CATALOG No. CM-01

NBK®

Nabeya Bi-tech Kaisha

Couplicon·mini

Miniature Couplings

Optimum Power Transmission and Control P.2~5

- Nabeya Bi-tech Kaisha (NBK) has applied for the intellectual property rights concerning Couplicon® mini
- Couplicon® mini is a registered trademark of Nabeya Bi-tech Kaisha (NBK)


MOS P.38~39
MOL P.35~37
MCT P.40~41
MWBS P.31~33
MKM P.28~30
MFB P.25~27
MLR P.58~59
MJT P.42~51
MRG P.55~57
MSF P.52~53
Flexus® P.62~63
MPF P.64
MDR P.60~61
Note P.65

Optimum Power Transmission and Control

Selecting Couplicon® mini Couplings

❶ Couplicon® mini couplings are mechanical components for transmitting torque and rotational angle. Each type has its own unique characteristics. Select a type which best fits your requirement in the table below.

❷ Refer to the specification and the stock bore size tables of the type you have selected for deciding which product you exactly need.

❸ Confirm that rated torque, max. rotational frequency, and dimensions of the coupling type you have selected are adequate for the equipment you intend to use it with. Max. torque of the Couplicon® mini is two-fold of the rated torque. Select a type in which torque generated during continuous operation does not exceed the rated torque of the Couplicon® mini.

Characteristics	Flexible Coupling									
	MSX NEW  (P.7~9)	MST NEW ADDITIONS IN SIZE  (P.11~16)	MSTS NEW ADDITIONS IN SIZE  (P.11~16)	MWS NEW ADDITIONS IN SIZE  (P.17~19)	MWSS NEW ADDITIONS IN SIZE  (P.17~19)	MDW NEW  (P.20~21)	MHW  (P.22)	MHS  (P.23)	MTD  (P.24)	MFB NEW ADDITIONS IN SIZE  (P.25~27)
Zero Backlash	●	●	●	●	●	●	●	●	●	●
High Torsional Stiffness	●	●	●	●	●	●	●	●	●	●
High Torque	●		●		●	●	●	●		
Flexibility		●	●			●	●		●	
Compactness	●			●	●			●		
All Stainless Steel			●		●					
Absorption of Vibration										
Electrical Insulation										
Constant Velocity										●
Setscrew Type	●	●	●	●	●				●	●
Clamp Type	●	●	●	●	●	●	●	●		●
Keyway Type		●	●							

Characteristics	Rigid Coupling			
	MRG  (P.55~57)	MRGS  (P.55~57)	MLR NEW  (P.58~59)	MLRS NEW  (P.58~59)
All Stainless Steel		●		●
Setscrew Type	●	●		
Clamp Type	●	●	●	●
Split Type	●	●		
Semi-Split Type			●	●

Usage	Mechanical Parts		
	MDR NEW  (P.60~61)	Flexus®  (P.62~63)	MPF  (P.64)
Damper Roll	●		
Flexus®		●	
Photo Sensor Flange			●

Flexible Coupling									Characteristics
MFBS NEW ADDITIONS IN SIZE  (P.25~27)	MKM NEW  (P.28~30)	MWBS NEW  (P.31~33)	MOL NEW ADDITIONS IN SIZE  (P.35~37)	MOS NEW  (P.38~39)	MCT NEW ADDITIONS IN SIZE  (P.40~41)	MJT NEW ADDITIONS IN SIZE  (P.42~51)	MSF  (P.52~53)	MSFH  (P.52~53)	
●	●	●				●			Zero Backlash
●	●	●	●	●	●	●			High Torsional Stiffness
●	●	●	●	●	●	●		●	High Torque
		●	●	●	●	●	●	●	Flexibility
				●					Compactness
●		●							All Stainless Steel
			●	●		●	●	●	Absorption of Vibration
			●	●		●	●	●	Electrical Insulation
●	●	●					●	●	Constant Velocity
●		●	●		●	●	●	●	Setscrew Type
●	●		●	●	●	●			Clamp Type
						●			Keyway Type

Customized Couplings

In case standard couplings do not fit your application, customized couplings are available.
We are ready to manufacture customized couplings to satisfy your application requirements, such as special bores, keyways, surface treatment, dimensional, configurational and material specifications. Please contact NBK directly for inquiries on customized couplings at info@nbk1560.com or fax : +81-575-23-1129.

