

1. 注意事項

1.1 安裝前準備

- ◆ 使用前請熟讀“操作說明書”，若因人為原因、非產品本身原因或天災發生等因素而導致不良或損壞，在操作時違反本說明書所示內容而造成的損害，或未依照原本設計之使用方式及非經由本公司進行的改裝及維修所造成的故障，本公司將不承擔任何賠償責任，特此聲明，敬請見諒。
- ◆ 本公司的產品保固期間為購買產品後一年內。保固期限內，若產品因非人為因素而發生故障，客戶將產品寄回，本公司免費更換受損零件。
- ◆ 減速機之安裝，拆卸，保養，須由專業技術人員進行之。
- ◆ 依據安裝環境之通風狀況，長時間連續運轉下可能使得減速機溫度升高，運轉中與剛停機後後，請避免直接碰觸減速機。
- ◆ 運轉中請勿接觸任何旋轉中之部件，減速機安裝完畢後請務必將側面的塞頭回塞，以避免細小物品掉入減速機中。
- ◆ 減速機為精密零組件，安裝過程中，請勿以軟錘或者工具敲擊減速機本體，以避免影響運轉精度。
- ◆ 請勿對減速機進行拆解或改造，否則有可能受傷或造成設備受損。
- ◆ 減速機為密封式設計，油品屬半固態高級合成油，不需換油。

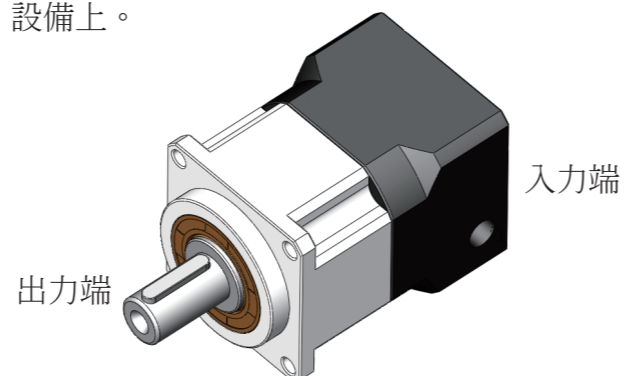
1.2 安裝環境的限制

減速機必須依據下列條件安裝，不符合下列之安裝條件及使用環境將會損害到本產品，不在保固範圍內。

- ◆ 本產品之設計或製造，為使用裝配於其他之機械設備上。
- ◆ 避免將減速機使用於可燃氣體或腐蝕氣體之環境。
- ◆ 周圍使用溫度-10~+90°C。
- ◆ 溼度：不可超過85%，以避免水氣凝結。
- ◆ 高度：不可超過海平面1000公尺。
- ◆ 避免陽光直射，灰塵堆積。
- ◆ 避免水或油的噴濺。
- ◆ 避免連續性震動或撞擊。
- ◆ 使用於良好通風之場所。

