L (Foot Mount)




| Dimension / Frame Number | A | B | C | D | E |
|---|---|---|---|---|---|
| 22 | 25 | 55 | 63.5 | 16 | 2 |
| 28 | 30 | 67 | 76 | 16 | 2 |
| 32 | 35 | 78 | 88 | 17 | 3 |
| 40 | 45 | 92 | 104 | 21 | 2 |
| 50 | 55 | 110 | 122 | 22 | 3 |

## H2F (Flange Mounted)




| Dimension / Frame Number | A | B | C | D | E | R | L |
|---|---|---|---|---|---|---|---|
| 22 | 25 | 55 | 63.5 | 16 | 2 | 12 | 174 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
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Water-Resistant, Outdoor Gearmotor with Brake
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# FS·F2S Type
# Attachment and Detachment of Hollow Shaft



## Attachment of Hollow Shaft and Driven Shaft of Reducer

1. Apply anti-seizing agent proper for the using circumstance such as molybdenum disulfide, on the surface of the driven shaft and the bore of the hollow shaft, and then insert the reducer in the driven shaft.
2. In case impact does not affect in the uniform load, "$h_7$" tolerance is recommended for the driven shaft. In case shock load is imposed or great radial load is observed, tighten the fittings. "$H_2$" tolerance is recommended for the bore of the hollow shaft.
3. If the fitting is too tight, tap the edge of the hollow drive shaft with the plastic hummer and fit together. In this case, never hit the casing. Smoother insert can be obtained if you prepare jigs shown in the figure below:

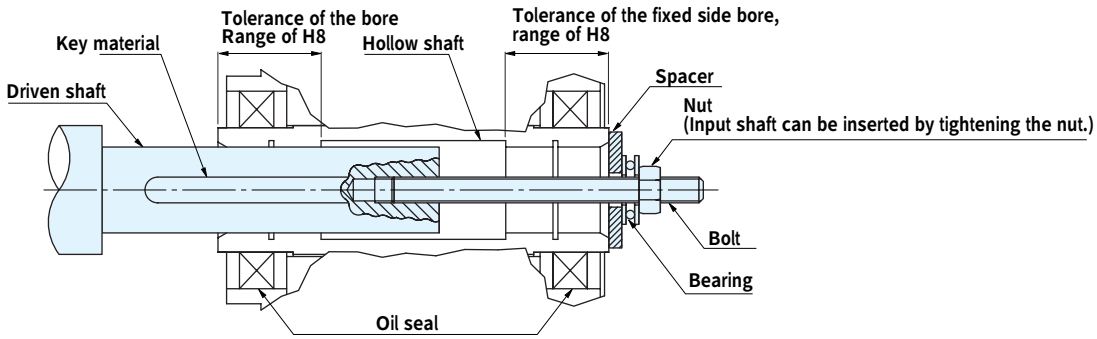



**Figure-1**
Spacer, nuts, bolts, key materials and bearing parts should be prepared by customer.

4. The length of the driven shaft and the fixing key are recommended to be within the tolerance of $H_8$ range of the fixed side bore. (The dimension of the bore $H_8$ tolerance part can be seen as L1 in the "Detailed figure of the Hollow Shaft" on page E53.)
5. It is recommended to supress the fluctuation at the edge of the driven shaft below 0.05. The greater fluctuation at operation may give harmful effect to the reducer.

## Connecting Reducer with Driven Shaft

1. Driven shaft with shoulder

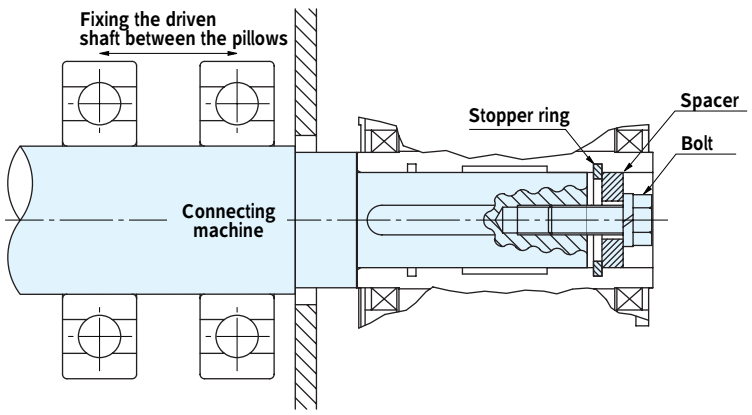



**Figure-2 Fixing by spacer and stopper ring**
(The spacer, bolt and retaining ring parts should be prepared by customer.)

Note) Excessive tightening of the bolt may cause deformation of the retaining ring, which carefully note.

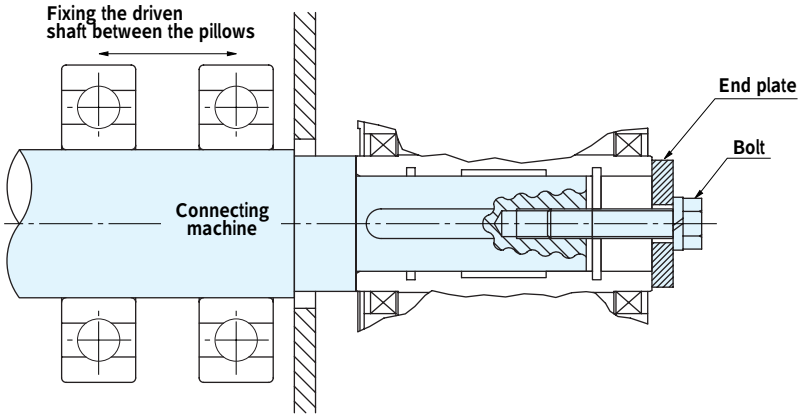



**Figure-3 Fixing by End plate**
(End plate, bolt parts should be prepared by customer.)

Note) The resin cover which is the attachment of F-Series, cannot be attached, which please note. Safety measure such as preparing the protective cover, should be given by customer in order to avoid wind-in at the output shaft.

### ❷ Driven shaft without shoulder

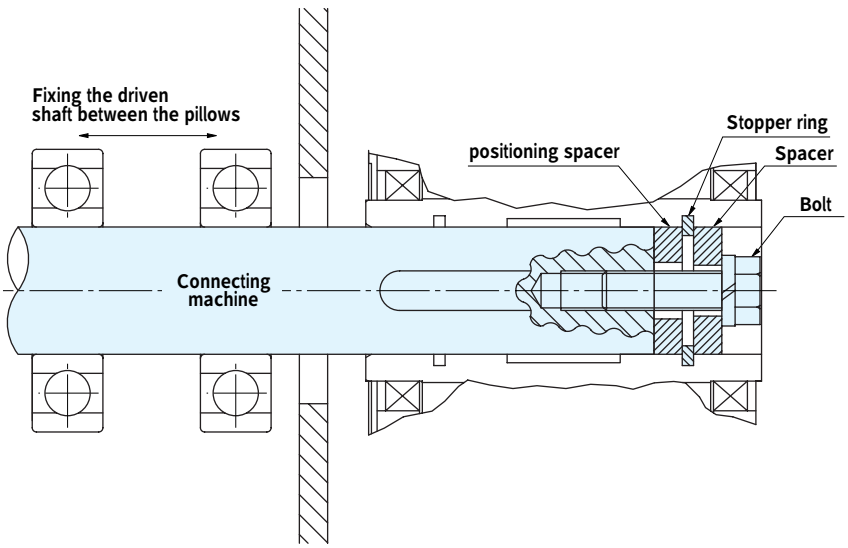



**Figure-4 Fixing by spacer and stopper ring**
(Spacer, positioning spacer, bolt and stopper ring parts should be prepared by customer.)

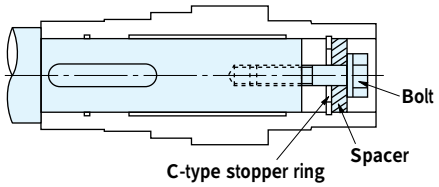
Note) Be sure to have space between the outer diameter of the spacer and the inner diameter of the hollow shaft. Excessive tightness of the fitting or inaccuracy of the spacer1s diameter may cause greater fluctuation on the driven and hollow shafts. Positioning spacer is used when deciding the position of the reducer. In case the length of the driven shaft is clarified preliminarily, positioning spacer is not necessary. By having positioning spacer, smooth detachment from the hollow shaft can be obtained. (For the details of detachment from the hollow shaft, refer to Figure-5 on page E58.)

# FS•F2S Type
# Attachment and Detachment of Hollow Shaft



## Recommended size for the driven shaft fixing part.

For the attachment of the hollow shaft in general use, we recommend you to refer to the dimensions shown on the right as a guideline for the strength when designing.

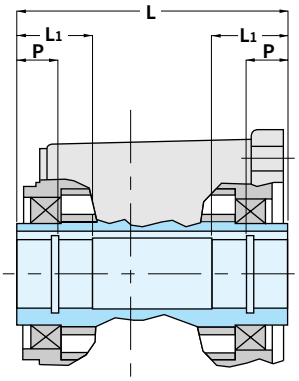



**<Recommended sizes for the driven shaft fixing parts>**

| | Bolt size | Spacer measurements | | | Nominal designation for C-type stopper ring |
|---|---|---|---|---|---|
| | | Outer diameter | Inner diameter | Width | |
| FS -20<br>F2S-20 | M6 | φ19.5 | φ7 | 3 | 20 |
| FS -25<br>F2S-25 | M6 | φ24.5 | φ7 | 4 | 25 |
| FS -30<br>F2S-30 | M8 | φ29.5 | φ9 | 5 | 30 |
| FS -35<br>F2S-35 | M10 | φ34.5 | φ11 | 5 | 35 |
| FS -45<br>F2S-45 | M10 | φ44.5 | φ11 | 5 | 45 |
| FS -55 | M12 | φ54.5 | φ13 | 6 | 55 |

## About the length of driven shaft

The driven shaft must be reached to the both side of the $L_1$ part. (As shown on the right figure) However, be sure to have an allowance for the spacer's dimension necessary at the "detachment from the hollow shaft".




## About the length of key for the driven shaft

The length of the key should be more than 1.5 times of the diameter of hollow shaft. Also, the key inserting position should be the place where more than 1/2 of the total key length can be reached to $L_1$. (Refer to the figure on the right)

## Detaching from the Hollow Shaft

Make sure to avoid excessive force between the casing and the hollow shaft. Smoother detachment can be obtained by using a jig as shown in the figure below:

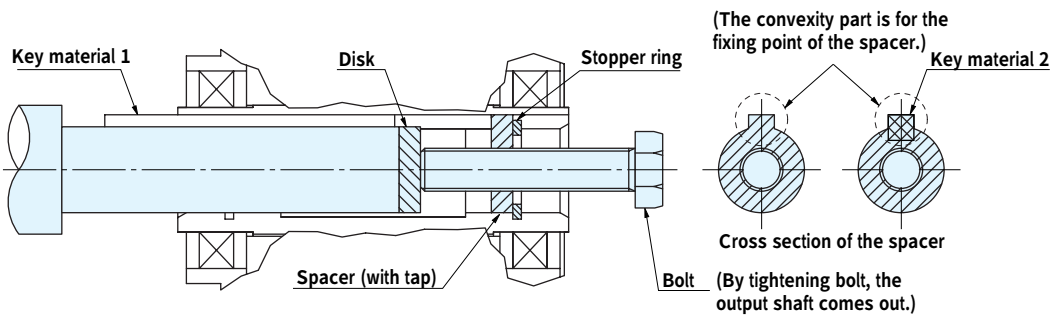



**Figure-5**

(Parts such as spacer, disk, bolt, stopper ring, etc. should be prepared by customer.)

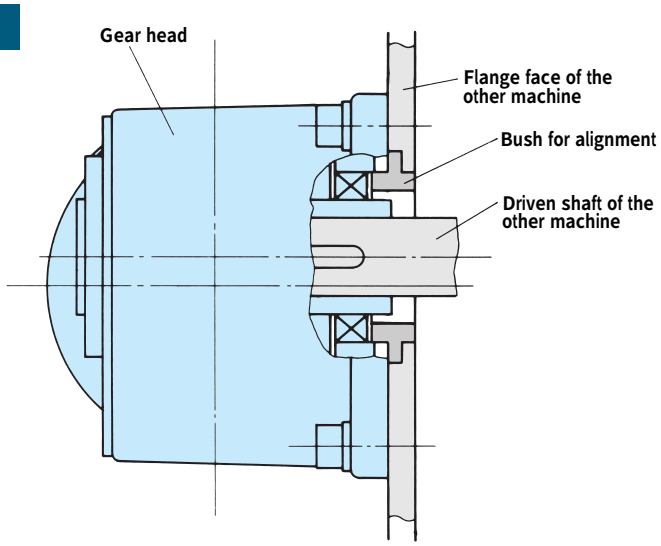
## Attaching Reducer

**Merits and demerits of flange mounted and torque arm mounted.**

| | Merits | Demerits |
|---|---|---|
| Flange Mounted | •Direct attachment to the machine is possible.<br>•Space saving | •Alignment with the connecting machine is needed.<br>•Four(4) attaching taps are needed for connecting with other machine. |
| Torque Arm Mounted | •Easy alignment with the connecting machine<br>•Only one fixing point is needed for fixing with other machine | •Torque arm is needed.<br>•Space for attaching torque arm is needed. |

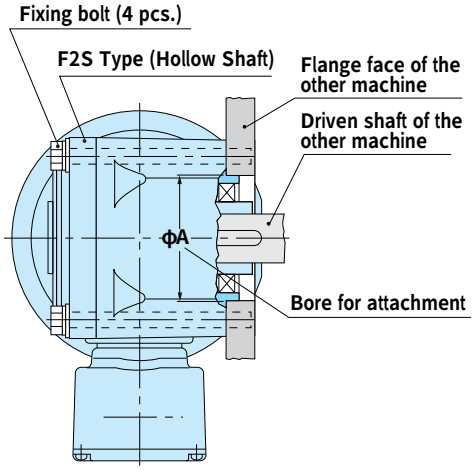
## FS Type Hollow Shaft•Flange Mounted

When the FS Type unit is directly coupled with the flange face of the other machine, the alignment should be done precisely to avoid motor burn, damage to the bearings, etc. caused by misalignment. Easy alignment can be obtained by using the alignment bush as shown in the diagram on the right. (The alignment bush should be parepared by customer.)




## F2S Type Hollow Shaft•Flange Mounted

When the F2S Type unit is directly coupled with the flange face of the other machine, the alignment should be done precisely to avoid burnout of motor, damage to the bearings, etc. caused by misalignment. In the F2 Series, there is a bore for the attachment as shown in the diagram on the right. The dimension tolerance of the bore for the attachment ϕA is "$h_8$".
The fixing bolts are to be used as shown in the diagram on the right. Fix by 4 bolts.




Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
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Gearmotor with Brake
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# FS・F2S-Type Torque Arm

## Fixing a Reducer and a Torque Arm

1. Torque arms are subjected to rotation reaction torque, therefore, they must be strong by using materials of enough thickness and bolts to endure the shock load on starting/braking. Choosing our optional torque arms is the most appropriate solution. (Refer to page E61.)
2. When installing a reducer with a torque arm, be sure to tighten the bolt using helical spring lock washers and plain washers. For proper tightening torque, refer to the table shown on the right.

**Bolt Size and Respective Tightening Torque**

| Bolt Size | Tightening Torque N・m{kgf・m} |
|---|---|
| M5 | 2.9{ 0.3} |
| M6 | 4.9{ 0.5} |
| M8 | 13 { 1.3} |
| M10 | 25 { 2.6} |
| M12 | 44 { 4.5} |
| M14 | 69 { 7.0} |
| M16 | 108 {11 } |
| M20 | 294 {30 } |

## How to fix the Torque Arm Fixing Part

1. In case of Normal/Reverse Operation

Firmly fix the fixing part of the torque arm. Make sure that there is no radial load (suspending load) imposed between the driven shaft and the hollow shaft of the reducer, caused by poor alignment between the hole of fixing part and the connecting machine. (Refer to the Figure-6)

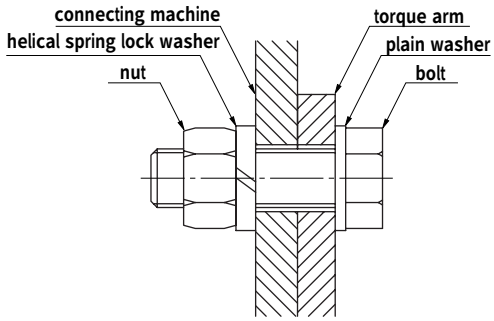
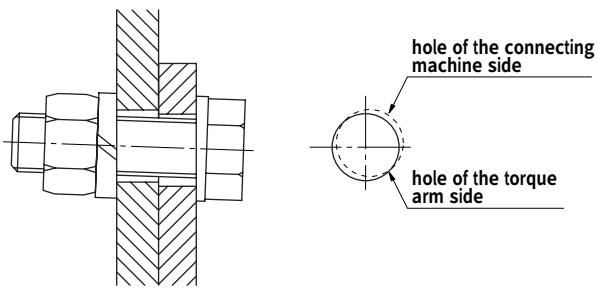



**Figure-6 Attaching the fixing part**



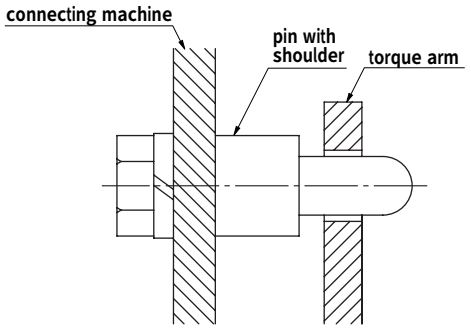

Excess force arisen in the driven shaft and the hollow shaft may cause failure of the machine.

**Bad example**

Note) When a backlash in the attaching part arose by normal/reverse operations or by high frequency of starting/stopping, the intense impact given to the torque arm in each starting may cause the failures such as loosening of the tightening bolt.

2. In case of One-Direction Operation

If the frequent staring torque like in the normal/reverse operation, is not observed, operation with the released fixing part of torque arm is possible. However, it is necessary to fix the driven shaft and the hollow shaft. (Refer to page E56~E-57, Figure -2~Figure-4)
In this case, be sure to secure enough space both for radial direction and for thrust direction in the alignment between the connecting machine and the fixing part.



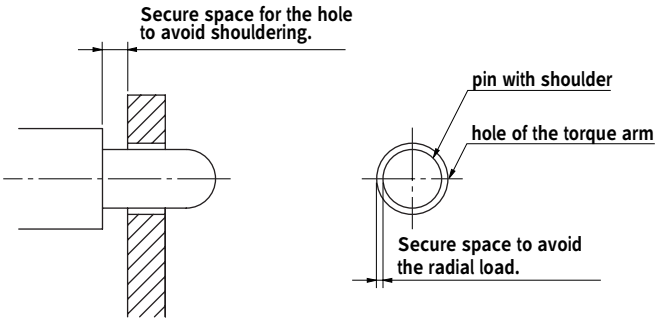




**Figure-7 Example of using pin with shoulder**

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
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Right Angle Shaft (Performance Table/Dimension)
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## FS Type (Hollow Shaft)•Torque Arm (Option)

**Figure No. 1**

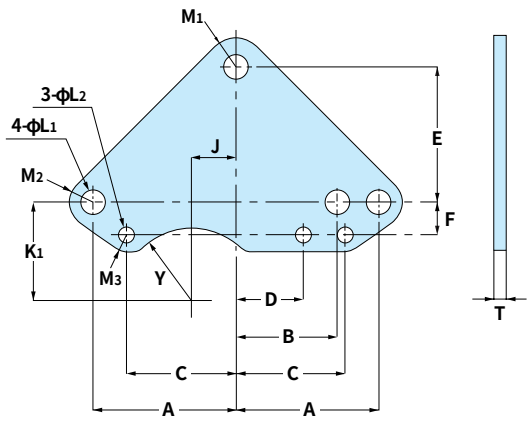
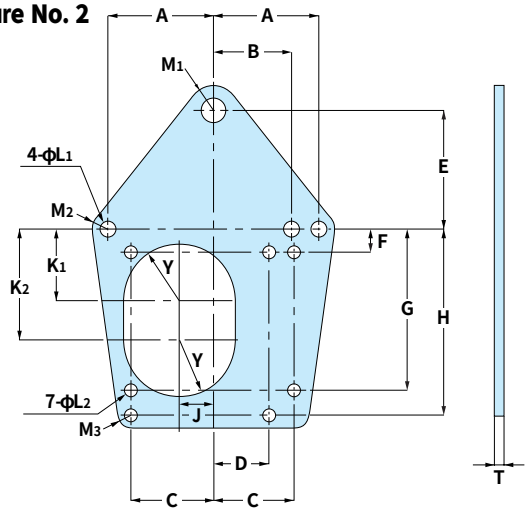
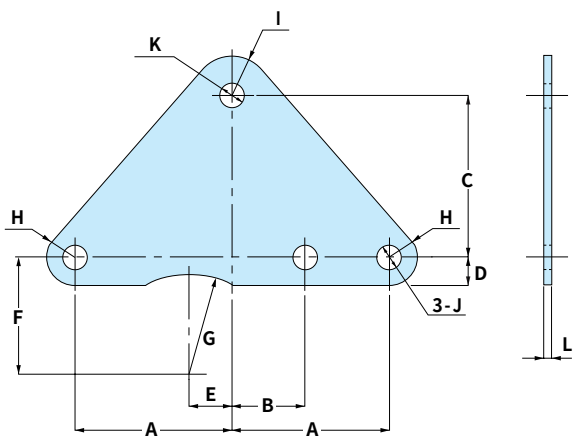



**Figure No. 2**




| Model Number | Frame Number | Figure No. | A | B | C | D | E | F | G | H | J | K1 | K2 | L1 | L2 | M1 | M2 | M3 | Y | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TA-20 | 20 | 1 | 55 | 39 | 42 | 26 | 52 | 13 | — | — | 17 | 38 | — | φ9 | φ5.5 | R11 | R 9 | R 6 | R28 | 4.5 |
| TA-25 | 25 | 1 | 63 | 47 | 47 | 31 | 61 | 16 | — | — | 19 | 44 | — | φ11 | φ6.5 | R15 | R10.5 | R 7 | R34 | 4.5 |
| TA-30 | 30 | 1 | 70 | 52 | 53 | 35 | 70 | 17 | — | — | 20 | 50 | — | φ11 | φ9 | R15 | R12 | R 9 | R39 | 6 |
| TA-35 | 35 | 2 | 82 | 62 | 64 | 44 | 94 | 18 | 126 | 146 | 26 | 56 | 88 | φ13 | φ9 | R18 | R12 | R10 | R43.5 | 6 |
| TA-45 | 45 | 2 | 102 | 72 | 80 | 50 | 110 | 22 | 152 | 182 | 32 | 70 | 104 | φ15 | φ11 | R20 | R15 | R11 | R51 | 9 |
| TA-55 | 55 | 2 | 129 | 93 | 97 | 61 | 160 | 32 | 190 | 226 | 39 | 90 | 132 | φ18 | φ13 | R25 | R20 | R13 | R70 | 9 |

## F2S Type (Hollow Shaft)•Torque Arm (Option)




| Model Number | Frame Number | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TAF2S-20 | 20 | 53.5 | 23.5 | 52 | 9 | — | — | — | R 9 | R11 | φ 9 | φ 9 | 3.2 |
| TAF2S-25 | 25 | 60 | 27 | 61 | 10.5 | 16.5 | 43.5 | R37 | R10.5 | R15 | φ 9 | φ 9 | 3.2 |
| TAF2S-30 | 30 | 69.5 | 26.5 | 70 | 12 | 21.5 | 48 | R41.5 | R12 | R15 | φ 9 | φ11 | 4.5 |
| TAF2S-35 | 35 | 80.5 | 31.5 | 94 | 12 | 24.5 | 56 | R46.5 | R12 | R18 | φ11 | φ13.5 | 6 |
| TAF2S-45 | 45 | 103.5 | 42.5 | 110 | 15 | — | — | — | R15 | R20 | φ13.5 | φ17.5 | 9 |

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# FS・F2S-Type Torque Arm

## Overhung Load (O.H.L.) on a Hollow Shaft

### Designing the Torque Arm

In case customer does not use our optional torque arm and use their manufactured torque arm as shown in the Figure-8, the distance between the center of the output shaft and the fixing point(r) can be calculated with the following formulas:

**SI Unit**

$$r\,(mm) \geqq \frac{\text{Actual load torque}\,(N\cdot m)\times 1000}{\text{Allowable O.H.L.}\,(N) - 9.8\times\text{Mass of the reducer}\,(kg)}$$

**Gravimetric Unit**

$$r\,(mm) \geqq \frac{\text{Actual load torque}\,(kgf\cdot m)\times 1000}{\text{Allowable O.H.L.}\,(kgf) - \text{Weight of the reducer}\,(kgf)}$$

In case of using the torque arm as shown in the Figure-9, the distance between the center of the output shaft and the fixing point(r) can be calculated with the following formulas:

**SI Unit**

$$r\,(mm) \geqq \frac{\text{Actual load torque}\,(N\cdot m)\times (A+M)\times 1000}{\{\text{Allowable O.H.L.}\,(N) - 9.8\times\text{Mass of the reducer}\,(kg)\}\times (A+20)}$$

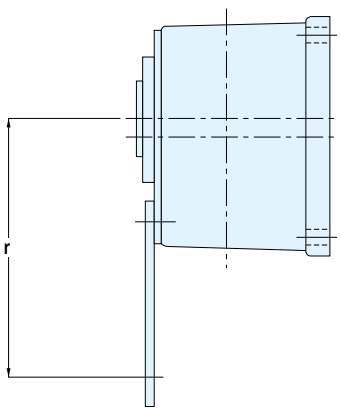
**Gravimetric Unit**

$$r\,(mm) \geqq \frac{\text{Actual load torque}\,(kgf\cdot m)\times (A+M)\times 1000}{\{\text{Allowable O.H.L.}\,(kgf) - \text{Weight of the reducer}\,(kgf)\}\times (A+20)}$$

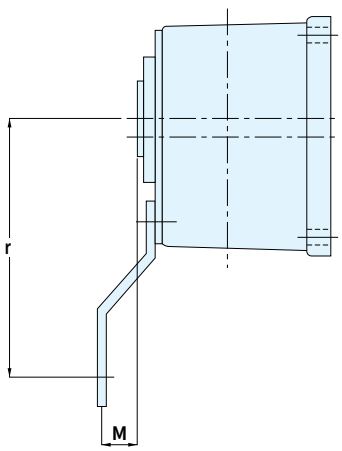
Note) Refer to the table below for "A".

| Ratio | A (mm) |
|---|---|
| 20 | 68.5 |
| 25 | 84.5 |
| 30 | 91 |
| 35 | 98 |
| 45 | 113 |
| 55 | 150 |

〈Figure-8〉




〈Figure-9〉



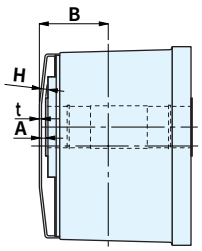

Note) For the thickness of torque arm, refer to the "Torque Arm(Option)" in page E61.

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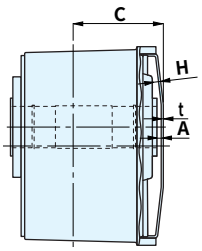
# Detailed Dimension of Hollow Shaft Safety Cover



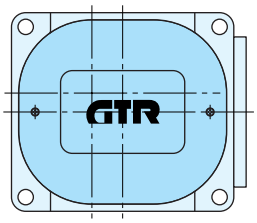
## FS Type




When attaching to the R-face

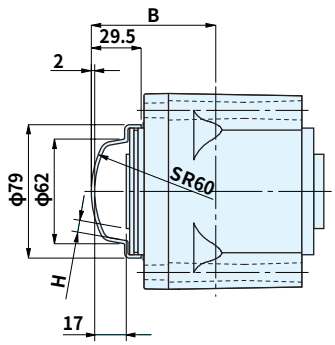



When attaching to the L-face

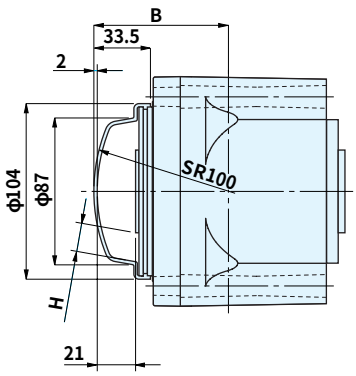



| Ratio | A<br>Space between shaft and cover | B<br>When attaching to the R-face | C<br>When attaching to the L-face | H | t |
|---|---|---|---|---|---|
| 20 | 1.2 | 42 | 55 | 1.03 | 1.8 |
| 25 | 1.2 | 51 | 63 | 0.61 | 1.8 |
| 30 | 1.2 | 54 | 69 | 0.74 | 1.8 |
| 35 | 1.2 | 56 | 74 | 0.54 | 1.8 |
| 45 | 1.2 | 62 | 84 | 0.39 | 1.8 |
| 55 | 3.0 | 87 | 104 | 2.07 | 2.0 |

## F2S Type




〈Figure-10〉




〈Figure-11〉

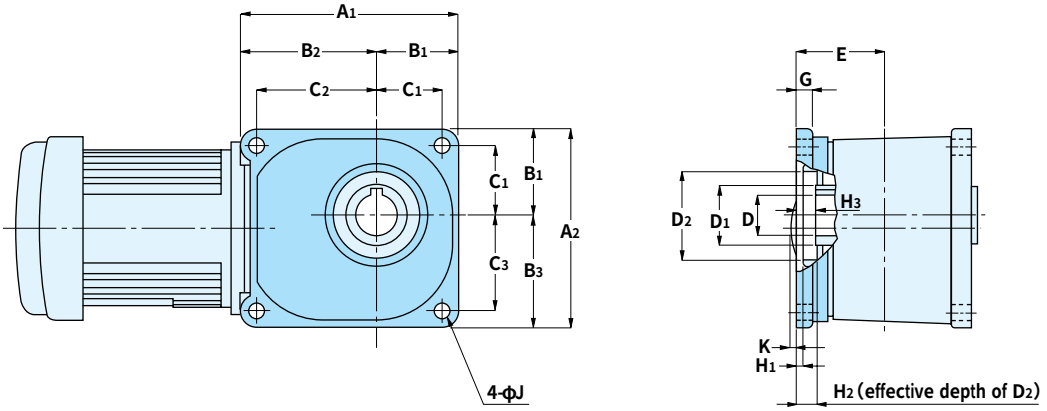
| Ratio | B | H | Figures to be referred |
|---|---|---|---|
| 20 | 63 | 14.3 | Figure-10 |
| 25 | 68 | 9.3 | |
| 30 | 73 | 6.9 | |
| 35 | 79 | 16.7 | Figure-11 |
| 45 | 92 | 9.3 | |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Attaching R-Flange

## FS Type(Hollow Shaft)•R-Flange(Option)

### Dimension Diagram for attaching the R-Flange




| Model Number | Frame Number | A1 | A2 | B1 | B2 | B3 | C1 | C2 | C3 | E | G | H1 | H2 | H3 | D2 (H8) | Output Shaft D1 | Output Shaft D (H8) | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RF-20 | 20 | 128 | 112 | 47 | 81 | 65 | 38 | 72 | 56 | 51 | 10 | 1 | 13 | 12 | ϕ46 | ϕ29 | ϕ20 | ϕ 8.5 |
| RF-25 | 25 | 147 | 131 | 54.5 | 92.5 | 76.5 | 44 | 82 | 66 | 59 | 12 | 6 | 12 | 11 | ϕ 58 | ϕ39 | ϕ25 | ϕ11 |
| RF-30 | 30 | 164 | 146 | 62 | 102 | 84 | 50 | 90 | 72 | 65 | 14 | 5 | 15 | 14 | ϕ 65 | ϕ44 | ϕ30 | ϕ11 |
| RF-35 | 35 | 188 | 168 | 68 | 120 | 100 | 56 | 108 | 88 | 70 | 16 | 3 | 18 | 17 | ϕ 72 | ϕ49 | ϕ35 | ϕ13 |
| RF-45 | 45 | 234 | 204 | 85 | 149 | 119 | 70 | 134 | 104 | 80 | 18 | 3 | 22 | 21 | ϕ 85 | ϕ64 | ϕ45 | ϕ15 |
| RF-55 | 55 | 298 | 262 | 110 | 188 | 152 | 90 | 168 | 132 | 98 | 22 | 6 | 17 | 16 | ϕ100 | ϕ79 | ϕ55 | ϕ18 |

### Measurements of the extruded part of Fan Cover when attaching the R-Flange (Measurement of K)

There is no extruded part of Fan Cover in the Frame number 20 and 55.

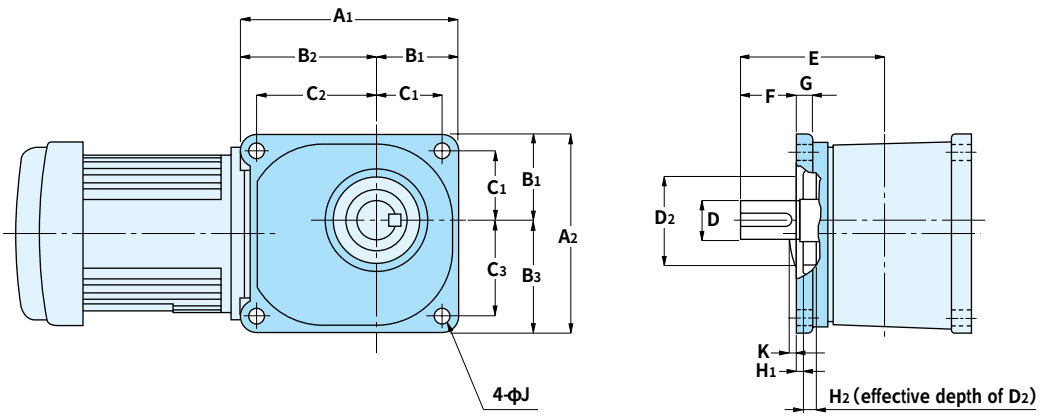
| Capacity | Frame Number | Outdoor Specification | | Water-resistant, Outdoor specification | |
|---|---|---|---|---|---|
| | | with Moter | with Brake | with Moter | with Brake |
| | | Standard | Standard | Standard | Standard |
| 0.1kW | 25 | — | 8.5 | — | — |
| | 30 | — | 2.5 | — | — |
| 0.2kW | 30 | 2.5 | 2.5 | 2.5 | 2.5 |
| 0.4kW | 35 | 0.5 | 0.5 | 0.5 | 0.5 |
| 0.75kW | 45 | 1 | 1 | 1 | 1 |

For use in the single-phase motor, consult us.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# FF Type(Solid Shaft)·R-Flange(Option)

## Dimension Diagram for attaching the R-Flange




| Model Number | Frame Number | $A_1$ | $A_2$ | $B_1$ | $B_2$ | $B_3$ | $C_1$ | $C_2$ | $C_3$ | E | G | $H_1$ | $H_2$ | $D_2$ ($H_8$) | Output Shaft | | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | F | D ($h_6$) | |
| RF-20 | 18 | 128 | 112 | 47 | 81 | 65 | 38 | 72 | 56 | 82 | 10 | 1 | 13 | ϕ46 | 31 | ϕ18 | ϕ 8.5 |
| RF-25 | 22 | 147 | 131 | 54.5 | 92.5 | 76.5 | 44 | 82 | 66 | 95 | 12 | 6 | 12 | ϕ58 | 36 | ϕ22 | ϕ11 |
| RF-30 | 28 | 164 | 146 | 62 | 102 | 84 | 50 | 90 | 72 | 107 | 14 | 5 | 15 | ϕ65 | 42 | ϕ28 | ϕ11 |
| RF-35 | 32 | 188 | 168 | 68 | 120 | 100 | 56 | 108 | 88 | 124 | 16 | 3 | 18 | ϕ72 | 54 | ϕ32 | ϕ13 |
| RF-45 | 40 | 234 | 204 | 85 | 149 | 119 | 70 | 134 | 104 | 144 | 18 | 3 | 22 | ϕ85 | 64 | ϕ40 | ϕ15 |

## Measurements of the extruded part of Fan Cover when attaching the R-Flange (Measurement of K)

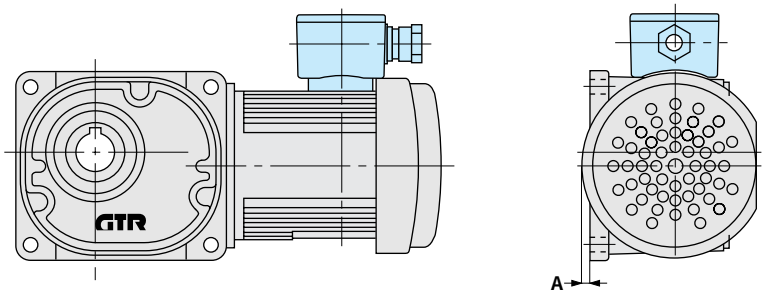
There is no extruded part of Fan Cover in the Frame number 18.

| Capacity | Frame Number | with Moter | with Brake |
|---|---|---|---|
| 0.1kW | 22 | — | 8.5 |
| 0.2kW | 28 | 2.5 | 2.5 |
| 0.4kW | 32 | 0.5 | 0.5 |
| 0.75kW | 40 | 1 | 1 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Dimension of protruded part of Fan Cover when changing the position of Terminal Box

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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Above Figure illustrates the position of terminal box(TZ) on top.

## Measurement of A

| Capacity | No. of Phase | Frame Number | Outdoor Specification | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | with Moter | | | with Brake | | |
| | | | T9 | TZ | T3 | T9 | TZ | T3 |
| 0.1kW | 1-Phase | 25 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 |
| | 3-Phase | 25 | — | — | — | 8.5 | 8.5 | 8.5 |
| | | 30 | — | — | — | 2.5 | 2.5 | 2.5 |
| 0.2kW | 3-Phase | 30 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 0.4kW | 3-Phase | 35 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 0.75kW | 3-Phase | 45 | 1 | 1 | 1 | 1 | 1 | 1 |

There is no extruded part in the models of 1.5kW and 2.2kW.

## Measurement of A

| Capacity | No. of Phase | Frame Number | Water-resistant, Outdoor specification | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | with Moter | | | with Brake | | |
| | | | T9 | TZ | T3 | T9 | TZ | T3 |
| 0.2kW | 3-Phase | 30 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 0.4kW | 3-Phase | 35 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 0.75kW | 3-Phase | 45 | 1 | 1 | 1 | 1 | 1 | 1 |

Model with the capacity of 0.1kW do not have fan cover.
There is no extruded part in the models of 1.5kW and 2.2kW.

The measurements remain the same even after changing the direction of the power supply inlet. (TZH6, TZH3, etc.)

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Standard Motor

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
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## UL Standard Gearmotors

### About UL Standards

UL is the abbreviation of "Underwriters Laboratories Inc.", a private testing organization which was established in 1894 by the Association of American Fire Insurance, with the aim to protect human lives and properties from fire, disasters and other accidents. This organization performs testing and certification of all kinds of products, parts and materials. This is the safety standard employed by most of the American states.

### ■Relevant Standards

| Number of Phase | UL Standard |
|---|---|
| 1-Phase | UL1004 (Regulations on overall structures of motors)<br>UL2111 (Regulations on overheating protection of motors) |
| 3-Phase | UL1004 (Regulations on overall structures of motors) |

＊3-phase motors are only evaluated by structures and not evaluated by the overheating protection test.

