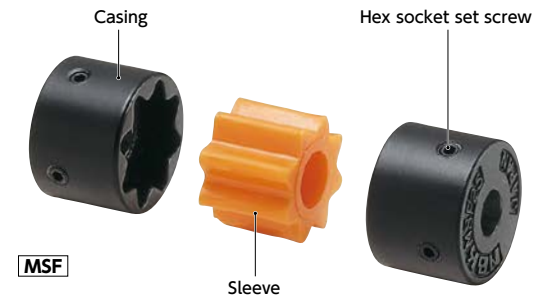


# MSF Flexible Couplings - Serration - Type

Electrical Insulation

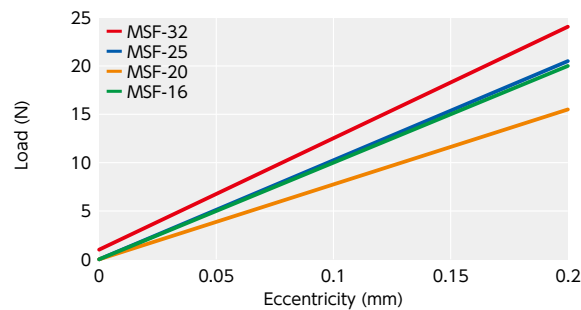
## Structure

### Set Screw Type



### Technical Information

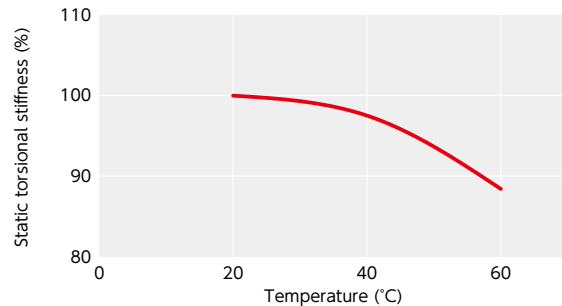
#### Eccentric Reaction Force



#### Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20°C is 100%.

Changes in the static torsion spring constant within the operating temperature are shown in the graph. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



### Recommended Applicable Motor

	MSF
Servomotor	●
Stepping Motor	●
General-purpose Motor	○

○: Excellent ○: Very good ●: Available

### Property

	MSF
Allowable Misalignment	○
Vibration Absorption	○
Electrical Insulation	●
Allowable Operating Temperature	-20°C to 60°C

○: Excellent ○: Very good

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

### Application

Mixer / Gaming device

### Material/Finish

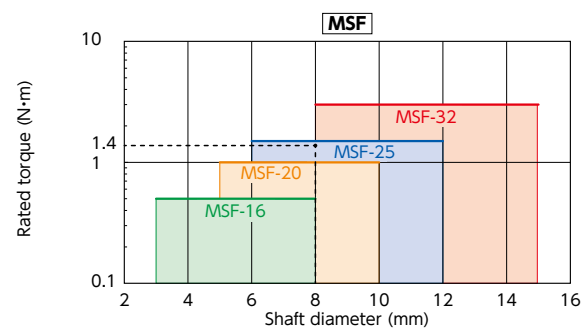
	MSF-16-MSF-25	MSF-32
Casing	ZDC2 Cathodic Electrodeposition Coating	SMF4040 Steam Treatment
Sleeve	Polyurethane	Polyurethane
Hex Socket Set Screw	SCM435 Ferrosioferic Oxide Film (Black)	SCM435 Ferrosioferic Oxide Film (Black)

RoHS

## Selection

### Selection Based on Shaft Diameter and Rated Torque

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



### Selection Example

In case of selected parameters of shaft diameter of  $\phi$  8 and load torque of 1.4 N·m, the selection size is

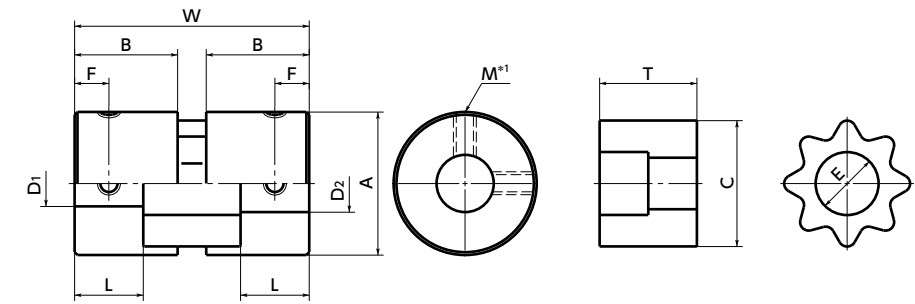
**MSF-25**.

### Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
-20°C to 30°C	1.00
30°C to 40°C	0.80
40°C to 60°C	0.70














MSF



\*1: In a case where the bore diameter is  $\phi$  4 or less, the set screw is used in only one place.

## Dimensions

Unit: mm

Part Number 	A	B	L	W	F	M	Screw Tightening Torque (N·m)	Sleeve			Standard Bore Diameter (Dimensional Allowance H8) 									
								T	C	E	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 screws.

• Recommended tolerance for shaft diameters is h6 and h7.

• For the shaft insertion amount to the coupling, see Mounting/maintenance.

## Performance

Part Number	Max. Bore Diameter (mm)	Rated Torque *1 (N·m)	Maximum Torque *1 (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment of Inertia *2 (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass *2 (g)
MSF-16	8	0.5	1	39000	$9.0 \times 10^{-7}$	4.4	0.2	2	22
MSF-20	10	1	2	31000	$2.7 \times 10^{-6}$	9.5	0.2	2	42
MSF-25	12	1.5	3	25000	$8.1 \times 10^{-6}$	20	0.2	2	81
MSF-32	15	3	6	19000	$2.5 \times 10^{-5}$	52	0.2	2	150

\*1: Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30°C, 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°C to 60°C.

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

### Part number specification

**MSF-16-6-6.35** **1 Set**

1 2

**MSF-16-SLV** **Single Sleeve**

1 Single Sleeve

Additional Keyway at Shaft Hole → P.0000	Cleanroom Wash & Packaging → P.0000	Change to Stainless Steel Screw → P.0000
Available / Add'l charge	Not Available	Available / Add'l charge