

Structure

- Clamping type

MSXP-C → P.235



- Property

	MSXP
Low Particle	⊙
Vacuum-supported	○
Low Outgas	○
Heat-resistance	○
Chemical Resistance	⊙
Zero Backlash	⊙
Allowable Misalignment	○
Electrical Insulation	⊙
Cleanroom Specification	⊙
Allowable Operating Temperature	-20°C to 80°C

⊙: Excellent ○: Very good

- This is a resin spring coupling with single-piece construction. A slit is inserted into a cylindrical material.
- It can be used in an environment or cleanroom where heat resistance and chemical resistance are required, such as FPD manufacturing device.
- PEEK superior in physical and chemical properties is adopted. The amount of outgas is ultralow.
- A plate spring formed by a slit allows eccentricity, angular misalignment, and end-play to be accepted.

- Application

FPD manufacturing device/Semiconductor manufacturing device

- Material/Finish



	MSXP-C
Main body	PEEK (Polyether ether ketone)
Hex Socket Head Cap Screw	PEEK (Polyether ether ketone)

- PEEK's color may vary depending on the lot or other matters.

Related Products

There is a slit-type flexible coupling **MSX** made of extra super duralumin (A7075).
→ P.97



- Part number specification

MSXP-25C-6-8

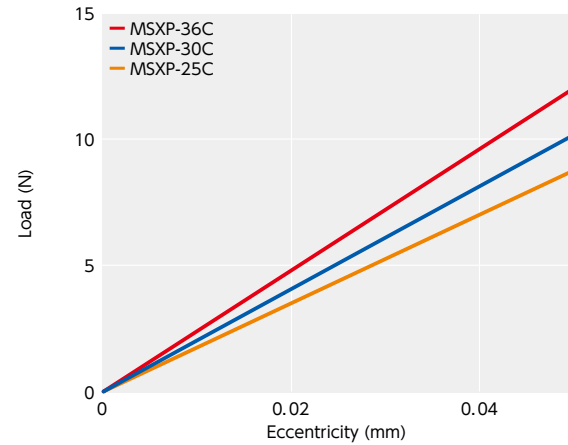
Product Code Size bore diameter

Please refer to dimensional table for part number specification.

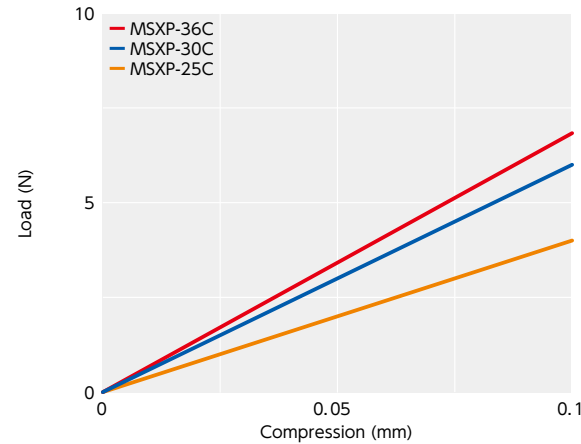
Additional Keyway at Shaft Hole → P.803	Cleanroom Wash & Packaging → P.807	Change to Stainless Steel Screw → P.805
Please feel free to contact us	Cleanroom washed and packed	Not Available

Technical Information

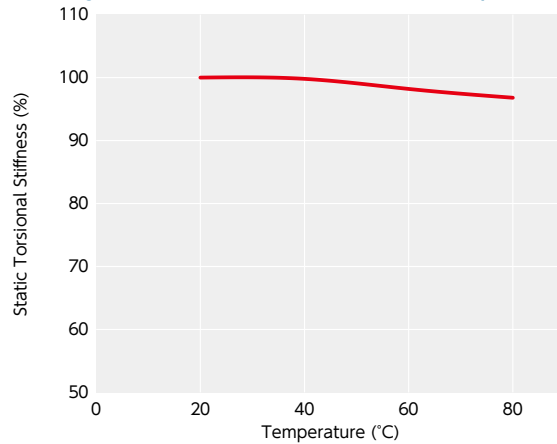
● Eccentric Reaction Force



● Thrust Reaction Force



● Change in static torsional stiffness due to temperature



● Analysis of outgas

Unit: (v/v ppm)

Component	Content	
Inorganic gas	Hydrogen	500 or less
	Carbon monoxide	500 or less
	Carbon dioxide	500 or less
Organic gas	Methane	5 or less
	Ethane	5 or less
	Ethylene	5 or less
	Propane	5 or less
	Acetylene	5 or less
	i-butane	5 or less
	n-butane	5 or less
	Propylene	5 or less

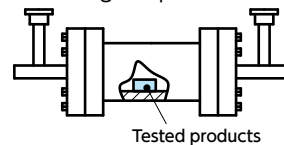
● Both inorganic gas and organic gas are not more than the lower limit of determined amount and are not detected.

