

XSTS-C/XWSS-C Cleanroom / Vacuum / Heat Resistant Couplings - Slit Type (SUS316L)

Zero Backlash Cleanroom Chemical-proof SUS Stainless steel

Structure

Clamping Type

XSTS-C → P.xxxx

Outside diameter $\phi 25, \phi 32$



XSTS-C

Outside diameter $\phi 40 - \phi 63$

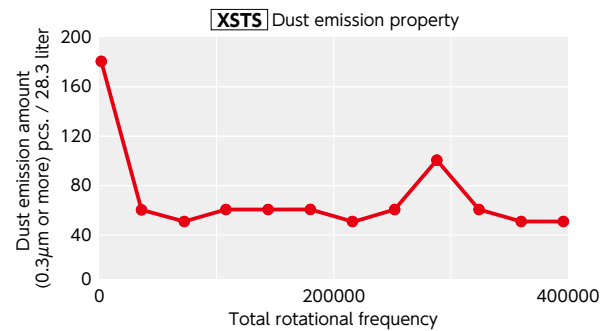
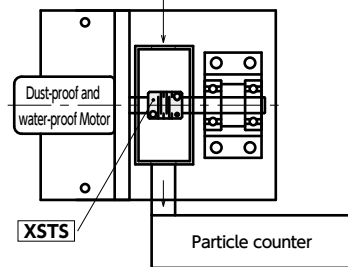


XWSS-C → P.xxxx



Dust emission property

Cleanroom (Class 500 or less) Clean bench (Class 10 or less)



Property

	XSTS-C	XWSS-C
Low Particle	○	○
Vacuum-supported	○	○
Low Outgas	○	○
Heat-resistance	○	○
Chemical Resistance	○	○
Zero Backlash	○	○
High Torque	○	○
Allowable Misalignment	○	○
Corrosion Resistance (All S.S.)	○	○

○: Excellent ○: Very good

- This is an all stainless steel spring coupling with single-piece construction. A slit is inserted into a cylindrical material.
- Made of SUS316L superior in corrosion resistance.
- Cleanroom wash/cleanroom packing provided. It is intended for applications that require chemical resistance, such as FPD production equipment and semiconductor devices.
- High flexibility type **XSTS-C** and short type **XWSS-C** are standardized.
- XSTS-C** has a plate spring formed by a slit allows eccentricity, angular misalignment, and end-play to be accepted.

Application

FPD manufacturing device / Semiconductor manufacturing device / Offshore instrument

Material/Finish

	XSTS-C / XWSS-C
Main Body	SUS316L Shot Blasting
Hex Socket Head Cap Screw	SUS316L HiMo



Part number specification

XSTS-32C-12-12

Product Code Size Bore Diameter

Please refer to dimensional table for part number specification.

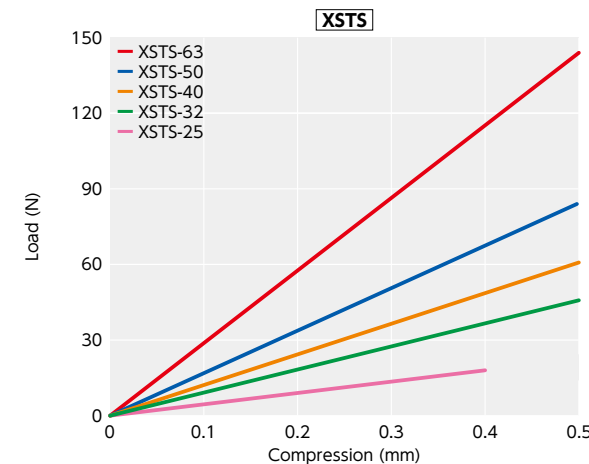
Technical Information

Features and Chemical Components of SUS316L

Characteristics

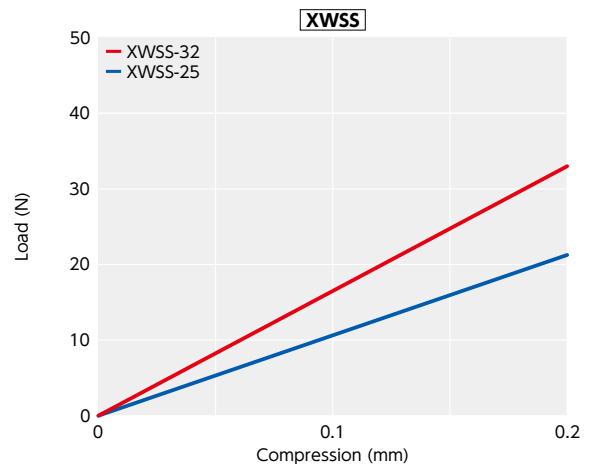
Material Code	Characteristics
SUS304	This features smaller amount of carbon and is superior in corrosion resistance and weldability. This is the most standard product among austenitic stainless steel.
SUS316	This has good corrosion resistance and acid resistance as well as high-temperature strength due to addition of Mo and is used as heat resistant steel.
SUS316L	Carbon content is lower than that of SUS316 and the grain boundary corrosivity and weldability are improved.

