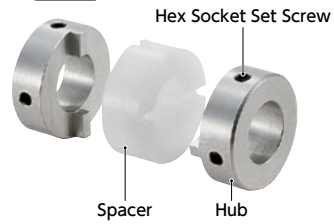


Structure

● Set Screw type

MOR → P.165



● Clamping type

MOR-C → P.167



● Set Screw + Key type

MOR-K → P.169



● Clamping + Key type

MOR-CK → P.171



● Applicable motors

	MOR
Servomotor	-
Stepping Motor	○
General-purpose motor	◎

◎: Excellent ○: Very good

● Property

	MOR
High torque	◎
Allowable Misalignment	◎
Small eccentric reaction force	◎
Electrical insulation	◎
Allowable operating temperature	-20°C to 80°C

◎: Excellent ○: Very good

- This is an oldham-type flexible coupling.
- Slippage of hubs and a spacer allows large eccentricity and angular misalignment to be accepted.
- The eccentric reaction force generated by misalignment is small and the burden on the shaft is reduced.
- The simple structure allows the unit to be easily assembled.

● Application

Sputtering device / Parts feeder / Industrial sewing machine / Amusement device

● Material/Finish



	MOR / MOR-C / MOR-K / MOR-CK
Hub	A2017 Alumite Treatment
Spacer	Polyacetal
Hex Socket Set Screw	SCM435 Ferrosferric oxide film
Hex Socket Head Cap Screw	SCM435 Ferrosferric oxide film

● Related Products

Oldham-type couplings with metal spacers are available. **MOM**
→ P.173



● Part number specification

MOR - 20CK - 6-10

Product Code Size Bore Diameter

Please refer to dimensional table for part number specification.

Additional Keyway at Shaft Hole → P.803

Available / Add'l charge

Cleanroom Wash & Packaging → P.807

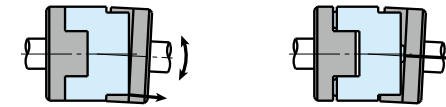
Available / Add'l charge

Change to Stainless Steel Screw → P.805

Available / Add'l charge

● 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)

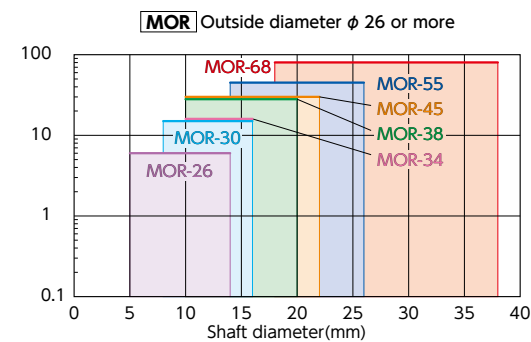
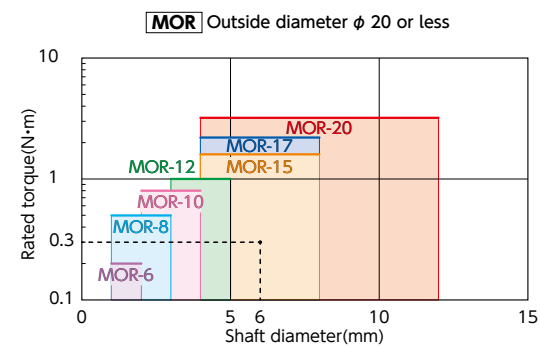
In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.

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 (3°) and the burden on the shaft is reduced.

