

# MOR Flexible coupling - Oldham - type

[WEB Selection Tool](#)
[WEB CAD Download](#)
[High torque](#)
[Electrical Insulation](#)
[High Allowable Misalignment](#)
[Small Eccentric Reaction Force](#)

## 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

RoHS2 Compliant

	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**

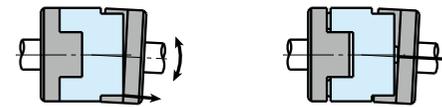
Product Code    Size    Bore Diameter

Please refer to dimensional table for part number specification.

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

### ● 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)

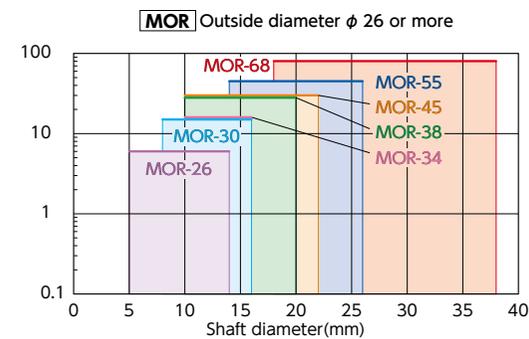
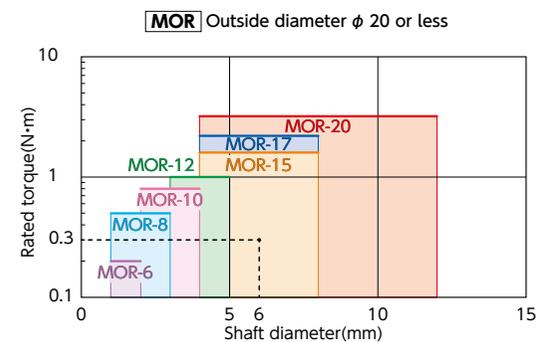
In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.

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  $\phi$  6 and load torque of 0.3 N·m, the selected size is

**MOR-15**.

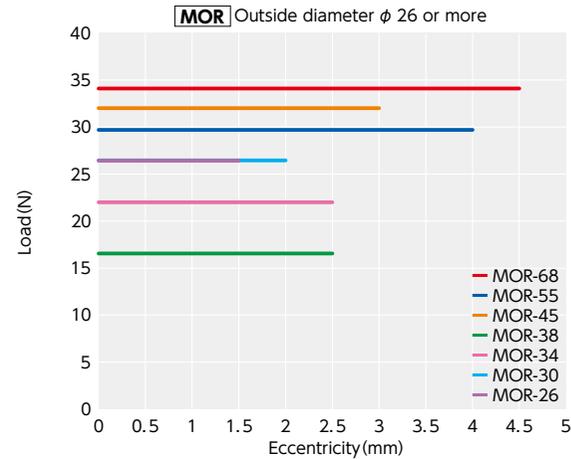
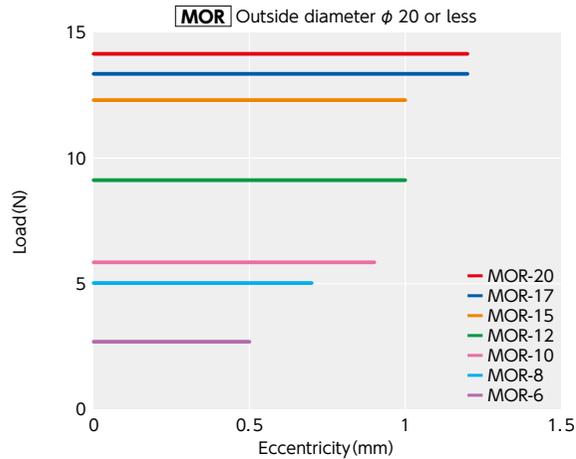


# MOR Flexible coupling - Oldham - type

- WEB Selection Tool
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- High torque
- Electrical Insulation
- High Allowable Misalignment
- Small Eccentric Reaction Force

## Technical Information

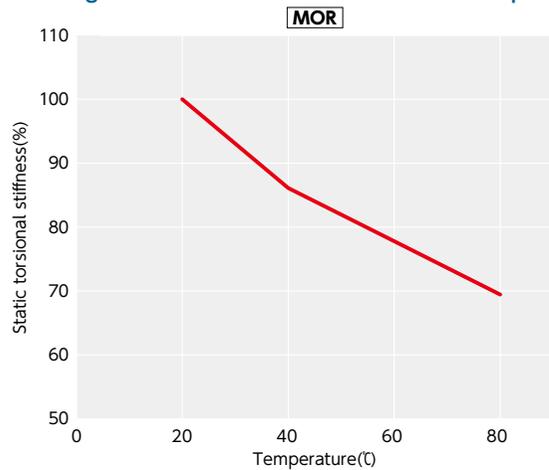
### ● Eccentric reaction force



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

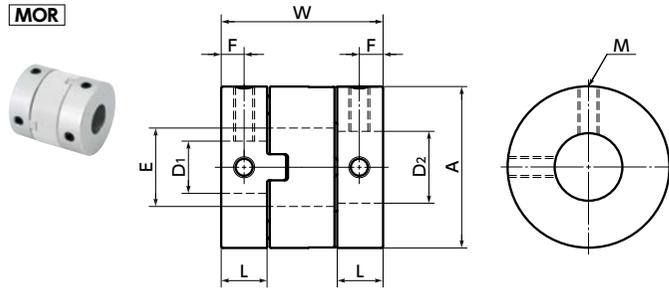
Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the max. torque of **MOR-C**.

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
<b>MOR-12C</b>	0.8	1.9	2.4																	
<b>MOR-15C</b>		2.3	3.5	4.8																
<b>MOR-17C</b>			2.7	3.6	4															
<b>MOR-20C</b>			3.7	4.2	4.3	5.7	6.1													
<b>MOR-26C</b>				4	6.4	9.3	11.8													
<b>MOR-30C</b>						7.5	13.6	13.9	17.2	20.4										
<b>MOR-34C</b>								16.5	18.6	23.3	30.9									
<b>MOR-38C</b>								19.4	20.2	24	30	34.1	37.8	38.8						
<b>MOR-45C</b>									34.5	41.8	42.6	44.5	48.4							
<b>MOR-55C</b>												73.2	75.9	88.1						
<b>MOR-68C</b>															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.

# MOR Flexible coupling - Oldham - type - Set screw type

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[Small Eccentric Reaction Force](#)



## 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](#)
[Cleanroom Wash & Packaging → P.807](#)
[Change to Stainless Steel Screw → P.805](#)

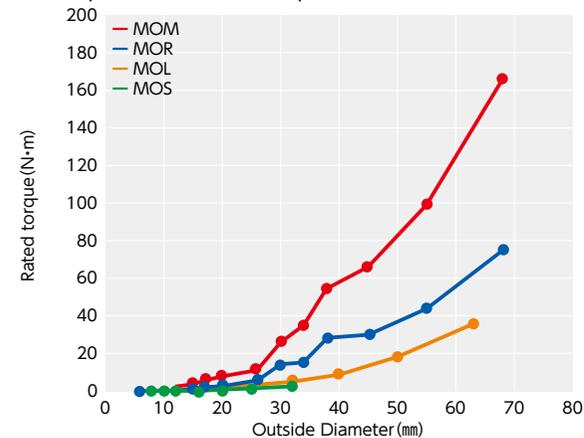
## Performance

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

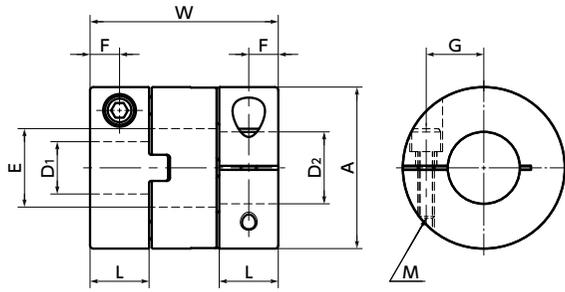
### Part number specification

**MOR-20-6-12** 1 set  
1 2  
**MOR - 20 - SPCR** Single Spacer  
 Product Code    Outside Diameter (A Dimension)    Single Spacer

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

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[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	5	16.5	5.2	2.5	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

