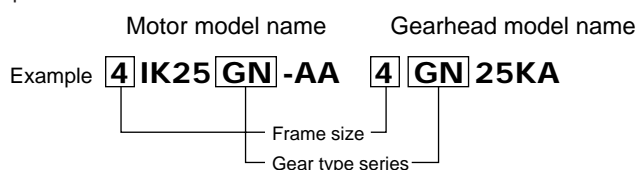


Thank you for purchasing this ORIENTAL MOTOR gearhead. For correct operation, please read this manual carefully.

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Motors which can be directly connected with this gearhead

Check the model names of the motor and gearhead. Gears and motors will fit together only if they are both of the same frame size (first digit of model number is the same) and of the same gear type (GN, GB or GU appear in both the gear and motor model numbers). See explanation below:



Included accessories for installation

The screws, washers, nuts and key are included to connect the gearhead with the motor.

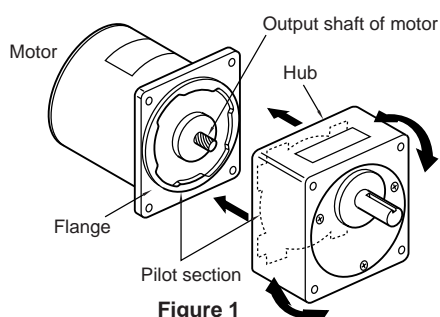
- 4 screws, 4 Hex. nuts and 4 flat washers.
- 1 key for shaft keyway (included with **5GU KA** type and **5GU KHA** type)

Table 1. Size of Screws

Gearhead Model Name	Thread Series	Length (inch)	Type
0GN3KA ~ 180KA	No.4-40UNC	1.57	Cross-recessed Head Machine Screws
2GN3KA ~ 18KA	No.8-32UNC	1.97	
2GN25KA ~ 180KA	No.8-32UNC	2.36	
3GN3KA ~ 18KA	No.10-24UNC	1.97	
3GN25KA ~ 180KA	No.10-24UNC	2.56	
4GN3KA ~ 18KA	No.10-24UNC	1.97	
4GN25KA ~ 180KA	No.10-24UNC	2.56	
5GN3KA ~ 18KA	1/4-20UNC	2.75	
5GN25KA ~ 180KA	1/4-20UNC	3.25	
5GU3KA ~ 180KA	1/4-20UNC	3.75	Hexagon Socket Head Screws
5GU50KHA ~ 180KHA	M6 P1.0	0.79	Hexagon Socket Head Screws
2GB3KA ~ 18KA	M4 P0.7	1.77	Cross-recessed Head Machine Screws
2GB25KA ~ 360KA	M4 P0.7	1.97	
4GB3KA ~ 18KA	M5 P0.8	1.97	
4GB25KA ~ 360KA	M5 P0.8	2.56	

Assembly

Align the gearhead and the motor as shown in Figure 1. Then rotate the gearhead slightly in both directions gently until the gearhead and motor fit flush together.



GEARHEAD OPERATION MANUAL

Do not strike or force the gearhead on to the motor shaft as damage may occur. To install the motor/gearhead to the equipment, please use the screws provided. After installation, please make certain that there is no gap between the motor and the gearhead.

Caution:

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

Installation Gearmotor

When you install the gearmotor, please use the screws which are included.

The seat plate should not be over 0.2 inches (5mm) in thickness. If your seat plate is over 0.2 inches (5mm), other screws are needed. In the case of **5GU KA** type, to support the weight, the seat plate should be 0.3 ~ 0.4 inches (8 ~ 10mm).

The gearmotor shafts are class h7 ISO. Parts being driven by the motor should fit snugly on to the output shaft of the gear. If they are not tight, use additional set screws. See Figure 2.

