ELECTRIC CYLINDER
2026



LINEAR MOTION EXPERT

• Coupling

Notes on Installation of Diaphragm Coupling

Locking force when locking screws, please refer to the following table, do not overexert or unlocked.

When the clamping screw is loose, please confirm whether the coupling can move slightly in the axial and rotational directions. If you can't move smoothly, you need to readjust two. Concentricity of shaft (motor locking screw).

If the concentricity of the 2 axes is too large.it will cause abnormal sound or cause danage to the coupling.

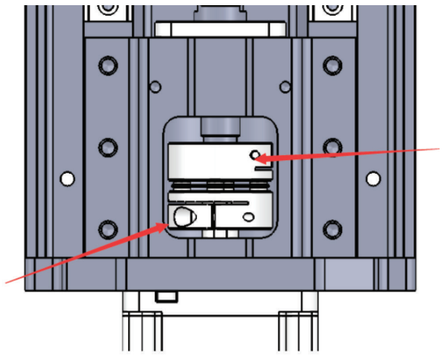


Figure1

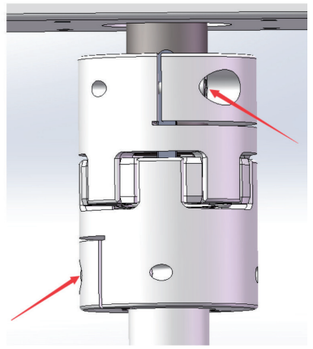


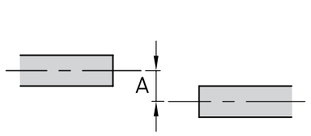
Figure2

Size	Clamping bolt	Locking torque(N·m)
20	M2.5	1.0-1.1
25	M2.5	1.0-1.1
30	M3	1.5-1.9
35	M4	3.4-4.1
40	M4	3.4-4.1
50	M5	7.0-8.5

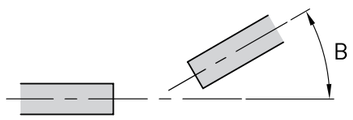
As shown in figure 1、2, first put on the coupling, turn it by hand to detect the concentricity, and then lock the screw according to the torsional force in the left figure.

Assembly Deviations Between Screw and Motor Shaft

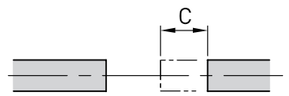
When assembling the ball screw and motor shaft, the following three basic deviations should be paid attention to. The illustration is as follows.



1、(A) Eccentricity



2、(B) Deflection



3、(C) Axial displacement

If you purchase the motor for installation by yourself, pay special attention to the following points when installing the coupling:

- Please refer to the right table for the corresponding locking force when locking screws.Do not apply excessive force or unlock them.
- Although the clamping screw is loose, please confirm whether the coupling can be light in the axial and rotational directions. Move lightly. If it can't move smoothly, it is necessary to readjust the concentricity of the two shafts (motor locking screws).
- If the concentricity of two shafts is too different, abnormal sound will be produced or the coupling will be damaged.
※If there is any problem in adjusting the alignment of two axes, please contact our company.

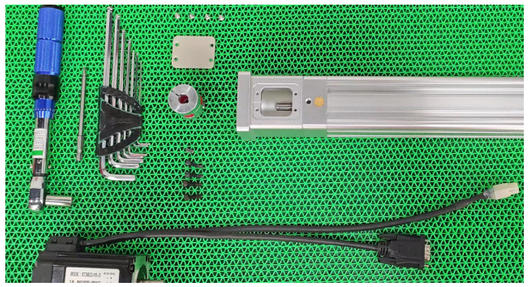
The clamping bolt	Locking torque(N·m)
M2.5	1.0-1.1
M2.5	1.0-1.1
M3	1.5-1.9
M4	3.4-4.1
M4	3.4-4.1
M5	7.0-8.5

Reference Data of Coupling

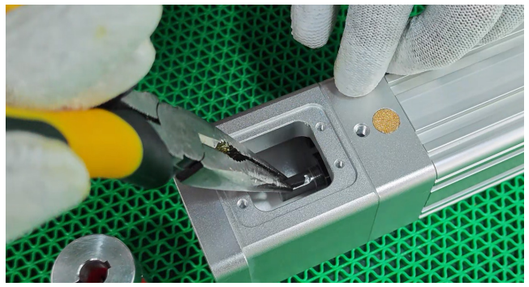
Model	Permissible torque [N·m]	Maximum permissible error			Max speed [min-1]	Torsional elasticity [N·m/red]	Axial elasticity [N·m/red]	Moment of inertia [kg·m2]	Weight [kg]
		Eccentricity [mm]	Declination [°]	Axial displacement [mm]					
SFC-005SA2	0.5	0.02	0.5	±0.05	10000	500	140	0.25x10-6	0.007
SFC-010SA2	0.8	0.02	1	±0.1	10000	1400	140	0.58x10-6	0.011
SFC-020SA2	1.5	0.02	1	±0.15	10000	3700	64	2.36x10-6	0.025
SFC-030SA2	4	0.02	1	±0.2	10000	8000	64	4.00x10-6	0.033
								6.06x10-6	0.041
								8.12x10-6	0.049
SFC-035SA2	6	0.02	1	±0.25	10000	18000	112	18.43x10-6	0.084
SFC-040SA2	10	0.02	1	±0.3	10000	20000	80	16.42x10-6	0.076
								22.98x10-6	0.09
								29.53x10-6	0.105
SFC-050SA2	25	0.02	1	±0.4	10000	32000	48	54.88x10-6	0.156
								77.10x10-6	0.185
								99.33x10-6	0.214
SFC-060SA2	60	0.02	1	±0.45	10000	70000	76.4	143.7x10-6	0.279
								206.1x10-6	0.337
								268.5x10-6	0.396
SFC-080SA2	100	0.02	1	±0.55	10000	140000	125	709.3x10-6	0.727
SFC-090SA2	180	0.02	1	±0.65	10000	100000	108	1227x10-6	0.959
SFC-100SA2	250	0.02	1	±0.74	10000	120000	111	1858x10-6	1.181