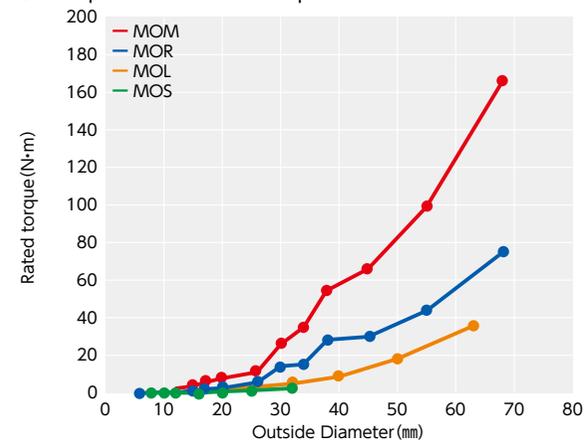
## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	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 <sup>-8</sup>	60	1	3	3
MOR-15C	6	1.6	3.2	42000	1.7×10 <sup>-7</sup>	80	1	3	5
MOR-17C	6.35	2.2	4.4	37000	3.8×10 <sup>-7</sup>	120	1.2	3	9
MOR-20C	10	3.2	6.4	31000	8.0×10 <sup>-7</sup>	120	1.2	3	13
MOR-26C	14	6	12	24000	2.5×10 <sup>-6</sup>	300	1.5	3	24
MOR-30C	14	15	30	21000	5.3×10 <sup>-6</sup>	530	2	3	39
MOR-34C	16	16	32	18000	8.6×10 <sup>-6</sup>	1000	2.5	3	50
MOR-38C	20	28	56	16000	1.5×10 <sup>-5</sup>	1500	2.5	3	67
MOR-45C	20	30	60	14000	3.2×10 <sup>-5</sup>	2400	3	3	110
MOR-55C	25	45	90	11000	1.0×10 <sup>-4</sup>	4100	4	3	230
MOR-68C	35	80	160	9000	3.3×10 <sup>-4</sup>	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

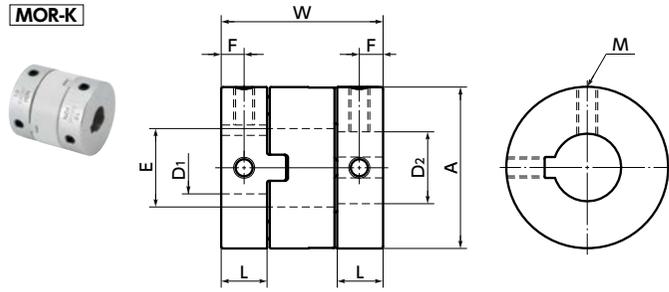
### ● Part number specification

**MOR-55C - 18-20** 1 set  
1 2  
**MOR - 20 - SPCR** Single Spacer  
 Product Code    Outside Diameter (A Dimension)    Single Spacer

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

# MOR-K Flexible coupling - Oldham - type - Set screw + Key type

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[WEB CAD Download](#)
[High torque](#)
[Electrical Insulation](#)
[High Allowable Misalignment](#)
[Small Eccentric Reaction Force](#)



## Dimensions

Unit : mm

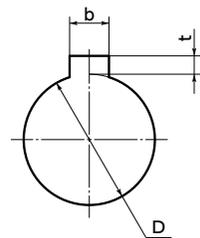
Part Number	A	L	W	E	F	M	Screw Tightening Torque (N·m)
MOR-15K	15	4.4	16	8.2	2.2	M3	0.7
MOR-17K	17	4.9	19.8	8.2	2.5	M3	0.7
MOR-20K	20	5.8	21.4	12.2	2.9	M4	1.7
MOR-26K	26	7.3	25.6	14.2	3.7	M4	1.7
MOR-30K	30	10	32.5	16.2	5	M4	1.7
MOR-34K	34	11.1	34	16.2	5.6	M5	4
MOR-38K	38	12.1	40	20.3	6.1	M5	4
MOR-45K	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.

Unit : mm

### 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 · 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

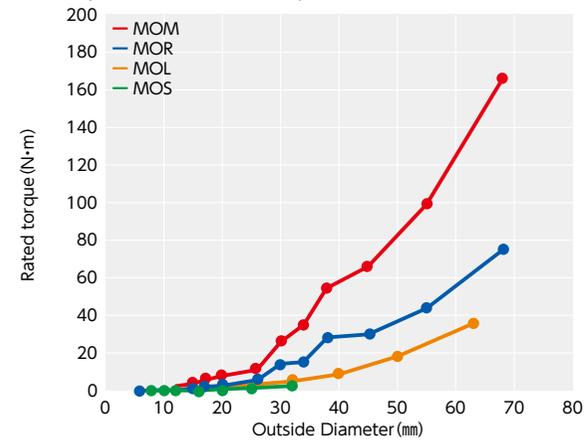
## Performance

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

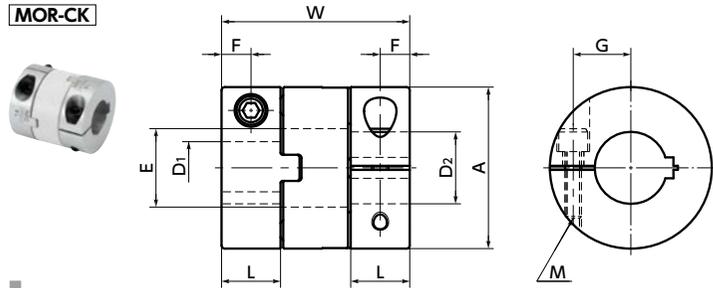
**MOR-26K-8-10** 1 set

**MOR - 20 - SPCR** Single Spacer

Product Code      Outside Diameter (A Dimension)      Single Spacer

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

[WEB Selection Tool](#)
[WEB CAD Download](#)
[High torque](#)
[Electrical Insulation](#)
[High Allowable Misalignment](#)
[Small Eccentric Reaction Force](#)



## Dimensions

Unit : mm

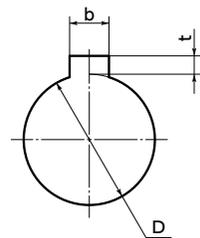
Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
MOR-15CK	15	5.8	18.8	8.2	2.9	5	M2.5	1
MOR-17CK	17	7.3	24.5	8.2	3.7	6	M2.5	1
MOR-20CK	20	8.8	27.4	12.2	4.4	7.5	M3	1.5
MOR-26CK	26	9.7	30.4	14.2	4.9	9.5	M3	1.5
MOR-30CK	30	10	32.5	16.2	5	11.1	M4	2.5
MOR-34CK	34	11.1	34	16.2	5.6	12.6	M4	2.5
MOR-38CK	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	6	●													
MOR-17CK	6	●													
MOR-20CK	6	●	●												
MOR-26CK	6	●	●	●											
MOR-30CK	6	●	●	●	●										
MOR-34CK	6	●	●	●	●	●									
MOR-38CK	6	●	●	●	●	●	●								
MOR-45CK	6	●	●	●	●	●	●	●							
MOR-55CK	6	●	●	●	●	●	●	●	●						
MOR-68CK	6	●	●	●	●	●	●	●	●	●					

- 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

Unit : mm

### 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](#)

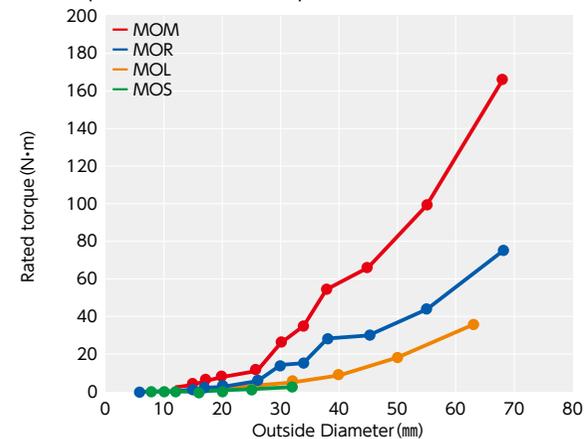
Please feel free to contact us      Available / Add'l charge      Available / Add'l charge

## Performance

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

# MOM Flexible coupling - Oldham - type

WEB Selection Tool WEB CAD Download High torque High Rigidity

## Structure

### • Set Screw type

**MOM** → P.179



### • Clamping type

**MOM-C** → P.181



### • Set Screw + Key type

**MOM-K** → P.183



### • Clamping + Key type

**MOM-CK** → P.185



### • Material/Finish

RoHS2 Compliant

	MOM / MOM-C / MOM-K / MOM-CK
Hub	S45C Ferrosoferric Oxide Film (Black)
Spacer	FCD400 Ferrosoferric oxide film
Pin	Polyacetal
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

### • Applicable motors

	MOM
Servomotor	-
Stepping Motor	-
General-purpose motor	⊙

⊙: Excellent ○: Very good

### • Property

	MOM
High torque	⊙
High Torsional Stiffness	⊙
Allowable Misalignment	○

⊙: Excellent ○: Very good

- This is an oldham-type flexible coupling.
- FCD400 is adopted in the spacer. Suitable for low-speed and high-torque specification.
- High performance grease is applied in the gap between hubs and the spacer in order to prevent sticking.
- Slippage of hubs and a spacer allows large eccentricity and angular misalignment to be accepted.
- A projection placed in the spacer (resin pin) allows angular misalignment to be effortlessly accepted.
- Long-term maintenance free. The grease accumulated in a grease hole will gradually seep out during operation, thereby maintaining the lubrication property over a long period.