Selection

● Selection based on shaft diameter and rated torque

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



● Selection example

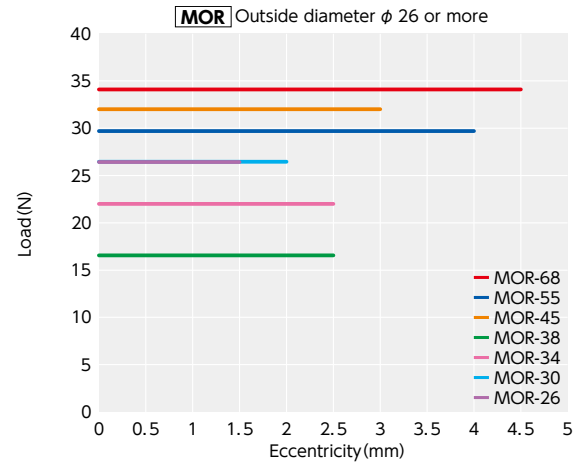
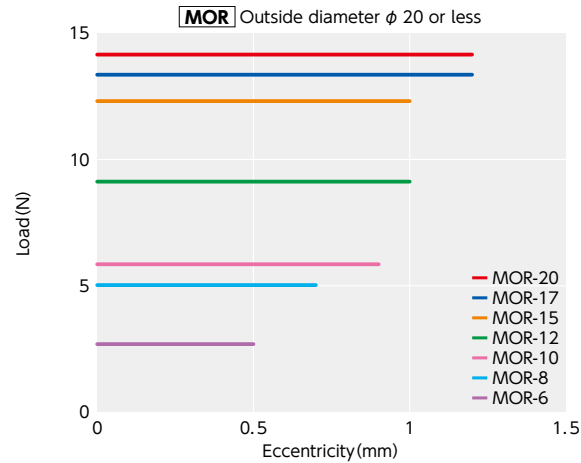
In case of selected parameters of shaft diameter of φ 6 and load torque of 0.3 N·m, the selected size is

MOR-15.



Technical Information

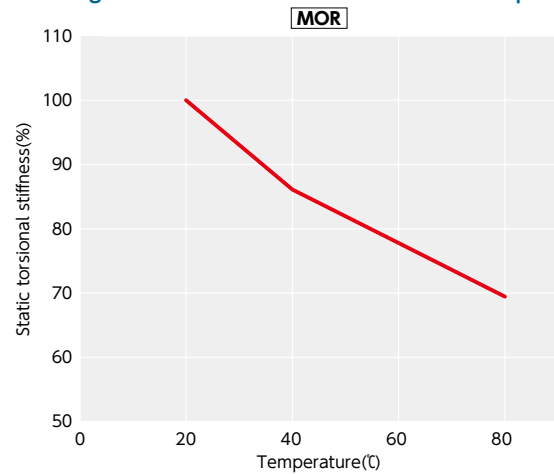
● Eccentric reaction force



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°C is 100%.

The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph.

Before using the unit, be aware of the deterioration of responsiveness.

● Spacer's physical property (Polyacetal)

	Test method	unit	Polyacetal
Density	ISO 1183	g/cm ³	1.36
Water Absorption (23°C, dipped for 24 hr)	ISO 62	%	0.7
Tensile strength	ISO 527 - 1, 2	N/mm ²	52
Bending Strength	ISO 178	N/mm ²	72
Charpy impact strength (with notch)	ISO 179/1eA	kJ/m ²	5.9
Deflection temperature under load(1.8 MPa)	ISO 75 - 1, 2	°C	85
Insulation breakdown strength (3 mmt)	IEC 60243 - 1	kV/mm	20
Volume Resistivity	IEC 60093	Ω · cm	1 × 10 ¹⁴
Combustibility	UL94	—	HB

● Spacer's chemical resistance (Polyacetal)

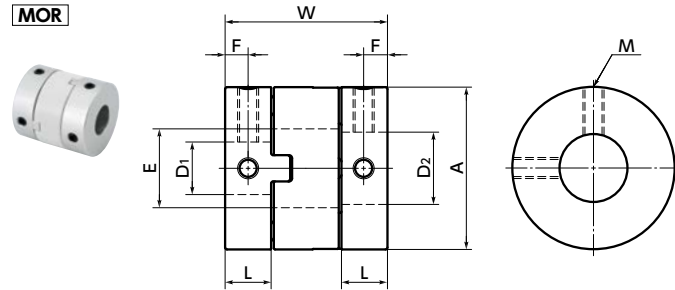
	Effect
Weather Resistance	Slight change in color
Weak Acid Resistance	Minor effect
Strong Acid Resistance	Effect
Weak Alkali Resistance	Minor effect
Strong Alkali Resistance	Minor effect
Organic Solvent Resistance	Includes resistance

