

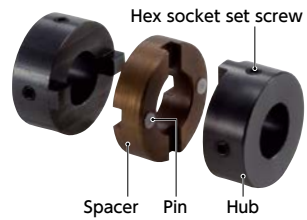
MOM Flexible Couplings - Oldham Type Registered Design

High torque High Rigidity

Structure

Set Screw Type

MOM → P.xxxx



Clamping Type

MOM-C → P.xxxx



Set Screws + Key Type

MOM-K → P.xxxx



Clamping + Key Type

MOM-CK → P.xxxx



Material/Finish



	MOM / MOM-C / MOM-K / MOM-CK
Hub	S45C Ferrosoferric Oxide Film (Black)*1
Spacer	FCD400 Ferrosoferric Oxide Film (Black)
Pin	Polyacetal
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film (Black)
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)
Grease	Lithium Soap Grease Nippeco DXL-No.1 Made by Nippeco

*1: Due to manufacturing process requirements, couplings may have bores and keyways with or without surface treatment. This does not affect the performance of the couplings.

Applicable motors

	MOM
Servomotor	●
Stepping Motor	●
General-purpose Motor	○

○: Excellent ●: Available

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.
- 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

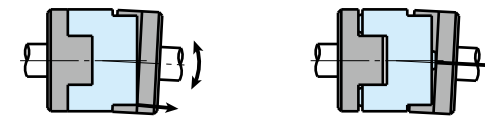
MOM-30K-12-14

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)

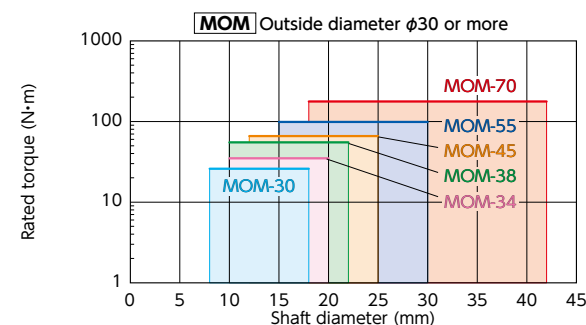
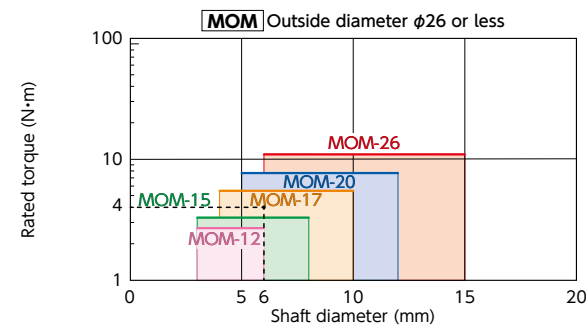
In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small and that the bending moment arises on the shaft.

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. 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 the selection size.



Selection Example

In case of selected parameters of shaft diameter of φ6 and load torque of 4N·m, the selected size is

MOM-17.

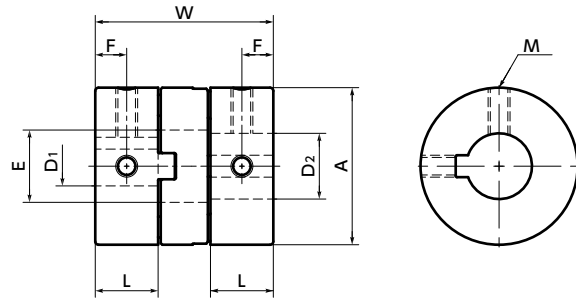


Additional Keyway at Shaft Hole → P.xxxx Cleanroom Wash & Packaging → P.xxxx Change to Stainless Steel Screw → P.xxxx
Available / Add'l charge Not Available Not Available

MOM-K Flexible Couplings - Oldham Type - Set Screw + Key Type

High torque High Rigidity

MOM-K



Dimensions

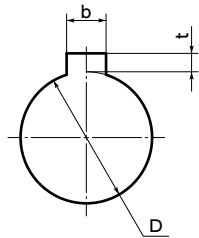
Unit : mm

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
MOM-15K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-17K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-20K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-26K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-30K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-34K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-38K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-45K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-55K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-70K	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35

- All products are provided with hex socket set screws.
- Recommended tolerance for shaft diameters is h6 and h7.
- A set of hubs with key type for one side and clamping type for the other side is available upon request.
- For the shaft insertion amount to the coupling, see Mounting/maintenance.