Thrust Reaction Force

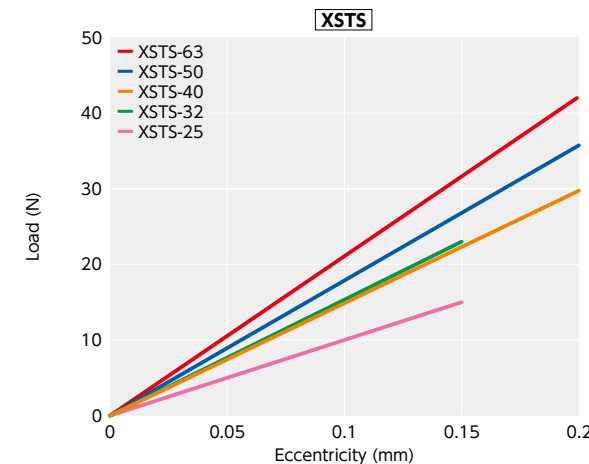


Chemical Components

Material Code	Chemical Components (%)				
	C	Si ? Mn ? P ? S	Ni	Cr	Mo
SUS304	0.08 or Less	Equivalent	8.00-10.50	18.00-20.00	—
SUS316	0.08 or Less		10.00-14.00	16.00-18.00	2.00-3.00
SUS316L	0.03 or Less		12.00-15.00	16.00-18.00	2.00-3.00

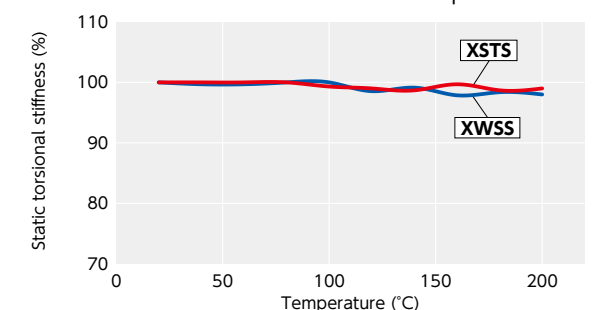


Eccentric Reaction Force



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%. The change of **XSTS** and **XWSS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

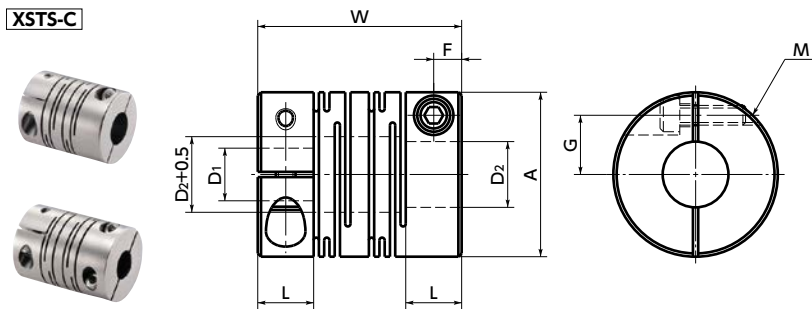


Additional Keyway at Shaft Hole → P.xxxx Cleanroom Wash & Packaging → P.xxxx Change to Stainless Steel Screw → P.xxxx
Please feel free to contact us Cleanroom washed and packed Changed to the S.S. screw

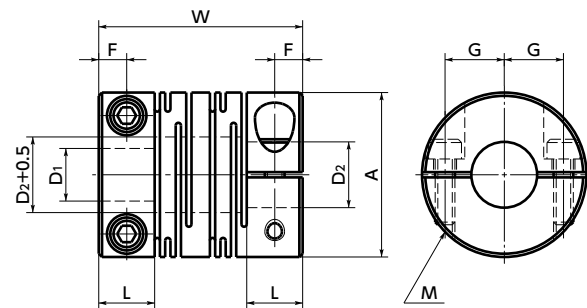
XSTS-C/XWSS-C Cleanroom / Vacuum / Heat Resistant Couplings - Slit Type (SUS316L) - Clamping Type