2. 減速機介紹

減速機分為入力端與出力端，入力端用於安裝伺服馬達，出力端用於安裝在所需傳動的設備上。



入力端與出力端分別與伺服馬達以及應用端連結。在使用前必須小心保護，避免刮傷或者生鏽，影響安裝精度，造成運轉不順暢。

3. 安裝說明

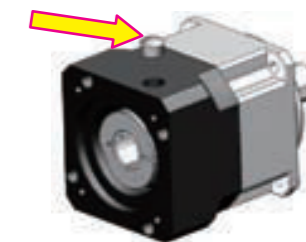
3.1 平行出力軸機型

◆ 1



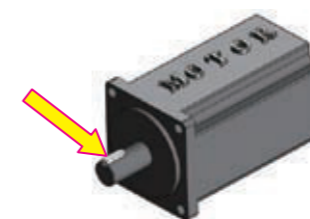
先確認馬達減速機規格是否正確，並將馬達與減速機之安裝面擦拭乾淨。

◆ 2



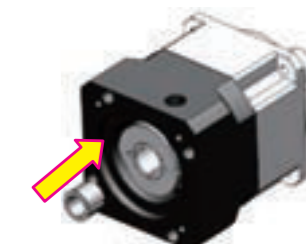
將連接板上扣式塞頭取下，轉動馬達鎖緊環，直到鎖緊環螺絲對準塞頭孔。

◆ 3



取下馬達上原先的鍵，如有必要，請安裝平衡鍵。

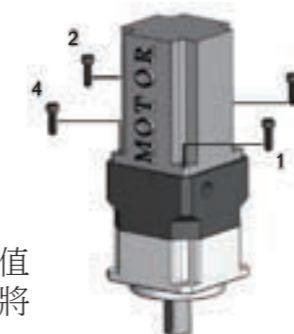
◆ 4



確認馬達軸心尺寸，軸心太小選用適當襯套。

當馬達為平軸狀，對準襯套夾縫在平軸中心線，使鎖緊環螺絲與平軸面呈垂直。

◆ 5



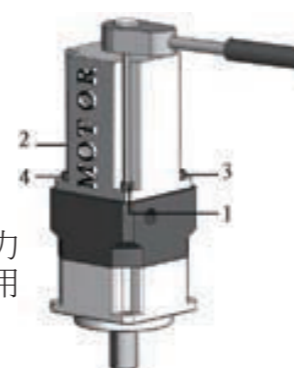
以鎖緊扭力表建議扭力值的5%，依照1至4順序，將螺絲輕輕鎖上。

◆ 6



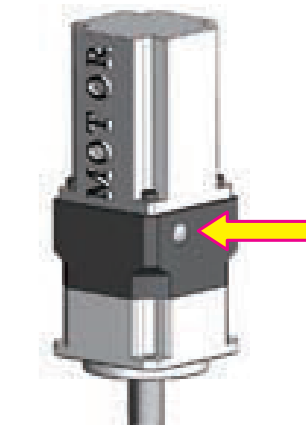
馬達與減速機務必保持垂直組裝，參照鎖緊扭力表建議之扭力值，以扭力扳手將馬達鎖緊環螺絲鎖緊。

◆ 7



以鎖緊扭力表建議之扭力值，依照1至4順序，用扭力扳手將螺絲鎖緊。

◆ 8



將扣式塞頭裝回。

3.2 中空軸機型

◆ 1

先確認馬達減速機規格是否正確，並將馬達與減速機之安裝面擦拭乾淨。



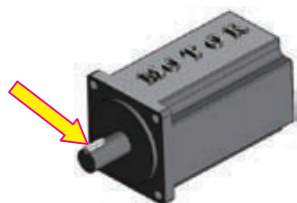
◆ 2

將連接板上扣式塞頭取下，轉動馬達鎖緊環，直到鎖緊環螺絲對準塞頭孔。



◆ 3

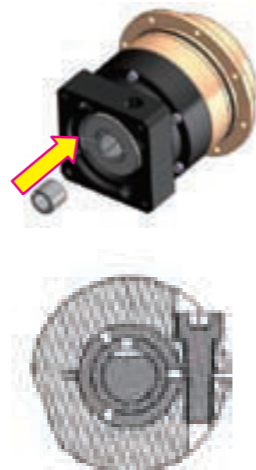
取下馬達上原先的鍵，如有必要，請安裝平衡鍵。



◆ 4

確認馬達軸心尺寸，軸心太小選用適當襯套。

當馬達為平軸狀，對準襯套夾縫在平軸中心線，使鎖緊環螺絲與平軸面呈垂直。



◆ 5

以鎖緊扭力表建議扭力值5%，依照1至4順序，將螺絲輕輕鎖上。



◆ 6

馬達與減速機務必保持垂直組裝，參照鎖緊扭力表見建議之扭力值，以扭力扳手將馬達鎖緊。



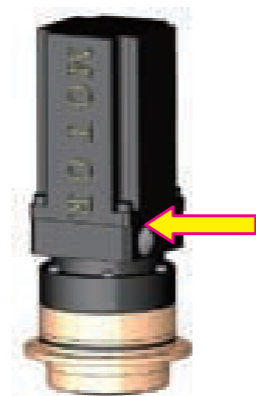
◆ 7

以鎖緊扭力表建議之扭力值，依照1至4順序，用扭力扳手將螺絲鎖緊。



◆ 8

將扣式塞頭裝回。



鎖緊螺絲扭力建議表

| 螺絲尺寸 | 六角頭尺寸 | 強度12.9螺絲之鎖緊扭力 | |
|-----------|-------|---------------|-------|
| | | N-m | In-lb |
| M3*0.5P | 2.5 | 2.1 | 19 |
| M4*0.7P | 3 | 4.9 | 44 |
| M5*0.8P | 4 | 9.8 | 87 |
| M6*1P | 5 | 17 | 151 |
| M8*1.25P | 6 | 41 | 364 |
| M10*1.5P | 8 | 80 | 709 |
| M12*1.75P | 10 | 139 | 1232 |
| M14*2P | 12 | 223 | 1976 |
| M16*2P | 14 | 343 | 3038 |