### • Application

Mixer / Pump / Small power press / Grinder

### ⚠️ Precautions for Use

Please apply grease periodically in order to prevent sticking of hubs and a spacer.

### • Part number specification

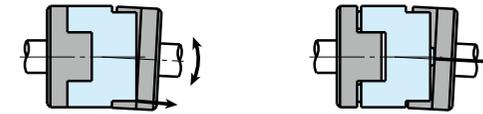
**MOM-30K-12-14**

Product Code Size Bore Diameter

Please refer to dimensional table for part number specification.

### • 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)

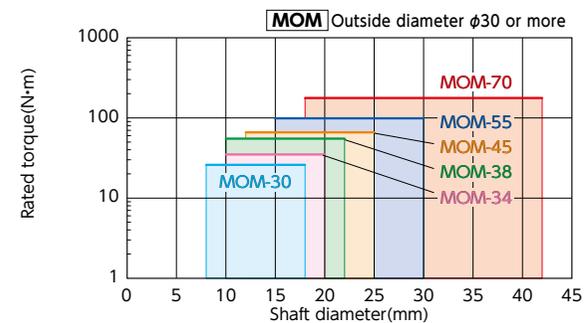
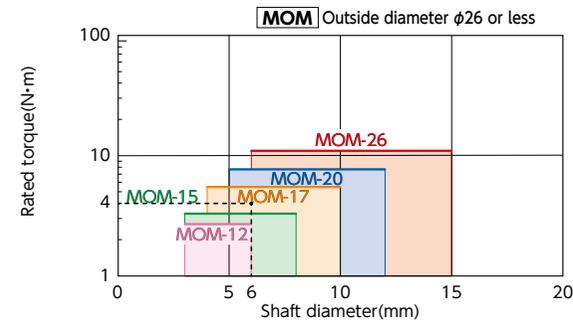
In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.

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 (2°) and the burden on the shaft is reduced. **MOM** is provided with a projection by inserting a resin pin into the spacer.

## 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 4N·m, the selected size is

**MOM-17**.



Additional Keyway at Shaft Hole → P.803

Cleanroom Wash & Packaging → P.807

Change to Stainless Steel Screw → P.805

Available / Add'l charge

Available / Add'l charge

Available / Add'l charge

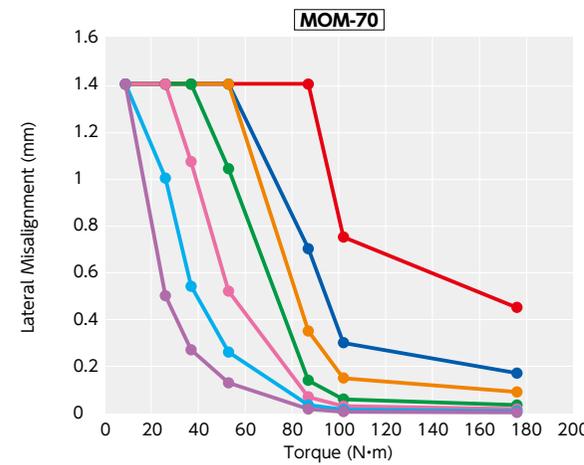
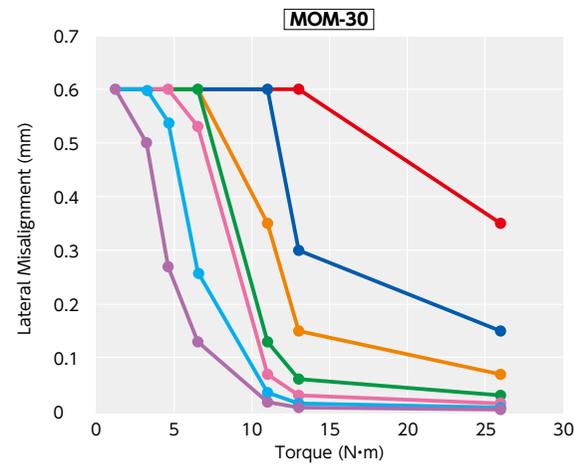
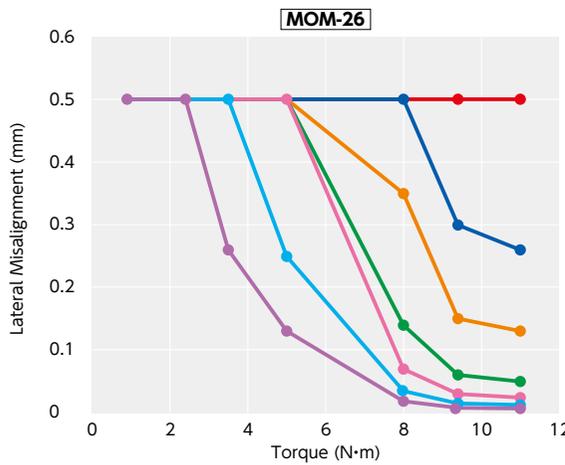
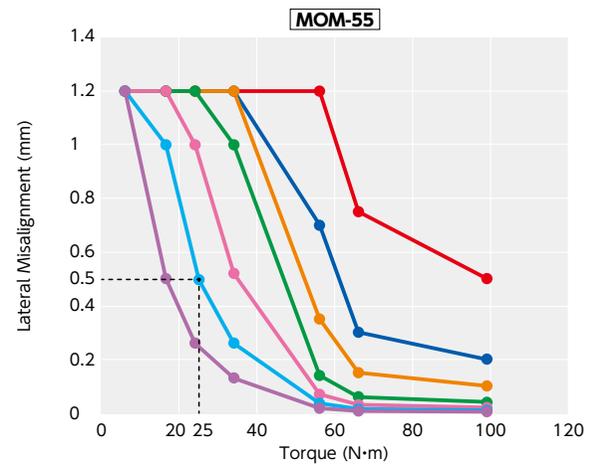
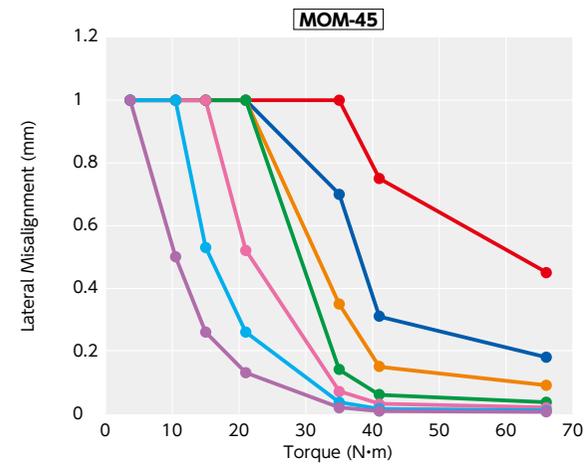
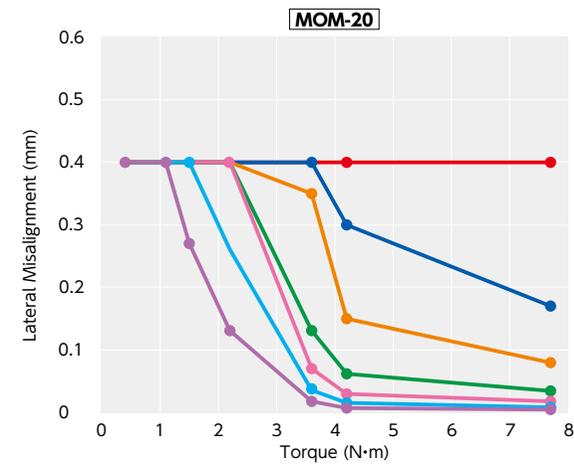
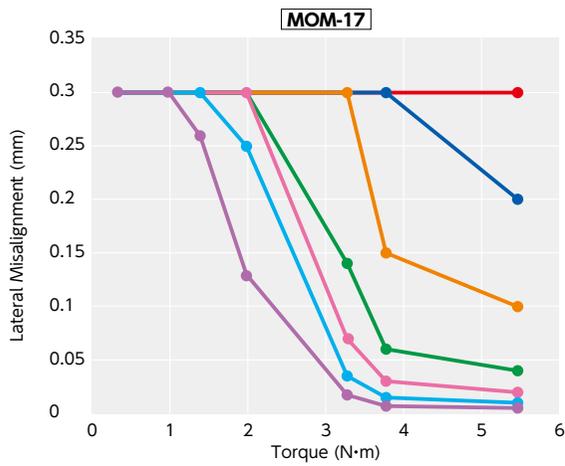
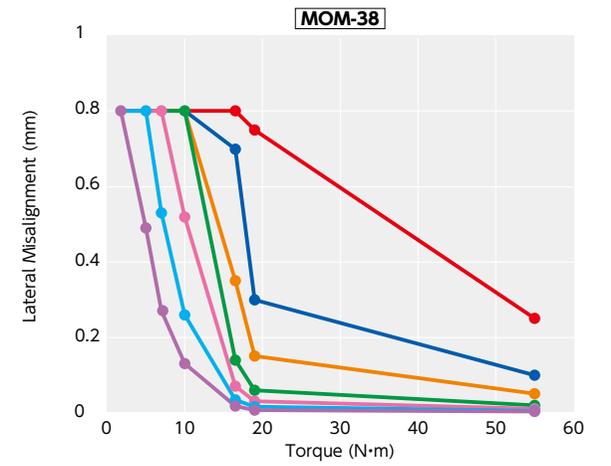
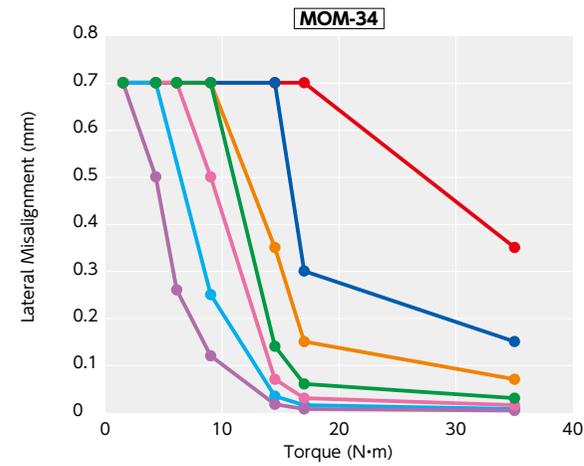
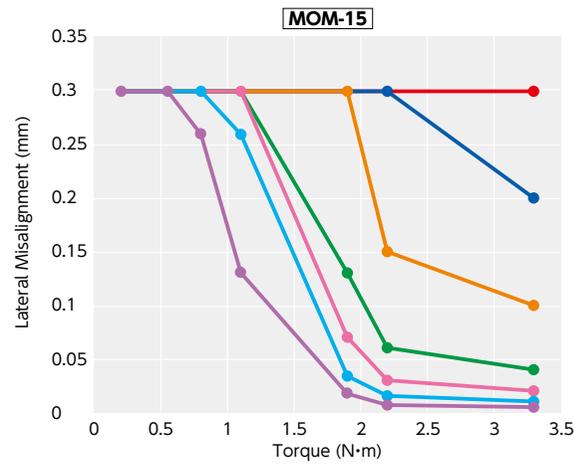
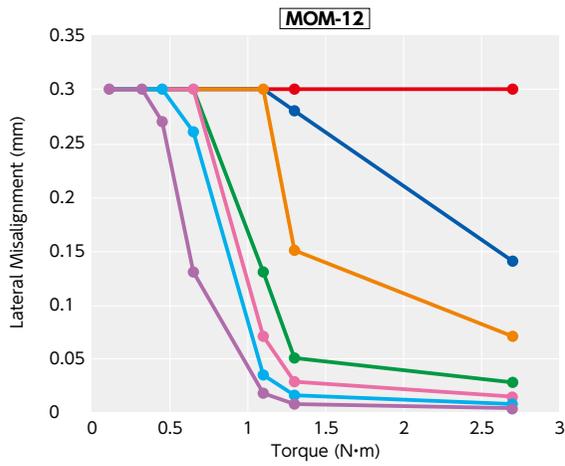
# MOM Flexible coupling - Oldham - type