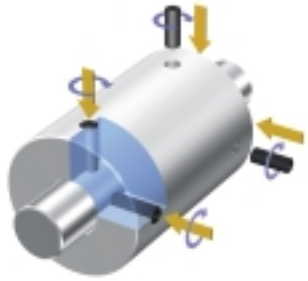
Optimum Power Transmission and Control

Attachment

The following five types of couplings are available for attachment on a shaft. Select a coupling matching your application.
Setscrews or socket head cap screws should be properly tightened using a torque driver or a torque wrench. Refer to wrench torque as shown in the specification table on each product.

❶ Setscrew Type

This low-cost type features the most conventional attachment. However, the point of setscrew may cause damage to the shaft and may be difficult to remove.

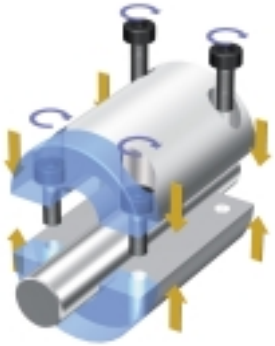


❷ Clamp Type

This type is clamped on the shaft by tightening the socket head cap screws. Attachment and removal is easy, and no shaft damage results.

❸ Split Type

The split type features separate hubs completely. It can provide easy attachment and removal without sliding your equipment.

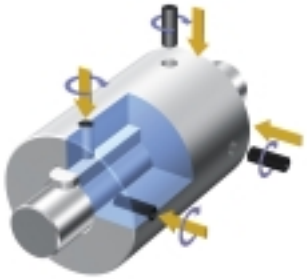


❹ Semi-Split Type

This type features the combination of one clamp type hub and one split type hub. Equipment can be installed by placing one shaft in the split type hub, with the other shaft being fixed in the clamp type hub.

❺ Keyway Type

This type, like the setscrew type, features the most conventional attachment and is used for transmitting relatively high torque. Setscrew / Clamp type hubs are applied for preventing shift towards the axial direction.



Alignment Adjustment

❶ Flexible couplings transmit torque and rotational angle while absorbing misalignment. When the misalignment exceeds allowable values, vibration may result or the life of the coupling may become shortened. Make sure to adjust the alignment accordingly.

❷ There are three types of shaft misalignment, namely in terms of parallel misalignment, angular misalignment and shaft end-play. Adjust the alignment to be below allowable values listed in the specification table of each product provided in this catalog.

❸ The maximum misalignment listed in this catalog is the allowable value when only one of the misalignments exists. In case two or more misalignments exist at the same time, the allowable values will be less than 1/2 of the maximum misalignment listed in the specification tables.

❹ Misalignments are sometimes caused not only by equipment assembly, but also by vibration, heat expansion, wear of bearings, etc. during operation. Therefore, it is recommended to adjust the shaft misalignment to be below 1/3 of maximum values.

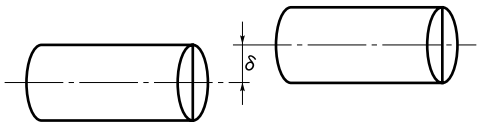
Adjustment of Torque Capacity in High Temperature Applications

MJT, MOL, MOS, and MSF include elastomer or plastic parts. These models must be used in the operational temperature range of each model as indicated in this catalog.

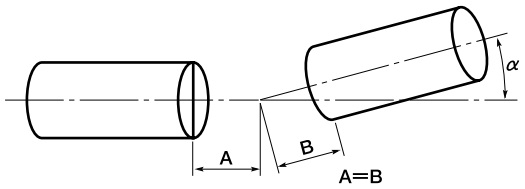
If the ambient temperature exceeds 30˚C (86˚F), the values of max. torque and rated torque should be multiplied by the values of the service factors listed in the table below.