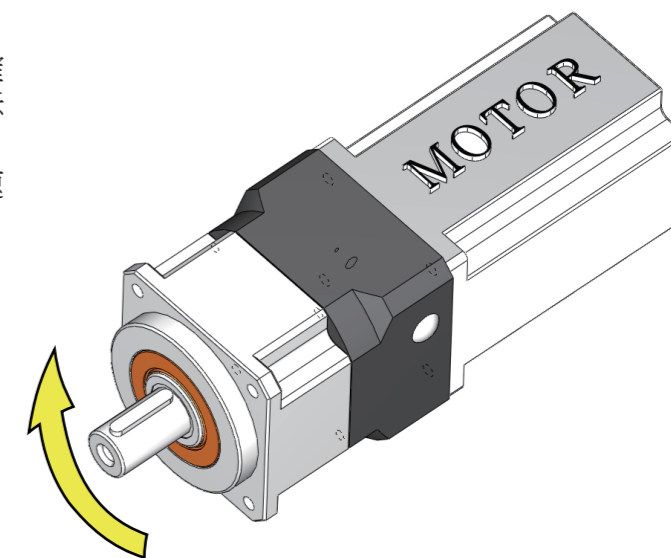
5. 運轉測試與故障排除

◆ 5.1

將馬達接上動力，以低轉速作正逆轉測試，確認運轉順暢。若有任何運轉不順暢產生，請拆開馬達與減速機，並依3.安裝說明重新組裝。若經重新組裝仍然運轉不順暢，請勿拆解減速機並儘快與世協電機聯絡，以取得技術協助。

⚠ 運轉前務必確認減速機上之塞頭已確實封閉固定。

⚠ 請勿接觸旋轉中之部件!!!



⚠ 請注意

- ◆ 減速機若未依上述方法與馬達正確組合，將會使齒輪受傷而產生異音，減少二者使用壽命，也可能造成意外，請特別注意。
- ◆ 將本公司產品與其他產品搭配使用時，請確認是否符合客戶所需之規格、法規或限制等。
- ◆ 此外，請客戶自行確認目前所使用的系統、機械或是裝置是否適用於本公司產品。
- ◆ 如未確認是否符合或適用時，本公司無須對本公司產品的適用性負責。

世協電機股份有限公司：

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Thank you for selecting SESAME products.
Please read this manual before operation.

ISO 9001
ISO 14001

1. Note

1.1 Preparation before installation

- Please read this operation manual before using this gearbox. Any problems caused by inappropriate operation contrary with the manual, or damage caused by natural disasters, or restructure the gearbox without our permission, Sesame will not hold any responsibility nor will the gearbox be covered by warranty.
- ◆ Warranty is one year after purchase of the gearbox. Within warranty period, if gearbox damage is not caused by operation error nor by natural disaster, then please send back the gearbox, we should replace the damage spare part at free of charge.
- ◆ Installation, disassemble, maintenance on the gearbox, needed to be performed by trained technicians.
- ◆ According to the application and operation environment, the gearbox temperature might be raising after period of running. Please do not touch the gearbox directly during operation, or right off from operation.
- ◆ Do not touch any rotating components when the gearbox is running. Ensure that the plugs of the gearbox were inserted after installation. Avoid any small object fall into the gearbox.
- ◆ Handle the gearbox gently during installation, do not knock the gearbox by any tool, to avoid the influence of running accuracy.
- ◆ Do not disassemble or modify gearbox to prevent injury or equipment damage.
- ◆ Synthetic lubricant is sealed in gearbox, there is no need to change lubricant.

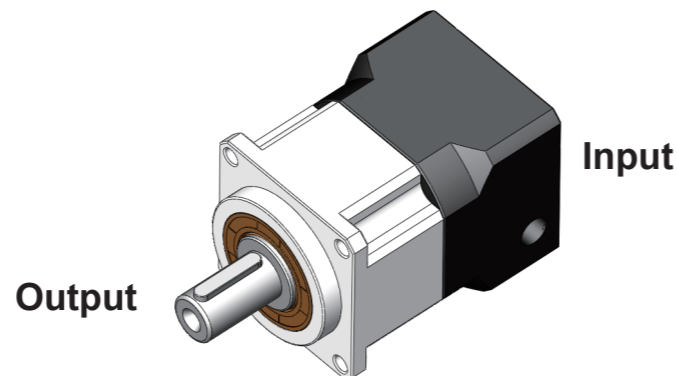
1.2 Installation environment limitation

Gearbox must be installed under following terms to prevent damages which are not covered by warranty.

