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OPERATING MANUAL

GEARHEAD for C · B MOTORS

1. Verifying the Product Name and Accessories

These gearheads are specially designed for C · B motors. Please take note that they are not able to fit except C · B motors. Gearheads and motors will fit together only if they are both of the same frame size and of the same gearhead type.

Gearhead comes with following accessories for mounting the motor and gearhead on equipment. Also check them completely provided.

- Screws for mounting , Hexagon nuts, Washers.....4 pcs. each
 - Key.....1 pc.
- (Key is not provided with gearheads that have a flat on the output shaft.)

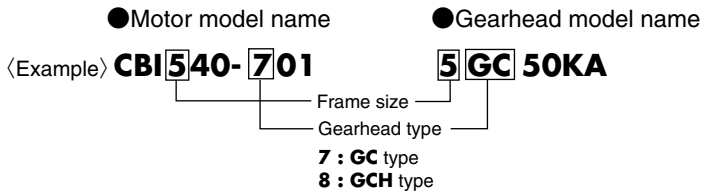
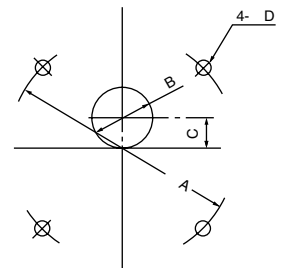


Table 1. Size of Screws for Mounting - Installation Hole Dimensions

Gearhead Model Name	Size of Screws for Mounting		Installation Hole Dimensions (inch)			
	Thread Series ×Length(mm)	Type	φA	φB	C	4- φD
5GC3.6KA to 18KA	M6 P1.0 × 65	Cross-recessed Head Machine Screws	4.094	1.42	0.71	0.26
5GC30KA to 180KA	M6 P1.0 × 80		4.094	1.42	0.71	0.26
5GCH3.6KA to 180KA	M6 P1.0 × 95	Hexagon Socket Head Screws	4.094	1.34	0.71	0.26

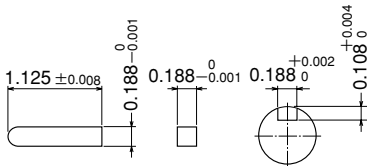
Installation Holes



Nominal diameter of embossment on housing. The corresponding diameter of the hole in the mounting surface should be at least 0.039inch larger; tight fit of the embossment is not required.

Key and Key Slot Dimensions (Unit =inch)

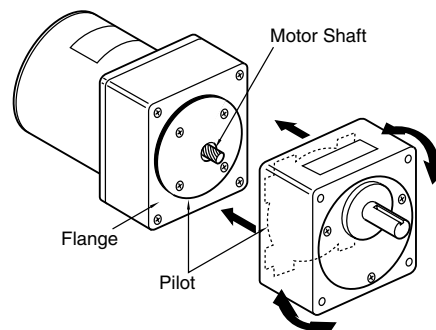
GCH Type



2. Connecting Gearhead to Motor

Align the gearhead and motor as shown to the right, then engage the pinion section of the shaft to the gear gently by turning the gearhead slightly in both directions until the gearhead and motor fit flush together.

NOTE: Forcing the motor and gearhead together during assemble or permitting contamination by foreign matter inside the gearhead will cause excess noise and /or shorter life of the gearhead.

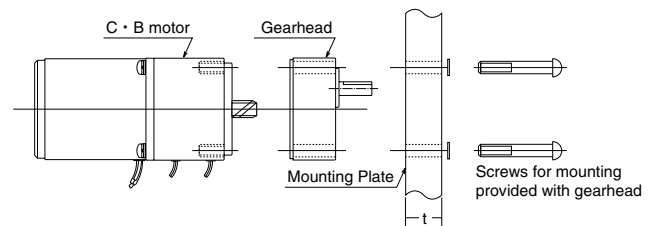


3. Installing Gearmotor

Use the mounting screws provided with the gearhead to mount the gearhead and motor on equipment.