● Slip Torque

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

Part Number	Bore diameter																	Unit : N · m		
	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	25	28		30	35
MOR-12C	0.8	1.9	2.4																	
MOR-15C		2.3	3.5	4.8																
MOR-17C			2.7	3.6	4															
MOR-20C			3.7	4.2	4.3	5.7	6.1													
MOR-26C				4	6.4	9.3	11.8													
MOR-30C						7.5	13.6	13.9	17.2	20.4										
MOR-34C								16.5	18.6	23.3	30.9									
MOR-38C								19.4	20.2	24	30	34.1	37.8	38.8						
MOR-45C									34.5	41.8	42.6	44.5	48.4							
MOR-55C												73.2	75.9	88.1						
MOR-68C															101.5	104.3	104.9	105.4	110.5	115.4

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



Dimensions

Unit : mm

Part Number	A	L	W	E	F	M	Screw Tightening Torque (N·m)
MOR-6	6	2.5	8.4	2.1	1.3	M2	0.3
MOR-8	8	2.5	9.6	3.1	1.3	M2	0.3
MOR-10	10	2.9	10.2	4.1	1.4	M2	0.3
MOR-12	12	3.9	14.2	5.2	2	M3	0.7
MOR-15	15	4.4	16	8.2	2.2	M3	0.7
MOR-17	17	4.9	19.8	8.2	2.5	M3	0.7
MOR-20	20	5.8	21.4	12.2	2.9	M4	1.7
MOR-26	26	7.3	25.6	14.2	3.7	M4	1.7
MOR-30	30	10	32.5	16.2	5	M4	1.7
MOR-34	34	11.1	34	16.2	5.6	M5	4
MOR-38	38	12.1	40	20.3	6.1	M5	4
MOR-45	45	13.8	46	22.3	6.9	M6	7
MOR-55	55	18.7	57	26.5	9.4	M8	15
MOR-68	68	24	77	38.5	12	M10	30

Part Number	Standard Bore Diameter D1 • D2 (dimensional allowance H8)																							
	1	1.5	2	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	25	28	30	35	38	
MOR-6	●	●	●																					
MOR-8	●		●	●																				
MOR-10			●	●	●																			
MOR-12				●	●	●																		
MOR-15					●	●	●	●	●															
MOR-17					●	●	●	●	●															
MOR-20					●	●	●	●	●	●														
MOR-26						●	●	●	●	●	●													
MOR-30								●	●	●	●	●												
MOR-34									●	●	●	●	●											
MOR-38										●	●	●	●	●										
MOR-45											●	●	●	●	●									
MOR-55												●	●	●	●	●								
MOR-68																●	●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- In a case where the bore diameter is φ 4 or less, the set screw is used in only one place.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with set screw type for one side and clamping type or other type for the other side is available upon request.

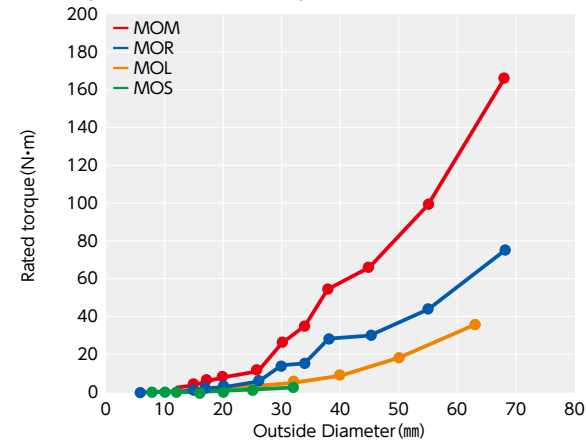
Additional Keyway at Shaft Hole → P.803 Available / Add'l charge
 Cleanroom Wash & Packaging → P.807 Available / Add'l charge
 Change to Stainless Steel Screw → P.805 Available / Add'l charge

