

MSXP(PEEK[®]*)



Configuration



Cap Screw

Body

Material & Finish

Body	PEEK [®] : Polyetheretherketone
Cap Screw	PEEK [®] : Polyetheretherketone

*PEEK[®] is a registered trademark of Victrex, PLC.
Color may vary according to production lot.



- **MSX** also available in extra super duralumin (A7075).



MSX (P.60~P.63)

Features

Merits

- Microscopic Levels of Outgas
- Clean

- Can be used with heat and chemical resistant applications and clean environment such as FPD and semiconductor production equipment and devices
- One-piece metallic spring coupling
- PEEK[®] has excellent mechanical properties and chemical resistance as well as microscopic levels of outgas
- Operational temperature: -20°C~80°C
- Excellent Chemical Resistance
- Zero Backlash
- Absorption of parallel, angular and shaft end-play misalignments by spring action
- Identical clockwise and counter-clockwise rotational characteristics
- Finished products featuring two different end bore diameters available in stock

Application	
Servomotor	—
Stepping Motor	—
General-Purpose Motor	○
Encoder	—
Special Characteristics	
Zero Backlash	○
High Torsional Stiffness	—
High Torque	—
Allowable Misalignment	●
Vibration Absorption	—
Electrical Insulation	○
Clean	○

○: Excellent ●: Very Good

When Ordering

Specify product code and both bore diameters.

MSXP-25C-6×8

Product Code

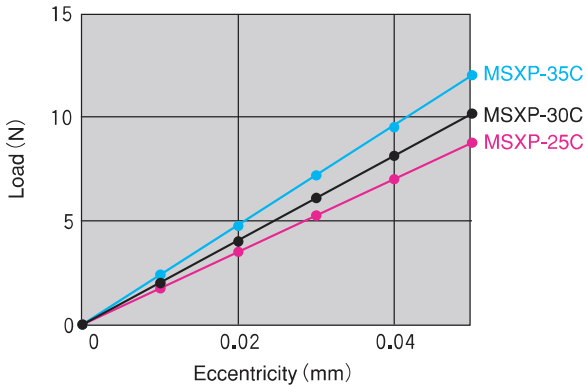
D₁

D₂

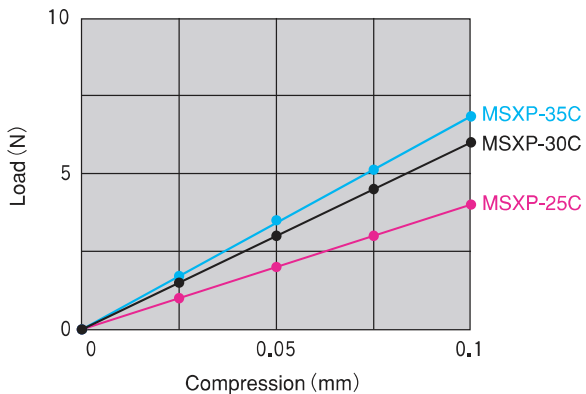


Technical Data

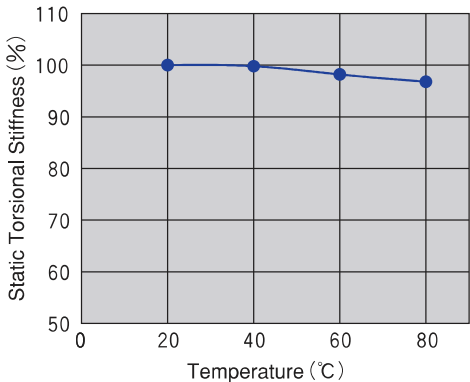
Eccentric Reaction Force



Thrust Reaction Force



Changes in Static Torsional Stiffness Caused by Temperature



100% values represent product performance at 20°C. Because MSXP experiences very little change in static torsional stiffness caused by temperature, the effect on response is minimal. However, please take into consideration that operating at high temperatures may lead to misalignment due to shaft distortion or elongation from thermal expansion.

●The technical data contained in this catalog is for convenient reference, but they are not guaranteed values. More detailed technical data can be downloaded from our homepage.

Technical Data

● Analysis of Outgas

unit: (v/v ppm)

Component		Contained Amount
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	

Measuring Method:

Inorganic Gas: Gaschromatograph (TCD)

Organic Gas: Gaschromatograph (FID)

Measurement Conditions:

Heating Temperature: 100°C

* Both Inorganic gas and organic gas is less than minimum limit of determination and not detected.