● Measurement Methods

- Inorganic gas — Gas chromatography (TCD)
- Organic gas — Gas chromatography (FID)

● Measurement Conditions

Heating temperature — 100°C



Technical Information

● PEEK's physical property

Property	Test Method	unit	PEEK
Tensile Strength	D638	N/mm ²	97
Tensile elongation	D638	%	65
Bending Strength	D790	N/mm ²	156
Bending elastic modulus	D790	GPa	4.1
Izod impact value (with notch)	D256	J/m	94
Rockwell hardness	D785	R / M Scale	M99
Deflection Temperature Under Load (1.82MPa)	D648	°C	152
Combustibility	UL94	—	V-0
Dielectric Constant (10 ⁶ Hz)	D150	—	3.3
Dielectric loss tangent (10 ⁶ Hz)	D150	—	0.003
Volume resistivity (x10 ¹⁴)	D257	Ω·m	4.9
Insulation Breakdown Strength	D149	MV/m	17
Arc resistance	D495	sec	23
Specific gravity	D792	—	1.30
Water absorption (in 23°C water x 24 h)	D570	%	0.500
Content by percentage of glass fiber	—	%	0

● PEEK's chemical resistance

Chemical name	PEEK
10% hydrochloric acid	○
10% sulfuric acid	○
50% sulfuric acid	×
10% nitric acid	○
50% nitric acid	×
50% hydrofluoric acid	×
10% phosphoric acid	○
Formic acid	△
10% acetic acid	○
Citric acid	○
Chromic acid	○
Boric acid	○
Methyl alcohol	○
Glycol	○
Ammonia	○
10% sodium hydroxide	○
10% potassium hydroxide	○
Calcium hydroxide	○
Hydrogen sulfide (gas)	○
Sulfur dioxide	○
Ammonium nitrate	○
Sodium nitrate	○
Calcium carbonate	○
Calcium chloride	○
Magnesium chloride	○
Magnesium sulfate	○
Zinc sulfate	○
Hydrogen peroxide	○

○: Available △: Fair pending on condition

×: Not available

● This is test data with a specimen used at room temperature (23°C). The chemical resistance varies depending on the usage conditions. Be sure to perform a test under the same usage conditions as in actual usage in advance.

● Slip Torque

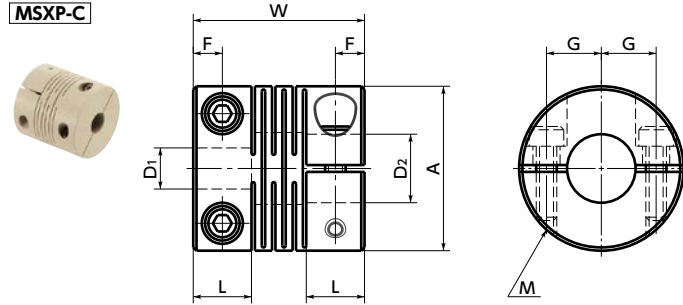
Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of **MSXP-C**.

Unit: N·m

Part Number	Bore Diameter (mm)			
	6	8	10	12
MSXP-25C	0.5	0.6		
MSXP-30C		0.8		
MSXP-36C			0.7	1.2

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MSXP-C** dimensional table.

MSXP-C



Dimensions

Unit : mm

Part Number	A	L	W	F	G	M	Screw Tightening Torque (N·m)
MSXP-25C	25	8.5	25	4.25	8	M3	0.15
MSXP-30C	30	10.2	30	5.1	9	M3	0.15
MSXP-36C	36	12	35	6	11	M3	0.15

Part Number	Standard Bore Diameter D1-D2				
MSXP-25C	6 - 8	6 - 10	8 - 8	8 - 10	10 - 10
MSXP-30C	8 - 8	8 - 10	10 - 12	12 - 12	
MSXP-36C	10 - 14	12 - 14	14 - 15	15 - 15	

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.258

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment*2 of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MSXP-25C	10	0.7	25000	3.0×10 ⁻⁷	110	0.05	0.5	±0.1	3.8
MSXP-30C	12	1	21000	7.8×10 ⁻⁷	180	0.05	0.5	±0.1	6.8
MSXP-36C	16	1.5	17000	1.8×10 ⁻⁶	280	0.05	0.5	±0.1	10

*1 : Correction of rated torque due to load fluctuation is not required.

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

• Part number specification

MSXP-36C-14-15