Ambient Temperature	Service Factor
–20˚C~ 30˚C	1.00
30˚C~ 40˚C	0.80
40˚C~ 60˚C	0.70
60˚C~100˚C	0.55

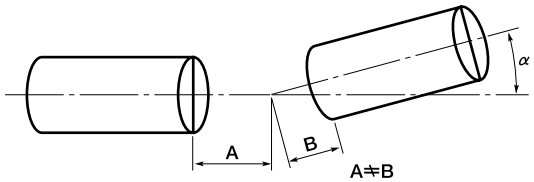
● Parallel Offset Misalignment



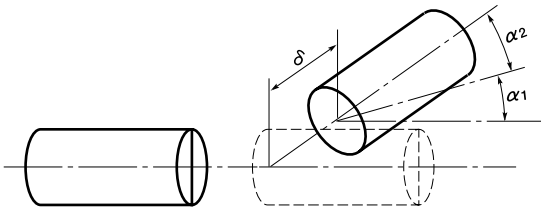
● Symmetrical Angular Misalignment



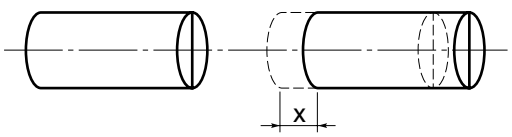
● Non-Symmetrical Angular Misalignment



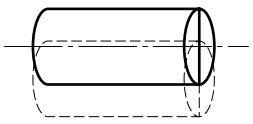
● Combined Angular-Offset Misalignment



● End-Play



● Run Out



Beauty Created by Functional Extremes

Radial Slits on Cylinder Bar
Complete One-piece Construction
Metallic Spring Couplings ——— Couplicon 1 & 2

Flexibility-torque capacity-torsional stiffness-light weight-compactness —
Persuing the ultimate in performance and function required for precision miniature shaft couplings.
Cylindrical in shape, these flexible couplings have slits forming a metallic spring and
feature two kinds of slit patterns based on our clear design concept —— Couplicon® 1 & 2.
These uniquely designed flexible couplings have been realized.

Couplicon 1

MST (P.11~16)

MWS (P.17~19)

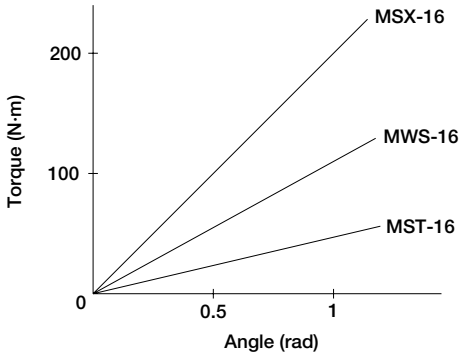
Torsional stiffness and flexibility ——
Good balance between these inconsistent functions has been achieved.
These are the flexible couplings suitable for stepping motor applications.

Couplicon 2

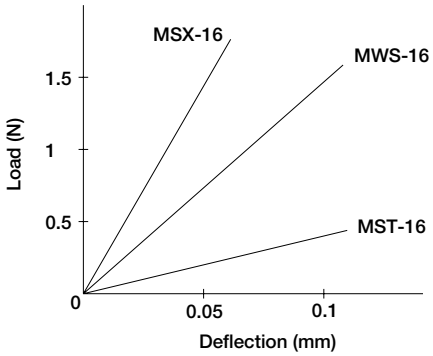
MSX (P.7~9)
High torsional stiffness, light weight and compactness ——
This is the flexible coupling suitable for servomotor applications.

Characteristics Comparison

• Torsional Load / Performance Graph



• Radial Load / Performance Graph



The simple configuration of slit type couplings allows free modification in the number of slits, clearance between slits, and width and depth of the slits to best match specific performance parameters.
NBK designs and manufactures the most suitable couplings for each customer's application requirement from our accumulated technical expertise on custom-made products.

MSX Couplicon 2

Miniature Slit Type Flexible Coupling

For Servomotor

Compact

Features

- One-piece metallic spring coupling
- Extremely high torsional stiffness, low inertia and excellent response
- Manufactured from extra super duralumin - the highest strength aluminum alloy
- Zero backlash
- Absorption of parallel, angular misalignments and shaft end-play by spring action
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance-free, oil and chemical resistant
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material