### ■UL File No.

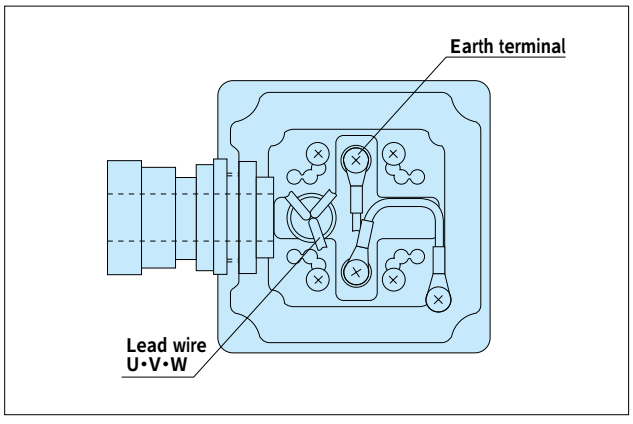
1-Phase No. E141674
3-Phase No. E172621

### ■Differences from the Japanese Standard Models

The gearmotors certified by UL are different from the models certified by the Japanese Standard. Therefore, any manufacturing, modification and repair of motors outside our factories are not permitted.
When no request is given on wiring for power supply, the flying lead will be employed for the motors: 3ph/0.1kW～0.4kW and 1ph/100W.
When optional terminal box is requested, the wiring will be arranged as shown below:

### ●A-Type Terminal Box

3-Phase 0.1kW～0.4kW 1-Phase 100W
(Common to with motor and with brake)




＊The 3-Phase 0.75kW～2.2kW motors are normally provided with terminal box as Japanese Standard models.

### About CSA Standards

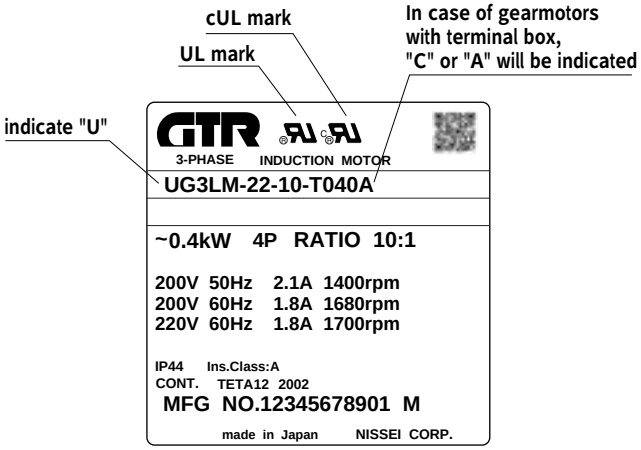
In Canada, it is regulated by law that all products must conform to CSA Standards. UL is authorized as a certification organization for CSA Standards, therefore, when a product is certified by CSA Standards, it can also be allowed to display "cUL" mark and used in the domestic Canadian market.

### ■Relevant Standards

| Number of Phase | CSA Standards |
|---|---|
| 1-Phase | C22. 2 No.100(Regulations on general matters for motors)<br>C22. 2 No.77 (Regulations on requirements for the motors with overheating protection device) |
| 3-Phase | C22 2 No.100(Regulations on general matters for motors) |

Both Nissei's 1 and 3-phase gearmotors are certified by UL and CSA and allowed to display "UL" and "cUL" marks.

### ●Nameplate



## ■UL／Certificated Gearmotors

| Number of phase | Motor capacity | Voltage(V)/Frequency(Hz) | Relevant models/series |
|---|---|---|---|
| 3-Phase | 0.1kW～2.2kW | 200/200/220V, 50/60/60Hz<br>208V/230V, 60Hz<br>220/230/240/240V, 50/50/50/60Hz<br>380/400/400/440V, 50/50/60/60Hz<br>380V, 60Hz<br>415/460V, 50/60Hz<br>420/440/480V, 50/50/60Hz<br>575V, 60Hz | Hollow shaft･Solid shaft GTR-U F Series, F2 Series<br>Right angle shaft GTR-U H2 Series<br>Parallel Shaft GTR-U G3 Series |
| 1-phase | 100W | 100/100V, 50/60Hz<br>115V, 60Hz<br>120V, 60Hz<br>200/200V, 50/60Hz<br>220V, 60Hz<br>230V, 60Hz<br>240V, 60Hz | Hollow shaft･Solid shaft GTR-U F Series, F2 Series<br>Right angle shaft GTR-U H2 Series |

＊The models with motor or brake-motors are available.
＊Gearmotors with brake manual release device (option) are also available.
＊As for the 3-phase, dual voltage motors (Special voltage) are also available.
＊Please ask as for the other voltage spec motors.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Standard Motor



## CE Marking Gearmotors

### About CE Marking

All the machines exported to Europe are required to have "CE Marking". In order to comply with the "CE Marking", products must be in conformity with the EC Directive. For the verification of conformity with the EC Directive, the approval from the EN Standards is a must.
Nissei declares that all the NIssei "CE Marking" products conform to the EC Directive.

### ∗"CE" Marking

Nissei affixes the "CE Marking" on the gearmotors which conform to EC Directive (Low Voltage Directive).

### ■Relevant Directives/Standards

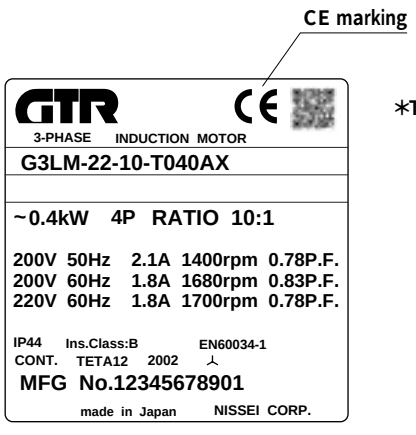
| | |
|---|---|
| EC Directives | Low Voltage Directive 73/23/EEC (Low Voltage Directive) |
| EN Standards | EN60034-1 (Regulations on motors in general) |

●All the gearmotors with "CE Marking" are furnished with terminal box.
Confirm types and specifications of the terminal box in the diagram shown below and instruct us.

| Capacity | Specification | | | Type A-BOX | Type Z-BOX | Type Standard(T-type) | Additional Instruction | Pages to be referred |
|---|---|---|---|---|---|---|---|---|
| 0.1kW～0.4kW | Without Brake | | | ○ | × | × | – | E17 |
| | With Brake | Rectifier built-in | AC Switching B | × | ○ | × | – | E24～E25 |
| | | | DC Switching | × | ○ | × | – | E24～E25 |
| | | | AC Switching A | × | ○ | × | AC Switching A | E24～E25 |
| | | Separated Rectifier | | × | ○ | × | Separated Rectifier | E25 |
| 0.75kW～2.2kW | Without Brake | | | × | × | ○ | – | E17 |
| | With Brake | Rectifier built-in | DC Switching | × | × | ○ | DC Switching | E26 |
| | | | AC Switching A | × | × | ○ | AC Switching A | E26 |
| | | | AC Switching B | × | × | ○ | AC Switching B | E26 |
| | | Separated Rectifier | | × | × | ○ | – | E17 Note 1 |

Note 1) The flying lead in the terminal box is employed.

●Motor Nameplate




∗Terminal Box is also the same spec. as the Japanese Standard Models

## ■CE／Certificated Gearmotors

| Number of phase | Motor capacity | Voltage(V)/Frequency(Hz) | Relevant models/series |
|---|---|---|---|
| 3-Phase | 0.1kW～2.2kW | 200/200/220V, 50/60/60Hz<br>220V, 50Hz<br>230V, 50Hz<br>240V, 50Hz<br>380V, 50Hz<br>400/400/440V, 50/60/60Hz<br>415V, 50Hz<br>420V, 50Hz<br>440V, 50Hz | Hollow shaft・Solid shaft F Series, F2 Series<br>Right angle shaft H2 Series<br>Parallel Shaft G3 Series |
| 1-phase | 100W | 100/100V, 50/60Hz<br>110V, 50Hz<br>115V, 50Hz<br>120V, 50Hz<br>200/200V, 50/60Hz<br>220V, 50Hz<br>230V, 50Hz<br>240V, 50Hz | Hollow shaft・Solid shaft F Series, F2 Series<br>Right angle shaft H2 Series |

＊The models with motor or brake-motors are available.
＊Gearmotors with brake manual release device(option) are also available.
＊Please ask us for the other voltage spec motors.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
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# Standard Motor



## China CCC Certified Gearmotor

### China: About the CCC marking

In China, on the occasion of joining the WTO, the China Compulsory Certification started operation in August, 2003, unifying all the certification systems existed and obligating to affix the CCC mark to all the items distributed in the domestic China market. Relevant Nissei products to this certification are gearmotors with the capacity of less than 0.75kW with induction motor. Products certified by CCC are regarded as the CE Marking certified products. (Refer to page E70)

In case exporting gearmotors as an independent unit to Mainland China, the CCC certification for the gearmotor itself is needed. However, in case of exporting gearmotor as a component of a machine, only certification of the machine is needed.

### ■GTR Geramotors certified by China CCC:

**Following classified models are object product for CCC marking.**

- **With Motor**
- **With Brake Motor**
- **With Brake Motor Manual Release Device (only for midi)**

| Classification | Model Classification | Capacity | Voltage and Frequency |
|---|---|---|---|
| **Medium type** | G3 series<br>H2 series<br>F series<br>F2 series | 3-phase 0.1kW～0.75kW | 200V/50・60Hz, 220V/50・60Hz, 230V/50Hz<br>380V/50Hz, 400V/50・60Hz, 440V/60Hz |
| **Small Type** | G type<br>H type<br>F2S type<br>F2F type | 3-phase 15W～90W | 200V/50・60Hz, 220V/50・60Hz, 230V/50Hz<br>380V/50Hz, 400V/50・60Hz, 440V/60Hz |
| | | 1-Phase 15W～90W | 100V/50・60Hz, 110V/50・60Hz<br>115V/50・60Hz, 120V/60Hz<br>200V/50・60Hz, 208V/60Hz, 220V/50・60Hz<br>230V/50・60Hz, 240V/50・60Hz |

＊1.5kW and 2.2kW are exempt from CCC regulation.
Standard voltage in China is generally 220V/50hz or 380V/50hz.

●All the gearmotors with China CCC Marking are furnished with terminal box.
Confirm types and specifications of the terminal box in the diagram shown below and instruct us.

| Capacity | Specification | | | Type A-BOX | Type Z-BOX | Type S-type Note 1 | Additional Instruction | Pages to be referred |
|---|---|---|---|---|---|---|---|---|
| 0.1kW～0.4kW | Without Brake | | | ○ | × | × | – | E17 |
| | With Brake | Rectifier built-in | AC Switching B | × | ○ | × | – | E24～E25 |
| | | | DC Switching | × | ○ | × | – | E24～E25 |
| | | | AC Switching A | × | ○ | × | AC Switching A | E24～E25 |
| | | Separated Rectifier | | × | ○ | × | Separated Rectifier | E25 |
| 0.75kW | Without Brake | | | × | × | ○ | – | E17 |
| | With Brake | Rectifier built-in | DC Switching | × | × | ○ | DC Switching | E26 |
| | | | AC Switching A | × | × | ○ | AC Switching A | E26 |
| | | | AC Switching B | × | × | ○ | AC Switching B | E26 |
| | | Separated Rectifier | | × | × | ○ | – | E17 Note 2 |

Note 1) Type-S has the same specifications as the one for the domestic Japanese Standard(T-Type).
2) The flying lead in the terminal box is employed.

●Motor Nameplate




＊Terminal Box is also the same spec. as the Japanese Standard Models

# About Nissei Gearmotor Types Certified by China CCC

## ■Types of the products certified by China CCC

- The specifications certified by CCC are different from that of Japanese Standard Specifications. Therefore, when ordering, be sure to specify as the CCC certified type.
- For ordering the CCC certificated types, at first select normal domestic model which has the same specifications (shape, motor capacity, reduction ratio, motor designation, etc.) from this catalogue. Then select the right CCC certified type, referring to the conversion table shown below.
- Specifications (dimensions, performance, etc.) are the same as that of the domestic Japanese products.
- Only gearmotors with terminal box are provided.

### Principal remarks on converting the existing type to the CCC type

- The type designation is described reducer part and motor part separately. Therefore, the auxiliary code (additional spec recognizing code) shall be added to the reducer part and motor part respectively.
- The ratio will be described with 3 digit, different from the usual way. (Example: 5 → 005, 1200 → 12X)
- The terminal box of 0.75kW is regarded as S-Type, therefore, so that the code will be "S". (Same product as the domestic T-Type)

**Domestic Japanese Specification Type**

| Type | Motor Capacity | | Frame Number | Shaft | | Reduction Ratio | | Capacity/Option | | | | Auxiliary Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G3L | M | – | 18 | | – | 15 | – | T | 010 | | A | |
| H2L | B | – | 40 | R | – | 1200 | – | T | 020 | W | Z | X |
| F2F | J | – | 32 | T | – | 60 | – | | 075 | | | X |

**CCC Certified Type**

| Type | Frame Number | Shaft | Reduction Ratio | Reducer Auxiliary Code | | Standard | Number of Phase | Motor Capacity | Capacity | Option | Terminal Box | Motor Auxiliary Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G3L | 18 | | 015 | | – | C | T | M | 010 | | A | |
| H2L | 40 | R | 12X | | – | C | T | B | 020 | W | Z | X |
| F2F | 32 | T | 060 | X | – | C | T | J | 075 | W | S | X |

# About the models planned to be certificated in future and the models out of certification plan

## ■Models out of CCC regulations

(Models enable to export to China without any modification to the Japanese Standard Specifications)

- Standard gearmotors (over 1.5kW)
- Midi Type Parallel Shaft Reducers
- Midi Type S-Type Reducers
- KOMPASS (gear box)
- GTR-A Series High Accuracy Reducer
- GTRII (V•S•C) with blashless motor
- Mini Type Multipurpose Inverters

## ■Following models are under the CCC regulation, however not certified yet.

- 1-Phase Gearmotors
- Gearmotor with Clutch/Brake
- Water Resistant/Outdoor Gearmotors (IP65)
- Explosion-Proof Gearmotors
- GT-STEP Index Gearmotor
- Speed Control Gearmotors
- Mini GT Type Gearmotors
- Mini GTR-L Gearmotors
- Mini with permanent brake
- GTRII C Series with induction motor

# Standard Motor Characteristic Table

## 3-Phase Standard Voltage (3Rated)

Characteristics of motor as an unit

| Capacity | Motor Capacity Designation | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristics | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) |
| 0.1kW | T010 | 200 | 50 | 1410 | 0.61 | 2.39 | 215 | 258 |
| | | 200 | 60 | 1690 | 0.54 | 2.27 | 190 | 238 |
| | | 220 | 60 | 1710 | 0.54 | 2.52 | 245 | 300 |
| 0.2kW | T020 | 200 | 50 | 1400 | 1.1 | 4.70 | 215 | 248 |
| | | 200 | 60 | 1680 | 1.0 | 4.35 | 195 | 225 |
| | | 220 | 60 | 1700 | 1.0 | 4.85 | 238 | 279 |
| 0.4kW | T040 | 200 | 50 | 1400 | 2.1 | 9.50 | 220 | 265 |
| | | 200 | 60 | 1680 | 1.8 | 8.60 | 190 | 234 |
| | | 220 | 60 | 1700 | 1.8 | 9.60 | 236 | 289 |
| 0.75kW | 075 | 200 | 50 | 1410 | 3.7 | 17.7 | 246 | 266 |
| | | 200 | 60 | 1690 | 3.3 | 16.7 | 228 | 244 |
| | | 220 | 60 | 1720 | 3.2 | 17.7 | 258 | 297 |
| 1.5kW | 150 | 200 | 50 | 1430 | 6.6 | 37.0 | 264 | 280 |
| | | 200 | 60 | 1710 | 6.1 | 33.5 | 232 | 248 |
| | | 220 | 60 | 1730 | 5.8 | 34.9 | 254 | 301 |
| 2.2kW | 220 | 200 | 50 | 1420 | 9.0 | 46.6 | 245 | 252 |
| | | 200 | 60 | 1690 | 8.6 | 41.2 | 202 | 225 |
| | | 220 | 60 | 1720 | 8.0 | 45.6 | 251 | 275 |

## 3-Phase High Voltage (4Rated)

Characteristics of motor as an unit

| Capacity | Motor Capacity Designation | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristics | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) |
| 0.1kW | T010W | 380 | 50 | 1400 | 0.31 | 1.12 | 180 | 224 |
| | | 400 | 50 | 1410 | 0.31 | 1.18 | 199 | 250 |
| | | 400 | 60 | 1690 | 0.28 | 1.12 | 180 | 233 |
| | | 440 | 60 | 1720 | 0.28 | 1.22 | 217 | 285 |
| 0.2kW | T020W | 380 | 50 | 1390 | 0.56 | 2.29 | 192 | 230 |
| | | 400 | 50 | 1400 | 0.56 | 2.38 | 220 | 257 |
| | | 400 | 60 | 1680 | 0.50 | 2.29 | 214 | 239 |
| | | 440 | 60 | 1710 | 0.50 | 2.48 | 258 | 294 |
| 0.4kW | T040W | 380 | 50 | 1390 | 1.0 | 4.35 | 194 | 225 |
| | | 400 | 50 | 1400 | 1.0 | 4.65 | 216 | 258 |
| | | 400 | 60 | 1680 | 0.9 | 4.30 | 184 | 232 |
| | | 440 | 60 | 1710 | 0.9 | 4.75 | 221 | 286 |
| 0.75kW | 075W | 380 | 50 | 1400 | 1.8 | 8.15 | 202 | 233 |
| | | 400 | 50 | 1410 | 1.8 | 8.65 | 228 | 258 |
| | | 400 | 60 | 1690 | 1.7 | 8.15 | 207 | 236 |
| | | 440 | 60 | 1720 | 1.6 | 8.95 | 252 | 287 |
| 1.5kW | 150W | 380 | 50 | 1420 | 3.3 | 17.5 | 218 | 258 |
| | | 400 | 50 | 1430 | 3.3 | 18.5 | 245 | 278 |
| | | 400 | 60 | 1710 | 3.0 | 16.5 | 200 | 245 |
| | | 440 | 60 | 1730 | 2.9 | 18.3 | 248 | 298 |
| 2.2kW | 220W | 380 | 50 | 1400 | 4.6 | 22.3 | 215 | 226 |
| | | 400 | 50 | 1420 | 4.5 | 23.6 | 243 | 252 |
| | | 400 | 60 | 1690 | 4.3 | 20.9 | 200 | 224 |
| | | 440 | 60 | 1720 | 4.0 | 23.1 | 247 | 273 |

## 1-phase Standard Voltage·High Voltage

Characteristics of motor as an unit

| Capacity | Motor Capacity Designation | Voltage | Frequency | Rated Rotation Speed | Current Characteristics | | Torque Characteristics | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Rated Current | Starting Current | Starting Torque | Braking Torque |
| | | (V) | (Hz) | (rpm) | (A) | (A) | (%) | (%) |
| 100W | S100 | 100 | 50 | 1410 | 1.70 | 4.48 | 61 | 149 |
| | | 100 | 60 | 1710 | 1.90 | 4.17 | 77 | 158 |
| | S100W | 200 | 50 | 1410 | 0.80 | 2.15 | 61 | 142 |
| | | 200 | 60 | 1700 | 0.95 | 2.02 | 78 | 154 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# Caution for Safe Operation

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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KOMPASS Gearbox

## Installation Location

| | |
|---|---|
| Ambient Temperature | −10°C~40°C |
| Ambient Humidity | 85% max. |
| Altitude | 1,000 m max. |
| Installation Location | Well ventilated place free from corrosive gas, explosive gas, vapor and/or dust |
| Installation place | Indoors |

## Installation Surface

Install the products with four bolts on a flat and machined surface free from vibration. For the shaft mount of the hollow shaft type, refer to page E56~E59.

## Mounting Position

All products can be mounted in any direction due to a grease lubrication system.

## Connecting with Other Equipment

1. "$H_7$" fit is recommended for the hole for couplings, sprockets, pulleys, gears etc., when attaching to the reducer.
2. In case of direct connection, connect a reducer shaft and a shaft of the connecting machine precisely, so that the center of the shaft of both machines will be fully aligned.
3. In case of using chains, belts gears, etc. connect the units precisely, so that the shaft of the reducer and that of the other machine are parallel. Also, be sure that the centerline of the sprockets and pulleys must be perpendicular to the shaft.
4. When attaching couplings or connecting equipment to the output shaft, be sure not to give any strong impact by hammer, etc. Failure to observe this warning may cause damage to the bearings, which may lead to noise, vibration or failure.

## Cautions for Operation

1. Load torque, load inertia moment I ($GD^2$)•O.H.L. should always be kept within the allowable value in operation.
2. When reversing the motor, be sure to confirm if the motor is completely stopped. Failure to observe this warning may cause serious damage to gearmotors and the connecting machine by plugging.
3. When reversing a single-phase motor, be sure to start reversing after confirming complete stop of the motor. Failure to observe this warning may cause the motor run out of control in the same direction.
4. Do not stop the motor forcibly. Failure to observe this warning may cause the motor run out of control by an unexpected reversing.
5. Be sure that the temperature of the reducer surface should never exceed 80°C.

## About Rated Current

The rated current values listed in the performance table are the ones of motor. For gearmotors with brake and gearmotors with clutch/brake, the current through brake coil should also be taken into consideration. For more details, consult us.

## Lubrication

All the F, F2, H2 and G3 Series models are employed a grease lubrication system and filled with high-grade grease before shipment from our factories.
The grease contains the additive agent of extreme-pressure, which is equivalent to NLGI-00 or NLGI-0. Quantities of the grease are shown in the list below:

### G3 Series (Parallel Shaft)

Grease Used : Equivalent to NLGI-0 (Unit: g)

| Frame Number \ Ratio | 1/200 and below | 1/300~1/450 | 1/600 and above |
|---|---|---|---|
| 18 | 65 | — | — |
| 22 | 130 | — | — |
| 28 | 210 | 250 | — |
| 32 | 350 | 400 | 390 |
| 40 | 580 | 680 | 630 |
| 50 | 1000 | 1150 | 1100 |

### H2 Series ( Right-angle Shaft)

Grease Used : Equivalent to NLGI-0 (Unit: g)

| Frame Number \ Ratio | 1/240 and below | 1/300~1/450 | 1/600 and above |
|---|---|---|---|
| 22 | 105 | — | — |
| 28 | 190 | 230 | — |
| 32 | 370 | 420 | 410 |
| 40 | 0.75kW 500<br>1.5kW 600 | 700 | 550 |
| 50 | 1200 | 1350 | 1300 |

### F Series ( Hollow Shaft. Solid Shaft)

Grease Used : Equivalent to NLGI-0 (Unit: g)

| Frame Number \ Ratio | 1/240 and below | 1/300~1/450 | 1/600 and above |
|---|---|---|---|
| ＊20 (18) | 105 | — | — |
| 25 (22) | 160 | 175 | — |
| 30 (28) | 295 | 335 | 310 |
| 35 (32) | 420 | 470 | 50W 435<br>0.1kW 460 |
| 45 (40) | 840 | 890 | 890 |
| 55 | 1200 | 1350 | 1300 |

Note 1) Frame numbers in the parenthesis indicate the FF Type (solid shaft).
2) The grease of the frame numbers marked with ＊ is the one equivalent to NLGI-0.

### F2 Series ( Hollow Shaft, solid Shaft)

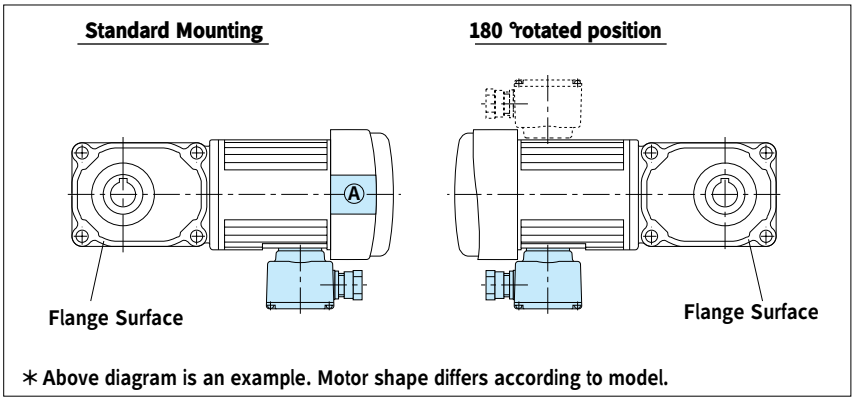
Grease Used : Equivalent to NLGI-0 (Unit: g)

| Frame Number \ Ratio | 1/60 and below |
|---|---|
| 20 (18) | 105 |
| 25 (22) | 160 |
| 30 (28) | 265 |
| 35 (32) | 370 |
| 45 (40) | 740 |

Note 1) Frame numbers in the parenthesis indicate the F2S Type (solid shaft).

## Warning on Positioning between Terminal Box and Flange Surface

Positioning between the terminal box of F2S Type and the flange surface is as shown in the figure on the right. In the opposite mounting, terminal box comes on top of the motor, which is standard position (as seen in dotted line). In this case, the position of terminal box can be rotated down to 90 °or 180 °(as seen in solid line). Therefore, when you order, direct the required position, referring to page E39. Be sure that customers cannot modify the position for the reason of its structure. As for the models with the capacity of 0.1kW or 0.2kW, the flat surface of the fan cover Ⓐ cannot be positioned to the flange side when the box being rotated down to180 °.

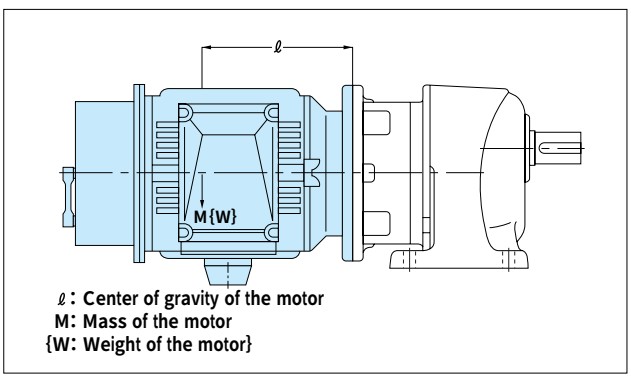



＊Above diagram is an example. Motor shape differs according to model.

## Cautions on attaching motors to S Type Reducer

❶ Wipe off the rust, dust and the anticorrosive agent on the motor shaft.
❷ When attaching motor, do not hit the motor part or reducer part, also do not insert these parts forcibly, taking advantage of the tightening torque of the bolt. Failure to observe this warning may cause damage to the bearings and abnormal noise caused by the key running on the key groove of the motor.
❸ Since there is no key material of the input pinion attached in the S Type reducer, use the key material of the motor side. In the motors with the capacity of 0.1kW･0.2kW, key material is attached.
❹ When the weight of S Type motor become greater, excessive load will be imposed to the attaching flange and this may cause a serious trouble. Refer to the Table-18 as a guideline.

Note 1) Attaching heavier motor than the designated weight limit may result in the damage to the casing and/or motor falling down.
2) Damages caused by attaching the over weighted motor are not in the scope of warranty.




ℓ: Center of gravity of the motor
M: Mass of the motor
{W: Weight of the motor}

〈Table-18〉

| Equivalent Capacity 4P motor | ℓ×M {ℓ×W} |
|---|---|
| 0.1、0.2kW | 27N･m {2.8kgf･m}以下 |
| 0.4kW | 31N･m {3.2kgf･m}以下 |
| 0.75kW | 34N･m {3.5kgf･m}以下 |
| 1.5kW | 83N･m {8.5kgf･m}以下 |
| 2.2kW | 93N･m {9.5kgf･m}以下 |

## Incase of changing speed of GTR Gearmotors by using inverter (device for converting frequency)

When using a gearmotor in combination with inverter, take care that the abnormal temperature rise (over 80°C at the motor surface) may occur in the low speed rotation. Also, in case of brake motor, brake failure may happen caused by the fluctuation of the voltage. In order to avoid these failures, be sure to bypass the inverter when wiring the brake.
For more details, refer to page E44, "On combination of gearmotor and inverter".

# Option



## Tapped Hole in Output Shaft

Output shafts with the tapped hole are available in the dimensions as seen below. Therefore when designing, direct us with these dimensions as much as possible. Since there is no tapped hole in the standard model, specify " with standard tapped hole" when ordering.

* "○" mark in the list indicates "standard stock".
  "△" mark indicate " more than 10 days required for the lead-time"
* Nonstandard tap size or water-proof specs(SUS420J2)are regarded as a special order specification. For details such as delivery or price, ask our local sales office.





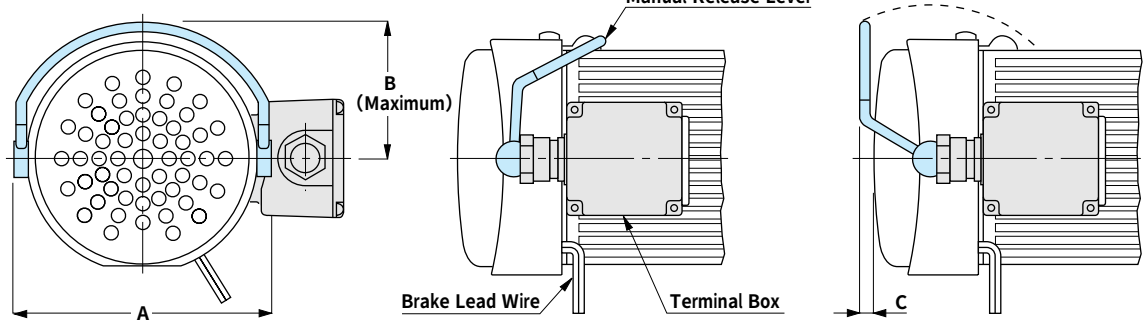
| Shaft Dia. (Frame Number) | Size×Pitch×Effective Depth | G3 Series (Parallel Shaft) | H2 Series ( Right Angle Shaft) | | | F Series FF Type (Solid Shaft) F2 Series F2F Type (Hollow Shaft) | | |
|---|---|---|---|---|---|---|---|---|
| | | | L-shaft | R-shaft | T-shaft | L-shaft | R-shaft | T-shaft |
| 18 | M 6×1.0 ×15ℓ | ○ | None | None | None | ○ | △ | △ |
| 22, 28 | M 8×1.25×20ℓ | ○ | ○ | ○ | △ | ○ | △ | △ |
| 32, 40 | M10×1.5 ×25ℓ | ○ | ○ | ○ | △ | ○ | △ | △ |
| 50 | M12×1.75×30ℓ | ○ | ○ | ○ | △ | None | None | None |

## Brake Manual Release Device

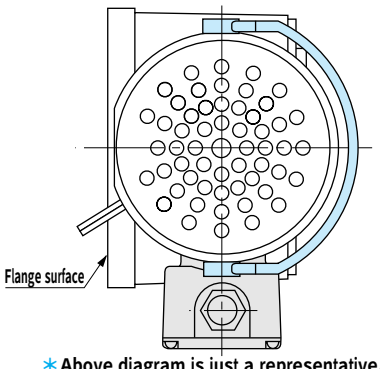
If requested, the brake manual release device can be attached. The terminal box and the manual release lever are basically in the same positioning.

* The manual release device cannot be attached to the F-Series, Motor Capacity Designation of T50 and T50W.
* The manual release device cannot be attached to the water-resistant, outdoor specs. gearmotors.

### H2•G3 Series




### F Series•F2 Series




* Above diagram is just a representative. In case of F2-Series, the shape of the gear head is different.

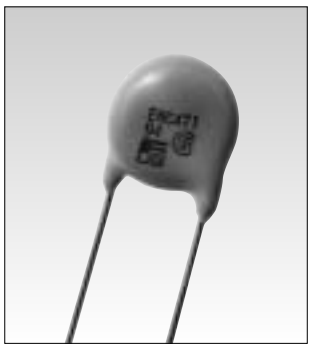
### Dimensions by Motor Capacity

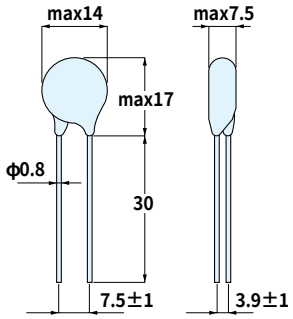
Common to F•F2•H2•G3 Series

| Motor Capacity Designation | 3-Phase T010•T010W 1-Phase S100•S100W | 3-Phase T020 •T020W 1-Phase 100 •200 1-Phase 100W•200W | 3-Phase T040•T040W | 3-Phase 075•075W 1-Phase 400•400W | 3-Phase 150•220 3-Phase 150W•220W |
|---|---|---|---|---|---|
| A | 156 | 156 | 156 | 180 | 212 |
| B | 83 | 83 | 83 | 102 | 124 |
| C | 8 | 0 | 0 | 2 | 6 |

Note 1) The terminal box and the manual release lever are basically in the same positioning.
2) When built in rectifier terminal box with manual release needs to change position, some direction is impossible as for technical reason. please ask us about detail.
3) In case the position of terminal box has been changed, the positioning with the flat surface of the fan cover can be referred in page E34～39.

## Surge Suppressor for Brake Wiring/OP-ENC471D-10A






●Appropriate for cutting off the sparks of a brake switch for AC line switching.

## Positioning between the Lead Wire and the Terminal Box

Refer to page E34～E39.

## Rectifier Built-in Gearmotors with Brake

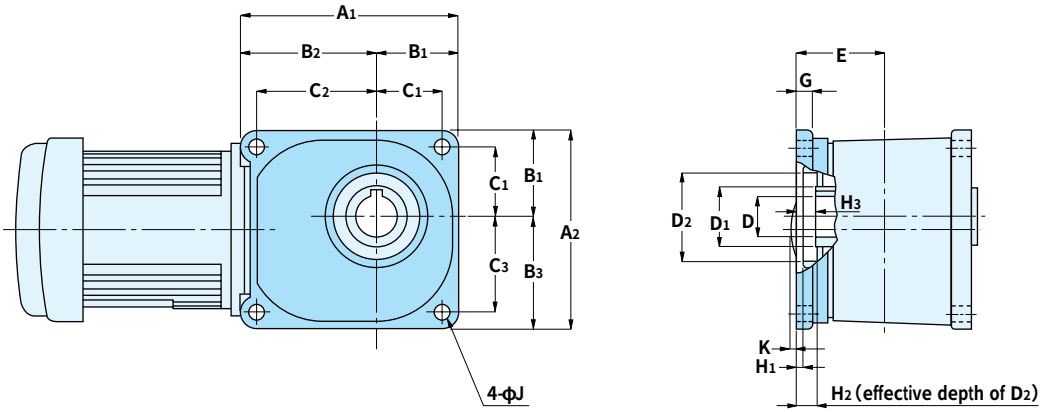
For indoor spec., refer to page E24～E26, for water-resistant, outdoor spec., refer to page E31.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
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# Option

## FS Type(Hollow Shaft)•R-Flange(Option)

### Dimension Diagram for attaching the R-Flange




| Model Number | Frame Number | A1 | A2 | B1 | B2 | B3 | C1 | C2 | C3 | E | G | H1 | H2 | H3 | D2 (H8) | Output Shaft | | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | D1 | D (H8) | |
| RF-20 | 20 | 128 | 112 | 47 | 81 | 65 | 38 | 72 | 56 | 51 | 10 | 1 | 13 | 12 | φ 46 | φ29 | φ20 | φ 8.5 |
| RF-25 | 25 | 147 | 131 | 54.5 | 92.5 | 76.5 | 44 | 82 | 66 | 59 | 12 | 6 | 12 | 11 | φ 58 | φ39 | φ25 | φ11 |
| RF-30 | 30 | 164 | 146 | 62 | 102 | 84 | 50 | 90 | 72 | 65 | 14 | 5 | 15 | 14 | φ 65 | φ44 | φ30 | φ11 |
| RF-35 | 35 | 188 | 168 | 68 | 120 | 100 | 56 | 108 | 88 | 70 | 16 | 3 | 18 | 17 | φ 72 | φ49 | φ35 | φ13 |
| RF-45 | 45 | 234 | 204 | 85 | 149 | 119 | 70 | 134 | 104 | 80 | 18 | 3 | 22 | 21 | φ 85 | φ64 | φ45 | φ15 |
| RF-55 | 55 | 298 | 262 | 110 | 188 | 152 | 90 | 168 | 132 | 98 | 22 | 6 | 17 | 16 | φ100 | φ79 | φ55 | φ18 |

### Measurements of the extruded part of Fan Cover when attaching the R-Flange (Measurement of K)

There is no extruded part of Fan Cover in the Frame number 20 and 55.