WEB Selection Tool   WEB CAD Download   High torque   High Rigidity

## Technical Information

### Max. Lateral Misalignment

MOM's max. lateral misalignment varies depending on the load torque and revolution.



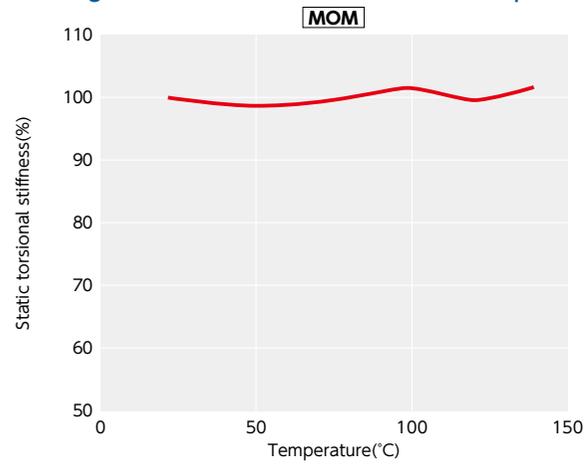
● Example  
When load torque is 25 N·m and revolution is 1000 min<sup>-1</sup>, the max. lateral misalignment of **MOM-55** is 0.5 mm.

- 20min<sup>-1</sup>
- 50min<sup>-1</sup>
- 100min<sup>-1</sup>
- 250min<sup>-1</sup>
- 500min<sup>-1</sup>
- 1000min<sup>-1</sup>
- 2000min<sup>-1</sup>

# MOM Flexible coupling - Oldham - type

WEB Selection Tool  
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 High torque  
 High Rigidity

## 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%.

**MOM**'s change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small.

However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

## 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 **MOM-C**.

Unit : N · m

Part Number	Bore Diameter																		
	3	4	5	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
<b>MOM-15C</b>	0.3	0.5	0.8	1															
<b>MOM-17C</b>		2.1	3.5	3.7															
<b>MOM-20C</b>			3.8	6	6	6.8	7.5												
<b>MOM-26C</b>				5.4	5.4	5.8	6.6	8.7											
<b>MOM-30C</b>						7.4	12.6	14.4	15.1										
<b>MOM-34C</b>							13	13.2	15.8	16.1	16.8								
<b>MOM-38C</b>							16.4	18.4	20.9	23.1	25.1	28.3	31.6						
<b>MOM-45C</b>								47.9	48.9	56.1	56.8	57.5	62.8						
<b>MOM-55C</b>										42.9	54.1	55.3	56.2	89.3	93.4	97.5			
<b>MOM-70C</b>												62.6	92.9	95.5	97.6	103.9	119	122.1	130

• 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 **MOM-C** Dimension table.

Selection Navigator

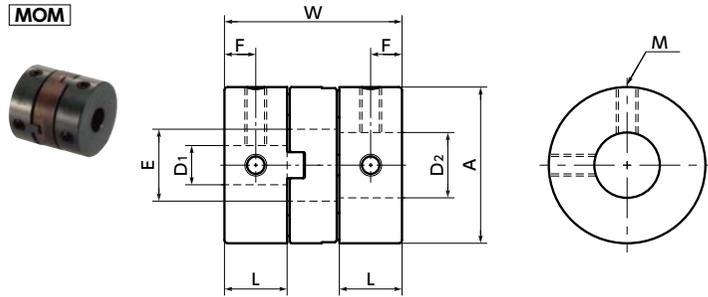


CAD Data Download

<https://www.nbk1560.com/>

# MOM Flexible coupling - Oldham - type - Set screw type

WEB Selection Tool WEB CAD Download High torque High Rigidity



## Dimensions

Unit : mm

Part Number	A	L	W	E	F	M	Screw Tightening Torque (N·m)
MOM-12	12	5.2	15	5.9	2.6	M2.5	0.5
MOM-15	15	5.4	16.6	6.9	2.7	M3	0.7
MOM-17	17	6.7	20.4	7.3	3.35	M3	0.7
MOM-20	20	7	22	11.1	3.5	M3	0.7
MOM-26	26	9	26.6	13.3	4.5	M4	1.7
MOM-30	30	12	34	15.5	6	M4	1.7
MOM-34	34	13	35	17.5	6.5	M5	4
MOM-38	38	15	40.5	21.5	7.5	M5	4
MOM-45	45	15	45.2	24.3	7.5	M5	4
MOM-55	55	17	51	27.7	8.5	M6	7
MOM-70	70	20	58.6	38.5	10	M8	15

Part Number	Standard Bore Diameter (dimensional allowance H8)																					
	D1 · D2																					
	3	4	5	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35	38	40	42
MOM-12	●	●	●	●																		
MOM-15	●	●	●	●		●																
MOM-17		●	●	●		●	●															
MOM-20			●	●	●	●	●	●														
MOM-26				●	●	●	●	●	●	●												
MOM-30					●	●	●	●	●	●	●	●										
MOM-34						●	●	●	●	●	●	●	●	●								
MOM-38							●	●	●	●	●	●	●	●	●	●						
MOM-45								●	●	●	●	●	●	●	●	●	●	●				
MOM-55									●	●	●	●	●	●	●	●	●	●	●	●		
MOM-70												●	●	●	●	●	●	●	●	●	●	●

- 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 for the other side is available upon request.