Zero Backlash Cleanroom Chemical-proof SUS Stainless steel

XSTS-C

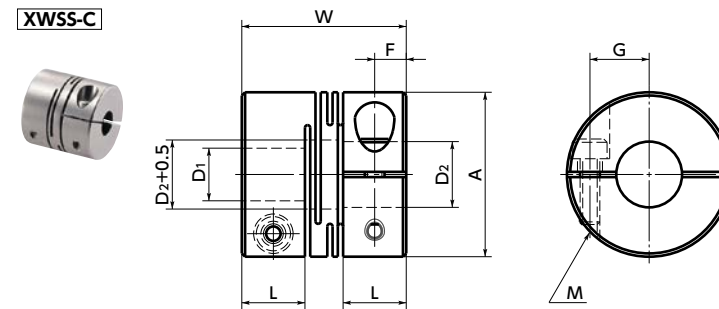


Outside diameter $\phi 25, \phi 32$



Outside diameter $\phi 40 - \phi 63$

XWSS-C



Dimensions

Unit : mm

Part Number	A	L	W	F	G	M	Screw Tightening Torque *1 (N·m)
XSTS-25C	25	8.5	31	4.25	9	M3	1.5
XSTS-32C	32	11.9	41	6	11	M4	2.5
XSTS-40C	40	17	56	8.5	14	M5	4
XSTS-50C	50	21	71	10.5	18	M6	8
XSTS-63C	63	26	90	13	24	M8	16
XWSS-25C	25	9.6	25	4.8	9	M3	1.5
XWSS-32C	32	12.6	32	6.3	11	M4	2.5

Part Number	Standard Bore Diameter D1/D2 																
	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30
XSTS-25C	●	●	●	●													
XSTS-32C			●	●	●	●	●										
XSTS-40C			●	●	●	●	●	●	●	●							
XSTS-50C						●	●	●	●	●	●	●	●				
XSTS-63C							●	●	●	●	●	●	●	●	●	●	●
XWSS-25C	●	●	●	●													
XWSS-32C			●	●	●	●	●										

- All products are provided with hex socket head cap screw.
 - Recommended tolerance for shaft diameters is h6 and h7.
 - For the shaft insertion amount to the coupling, see Mounting/maintenance.
- *1 : This is a screw tightening torque when inserting a degreased shaft.

Performance

Part Number	Max. Bore Diameter (mm)	Rated Torque *1 (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)
XSTS-25C	10	2	25000	7.1×10^{-6}	330	0.15	2	±0.4	78
XSTS-32C	14	3.5	19000	2.7×10^{-5}	850	0.15	2	±0.5	170
XSTS-40C	18	8	15000	9.0×10^{-5}	1000	0.2	2	±0.5	370
XSTS-50C	22	15	12000	2.8×10^{-4}	1400	0.2	2	±0.5	750
XSTS-63C	30	35	10000	8.8×10^{-4}	1800	0.2	2	±0.5	1400
XWSS-25C	10	2	25000	6.3×10^{-6}	720		1	±0.2	69
XWSS-32C	14	3.5	19000	2.2×10^{-5}	1300		1	±0.2	150

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

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

⚠ Precautions for Use

- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.xxxx
- There are sizes where the hex socket head bolt exceeds the outer diameter of the coupling and the rotating diameter is larger than the outer diameter. Please be careful of the interference of coupling. → P.xxxx

- Part number specification

XWSS-25C-8-10

1

2

Additional Keyway at Shaft Hole → P.xxxx Cleanroom Wash & Packaging → P.xxxx Change to Stainless Steel Screw → P.xxxx
Please feel free to contact us Cleanroom washed and packed Changed to the S.S. screw

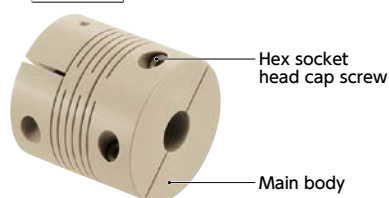
MSXP-C Cleanroom / Vacuum / Heat Resistant Couplings - Slit Type (PEEK)

Zero Backlash Cleanroom Electrical Insulation Chemical-proof

Structure

Clamping Type

MSXP-C → P.xxxx



Property

	MSXP-C
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.
- It can be used in an environment or cleanroom where heat resistance and chemical resistance are required, such as FPD manufacturing equipment.
- PEEK superior in physical and chemical properties is adopted. Outgas quantity is extremely low.
- 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

RoHS

	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.

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.xxxx

Please feel free to contact us

Cleanroom Wash & Packaging → P.xxxx

Cleanroom washed and packed

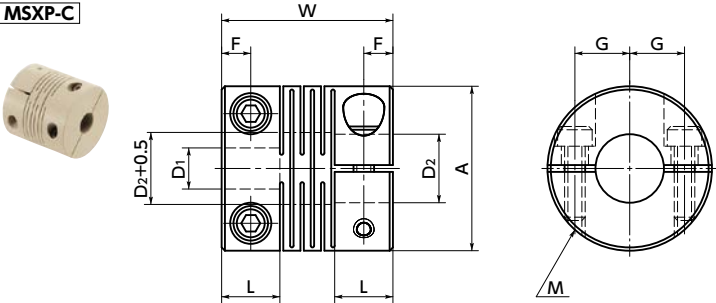
Change to Stainless Steel Screw → P.xxxx

Not Available

MSXP-C Cleanroom / Vacuum / Heat Resistant Couplings - Slit Type (PEEK) - Clamping Type

Zero Backlash Cleanroom Electrical Insulation Chemical-proof

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 tolerance for shaft diameters is h6 and h7.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft.
- For the shaft insertion amount to the coupling, see Mounting/maintenance.