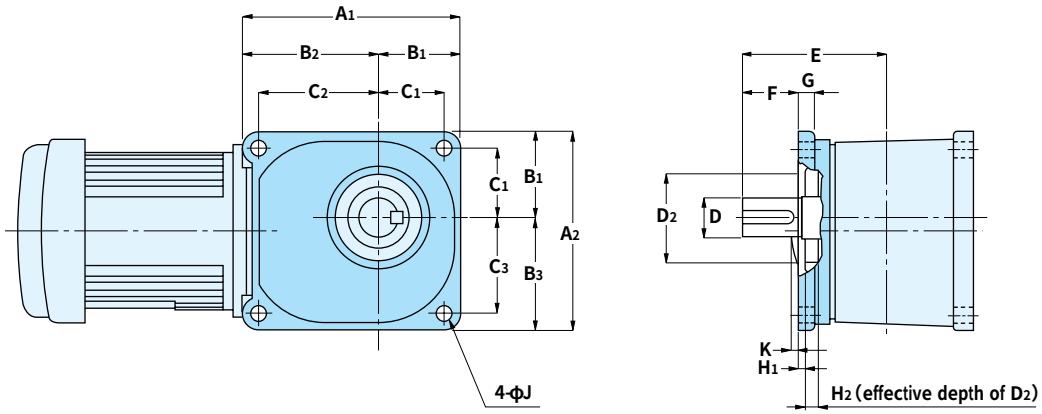
| Capacity | Frame Number | Outdoor Specification | | Water-resistant, Outdoor specification | |
|---|---|---|---|---|---|
| | | with Moter | with Brake | with Moter | with Brake |
| | | Standard | Standard | Standard | Standard |
| 0.1kW | 25 | — | 8.5 | — | — |
| | 30 | — | 2.5 | — | — |
| 0.2kW | 30 | 2.5 | 2.5 | 2.5 | 2.5 |
| 0.4kW | 35 | 0.5 | 0.5 | 0.5 | 0.5 |
| 0.75kW | 45 | 1 | 1 | 1 | 1 |

For use in the single-phase motor, consult us.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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# FF Type(Solid Shaft)·R-Flange(Option)

## Dimension Diagram for attaching the R-Flange




| Model Number | Frame Number | $A_1$ | $A_2$ | $B_1$ | $B_2$ | $B_3$ | $C_1$ | $C_2$ | $C_3$ | E | G | $H_1$ | $H_2$ | $D_2$ ($H_8$) | Output Shaft | | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | F | D ($h_6$) | |
| RF-20 | 18 | 128 | 112 | 47 | 81 | 65 | 38 | 72 | 56 | 82 | 10 | 1 | 13 | ϕ46 | 31 | ϕ18 | ϕ 8.5 |
| RF-25 | 22 | 147 | 131 | 54.5 | 92.5 | 76.5 | 44 | 82 | 66 | 95 | 12 | 6 | 12 | ϕ58 | 36 | ϕ22 | ϕ11 |
| RF-30 | 28 | 164 | 146 | 62 | 102 | 84 | 50 | 90 | 72 | 107 | 14 | 5 | 15 | ϕ65 | 42 | ϕ28 | ϕ11 |
| RF-35 | 32 | 188 | 168 | 68 | 120 | 100 | 56 | 108 | 88 | 124 | 16 | 3 | 18 | ϕ72 | 54 | ϕ32 | ϕ13 |
| RF-45 | 40 | 234 | 204 | 85 | 149 | 119 | 70 | 134 | 104 | 144 | 18 | 3 | 22 | ϕ85 | 64 | ϕ40 | ϕ15 |

## Measurements of the extruded part of Fan Cover when attaching the R-Flange (Measurement of K)

There is no extruded part of Fan Cover in the Frame number 18.

| Capacity | Frame Number | with Moter | with Brake |
|---|---|---|---|
| 0.1kW | 22 | — | 8.5 |
| 0.2kW | 28 | 2.5 | 2.5 |
| 0.4kW | 32 | 0.5 | 0.5 |
| 0.75kW | 40 | 1 | 1 |

## Spec for R-Flange

| Model Number | Frame Number | Weight (kg) | Material | Surface Treatment | Color |
|---|---|---|---|---|---|
| RF-20 | 20•18 | 0.3 | aluminium casting | Anion electrophoretic coating | grey |
| RF-25 | 25•22 | 0.5 | | | |
| RF-30 | 30•28 | 0.5 | aluminium die casting | | |
| RF-35 | 35•32 | 1.0 | aluminium casting | | |
| RF-45 | 45•40 | 2.0 | | | |
| RF-55 | 55 | 7.0 | cast iron | | |

# Option

## FS Type (Hollow Shaft)•Torque Arm (Option)

**Figure No. 1**

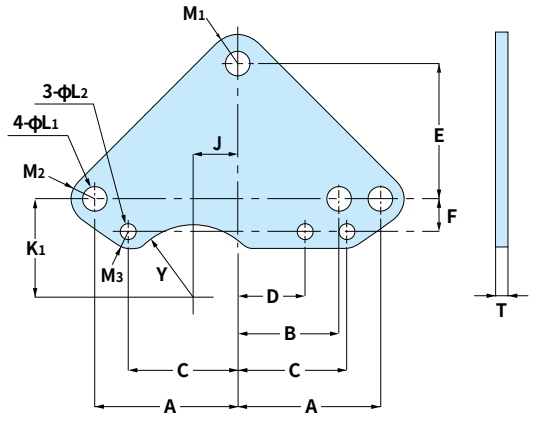
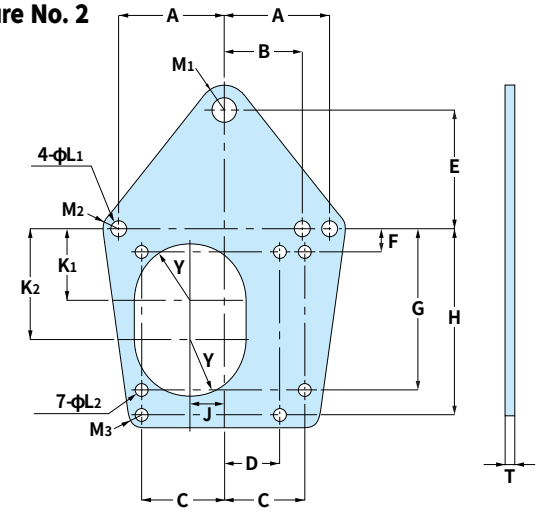
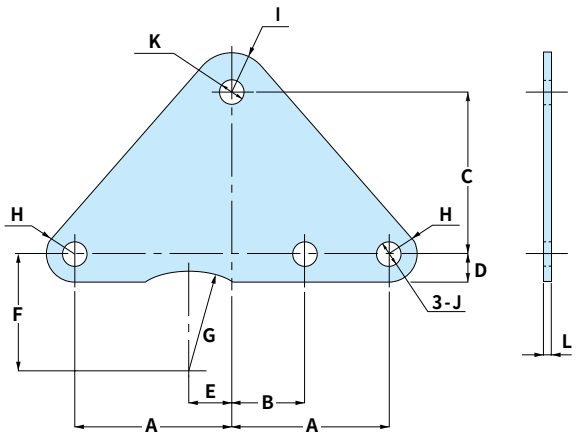



**Figure No. 2**



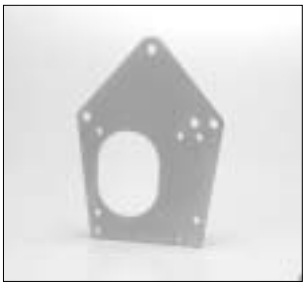

| Model Number | Frame Number | Figure No. | A | B | C | D | E | F | G | H | J | K1 | K2 | L1 | L2 | M1 | M2 | M3 | Y | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TA-20 | 20 | 1 | 55 | 39 | 42 | 26 | 52 | 13 | — | — | 17 | 38 | — | φ9 | φ5.5 | R11 | R 9 | R 6 | R28 | 4.5 |
| TA-25 | 25 | 1 | 63 | 47 | 47 | 31 | 61 | 16 | — | — | 19 | 44 | — | φ11 | φ6.5 | R15 | R10.5 | R 7 | R34 | 4.5 |
| TA-30 | 30 | 1 | 70 | 52 | 53 | 35 | 70 | 17 | — | — | 20 | 50 | — | φ11 | φ9 | R15 | R12 | R 9 | R39 | 6 |
| TA-35 | 35 | 2 | 82 | 62 | 64 | 44 | 94 | 18 | 126 | 146 | 26 | 56 | 88 | φ13 | φ9 | R18 | R12 | R10 | R43.5 | 6 |
| TA-45 | 45 | 2 | 102 | 72 | 80 | 50 | 110 | 22 | 152 | 182 | 32 | 70 | 104 | φ15 | φ11 | R20 | R15 | R11 | R51 | 9 |
| TA-55 | 55 | 2 | 129 | 93 | 97 | 61 | 160 | 32 | 190 | 226 | 39 | 90 | 132 | φ18 | φ13 | R25 | R20 | R13 | R70 | 9 |

## F2S Type (Hollow Shaft)•Torque Arm (Option)




| Model Number | Frame Number | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TAF2S-20 | 20 | 53.5 | 23.5 | 52 | 9 | — | — | — | R 9 | R11 | φ 9 | φ 9 | 3.2 |
| TAF2S-25 | 25 | 60 | 27 | 61 | 10.5 | 16.5 | 43.5 | R37 | R10.5 | R15 | φ 9 | φ 9 | 3.2 |
| TAF2S-30 | 30 | 69.5 | 26.5 | 70 | 12 | 21.5 | 48 | R41.5 | R12 | R15 | φ 9 | φ11 | 4.5 |
| TAF2S-35 | 35 | 80.5 | 31.5 | 94 | 12 | 24.5 | 56 | R46.5 | R12 | R18 | φ11 | φ13.5 | 6 |
| TAF2S-45 | 45 | 103.5 | 42.5 | 110 | 15 | — | — | — | R15 | R20 | φ13.5 | φ17.5 | 9 |





## Torque Arm Specificaiton

| Model Number | Frame Number | Weight (kg) | Material | Surface Treatment | Color |
|---|---|---|---|---|---|
| TA-20 | 20 | 0.2 | SS41 | uni-chrome coating | white |
| TA-25 | 25 | 0.3 | | | |
| TA-30 | 30 | 0.5 | | | |
| TA-35 | 35 | 1.2 | | | |
| TA-45 | 45 | 3.0 | | | |
| TA-55 | 55 | 4.8 | | | |
| TAF2S-20 | 20 | 0.1 | | | |
| TAF2S-25 | 25 | 0.2 | | | |
| TAF2S-30 | 30 | 0.3 | | | |
| TAF2S-35 | 35 | 0.6 | | | |
| TAF2S-45 | 45 | 1.4 | | | |

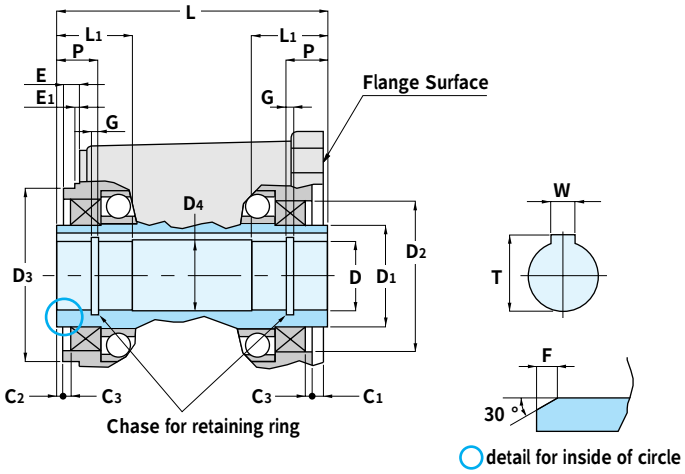
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
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# Option

■In the FS•F2S Type (hollow shaft), output shafts with the bore sizes listed below are also available. Instruct us your required shaft diameter when ordering.
*Water-resistant type (SUS420J2) is also available.
*Need investigation about the strength of inserting shaft.
*For more details such as delivery and price, etc., ask our local office.



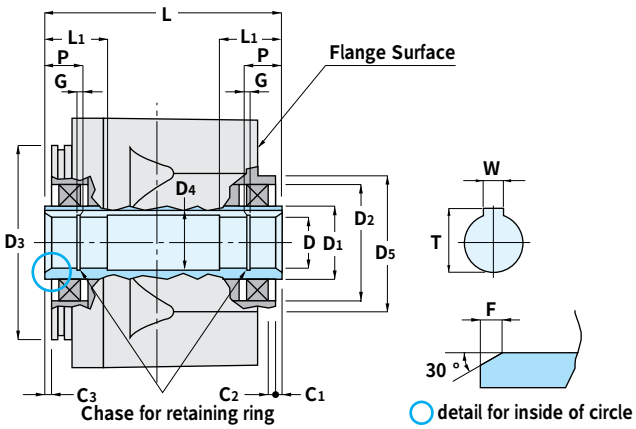
## FS Type (Hollow Shaft) • Additional specification for output shaft hole diameter




| Frame Number | Bore of the Hollow Shaft | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | W | T | L | L1 | P | C1 | C2 | C3 | E | E1 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | ϕ17 | ϕ17 | ϕ29 | ϕ 46 | ϕ 53 | ϕ18 | 5 | 19.3 | 91 | 24 | 13 | 1 | 2 | 3 | 8 | 0 | 2 | 1.15 |
| 25 | ϕ20 | ϕ20 | ϕ39 | ϕ 58 | ϕ 66 | ϕ21 | 6 | 22.8 | 108 | 27 | 14 | 6 | 2 | 3 | 6 | 0 | 2 | 1.15 |
| 30 | ϕ20 | ϕ20 | ϕ44 | ϕ 65 | ϕ 75 | ϕ21 | 6 | 22.8 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.15 |
| | ϕ25 | ϕ25 | ϕ44 | ϕ 65 | ϕ 75 | ϕ26 | 8 | 28.3 | 117 | 33 | 17 | 5 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 35 | ϕ25 | ϕ25 | ϕ49 | ϕ 72 | ϕ 85 | ϕ26 | 8 | 28.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| | ϕ30 | ϕ30 | ϕ49 | ϕ 72 | ϕ 85 | ϕ31 | 8 | 33.3 | 124 | 38 | 20 | 3 | 2 | 3 | 7 | 0 | 2 | 1.35 |
| 45 | ϕ30 | ϕ30 | ϕ64 | ϕ 85 | ϕ100 | ϕ31 | 8 | 33.3 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.35 |
| | ϕ35 | ϕ35 | ϕ64 | ϕ 85 | ϕ100 | ϕ36 | 10 | 38.3 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.75 |
| | ϕ40 | ϕ40 | ϕ64 | ϕ 85 | ϕ100 | ϕ41 | 12 | 43.3 | 140 | 50 | 26 | 3 | 2 | 3 | 6 | 0 | 2 | 1.95 |
| 55 | ϕ40 | ϕ40 | ϕ79 | ϕ100 | ϕ120 | ϕ41 | 12 | 43.3 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 1.95 |
| | ϕ45 | ϕ45 | ϕ79 | ϕ100 | ϕ120 | ϕ46 | 14 | 48.8 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 1.95 |
| | ϕ50 | ϕ50 | ϕ79 | ϕ100 | ϕ120 | ϕ51 | 14 | 53.8 | 181 | 61 | 32 | 5 | 2 | 5 | 10 | 2 | 2 | 2.20 |

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
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## F2S Type (Concentric Hollow Shaft) • Additional specification for output shaft hole diameter




| Frame Number | Bore of the Hollow Shaft | D (H8) | D1 | D2 (H8) | D3 (h8) | D4 | D5 (h8) | W | T | L | L1 | P | C1 | C2 | C3 | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | ϕ17 | ϕ17 | ϕ29 | ϕ46 | ϕ 75 | ϕ18 | ϕ 53 | 5 | 19.3 | 91 | 24 | 13 | 2 | 3 | 2 | 2 | 1.15 |
| 25 | ϕ20 | ϕ20 | ϕ39 | ϕ58 | ϕ 75 | ϕ21 | ϕ 66 | 6 | 22.8 | 108 | 27 | 14 | 7 | 3 | 2 | 2 | 1.15 |
| 30 | ϕ20 | ϕ20 | ϕ44 | ϕ65 | ϕ 75 | ϕ21 | ϕ 75 | 6 | 22.8 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.15 |
| | ϕ25 | ϕ25 | ϕ44 | ϕ65 | ϕ 75 | ϕ26 | ϕ 75 | 8 | 28.3 | 117 | 33 | 17 | 6 | 3 | 2 | 2 | 1.35 |
| 35 | ϕ25 | ϕ25 | ϕ49 | ϕ72 | ϕ100 | ϕ26 | ϕ 85 | 8 | 28.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.35 |
| | ϕ30 | ϕ30 | ϕ49 | ϕ72 | ϕ100 | ϕ31 | ϕ 85 | 8 | 33.3 | 124 | 38 | 20 | 4 | 3 | 2 | 2 | 1.35 |
| 45 | ϕ30 | ϕ30 | ϕ64 | ϕ85 | ϕ100 | ϕ31 | ϕ100 | 8 | 33.3 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.35 |
| | ϕ35 | ϕ35 | ϕ64 | ϕ85 | ϕ100 | ϕ36 | ϕ100 | 10 | 38.3 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.75 |
| | ϕ40 | ϕ40 | ϕ64 | ϕ85 | ϕ100 | ϕ41 | ϕ100 | 12 | 43.3 | 140 | 50 | 26 | 4 | 3 | 2 | 2 | 1.95 |

# Main Features of Combination of Nissei-Gearmotor & Inverter

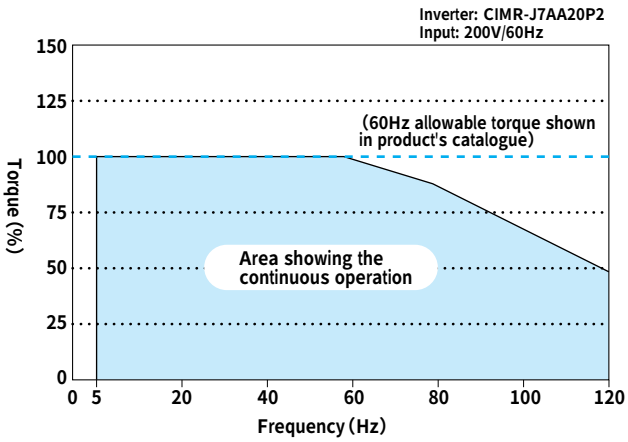


## Quick Installation and Opevation

- With the best setting of parameter, wide range of continuous rated operation can be feasible. Continuous operations in the range of 5Hz to 60Hz are feasible.
- At the shipment of inverters, the most appropriate parameter has already been set in accordance with the Nissei Gearmotor. Upon arrival of products, customer can start using them without doing troublesome parameter settings.

The figure shown on the right is an example of the case with the motor capacity of 3-phase, 0.2kW. For other capacities, refer to page E90～E91.

●"Range of continuous rated operations" 0.2kW




## Low Cost when Set Purchasing, No additional Labor!

- Inverters can be ordered in combination with gearmotors. Eliminate a needless trouble of ordering inverter and gearmotor separately. Specify the type of gearmotor to be used, in your inquiry.
- We will do the parameter setting in accordance with our gearmotor to be used.

For the standard specifications, parameters have already been set, using our gearmotor with the same capacity.
In case the inverter capacity is different from that of gearmotor, consult us.

**Advantage Point**

**Shipment will be made after setting the parameter in accordance with the ordered gearmotor.**



## Performance・Function

＊In case of using gearmotors other than horizontal transporting, consult us.

### Entire Area・Fully Automatic Torque Booster

- Even in a same machine, necessary motor torque varies according to the load condition. It is the Entire Area Fully Automatic Booster that automatically adjust the voltage (V) of V/f in accordance with the torque needed. In the VSminiH7, voltage (V) can be adjusted not only at the constant speed operation but also at the acceleration. Calculation of the needed torque is done by the inverter.

### Corresponds to various input/output

- Corresponds to 0～10V, 4～20mA, 0～20mA input terminals, multi-function input/output terminals, analog monitor, etc.
- In the multi function input, free handling level has been further improved for it's ability of switching over the logical level(PNP/NPN).

Available as an optional part in RS-232C, RS-485/422 (Memo Bus Protocol).

### Enhanced Suppression Function

- Control the current surge trip (over 250% of motor constant current) with the high speed current control function, which resulted in further improvement of the trip-less operations(instantaneous stopping/restarting, stall-protecting function, abnormal retry, etc.)
- Rush current controlling circuit built-in.
- Enhanced ground fault protection

### Versatile Operation Methods・Functions

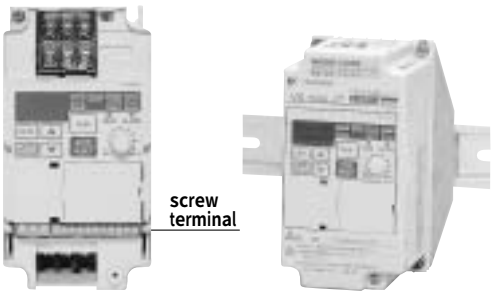
- Various speed operations (maximum 9 phase), Up and down operation, JOG operation can be obtained.
- Slip adjustment function, excess torque searching function and velocity searching function, etc. are ready.

The VS mini V7 Series is most appropriate for medium and high load hoisting operation. For more details such as prices, deliveries and specifications, ask us.

# Operability

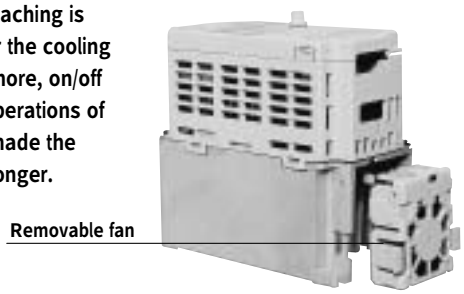
## Easy Attaching and Wiring

- Since the main circuit terminals are top to bottom arrangement, connection can be easily done just like a contactor feeling.
- By employing a screw type terminal for main circuit and brake circuit, easy wiring and high reliability have been secured.
- By employing the DIN rail attachment, one-touch attaching/detaching has been realized.




## Easy Maintenance

- One-touch attaching/detaching is employed for the cooling fan. Furthermore, on/off controlling operations of cooling fan made the inverter life longer.




**Consideration is given to the controlling of the higher harmonic wave of the power supply. DC reactor(option) can be connected. AC reactor is also available.**

This inverter is conformed to the regulations in the "Guideline for Controlling the Higher Harmonic Wave of the Electric Appliances and General-Purpose Goods" issued by MITI in September, 1994. Based on this guideline, the graduated regulation levels have been determined by Japan Electric Machine Industry Association (JEM). In order to be in conformity with this standard, inverters to be installed after the 1st of January, 1997 must be connected to the higher harmonic controlling reactor. Select DC reactor or AC reactor for actual use referring the "Power Factor Improvement Reactors (Higher Harmonic Controlling Reactors)" described in the separate catalogue. In case customer prepare other reactor, inform us of the detailed specifications.

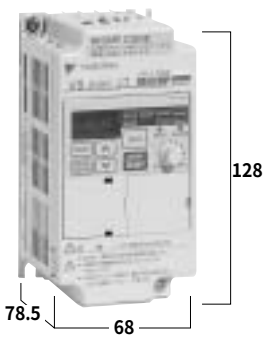
## Simple operation only by connecting

- Frequency Setting Volume is equipped as a standard in the operation panel(Operator). Therefore, immediate starting after supplying power can be obtained.
- In case the remote control system is needed, it can be attached to the operation panel by the operator and cable separately supplied.

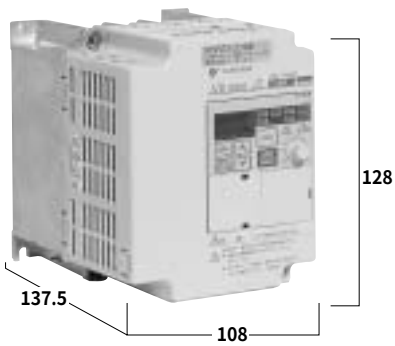
# Compact Size

## Effective storing of panels

- Compact size for space saving. Due to the uniform height of 128mm for all models, panel layout is also easy.




(Example: 200V, 3-phase 0.2kW)
200V, 3-phase 0.1～0.75kW




(Example: 200V, 3-phase 1.5kW)
200V, 3-phase 1.5～3.7kW

In case of brake motors, the braking failure may happen because of the fluctuation of voltage by inverter. Therefore, inverter should not be employed for the brake wiring. In case of low speed operations, temperature rise become greater, therefore, care should be given to the range of continuous operation. In case of high speed operations, decline of the allowable torque value, greater vibration and noise may be observed. In this case, contact us. When ordering gearmotors with terminal box, refer to the cautions indicated on the right.

| Motor Capacity | Caution |
|---|---|
| 0.1kW～0.4kW | When ordering A Type or Z Type terminal box, instruct us whether rectifier independent specification or AC Switching (A) wirings. |
| 0.75kW～2.2kW | When ordering the rectifier built-in inverter, instruct us with the AC Switching (A) wiring. |

## Cautions on Safety

This inverter can be applied to variable speed 3-phase AC motors for general industry use.

- In case inverters are applied to the equipments where the inverter failure or malfunction may directly affects to human life or may cause serious injury, inform us beforehand. It is necessary to have detailed study for each case. (Examples: Atomic power control, Aerospace equipments, Transportation equipments, Medical instruments, Various safety devices, etc)
- Inverters are manufactured under the severe quality control, however, it is recommended to install safety device to prevent from serious accidents in the application where the inverter failure may cause fatal accidents and/or may cause serious losses to valuable equipments.
- Wiring should be done by a professional electric worker.
- Inverter should not be applied to the load other than 3-phase AC motor.

# Multipurpose Inverter



## Outer Dimension

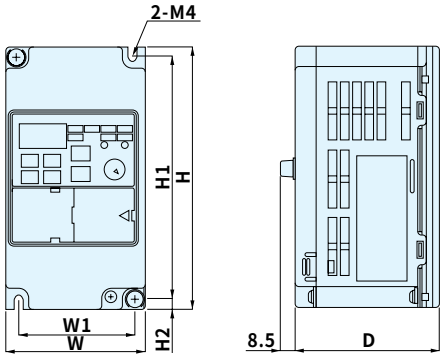



Fig.1

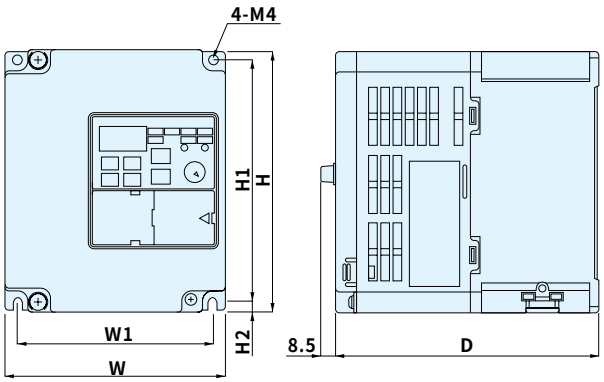
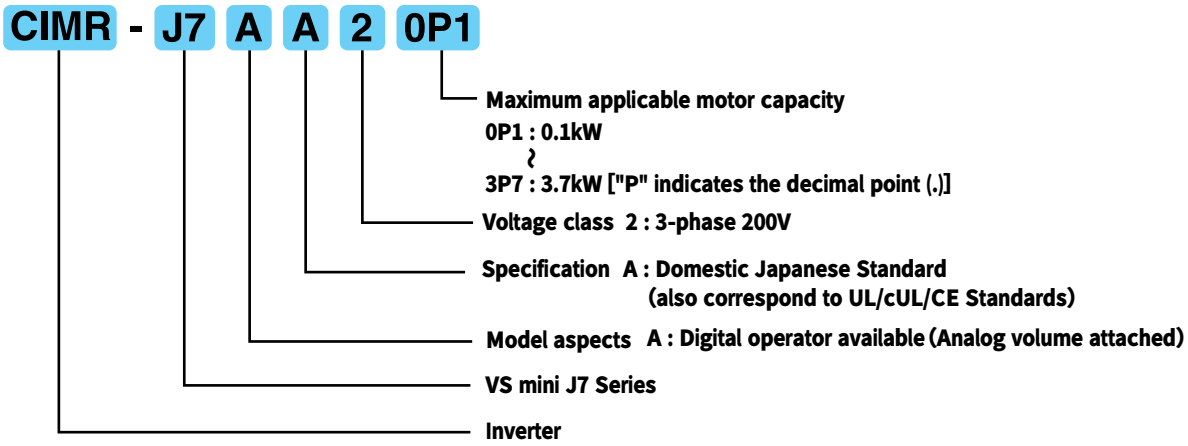



Fig.2

| Voltage Class | Maximum Applicable Motor Capacity kW | Fig. No. | Outer Dimension mm | | | | | | Round Weight kg | Heat Value (Loss arisen) W | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | W | H | D | W1 | H1 | H2 | | Outer Part (cooling fin part) | Inner Part (unit inside) | Total Heat Value |
| 200V (3-phase) | 0.1 | 1 | 68 | 128 | 70 | 56 | 118 | 5 | 0.5 | 3.7 | 9.3 | 13.0 |
| | 0.2 | | | | | | | | | 7.7 | 10.3 | 18.0 |
| | 0.4 | | 68 | 128 | 102 | 56 | 118 | 5 | 0.8 | 15.8 | 12.3 | 28.1 |
| | 0.75 | | | | 122 | | | | 0.9 | 28.4 | 16.7 | 45.1 |
| | 1.5 | 2 | 108 | 128 | 129 | 96 | 118 | 5 | 1.3 | 53.7 | 19.1 | 72.8 |
| | 2.2 | | | | 154 | | | | 1.5 | 60.4 | 34.4 | 94.8 |
| | 3.7 | | 140 | 128 | 161 | 128 | 118 | 5 | 2.1 | 96.7 | 52.4 | 149.1 |

## Explanation about Type Designation

Note) When ordering and/or inquiring, inform us of the inverter type shown below, together with our gearmotor type to be used with.




## Standard Model

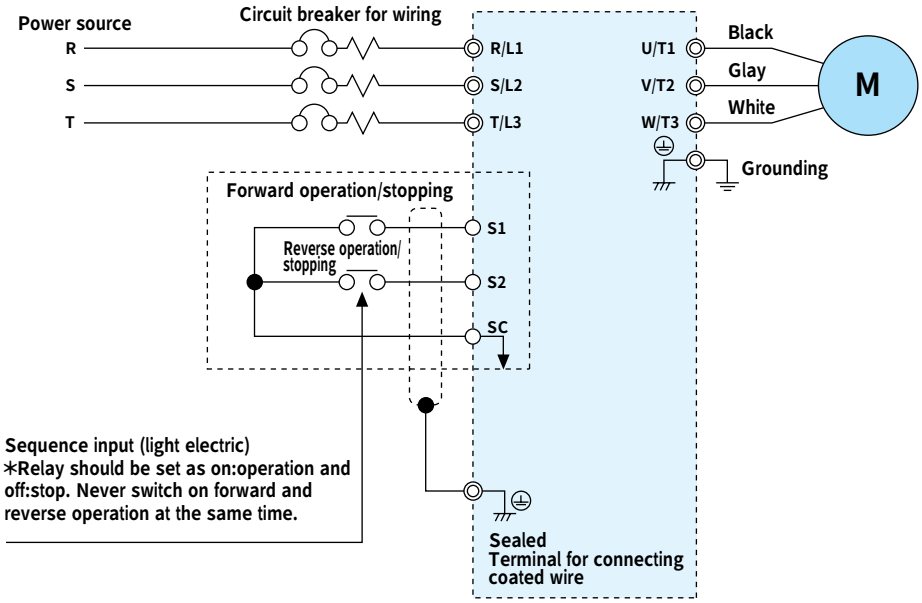
| Voltage Class | Model | Inverter Type | Code to be inserted to ☐ of Inverter | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.1kW | 0.2kW | 0.4kW | 0.75kW | 1.5kW | 2.2kW | 3.0kW | 3.7kW |
| | | | 0P1 | 0P2 | 0P4 | 0P7 | 1P5 | 2P2 | 3P0 | 3P7 |
| 200V (3-phase) | Digital operator available (Analog volume attached) | CIMR-J7AA2☐ | ○ | ○ | ○ | ○ | ○ | ○ | — | ○ |

Note 1) We deliver inverters with most appropriate parameter setting in accordance with the characteristics of our gearmotors. In general, parameter setting is done in accordance with gearmotors of same capacity. In case of the different combination, consult us.

2) The inverter of this product is manufactured by Yasukawa Denki.

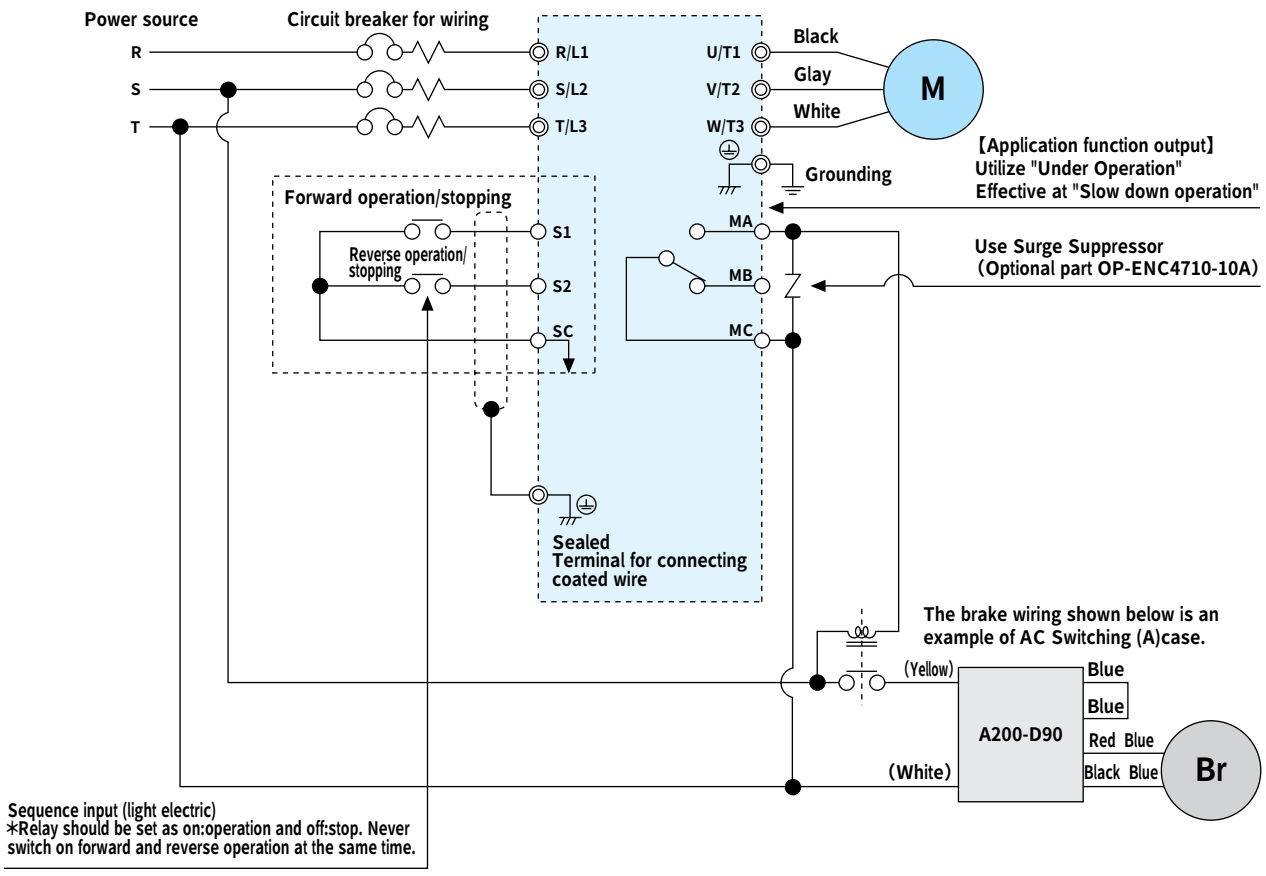
## Wiring Diagram for Inverter (VSminiJ7) and Gearmotor (Typical Example)

The wiring shown below is a example of the guideline circuit for operation.
In case of applying to the different controlling (operation), refer to the instruction manual or ask us.




## Wiring Diagram for Inverter (VSminiJ7) and Gearmotor with Brake (Typical Example)

The wiring shown below is a example of the guideline circuit for operation.
In case of applying to the different controlling (operation), refer to the instruction manual or ask us.



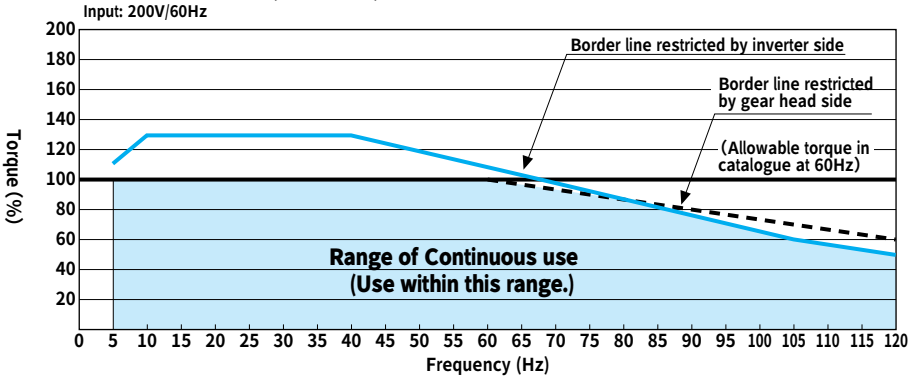
# Multipurpose Inverter

## Range of Continuous Rated Use



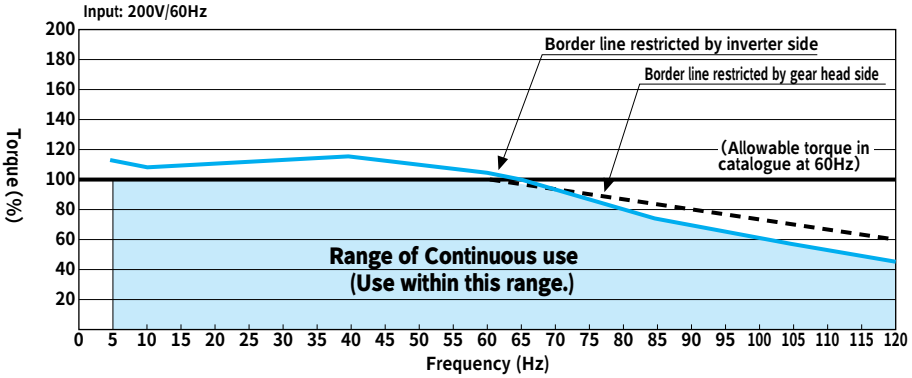
0.1kW

Inverter: CIMR-J7AA20P1 (YASUKAWA)
Input: 200V/60Hz



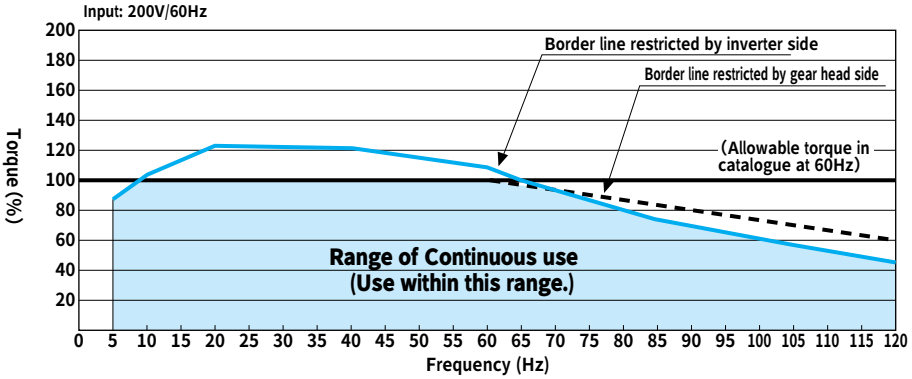

0.2kW

Inverter: CIMR-J7AA20P2 (YASUKAWA)
Input: 200V/60Hz




0.4kW

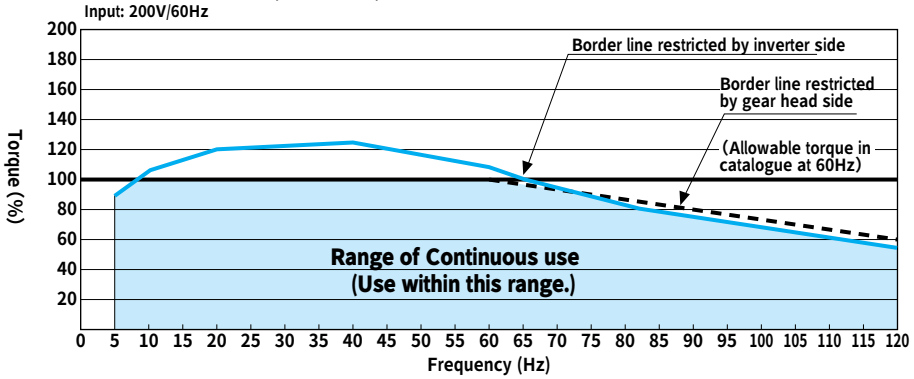
Inverter: CIMR-J7AA20P4 (YASUKAWA)
Input: 200V/60Hz



## Range of Continuous Rated Use

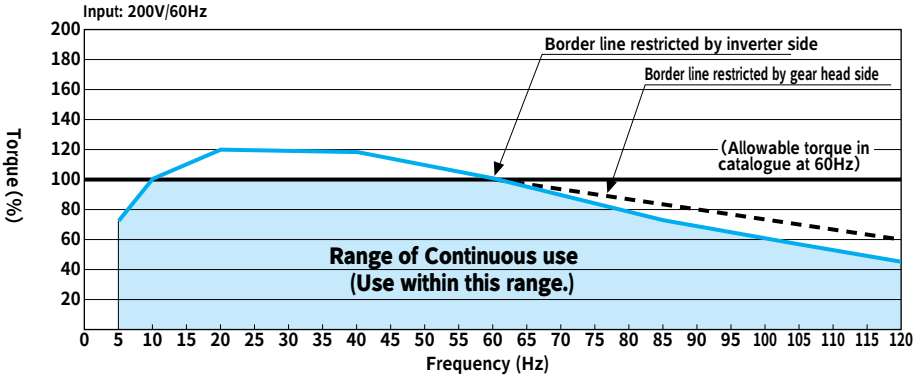
0.75kW

Inverter: CIMR-J7AA20P7 (YASUKAWA)
Input: 200V/60Hz



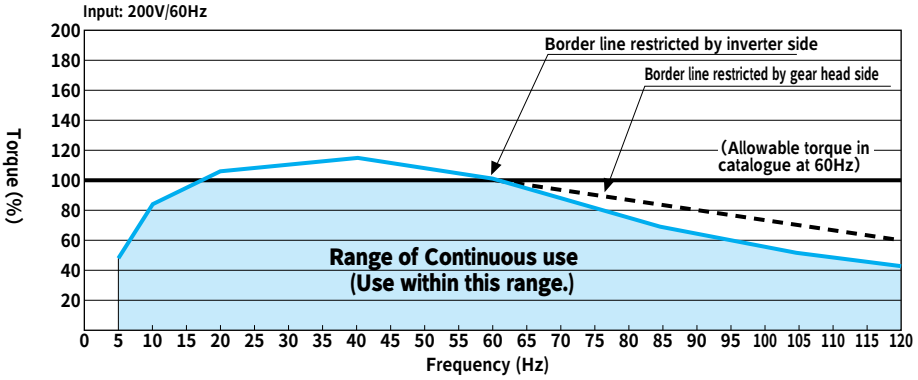

1.5kW

Inverter: CIMR-J7AA21P5 (YASUKAWA)
Input: 200V/60Hz




2.2kW

Inverter: CIMR-J7AA22P2 (YASUKAWA)
Input: 200V/60Hz




Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Multipurpose Inverter

## Remarks on the Use Limit Graph

■This is the Use Limit Graph in case of correcting the inverter constant (parameter) in accordance with the Nissei gearmotor of the same capacity.
(For set value, refer to the "Modified Constant (Parameter) Table" shown below.) Constant (parameter) has been corrected when shipping from our factory.
∗Correction is not necessary due to the entire area fully automatic torque boost.