- ◆ Gearbox is designed or manufactured to be used with other mechanical equipment .
- ◆ Avoid gearbox used in flammable gas or corrosion gas environment.
- ◆ Operate temperature is between -10 to + 90°C.
- ◆ Humidity: no more than 85%, in order to avoid condensation.
- ◆ Operate altitude may not be higher than 1000m above sea-level
- ◆ Avoid direct sunlight, dust accumulation.
- ◆ Avoid continuity vibration or impact.
- ◆ Used in good ventilated place.

2. Gearbox Introduction

As shown below, the input side is for installing the servo motor and the output is mounted to application equipment.



To ensure the product performance, both the input and output ends must be protected carefully to avoid any damage or improper operation.

3. Mounting Instructions

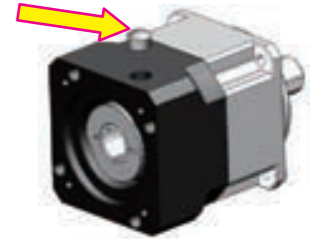
3.1 Parallel Type

◆ 1



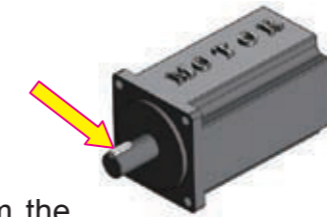
Check the motor and gearbox size. Clean the mounting surface.

◆ 2



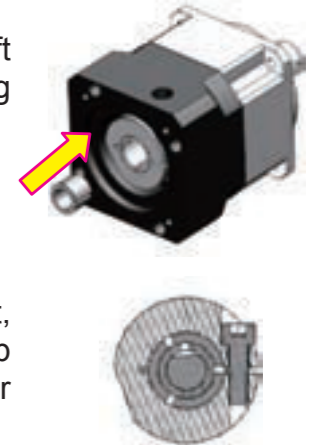
Take off the plug from the adapter plate. Revolve the set collar until the bolt is aligned with the hole.

◆ 3



Remove the key from the motor shaft. Mounting the balance key if necessary.

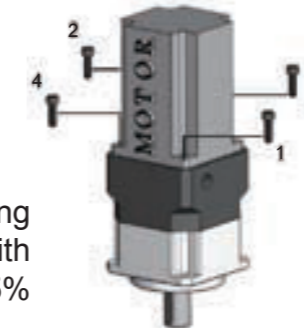
◆ 4



Make sure the motor shaft size. Choose the right bushing if necessary.

As installing on flatted shaft, be sure to align the collet gap over the flat and the set collar bolt perpendicular to the flat.

◆ 5



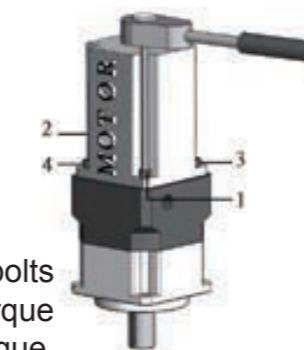
Tighten the mounting bolts in 1~4 order with torque wrench to 5% specified torque.

◆ 6



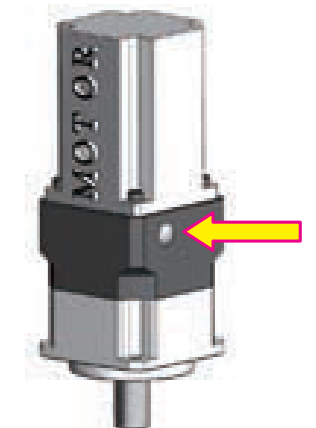
Install gearbox and motor vertically. Tighten the set collar bolt with torque wrench to specified torque.

◆ 7



Tighten the mounting bolts in 1~4 order with torque wrench to specified torque.

◆ 8



Put the plug back .