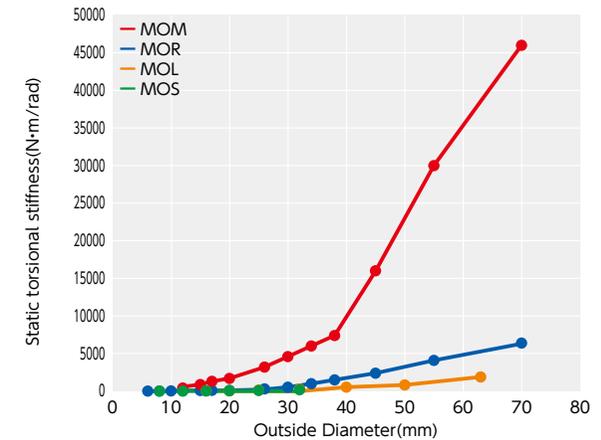
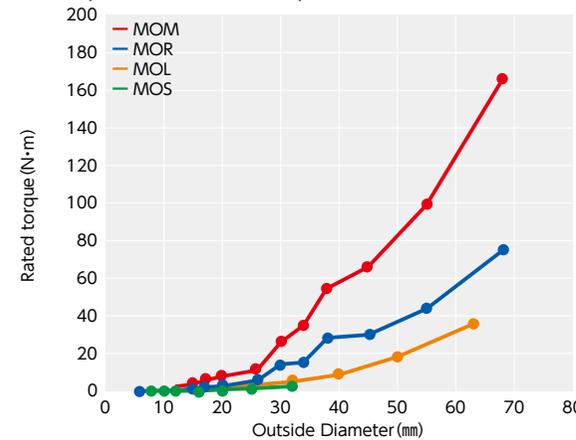
Additional Keyway at Shaft Hole → P.803    Cleanroom Wash & Packaging → P.807    Change to Stainless Steel Screw → P.805

## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. lateral*3 misalignment (mm) → P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-12	6	2.7	5.4	2000	2.0×10 <sup>-7</sup>	420	0.3	2	9
MOM-15	8	3.3	6.6	2000	5.5×10 <sup>-7</sup>	870	0.3	2	15
MOM-17	10	5.5	11	2000	1.1×10 <sup>-6</sup>	1300	0.3	2	24
MOM-20	12	7.7	15.4	2000	2.3×10 <sup>-6</sup>	1700	0.4	2	34
MOM-26	15	11	22	2000	8.1×10 <sup>-6</sup>	3200	0.5	2	72
MOM-30	18	26	52	2000	1.8×10 <sup>-5</sup>	4600	0.6	2	119
MOM-34	20	35	70	2000	3.1×10 <sup>-5</sup>	6000	0.7	2	159
MOM-38	22	55	110	2000	5.5×10 <sup>-5</sup>	7400	0.8	2	230
MOM-45	25	66	132	2000	1.2×10 <sup>-4</sup>	16000	1	2	364
MOM-55	30	99	198	2000	3.0×10 <sup>-4</sup>	30000	1.2	2	636
MOM-70	42	176	352	2000	8.9×10 <sup>-4</sup>	46000	1.4	2	1090

- \*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.
- \*3: The max. lateral misalignment varies depending on the load torque and revolution. → P.175

### Comparison of rated torque



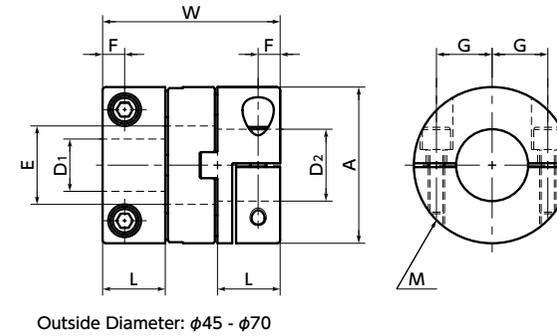
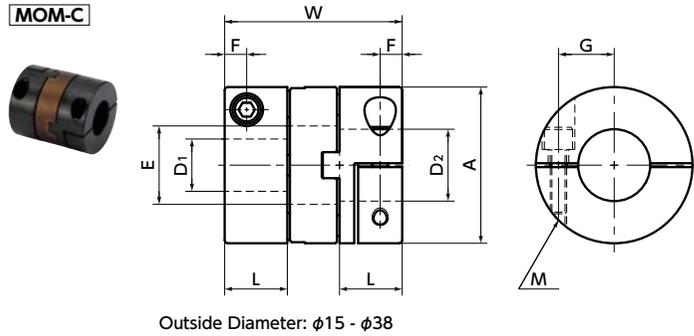
### Part number specification

**MOM-26-6.35-10**



# MOM-C Flexible coupling - Oldham - type - Clamping type

WEB Selection Tool | WEB CAD Download | High torque | High Rigidity



## Dimensions

Unit : mm

Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
MOM-15C	15	6.6	19	6.9	2.15	5.2	M1.6	0.25
MOM-17C	17	9	25	7.3	2.65	5.5	M2	0.5
MOM-20C	20	10	28	11.1	3.25	7.25	M2.5	1
MOM-26C	26	11.5	31.6	13.3	4	9	M3	1.5
MOM-30C	30	12	34	15.5	4	11	M3	1.5
MOM-34C	34	13	35	17.5	4.5	12	M4	3.5
MOM-38C	38	15	40.5	21.5	4.75	14	M4	3.5
MOM-45C	45	16.2	47.6	24.3	6.2	16	M5	8
MOM-55C	55	20.8	58.6	27.7	7.9	20	M6	13
MOM-70C	70	25	68.6	38.5	8.9	26	M6	13

Part Number	Standard Bore Diameter																					
	D1	D2	3	4	5	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35	
MOM-15C	3	4	5	6																		
MOM-17C	4	5	6																			
MOM-20C	5	6																				
MOM-26C	6																					
MOM-30C	6																					
MOM-34C	6																					
MOM-38C	6																					
MOM-45C	6																					
MOM-55C	6																					
MOM-70C	6																					

- 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

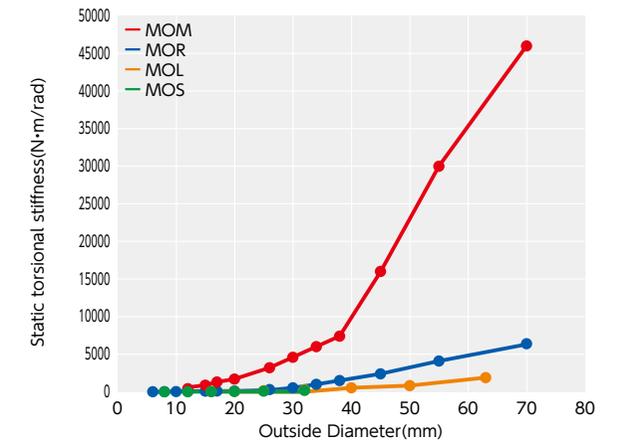
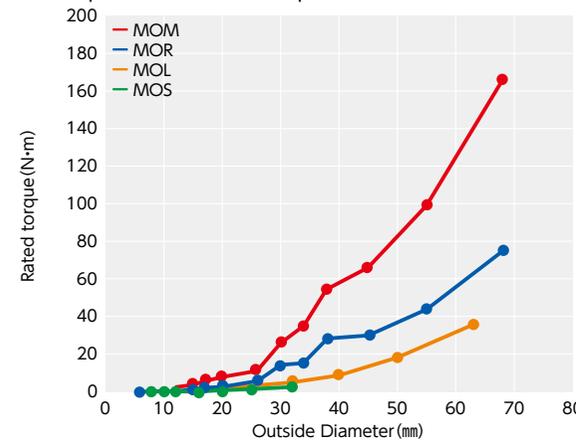
Additional Keyway at Shaft Hole → P.803 | Cleanroom Wash & Packaging → P.807 | Change to Stainless Steel Screw → P.805

## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. Lateral*3 Misalignment (mm) → P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-15C	6	3.3	6.6	2000	6.2×10 <sup>-7</sup>	870	0.3	2	19
MOM-17C	6.35	5.5	11	2000	1.4×10 <sup>-6</sup>	1300	0.3	2	34
MOM-20C	10	7.7	15.4	2000	3.0×10 <sup>-6</sup>	1700	0.4	2	47
MOM-26C	12	11	22	2000	9.6×10 <sup>-6</sup>	3200	0.5	2	92
MOM-30C	14	26	52	2000	1.8×10 <sup>-5</sup>	4600	0.6	2	131
MOM-34C	16	35	70	2000	3.1×10 <sup>-5</sup>	6000	0.7	2	173
MOM-38C	20	55	110	2000	5.5×10 <sup>-5</sup>	7400	0.8	2	235
MOM-45C	22	66	132	2000	1.2×10 <sup>-4</sup>	16000	1	2	387
MOM-55C	25	99	198	2000	3.4×10 <sup>-4</sup>	30000	1.2	2	752
MOM-70C	35	176	352	2000	1.0×10 <sup>-3</sup>	46000	1.4	2	1370