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*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 (°)	Mass*2 (g)
MOR-6	2	0.2	0.4	100000	2.2×10 ⁻⁹	5	0.5	3	0.4
MOR-8	3	0.5	1	78000	7.4×10 ⁻⁹	12	0.7	3	0.8
MOR-10	4	0.8	1.6	63000	1.9×10 ⁻⁸	23	0.9	3	1
MOR-12	5	1	2	52000	5.3×10 ⁻⁸	60	1	3	3
MOR-15	8	1.6	3.2	42000	1.4×10 ⁻⁷	80	1	3	4
MOR-17	8	2.2	4.4	37000	2.8×10 ⁻⁷	120	1.2	3	7
MOR-20	12	3.2	6.4	31000	5.7×10 ⁻⁷	120	1.2	3	9
MOR-26	14	6	12	24000	2.1×10 ⁻⁶	300	1.5	3	20
MOR-30	16	15	30	21000	5.4×10 ⁻⁶	530	2	3	38
MOR-34	16	16	32	18000	9.1×10 ⁻⁶	1000	2.5	3	52
MOR-38	20	28	56	16000	1.6×10 ⁻⁵	1500	2.5	3	69
MOR-45	22	30	60	14000	3.3×10 ⁻⁵	2400	3	3	110
MOR-55	26	45	90	11000	1.0×10 ⁻⁴	4100	4	3	230
MOR-68	38	80	160	9000	3.7×10 ⁻⁴	6400	4.5	3	430

- *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. 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 MOR is -20°C to 80°C.
- *2: These are values with max. bore diameter.

Comparison of rated torque



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
60°C to 80°C	0.55

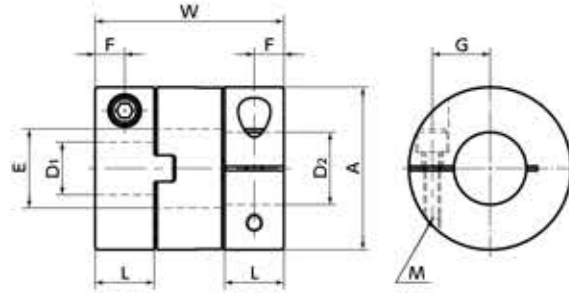
Part number specification

MOR-20-6-12 1 set
 MOR - 20 - SPCR Single Spacer
 Product Code Outside Diameter (A Dimension) Single Spacer

MOR-C Flexible coupling - Oldham - type - Clamping type

Selection Tool
 CAD Download
 High torque
 Electrical Insulation
 High Allowable Misalignment
 Small Eccentric Reaction Force

MOR-C



Dimensions

Unit: mm

Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
MOR-12C	12	6.2	19	5.2	3.1	4	M2	0.5
MOR-15C	15	5.8	18.8	8.2	2.9	5	M2.5	1
MOR-17C	17	7.3	24.5	8.2	3.7	6	M2.5	1
MOR-20C	20	8.8	27.4	12.2	4.4	7.5	M3	1.5
MOR-26C	26	9.7	30.4	14.2	4.9	9.5	M3	1.5
MOR-30C	30	10	32.5	16.2	5	11.1	M4	2.5
MOR-34C	34	11.1	34	16.2	5.6	12.6	M4	2.5
MOR-38C	38	12.1	40	20.3	6	14.2	M5	4
MOR-45C	45	13.8	46	22.3	6.9	16	M5	4
MOR-55C	55	18.7	57	26.5	9.4	20	M6	8
MOR-68C	68	24	77	38.5	12	26	M8	16

Part Number	Standard Bore Diameter D1 · D2																		
	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	25	28	30	35
MOR-12C	●	●	●																
MOR-15C		●	●	●															
MOR-17C			●	●	●														
MOR-20C			●	●	●	●	●	●											
MOR-26C				●	●	●	●	●	●	●									
MOR-30C					●	●	●	●	●	●	●								
MOR-34C						●	●	●	●	●	●	●							
MOR-38C							●	●	●	●	●	●	●						
MOR-45C								●	●	●	●	●	●	●					
MOR-55C									●	●	●	●	●	●	●				
MOR-68C										●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping type for one side and set screw type or other type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.258

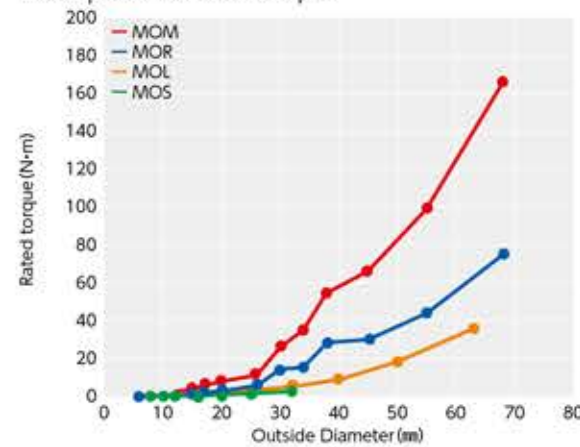
Additional Keyway at Shaft Hole → P.803
 Cleanroom Wash & Packaging → P.807
 Change to Stainless Steel Screw → P.805