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.
※ The shaft's slip torque may be smaller than the coupling's rated torque depending on the shaft bore. ➡ P.xxxx
- *2 : These are values with max. bore diameter.

- Part number specification

MSXP-36C- 14-15

1 2

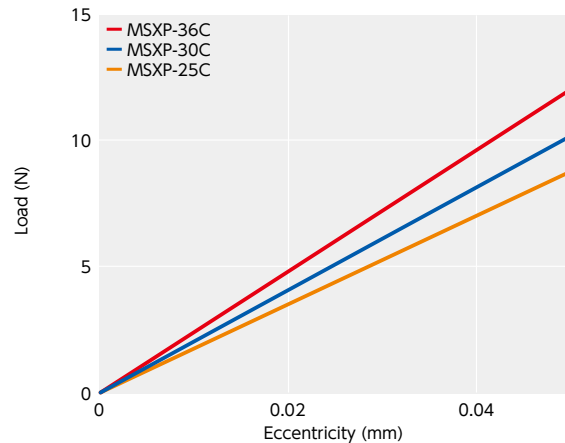
Additional Keyway at Shaft Hole ➡ P.xxxx	Cleanroom Wash & Packaging ➡ P.xxxx	Change to Stainless Steel Screw ➡ P.xxxx
Please feel free to contact us	Cleanroom washed and packed	Not Available

MSXP-C Cleanroom / Vacuum / Heat Resistant Couplings - Slit Type (PEEK)

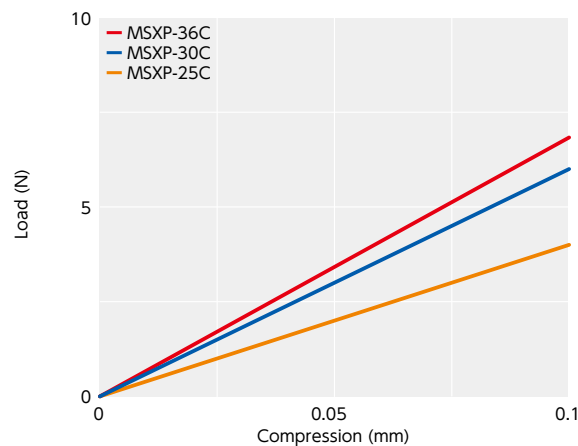
Zero Backlash Cleanroom Electrical Insulation Chemical-proof

Technical Information

• Eccentric Reaction Force



• Thrust Reaction Force



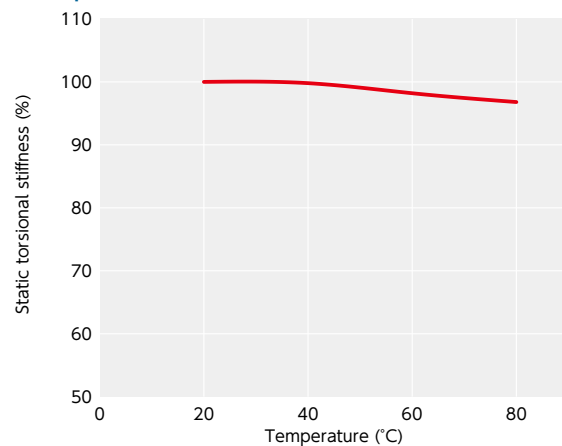
• Analysis of outgas

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.

• Change in static torsional stiffness due to temperature



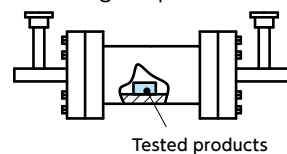
• Measurement Method

Inorganic gas — Gas chromatography (TCD)

Organic gas — Gas chromatography (FID)

• Measurement Conditions

Heating temperature — 100°C



Tested products

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 × 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 △: Available depending on conditions ×: Not available

• This is test data with a specimen used at room temperature (23°C). Chemical resistance changes with performance conditions. Always carry out tests under performance conditions similar to actual conditions in advance.

• Slip Torque

As in the table below, the clamping type **MSXP-C** has different slip torque according to the bore diameter. Take care during selection.

Unit: N·m

Part Number	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

- These are test values based on the conditions of shaft dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MSXP-C** dimension tables. They are not guaranteed values.
- Slip torque changes with usage conditions. Carry out tests under conditions similar to actual conditions in advance.