

Coupling

A coupling is a mechanical device that serves to connect two different machines for rotating and for the normal operation within the permissible axial, parallel and angle deviation ranges, and transmits safe torques.

PURPOSES

- 1 · To link the axes of two independent rotating machines (such as motor and screw), and allow the disassembly for replacement or repair.
- 2 · To increase the flexibility of machines and allow the minor deviation of axes.
- 3 · A coupling is a safety device to protect the machines from being damaged.
- 4 · To adjust or improve the vibration characteristics of rotating components.
- 5 · To realize the transmission of power or torque.

THE KIND OF COUPLING

The coupling can be divided into two major categories : flexible coupling and rigid coupling.







- 1 · Flexible coupling : Flexible coupling is applied when it is difficult to configure the power transmission and two axes into a straight line or when the installation of two axes is very simple. Flexible coupling has the functions of alleviating the impact, allowing the parallel, angle and axial potential differences as well as improving the transfer power characteristics of the system. That is to say, such coupling can ensure that the axes rotate smoothly even when there are minor deviations in installation. The flexible coupling is widely used.
- 2 · Rigid coupling : Rigid coupling is the component that can transmit torques accurately, completely prevent the deflective angle and eccentricity as well as integrate the two axes connected into a unit ; therefore, the application of rigid coupling has a high requirement for concentricity.

COUPLING GUIDE-1

Fixing of coupling	Flexible	Rigid
Fixed by set screw	MFC/MFCS	MRC/MRCS
	MFB/MFBS	
	MFL	
	MTC	
Fixed by clamping	MFC-C/MFCS-C	MHC-C
	MFL-C	MRC-C/MRCS-C
	MTC-C	WTM

Coupling

COUPLING GUIDE-2

性質 (character)	撓性聯軸器 FLEXIBLE COUPLING										
品號 (item)	SCT	SCT-C	SCTS	SCTS-C	SCP	SWS	SWS-C	SWSS	SWSS-C	SRJ	SRJ-C
產品圖 (picture)											
材質 (material)	AL	AL	SUS	SUS	PLASTIC	AL	AL	SUS	SUS	AL	AL
高扭力 (high torque)	★	★	★	★		★	★	★	★	★	★
低慣性 (low inertia)	★	★	★	★	★	★	★	★	★	★	★
零背隙 (zero backlash)	★	★	★	★	★	★	★	★	★		
高剛性 (high rigid)			★	★				★	★	★	★
絕緣性 (high insulation)					★					★	★
抗蝕性 (erode resistance)			★	★	★			★	★		
抗震性 (anti-seismic)										★	★
偏心佳 (high eccentric)											
偏角佳 (high deflection)	★	★			★	★	★	★		★	★

性質 (character)	撓性聯軸器 FLEXIBLE COUPLING							剛性聯軸器 RIGID COUPLING			
品號 (item)	SMT	SMT-C	SGH-C	SGS-C	SGL-C	SOT	SOT-C	SCG	SCG-C	SCGS	SCGS-C
產品圖 (picture)											
材質 (material)	AL	AL	AL	AL	AL	AL	AL	AL	AL	SUS	SUS
高扭力 (high torque)			★	★	★	★	★	★	★	★	★
低慣性 (low inertia)	★	★	★	★	★	★	★	★	★	★	★
零背隙 (zero backlash)	★	★	★	★	★			★	★	★	★
高剛性 (high rigid)			★	★	★	★	★	★	★	★	★
絕緣性 (high insulation)						★	★				
抗蝕性 (erode resistance)											
抗震性 (anti-seismic)	★	★				★	★				
偏心佳 (high eccentric)	★	★				★	★				
偏角佳 (high deflection)	★	★	★	★	★	★	★				

Coupling

FIXING OF COUPLING

1 · Fixed by set screw.

The method is to fix the coupling with four set screws to the axes at 90° or 120°, characterized by small size, easy to install and low cost ; however, the long-term rotation and impact of the machines may loosen the screws, leave screw marks on the axis surface and lead to difficult disassembly. Low-cost is the advantage of this method.

2 · Fixed by clamping.

Both sides of the coupling have cut grooves that are flexible ; two or four socket head screws are inserted into two sides of the clamp to allow the groove to tighten the axes. The method has the advantages of easy disassembly, protection of axis, and better stability and maintaining.

3 · Keyway.

Both the method of fixation by set screw and fixation by clamping allow the processing of keyways. The inosculating of keyways can prevent sliding, which is suitable for machines with high torques.

4 · Fixed by free-button compression ring.

The coupling allows minor deviation ; large deviation may cause breakdown of the coupling and the axes ; therefore, during assembly, more attention should be paid to precision flat correction, which facilitates the installation and lifespan, and increases the utilization ratio of machines.



MFC-C / MFCS-C

MATERIAL

- 1 · SCT-C : Aluminum alloy.
- 2 · SCTS-C : Stainless steel.

SURFACE TREATMENT

SCT-C-Surface treatment : Anodizing standard white.

FEATURES

- 1 · Ideal one-body metallic spring flexible couplings.
- 2 · Zero backlash.
- 3 · Complete absorption of eccentricity angularity, and end-play by spring action.
- 4 · High torsional stiffness and response.
- 5 · Identical clockwise and anticlockwise rotational characteristics.
- 6 · Maintenance-free, oil and chemical resistant.
- 7 · Clamp type.

SPECIFICATIONS

Model	Rated Torque (N.m)	Max. Torque (N.m)	Max Rotational (Rpm/min)	Moment of Inertia (Kg . m ²)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of End-Play (mm)
SCT-12C	0.2	0.4	12000	7.8×10 ⁻⁸	0.10	2	±0.3
SCT-16C	0.3	0.6	9500	3.4×10 ⁻⁷	0.10	2	±0.4
SCT-20C	0.5	1.0	7600	9.1×10 ⁻⁷	0.10	2	±0.4
SCT-25C	1.0	2.0	6100	2.6×10 ⁻⁶	0.15	2	±0.5
SCT-32C	2.0	4.0	4800	9.7×10 ⁻⁶	0.15	2	±0.5
SCT-40C	5.0	10.0	3800	3.3×10 ⁻⁵	0.20	2	±0.5
SCT-50C	10.0	20.0	3100	1.0×10 ⁻⁴	0.20	2	±0.5
SCT-63C	20.0	40.0	2400	3.2×10 ⁻⁴	0.20	2	±0.5
SCTS-12C	0.3	0.6	12000	2.2×10 ⁻⁷	0.10	2	±0.2
SCTS-16C	0.5	1.0	9500	9.0×10 ⁻⁷	0.10	2	±0.3
SCTS-20C	1.0	2.0	7600	2.5×10 ⁻⁶	0.10	2	±0.3
SCTS-25C	2.0	4.0	6100	7.1×10 ⁻⁶	0.15	2	±0.4
SCTS-32C	3.5	7.0	4800	2.7×10 ⁻⁵	0.15	2	±0.5
SCTS-40C	8.0	16.0	3800	9.0×10 ⁻⁵	0.20	2	±0.5
SCTS-50C	15.0	30.0	3100	2.8×10 ⁻⁴	0.20	2	±0.5
SCTS-63C	35.0	70.0	2400	8.8×10 ⁻⁴	0.20	2	±0.5

WHEN ORDERING

SCT-25C-D1×D2 ; SCTS-25C-D1×D2.

