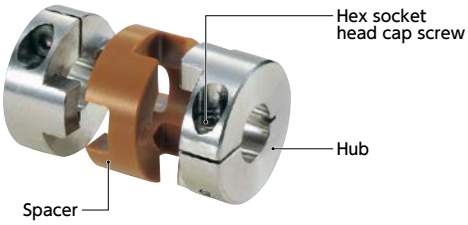
MOHS-C Cleanroom / Vacuum / Heat Resistant Couplings - Oldham Type (VESPEL)

Cleanroom | Electrical Insulation | Heat-resistance | Chemical-proof | High Allowable Misalignment | SUS Stainless steel

Structure

● Clamping Type

MOHS-C ➡ P.xxxx



● Spacer's projection structure

Spacer's projection structure allows large angular to be effortlessly accepted. It reduces burden on the shaft.

(Without projection) (With projection)

In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small and that the bending moment arises on the shaft.

NBK's oldham type coupling allows the angular misalignment to be easily accepted since the projection serves as support. Bending moment does not arise. Therefore, the max. angular misalignment is large and the burden on the shaft is reduced.

● Property

	MOHS-C
Low Particle	△
Vacuum-supported	◎
Low Outgas	○
Heat-resistance	◎
Chemical Resistance	○
Allowable Misalignment	◎
Electrical Insulation	◎
Cleanroom Specification	◎
Allowable Operating Temperature	−20℃ to 200℃

◎: Excellent ○: Very good

△: Abrasion powder may be produced

- This is an oldham type flexible coupling.
- Cleanroom wash/cleanroom packing provided. It can be used in an environment or cleanroom where heat resistance and chemical resistance are required, such as FPD manufacturing equipment.
- VESPEL SCP-5000 is adopted in the spacer. This is superior in heat resistance and chemical resistance, and the amount of outgas at high temperature is ultralow.
- Slippage of hubs and a spacer allows eccentricity and angular misalignment to be accepted.
- The load on the shaft generated by misalignment is small and the burden on the shaft is reduced.

● Application

FPD manufacturing device / Semiconductor manufacturing device

● Material/Finish

RoHS

	MOHS-C
Hub	SUS303
Spacer	VESPEL*1
Hex Socket Head Cap Screw	SUSXM7 Molybdenum Disulfide Coating

*1 : VESPEL is a registered trademark of DuPont.

- The color may vary depending on the lot or other matters.

● Part number specification

MOHS - 19C - 6-6

Product Code | Size | Bore Diameter

Please refer to dimensional table for part number specification.

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

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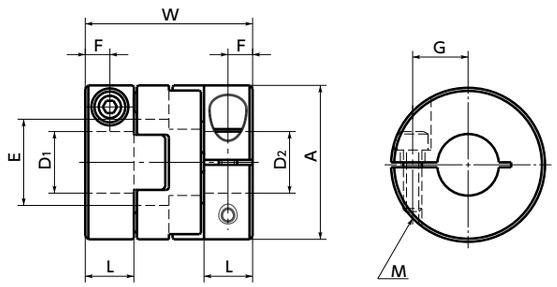
MOHS-C



Dimensions

Unit : mm

Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOHS-19C	19	7	22.1	10	3.5	6.5	M2.5	0.5
MOHS-26C	25.4	8	27.2	14	4	9	M3	0.7
MOHS-32C	31.7	10	33.3	18	5	11	M4	1.2

Part Number	Standard Bore Diameter D1/D2 2						
	5	6	8	10	11	12	14
MOHS-19C	●	●	●				
MOHS-26C			●	●			
MOHS-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.

⚠ 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated Torque *1 (N・m)	Maximum Torque *1 (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)
MOHS-19C	8	0.4	0.8	900	1.4×10^{-6}	160	1.3	2	28
MOHS-26C	10	1.2	2.4	900	5.5×10^{-6}	220	1.5	2	61
MOHS-32C	14	2.2	4.4	900	1.6×10^{-5}	600	2	2	110

*1 : Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin.