Details of Shaft Hole



Standard Bore Diameter D	Keyway				Key Nominal Dimension b x h
	b Standard Dimension	Allowance (JS9)	t Standard Dimension	Allowance	
6 · 6.35	2	±0.0125	1.0	0 - +0.1	2 × 2
8	3	±0.0125	1.4	0 - +0.1	3 × 3
10 · 12	4	±0.0150	1.8	0 - +0.1	4 × 4
14 · 15 · 16	5	±0.0150	2.3	0 - +0.1	5 × 5
18 · 20 · 22	6	±0.0150	2.8	0 - +0.1	6 × 6
24 · 25 · 28 · 30	8	±0.0180	3.3	0 - +0.2	8 × 7
35	10	±0.0180	3.3	0 - +0.2	10 × 8

• Excerpt from JIS B 1301

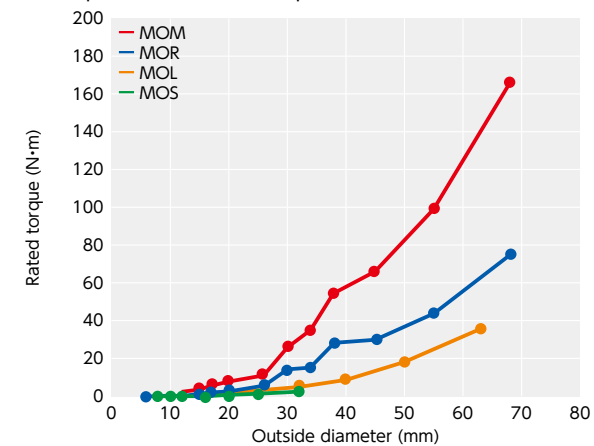
Additional Keyway at Shaft Hole → P.xxxx | Cleanroom Wash & Packaging → P.xxxx | Change to Stainless Steel Screw → P.xxxx

Performance

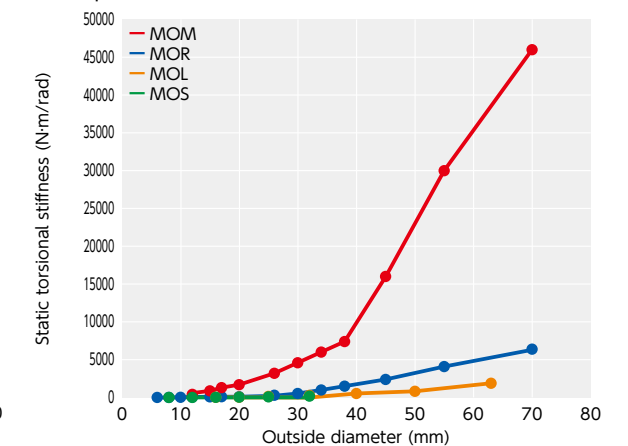
Part Number	Max. Bore Diameter (mm)	Rated Torque *1 (N·m)	Maximum Torque *1 (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment of Inertia *2 (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment *3 (mm)	Max. Angular Misalignment (°)	Mass *2 (g)
MOM-15K	7	3.3	6.6	2000	5.7×10 ⁻⁷	870	0.3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