■Border line restricted by inverter side
This is an area of continuous use restricted due to the performance limit of inverter when making combination with gearmotor.

■Border line restricted by gear head side
This is an area of continuous use restricted due to the value which is equivalent to the value of multiplying the correction coefficient by the "Allowable torque coefficient in accordance with the reducer input shaft rotation speed" when making combination with gearmotor.

## About the Modification of the Constant(Parameter) of Inverter

■Table for Modified Constant (Parameter)
●In order to realize the maximum performance of our gearmotors, we modify the constants shown below.
●When inputting the constant (Constant No. 01), be careful that initialization may erase the modified constants shown below. In such case, it is recommended to use the data after correcting to the contents shown below.

| No. | Designation | 0.1kW | 0.2kW | 0.4kW | 0.75kW | 1.5kW | 2.2kW |
|---|---|---|---|---|---|---|---|
| 16 | Acceleration Hour 1 | 1s | 1s | 1s | 1s | 1s | 1s |
| 17 | Slowing Down Hour 1 | 5s | 5s | 5s | 5s | 5s | 5s |
| 32 | Motor Constant Current | 0.5A | 0.9A | 1.7A | 3.0A | 5.7A | 8.6A |
| 33 | Choice of Electronic Thermal Motor Protection | 1 | 1 | 1 | 1 | 1 | 0 |

Note 1) Only the SEW-made 3.7kW motor has the constant setting shown on page 104～107 of the Instruction Manual.
2) The "Maximum output frequency of No.09" has been set to 60Hz, considering the safety at the initial stage of installing.
In case of using with over 60Hz, operate after modifying the frequency to a proper value with the upper limit of 120Hz.
3) The constant values shown above are the ones corresponding to our gearmotors of the same capacity.
4) The parameter setting done according to the capacity of gearmotor
are only the motor capacities between 0.1kW through 2.2kW.
In case of using the SEW-made 3.7kW gearmotor in combination with the 3.7kW inverter, be sure to consult us.
5) For the constants in combination with gearmotor other than our same capacity gearmotors, ask us.
6) The 3.7kW in the above table is Nissei-made.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

# GT-STEP
## Index Gearmotor

| | | | |
|---|---|---|---|
| Motor Part | Number of phase | 3-Phase | 1-Phase |
| | Capacity | 25W～90W、0.2kW | 25W～90W |
| | Power Source | 3 Rated Power Source 200V 50/60Hz、220V/60Hz | 100V 50/60Hz |
| | Insulation Classification | Class E (Class B for 0.2kW) | Class E |
| | Starting Method | Direct start | Capacitor Operation |
| | Protective cooling Method | Totally Enclosed fan-cooled (Totally Enclosed only for 25～90W without brake) | Totally Enclosed fan-cooled (Totally Enclosed only for 25～50W without brake) |
| | Number of Pole | 4 | |
| Speed Reduction Part | Reduction Method | Helical Gear and Geneva Gear | |
| | Lubrication | Grease Lubrication(Maintenance Free) | |
| | Output Shaft Material | S43C | |
| | Case Material | Aluminium die-cast | |
| Ambient Conditions | Ambient Temperature | －10°C～40°C | |
| | Ambient Humidity | 85% max. (without any dew condensation) | |
| | Altitude | 1,000m max. | |
| | Environment | Well ventilated place free from corrosive gas, explosive gas vapor and/or dust. | |
| | Installation Location | Indoors | |
| Painting | Painting Method | Anion painting, Acrylic paint | |
| | Painting Color | Grey (Mansel code:9B6/0.5) | |
| Mounting Direction | | No restriction in the mounting angle. (horizontally, vertically or heeling angle) | |

# Model and Type Designation GT-STEP

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

## Standard Model

### ■Model type and code

GT-STEP are classified by codes as shown below.
Specify these codes in your inquiry and/or order.

| Type | | | | Frame Number | | Number of Stop | | Cycle Time | | Motor Capacity・Option | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | I | L | M | 22 | – | 4 | / | 1.5 | – | S25 | W | T |

- Series Name of GT-STEP
- Classification by Mount: L : Foot Mount / F : Flange Mount
- Classification by Motor Type: M : With Motor / B : With Brake Motor
- Frame No. and Diameter of Output shaft
- Number of Stop (Refer to Table-1)
- Nominal Cycle Time (Refer to Table-1)

For the relation between the number of stop and nominal cycle time, refer to page F22.

Example: S25 : 1-phase 25W / T90 : 3-phase 90W / T020: 3-phase 0.2kW

- Blank: Standard Voltage
  - 3-phase 200V/50・60Hz, 220V/60Hz
  - 1-phase 100V/50・60Hz
- W : High Voltage (Option)
  - 3-phase 380V/50Hz, 400V/50・60Hz, 440V/60Hz
  - 1-phase 200V/50・60Hz
- T : Small type terminal box (option) 25W～90W
- K : Small type terminal box (option) 25W～90W
- C : Large type terminal box (option) 25W～90W With brake and rectifier built in type
- A : Terminal box (option) 0.2kW
- Z : Terminal box (option) 0.2kW for with brake motor (rectifier insert type)

### ■Model Lineup (1264 various)

〈Table-1〉

| Number of Stop | Type | Motor Capacity | Frame Number | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4, 6, 8, 12 | With Motor (GILM GIFM) | 3-phase 25W | 22 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | |
| | | 1-phase 25W | 28 | | | | | | | | ○ | ○ | ○ | | | |
| | | | 32 | | | | | | | | | | | ○ | ○ | ○ |
| | | 3-phase 50W | 28 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | |
| | | 1-phase 50W | 32 | | | | | | | | ○ | ○ | ○ | | | |
| | | | 40 | | | | | | | | | | | ○ | ○ | ○ |
| | With Brake Motor (GILB GIFB) | 3-phase 90W | 32 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | |
| | | 1-phase 90W | 40 | | | | | | | | ○ | ○ | ○ | | | |
| | | 3-phase 0.2kW | 40 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | |

## Features

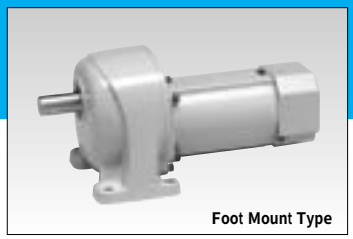
**❶Reasonable Price**
Prepared for users who is unable to purchase the previous index because of the high prices. For those who are using the expensive index, we offer you with the reasonable price for easy employment.

**❷All-in-one Structure**
Intermittent mechanisms, reducer and motor are compactly combined. This design offers better handlings.

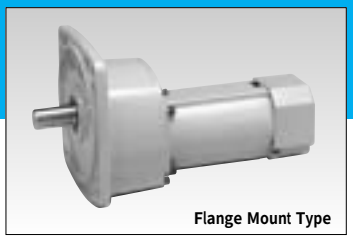
**❸Wide varieties of models**
1,264 models of GT-STEP are nominated as standard model. Therefore, detailed selection for the most adequate model is possible.

**❹Long Life**
Excellent durability of the built-in gears and Geneva gears have been realized with the precise machining and the high-level heat treatment.

**❺Free mounting direction**
Because of the high level grease lubrication system, there is no restriction in the mounting direction.



Foot Mount Type



Flange Mount Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake

## 3-phase 25W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

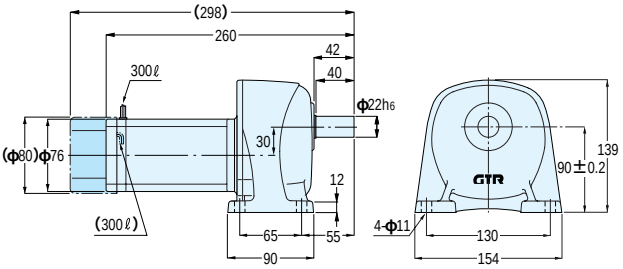
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 3-phase 25W | 22 | 1.47<br>0.070 | 2.25<br>0.150 | 2.94<br>0.275 | 4.41<br>0.625 | 5.88<br>1.13 | 7.35<br>1.75 | 8.82<br>2.53 | | | | | | | ±5 | 882 | P.F4 Fig.F-1 | P.F5 Fig.F-4 |
| | | 28 | | | | | | | | 11.8<br>5.75 | 14.7<br>9.00 | 17.6<br>13.0 | | | | | 1370 | P.F4 Fig.F-2 | P.F5 Fig.F-5 |
| | | 32 | | | | | | | | | | | 23.5<br>37.8 | 29.4<br>59.0 | 35.3<br>85.0 | | 2550 | P.F5 Fig.F-3 | P.F5 Fig.F-6 |
| 6 | | 22 | 2.16<br>0.158 | 3.33<br>0.325 | 4.41<br>0.600 | 6.57<br>1.40 | 8.82<br>2.53 | 10.8<br>3.93 | 12.7<br>5.68 | | | | | | | | 1180 | P.F4 Fig.F-1 | P.F5 Fig.F-4 |
| | | 28 | | | | | | | | 17.6<br>13.0 | 21.6<br>20.3 | 26.5<br>29.0 | | | | | 1760 | P.F4 Fig.F-2 | P.F5 Fig.F-5 |
| | | 32 | | | | | | | | | | | 35.3<br>84.8 | 44.1<br>133 | 52.9<br>191 | | 3330 | P.F5 Fig.F-3 | P.F5 Fig.F-6 |
| 8 | | 22 | 2.94<br>0.275 | 4.51<br>0.600 | 5.88<br>1.10 | 8.82<br>2.50 | 11.8<br>4.50 | 14.7<br>7.00 | 17.6<br>10.1 | | | | | | | | 1470 | P.F4 Fig.F-1 | P.F5 Fig.F-4 |
| | | 28 | | | | | | | | 23.5<br>23.0 | 29.4<br>36.0 | 35.3<br>51.8 | | | | | 2250 | P.F4 Fig.F-2 | P.F5 Fig.F-5 |
| | | 32 | | | | | | | | | | | 47.0<br>151 | 58.8<br>236 | 70.6<br>340 | | 4310 | P.F5 Fig.F-3 | P.F5 Fig.F-6 |
| 12 | | 22 | 4.31<br>0.625 | 6.66<br>1.30 | 8.82<br>2.40 | 12.7<br>5.60 | 17.6<br>10.1 | 21.6<br>15.7 | 25.5<br>22.7 | | | | | | | | 1670 | P.F4 Fig.F-1 | P.F5 Fig.F-4 |
| | | 28 | | | | | | | | 35.3<br>51.8 | 43.1<br>81.0 | 52.9<br>116 | | | | | 2550 | P.F4 Fig.F-2 | P.F5 Fig.F-5 |
| | | 32 | | | | | | | | | | | 70.6<br>340 | 88.2<br>530 | 106<br>765 | | 4700 | P.F5 Fig.F-3 | P.F5 Fig.F-6 |

## Foot Mount Type

**Fig.F-1**

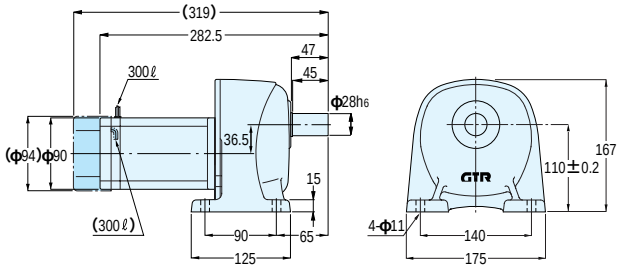
**GILM-22-4～12/1～6-T25**
CAD Data: GILM-22-T25
**(GILB-22-4～12/1～6-T25)**
(CAD Data: GILB-22-T25)




Round Weight 6kg

**Fig.F-2**

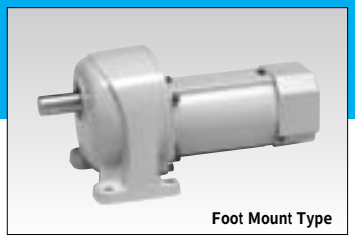
**GILM-28-4～12/8～12-T25**
CAD Data: GILM-28-T25
**(GILB-28-4～12/8～12-T25)**
(CAD Data: GILB-28-T25)

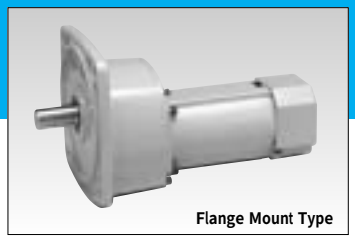



Round Weight 8kg

Model Code P.F2
Techincal Information P.F19

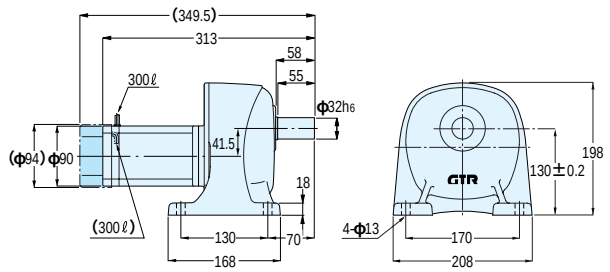
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
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Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mount Type

## Fig.F-3

**GILM-32-4～12/16～24-T25**
CAD Data: GILM-32-T25
**(GILB-32-4～12/16～24-T25)**
(CAD Data: GILB-32-T25)

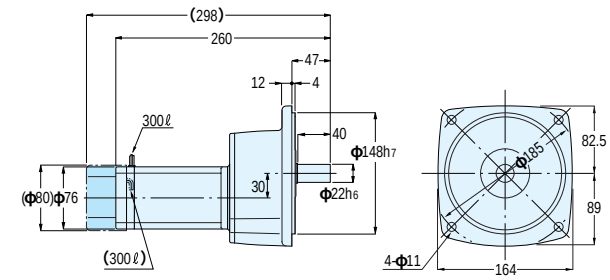



Round Weight 12kg

# Flange Mount Type

## Fig.F-4

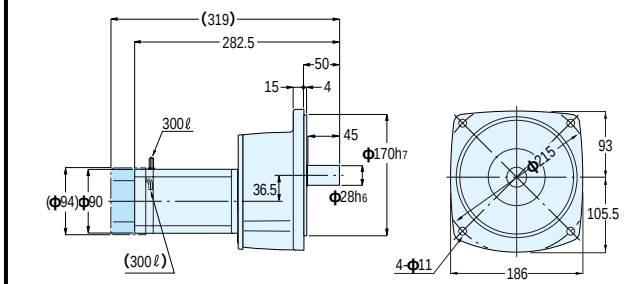
**GIFM-22-4～12/1～6-T25**
CAD Data: GIFM-22-T25
**(GIFB-22-4～12/1～6-T25)**
(CAD Data: GIFB-22-T25)




Round Weight 6kg

## Fig.F-5

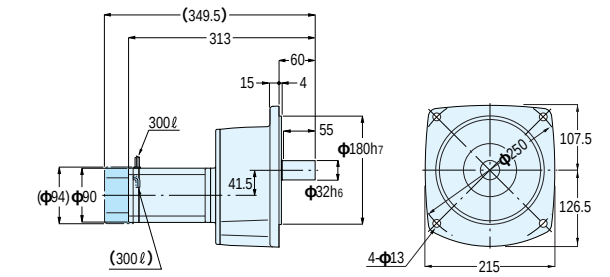
**GIFM-28-4～12/8～12-T25**
CAD Data: GIFM-28-T25
**(GIFB-28-4～12/8～12-T25)**
(CAD Data: GIFB-28-T25)




Round Weight 8kg

## Fig.F-6

**GIFM-32-4～12/16～24-T25**
CAD Data: GIFM-32-T25
**(GIFB-32-4～12/16～24-T25)**
(CAD Data: GIFB-32-T25)




Round Weight 12kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake

## 3-phase 50W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

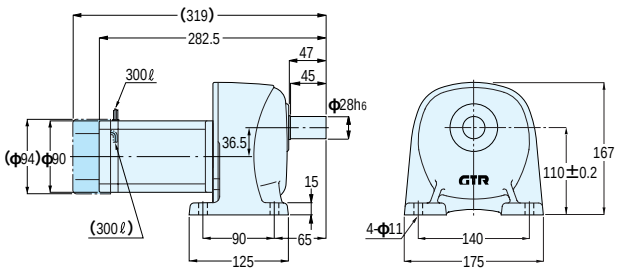
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 3-phase 50W | 28 | 2.94<br>0.140 | 4.41<br>0.300 | 5.88<br>0.550 | 8.82<br>1.25 | 11.8<br>2.25 | 14.7<br>3.50 | 17.6<br>5.05 | | | | | | | ±5 | 1370 | P.F6 Fig.F-7 | P.F7 Fig.F-10 |
| | | 32 | | | | | | | | 23.5<br>11.7 | 29.4<br>18.3 | 35.3<br>26.3 | | | | | 2550 | P.F6 Fig.F-8 | P.F7 Fig.F-11 |
| | | 40 | | | | | | | | | | | 47.0<br>76.8 | 58.8<br>120 | 70.6<br>173 | | 3530 | P.F7 Fig.F-9 | P.F7 Fig.F-12 |
| 6 | | 28 | 4.41<br>0.300 | 6.57<br>0.675 | 8.82<br>1.23 | 12.7<br>2.80 | 17.6<br>5.05 | 21.6<br>7.88 | 26.5<br>11.4 | | | | | | | | 1760 | P.F6 Fig.F-7 | P.F7 Fig.F-10 |
| | | 32 | | | | | | | | 35.3<br>26.3 | 44.1<br>41.0 | 52.9<br>59.0 | | | | | 3330 | P.F6 Fig.F-8 | P.F7 Fig.F-11 |
| | | 40 | | | | | | | | | | | 70.6<br>173 | 88.2<br>270 | 106<br>388 | | 4610 | P.F7 Fig.F-9 | P.F7 Fig.F-12 |
| 8 | | 28 | 5.88<br>0.550 | 8.82<br>1.20 | 11.8<br>2.20 | 17.6<br>5.00 | 23.5<br>9.00 | 29.4<br>14.0 | 35.3<br>20.2 | | | | | | | | 2250 | P.F6 Fig.F-7 | P.F7 Fig.F-10 |
| | | 32 | | | | | | | | 47.0<br>46.8 | 58.8<br>73.0 | 70.6<br>105 | | | | | 4310 | P.F6 Fig.F-8 | P.F7 Fig.F-11 |
| | | 40 | | | | | | | | | | | 94.1<br>308 | 118<br>480 | 141<br>690 | | 5880 | P.F7 Fig.F-9 | P.F7 Fig.F-12 |
| 12 | | 28 | 8.82<br>1.20 | 12.7<br>2.70 | 17.6<br>4.90 | 25.5<br>11.2 | 35.3<br>20.2 | 43.1<br>31.5 | 52.9<br>45.5 | | | | | | | | 2550 | P.F6 Fig.F-7 | P.F7 Fig.F-10 |
| | | 32 | | | | | | | | 70.6<br>105 | 94.1<br>164 | 106<br>236 | | | | | 4700 | P.F6 Fig.F-8 | P.F7 Fig.F-11 |
| | | 40 | | | | | | | | | | | 141<br>690 | 176<br>1080 | 212<br>1560 | | 6660 | P.F7 Fig.F-9 | P.F7 Fig.F-12 |

## Foot Mount Type

**Fig.F-7**

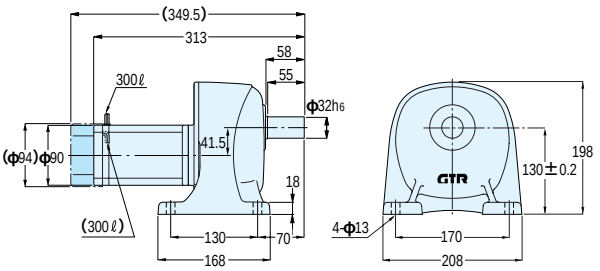
**GILM-28-4～12/1～6-T50**
CAD Data: GILM-28-T50
**(GILB-28-4～12/1～6-T50)**
(CAD Data: GILB-28-T50)




Round Weight 8kg

**Fig.F-8**

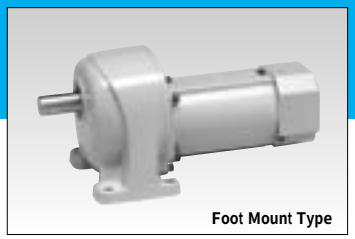
**GILM-32-4～12/8～12-T50**
CAD Data: GILM-32-T50
**(GILB-32-4～12/8～12-T50)**
(CAD Data: GILB-32-T50)

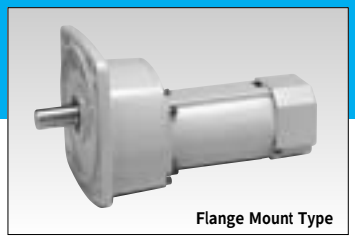



Round Weight 12kg

Model Code P.F2
Techincal Information P.F19

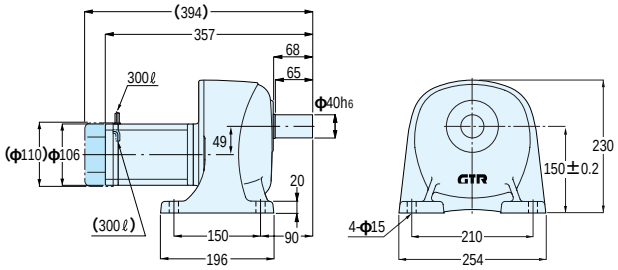
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mount Type

## Fig.F-9

**GILM-40-4～12/16～24-T50**
CAD Data: GILM-40-T50
**(GILB-40-4～12/16～24-T50)**
(CAD Data: GILB-40-T50)

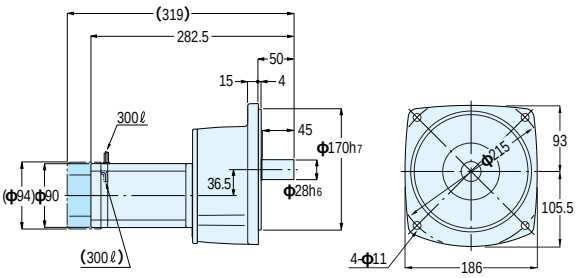



Round Weight 17kg

# Flange Mount Type

## Fig.F-10

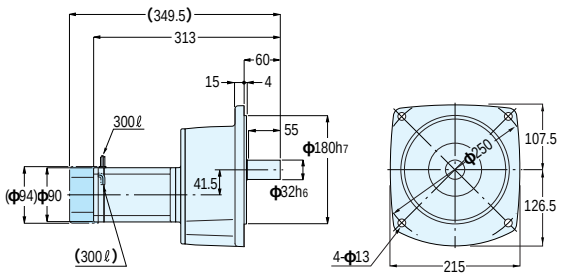
**GIFM-28-4～12/1～6-T50**
CAD Data: GIFM-28-T50
**(GIFB-28-4～12/1～6-T50)**
(CAD Data: GIFB-28-T50)




Round Weight 8kg

## Fig.F-11

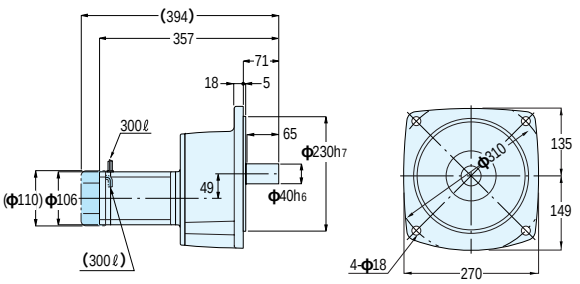
**GIFM-32-4～12/8～12-T50**
CAD Data: GIFM-32-T50
**(GIFB-32-4～12/8～12-T50)**
(CAD Data: GIFB-32-T50)




Round Weight 12kg

## Fig.F-12

**GIFM-40-4～12/16～24-T50**
CAD Data: GIFM-40-T50
**(GIFB-40-4～12/16～24-T50)**
(CAD Data: GIFB-40-T50)




Round Weight 17kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake

## 3-phase 90W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

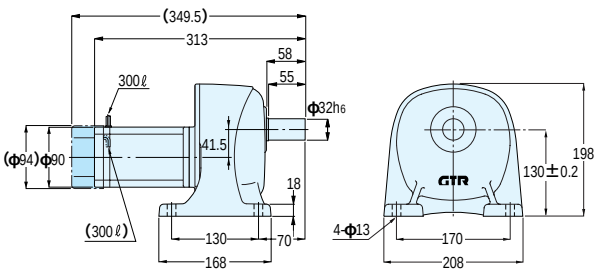
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 3-phase 90W | 32 | 5.39<br>0.275 | 8.13<br>0.625 | 10.8<br>1.10 | 16.7<br>2.48 | 21.6<br>4.40 | 27.4<br>6.88 | 32.3<br>9.90 | | | | | | | ±5 | 2550 | P.F8 Fig.F-13 | P.F9 Fig.F-15 |
| | | 40 | | | | | | | | 43.1<br>22.4 | 53.9<br>35.0 | 64.7<br>50.5 | | | | | 3530 | P.F8 Fig.F-14 | P.F9 Fig.F-16 |
| 6 | | 32 | 8.04<br>0.600 | 11.8<br>1.40 | 15.7<br>2.48 | 24.5<br>5.55 | 32.3<br>9.90 | 41.2<br>15.5 | 48.0<br>22.3 | | | | | | | | 3330 | P.F8 Fig.F-13 | P.F9 Fig.F-15 |
| | | 40 | | | | | | | | 64.7<br>50.3 | 80.4<br>78.8 | 97.0<br>114 | | | | | 4610 | P.F8 Fig.F-14 | P.F9 Fig.F-16 |
| 8 | | 32 | 10.8<br>1.10 | 16.7<br>2.50 | 21.6<br>4.40 | 33.3<br>9.90 | 43.1<br>17.6 | 54.9<br>27.5 | 64.7<br>39.5 | | | | | | | | 4310 | P.F8 Fig.F-13 | P.F9 Fig.F-15 |
| | | 40 | | | | | | | | 86.2<br>89.5 | 108<br>140 | 129<br>202 | | | | | 5880 | P.F8 Fig.F-14 | P.F9 Fig.F-16 |
| 12 | | 32 | 15.7<br>2.40 | 23.5<br>5.60 | 31.4<br>9.90 | 49.0<br>22.2 | 64.7<br>39.5 | 82.3<br>61.8 | 96.0<br>89.0 | | | | | | | | 4700 | P.F8 Fig.F-13 | P.F9 Fig.F-15 |
| | | 40 | | | | | | | | 129<br>201 | 161<br>315 | 194<br>455 | | | | | 6660 | P.F8 Fig.F-14 | P.F9 Fig.F-16 |

## Foot Mount Type

**Fig.F-13**

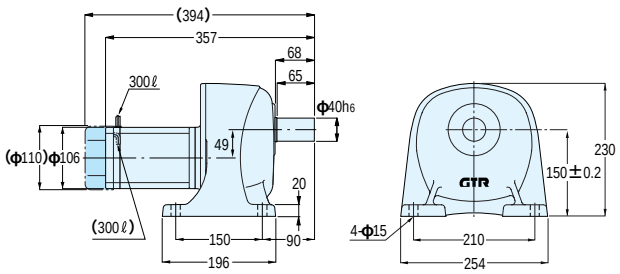
**GILM-32-4～12/1～6-T90**
CAD Data: GILM-32-T90
**(GILB-32-4～12/1～6-T90)**
(CAD Data: GILB-32-T90)




Round Weight 12kg

**Fig.F-14**

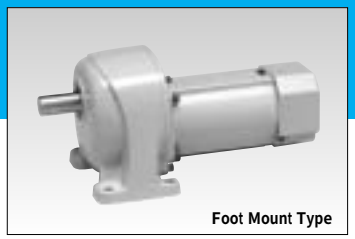
**GILM-40-4～12/8～12-T90**
CAD Data: GILM-40-T90
**(GILB-40-4～12/8～12-T90)**
(CAD Data: GILB-40-T90)

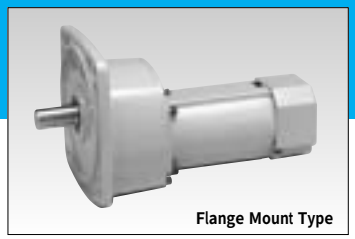



Round Weight 17kg

Model Code P.F2
Techincal Information P.F19

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type

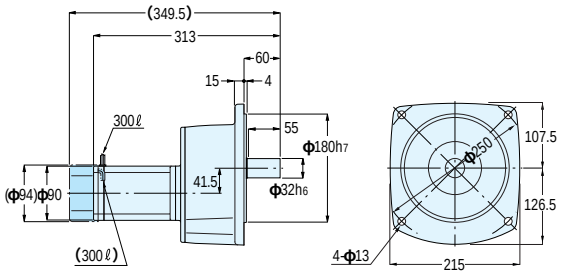

Flange Mount Type

# Flange Mount Type

**Fig.F-15**

## GIFM-32-4～12/1～6-T90
CAD Data: GIFM-32-T90

## (GIFB-32-4～12/1～6-T90)
(CAD Data: GIFB-32-T90)

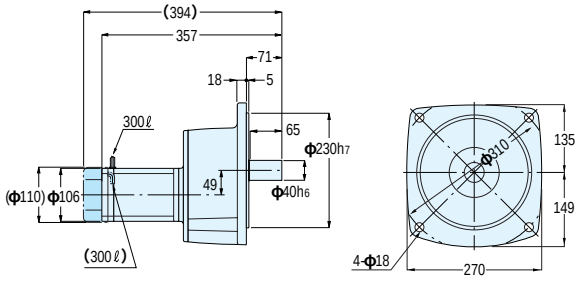



Round Weight 12kg

**Fig.F-16**

## GIFM-40-4～12/8～12-T90
CAD Data: GIFM-40-T90

## (GIFB-40-4～12/8～12-T90)
(CAD Data: GIFB-40-T90)




Round Weight 17kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake

## 3-phase 0.2kW

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

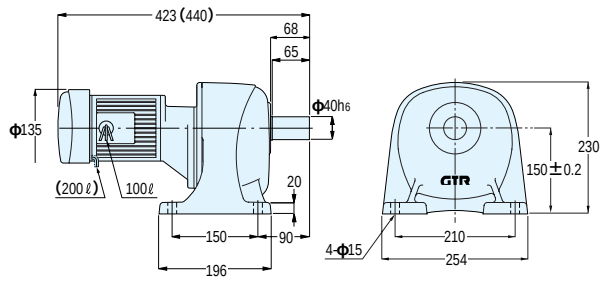
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 3-phase 0.2kW | 40 | 11.8<br>0.450 | 17.6<br>1.03 | 23.5<br>1.80 | 35.3<br>4.05 | 47.0<br>7.20 | 58.8<br>11.3 | 70.6<br>16.3 | | | | | | | ±5 | 3530 | P.F10<br>Fig.F-17 | P.F10<br>Fig.F-18 |
| 6 | | 40 | 17.6<br>1.00 | 26.5<br>2.30 | 35.3<br>4.05 | 52.9<br>9.10 | 70.6<br>16.2 | 88.2<br>25.3 | 106<br>36.3 | | | | | | | | 4610 | P.F10<br>Fig.F-17 | P.F10<br>Fig.F-18 |
| 8 | | 40 | 23.5<br>1.80 | 35.3<br>4.10 | 47.0<br>7.20 | 70.6<br>16.2 | 94.1<br>28.8 | 118<br>45.0 | 141<br>65.0 | | | | | | | | 5880 | P.F10<br>Fig.F-17 | P.F10<br>Fig.F-18 |
| 12 | | 40 | 35.3<br>4.00 | 52.9<br>9.20 | 70.6<br>16.2 | 106<br>36.5 | 141<br>64.8 | 176<br>101 | 212<br>145 | | | | | | | | 6660 | P.F10<br>Fig.F-17 | P.F10<br>Fig.F-18 |

## Foot Mount Type

**Fig.F-17**

**GILM-40-4～12/1～6-T020**
CAD Data: GILM-40-T020
**(GILB-40-4～12/1～6-T020)**
(CAD Data: GILB-40-T020)

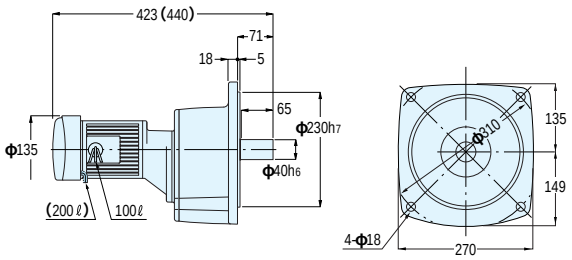



Round Weight 21kg

## Flange Mount Type

**Fig.F-18**

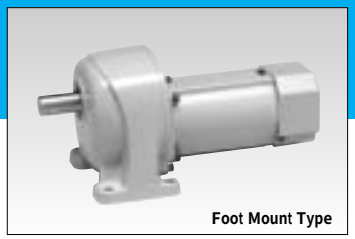
**GIFM-40-4～12/1～6-T020**
CAD Data: GIFM-40-T020
**(GIFB-40-4～12/1～6-T020)**
(CAD Data: GIFB-40-T020)

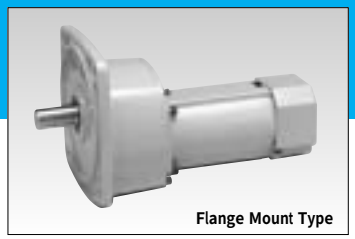



Round Weight 21kg

Model Code P.F2
Techincal Information P.F19

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mount Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake

## 1-phase 25W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

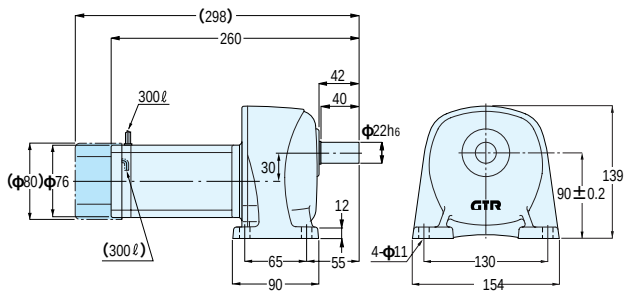
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 1-phase 25W | 22 | 1.47<br>0.070 | 2.25<br>0.150 | 2.94<br>0.275 | 4.41<br>0.625 | 5.88<br>1.13 | 7.35<br>1.75 | 8.82<br>2.53 | | | | | | | ±5 | 882 | P.F12 Fig.F-19 | P.F13 Fig.F-22 |
| | | 28 | | | | | | | | 11.8<br>5.75 | 14.7<br>9.00 | 17.6<br>13.0 | | | | | 1370 | P.F12 Fig.F-20 | P.F13 Fig.F-23 |
| | | 32 | | | | | | | | | | | 23.5<br>37.8 | 29.4<br>59.0 | 35.3<br>85.0 | | 2550 | P.F13 Fig.F-21 | P.F13 Fig.F-24 |
| 6 | | 22 | 2.16<br>0.158 | 3.33<br>0.325 | 4.41<br>0.600 | 6.57<br>1.40 | 8.82<br>2.53 | 10.8<br>3.93 | 12.7<br>5.68 | | | | | | | | 1180 | P.F12 Fig.F-19 | P.F13 Fig.F-22 |
| | | 28 | | | | | | | | 17.6<br>13.0 | 21.6<br>20.3 | 26.5<br>29.0 | | | | | 1760 | P.F12 Fig.F-20 | P.F13 Fig.F-23 |
| | | 32 | | | | | | | | | | | 35.3<br>84.8 | 44.1<br>133 | 52.9<br>191 | | 3330 | P.F13 Fig.F-21 | P.F13 Fig.F-24 |
| 8 | | 22 | 2.94<br>0.275 | 4.51<br>0.600 | 5.88<br>1.10 | 8.82<br>2.50 | 11.8<br>4.50 | 14.7<br>7.00 | 17.6<br>10.1 | | | | | | | | 1470 | P.F12 Fig.F-19 | P.F13 Fig.F-22 |
| | | 28 | | | | | | | | 23.5<br>23.0 | 29.4<br>36.0 | 35.3<br>51.8 | | | | | 2250 | P.F12 Fig.F-20 | P.F13 Fig.F-23 |
| | | 32 | | | | | | | | | | | 47.0<br>151 | 58.8<br>236 | 70.6<br>340 | | 4310 | P.F13 Fig.F-21 | P.F13 Fig.F-24 |
| 12 | | 22 | 4.31<br>0.625 | 6.66<br>1.30 | 8.82<br>2.40 | 12.7<br>5.60 | 17.6<br>10.1 | 21.6<br>15.7 | 25.5<br>22.7 | | | | | | | | 1670 | P.F12 Fig.F-19 | P.F13 Fig.F-22 |
| | | 28 | | | | | | | | 35.3<br>51.8 | 43.1<br>81.0 | 52.9<br>116 | | | | | 2550 | P.F12 Fig.F-20 | P.F13 Fig.F-23 |
| | | 32 | | | | | | | | | | | 70.6<br>340 | 88.2<br>530 | 106<br>765 | | 4700 | P.F13 Fig.F-21 | P.F13 Fig.F-24 |

## Foot Mount Type

**Fig.F-19**

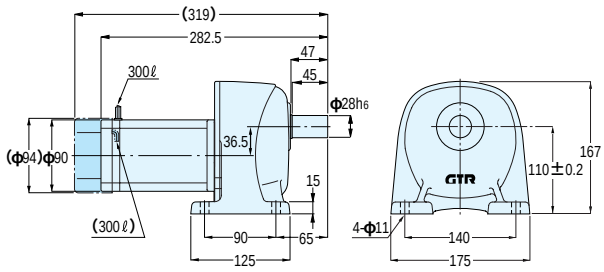
**GILM-22-4～12/1～6-S25**
CAD Data: GILM-22-S25
**(GILB-22-4～12/1～6-S25)**
(CAD Data: GILB-22-S25)




Round Weight 6kg

**Fig.F-20**

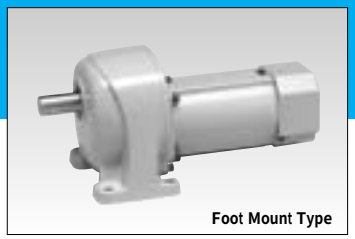
**GILM-28-4～12/8～12-S25**
CAD Data: GILM-28-S25
**(GILB-28-4～12/8～12-S25)**
(CAD Data: GILB-28-S25)