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

- Part number specification

MOHS-32C - 10-12 1 Set
(1) (2)

MOHS-32C - SPCR Single Spacer
(1) Single Spacer

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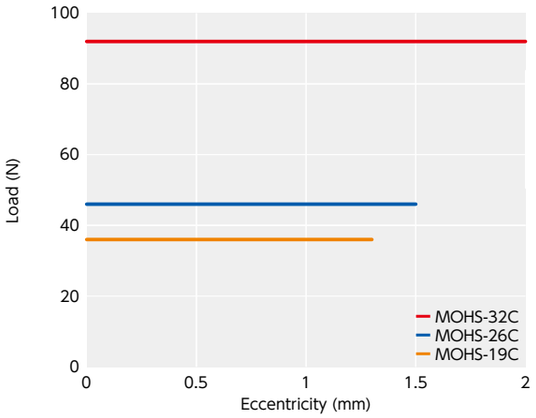
SUS Stainless steel | Cleanroom | Electrical Insulation | Heat-resistance | Chemical-proof | High Allowable Misalignment

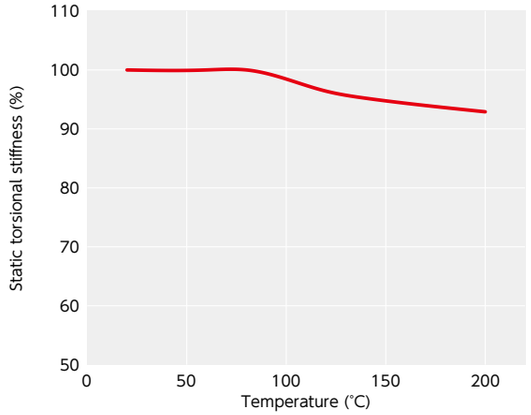
Technical Information

● Eccentric Reaction Force



These are initial slippage load values of hubs and a spacer.
After running-in operation, the slippage load becomes small, the load on the shaft due to misalignment becomes lowered, and the burden on the shaft bearing is reduced.

● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of MOHS-C 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.

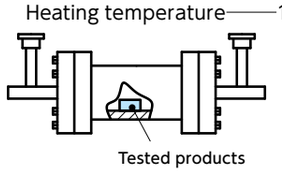
● Analysis of outgas

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 Method
Inorganic gas———Gas chromatography (TCD)
Organic gas———Gas chromatography (FID)
● Measurement Conditions
Heating temperature——100℃



Technical Information

● VESPEL's physical property

Property	Test Method	unit	VESPEL
Tensile Strength	D1708	N/mm²	160
Tensile Elongation	D1708	%	7
Bending Strength	D790	N/mm²	247
Bending Elastic Modulus	D790	GPa	5.7
Izod Impact Value (with Notch)	D256	J/m	–
Rockwell Hardness	D785	R / M Scale	M100
Deflection Temperature Under Load (1.82MPa)	D648	℃	350
Combustibility	UL94	-	V-0
Dielectric Constant (10^6 Hz)	D150	-	3.3
Dielectric Loss Tangent (10^6 Hz)	D150	-	0.001
Volume Resistivity ($x10^{14}$)	D257	Ω・m	1
Insulation Breakdown Strength	D149	MV/m	–
Specific Gravity	D792	-	1.43
Water Absorption (in 23℃ Water × 24 h)	D570	%	0.08
Content by Percentage of Glass Fiber	–	%	–

● VESPEL's chemical resistance

Property	VESPEL
10% Hydrochloric Acid	○
10% Sulfuric Acid	○
50% Sulfuric Acid	△
10% Nitric Acid	△
50% Nitric Acid	×
10% Hydrofluoric Acid	△
50% Hydrofluoric Acid	×
Formic Acid	△
10% Acetic Acid	○
Citric Acid	○
Boric Acid	○
Methyl Alcohol	△
Glycol	○
Ammonia	△

○: Available △: Available depending on conditions ×: Not available

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