- \*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.
- \*3: The max. lateral misalignment varies depending on the load torque and revolution. → P.175

### Comparison of rated torque



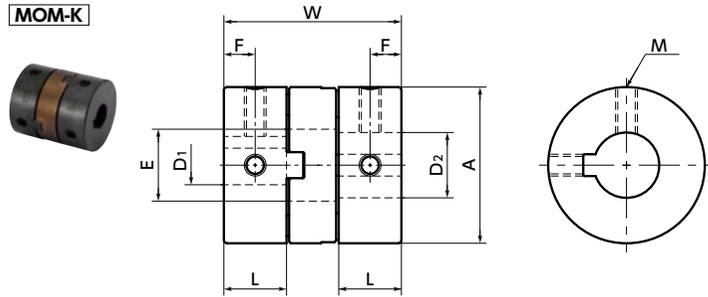
### Part number specification

**MOM-55C-15-16**



# MOM-K Flexible coupling - Oldham - type - Set screw + Key type

WEB Selection Tool WEB CAD Download High torque High Rigidity



## Dimensions

Unit : mm

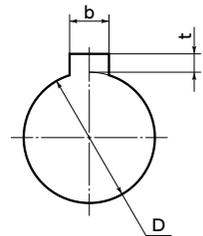
Part Number	A	L	W	E	F	M	Screw Tightening Torque (N·m)
MOM-15K	15	5.4	16.6	6.9	2.7	M3	0.7
MOM-17K	17	6.7	20.4	7.3	3.35	M3	0.7
MOM-20K	20	7	22	11.1	3.5	M3	0.7
MOM-26K	26	9	26.6	13.3	4.5	M4	1.7
MOM-30K	30	12	34	15.5	6	M4	1.7
MOM-34K	34	13	35	17.5	6.5	M5	4
MOM-38K	38	15	40.5	21.5	7.5	M5	4
MOM-45K	45	15	45.2	24.3	7.5	M5	4
MOM-55K	55	17	51	27.7	8.5	M6	7
MOM-70K	70	20	58.6	38.5	10	M8	15

Part Number	Standard Bore Diameter (dimensional allowance H8)																
	D1 · D2	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-15K		●															
MOM-17K		●	●														
MOM-20K		●	●	●													
MOM-26K		●	●	●	●												
MOM-30K			●	●	●	●											
MOM-34K				●	●	●	●										
MOM-38K				●	●	●	●	●									
MOM-45K					●	●	●	●	●								
MOM-55K						●	●	●	●	●							
MOM-70K							●	●	●	●	●	●					

- 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.

Unit : mm

### ● Details of Shaft Hole



Standard bore diameter D	Keyway				Key Nominal dimension b×h
	b Standard Dimension	Allowance (JS9)	t Standard Dimension	Allowance	
6 · 6.35	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
24 · 25 · 28 · 30	8	±0.0180	3.3	+0.2 0	8×7
35	10	±0.0180	3.3	+0.2 0	10×8

● Excerpt from JIS B 1301

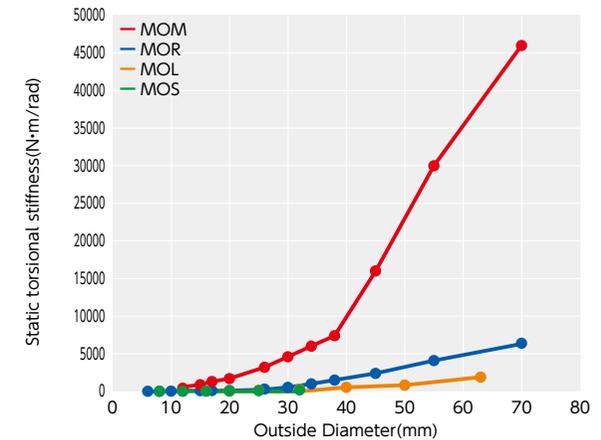
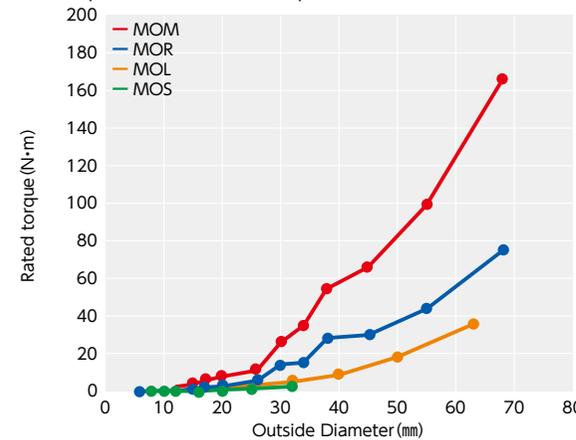
Additional Keyway at Shaft Hole → P.803 Cleanroom Wash & Packaging → P.807 Change to Stainless Steel Screw → P.805  
Please feel free to contact us Available / Add'l charge Available / Add'l charge

## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. lateral*3 misalignment (mm) → P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-15K	7	3.3	6.6	2000	5.7×10 <sup>-7</sup>	870	0.3	2	17
MOM-17K	8	5.5	11	2000	1.1×10 <sup>-6</sup>	1300	0.3	2	26
MOM-20K	10	7.7	15.4	2000	2.4×10 <sup>-6</sup>	1700	0.4	2	37
MOM-26K	12	11	22	2000	8.4×10 <sup>-6</sup>	3200	0.5	2	78
MOM-30K	15	26	52	2000	1.8×10 <sup>-5</sup>	4600	0.6	2	130
MOM-34K	16	35	70	2000	3.2×10 <sup>-5</sup>	6000	0.7	2	178
MOM-38K	20	55	110	2000	5.7×10 <sup>-5</sup>	7400	0.8	2	241
MOM-45K	22	66	132	2000	1.2×10 <sup>-4</sup>	16000	1	2	384
MOM-55K	28	99	198	2000	3.1×10 <sup>-4</sup>	30000	1.2	2	650
MOM-70K	35	176	352	2000	9.3×10 <sup>-4</sup>	46000	1.4	2	1200

- \*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.
- \*3: The max. lateral misalignment varies depending on the load torque and revolution. → P.175

### ● Comparison of rated torque



### ● Part number specification

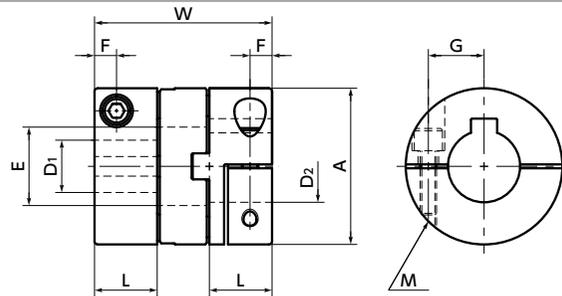
**MOM-15K-6-6**



# MOM-CK Flexible coupling - Oldham - type - Clamping + Key type

WEB Selection Tool WEB CAD Download High torque High Rigidity

MOM-CK



Outside Diameter:  $\phi 15 - \phi 38$

## Dimensions

Unit : mm

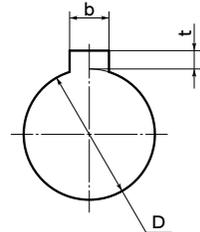
Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
MOM-15CK	15	6.6	19	6.9	2.15	5.2	M1.6	0.25
MOM-17CK	17	9	25	7.3	2.65	5.5	M2	0.5
MOM-20CK	20	10	28	11.1	3.25	7.25	M2.5	1
MOM-26CK	26	11.5	31.6	13.3	4	9	M3	1.5
MOM-30CK	30	12	34	15.5	4	11	M3	1.5
MOM-34CK	34	13	35	17.5	4.5	12	M4	3.5
MOM-38CK	38	15	40.5	21.5	4.75	14	M4	3.5
MOM-45CK	45	16.2	47.6	24.3	6.2	16	M5	8
MOM-55CK	55	20.8	58.6	27.7	7.9	20	M6	13
MOM-70CK	70	25	68.6	38.5	8.9	26	M6	13

Part Number	Standard Bore Diameter D1 · D2															
	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-15CK	●															
MOM-17CK	●															
MOM-20CK	●	●	●	●												
MOM-26CK	●	●	●	●	●											
MOM-30CK			●	●	●	●										
MOM-34CK				●	●	●	●									
MOM-38CK				●	●	●	●	●								
MOM-45CK					●	●	●	●	●							
MOM-55CK						●	●	●	●	●						
MOM-70CK							●	●	●	●	●	●				

- 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 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