· **Maximum Thickness of Mounting Plate** (t) when using provided screws (unit: inch)

Gear Ratio	5GC□KA
3.6 to 18	0.472
30 to 180	0.354
Gear Ratio	5GCH□KA
3.6 to 180	0.394



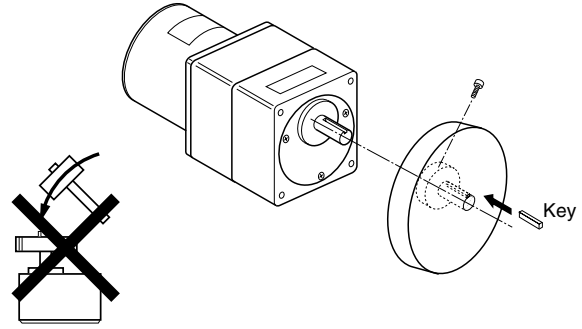
Use the screws provided with the gearhead and secure all parts so that there are no gaps between the motor flange face and the recessed area of the gearhead.

4. Attaching Load

The shaft of the gearhead has been machined to an outer diameter tolerance of h7 ISO and is provided with a key slot for connecting the transmission parts. (Model **5GC□KA** has a flat on the shaft.)
When connecting the transmission parts, ensure that the shaft and parts have a clearance fit, and secure with a screw to prevent the parts from wobbling.

NOTE:

Do not use excessive force, or hammer the transmission parts onto the gearmotor shaft as damage may occur.



5. Precautions for Operation

- Use your gearhead under ambient temperature of -10 to +50°C and 85% humidity.
- Do not use your gearhead where it may be exposed direct sunlight water and/ or oil.
- Do not use your gearhead in locations subject to severe vibration or shock, a large amount of dust, inflammable gas and or corrosive gas.
- On rare occasions, a small amount of grease may ooze out from the gearhead. If there is concern over possible environmental damage resulting from the leakage of grease, check for grease stains during regular inspections. Alternatively, install an oil pan or other device to prevent leakage from causing further damage. Oil leakage may lead to problems in the customer's equipment or products.

Direction of Rotation of the Gearhead Output Shaft

With some gear ratios, the motor and gearhead output shaft will rotate in opposite directions.

Direction of Rotation of the Gearhead

Gearhead Model	Gear Ratio	
	Same direction as motor	Opposite direction to motor
5GC□KA	3.6 to 18	30 to 36
	60 to 180	
5GCH□KA	3.6 to 9	15 to 18
	30 to 60	90 to 180

Maximum Permissible Torque

Since the output torque of the gearhead increases proportionally with the reduction of speed, a high reduction ratio of the gearhead will result an output torque that cannot be taken up by the physical construction of the gearhead. Use gearheads within the maximum permissible torque set for each speed reduction ratio. For the values of the maximum permissible torque, please refer to catalogue.

Permissible Overhung Load and Permissible Thrust Load

"Overhung load" refers to load placed on the output shaft of the gearhead in a direction perpendicular to the shaft as shown in the Figure below. The "Thrust load" is a load applied in the axial direction of the output shaft. Since the overhung load and thrust load have a great influence on the life of the bearings and strength of the shaft, be careful not to exceed the maximum values shown in the Table below.

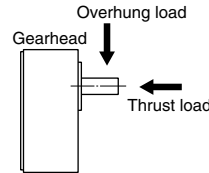


Table 2. Permissible Overhung Load and Thrust Load

Gearhead Models	Gear Ratio	Permissible Overhung Load lb		Permissible Thrust Load lb
		0.4inch from the end of shaft	0.8inch from the end of shaft	
5GC□KA	3.6 to 18	55	77	22
	30 to 180	66	99	
5GCH□KA	3.6 to 9	88	110	33
	15 to 18	99	132	
	30 to 180	110	154	

• Characteristics, specifications and dimensions are subject to change without notice.

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ORIENTAL MOTOR U.S.A. CORP.
Technical Support Line Tel:(800)468-3982
Available from 7:30 AM to 5:00 PM, P.S.T.
E-mail: techsupport@orientalmotor.com
www.orientalmotor.com

ORIENTAL MOTOR CO.,LTD.
Headquarters Tokyo, Japan
Tel:(03)3835-0684 Fax:(03)3835-1890