MSX

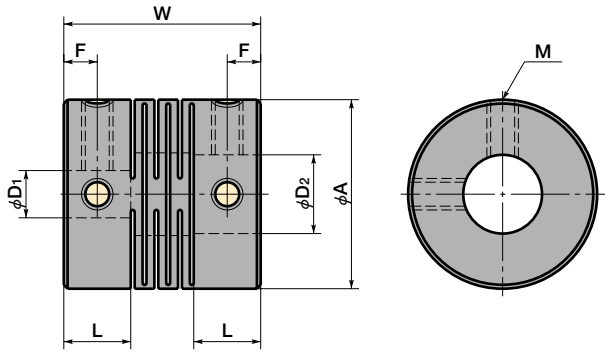
MSX-C

Body:
Extra Super Duralumin,
Anodic Oxide Coating

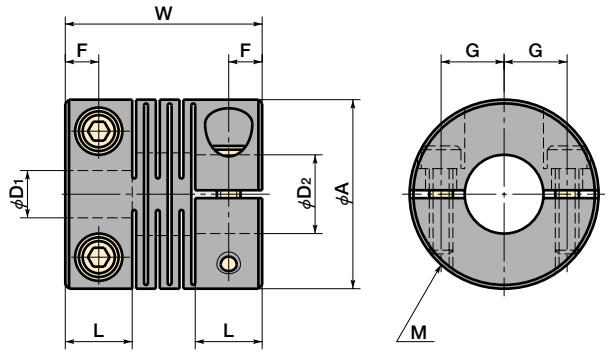
Setscrew Type

Clamp Type

MSX Setscrew Type



MSX-C Clamp Type



Dimensions

unit : mm

Catalog Number		A	L	W	F	G	M	Wrench Torque (N·m)
MSX-16		16	6	17.4	3	—	M3	0.7
MSX-19		19	6.8	20	3.4	—	M3	0.7
MSX-24		24	8.5	25	4.25	—	M4	1.7
MSX-29		29	10.2	30	5.1	—	M4	1.7
MSX-34		34	12	35	6	—	M5	4
MSX-16C		16	6	17.4	3	4.74	M2	0.5
MSX-19C		19	6.8	20	3.4	5.6	M2.5	1
MSX-24C		24	8.5	25	4.25	8	M3	1.5
MSX-29C		29	10.2	30	5.1	9	M3	1.5
MSX-34C		34	12	35	6	11	M3	1.5

Catalog Number	Stock Bores $D_1 \times D_2$							
MSX-16	5 × 5	5 × 6	6 × 6					
MSX-19	5 × 5	5 × 6	5 × 7	5 × 8	6 × 6	6 × 6.35	6× 7	6× 8
	6.35× 6.35	6.35× 8	8 × 8	8 ×10	10 ×10			
MSX-24	6 × 6	6 × 8	6 ×10	6.35× 6.35	6.35× 8	6.35×10	7× 8	8× 8
	8 × 9.525	8 ×10	9.525×10	10 ×10	10 ×11	10 ×12	11×12	12×12
MSX-29	8 × 8	8 ×10	8 ×11	8 ×12	10 ×10	10 ×11	10×12	10×14
	11 ×12	11 ×14	12 ×12	12 ×14				
MSX-34	10 ×14	11 ×14	12 ×12	12 ×14	12 ×16	14 ×14	14×15	14×16
	15 ×15	15 ×16	16 ×16					
MSX-16C	5 × 5	5 × 6	6 × 6					
MSX-19C	5 × 5	5 × 6	5 × 7	5 × 8	6 × 6	6 × 6.35	6× 7	6× 8
	6.35× 6.35	6.35× 8	8 × 8					
MSX-24C	6 × 6	6 × 8	6 ×10	6.35× 6.35	6.35× 8	6.35×10	7× 8	8× 8
	8 × 9.525	8 ×10	9.525×10	10 ×10				
MSX-29C	8 × 8	8 ×10	8 ×11	8 ×12	10 ×10	10 ×11	10×12	11×12
	12 ×12							
MSX-34C	10 ×14	11 ×14	12 ×12	12 ×14	12 ×16	14 ×14	14×15	14×16
	15 ×15	15 ×16	16 ×16					

- All products come with setscrews (MSX) or cap screws (MSX-C).
- Tolerance on shaft bores of setscrew type coupling is H8.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MSX-16	8	0.5	1	24000	2.8×10^{-7}	200	0.05	0.5	±0.1	7
MSX-19	10	1	2	20000	6.2×10^{-7}	270	0.05	0.5	±0.1	10
MSX-24	12	1.5	3	16000	2.0×10^{-6}	790	0.05	0.5	±0.1	22
MSX-29	14	2	4	13000	5.2×10^{-6}	1400	0.05	0.5	±0.1	40
MSX-34	18	3	6	11000	1.1×10^{-5}	2200	0.05	0.5	±0.1	64
MSX-16C	6	0.5	1	9500	2.5×10^{-7}	200	0.05	0.5	±0.1	7
MSX-19C	8	1	2	8000	5.8×10^{-7}	270	0.05	0.5	±0.1	12
MSX-24C	10	1.5	3	6300	1.8×10^{-6}	790	0.05	0.5	±0.1	23
MSX-29C	12	2	4	5200	4.7×10^{-6}	1400	0.05	0.5	±0.1	41
MSX-34C	16	3	6	4400	1.1×10^{-5}	2200	0.05	0.5	±0.1	62

* Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

● Specify product No. and both bore diameters.