Unit : mm

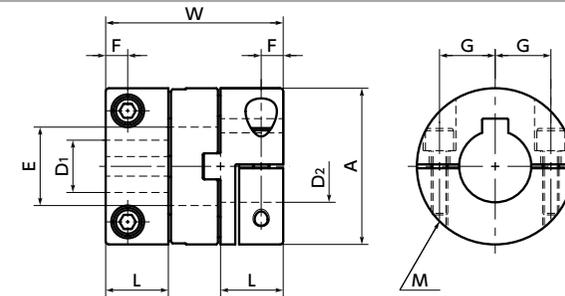
● Details of Shaft Hole



Standard bore diameter D	Keyway				Key
	b	t	Standard Dimension	Allowance	
6 · 6.35	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
24 · 25 · 28 · 30	8	±0.0180	3.3	+0.2 0	8×7
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



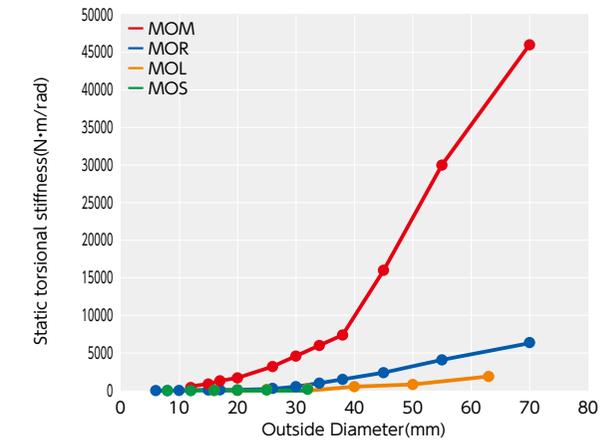
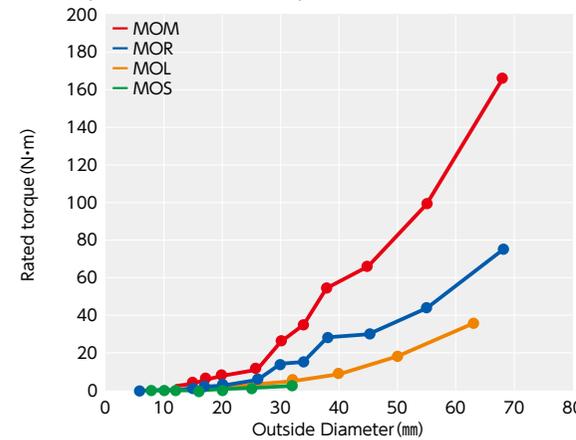
Outside Diameter:  $\phi 45 - \phi 70$

## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. lateral*3 misalignment (mm) → P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-15CK	6	3.3	6.6	2000	6.1 × 10 <sup>-7</sup>	870	0.3	2	18
MOM-17CK	6.35	5.5	11	2000	1.4 × 10 <sup>-6</sup>	1300	0.3	2	33
MOM-20CK	10	7.7	15.4	2000	2.9 × 10 <sup>-6</sup>	1700	0.4	2	45
MOM-26CK	12	11	22	2000	9.5 × 10 <sup>-6</sup>	3200	0.5	2	90
MOM-30CK	14	26	52	2000	1.8 × 10 <sup>-5</sup>	4600	0.6	2	128
MOM-34CK	16	35	70	2000	3.0 × 10 <sup>-5</sup>	6000	0.7	2	170
MOM-38CK	20	55	110	2000	5.4 × 10 <sup>-5</sup>	7400	0.8	2	231
MOM-45CK	22	66	132	2000	1.2 × 10 <sup>-4</sup>	16000	1	2	383
MOM-55CK	25	99	198	2000	3.4 × 10 <sup>-4</sup>	30000	1.2	2	743
MOM-70CK	35	176	352	2000	1.0 × 10 <sup>-3</sup>	46000	1.4	2	1350

- \*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.
- \*3 : The max. lateral misalignment varies depending on the load torque and revolution. → P.175

### ● Comparison of rated torque



### ● Part number specification

**MOM-38CK-16-18**



# MOL/MOS Flexible coupling - Oldham - type

[WEB Selection Tool](#)
[WEB CAD Download](#)
 High Allowable Misalignment
 Small Eccentric Reaction Force

## Structure

### ● Set Screw type

**MOL** Outside diameter  $\phi 16 - \phi 32 \rightarrow$  P.189

Hex Socket Set Screw



**MOL** Outside diameter  $\phi 40 - \phi 63$



**MOS**  $\rightarrow$  P.191



### ● Clamping type

**MOL-C** Outside diameter  $\phi 16 - \phi 32 \rightarrow$  P.189

Spacer Hub



**MOL-C** Outside diameter  $\phi 40 - \phi 63$



**MOS-C**  $\rightarrow$  P.191

Hex Socket Head Cap Screw



### ● Applicable motors

	MOL	MOS
Servomotor	-	-
Stepping Motor	○	○
General-purpose motor	◎	◎

◎: Excellent ○: Very good

### ● Property

	MOL	MOS
Allowable Misalignment	◎	◎
Electrical insulation	◎	◎
Allowable operating temperature	-20°C to 80°C	-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 load on the shaft generated by misalignment is small and the burden on the shaft is reduced.

● It has electrical insulation.

● Standard type **MOL** and short type **MOS** are available.

### ● Application

Parts feeder/Transport device

### ● Material/Finish

RoHS2 Compliant

	MOL / MOL-C / MOS / MOS-C
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 coupling with high torque specification **MOR** is available.

$\rightarrow$  P.161



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

$\rightarrow$  P.173



### ● Part number specification

## MOL-20C-6-8

Product Code Size Bore Diameter

Please refer to dimensional table for part number specification.

Selection Navigator



CAD Data Download

<https://www.nbk1560.com/>

[Additional Keyway at Shaft Hole  \$\rightarrow\$  P.803](#)
[Cleanroom Wash & Packaging  \$\rightarrow\$  P.807](#)
[Change to Stainless Steel Screw  \$\rightarrow\$  P.805](#)

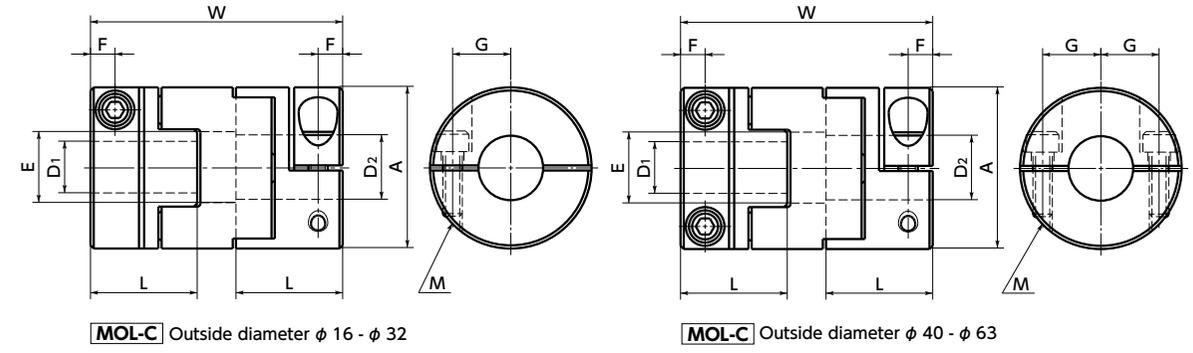
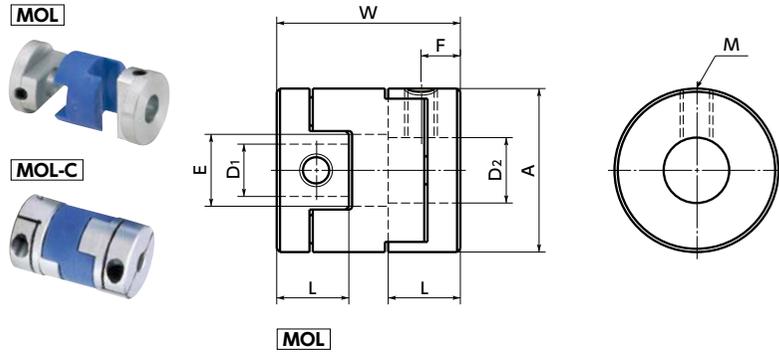
Available / Add'l charge

Available / Add'l charge

Available / Add'l charge

# MOL/MOL-C Flexible coupling - Oldham - type - Set screw type/Clamping type

WEB Selection Tool | WEB CAD Download | High Allowable Misalignment | Small Eccentric Reaction Force



## Dimensions

Unit : mm

Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
MOL-16	16	7	18	7	3.5		M3	0.7
MOL-20	20	9	23	9	4.5		M4	1.7
MOL-25	25	11	28.2	11	5.5		M5	4
MOL-32	32	12.7	32.7	14.5	6.5		M6	7
MOL-40	40	14	32	17	7		M6	7
MOL-50	50	17	38.2	23	8.5		M8	15
MOL-63	63	21	46.6	28	10.5		M10	30
MOL-16C	16	12.5	29	7	3	5	M2.5	1
MOL-20C	20	14.4	33.8	9	3	6.5	M2.5	1
MOL-25C	25	16.5	39.2	11	3.8	9	M3	1.5
MOL-32C	32	18.7	44.7	14.5	4.5	11	M4	2.5
MOL-40C	40	23	50	17	7	13	M5	4
MOL-50C	50	27	58.2	23	8	16	M6	8
MOL-63C	63	33	70.6	28	10	21	M8	16