● Characteristics of PEEK®

Properties	Test Method	Unit	PEEK®
Tensile Strength	D1708	MPa	160
Tensile Elongation	D1708	%	7
Flexural Strength	D790	MPa	247
Flexural Modulus	D790	GPa	5.7
Izod Impact, Notched	D256	J/m	—
Rockwell Hardness	D785	R/M Scale	M100
Deflection Temperature Under Load (1.82MPa)	D648	°C	350
Combustiblensness	UL94	—	V-0
Dielectric Constant (10 ⁶ Hz)	D150	—	3.3
Dielectric Loss Tangent (10 ⁶ Hz)	D150	—	0.001
Volume Resistivity	D257	Ωm	10E14
Dielectric Breakdown Strength	D149	MV/m	—
Specific Gravity	D792	—	1.43
Coefficient of Water Absorption (Water at 23°C*24H)	D570	%	0.08
Fibrous Glass Content	—	%	0

● Chemical Resistance of PEEK®

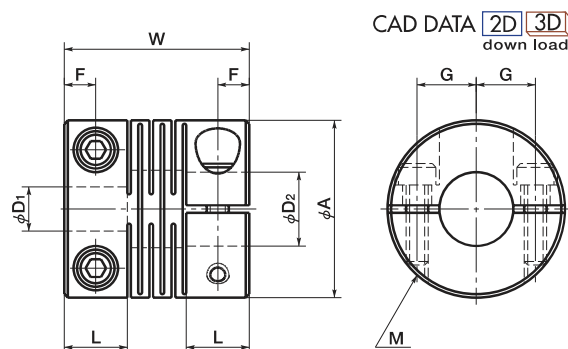
Name of Chemical	PEEK®
10% Hydrochloric Acid	○
10% Sulfuric Acid	○
50% Sulfuric Acid	×
10% Nitric Acid	○
50% Nitric Acid	×
50% Hydrofluoric Acid	×
10% Phosphoric Acid	○
Formic Acid	△
10% Acetic Acid	○
Citric Acid	○
Chromic Acid	○
Boracic Acid	○
Methanol	○
Glycol	○
Ammonia	○
10% Sodium Hydroxide	○
10% Potassium Hydroxide	○
Calcium Hydroxide	○
Hydrogen Sulfide (Gas)	○
Sulfur Dioxide	○
Ammonium Nitrate	○
Sodium Nitrate	○
Calcium Carbonate	○
Calcium Chloride	○
Magnesium Chloride	○
Magnesium Chloride	○
Magnesium Sulfate	○
Zinc Sulfate	○
Hydrogen Peroxide	○

○: Usable △: Usable under certain conditions ×: Unusable

● Data from samples tested at room temperature (23°C).

Chemical resistance values will vary according to usage conditions. They should be tested under actual performance conditions prior to use.

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Dimensions

unit:mm

Product Code	A	L	W	F	G	M	Wrench 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

Product Code	Stock Bore Diameters				
	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 come with cap screws.
- Recommended tolerance for shaft diameters is h6 and h7.
- Bore and keyway modifications are available on request. Please take advantage of our bore modification services. For more information please refer to pages 17~19.

Specifications

Product Code	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment** of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass** (g)
MSXP-25C	10	0.7	1.4	25000	3.0×10 ⁻⁷	110	0.05	0.5	±0.1	3.8
MSXP-30C	12	1	2	21000	7.8×10 ⁻⁷	180	0.05	0.5	±0.1	6.8
MSXP-36C	16	1.5	3	17000	1.8×10 ⁻⁶	280	0.05	0.5	±0.1	10

* Adjustment of rated and maximum torque specifications for load fluctuations is not required. For more detailed information, please refer to For Better Drive on page 34.
 ** Moment of inertia and mass figures based on maximum bore dimensions.

Slip Torque

Please be aware that for the bore sizes shown in the table below, the slip torque is smaller than [MSXP]'s maximum torque.
 unit:N·m



Product Code	Bore Diameter (mm)					
	6	8	10	12	14	15
MSXP-25C	0.5	0.6	0.7	—	—	—
MSXP-30C	—	0.8	1.1	1.5	—	—
MSXP-36C	—	—	0.7	1.2	1.8	2.2

* Testing performed with a permissible dimensional deviation of h7, hardness of 34-40 HRC and wrench torque shown in the above chart.