3.2 Hollow Spindle Type

◆ 1



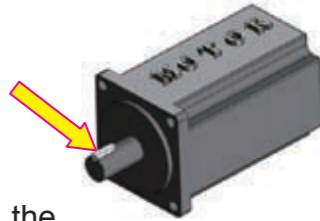
Check the motor and gearbox size. Clean the mounting surface.

◆ 2



Take off the plug from the adapter plate. Revolve the set collar until the bolt is aligned with the hole.

◆ 3

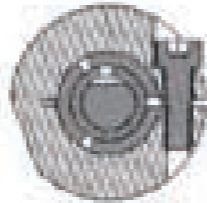


Remove the key from the motor shaft. Mounting the balance key if necessary.

◆ 4

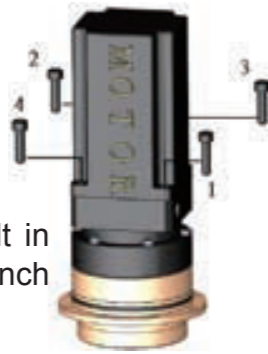


Make sure the motor shaft size. Choose the right bushing if necessary.



As installing on flatted shaft, be sure to align the collet gap over the flat and the set collar bolt perpendicular to the flat.

◆ 5



Tighten the mounting bolt in 1~4 order with torque wrench to 5% specified torque.

◆ 6



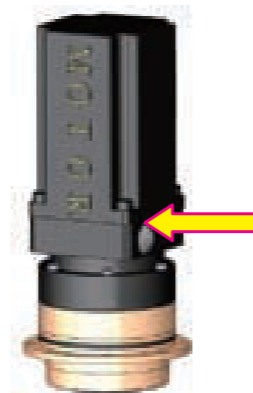
Install gearbox and motor vertically. Tighten the set collar bolt with torque wrench to specified torque.

◆ 7



Tighten the mounting bolts in 1~4 order with torque wrench to specified torque.

◆ 8



Put the plug back.

Tightening Torque

| Bolt Size | Width Across Flats | Strength 12.9 Tightening Torque | |
|-----------|--------------------|---------------------------------|-------|
| | | N-m | In-lb |
| M3*0.5P | 2.5 | 2.1 | 19 |
| M4*0.7P | 3 | 4.9 | 44 |
| M5*0.8P | 4 | 9.8 | 87 |
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5. Test Run & Trouble Shooting Guides

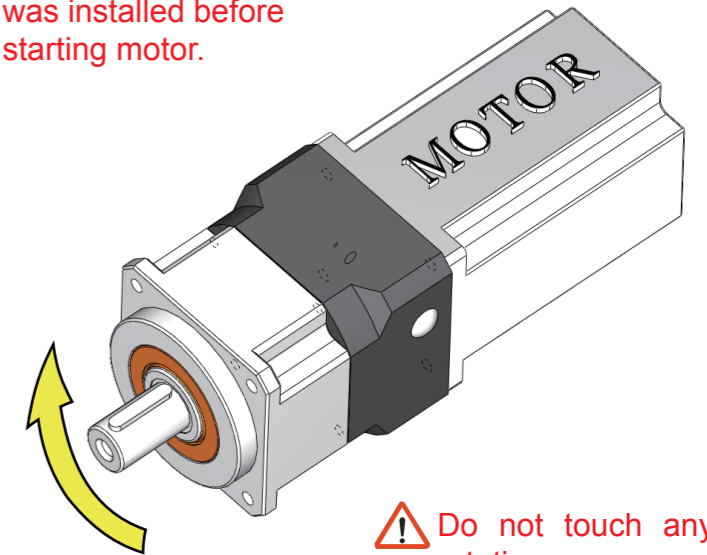
◆ 5.1

Power on the motor. Slowly drive the motor and adjust its mounting status until the gearbox is driven smoothly.

⚠ Ensure the plug was installed before starting motor.

◆ 5.2

If smooth operation is not available after mounting adjustment, re-install motor and gearbox again as per mounting instructions. If the problem could not be solved via the procedures above, please DO NOT take apart of the gearbox, contact SESAME for technical support right away.



⚠ Do not touch any rotating component when the gearbox is running.

⚠ Attention

- ◆ Incorrect installation will damage gears and results in abnormal noise, short lifespan or accident. Please be alert.
- ◆ Specification compatibility check is required before applying both products to other machinery or equipment.
- ◆ Sesame Motor Corp. is not responsible for any cause there might occur if user's neglects of specification compatibility checking.

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