Part Number	Standard Bore Diameter D1 · D2															
	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	18	20	25
MOL-16	●	●	●	●	●	●										
MOL-20		●	●	●	●	●										
MOL-25			●	●	●	●	●									
MOL-32						●	●			●	●					
MOL-40							●			●	●	●	●			
MOL-50											●	●	●	●	●	
MOL-63												●	●	●	●	●
MOL-16C			●	●												
MOL-20C				●	●	●										
MOL-25C					●	●	●									
MOL-32C						●	●	●								
MOL-40C							●	●	●							
MOL-50C								●	●	●						
MOL-63C									●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw **MOL** or hex socket head cap screw **MOL-C**
- The dimensional allowance for bore diameter of a set screw type **MOL** is H8.
- 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 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

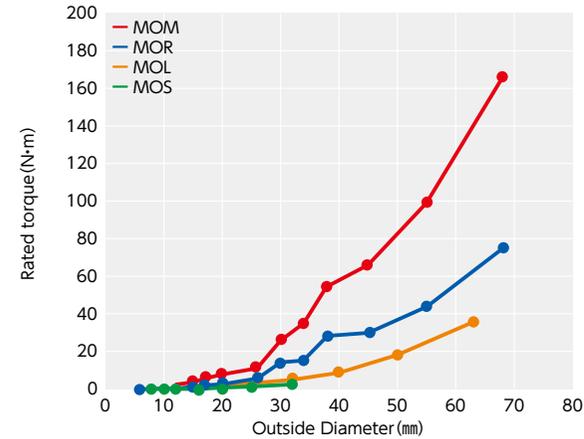
Additional Keyway at Shaft Hole → P.803 | Cleanroom Wash & Packaging → P.807 | Change to Stainless Steel Screw → P.805

## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOL-16	6.35	0.7	1.4	39000	3.2×10 <sup>-7</sup>	31	1	3	7
MOL-20	8	1.2	2.4	31000	1.0×10 <sup>-6</sup>	60	1.5	3	14
MOL-25	10	2	4	25000	3.0×10 <sup>-6</sup>	140	2	3	27
MOL-32	14	4.5	9	19000	9.5×10 <sup>-6</sup>	280	2.5	3	50
MOL-40	16	9	18	15000	2.3×10 <sup>-5</sup>	540	3	3	80
MOL-50	20	18	36	12000	6.7×10 <sup>-5</sup>	820	3.5	3	150
MOL-63	25	36	72	10000	2.2×10 <sup>-4</sup>	1900	4	3	300
MOL-16C	6	0.7	1.4	39000	5.8×10 <sup>-7</sup>	31	1	3	12
MOL-20C	8	1.2	2.4	31000	1.5×10 <sup>-6</sup>	60	1.5	3	19
MOL-25C	10	2	4	25000	4.4×10 <sup>-6</sup>	140	2	3	36
MOL-32C	14	4.5	9	19000	1.4×10 <sup>-5</sup>	280	2.5	3	69
MOL-40C	16	9	18	15000	4.1×10 <sup>-5</sup>	540	3	3	130
MOL-50C	20	18	36	12000	1.2×10 <sup>-4</sup>	820	3.5	3	230
MOL-63C	25	36	72	10000	3.7×10 <sup>-4</sup>	1900	4	3	450

- \*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 **MOL** **MOL-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

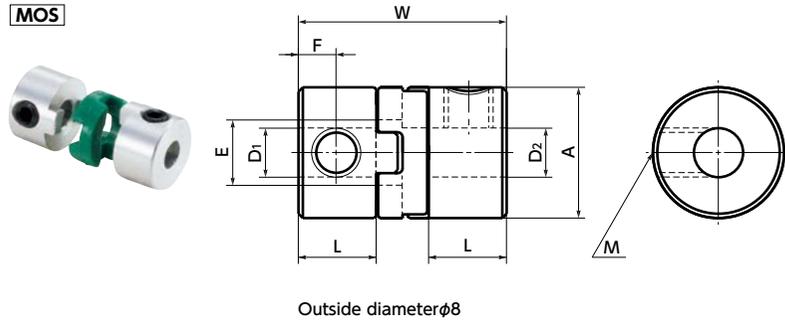
**MOL-40C-14-15** 1 set

**MOL - 40 - SPCR** Single Spacer

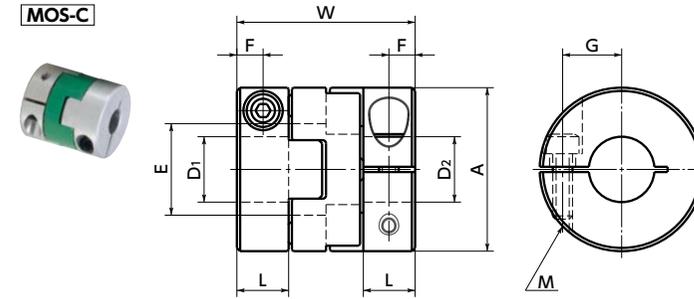
Product Code: MOL-40C-14-15  
 Outside Diameter (A Dimension): 40  
 Single Spacer: SPCR

# MOS/MOS-C Flexible coupling - Oldham - type - Set screw type/Clamping type

WEB Selection Tool WEB CAD Download High Allowable Misalignment Small Eccentric Reaction Force



Outside diameter  $\phi 8$



Outside diameter  $\phi 12 - \phi 32$

## Dimensions

Unit : mm

Part Number	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
<b>MOS-8</b>	8	4.8	12.7	4	2.3		M3	0.7
<b>MOS-12C</b>	12	5	14.9	6	2.5	4	M2	0.5
<b>MOS-16C</b>	16	7	21	8	3.5	5	M2.5	1
<b>MOS-20C</b>	20	7	22.1	10	3.5	6.5	M2.5	1
<b>MOS-25C</b>	25	8	27.2	14	4	9	M3	1.5
<b>MOS-32C</b>	32	10	33.3	18	5	11	M4	2.5

Part Number	Standard Bore Diameter D1 · D2														
	1	2	2.5	3	4	5	6	6.35	7	8	10	11	12	14	
<b>MOS-8</b>	●	●	●	●											
<b>MOS-12C</b>				●	●	●									
<b>MOS-16C</b>				●	●	●	●								
<b>MOS-20C</b>						●	●	●	●	●					
<b>MOS-25C</b>								●	●	●	●				
<b>MOS-32C</b>										●	●	●	●	●	

- All products are provided with hex socket set screw (**MOS-8**) or hex socket head cap screw (**MOS-C**)
- The dimensional allowance for bore diameter of **MOS-8** is H8.
- 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

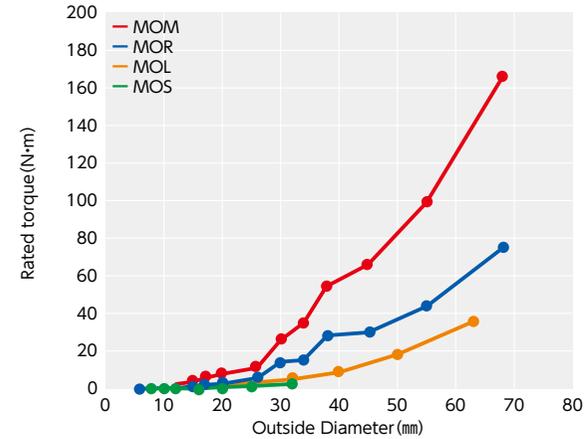
## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
<b>MOS-8</b>	3	0.08	0.16	78000	1.2×10 <sup>-8</sup>	2	0.5	2	2
<b>MOS-12C</b>	5	0.2	0.4	52000	7.1×10 <sup>-8</sup>	9	0.6	2	3
<b>MOS-16C</b>	6	0.4	0.8	39000	3.0×10 <sup>-7</sup>	30	1	2	8
<b>MOS-20C</b>	8	0.7	1.4	31000	7.4×10 <sup>-7</sup>	47	1.3	2	13
<b>MOS-25C</b>	10	1.2	2.4	25000	2.2×10 <sup>-6</sup>	85	1.5	2	24
<b>MOS-32C</b>	14	2.8	5.6	19000	7.3×10 <sup>-6</sup>	190	2	2	48

\*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 **MOS** **MOS-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

**MOS-20C-6.35-8** 1 set

**MOS - 40 - SPCR** Single Spacer  
 Product Code Outside Diameter (A Dimension) Single Spacer

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