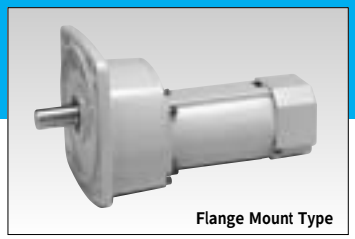



Round Weight 8kg

Model Code P.F2
Techincal Information P.F19

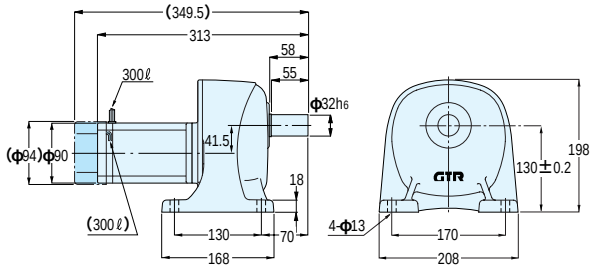
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mount Type

## Fig.F-21

**GILM-32-4～12/16～24-S25**
CAD Data: GILM-32-S25
**(GILB-32-4～12/16～24-S25)**
(CAD Data: GILB-32-S25)

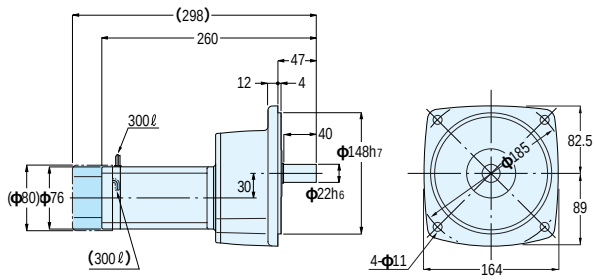



Round Weight 12kg

# Flange Mount Type

## Fig.F-22

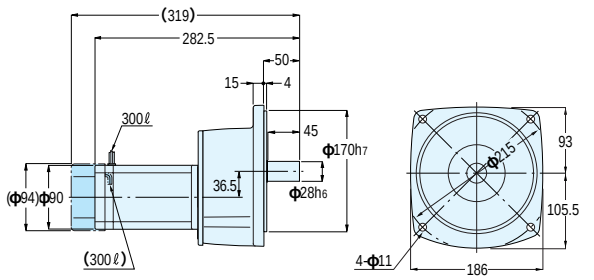
**GIFM-22-4～12/1～6-S25**
CAD Data: GIFM-22-S25
**(GIFB-22-4～12/1～6-S25)**
(CAD Data: GIFB-22-S25)




Round Weight 6kg

## Fig.F-23

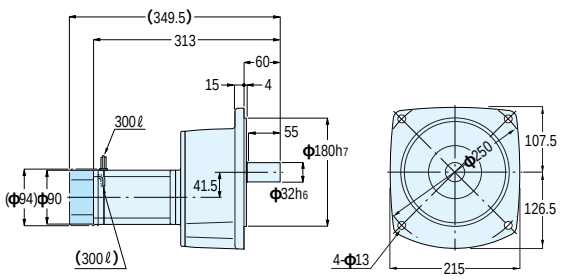
**GIFM-28-4～12/8～12-S25**
CAD Data: GIFM-28-S25
**(GIFB-28-4～12/8～12-S25)**
(CAD Data: GIFB-28-S25)




Round Weight 8kg

## Fig.F-24

**GIFM-32-4～12/16～24-S25**
CAD Data: GIFM-32-S25
**(GIFB-32-4～12/16～24-S25)**
(CAD Data: GIFB-32-S25)




Round Weight 12kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake

## 1-phase 50W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

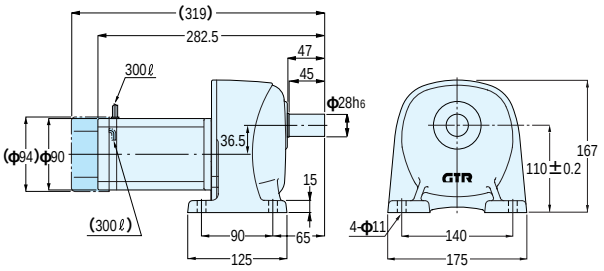
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 1-phase 50W | 28 | 2.94<br>0.140 | 4.41<br>0.300 | 5.88<br>0.550 | 8.82<br>1.25 | 11.8<br>2.25 | 14.7<br>3.50 | 17.6<br>5.05 | | | | | | | ±5 | 1370 | P.F14 Fig.F-25 | P.F15 Fig.F-28 |
| | | 32 | | | | | | | | 23.5<br>11.7 | 29.4<br>18.3 | 35.3<br>26.3 | | | | | 2550 | P.F14 Fig.F-26 | P.F15 Fig.F-29 |
| | | 40 | | | | | | | | | | | 47.0<br>76.8 | 58.8<br>120 | 70.6<br>173 | | 3530 | P.F15 Fig.F-27 | P.F15 Fig.F-30 |
| 6 | | 28 | 4.41<br>0.300 | 6.57<br>0.675 | 8.82<br>1.23 | 12.7<br>2.80 | 17.6<br>5.05 | 21.6<br>7.88 | 26.5<br>11.4 | | | | | | | | 1760 | P.F14 Fig.F-25 | P.F15 Fig.F-28 |
| | | 32 | | | | | | | | 35.3<br>26.3 | 44.1<br>41.0 | 52.9<br>59.0 | | | | | 3330 | P.F14 Fig.F-26 | P.F15 Fig.F-29 |
| | | 40 | | | | | | | | | | | 70.6<br>173 | 88.2<br>270 | 106<br>388 | | 4610 | P.F15 Fig.F-27 | P.F15 Fig.F-30 |
| 8 | | 28 | 5.88<br>0.550 | 8.82<br>1.20 | 11.8<br>2.20 | 17.6<br>5.00 | 23.5<br>9.00 | 29.4<br>14.0 | 35.3<br>20.2 | | | | | | | | 2250 | P.F14 Fig.F-25 | P.F15 Fig.F-28 |
| | | 32 | | | | | | | | 47.0<br>46.8 | 58.8<br>73.0 | 70.6<br>105 | | | | | 4310 | P.F14 Fig.F-26 | P.F15 Fig.F-29 |
| | | 40 | | | | | | | | | | | 94.1<br>308 | 118<br>480 | 141<br>690 | | 5880 | P.F15 Fig.F-27 | P.F15 Fig.F-30 |
| 12 | | 28 | 8.82<br>1.20 | 12.7<br>2.70 | 17.6<br>4.90 | 25.5<br>11.2 | 35.3<br>20.2 | 43.1<br>31.5 | 52.9<br>45.5 | | | | | | | | 2550 | P.F14 Fig.F-25 | P.F15 Fig.F-28 |
| | | 32 | | | | | | | | 70.6<br>105 | 94.1<br>164 | 106<br>236 | | | | | 4700 | P.F14 Fig.F-26 | P.F15 Fig.F-29 |
| | | 40 | | | | | | | | | | | 141<br>690 | 176<br>1080 | 212<br>1560 | | 6660 | P.F15 Fig.F-27 | P.F15 Fig.F-30 |

## Foot Mount Type

**Fig.F-25**

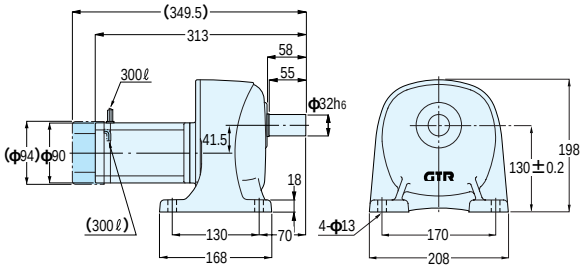
**GILM-28-4～12/1～6-S50**
CAD Data: GILM-28-S50
**(GILB-28-4～12/1～6-S50)**
(CAD Data: GILB-28-S50)




Round Weight 8kg

**Fig.F-26**

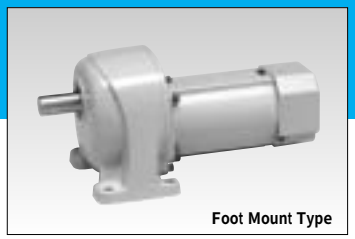
**GILM-32-4～12/8～12-S50**
CAD Data: GILM-32-S50
**(GILB-32-4～12/8～12-S50)**
(CAD Data: GILB-32-S50)

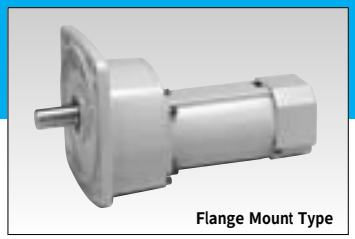



Round Weight 12kg

Model Code P.F2
Techincal Information P.F19

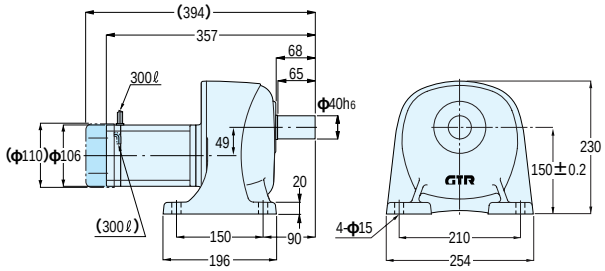
Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox


Foot Mount Type


Flange Mount Type

## Fig.F-27

**GILM-40-4～12/16～24-S50**
CAD Data: GILM-40-S50
**(GILB-40-4～12/16～24-S50)**
(CAD Data: GILB-40-S50)

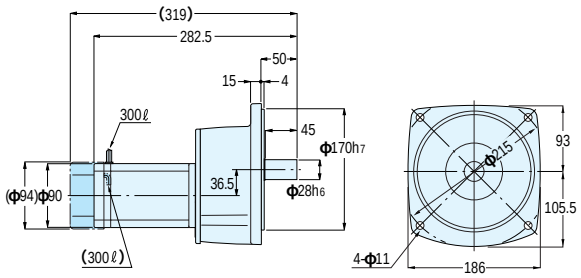



Round Weight 17kg

# Flange Mount Type

## Fig.F-28

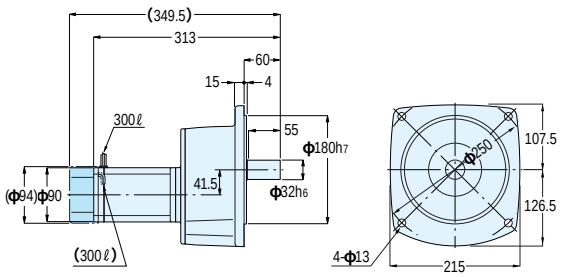
**GIFM-28-4～12/1～6-S50**
CAD Data: GIFM-28-S50
**(GIFB-28-4～12/1～6-S50)**
(CAD Data: GIFB-28-S50)




Round Weight 8kg

## Fig.F-29

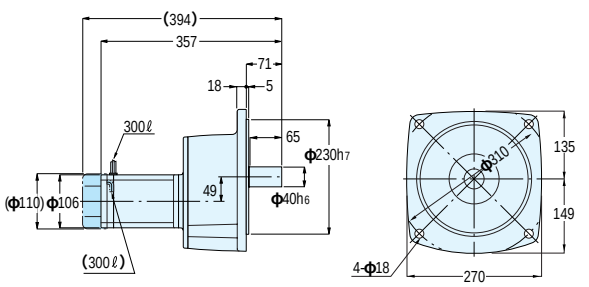
**GIFM-32-4～12/8～12-S50**
CAD Data: GIFM-32-S50
**(GIFB-32-4～12/8～12-S50)**
(CAD Data: GIFB-32-S50)




Round Weight 12kg

## Fig.F-30

**GIFM-40-4～12/16～24-S50**
CAD Data: GIFM-40-S50
**(GIFB-40-4～12/16～24-S50)**
(CAD Data: GIFB-40-S50)




Round Weight 17kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Index Gearmotor
# Index Gearmotor with Brake
## 1-phase 90W

**The values in parentheses in the Performance Table/Dimension Diagram indicate the values of gearmotors with brake.**

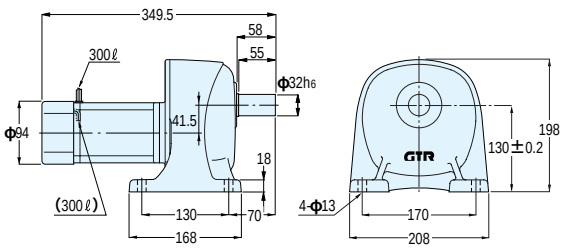
Top figure/Allowable Torque(N•m)
Bottom figure/Allowable Inertia Moment I (kg•m²)

| No. of stop | Motor Capacity | Frame Number | Nominal Cycle Time (At the input speed of 1800rpm) 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | Plotted Accuracy (minute) | Allowable O.H.L. (N) | Outer dimension Figure No. and Page GILM (GILB) | GIFM (GIFB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 1-phase 90W | 32 | 5.39<br>0.275 | 8.13<br>0.625 | 10.8<br>1.10 | 16.7<br>2.48 | 21.6<br>4.40 | 27.4<br>6.88 | 32.3<br>9.90 | | | | | | | ±5 | 2550 | P.F16 Fig.F-31 | P.F17 Fig.F-33 |
| | | 40 | | | | | | | | 43.1<br>22.4 | 53.9<br>35.0 | 64.7<br>50.5 | | | | | 3530 | P.F16 Fig.F-32 | P.F17 Fig.F-34 |
| 6 | | 32 | 8.04<br>0.600 | 11.8<br>1.40 | 15.7<br>2.48 | 24.5<br>5.55 | 32.3<br>9.90 | 41.2<br>15.5 | 48.0<br>22.3 | | | | | | | | 3330 | P.F16 Fig.F-31 | P.F17 Fig.F-33 |
| | | 40 | | | | | | | | 64.7<br>50.3 | 80.4<br>78.8 | 97.0<br>114 | | | | | 4610 | P.F16 Fig.F-32 | P.F17 Fig.F-34 |
| 8 | | 32 | 10.8<br>1.10 | 16.7<br>2.50 | 21.6<br>4.40 | 33.3<br>9.90 | 43.1<br>17.6 | 54.9<br>27.5 | 64.7<br>39.5 | | | | | | | | 4310 | P.F16 Fig.F-31 | P.F17 Fig.F-33 |
| | | 40 | | | | | | | | 86.2<br>89.5 | 108<br>140 | 129<br>202 | | | | | 5880 | P.F16 Fig.F-32 | P.F17 Fig.F-34 |
| 12 | | 32 | 15.7<br>2.40 | 23.5<br>5.60 | 31.4<br>9.90 | 49.0<br>22.2 | 64.7<br>39.5 | 82.3<br>61.8 | 96.0<br>89.0 | | | | | | | | 4700 | P.F16 Fig.F-31 | P.F17 Fig.F-33 |
| | | 40 | | | | | | | | 129<br>201 | 161<br>315 | 194<br>455 | | | | | 6660 | P.F16 Fig.F-32 | P.F17 Fig.F-34 |

## Foot Mount Type

**Fig.F-31**

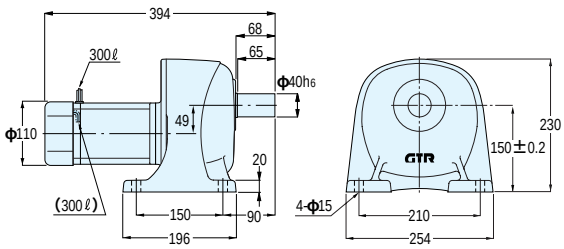
**GILM-32-4～12/1～6-S90**
CAD Data: GILM-32-S90
**(GILB-32-4～12/1～6-S90)**
(CAD Data: GILB-32-S90)




Round Weight 12kg

**Fig.F-32**

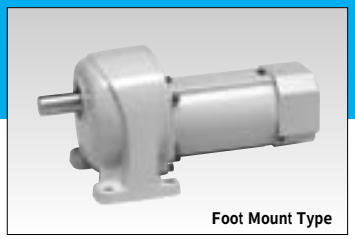
**GILM-40-4～12/8～12-S90**
CAD Data: GILM-40-S90
**(GILB-40-4～12/8～12-S90)**
(CAD Data: GILB-40-S90)

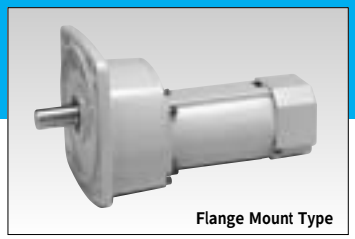



Round Weight 17kg

Model Code P.F2
Techincal Information P.F19

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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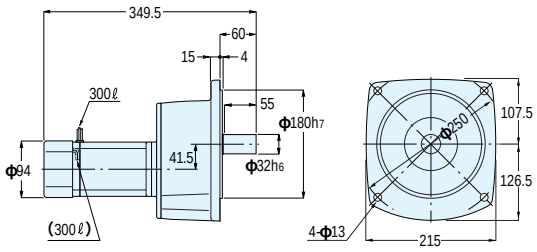

Foot Mount Type


Flange Mount Type

# Flange Mount Type

## Fig.F-33

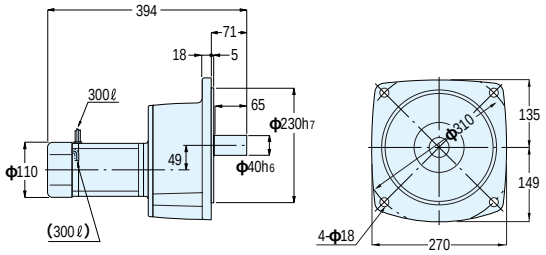
**GIFM-32-4～12/1～6-S90**
CAD Data: GIFM-32-S90
**(GIFB-32-4～12/1～6-S90)**
(CAD Data: GIFB-32-S90)




Round Weight 12kg

## Fig.F-34

**GIFM-40-4～12/8～12-S90**
CAD Data: GIFM-40-S90
**(GIFB-40-4～12/8～12-S90)**
(CAD Data: GIFB-40-S90)




Round Weight 17kg

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
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Right Angle Shaft (Performance Table/Dimension)
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Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
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GT-STEP
Index Gearmotor

# GT-STEP
## Index Gearmotor

## Technical Information

# Technical Information

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
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## Wiring

### Motor

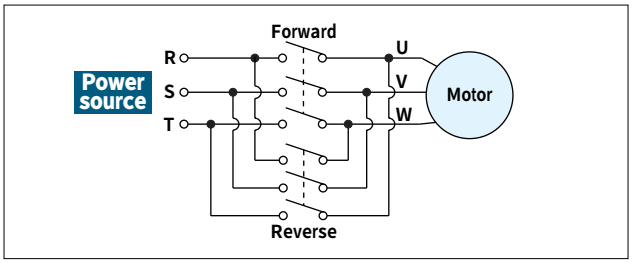
Induction motors are employed for both 3-phase and 1-phase. The reversible wiring (with 3 lead wires) is adopted to all the 1-phase motors, therefore, forward/reverse rotation can easily be switched just like 3-phase motors.

Time rated : Continuous
Protective cooling method : Totally enclosed or totally enclosed outer fan
Insulation type : E type (B type for 0.2kW)

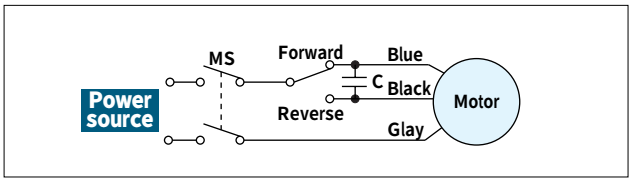
### ❶Wiring of Capacitor

In case of operating with the power supply of 1-phase 100V, connect the capacitor•C enclosed with the products, as shown in the right figure.

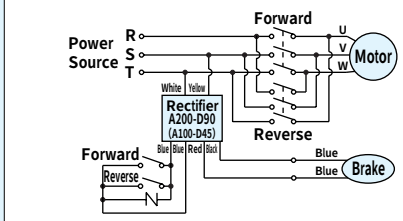
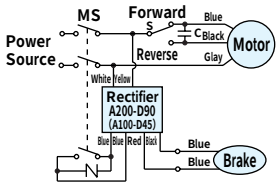
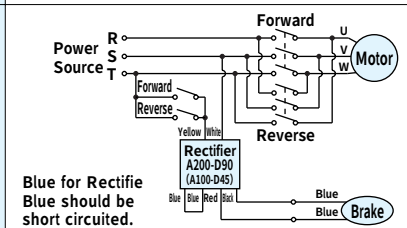
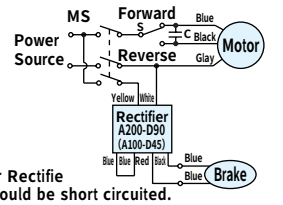
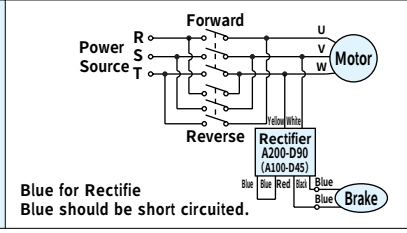
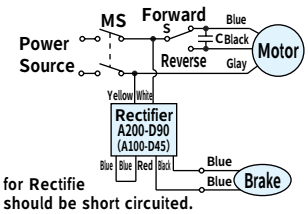
### 3-Phase Motor Motor Capacity Designation T25•T50•T90•T020




### 1-Phase Motor Motor Capacity Designation S25•S50•S90




### ❷Wiring of Gearmotor with Brake

| No. | Wiring Diagram 3-phase (200V) | Wiring Diagram 1-phase (100V) | Braking delay time (second) The values indicate interval between switching-off and braking on. They are different from braking time. |
|---|---|---|---|
| 1.DC Switching |  |  | 0.005〜0.015 |
| 2.AC Switching(A) |  Blue for Rectifie Blue should be short circuited. |  Blue for Rectifie Blue should be short circuited. | 0.03〜0.10 |
| 3.AC Switching(B) |  Blue for Rectifie Blue should be short circuited. |  Blue for Rectifie Blue should be short circuited. | 0.1〜0.2 |



M:Motor Br:Brake S: Rotation Changeover Switch C: Capacitor MS: Electro-Magnetic Switch ⊣N⊢: Surge Suppressor (option)

Note 1) For the application of vertical motion such as lifting, DC Switching wiring should be employed.
2) It is recommended to insert surge suppressor between contact points in DC Switching circuit. (Varistor Voltage 423〜517V)
3) The electro-magnetic switch with the rated current of over 6A(AC200V) is recommended for the relay for brake circuit. In case DC Switching wiring is employed, in order to sield the inductive load (DC coil), DC110V, DC13 class is recommended. Also, in case of employing a noncontact relay, it is recommended to use the rated voltage of AC240V equivalent (half-wave rectification switching available).
4) Since the rectifier contains diodes, improper wiring may cause fatal short-circuiting. Therefore, special care should be given to the wiring.

### ❸In case of changing speed by Inverter (Frequency changing device)

When using the GT-STEP in combination with inverter, abnormal temperature rise (over 80℃ on the surface of motor) may occur due to the decline of cooling function caused by slow down of fan speed. As for a gearmotors with brake, poor braking may occur due to fluctuations of voltage. To avoid this failure, be sure to bypass the inverter when wiring the brake. For more details, refer to page E44 " On Combination of Gearmotor and Inverter "

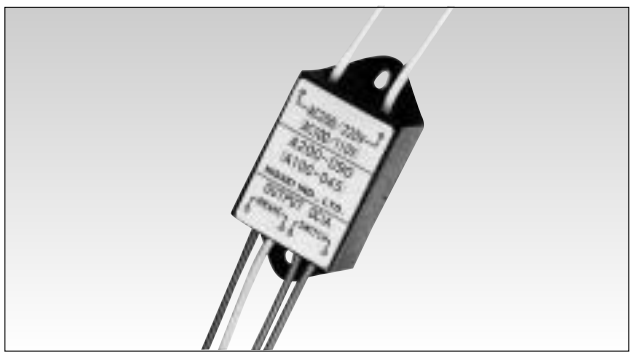
## Brake Specifications

| Items \ Motor | 3-phase | | | | 1-phase | | |
|---|---|---|---|---|---|---|---|
| | 25W | 50W | 90W | 0.2kW | 25W | 50W | 90W |
| Brake Type | "Power-off, Brake-on" Type (Spring Close) | | | | | | |
| Rated torque N•m (at 1500～1800rpm) | 0.37 | 0.37 | 0.54 | 1.57 | 0.37 | 0.37 | 0.54 |
| Voltage(Average) | DC90V | | | | DC45V | | |
| Capacity(at 75℃) (W) | 12 | | | 14 | 11 | | |
| Current(at 75℃) (A) | 0.13 | | | 0.15 | 0.25 | | |
| Allowable Total Work Emax (J) | $3\times10^7$ | | | $1.5\times10^8$ | $3\times10^7$ | | |
| Braking time (s) | 0.25～0.35 | | | 0.1～0.2 | 0.25～0.35 | | |
| Allowable Braking Frequency | 10 times/minute | | | | | | |

Note 1) Guideline values of allowable braking frequency for avoiding excessive motor temperature rise are given above. Braking frequency can be increased under light loads or where cooling of motor is sufficient enough. (Be sure to maintain the motor surface temperature below 80 ℃.)
Note 2) Avoid continuous energizing to the brake coil while the motor stops.

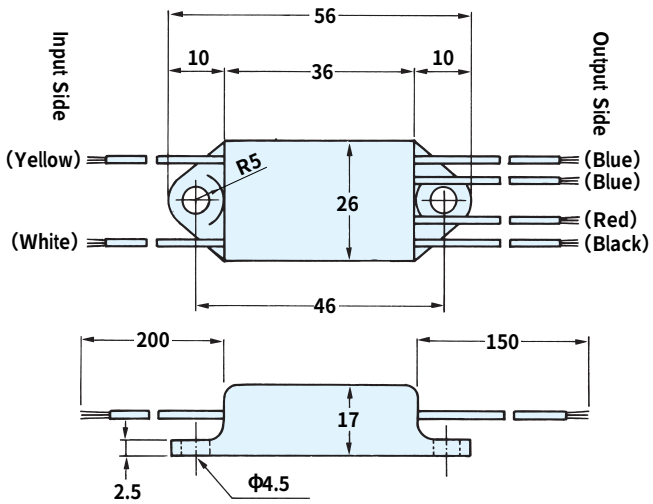
### ■Rectifier

Rectifier A200-D90（A100-45）comes with brake motor type is required for actuation of brake. Braking lag time differ depend on method for connection, so please choose according to page F20 as usage. Surge Suppressor comes to the rectifier, please add extra rectifier or moise filter（OP-ZMB）.



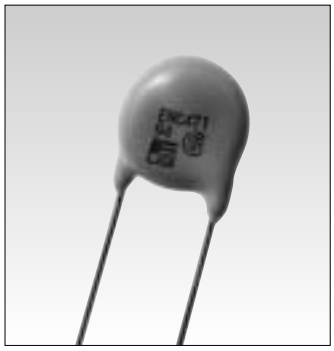
### ■A200—D90Dimension〈Round Weight 40g〉

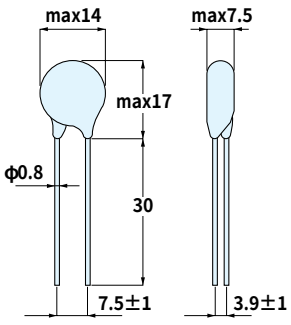
（A100—D45）




### ■Surge Suppressor (Option) OP-ENC471D-10A

For use in cutting off the sparks of a brake switch for DC switching or AC line switching.

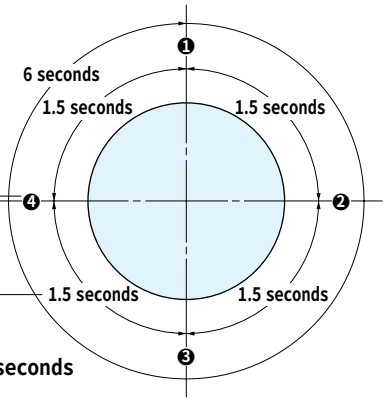




# Technical Information

## Number of Stop and Nominal Cycle Time

The“ Number of Stop ”means the times of plot (stop) during the output shaft's one rotation, while the “ Nominal Cycle Time ” means the total hour of one cycle (rotate and stop). Therefore, the value of multiplying the number of stop by the nominal cycle time equal to the time consumed(second) in the output shaft's one rotation. Also, there is a formula, namely, (Operating Time) : (Stopping Time) = 1 : 2




〈Example〉
Number of stop ：n = 4
Nominal Cycle Time：St= 1.5 seconds
(operating time = 0.5 seconds
stopping time = 1.0 seconds)
Time consumed in output shaft's one rotation：n x St= 6 seconds

Since the nominal cycle values used in the type code are the ones under the input speed of 1,800/hour, in case of operating the machine in the 50Hz area, refer to the table shown below for quick reference:

(Unit: Seconds)

| 60Hz (Nominal) | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 16 | 20 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50Hz | 1.2 | 1.8 | 2.4 | 3.6 | 4.8 | 6.0 | 7.2 | 9.6 | 12.0 | 14.4 | 19.2 | 24.0 | 28.8 |

## Cam Curve

In GT-STEP, Geneva Gear is built-in. The shift(S), velocity(V) and acceleration(A) in the operating time can be obtained by the formula below.

n……Number of stop St……Nominal Cycle Time

1) Shift〔S〕

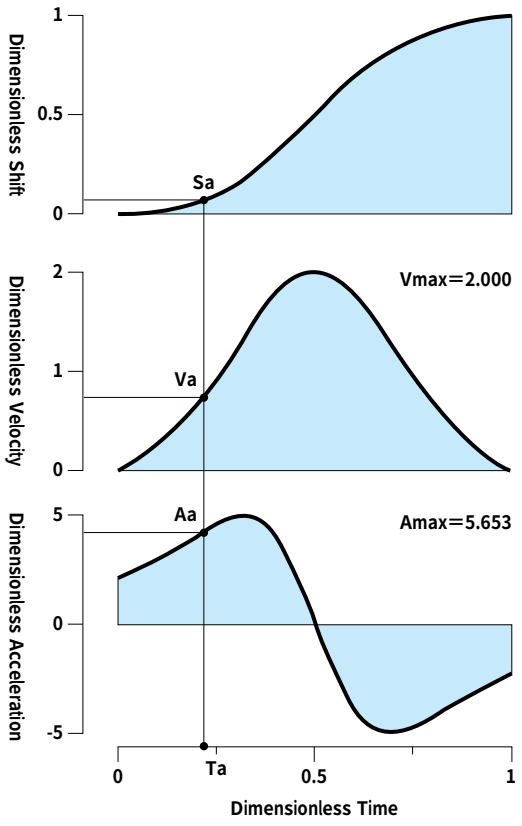
$$S=\frac{2\pi Sa}{n}\ (rad) \qquad S=\frac{360Sa}{n}\ (°)$$

2) Velocity〔V〕

$$V=\frac{6\pi Va}{n\cdot St}\ (rad/sec) \qquad V=\frac{1080Va}{n\cdot St}\ (°/s)$$

3) Acceleration〔A〕

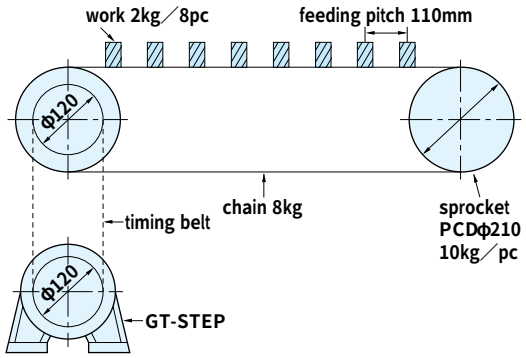
$$A=\frac{18\pi Aa}{n\cdot St^2}\ (rad/sec^2) \qquad A=\frac{3240Aa}{n\cdot St^2}\ (°/s^2)$$




Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
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# Selection Example

## ■An example of conveyor selection (1)




**conveyor feeding pitch ： 110mm**
**nominal cycle time ： 3 seconds** (operating time: 1 second, stopping time: 2 seconds)
**friction coefficient: 0.2**
Since the feeding pitch 110mm is equivalent to the sprocket's 1/6 rotation, stopping time 6 can be applied to GT-STEP.

**●Calculation for Inertia Moment**
**Refer to " calculation formula for inertia moment "on page ....**

$I_1$ of sprocket can be obtained by:

$$I_1=\frac{1}{2}\times M\times\left(\frac{D^2}{2}\right)\times n=\frac{1}{2}\times 10\times\left(\frac{0.21}{2}\right)^2\times 2=0.1103\,(kg\cdot m^2)$$

$I_2$ of chain can be obtained by:

$$I_2=M\times\left(\frac{D}{2}\right)^2=8\times\left(\frac{0.21}{2}\right)^2=0.0882\,(kg\cdot m^2)$$

$I_3$ of work can be obtained by:

$$I_3=M\times\left(\frac{D}{2}\right)^2\times n=2\times\left(\frac{0.21}{2}\right)^2\times 8=0.1764\,(kg\cdot m^2)$$

Total I of conveyor can be obtained by:

$$I=0.1103+0.0882+0.1764=0.375\,(kg\cdot m^2)$$

**●Calculation for Torque**
Supposing the friction coefficient of conveyor is 0.2, the load torque(T) can be obtained:

$$T=9.8\times(2\times 8+8+10\times 2)\times 0.2\times\frac{210}{2\times 1000}=9.1\,(N\cdot m)$$

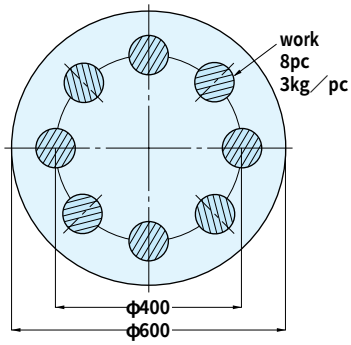
**●Calculation for O.H.L.** **Refer to " O.H.L. " on page ...**
Supposing the load point of O.H.L. is at the center of the shaft
O.H.L. of the load can be obtained by:

$$O.H.L.=\frac{T\times K_1\times K_2}{R}=\frac{9.1\times 1.0\times 1.0}{\frac{120}{2\times 1000}}=152\,(N)$$

| We obtained: | Nominal Cycle Time : | 3 seconds |
|---|---|---|
| | Number of Stop: | 6 |
| | Inertia Moment: | 0.375 (kg·m²) |
| | Torque: | 9.1 (N·m) |
| | O.H.L. | 152 (N) |

Judging from these values, the most appropriate model is:
**GILM-28-6/3-T50**

## ■An example of Turntable Selection (2)




**Weight of Turntable：40kg**
**Number of Stop：8**
**Nominal Cycle Time：3 seconds** (operating time: 1 second, stopping time: 2 seconds)
**Friction Coefficient：0.05**
Supposing the turntable is sustained by the thrust bearing of 100mm diameter rolling unit.

**●Calculation for Inertia Moment**
**Refer to " calculation formula for inertia moment "on page ....**

$I_1$ of table can be obtained by:

$$I_1=\frac{1}{2}\times M\times\left(\frac{D}{2}\right)^2=\frac{1}{2}\times 40\times\left(\frac{0.6}{2}\right)^2=1.8\,(kg\cdot m^2)$$

$I_2$ of work can be obtained by:

$$I_2=M\times R^2\times n=3\times 0.2^2\times 8=0.96\,(kg\cdot m^2)$$

Total I of Turntable can be obtained by:

$$I=1.8+0.96=2.76\,(kg\cdot m^2)$$

**●Calculation for Torque**
The load torque (T) can be, Obtained

$$T=9.8\times(40+3\times 8)\times\frac{100}{2\times 1000}\times 0.05=1.6\,(N\cdot m)$$

| We obtained: | Nominal Cycle Time : | 3 seconds |
|---|---|---|
| | Number of Stop: | 8 |
| | Inertia Moment: | 2.76 (kg·m²) |
| | Torque: | 1.6 (N·m) |

Judging from these values, the most appropriate model is:
**GIFM-28-8/3-T50**

# Technical Information



## Allowable Inertia Moment I

When operating gearmotor under high load inertia, critical torque may arise transiently at starting (or at stopping in gearmotors with brake). And this may cause unexpected accident and failure such as damage to the gear, etc. Therefore, be sure to operate gearmotor within the allowable value in the performance table.

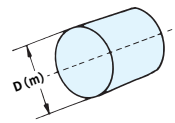
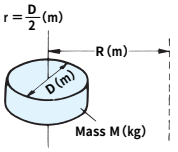
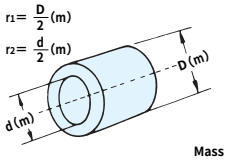
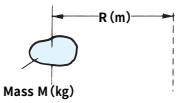
### ❶Calculation Method for the Inertia Moment

The inertia moment I (kg•m²)of SI Unit can be converted into the GD²(kgf•m²) of gravimetric unit with the following formula:

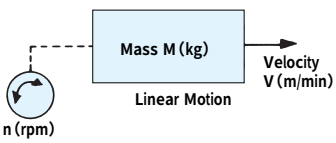
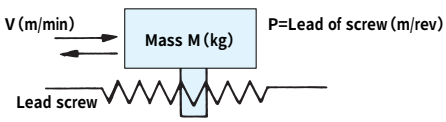
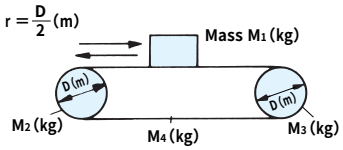
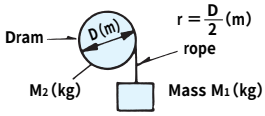
$$I = \frac{GD^2}{4}$$

G : Gravity (kgf)
D : Diameter of Rotation (m)
I : Inertia Moment (kg•m²)

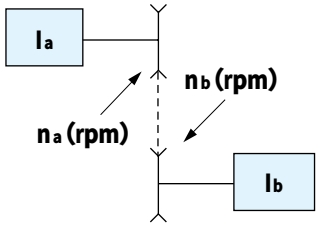
## Inertia Moment I in Rotating Object

| When the center of rotation is concentric with the center of gravity | | When the center of rotation is not concentric with the center of gravity | |
|---|---|---|---|
| | S I Unit | | S I Unit |
|  | $I = \frac{1}{2} Mr^2$ (kg•m²) |  | $I = \frac{1}{2} Mr^2 + MR^2$ (kg•m²) |
|  | $I = \frac{1}{2} M(r_1^2 + r_2^2)$ (kg•m²) |  | (when you can ignore size) $I = MR^2$ (kg•m²) |

## Inertia Moment I in case of Linear Motion

| | | S I Unit |
|---|---|---|
| Normal Use |  | $I = \frac{1}{4} M \cdot \left(\frac{V}{\pi \cdot n}\right)^2$ (kg•m²) |
| Use in Horizontal Movement (Mass driven by lead screw) |  | $I = \frac{1}{4} M \cdot \left(\frac{P}{\pi}\right)^2 = \frac{1}{4} M \cdot \left(\frac{V}{\pi \cdot n}\right)^2$ (kg•m²) |
| Use in Horizontal Movement ( Conveyors, etc.) |  | $I = M_1r^2 + \frac{1}{2} M_2r^2 + \frac{1}{2} M_3r^2 + M_4r^2$ (kg•m²) |
| Use in Vertical Movement (cranes, winches, etc.) |  | $I = M_1r^2 + \frac{1}{2} M_2r^2$ (kg•m²) |

## Conversion of Inertia Moment in case of Speed Ratio




The inertia moment $I_b$ of the load can be converted into the value at the $n_a$ shaft as follows:

$$I = I_a + \left(\frac{n_b}{n_a}\right)^2 \times I_b$$

## Overhung Load (O.H.L.)

An overhung load is a suspending load imposed on a shaft. In the coupling of reducer shaft and other machine, if chains, belts and gears are used, this O.H.L. must be taken into consideration.