※The moment of inertia and mass in the table are the values at the maximum aperture.
The values of torsional elasticity constants in the table are only the values of individual components.

Motor direct coupled mount



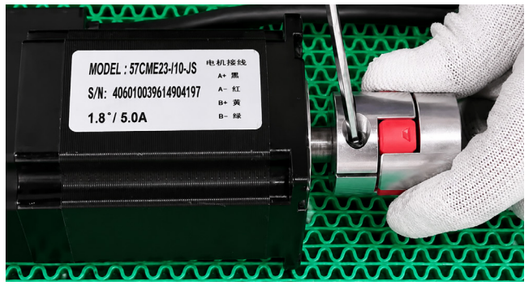
Step 1 Prepare the coupling, motor, key, hex wrench, torque wrench, and related accessories.



Step 2 Install the key into the screw shaft keyway.



Step 3 Install the key into the motor shaft keyway.



Step 4 Pre-tighten the motor-side coupling screws and tighten them to the specified torque.



Step 5 Mount the motor assembly onto the screw shaft end. Pre-tighten the four motor mounting bolts in a diagonal sequence, then tighten them to the specified torque.



Step 6 Tighten the screw-side coupling screws to the specified torque.

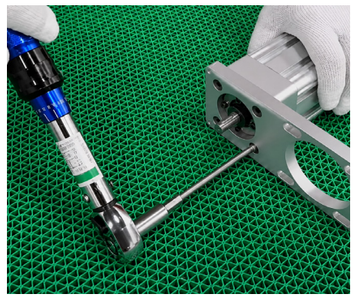


Step 7 Install and secure the coupling cover.



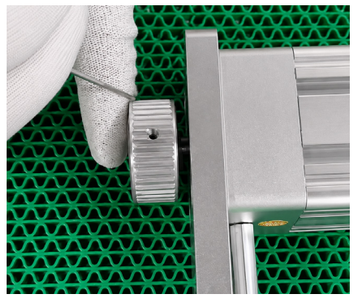
Step 8 Manually move the piston rod to verify smooth operation and ensure there is no abnormal noise or binding.

Motor parallel mount



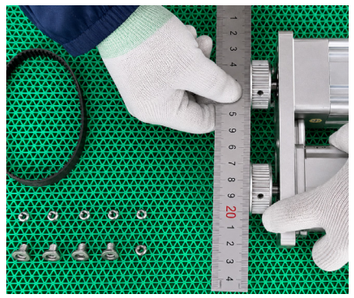
Step 1

Secure the turning plate to the bearing housing and tighten the mounting screws.



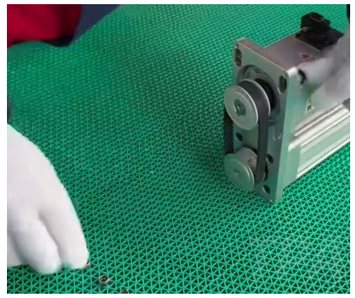
Step 2

Install the set screws into the timing pulley and secure the pulley to the screw shaft end.



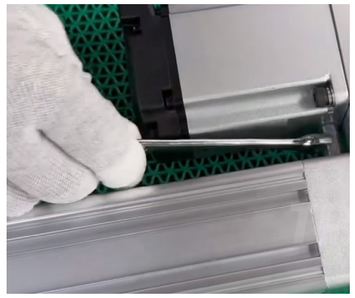
Step 3

Install the motor-side timing pulley and ensure both pulleys are properly aligned.



Step 4

Center the timing belt and pre-tighten the motor-side lock nuts.



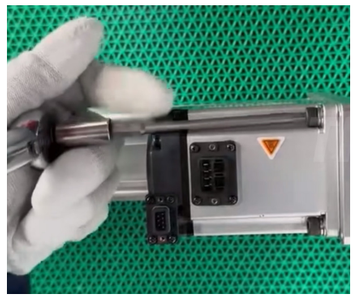
Step 5

Adjust the timing belt tension using a wrench.



Step 6

Measure and adjust the belt tension frequency to approximately 180 Hz.



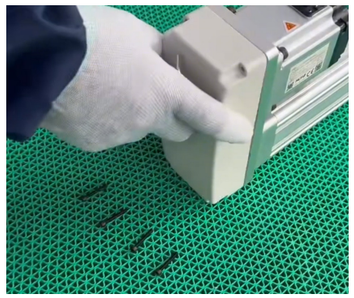
Step 7

Tighten the four motor mounting screws.



Step 8

Manually move the piston rod to check for abnormal noise, binding, or belt misalignment.



Step 9

Install the motor cover and tighten the corresponding screws.