Comparison of rated torque



Comparison of Static Torsional Stiffness



Part number specification

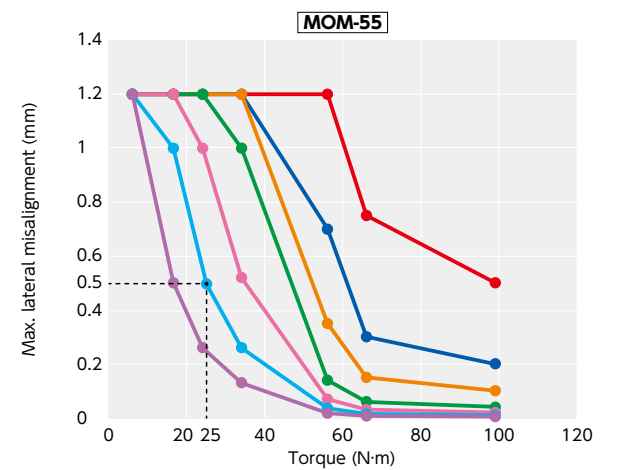
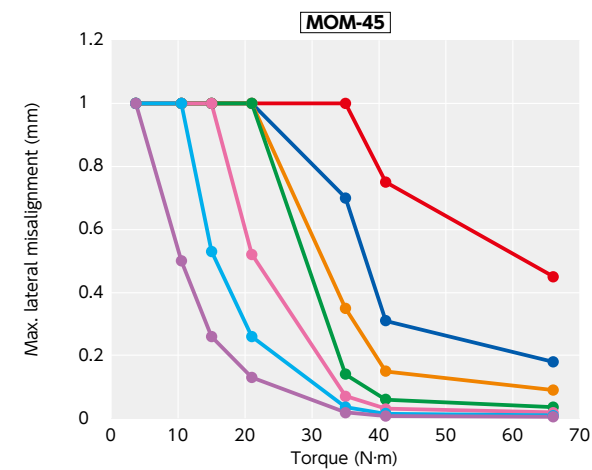
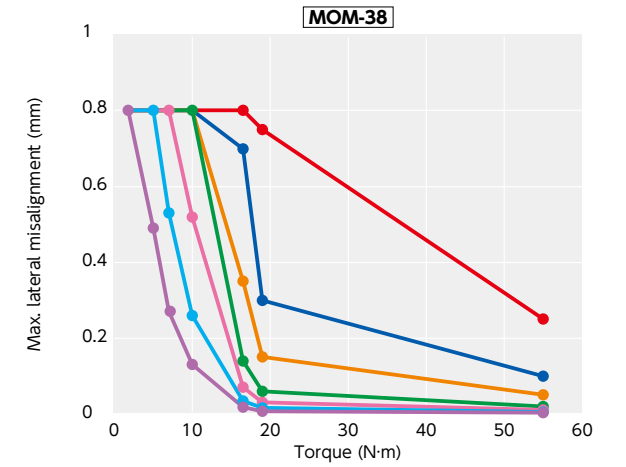
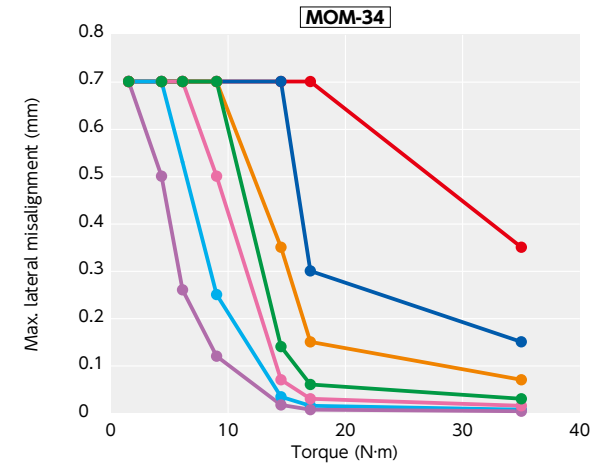
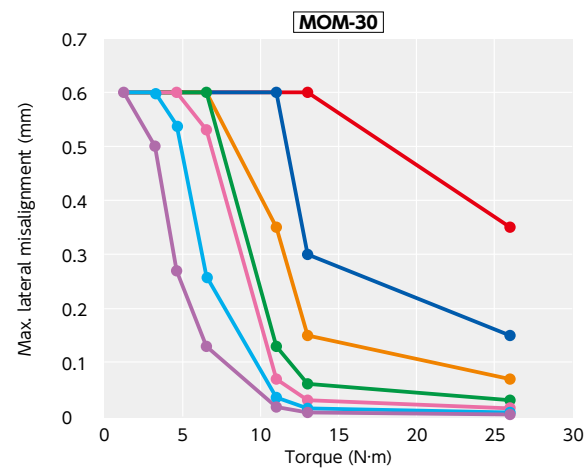
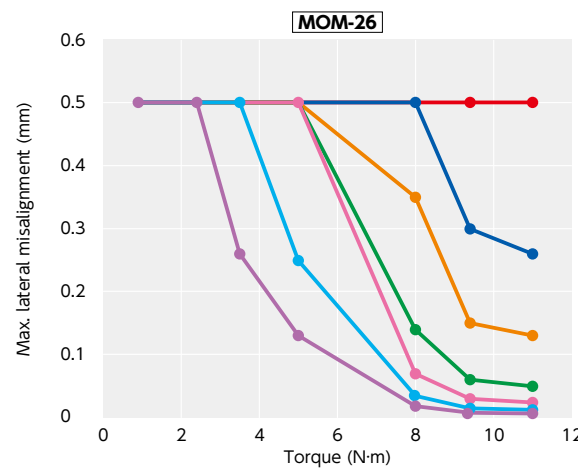
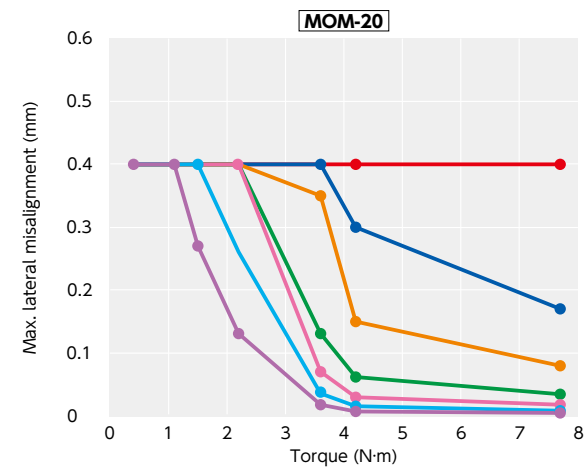
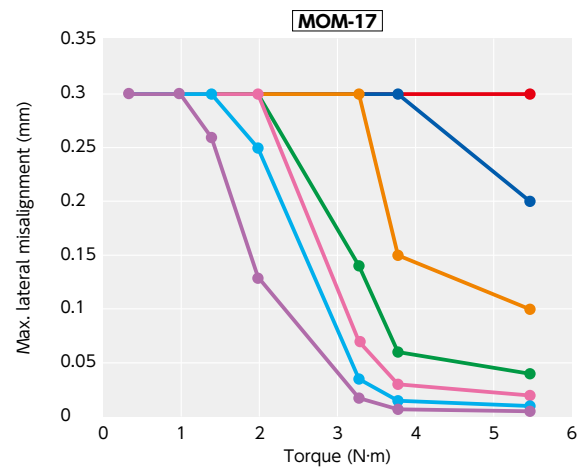
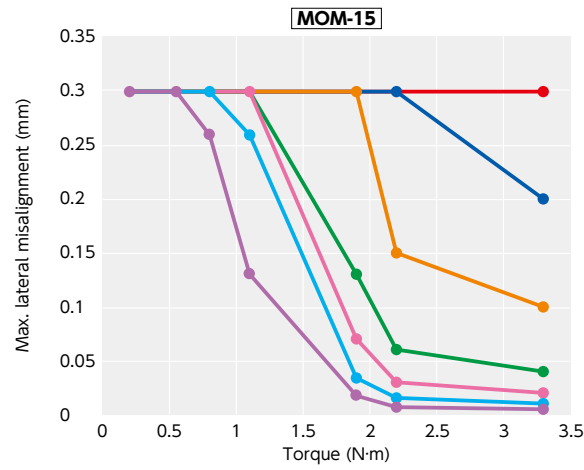
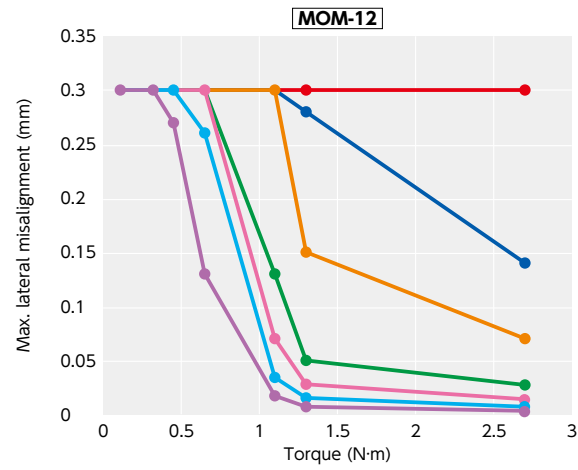
MOM-15K-6-6