Be sure that the OHL value calculated by the formula below should not exceed the allowable OHL value listed in the performance table.

$$O.H.L. = \frac{T \times K_1 \times K_2}{R} \ (N)$$

T : Torque imposed on reducer shaft (N•m)
R : Pitch Circle Radius(m) of sprocket, pulley, gear, etc. attached to reducer shaft.
$K_1$ : Factor by the connecting method (Refer to Table-1)
$K_2$ : Factor by the load point (Refer to Table-2)

## Factor $K_1$

〈Table−1〉

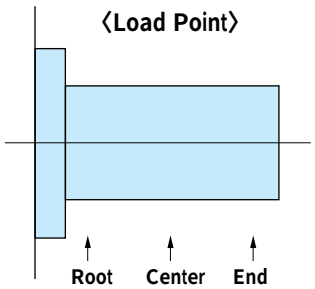
| Connecting Method | $K_1$ |
|---|---|
| Chain, Timing Belt | 1.00 |
| Gear | 1.25 |
| V-Belt | 1.50 |

## Factor $K_2$

〈Table−2〉

| Load Point | $K_2$ |
|---|---|
| Root of shaft | 0.75 |
| Center of shaft | 1.00 |
| End of shaft | 1.50 |

〈Load Point〉




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KOMPASS®
Gear Box

# KOMPASS®
# Bevel gear boxes

## ■Standard Specifications (Compass)

| Type | | K Type | | KN Type |
|---|---|---|---|---|
| Frame Number | | 04, 06, 08 | 10, 15, 20 | 19, 25, 32, 40 |
| Reduction Ratio | | 1:1 | 1:1, 1:2 | |
| Structure | Reduction Method | Grease Lubrication (Applied to gear tooth) | Grease Lubrication | Oil Lubrication |
| | Case Material | Resin | Aluminium Die-Casting | Cast Iron |
| | Inner Gear | Straight Bevel Gear | Spiral Bevel Gear | |
| Painting | Painting Method | No Painting | Anion Painting, Acrylic Paint | |
| | Color | | Grey (Mansel value: 9B6/0.5) | |
| Mounting Direction | | No restriction in mounting angle(horizontally, vertically, incline, etc.) | | Horizontal Type, Vertical Type (Note) |
| Ambient Condition | Ambient Temperature | −10°C to 40°C | | |
| | Ambient Humidity | 80% max. | | |
| | Altitude | 1,000m max | | |
| | Atmosphere | Well ventilated place free from corrosive gas, explosive gas, vapor and/or dust. | | |
| | Installation Location | Indoors | | |

Note) For the shaft positioning and shaft positioning codes of the horizontal and vertical type, refer to page G15.

# Characteristics

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
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Gearmotor with Clutch /Brake
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## ■K-Type (Metal Type)

### ❶ Offering Reasonable Price・Simple・Quick Delivery

Simple Structure, reasonable price and short delivery of 3 days

### ❷ Direction-Free Mounting

This product can be mounted to any direction.

### ❸ Ready for Use Without Any Extra Work

We ship the product after giving grease lubrication to the gear tooth, therefore it is ready to use upon arrival.

### ❹ Variation

●Diameter of the shaft φ4, φ6, φ8
●Reduction Ratio 1／1

## ■K-Type (Bearing Type)

### ❶ Compact

Simple Structure and Aluminium Die-Casting Case

### ❷ Low Noise & High Efficiency

Employing the Spiral Bevel Gear made of special steel of quench hardening by carburizing

### ❸ Direction-Free Mounting

Mountable to any direction and easy mounting

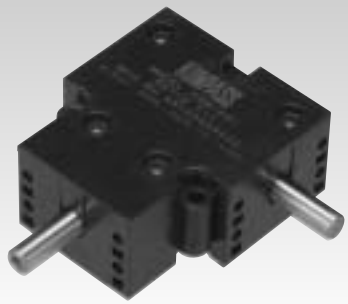
### ❹ Maintenance-free

High class grease lubrication on shipment

### ❺ Reduction Ratio

Selectable gear ratio of either 1/1 or 1/2 according to the using purpose

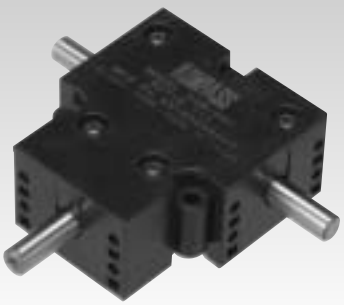
**KBM Type**



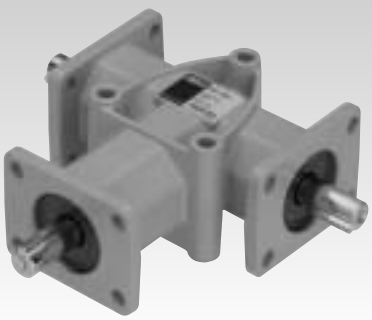
**KB Type**



**KCM Type**



**KC Type**



## ■Lubrication

Lubricant is filled with regulated amount at the moment of shipment from factory.

| Model | General amount of oil | Class of grease | |
|---|---|---|---|
| K10 Type<br>K15 Type<br>K20 Type | 10g<br>30g<br>50g | Grease | Type Li-extreme-pressure additive No.GI-00. |

❶ **Painted color:**
Grey (Mansel value 9B6/0.5)

❷ **Key Dimension:**
New JIS Key is adopted.
(JIS B1301-1976(standard))

## ■KN Type

### ❶ Strong

Employing high class cast iron for casing and taper roller bearing for bearing

### ❷ Low Noise & High Efficiency

Employing the Spiral Bevel Gear made of special steel of quench hardening by carburizing

### ❸ Direction-Free Mounting

Mountable to any direction according to the selected shaft positioning However, it may possible that the model cannot be used with the standard specification. For more details, refer to page G36.

### ❹ Filled up lubrication

High class oil is filled up before shipment

### ❺ Reduction Ratio

Selectable gear ratio of 1/1 or 1/2 according to the using purpose

**KNB Type**



**KNC Type**



## ■Lubrication

Lubricant is filled with regulated amount at the moment of shipment from factory.

| Model | General amount of oil | Class of grease | |
|---|---|---|---|
| KN-19 Type | 0.3 L | Oil | JIS Gear Oil Industrial Use Class 2 |
| KN-25 Type | 0.7 L | | |
| KN-32 Type | 1.0 L | | |
| KN-40 Type | 1.5 L | | |

❶ **Painted color:**
Grey (Mansel value 9B6/0.5)

❷ **Key Dimension:**
New JIS Key is adopted.
(JIS B1301-1976(standard))

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KOMPASS®
Gear Box

# Bevel gear boxes K Type

## Model • Type Designation
## Performance Table
## Dimension diagram

# Model and Type Designation

Bevel gear boxes (KOMPASS) K-Type are classified by codes as shown below.
When ordering/inquiring, indicate these codes.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
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## K-Type (Metal Type)

**K B M – 04 1**

- **1** — Reduction Ratio 1 : 1
- **04** — Frame No. and Diameter of Output shaft
  - 04 : φ4
  - 06 : φ6
  - 08 : φ8
- **M** — Bearing type M : Metal Type
- **B** — Classification by Form
  - B : Y shaft with one direction
  - C : Y shaft with two one direction
- **K** — Type

## K-Type (Bearing Type)

**K B – 10 1**

- **1** — Reduction Ratio
  - 1 : 1/1
  - 2 : 1/2 (reduce from shaft X to Y)
- **10** — Frame No. and Diameter of Output shaft
  - 10 : φ10
  - 15 : φ15
  - 20 : φ20
- **B** — Classification by Form
  - B : Y shaft with one direction
  - C : Y shaft with two one direction
- **K** — Type

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# Bevel gear boxes K Type (Metal Type)

## Shaft Diameter φ4・φ6・φ8

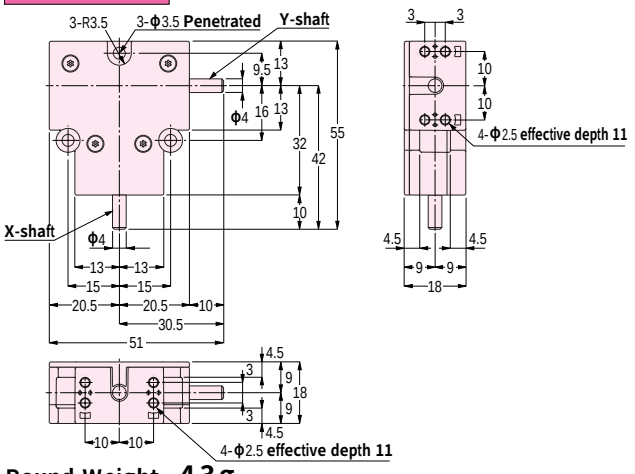


| Reduction Ratio | Type Designation | Spec. Designation | "X" Shaft Rotation Speed (rpm) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 50 | 100 | 200 | 250 | 300 | 400 | 500 |
| 1 : 1 | KBM-041<br>KCM-041 | Allowable Torque on X and Y Shaft (N・cm) {kgf・cm} | 9.8<br>{1.0} | 9.8<br>{1.0} | 9.6<br>{0.98} | 9.5<br>{0.97} | 9.4<br>{0.96} | 9.3<br>{0.95} | 9.1<br>{0.93} |
| | KBM-061<br>KCM-061 | Allowable Torque on X and Y Shaft (N・cm) {kgf・cm} | 39.2<br>{4.0} | 39.2<br>{4.0} | 38.5<br>{3.93} | 38.2<br>{3.90} | 37.9<br>{3.87} | 37.2<br>{3.80} | 36.5<br>{3.72} |
| | KBM-081<br>KCM-081 | Allowable Torque on X and Y Shaft (N・cm) {kgf・cm} | 78.4<br>{8.0} | 78.4<br>{8.0} | 77.0<br>{7.86} | 76.4<br>{7.80} | 75.7<br>{7.72} | 74.4<br>{7.59} | 73.1<br>{7.46} |

(Notes)

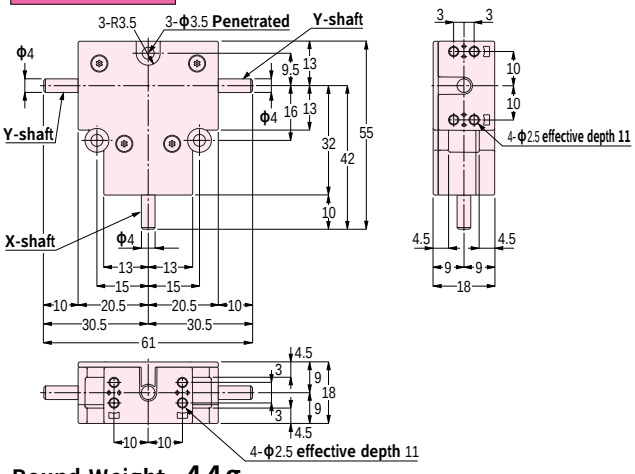
1. Be sure to use the product within the allowable value.
2. Values in this performance table are the ones when the service factor is 1. In case of using the product under different condition, correct the load torque referring the service factor in the Table-1 on page G32.
3. The KBM/KCM types are light and compact type gear box. When higher strength, rotation and speed are to be required in your operation, study to introduce the KB/KC types.
4. Be sure that the overhung load (O.H.L.)and thrust load should never be imposed to the shaft of gear box. In case the overhung load and thrust load are imposed, support the both edges of sprocket and gear with a bearing such as pillow, etc., in order to avoid these loads. (Refer to the Figure-1 on page G32.)
5. Never use the product under the condition of sudden reverse rotation by plugging or of heavy shock load may occur. In such situations, study to introduce the KB/KC Types.

**Fig.G-1** KBM-041 CAD data: KBM-041



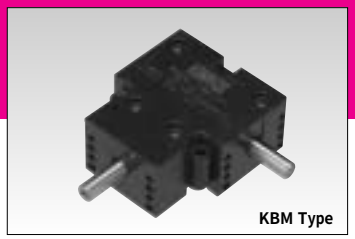

Round Weight 43g

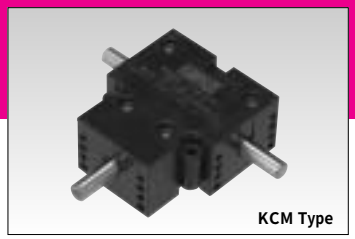
**Fig.G-2** KCM-041 CAD data: KCM-041



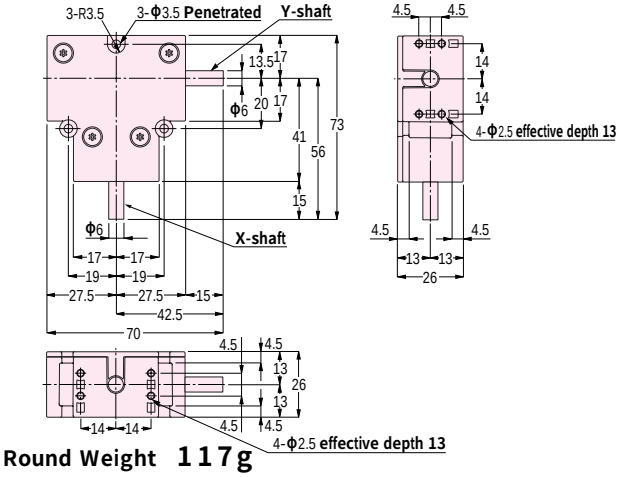

Round Weight 44g

Model Code P.G6
Techincal Information P.G32～G35


KBM Type

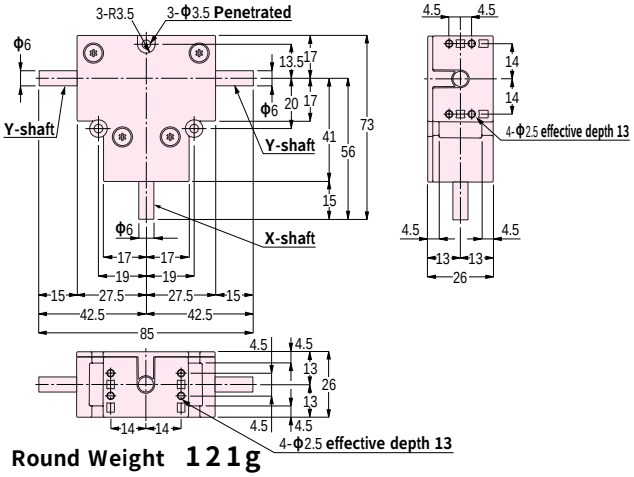

KCM Type

## Fig.G-3 KBM-061 CAD data: KBM-061



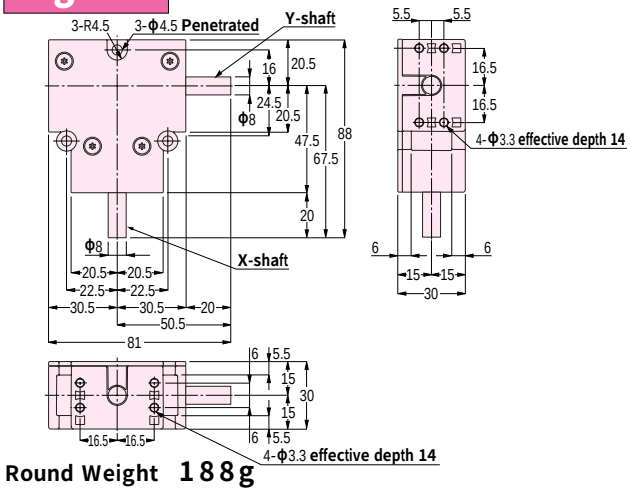

Round Weight 117g

## Fig.G-4 KCM-061 CAD data: KCM-061



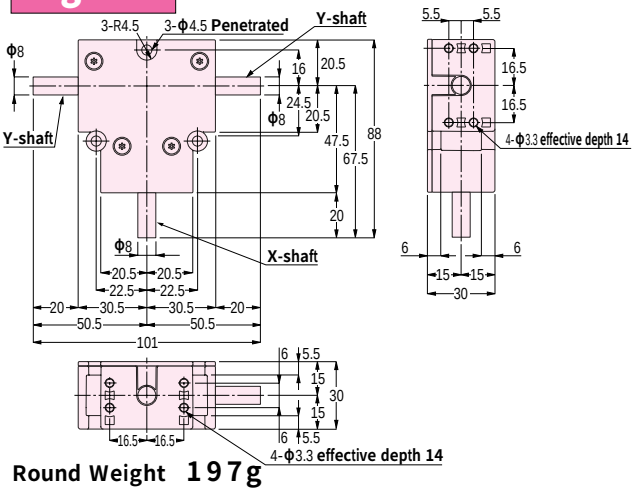

Round Weight 121g

## Fig.G-5 KBM-081 CAD data: KBM-081




Round Weight 188g

## Fig.G-6 KCM-081 CAD data: KCM-081




Round Weight 197g

Parallel Shaft (Performance Table/Dimension)
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# Bevel gear boxes
# K Type (Bearing Type)
## Shaft Diameter φ10・φ15・φ20



| Reduction Ratio | Type Designation | Spec. Designation | "X" Shaft Rotation Speed (rpm) 50 | 100 | 200 | 300 | 400 | 600 | 900 | 1200 | 1500 | 1800 | 2500 | 3600 | Allowable Thrust Load(N) (kgf) X Shaft | Y Shaft |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 : 1 | KB-101 KC-101 | Allowable Transfer Capacity (kW) | 0.01 | 0.02 | 0.05 | 0.07 | 0.09 | 0.14 | 0.20 | 0.26 | 0.31 | 0.35 | 0.38 | 0.44 | 59 {6} | 69 {7} |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 2.35 {0.24} | 2.35 {0.24} | 2.25 {0.23} | 2.25 {0.23} | 2.16 {0.22} | 2.16 {0.22} | 2.06 {0.21} | 2.06 {0.21} | 1.96 {0.20} | 1.86 {0.19} | 1.47 {0.15} | 1.18 {0.12} | | |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 78 {8} | 78 {8} | 78 {8} | 78 {8} | 69 {7} | 69 {7} | 69 {7} | 69 {7} | 69 {7} | 59 {6} | 49 {5} | 39 {4} | | |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 127 {13} | 127 {13} | 118 {12} | 118 {12} | 118 {12} | 118 {12} | 108 {11} | 108 {11} | 108 {11} | 98 {10} | 78 {8} | 59 {6} | | |
| | KB-151 KC-151 | Allowable Transfer Capacity (kW) | 0.05 | 0.09 | 0.18 | 0.27 | 0.35 | 0.51 | 0.75 | 0.96 | 1.16 | 1.30 | 1.44 | 1.66 | 98 {10} | 118 {12} |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 8.82 {0.90} | 8.82 {0.90} | 8.62 {0.88} | 8.53 {0.87} | 8.33 {0.85} | 8.13 {0.83} | 7.94 {0.81} | 7.64 {0.78} | 7.35 {0.75} | 6.86 {0.70} | 5.49 {0.56} | 4.41 {0.45} | | |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 255 {26} | 255 {26} | 255 {26} | 245 {25} | 245 {25} | 235 {24} | 225 {23} | 216 {22} | 216 {22} | 186 {19} | 157 {16} | 127 {13} | | |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 294 {30} | 294 {30} | 284 {29} | 284 {29} | 274 {28} | 265 {27} | 265 {27} | 255 {26} | 245 {25} | 216 {22} | 176 {18} | 147 {15} | | |
| | KB-201 KC-201 | Allowable Transfer Capacity (kW) | 0.09 | 0.18 | 0.36 | 0.52 | 0.68 | 0.95 | 1.38 | 1.78 | 2.15 | 2.50 | 2.55 | 2.95 | 196 {20} | 274 {28} |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 17.6 {1.80} | 17.6 {1.80} | 17.2 {1.75} | 16.7 {1.70} | 16.2 {1.65} | 15.2 {1.55} | 14.7 {1.50} | 14.2 {1.45} | 13.7 {1.40} | 13.2 {1.35} | 9.80 {1.00} | 7.84 {0.80} | | |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 353 {36} | 353 {36} | 343 {35} | 333 {34} | 333 {34} | 323 {33} | 314 {32} | 304 {31} | 294 {30} | 265 {27} | 216 {22} | 176 {18} | | |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 529 {54} | 529 {54} | 519 {53} | 510 {52} | 500 {51} | 490 {50} | 470 {48} | 451 {46} | 441 {45} | 392 {40} | 314 {32} | 255 {26} | | |
| 1 : 2 | KB-102 KC-102 | Allowable Transfer Capacity (kW) | 0.005 | 0.01 | 0.02 | 0.03 | 0.04 | 0.06 | 0.09 | 0.12 | 0.14 | 0.16 | 0.17 | 0.20 | 59 {6} | 69 {7} |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 2.06 {0.21} | 2.06 {0.21} | 2.06 {0.21} | 1.96 {0.20} | 1.96 {0.20} | 1.96 {0.20} | 1.86 {0.19} | 1.86 {0.19} | 1.76 {0.18} | 1.67 {0.17} | 1.27 {0.13} | 1.08 {0.11} | | |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 88 {9} | 88 {9} | 88 {9} | 88 {9} | 88 {9} | 78 {8} | 78 {8} | 78 {8} | 78 {8} | 69 {7} | 59 {6} | 49 {5} | | |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 137 {14} | 137 {14} | 137 {14} | 127 {13} | 127 {13} | 127 {13} | 127 {13} | 118 {12} | 118 {12} | 108 {11} | 88 {9} | 69 {7} | | |
| | KB-152 KC-152 | Allowable Transfer Capacity (kW) | 0.02 | 0.04 | 0.08 | 0.13 | 0.17 | 0.25 | 0.36 | 0.46 | 0.55 | 0.62 | 0.69 | 0.80 | 98 {10} | 118 {12} |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 8.43 {0.86} | 8.43 {0.86} | 8.23 {0.84} | 8.13 {0.83} | 8.04 {0.82} | 7.84 {0.80} | 7.55 {0.77} | 7.25 {0.74} | 7.06 {0.72} | 6.57 {0.67} | 5.29 {0.54} | 4.21 {0.43} | | |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 255 {26} | 255 {26} | 255 {26} | 245 {25} | 245 {25} | 235 {24} | 225 {23} | 216 {22} | 216 {22} | 186 {19} | 157 {16} | 127 {13} | | |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 294 {30} | 294 {30} | 284 {29} | 284 {29} | 274 {28} | 265 {27} | 265 {27} | 255 {26} | 245 {25} | 216 {22} | 176 {18} | 147 {15} | | |
| | KB-202 KC-202 | Allowable Transfer Capacity (kW) | 0.05 | 0.10 | 0.19 | 0.28 | 0.37 | 0.53 | 0.77 | 0.99 | 1.15 | 1.31 | 1.40 | 1.57 | 196 {20} | 274 {28} |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 19.6 {2.00} | 19.6 {2.00} | 18.6 {1.90} | 18.1 {1.85} | 17.6 {1.80} | 17.0 {1.73} | 16.4 {1.67} | 15.7 {1.60} | 14.7 {1.50} | 13.9 {1.42} | 10.8 {1.10} | 8.33 {0.85} | | |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 372 {38} | 372 {38} | 363 {37} | 363 {37} | 353 {36} | 343 {35} | 333 {34} | 323 {33} | 314 {32} | 274 {28} | 235 {24} | 186 {19} | | |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 588 {60} | 588 {60} | 578 {59} | 568 {58} | 559 {57} | 539 {55} | 529 {54} | 510 {52} | 490 {50} | 441 {45} | 363 {37} | 294 {30} | | |

(Notes)

❶ Be sure to use the product within the allowable value. In case of the ratio of (1 : 2), speed reduction is applied to Y shaft.

❷ Values in this performance table are the ones when the service factor is 1. In case of using the product under different condition, refer to the " Service Factor " in the Table-2 on page G33.

❸ An overhung load(O.H.L.) means the allowable load imposed on the center of the shaft. In case of using the product under different condition, refer to the factor K1 and K2 in the Table-3 and 4 on page G33.

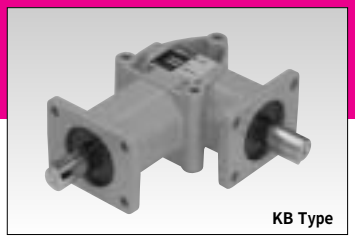
❹ When using the type with the ratio of (1 : 2) with increased speed(Increasing speed from Y shaft to X shaft.), the torque on the X shaft become 1/2 of the value in the performance table(torque on the Y shaft).

❺ The torque at Y shaft in the KC Type is the sum of right and left shaft.

❻ The O.H.L. value at Y shaft in the KC Type is the sum of right and left shaft.

Model Code P.G6

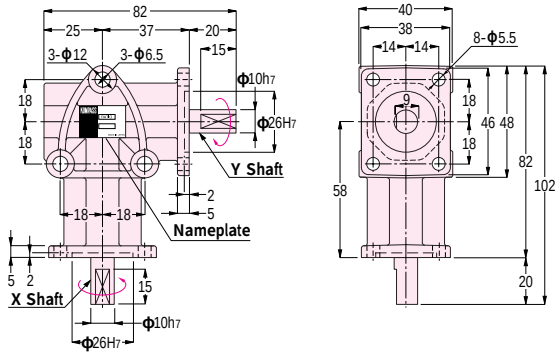
Techincal Information P.G32～G35


KB Type


KC Type

## Fig.G-7 KB-101 KB-102

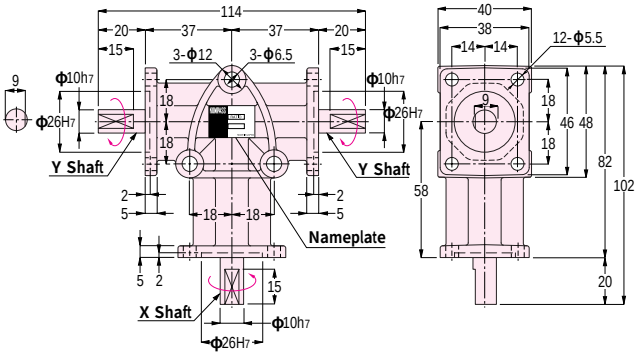
CAD data: KB-10




Round Weight 0.4kg

## Fig.G-8 KC-101 KC-102

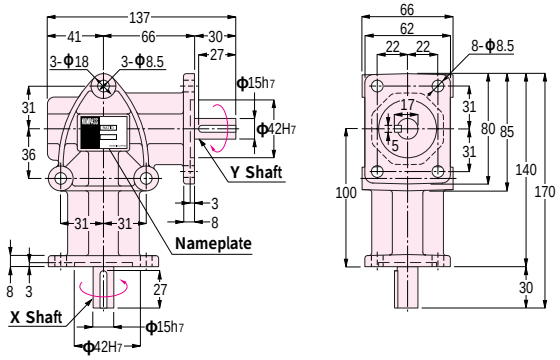
CAD data: KC-10




Round Weight 0.5kg

## Fig.G-9 KB-151 KB-152

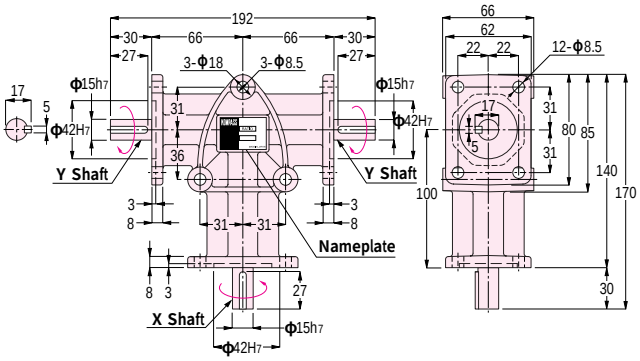
CAD data: KB-15




Round Weight 1.8kg

## Fig.G-10 KC-151 KC-152

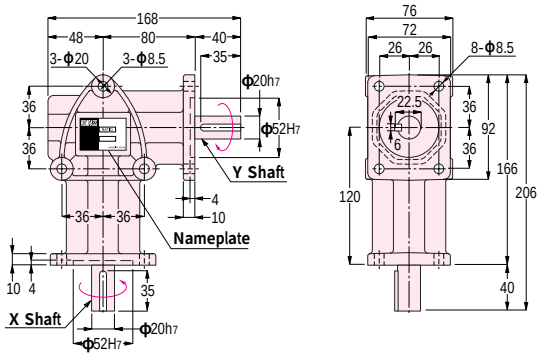
CAD data: KC-15




Round Weight 2.2kg

## Fig.G-11 KB-201 KB-202

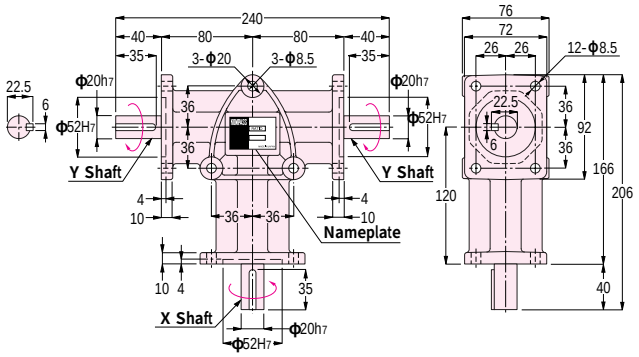
CAD data: KB-20




Round Weight 3.1kg

## Fig.G-12 KC-201 KC-202

CAD data: KC-20




Round Weight 3.4kg

(Note)❶The rotation direction shown by arrow just indicates the directional relation between the shafts, and does not limit the rotation direction. Therefore, both forward and reverse rotation can be feasible.
❷Right-hand rotation for X-shaft against left-hand rotation for Y-shaft is regarded as standard.
❸The key groove for X shaft and that for Y shaft are not necessarily aligned.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

KOMPASS®
Gear Box

# Bevel gear boxes KN Type

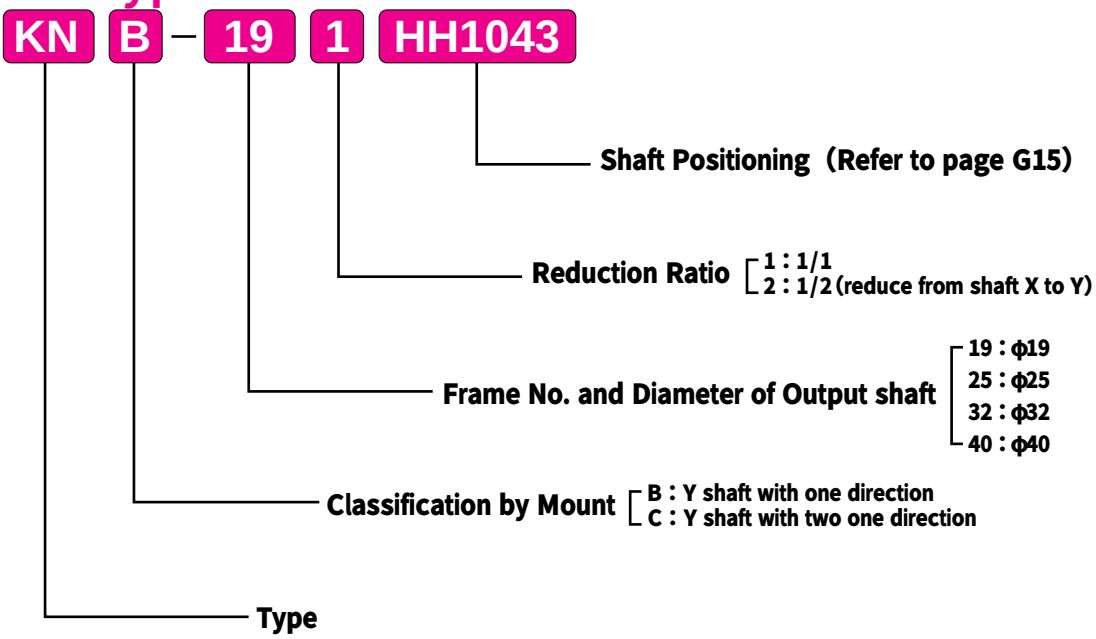
## Model • Type Designation
## Performance Table
## Dimension diagram

# Model and Type Designation

Bevel gear boxes (KOMPASS) KN-Type are classified by codes as shown below.
When ordering/inquiring, indicate these codes.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

## KN-Type



# KN Type
# Shaft Positioning Code

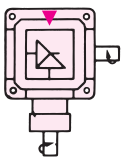
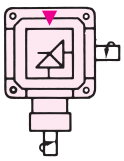
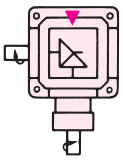
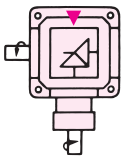
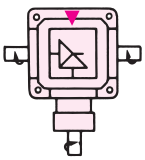
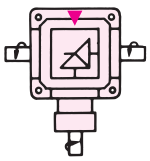
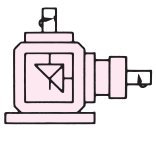
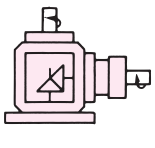
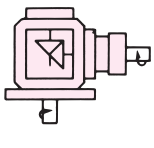
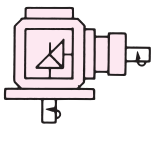
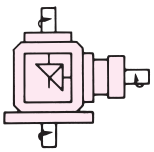
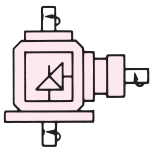
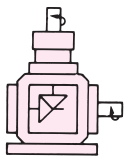
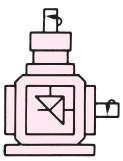
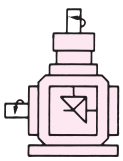
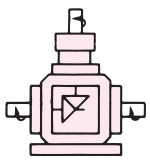
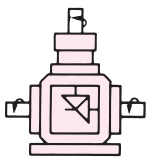
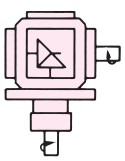
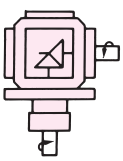
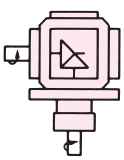
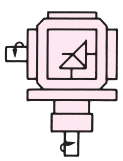
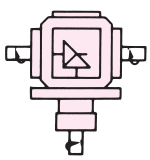
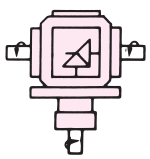


## ■Shaft Positioning and Shaft Positioning Code

**In <KOMPASS> Series KN-Type, 24 ways are available as standard types of shaft positioning, according to the shaft direction and shaft rotation. Therefore, when ordering, the shaft positioning should be taken into consideration in addition to the type codes.**

(Notes)

❶ These figures indicate the mounting space and the horizontal mounting (floor mounting).
❷ The rotation direction shown by arrow just indicates the relation of rotation direction between each shaft and not limits the direction. Shafts can be rotated in both forward and reverse direction.
❸ The mark ▼ indicates the wall surface in which the filler opening and drain plug exist, in case of horizontal mounting (floor mounting). The ones with no mark means that the wall surface comes to the back side of the figures described. (Standard Specification)
❹ Shaft Positioning: In case of wall mounting in which the input shaft (X shaft) is to be used in the upward position other than " HU Type ", inform us accordingly when ordering. Because the lubrication method for bearing is different in this case.
❺ For use other than horizontal mounting, refer to page G36.

| | KNB-Type | | | | KNC-Type | |
|---|---|---|---|---|---|---|
| Horizontal Type (plan view) |  HH1043 |  HH1044 |  HH1033 |  HH1034 |  HH1343 |  HH1344 |
| Vertical Type (front view) |  HH1022 |  HH1025 |  HH1052 |  HH1055 |  HH1252 |  HH1255 |
| |  HU2043 |  HU2044 |  HU2033 |  HU2034 |  HU2343 |  HU2344 |
| |  HD5043 |  HD5044 |  HD5033 |  HD5034 |  HD5343 |  HD5344 |

# Bevel gear boxes KN Type

## Shaft Diameter ϕ19



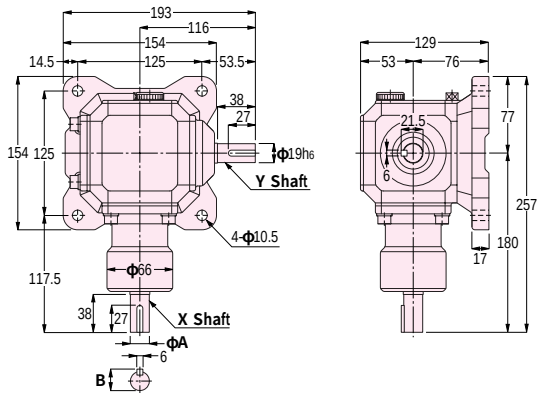
| Reduction Ratio | Type Designation | Spec. Designation | " X " Shaft Rotation Speed (rpm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 20 | 50 | 100 | 200 | 300 | 400 | 600 | 900 | 1200 | 1500 | 1800 | 2500 | 3600 |
| 1 : 1 | KNB-191 KNC-191 | Allowable Transfer Capacity (kW) | 0.08 | 0.20 | 0.39 | 0.77 | 1.15 | 1.50 | 2.05 | 2.67 | 3.30 | 3.95 | 4.40 | 4.40 | 4.40 |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 37.2 {3.8} | 37.2 {3.8} | 37.2 {3.8} | 36.3 {3.7} | 36.3 {3.7} | 36.3 {3.6} | 32.3 {3.3} | 28.4 {2.9} | 26.5 {2.7} | 24.5 {2.5} | 23.5 {2.4} | 16.7 {1.7} | 10.8 {1.1} |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 1760 {180} | 1760 {180} | 1760 {180} | 1760 {180} | 1670 {170} | 1620 {165} | 1270 {130} | 1080 {110} | 882 {90} | 833 {85} | 784 {80} | 686 {70} | 637 {65} |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 1960 {200} | 1960 {200} | 1960 {200} | 1960 {200} | 1960 {200} | 1810 {185} | 1470 {150} | 1180 {120} | 1030 {105} | 980 {100} | 931 {95} | 784 {80} | 735 {75} |
| 1 : 2 | KNB-192 KNC-192 | Allowable Transfer Capacity (kW) | 0.03 | 0.07 | 0.14 | 0.27 | 0.40 | 0.53 | 0.78 | 1.15 | 1.50 | 1.85 | 2.17 | 2.20 | 2.20 |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 25.5 {2.6} | 25.5 {2.6} | 25.5 {2.6} | 25.5 {2.6} | 25.5 {2.6} | 24.5 {2.5} | 24.5 {2.5} | 24.5 {2.5} | 23.5 {2.4} | 23.5 {2.4} | 22.5 {2.3} | 16.7 {1.7} | 10.8 {1.1} |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 1180 {120} | 1180 {120} | 1180 {120} | 1180 {120} | 1180 {120} | 1130 {115} | 1130 {115} | 1080 {110} | 1080 {110} | 882 {90} | 833 {85} | 784 {80} | 735 {75} |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 1760 {180} | 1760 {180} | 1760 {180} | 1760 {180} | 1760 {180} | 1720 {175} | 1670 {170} | 1470 {150} | 1270 {130} | 1080 {110} | 980 {100} | 833 {85} | 784 {80} |

(Notes)

❶ Be sure to use the product within the allowable value. In case of the ratio of (1 : 2), speed reduction is given to Y shaft.
❷ Values in this performance table are the ones when the service factor is 1. In case of using the product under different condition, refer to the " Service Factor " in the Table-2 on page G33.
❸ An overhung load(O.H.L.) means the allowable load imposed on the center of the shaft. In case using the product under different condition, refer to the factor K1 and K2 in the Table-3 and 4 on page G33.
❹ When using the type with the ratio of (1 : 2) with increased speed(Increasing speed from Y shaft to X shaft.), the torque on the X shaft become 1/2 of the value in the performance table(torque on the Y shaft).
❺ The torque at Y shaft in the KC Type is the sum of right and left shaft.
❻ The O.H.L. value at Y shaft in the KC Type is the sum of right and left shaft.
❼ The allowable thrust load will be the half of the O.H.L. value respectively.