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*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 (°)	Mass*2 (g)
MOR-12C	5	1	2	52000	6.6×10 ⁻⁶	60	1	3	3
MOR-15C	6	1.6	3.2	42000	1.7×10 ⁻⁷	80	1	3	5
MOR-17C	6.35	2.2	4.4	37000	3.8×10 ⁻⁷	120	1.2	3	9
MOR-20C	10	3.2	6.4	31000	8.0×10 ⁻⁷	120	1.2	3	13
MOR-26C	14	6	12	24000	2.5×10 ⁻⁶	300	1.5	3	24
MOR-30C	14	15	30	21000	5.3×10 ⁻⁶	530	2	3	39
MOR-34C	16	16	32	18000	8.6×10 ⁻⁶	1000	2.5	3	50
MOR-38C	20	28	56	16000	1.5×10 ⁻⁵	1500	2.5	3	67
MOR-45C	20	30	60	14000	3.2×10 ⁻⁵	2400	3	3	110
MOR-55C	25	45	90	11000	1.0×10 ⁻⁴	4100	4	3	230
MOR-68C	35	80	160	9000	3.3×10 ⁻⁴	6400	4.5	3	440

- *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. 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 **MOR-C** is -20°C to 80°C.
- *2: These are values with max. bore diameter.

Comparison of rated torque



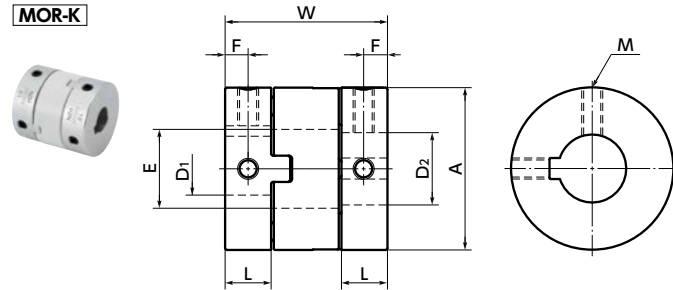
Ambient Temperature / Temperature Correction Factor

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
60°C to 80°C	0.55

Part number specification

MOR-55C - 18-20 1 set





Dimensions

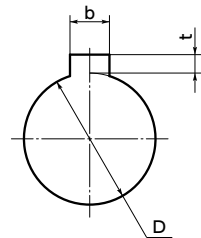
Unit : mm

Part Number	A	L	W	E	F	M	Screw Tightening Torque (N·m)
MOR-15K	15	4.4	16	8.2	2.2	M3	0.7
MOR-17K	17	4.9	19.8	8.2	2.5	M3	0.7
MOR-20K	20	5.8	21.4	12.2	2.9	M4	1.7
MOR-26K	26	7.3	25.6	14.2	3.7	M4	1.7
MOR-30K	30	10	32.5	16.2	5	M4	1.7
MOR-34K	34	11.1	34	16.2	5.6	M5	4
MOR-38K	38	12.1	40	20.3	6.1	M5	4
MOR-45K	45	13.8	46	22.3	6.9	M6	7
MOR-55K	55	18.7	57	26.5	9.4	M8	15
MOR-68K	68	24	77	38.5	12	M10	30

Part Number	Standard Bore Diameter (dimensional allowance H8) D1 · D2														
	6	8	10	12	14	15	16	18	20	22	25	28	30	35	38
MOR-15K	●	●													
MOR-17K	●	●													
MOR-20K	●	●	●	●											
MOR-26K	●	●	●	●	●										
MOR-30K		●	●	●	●	●									
MOR-34K			●	●	●	●	●								
MOR-38K			●	●	●	●	●	●	●						
MOR-45K			●	●	●	●	●	●	●	●					
MOR-55K				●	●	●	●	●	●	●	●				
MOR-68K							●	●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with key type for one side and clamping type or other type for the other side is available upon request.