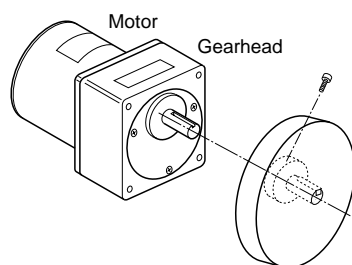


Figure 2

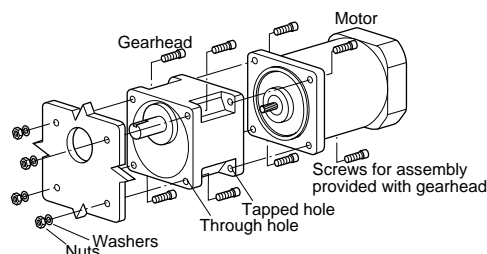


Figure 3

Caution:

Do not use excessive force, or hammer the transmission parts on to the gearmotor shaft as damage may occur. See Figure 3.

5GU KHA Types



Connect the gearhead and motor using the screws provided before mounting them on equipment. When mounting, use a mounting plate about 0.3 inches (8mm) thick and screws (M8) long enough to ensure adequate bite.

* Dedicated mounting brackets (**SOL Series**) can also be used for installing gearmotor. For details, please refer to catalogue.

Direction of Rotation of Gearhead Output Shaft

Gearhead Model Name	Gear ratio	
	Same direction as motor	Opposite direction to motor
0GN KA	3 ~ 9	12.5 ~ 18
	25 ~ 60	75 ~ 180
2GN KA	3 ~ 18	25 ~ 36
3GN KA		
4GN KA 5GN KA	50 ~ 180	
5GU KA	3 ~ 9	12.5 ~ 18
	25 ~ 60	75 ~ 180
5GU KHA	50 ~ 60	75 ~ 180
2GB KA	3 ~ 18	25 ~ 36
4GB KA	50 ~ 180	250 ~ 360

Operating Precautions

- Operating temp : range of +14°F ~ +122°F (-10 ~ +50).
 - Humidity range : 85% or less.
 - Avoid operating in environments where strong vibration, dust or corrosive gas is present.
 - 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.

Permissible Overhung and Permissible Thrust Load

The overhung load, as shown in Figure 4. is the load applied in the direction perpendicular to the output shaft.

The thrust load is the load applied in parallel to the output shaft.

These loads greatly influence the life of shaft. Care must be taken not to operate over the limits.

The permissible overhung and thrust loads are listed in Table 2.

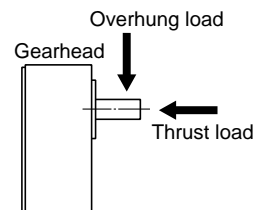


Figure 4

Table 2. Permissible Overhung Load and Thrust Load

Gearhead Model Name		Maximum Permissible Torque lb-in. (N·m)	Permissible Overhung Load lb. (kg)		Permissible Thrust Load lb. (kg)
			0.4-in. from the end of shaft	0.8-in. from the end of shaft	
0GN KA	3 ~ 180	8.7 (1)	4.4 (2)	-	3.3 (1.5)
2GN KA	3 ~ 18	26 (3)	11 (5)	18 (8)	6.6 (3)
	25 ~ 180		26 (12)	40 (18)	
3GN KA	3 ~ 18	43 (5)	18 (8)	26 (12)	8.8 (4)
	25 ~ 180		33 (15)	55 (25)	
4GN KA	3 ~ 18	69 (8)	22 (10)	33 (15)	11 (5)
	25 ~ 180		44 (20)	66 (30)	
5GN KA	3 ~ 18	87 (10)	55 (25)	77 (35)	22 (10)
	25 ~ 180		66 (30)	99 (45)	
5GU KA	3 ~ 9	174 (20)	88 (40)	110 (50)	33 (15)
	12.5 ~ 18		99 (45)	132 (60)	
	25 ~ 180		110 (50)	154 (70)	
5GU KHA	50 ~ 180	261 (30)	88 (40)	132 (60)	33 (15)
2GB KA	3 ~ 360	13 (1.5)	8.8 (4)	13 (6)	6.6 (3)
4GB KA	3 ~ 18	43 (5)	18 (8)	26 (12)	11 (5)
	25 ~ 360		33 (15)	55 (25)	

Maximum permissible torque is dependent on the gear ratio. Please refer to gearmotor torque table in our catalogue.

- Characteristics, specifications and dimensions are subject to change without notice.
- **Orientalmotor** is a trademark of Oriental Motor Co., Ltd.
- Please contact your nearest Oriental Motor office for further information.

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