### Fig.G-13

**KNB-191 HH1043** CAD data:
**KNB-191 HH1044** KNB-191-HH104
**KNB-192 HH1043** CAD data:
**KNB-192 HH1044** KNB-192-HH104

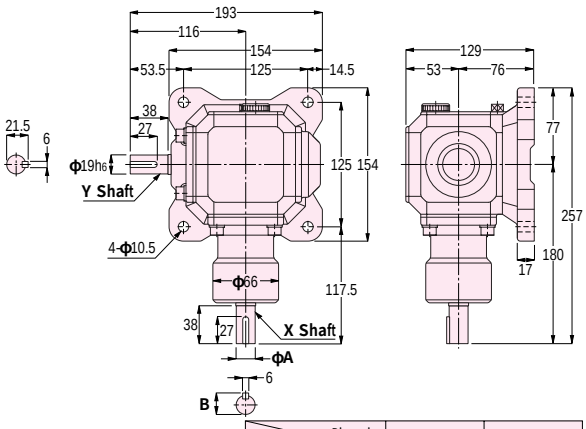



| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

### Fig.G-14

**KNB-191 HH1033** CAD data:
**KNB-191 HH1034** KNB-191-HH103
**KNB-192 HH1033** CAD data:
**KNB-192 HH1034** KNB-192-HH103




| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

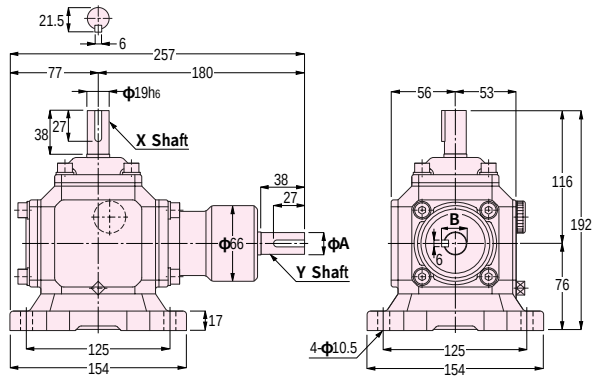
Round Weight 10kg

Model Code P.G14
Techincal Information P.G32～G35


KNB Type

## Fig.G-15

**KNB-191 HH1022** CAD data: KNB-191-HH102
**KNB-191 HH1025**
**KNB-192 HH1022** CAD data: KNB-192-HH102
**KNB-192 HH1025**

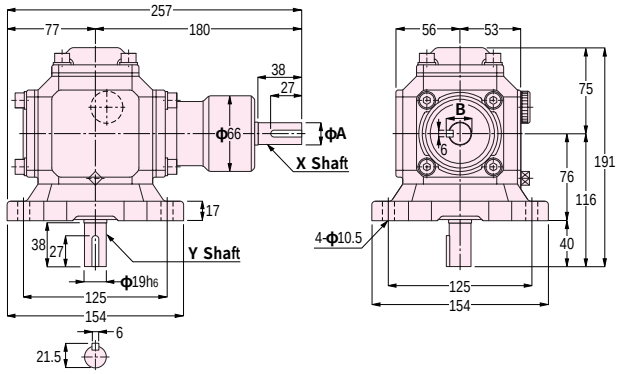



| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

## Fig.G-16

**KNB-191 HH1052** CAD data: KNB-191-HH105
**KNB-191 HH1055**
**KNB-192 HH1052** CAD data: KNB-192-HH105
**KNB-192 HH1055**

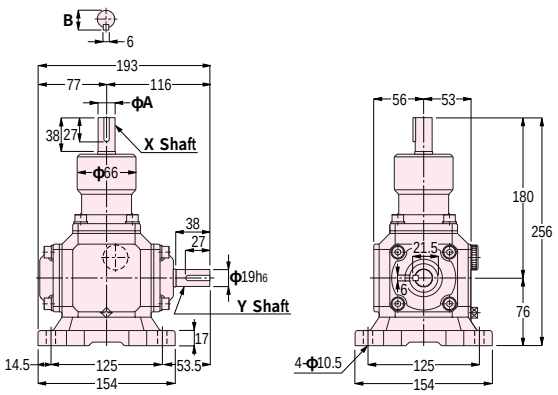



| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

## Fig.G-17

**KNB-191 HU2043** CAD data: KNB-191-HU204
**KNB-191 HU2044**
**KNB-192 HU2043** CAD data: KNB-192-HU204
**KNB-192 HU2044**

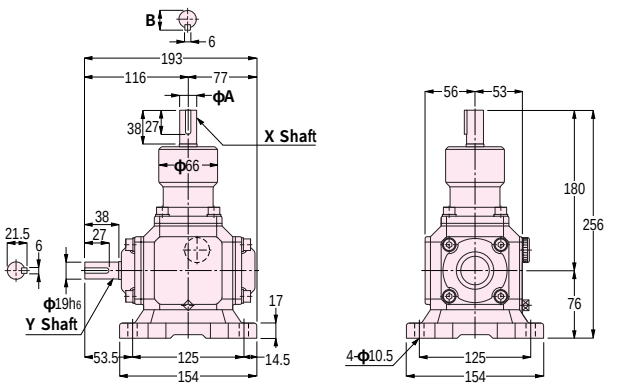



| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

## Fig.G-18

**KNB-191 HU2033** CAD data: KNB-191-HU203
**KNB-191 HU2034**
**KNB-192 HU2033** CAD data: KNB-192-HU203
**KNB-192 HU2034**




| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

(Notes)
❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)
❷ The key groove between the X shaft and Y shaft is not always aligned.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

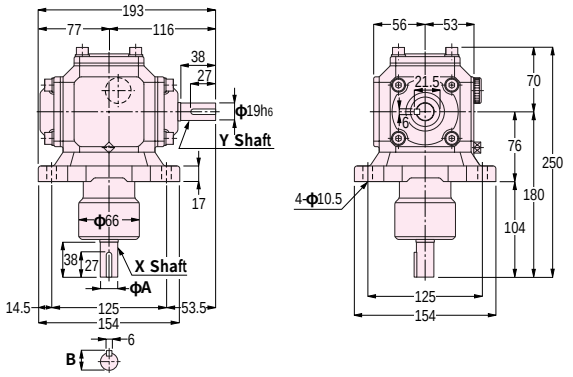
# Bevel gear boxes KN Type

## Shaft Diameter ϕ19



### Fig.G-19

**KNB-191 HD5043** CAD data:
**KNB-191 HD5044** KNB-191-HD504
**KNB-192 HD5043** CAD data:
**KNB-192 HD5044** KNB-192-HD504

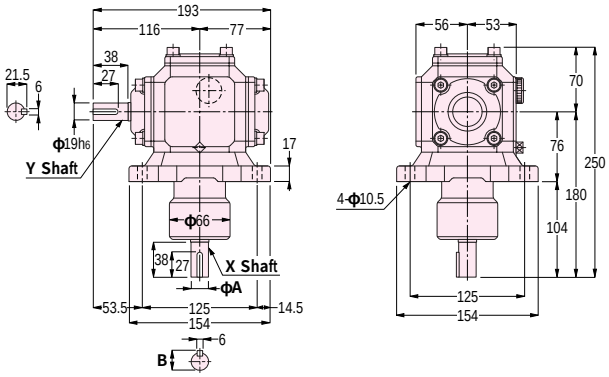



| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

### Fig.G-20

**KNB-191 HD5033** CAD data:
**KNB-191 HD5034** KNB-191-HD503
**KNB-192 HD5033** CAD data:
**KNB-192 HD5034** KNB-192-HD503




| Type \ Dimension | A | B |
|---|---|---|
| KNB-191 | ϕ19h6 | 21.5 |
| KNB-192 | ϕ18h6 | 20.5 |

Round Weight 10kg

(Notes)
❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)
❷ The key groove between the X shaft and Y shaft is not always aligned.

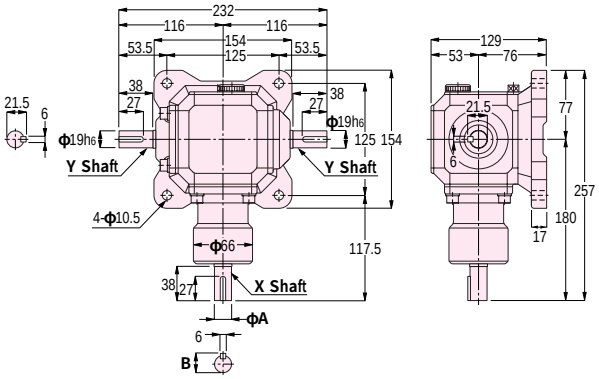
Model Code P.G14
Techincal Information P.G32～G35


KNB Type


KNC Type

## Fig.G-21

**KNC-191 HH1343** CAD data:
**KNC-191 HH1344** KNC-191-HH134
**KNC-192 HH1343** CAD data:
**KNC-192 HH1344** KNC-192-HH134

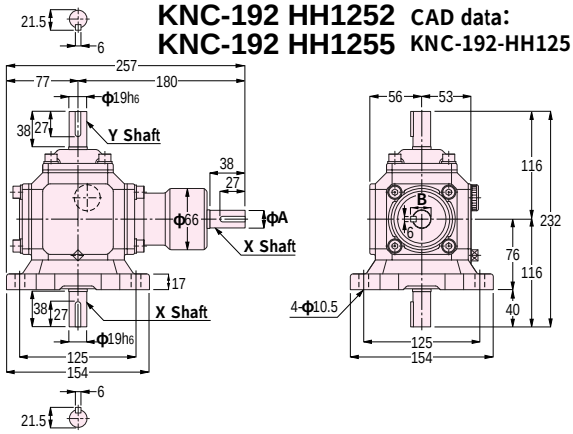



| Type \ Dimension | A | B |
|---|---|---|
| KNC-191 | Φ19h6 | 21.5 |
| KNC-192 | Φ18h6 | 20.5 |

Round Weight 10kg

## Fig.G-22

**KNC-191 HH1252** CAD data:
**KNC-191 HH1255** KNC-191-HH125
**KNC-192 HH1252** CAD data:
**KNC-192 HH1255** KNC-192-HH125

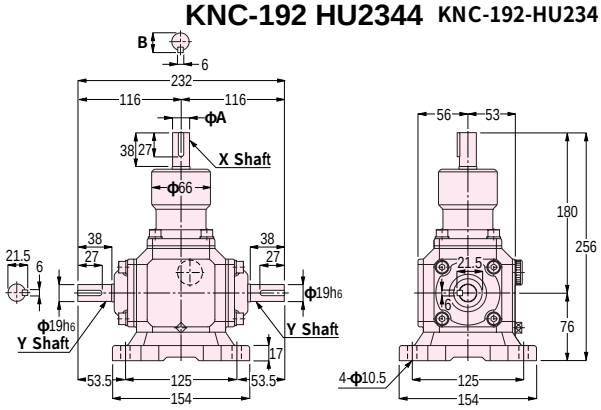



| Type \ Dimension | A | B |
|---|---|---|
| KNC-191 | Φ19h6 | 21.5 |
| KNC-192 | Φ18h6 | 20.5 |

Round Weight 10kg

## Fig.G-23

**KNC-191 HU2343** CAD data:
**KNC-191 HU2344** KNC-191-HU234
**KNC-192 HU2343** CAD data:
**KNC-192 HU2344** KNC-192-HU234

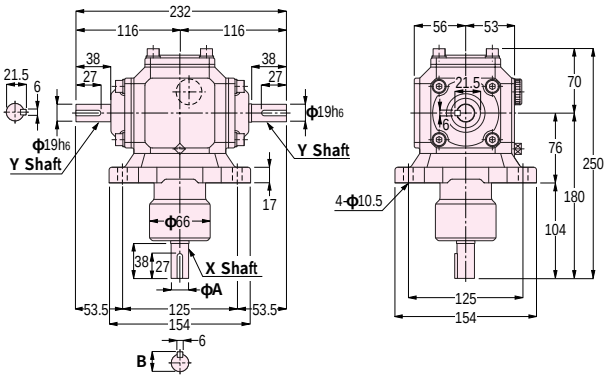



| Type \ Dimension | A | B |
|---|---|---|
| KNC-191 | Φ19h6 | 21.5 |
| KNC-192 | Φ18h6 | 20.5 |

Round Weight 10kg

## Fig.G-24

**KNC-191 HD5343** CAD data:
**KNC-191 HD5344** KNC-191-HD534
**KNC-192 HD5343** CAD data:
**KNC-192 HD5344** KNC-192-HD534




| Type \ Dimension | A | B |
|---|---|---|
| KNC-191 | Φ19h6 | 21.5 |
| KNC-192 | Φ18h6 | 20.5 |

Round Weight 10kg

(Notes)
❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)
❷ The key groove between the X shaft and Y shaft is not always aligned.

Model Code P.G14
Techincal Information P.G32～G35

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Bevel gear boxes KN Type

## Shaft Diameter ϕ25



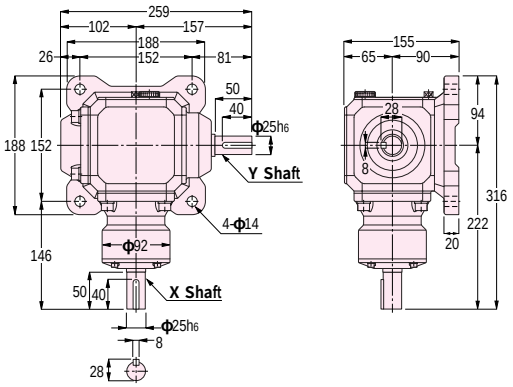
| Reduction Ratio | Type Designation | Spec. Designation | " X " Shaft Rotation Speed (rpm) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 20 | 50 | 100 | 200 | 300 | 400 | 600 | 900 | 1200 | 1500 | 1800 | 2500 | 3600 |
| 1 : 1 | KNB-251 KNC-251 | Allowable Transfer Capacity (kW) | 0.25 | 0.62 | 1.24 | 2.47 | 3.68 | 4.70 | 6.40 | 8.60 | 10.5 | 12.3 | 13.8 | — | — |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 118 {12.0} | 118 {12.0} | 118 {12.0} | 118 {12.0} | 116 {11.8} | 112 {11.4} | 101 {10.3} | 91.1 {9.3} | 83.3 {8.5} | 78.4 {8.0} | 73.5 {7.5} | — | — |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 3920 {400} | 3920 {400} | 3920 {400} | 3920 {400} | 3630 {370} | 3330 {340} | 2940 {300} | 2450 {250} | 2160 {220} | 1960 {200} | 1760 {180} | — | — |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 4120 {420} | 4120 {420} | 4120 {420} | 4120 {420} | 4020 {410} | 3920 {400} | 3430 {350} | 2940 {300} | 2550 {260} | 2450 {250} | 2250 {230} | — | — |
| 1 : 2 | KNB-252 KNC-252 | Allowable Transfer Capacity (kW) | 0.09 | 0.23 | 0.45 | 0.90 | 1.34 | 1.78 | 2.67 | 4.00 | 5.30 | 6.33 | 7.50 | 7.50 | — |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 85.3 {8.7} | 85.3 {8.7} | 85.3 {8.7} | 85.3 {8.7} | 85.3 {8.7} | 84.3 {8.6} | 84.3 {8.6} | 84.3 {8.6} | 84.3 {8.6} | 80.4 {8.2} | 79.4 {8.1} | 56.8 {5.8} | — |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 3920 {400} | 3920 {400} | 3920 {400} | 3920 {400} | 3920 {400} | 3720 {380} | 3630 {370} | 3530 {360} | 3230 {330} | 2740 {280} | 2250 {230} | 1670 {170} | — |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 4120 {420} | 4120 {420} | 4120 {420} | 4120 {420} | 4020 {410} | 3920 {400} | 3820 {390} | 3720 {380} | 3430 {350} | 3040 {310} | 2650 {270} | 2350 {240} | — |

(Notes)

❶ Be sure to use the product within the allowable value. In case of the ratio of (1 : 2), speed reduction is given to Y shaft.
❷ Values in this performance table are the ones when the service factor is 1. In case of using the product under different condition, refer to the " Service Factor " in the Table-2 on page G33.
❸ An overhung load(O.H.L.) means the allowable load imposed on the center of the shaft. In case using the product under different condition, refer to the factor K1 and K2 in the Table-3 and 4 on page G33.
❹ When using the type with the ratio of (1 : 2) with increased speed(Increasing speed from Y shaft to X shaft.), the torque on the X shaft become 1/2 of the value in the performance table(torque on the Y shaft).
❺ The torque at Y shaft in the KC Type is the sum of right and left shaft.
❻ The O.H.L. value at Y shaft in the KC Type is the sum of right and left shaft.
❼ The allowable thrust load will be the half of the O.H.L. value respectively.

**Fig.G-25**

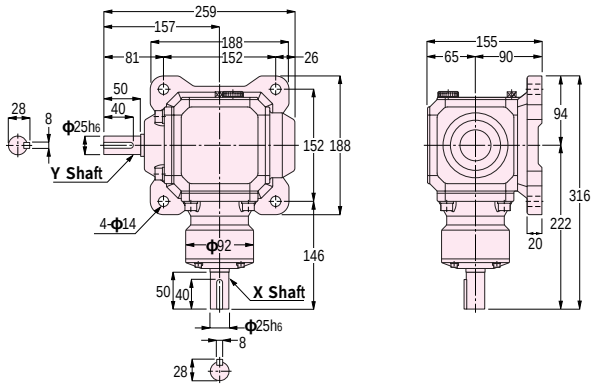
**KNB-251 HH1043** CAD data:
**KNB-251 HH1044** KNB-25-HH104
**KNB-252 HH1043**
**KNB-252 HH1044**




Round Weight 17kg

**Fig.G-26**

**KNB-251 HH1033** CAD data:
**KNB-251 HH1034** KNB-25-HH103
**KNB-252 HH1033**
**KNB-252 HH1034**



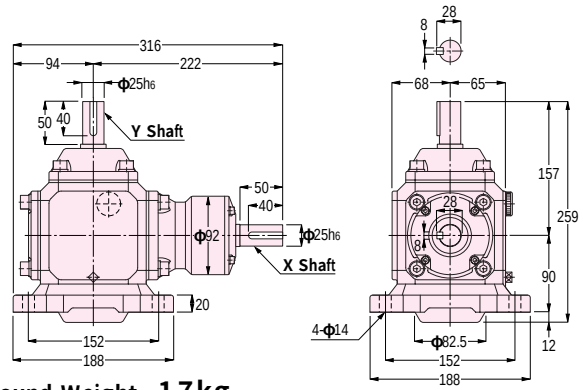

Round Weight 17kg

Model Code P.G14
Techincal Information P.G32～G35


KNB Type

## Fig.G-27

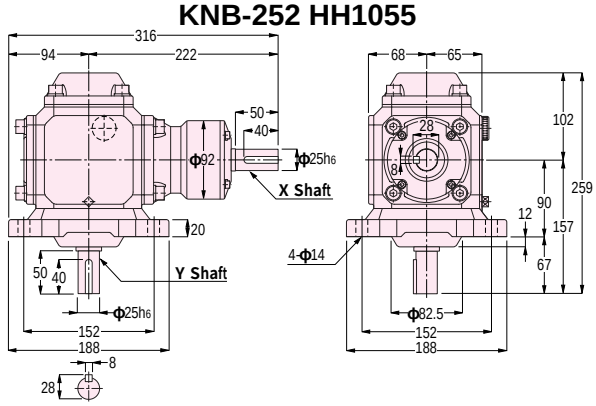
**KNB-251 HH1022** CAD data:
**KNB-251 HH1025** KNB-25-HH102
**KNB-252 HH1022**
**KNB-252 HH1025**




Round Weight 17kg

## Fig.G-28

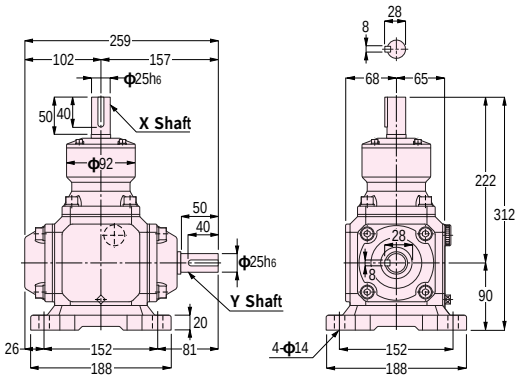
**KNB-251 HH1052** CAD data:
**KNB-251 HH1055** KNB-25-HH105
**KNB-252 HH1052**
**KNB-252 HH1055**




Round Weight 17kg

## Fig.G-29

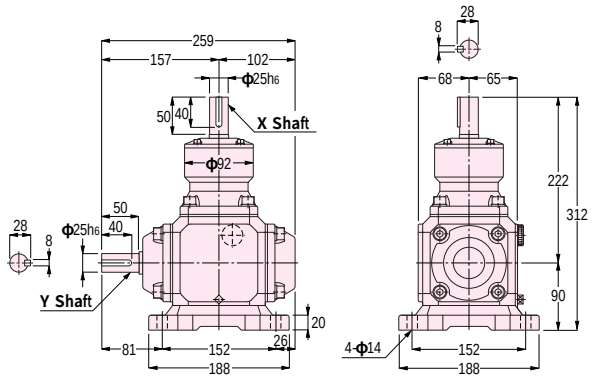
**KNB-251 HU2043** CAD data:
**KNB-251 HU2044** KNB-25-HU204
**KNB-252 HU2043**
**KNB-252 HU2044**




Round Weight 17kg

## Fig.G-30

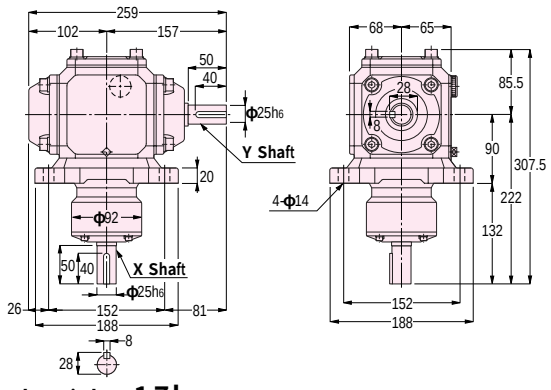
**KNB-251 HU2033** CAD data:
**KNB-251 HU2034** KNB-25-HU203
**KNB-252 HU2033**
**KNB-252 HU2034**




Round Weight 17kg

## Fig.G-31

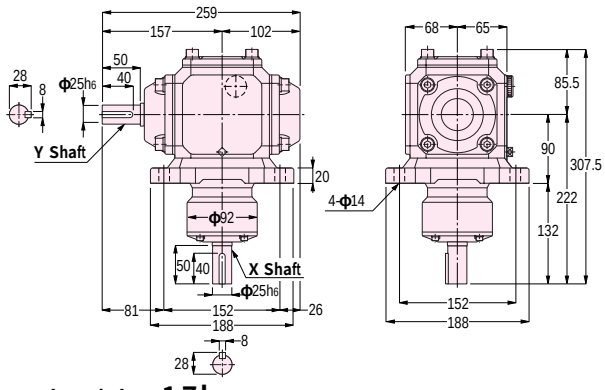
**KNB-251 HD5043** CAD data:
**KNB-251 HD5044** KNB-25-HD504
**KNB-252 HD5043**
**KNB-252 HD5044**




Round Weight 17kg

## Fig.G-32

**KNB-251 HD5033** CAD data:
**KNB-251 HD5034** KNB-25-HD503
**KNB-252 HD5033**
**KNB-252 HD5034**




Round Weight 17kg

(Notes) ❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)

❷ The key groove between the X shaft and Y shaft is not always aligned.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

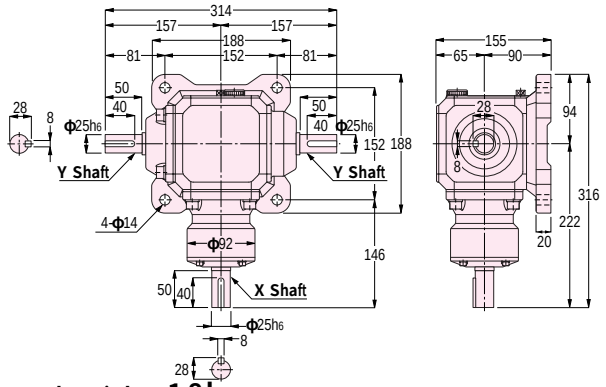
# Bevel gear boxes KN Type

## Shaft Diameter Φ25



**Fig.G-33**

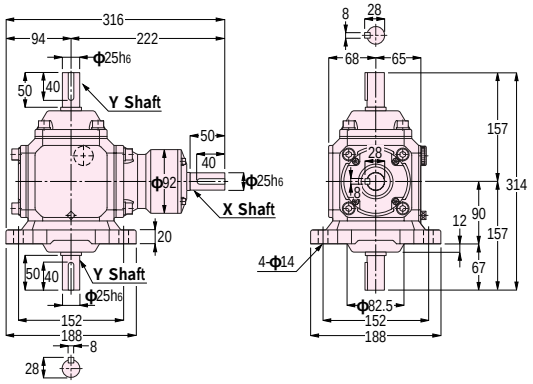
**KNC-251 HH1343** CAD data:
**KNC-251 HH1344** KNC-25-HH134
**KNC-252 HH1343**
**KNC-252 HH1344**




Round Weight 18kg

**Fig.G-34**

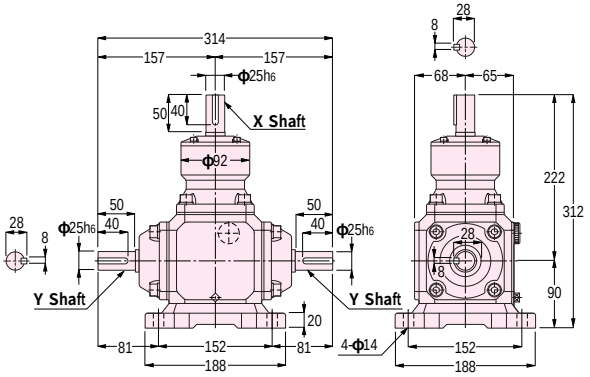
**KNC-251 HH1252** CAD data:
**KNC-251 HH1255** KNC-25-HH125
**KNC-252 HH1252**
**KNC-252 HH1255**




Round Weight 18kg

**Fig.G-35**

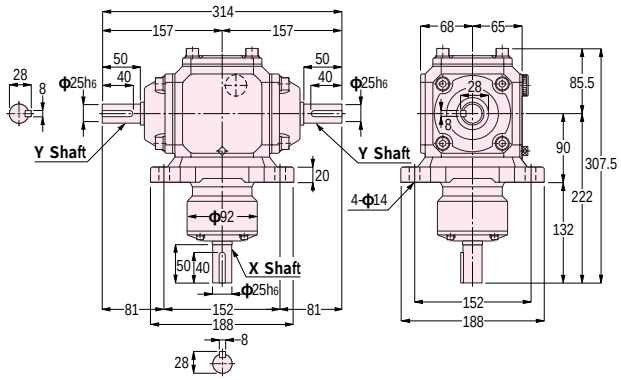
**KNC-251 HU2343** CAD data:
**KNC-251 HU2344** KNC-25-HU234
**KNC-252 HU2343**
**KNC-252 HU2344**




Round Weight 18kg

**Fig.G-36**

**KNC-251 HD5343** CAD data:
**KNC-251 HD5344** KNC-25-HD534
**KNC-252 HD5343**
**KNC-252 HD5344**




Round Weight 18kg

(Notes) ❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)

❷ The key groove between the X shaft and Y shaft is not always aligned.

Model Code P.G14
Techincal Information P.G32～G35



KNC Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Bevel gear boxes KN Type

## Shaft Diameter ϕ32



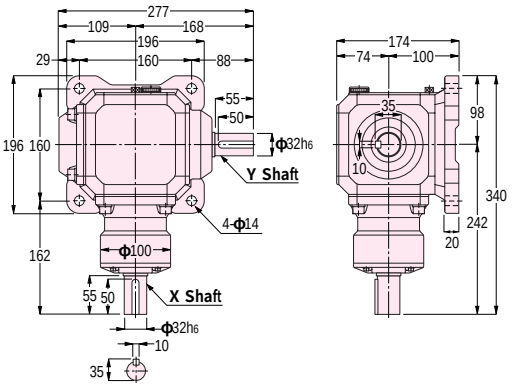
| Reduction Ratio | Type Designation | Spec. Designation | "X" Shaft Rotation Speed (rpm) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 20 | 50 | 100 | 200 | 300 | 400 | 600 | 900 | 1200 | 1500 | 1800 | 2500 | 3600 |
| 1 : 1 | KNB-321 KNC-321 | Allowable Transfer Capacity (kW) | 0.36 | 0.88 | 1.77 | 3.53 | 5.26 | 6.72 | 9.15 | 12.3 | 15.0 | 17.5 | 19.7 | — | — |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 167 {17.0} | 167 {17.0} | 167 {17.0} | 167 {17.0} | 165 {16.8} | 160 {16.3} | 144 {14.7} | 130 {13.3} | 119 {12.1} | 112 {11.4} | 104 {10.6} | — | — |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 4900 {500} | 4900 {500} | 4900 {500} | 4900 {500} | 4610 {470} | 4210 {430} | 3720 {380} | 3140 {320} | 2740 {280} | 2450 {250} | 2160 {220} | — | — |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 5190 {530} | 5190 {530} | 5190 {530} | 5190 {530} | 5100 {520} | 4900 {500} | 4310 {440} | 3720 {380} | 3230 {330} | 3140 {320} | 2840 {290} | — | — |
| 1 : 2 | KNB-322 KNC-322 | Allowable Transfer Capacity (kW) | 0.13 | 0.32 | 0.64 | 1.28 | 1.91 | 2.54 | 3.80 | 5.72 | 7.57 | 9.05 | 10.7 | — | — |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 123 {12.5} | 123 {12.5} | 123 {12.5} | 123 {12.5} | 122 {12.4} | 122 {12.4} | 121 {12.3} | 121 {12.3} | 120 {12.2} | 115 {11.7} | 114 {11.6} | — | — |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 4900 {500} | 4900 {500} | 4900 {500} | 4900 {500} | 4900 {500} | 4700 {480} | 4610 {470} | 4410 {450} | 4120 {420} | 3430 {350} | 2840 {290} | — | — |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 5190 {530} | 5190 {530} | 5190 {530} | 5190 {530} | 5100 {520} | 4900 {500} | 4800 {490} | 4700 {480} | 4310 {440} | 3820 {390} | 3330 {340} | — | — |

(Notes)

❶ Be sure to use the product within the allowable value. In case of the ratio of (1 : 2), speed reduction is given to Y shaft.
❷ Values in this performance table are the ones when the service factor is 1. In case of using the product under different condition, refer to the " Service Factor " in the Table-2 on page G33.
❸ An overhung load(O.H.L.) means the allowable load imposed on the center of the shaft. In case using the product under different condition, refer to the factor K1 and K2 in the Table-3 and 4 on page G33.
❹ When using the type with the ratio of (1 : 2) with increased speed(Increasing speed from Y shaft to X shaft.), the torque on the X shaft become 1/2 of the value in the performance table(torque on the Y shaft).
❺ The torque at Y shaft in the KC Type is the sum of right and left shaft.
❻ The O.H.L. value at Y shaft in the KC Type is the sum of right and left shaft.
❼ The allowable thrust load will be the half of the O.H.L. value respectively.

**Fig.G-37**

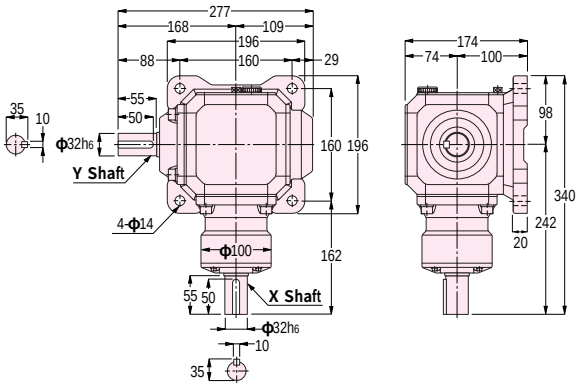
**KNB-321 HH1043** CAD data:
**KNB-321 HH1044** KNB-32-HH104
**KNB-322 HH1043**
**KNB-322 HH1044**




Round Weight 22kg

**Fig.G-38**

**KNB-321 HH1033** CAD data:
**KNB-321 HH1034** KNB-32-HH103
**KNB-322 HH1033**
**KNB-322 HH1034**



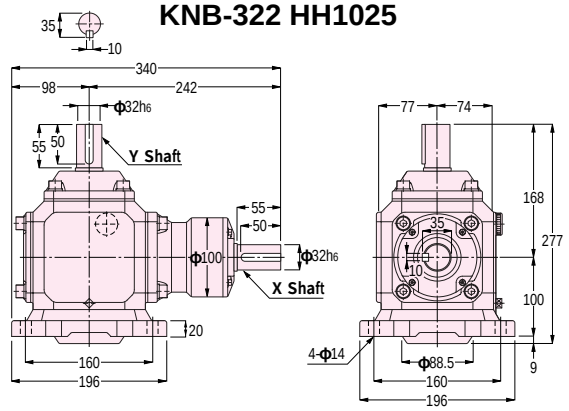

Round Weight 22kg

Model Code P.G14
Techincal Information P.G32～G35


KNB Type

## Fig.G-39

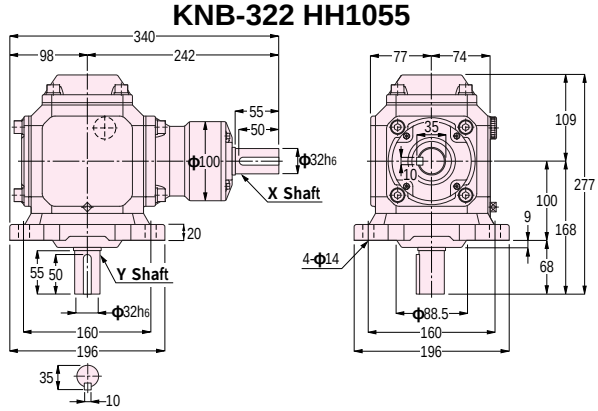
**KNB-321 HH1022** CAD data:
**KNB-321 HH1025** KNB-32-HH102
**KNB-322 HH1022**
**KNB-322 HH1025**




Round Weight 22kg

## Fig.G-40

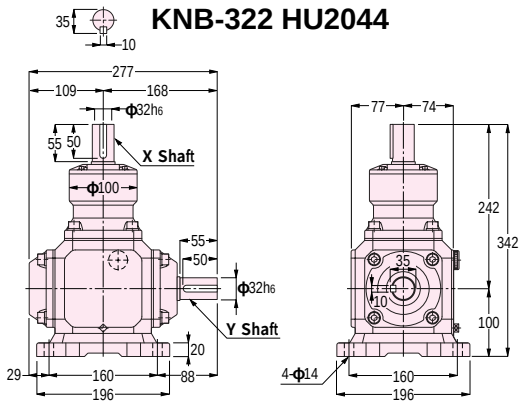
**KNB-321 HH1052** CAD data:
**KNB-321 HH1055** KNB-32-HH105
**KNB-322 HH1052**
**KNB-322 HH1055**




Round Weight 22kg

## Fig.G-41

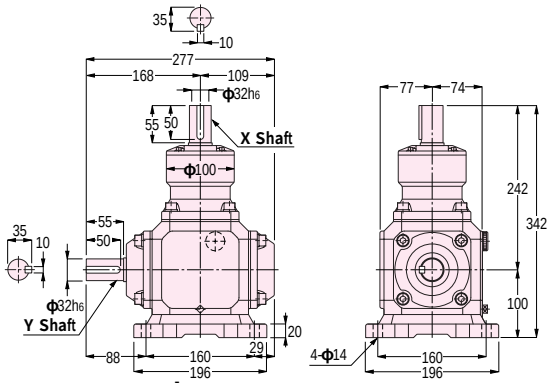
**KNB-321 HU2043** CAD data:
**KNB-321 HU2044** KNB-32-HU204
**KNB-322 HU2043**
**KNB-322 HU2044**




Round Weight 22kg

## Fig.G-42

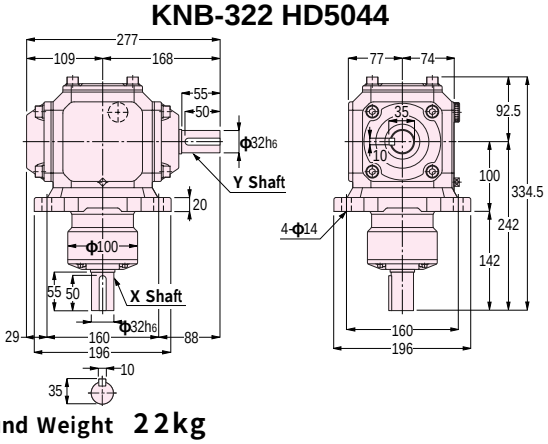
**KNB-321 HU2033** CAD data:
**KNB-321 HU2034** KNB-32-HU203
**KNB-322 HU2033**
**KNB-322 HU2034**




Round Weight 22kg

## Fig.G-43

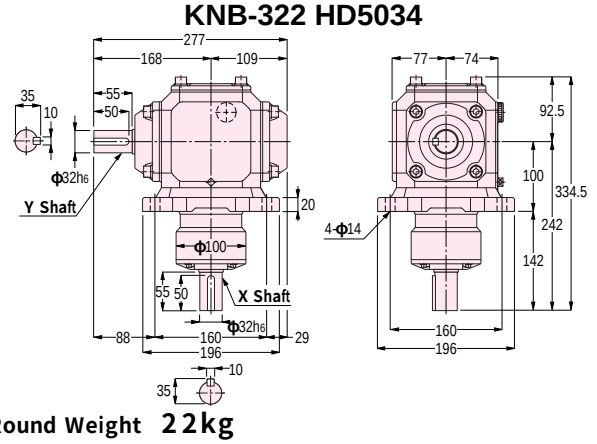
**KNB-321 HD5043** CAD data:
**KNB-321 HD5044** KNB-32-HD504
**KNB-322 HD5043**
**KNB-322 HD5044**




Round Weight 22kg

## Fig.G-44

**KNB-321 HD5033** CAD data:
**KNB-321 HD5034** KNB-32-HD503
**KNB-322 HD5033**
**KNB-322 HD5034**




Round Weight 22kg

(Notes) ❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)

❷ The key groove between the X shaft and Y shaft is not always aligned.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

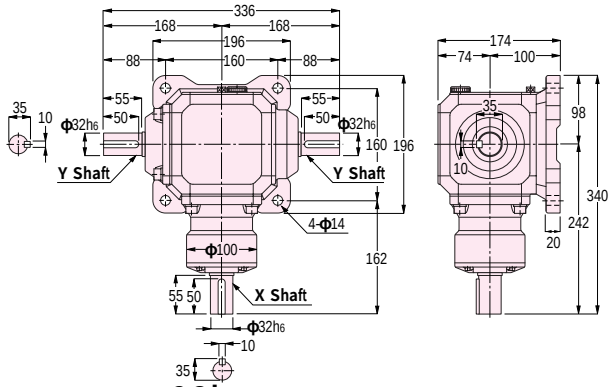
# Bevel gear boxes KN Type

## Shaft Diameter ϕ32



**Fig.G-45**

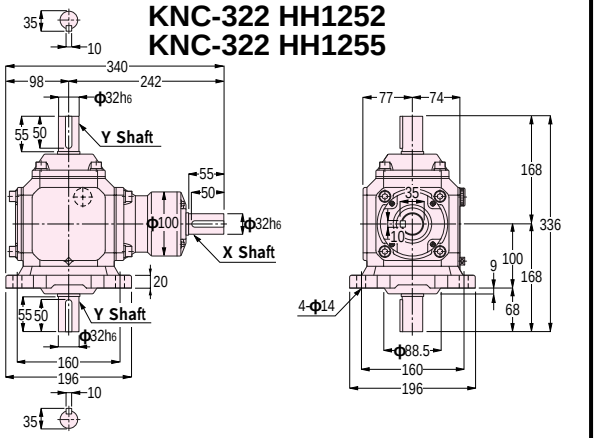
**KNC-321 HH1343** CAD data:
**KNC-321 HH1344** KNC-32-HH134
**KNC-322 HH1343**
**KNC-322 HH1344**




Round Weight 23kg

**Fig.G-46**

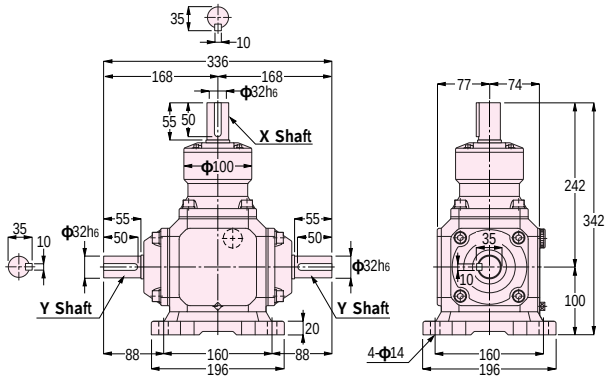
**KNC-321 HH1252** CAD data:
**KNC-321 HH1255** KNC-32-HH125
**KNC-322 HH1252**
**KNC-322 HH1255**




Round Weight 23kg

**Fig.G-47**

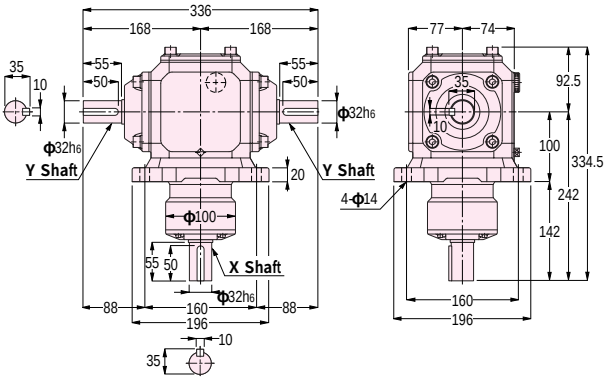
**KNC-321 HU2343** CAD data:
**KNC-321 HU2344** KNC-32-HU234
**KNC-322 HU2343**
**KNC-322 HU2344**




Round Weight 23kg

**Fig.G-48**

**KNC-321 HD5343** CAD data:
**KNC-321 HD5344** KNC-32-HD534
**KNC-322 HD5343**
**KNC-322 HD5344**




Round Weight 23kg

(Notes) ❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)

❷ The key groove between the X shaft and Y shaft is not always aligned.