● Details of Shaft Hole



Unit : mm

Standard bore diameter D	Keyway				Key Nominal dimension b×h
	b Standard Dimension	Allowance (JS9)	t Standard Dimension	Allowance	
6	2	±0.0125	1.0	+0.1 0	2×2
8	3	±0.0125	1.4	+0.1 0	3×3
10 · 12	4	±0.0150	1.8	+0.1 0	4×4
14 · 15 · 16	5	±0.0150	2.3	+0.1 0	5×5
18 · 20 · 22	6	±0.0150	2.8	+0.1 0	6×6
25 · 28	8	±0.0180	3.3	+0.2 0	8×7
30 · 35 · 38	10	±0.0180	3.3	+0.2 0	10×8

● Excerpt from JIS B 1301

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 Available / Add'l charge Available / Add'l charge

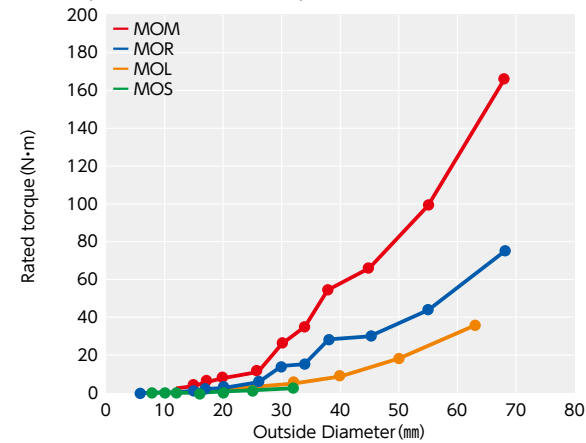
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*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 (°)	Mass*2 (g)
MOR-15K	8	1.6	3.2	42000	1.4×10 ⁻⁷	80	1	3	4
MOR-17K	8	2.2	4.4	37000	2.8×10 ⁻⁷	120	1.2	3	7
MOR-20K	12	3.2	6.4	31000	5.6×10 ⁻⁷	120	1.2	3	8
MOR-26K	14	6	12	24000	2.0×10 ⁻⁶	300	1.5	3	19
MOR-30K	16	15	30	21000	5.4×10 ⁻⁶	530	2	3	37
MOR-34K	16	16	32	18000	9.0×10 ⁻⁶	1000	2.5	3	51
MOR-38K	20	28	56	16000	1.5×10 ⁻⁵	1500	2.5	3	68
MOR-45K	22	30	60	14000	3.2×10 ⁻⁵	2400	3	3	110
MOR-55K	26	45	90	11000	1.0×10 ⁻⁴	4100	4	3	230
MOR-68K	38	80	160	9000	3.3×10 ⁻⁴	6400	4.5	3	430

*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. 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 **MOR-K** is -20°C to 80°C.

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

● Comparison of rated torque

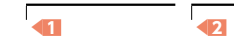


● Ambient Temperature / Temperature Correction Factor

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
60°C to 80°C	0.55

● Part number specification

MOR-26K-8-10 1 set



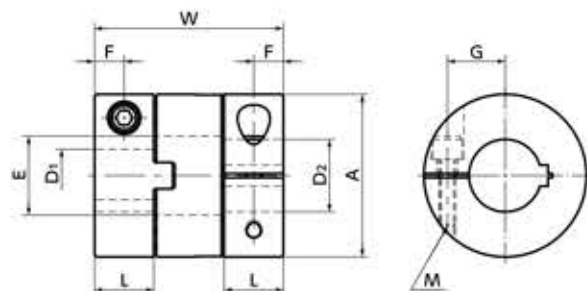
MOR - 20 - SPCR Single Spacer

Product Code Outside Diameter (A Dimension) Single Spacer

MOR-CK Flexible coupling - Oldham - type - Clamping + Key type

Selection Tool
 CAD Download
 High torque
 Electrical Insulation
 High Allowable Misalignment
 Small Eccentric Reaction Force

