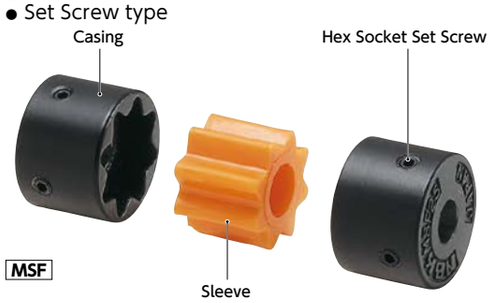
MSF Flexible coupling - Serration - type

WEB Selection Tool | WEB CAD Download | Electrical Insulation | SUS Stainless steel

Structure

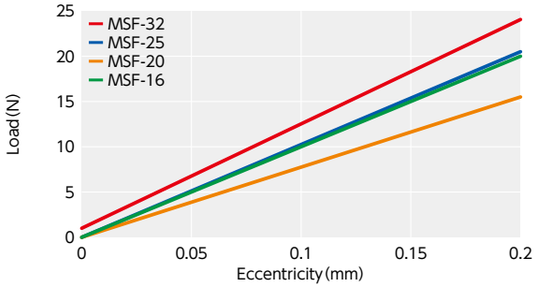
● Set Screw type



MSF

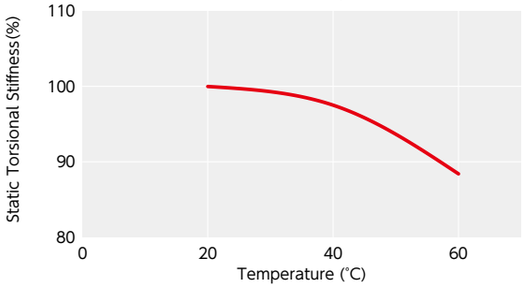
● Technical Information

● Eccentric reaction force



● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



● Applicable motors

	MSF
Servomotor	–
Stepping Motor	–
General-purpose motor	◎

◎: Excellent ○: Very good

● Property

	MSF
Allowable Misalignment	○
Vibration absorption	○
Electrical insulation	◎
Allowable operating temperature	–20℃ to 60℃

◎: Excellent ○: Very good

- The engagement of serration transmits torque. This is a simple structure flexible coupling.
- It has excellent flexibility. Its max. lateral misalignment and max. angular misalignment are large, absorbing torsional vibration.

● Application

Mixer/Gaming device

● Material/Finish

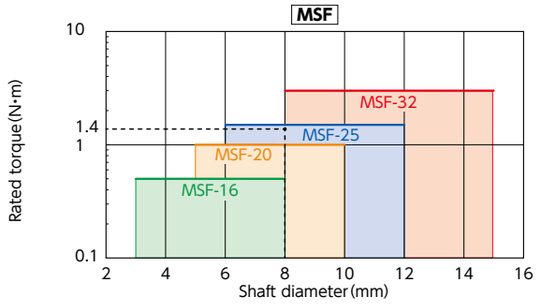
RoHS2 Compliant

	MSF-16-MSF-25	MSF-32
Casing	ZDC2 Cathodic electrodeposition coating	SMF4040 Steam treatment
Sleeve	Polyurethane	Polyurethane
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film	SCM435 Ferrosoferric oxide film

Selection

● Selection based on shaft diameter and rated torque

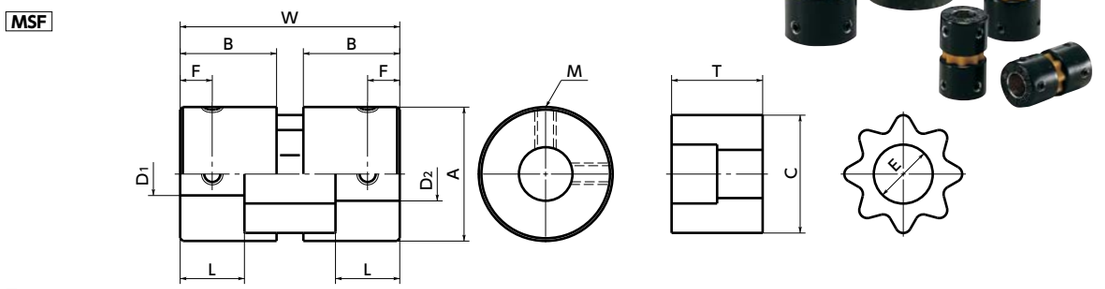
The area bounded by the shaft diameter and rated torque indicates is the selection size.



● Selection example

In case of selected parameters of shaft diameter of ϕ 8 and load torque of 1.4 N•m, the selected size is **MSF-25**.

Additional Keyway at Shaft Hole ➡ P.803 — Available / Add'l charge
Cleanroom Wash & Packaging ➡ P.807 — Please feel free to contact us
Change to Stainless Steel Screw ➡ P.805 — Available / Add'l charge



Dimensions

Unit : mm

Part Number ◀1	A	B	L	W	F	M	Screw Tightening Torque (N·m)	Sleeve T	Sleeve C	Sleeve E	Standard Bore Diameter (dimensional allowance H8) D1・D2 ◀2 3	4	5	6	6.35	8	10	12	14
MSF-16	16	12	8	27	4	M3	0.7	11	14	6 / 6	●	●	●	●	●	●			
MSF-20	20	15	10	34	5	M3	0.7	14	18	8 / 8			●	●	●	●	●		
MSF-25	25	18	12	41	6	M4	1.7	17	22	10 / 10				●	●	●	●	●	
MSF-32	32	21	14	48	7	M4	1.7	20	29	12 / 14						●	●	●	●

- All products are provided with hex socket set screw.
- In a case where the bore diameter is ϕ 4 or less, the set screw is used in only one place.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MSF-16	8	0.5	1	39000	9.0×10^{-7}	4.4	0.20	2	22
MSF-20	10	1	2	31000	2.7×10^{-6}	9.5	0.20	2	42
MSF-25	12	1.5	3	25000	8.1×10^{-6}	20	0.20	2	81
MSF-32	15	3	6	19000	2.5×10^{-5}	52	0.20	2	150

*1: Correction of rated torque and max. torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MSF is –20℃ to 60℃.

*2: These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
–20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

● Part number specification

MSF-16-6-6.35 1 set
◀1 ◀2

MSF-16-SLV Single Sleeve
◀1 Single Sleeve