Model Code P.G14
Techincal Information P.G32～G35



KNC Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

# Bevel gear boxes KN Type

## Shaft Diameter ϕ40



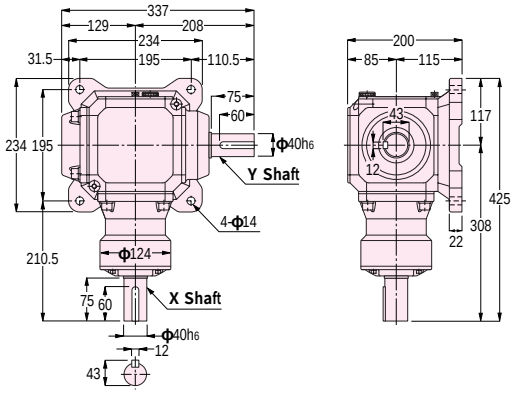
| Reduction Ratio | Type Designation | Spec. Designation | " X " Shaft Rotation Speed (rpm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 20 | 50 | 100 | 200 | 300 | 400 | 600 | 900 | 1200 | 1500 | 1800 | 2500 | 3600 |
| 1 : 1 | KNB-401 KNC-401 | Allowable Transfer Capacity (kW) | 0.62 | 1.59 | 3.18 | 6.32 | 9.50 | 12.0 | 16.1 | 22.0 | 26.5 | — | — | — | — |
| | | Allowable Torque on X and Y Shaft (N•m) {kgf•m} | 294 {30.0} | 294 {30.0} | 294 {30.0} | 294 {30.0} | 294 {30.0} | 284 {29.0} | 255 {26.0} | 231 {23.6} | 211 {21.5} | — | — | — | — |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 9800 {1000} | 9800 {1000} | 9800 {1000} | 7840 {800} | 5880 {600} | 4900 {500} | 4410 {450} | 3720 {380} | 3430 {350} | — | — | — | — |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 11760 {1200} | 11760 {1200} | 11760 {1200} | 9800 {1000} | 7350 {750} | 6370 {650} | 5880 {600} | 5100 {520} | 4020 {410} | — | — | — | — |
| 1 : 2 | KNB-402 KNC-402 | Allowable Transfer Capacity (kW) | 0.20 | 0.48 | 0.96 | 1.93 | 2.90 | 3.84 | 5.72 | 8.55 | 11.0 | 13.8 | 16.4 | — | — |
| | | Allowable Torque on Y Shaft (N•m) {kgf•m} | 183 {18.7} | 183 {18.7} | 183 {18.7} | 183 {18.7} | 183 {18.7} | 182 {18.6} | 181 {18.5} | 180 {18.4} | 174 {17.8} | 173 {17.6} | 172 {17.5} | — | — |
| | | Allowable O.H.L. on X Shaft (N) {kgf} | 9800 {1000} | 9800 {1000} | 9800 {1000} | 9800 {1000} | 9800 {1000} | 8820 {900} | 7840 {800} | 6860 {700} | 5880 {600} | 4900 {500} | 3920 {400} | — | — |
| | | Allowable O.H.L. on Y Shaft (N) {kgf} | 11760 {1200} | 11760 {1200} | 11760 {1200} | 11760 {1200} | 11760 {1200} | 9800 {1000} | 8820 {900} | 8820 {900} | 8820 {900} | 7840 {800} | 6860 {700} | — | — |

(Notes)

❶ Be sure to use the product within the allowable value. In case of the ratio of (1 : 2), speed reduction is given to Y shaft.
❷ Values in this performance table are the ones when the service factor is 1. In case of using the product under different condition, refer to the " Service Factor " in the Table-2 on page G33.
❸ An overhung load(O.H.L.) means the allowable load imposed on the center of the shaft. In case using the product under different condition, refer to the factor K1 and K2 in the Table-3 and 4 on page G33.
❹ When using the type with the ratio of (1 : 2) with increased speed(Increasing speed from Y shaft to X shaft.), the torque on the X shaft become 1/2 of the value in the performance table(torque on the Y shaft).
❺ The torque at Y shaft in the KC Type is the sum of right and left shaft.
❻ The O.H.L. value at Y shaft in the KC Type is the sum of right and left shaft.
❼ The allowable thrust load will be the half of the O.H.L. value respectively.

**Fig.G-49**

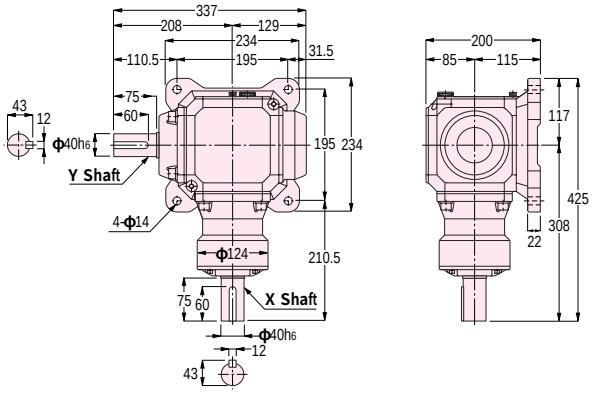
**KNB-401 HH1043** CAD data:
**KNB-401 HH1044** KNB-40-HH104
**KNB-402 HH1043**
**KNB-402 HH1044**




Round Weight 33kg

**Fig.G-50**

**KNB-401 HH1033** CAD data:
**KNB-401 HH1034** KNB-40-HH103
**KNB-402 HH1033**
**KNB-402 HH1034**



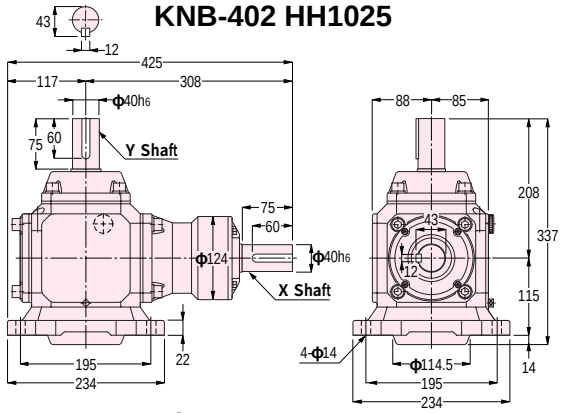

Round Weight 33kg

Model Code P.G14
Techincal Information P.G32～G35


KNB Type

## Fig.G-51

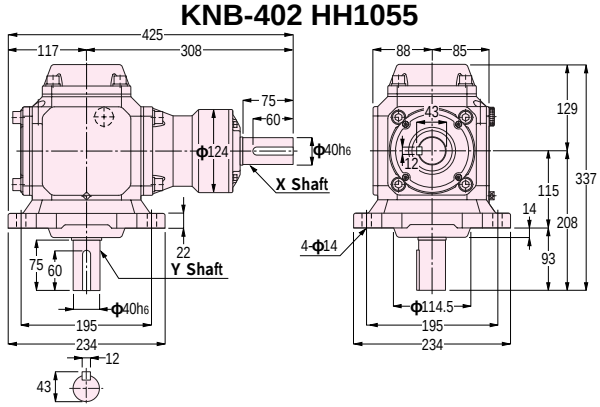
**KNB-401 HH1022** CAD data:
**KNB-401 HH1025** KNB-40-HH102
**KNB-402 HH1022**
**KNB-402 HH1025**




Round Weight 33kg

## Fig.G-52

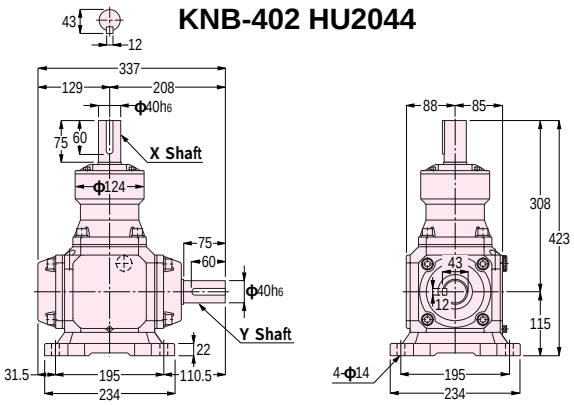
**KNB-401 HH1052** CAD data:
**KNB-401 HH1055** KNB-40-HH105
**KNB-402 HH1052**
**KNB-402 HH1055**




Round Weight 33kg

## Fig.G-53

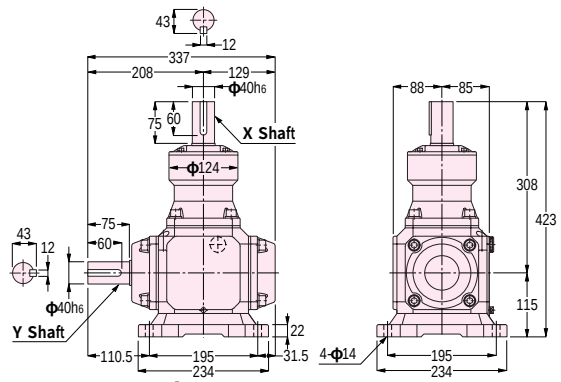
**KNB-401 HU2043** CAD data:
**KNB-401 HU2044** KNB-40-HU204
**KNB-402 HU2043**
**KNB-402 HU2044**




Round Weight 33kg

## Fig.G-54

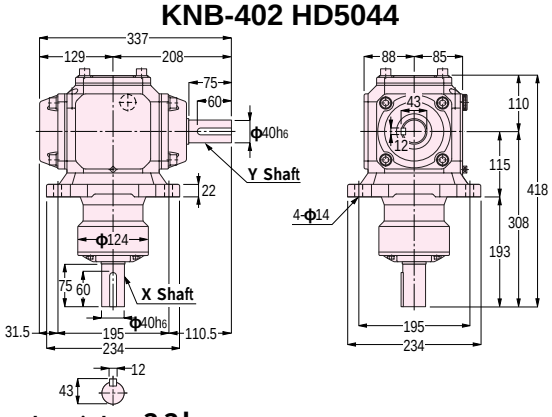
**KNB-401 HU2033** CAD data:
**KNB-401 HU2034** KNB-40-HU203
**KNB-402 HU2033**
**KNB-402 HU2034**




Round Weight 33kg

## Fig.G-55

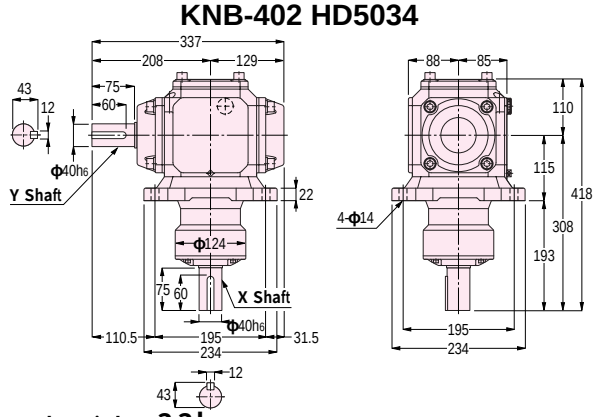
**KNB-401 HD5043** CAD data:
**KNB-401 HD5044** KNB-40-HD504
**KNB-402 HD5043**
**KNB-402 HD5044**




Round Weight 33kg

## Fig.G-56

**KNB-401 HD5033** CAD data:
**KNB-401 HD5034** KNB-40-HD503
**KNB-402 HD5033**
**KNB-402 HD5034**




Round Weight 33kg

(Notes) ❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)

❷ The key groove between the X shaft and Y shaft is not always aligned.

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch/Brake
Reducer (Double Shaft)
S-Type Reducer
Right Angle Shaft (Performance Table/Dimension)
Gearmotor with Brake
Water-resistant, Outdoor Gearmotor with Brake
Gearmotor with Clutch /Brake
Reduce (Double Shaft)
S-Type Reducer
Hollow Shaft Solid Shaft Performance Table/Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reduce (Double Shaft)
S-Type Reducer
Concentric Hollow Shaft Concentric Solid Shaft Performance Table/ Dimension
Gearmotor with Brake
Water-Resistant, Outdoor Gearmotor with Brake
Reducer (Parallel Shaft)
S-Type Reducer
Technical Information
Standard Motors
Cautions for Safety
Option
GT-STEP Index Gearmotor
KOMPASS Gearbox

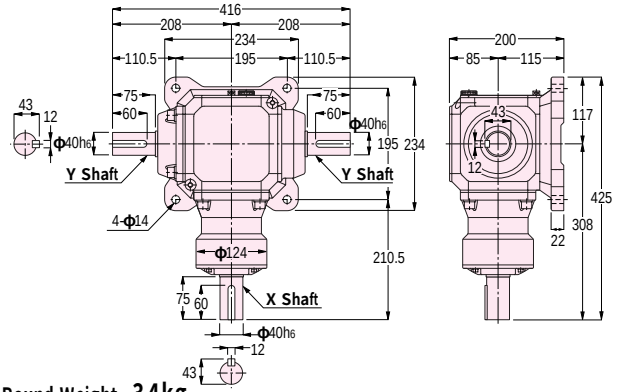
# Bevel gear boxes KN Type

## Shaft Diameter ϕ40



**Fig.G-57**

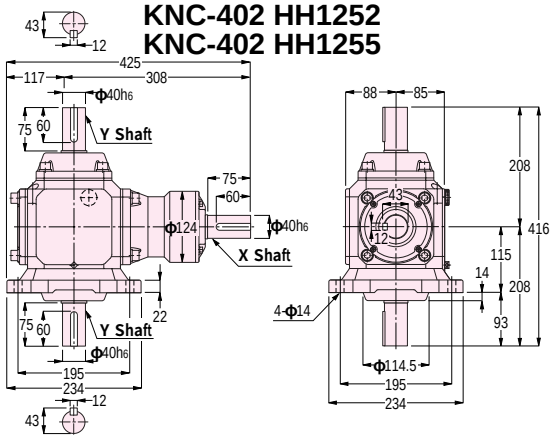
**KNC-401 HH1343** CAD data:
**KNC-401 HH1344** KNC-40-HH134
**KNC-402 HH1343**
**KNC-402 HH1344**




Round Weight 34kg

**Fig.G-58**

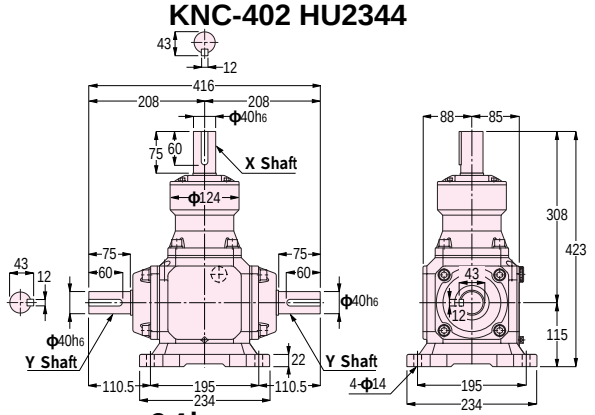
**KNC-401 HH1252** CAD data:
**KNC-401 HH1255** KNC-40-HH125
**KNC-402 HH1252**
**KNC-402 HH1255**




Round Weight 34kg

**Fig.G-59**

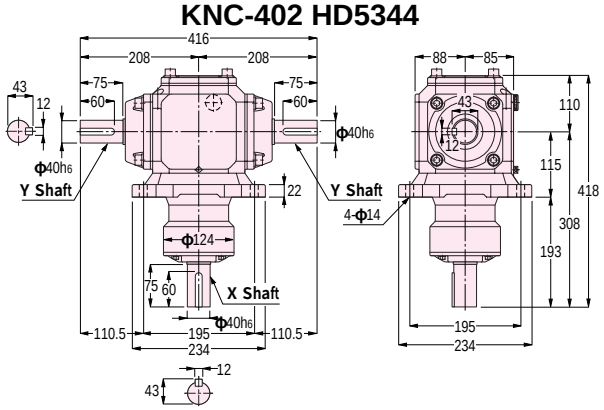
**KNC-401 HU2343** CAD data:
**KNC-401 HU2344** KNC-40-HU234
**KNC-402 HU2343**
**KNC-402 HU2344**




Round Weight 34kg

**Fig.G-60**

**KNC-401 HD5343** CAD data:
**KNC-401 HD5344** KNC-40-HD534
**KNC-402 HD5343**
**KNC-402 HD5344**




Round Weight 34kg

(Notes) ❶ The sizes of oil plug are PF1/2 for intake and PT1/4 for vent. (Standard Specification)

❷ The key groove between the X shaft and Y shaft is not always aligned.

Model Code P.G14
Techincal Information P.G32～G35



KNC Type

Parallel Shaft (Performance Table/Dimension)
Gearmotor with Brake
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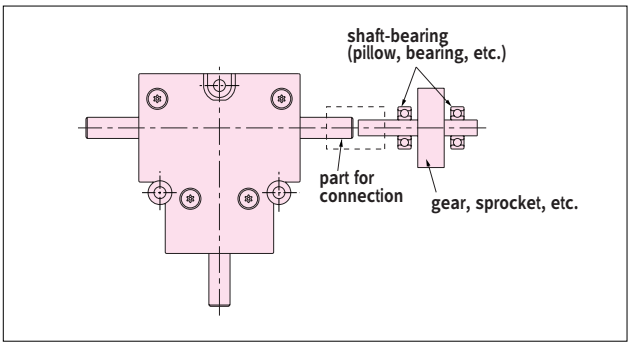
# Technical Information

## K-Type (Metal Type)

### Cautions on Selection

①The KBM/KCM types are light and compact type gear box. When higher strength, rotation and speed are to be required in your operation, study to introduce the KB/KC types.
②Be sure that the overhung load (O.H.L.)and thrust load should never be imposed to the shaft of gear box. In case the overhung load and thrust load are imposed, support the both edges of sprocket and gear with a bearing such as pillow, etc., in order to avoid these loads. (Refer to the Figure-1 on page G32.)
③Never use the product under the condition of sudden reverse rotation by plugging or of heavy shock load may occur. In such situation, study to introduce the KB/KC Types.
④The values in the performance table in this catalogue are obtained under the condition of: motor as a power generator, operation with uniform load at 10 hours/day. Therefore, in case of using the product in the different condition, correct the load torque by the service factor in the Table-1.

Figure-1




Service Factor (Sf) Table-1

| Load Condition | Service Factor (Sf) | | |
|---|---|---|---|
| | Operation of less than 3 hours/day | Operation of 3～10 hours/day | Operation of over 10 hours/day |
| Uniform Load | 1 (1) | 1 (1.25) | 1.25 (1.50) |
| Light Shock Load | 1 (1.25) | 1.25 (1.50) | 1.50 (1.75) |

(Note)
In case the frequency of start/stop is over 10 times/hour, use the coefficient in the parenthesis.

**Corrected Load Torque**
**Load Torque Imposed to Gear Box x Service Factor**

In the operating rotation speed, the corrected load torque should be always smaller than the allowable torque of X•Y shaft specified in the performance table or than the Y shaft allowable torque.

### Cautions on Operation

#### 1. Installation Location

●Ambient Temperature: −10°C to 40°C
●Ambient Humidity: 85% max.
●Altitude: 1,000 m max.
●Environment: Well ventilated place free from corrosive gas, explosive gas, vapor and/or dust
●Installation Location: Indoors

#### 2. Installation

●Install the products on a flat surface free from vibration.
●The JIS Class 2 screw with groove is recommended for tapping screw.
●The recommended tightening torque and the screw dimensions are as shown in the table below:

●Recommended Tightening Torque (N•m)

| | Hole for screw | | Hole for tapping screw at end face | | |
|---|---|---|---|---|---|
| Model | Size | Tightening Torque | Nominal Diameter | Effective Length (mm) | Tightening Torque |
| KM-04 | M3 | 0.3～0.6 | 3 | 7～11 | 0.4～0.8 |
| KM-06 | M3 | 0.4～0.8 | 3 | 9～13 | 0.5～1.0 |
| KM-08 | M4 | 0.5～1.0 | 4 | 9～14 | 0.5～1.0 |

●Additional modification such as making bolt hole in the casing, etc., must be avoided. Failure to observe this warning may cause damage to gear box.
●In the equipments such as food machine, which must avoid oil or grease, furnish with protective devices such as oil pan, etc. in order to protect from the oil leakage.

#### 3. Connecting with Other Equipment

●Before connecting with other equipment, be sure to confirm the rotation direction. Opposite rotation may cause personal injury and/or damage to the equipment.
●Use a flexible connecting parts in the connection of gearmotor with the other equipment.
●Connect the units precisely, so that the center of shaft of gearmotor and the other equipment are fully aligned.
●There is no shoulder on the gear box shaft. Therefore, when attaching couplings, etc., be sure not to interfere the surface of casing.
●There is no key groove in the gear box shaft. Therefore, when connecting to the other equipment, use the clamping type coupling to avoid slipping.

#### 4. Cautions on Operation

●During operation, do not approach or touch the rotating object such as shaft. Failure to observe this warning may cause physical injury by winding in.
●When noise and/or abnormal temperature rise are observed, stop operation immediately. And never start operation until the causes of the abnormal situation are found out and proper measures are taken.
●Do not dismantle or modify the product. Failure to observe this warning may cause damage to the equipment.

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# K-Type (Bearing Type)・KN-Type

## Cautions on Selection

### ■Particulars Necessary for Selection

load torque, type of power generator, input rotation speed, reduction ratio, operating hour, connecting method, frequency of start/stop

### ■Process of Selection

① The values in the performance table in this catalogue are obtained under the condition of: motor as a power generator, operation with uniform load at 10 hours/day. Therefore, in case of using the product in the different condition, correct the load torque by the service factor in the Table-2

**Corrected Load Torque =Load Torque Imposed to Gear Box x Service Factor**

Service Factor (Sf) Table-2

| Load Condition | Service Factor (Sf) | | |
|---|---|---|---|
| | Operation of less than 3 hours/day | Operation of 3~10 hours/day | Operation of over 10 hours/day |
| Uniform Load | 1 (1) | 1 (1.25) | 1.25 (1.50) |
| Light Shock Load | 1 (1.25) | 1.25 (1.50) | 1.50 (1.75) |
| Heavy Shock Load | 1.25 (1.50) | 1.50 (1.75) | 1.75 (2.00) |

(Note)
1. In case starting/stopping action counts more than 10 times/hour, use the coefficient in the parenthesis.
2. In case of power generator other than electric motor (engine, etc.), use the coefficient in the parenthesis too.

In the operating rotation speed, the corrected load torque should be always smaller than the allowable torque of X・Y shaft specified in the performance table or than the Y shaft allowable torque.

② For the positioning of shaft, select from the shaft positioning figures of each model.

③ Confirmation of overhung load (O.H.L.).
An overhung load is a suspending load imposed on a shaft. In the coupling of reducer shaft and other machine, if chains, belts and gears are used, this O.H.L. must be taken into consideration.

$$\text{O.H.L.} = \frac{T_{LE} \times K_1 \times K_2}{R} \text{ (N) \{kgf\}}$$

$T_{LE}$ : Corrected load torque imposed on gear box shaft (N・m)(kgf・m)
R : Pitch Circle Radius(m) of sprocket, pulley, gear, etc. ttached to gear box shaft.
$K_1$ : Factor by the connecting method (Refer to Table-3)
$K_2$ : Factor by the load point (Refer to Table-4)

*The O.H.L. value calculated by the above formula should be smaller than the allowable O.H.L. value in the performance table.

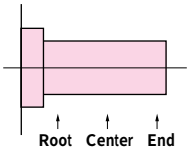
Factor $K_1$ Table-3

| Connecting Method | $K_1$ |
|---|---|
| Chain, Timing Belt | 1.00 |
| Gear | 1.25 |
| V-Belt | 1.50 |

Factor $K_2$ Table-4

| Load Point | $K_2$ |
|---|---|
| Root of the shaft | 0.75 |
| Center of the shaft | 1.00 |
| End of the shaft | 1.50 |

●Load point




④ Select the model which satisfies all of the above ①, ② and ③.

## Cautions on Operation

### 1. Installation Location

●Ambient Temperature: −10℃ to 40℃
●Ambient Humidity: 85% max.
●Altitude: 1,000 m max.
●Environment: Well ventilated place free from corrosive gas, explosive gas, vapor and/or dust
●Installation Location: Indoors

### 2. Installation Surface

●Install the product, fixing with bolts on a flat and machined surface free from vibration.

### 3. Connecting with Other Equipment

●When attaching couplings, sprockets, pulleys, gears, etc., to the gear box shaft, be sure not to interfere the oil seal or case surface because some models have no shoulder. " H7 " fit is recommended for the connecting hole.
●In direct connection, connect the gear box shaft with the shaft of other equipment precisely, so that the center of the shaft of both machines are fully aligned.
●In case of attachment by chains, belts or gears, connect the gear box shaft and that of the other machine precisely, so that the shaft of both machines are parallel. Also, be sure that the centerline of the shaft of both machines must be perpendicular to the shaft.

### 4. Cautions on Operation

●Be sure to operate the product within the allowable load torque and O.H.L.
●Sudden reverse rotation by plugging may cause damages to gear box or other machine. Therefore, be sure to make complete stop before starting reverse rotation.

# Technical Information

## ■Inertia Moment of COMPASS (GD²) (Values converted to X shaft)

### ●K Type

| Reduction Ratio | Type Designation | Inertia Moment (X10⁻⁴kg·m²) | {GD² (X10⁻⁴kg·m²)} |
|---|---|---|---|
| 1:1 | KBM-041 | 0.0015 | 0.0061 |
| | KCM-041 | 0.0016 | 0.0062 |
| | KBM-061 | 0.014 | 0.054 |
| | KCM-061 | 0.014 | 0.054 |
| | KBM-081 | 0.031 | 0.12 |
| | KCM-081 | 0.032 | 0.13 |
| | KB-101 | 0.045 | 0.18 |
| | KC-101 | 0.048 | 0.19 |
| | KB-151 | 0.53 | 2.1 |
| | KC-151 | 0.56 | 2.2 |
| | KB-201 | 1.8 | 7.2 |
| | KC-201 | 1.9 | 7.8 |
| 1:2 | KB-102 | 0.022 | 0.086 |
| | KC-102 | 0.022 | 0.089 |
| | KB-152 | 0.37 | 1.5 |
| | KC-152 | 0.37 | 1.5 |
| | KB-202 | 0.79 | 3.1 |
| | KC-202 | 0.82 | 3.3 |

### ●KN Type

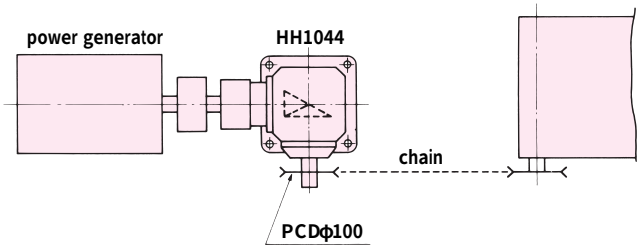
| Reduction Ratio | Type Designation | Inertia Moment (X10⁻⁴kg·m²) | {GD² (X10⁻⁴kg·m²)} |
|---|---|---|---|
| 1:1 | KNB-191 | 4.0 | 16.0 |
| | KNC-191 | 4.1 | 16.2 |
| | KNB-251 | 24.8 | 99.3 |
| | KNC-251 | 25.0 | 100 |
| | KNB-321 | 40.0 | 160 |
| | KNC-321 | 40.8 | 163 |
| | KNB-401 | 89.5 | 358 |
| | KNC-401 | 92.0 | 368 |
| 1:2 | KNB-192 | 1.9 | 7.4 |
| | KNC-192 | 1.9 | 7.5 |
| | KNB-252 | 10.3 | 41.3 |
| | KNC-252 | 10.4 | 41.6 |
| | KNB-322 | 12.9 | 51.7 |
| | KNC-322 | 13.1 | 52.4 |
| | KNB-402 | 38.3 | 153 |
| | KNC-402 | 38.8 | 155 |

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# An Example of Selection

## ■An Example of Selection 1

**Application:** Conveyor (uniform load)
**Load Torque:** 78.4N•m (8kgf•m)
**X Shaft Rotation Speed:** 300 rpm
**Reduction Ratio:** 1 : 2
**Shaft Positioning:** HH1044
**Operating Hour:** 12 hours/day
**Connecting Method:** X Shaft- coupling
Y Shaft - chain ( positioned at the center of shaft)
**Installation Method:** Horizontal mount
**Installation Location:** Indoors




### ❶Obtain torque

The service factor according to the load torque can be obtained by the Table-2, namely Sf=1.25
Accordingly, the corrected torque imposed on the Y shaft can be calculated as follows:

$T_{LE}=78.4\times1.25=98N\cdot m$ {$T_{LE}=8\times1.25=10kgf\cdot m$}

### ❷Obtain O.H.L.

The load O.H.L. can be obtained with the following formula:

$$O.H.L=\frac{T_{LE}\times K_1\times K_2}{R}=\frac{98\times1\times1}{\frac{100}{2\times1000}}=1960N \quad \{O.H.L=\frac{T_{LE}\times K_1\times K_2}{R}=\frac{10\times1\times1}{\frac{100}{2\times1000}}=200kgf\}$$

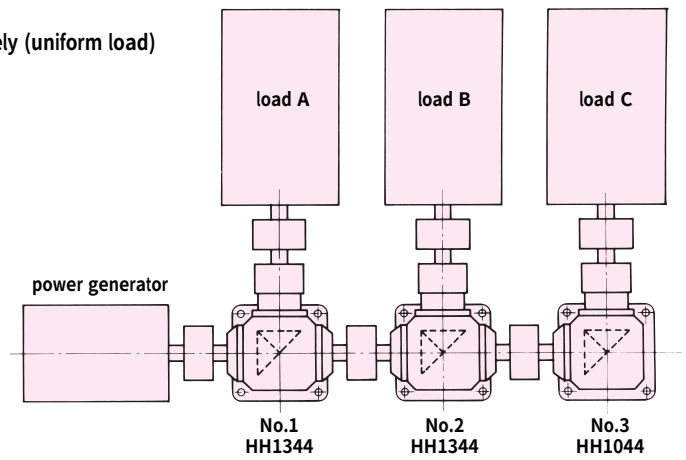
### ❸Determine the model:

The most appropriate model which satisfies all the conditions, torque and the O.H.L. is **KNB-322 HH1044**.

## ■An Example of Selection 2

**Application:** Line Shaft Drive
**Load Torque:** Load A, B and C are all 58.8 N•m (6kgf•m) respectively (uniform load)
**Rotation Speed:** 600 rpm
**Reduction Ratio:** 1 : 1
**Shaft Positioning:** As shown in the figure on the right
**Operating Hour:** 8 hours/day
**Connecting Method:** All with coupling
**Installation Method:** Horizontal mount
**Installation Location:** Indoors

In case of Line Shaft Drive, the load imposed to Y shaft differs according to the gear box position. Therefore, model should be selected respectively. Service factor (Sf) (Table-2) according to the conditions is 1(Sf=1.0) for all the case.




### ❶Gear Box No.1

The correction load torque imposed on X shaft is calculated as follows since operation is done only for the load A:
58.8×1.0=58.8N•m {6×1.0=6kgf•m}
The correction load torque imposed on Y shaft is calculated as follows since operation is done for the load A, B and C.
(58.8+58.8+58.8)×1.0=176.4N•m
{(6+6+6)×1.0=18kgf•m}
Finally, KNC-401 HH1344 is selected from the performance table.

### ❷Gear Box No. 2

The correction load torque imposed on X shaft is calculated as follows since operation is done only for the load B:
58.8×1.0=58.8N•m {6×1.0=6kgf•m}
The correction load torque imposed on Y shaft is calculated as follows since operation is done for the load B and C.
(58.8+58.8)×1.0=117.6N•m
{(6+6)×1.0=12kgf•m}
Finally, KNC-321 HH1344 is selected from the performance table.

### ❸Gear Box No. 3

The correction load torque imposed on X shaft is calculated as follows since operation is done only for the load C:
58.8×1.0=58.8N•m {6×1.0=6kgf•m}
The correction load torque imposed on Y shaft is calculated as follows since operation is only for the load C:
58.8×1.0=58.8N•m {6×1.0=6kgf•m}
Finally, KNB-251 HH1344 is selected from the performance table.

### ❹Final Decision of the Model

**No.1 Gear Box** KNC-401 HH1344
**No.2 Gear Box** KNC-321 HH1344
**No.3 Gear Box** KNB-251 HH1044

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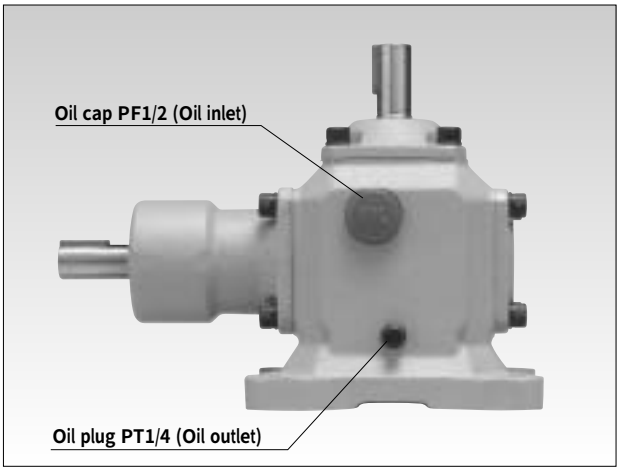
## ■The case of adding oil plug PT1/4 to the standard specification

In our standard, the position of oil inlet and oil outlet are designed to be in the horizontal face (floor face)

Besides the oil inlet/outlet in the horizontal face, inlet/outlet in the ceiling or wall face are also available. Therefore, if you require the oil inlet/outlet to be in the position other than the horizontal face, instruct us in which face of the A, B, C or D in the Figure-2 you wish to add the oil plug PT1/4 as a special order.

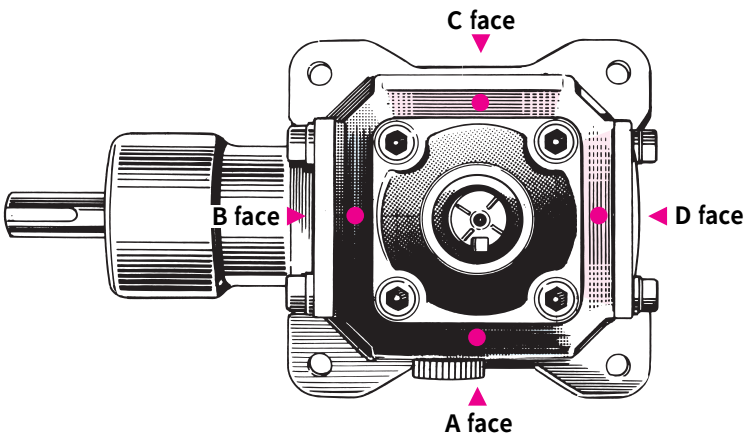
※ In the case of additional works, we need additional days for the delivery. Ask our sales office for the delivery.

●standard specification

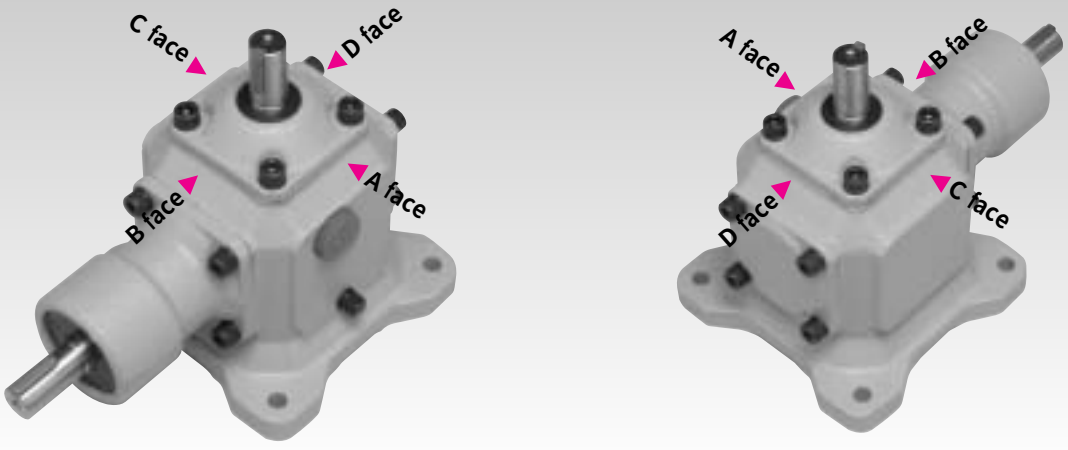



●The position of oil plug PT1/4 added

〈Figure−2〉




The oil plug PT1/4 can be added in the position marked with ● in the figure.




※ If the face in which the oil cap exist, is supposed to be A face, the other faces are regarded as B, C and D face in clockwise viewed from above.

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