MOR-CK



Dimensions

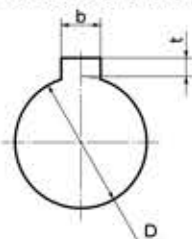
Unit : mm

Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
MOR-15CK	15	7	21.2	8.2	3.5	5	M2.5	1
MOR-17CK	17	7.3	24.5	8.2	3.7	6	M2.5	1
MOR-20CK	20	8.8	27.4	12.2	4.4	7.5	M3	1.5
MOR-26CK	26	9.7	30.4	14.2	4.9	9.5	M3	1.5
MOR-30CK	30	10	32.5	16.2	5	11.1	M4	2.5
MOR-34CK	34	11.1	34	16.2	5.6	12.6	M4	2.5
MOR-38CK	38	12.1	40	20.3	6	14.2	M5	4
MOR-45CK	45	13.8	46	22.3	6.9	16	M5	4
MOR-55CK	55	18.7	57	26.5	9.4	20	M6	8
MOR-68CK	68	24	77	38.5	12	26	M8	16

Part Number	Standard Bore Diameter D1 · D2													
	6	8	10	12	14	15	16	18	20	22	25	28	30	35
MOR-15CK	●													
MOR-17CK	●													
MOR-20CK	●	●	●											
MOR-26CK	●	●	●	●										
MOR-30CK		●	●	●	●									
MOR-34CK			●	●	●	●								
MOR-38CK			●	●	●	●	●							
MOR-45CK				●	●	●	●	●						
MOR-55CK					●	●	●	●	●					
MOR-68CK									●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping + key type for one side and clamping type or other types for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.258

● Details of Shaft Hole



Standard bore diameter D	Keyway				Key Nominal dimension b×h
	b Standard Dimension	Allowance (JS9)	t Standard Dimension	Allowance	
6	2	±0.0125	1.0	+0.1 0	2×2
8	3	±0.0125	1.4	+0.1 0	3×3
10·12	4	±0.0150	1.8	+0.1 0	4×4
14·15·16	5	±0.0150	2.3	+0.1 0	5×5
18·20·22	6	±0.0150	2.8	+0.1 0	6×6
25·28	8	±0.0180	3.3	+0.2 0	8×7
30·35	10	±0.0180	3.3	+0.2 0	10×8

● Excerpt from JIS B 1301

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

Available / Add'l charge

Available / Add'l charge

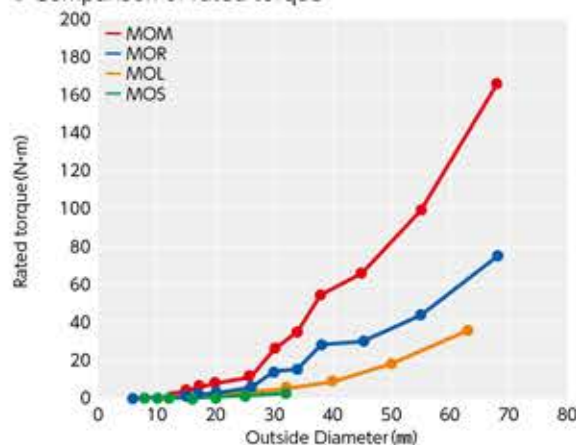
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*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 (°)	Mass*2 (g)
MOR-15CK	6	1.6	3.2	42000	1.8×10 ⁻⁷	80	1	3	5
MOR-17CK	6.35	2.2	4.4	37000	3.8×10 ⁻⁷	120	1.2	3	9
MOR-20CK	10	3.2	6.4	31000	8.0×10 ⁻⁷	120	1.2	3	13
MOR-26CK	14	6	12	24000	2.5×10 ⁻⁶	300	1.5	3	23
MOR-30CK	14	15	30	21000	5.2×10 ⁻⁶	530	2	3	38
MOR-34CK	16	16	32	18000	8.6×10 ⁻⁶	1000	2.5	3	49
MOR-38CK	20	28	56	16000	1.5×10 ⁻⁵	1500	2.5	3	64
MOR-45CK	20	30	60	14000	3.2×10 ⁻⁵	2400	3	3	110
MOR-55CK	25	45	90	11000	1.0×10 ⁻⁴	4100	4	3	230
MOR-68CK	35	80	160	9000	3.3×10 ⁻⁴	6400	4.5	3	440

*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. 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 **MOR** is -20°C to 80°C.

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

● Comparison of rated torque



● 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
60°C to 80°C	0.55

● Part number specification

MOR-38CK - 14-15 1 set

MOR - 20 - SPCR Single Spacer

Product Code Outside Diameter (A Dimension) Single Spacer