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Technical Information

● Max. Lateral Misalignment

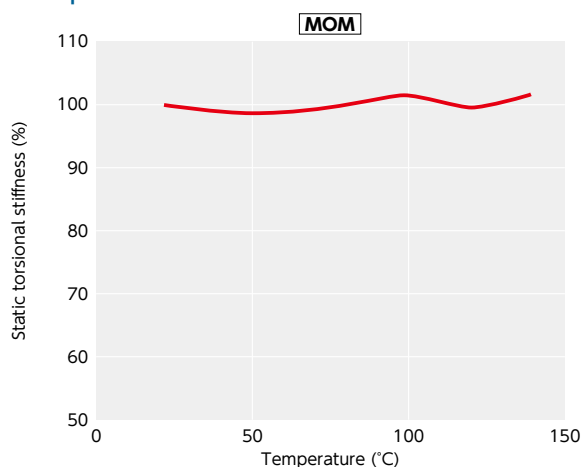
MOM's max. lateral misalignment varies depending on the load torque and revolution.



● Example
When load torque is 25 N•m and revolution is 1000 min⁻¹, the max. lateral misalignment of MOM-55 is 0.5 mm.



● **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 **MOM** 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.

● **Slip Torque**

For set screw type **MOM**, see Carbon Steel Coupling under "Slip Torque of Coupling - Set Screw Type" for details.

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

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	
MOM-15C	0.3	0.5	0.8	1																
MOM-17C		2.1	3.5	3.7																
MOM-20C			3.8	6	6	6.8	7.5													
MOM-26C				5.4	5.4	5.8	6.6	8.7												
MOM-30C						7.4	12	14	15											
MOM-34C							13	13	15	16	16									
MOM-38C							16	18	20	23	25	28	31							
MOM-45C								47	48	56	56	57	62							
MOM-55C										42	54	55	56	89	93	97				
MOM-70C													62	92	95	97	100	110	120	130

- 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 **MOM-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.