MSX-19C-ϕ5×ϕ6

Product No. D_1 D_2

You can download the most current CAD data on Couplicon® mini couplings directly from our website. The file is available in DXF format.

* DXF is the registered trademark of Autodesk, Inc.

http://www.nbk1560.com/

e-mail : info@nbk1560.com

MST Couplicon 1

NEW ADDITIONS IN SIZE

Miniature Slit Type Flexible Coupling

For Stepping Motor

Recipient of 1988 MITI Good Design Award

Industrie Forum Design Hannover
Award for good industrial design 1991

Features

- One-piece metallic spring coupling
- Zero backlash
- Absorption of parallel, angular misalignments and shaft end-play by spring action
- High torsional stiffness and response
- Identical clockwise and anti-clockwise rotational characteristics
- Maintenance-free, oil and chemical resistant
- Available in aluminum alloy and stainless steel
- Outside diameter ranging from ϕ8 to ϕ63 - Wide variation
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material

MST
Outside Dia. ϕ8~ϕ63

MST-C
Outside Dia. ϕ12~ϕ32

MST-C
Outside Dia. ϕ40~ϕ63

MST-K
Outside Dia. ϕ32~ϕ63

Body: Aluminum Alloy, Anodic Oxide Coating

MSTS
Outside Dia. ϕ8~ϕ63

MSTS-C
Outside Dia. ϕ12~ϕ32

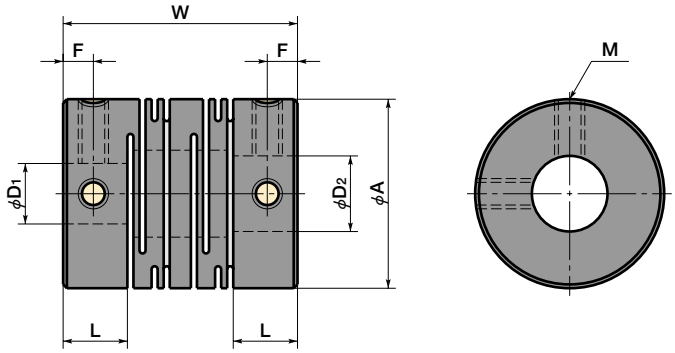
MSTS-C
Outside Dia. ϕ40~ϕ63

MSTS-K
Outside Dia. ϕ32~ϕ63

Body: Stainless Steel

Setscrew Type **Clamp Type** **Keyway Type**

Material	Attachment		
	Setscrew Type	Clamp Type	Keyway Type
Aluminum Alloy	MST -✻✻	MST -✻✻C	MST -✻✻K
Stainless Steel	MSTS-✻✻	MSTS-✻✻C	MSTS-✻✻K



Dimensions

unit:mm

Catalog Number		A	L	W	F	M	Wrench Torque (N·m)
MST - 8		8	3.5	14	1.7	M2	0.3
MST -12		12	5	18.5	2.5	M2.5	0.5
MST -16		16	6.5	23	3	M3	0.7
MST -20		20	7.5	26	3	M3	0.7
MST -25		25	8.5	31	4	M4	1.7
MST -32		32	12	41	6	M4	1.7
MST -40		40	17	56	8.5	M5	4
MST -50		50	21	71	10.5	M6	7
MST -63		63	26	90	13	M8	15
MSTS- 8		8	3.5	14	1.7	M2	0.3
MSTS-12		12	5	18.5	2.5	M2.5	0.5
MSTS-16		16	6.5	23	3	M3	0.7
MSTS-20		20	7.5	26	3	M3	0.7
MSTS-25		25	8.5	31	4	M4	1.7
MSTS-32		32	12	41	6	M4	1.7
MSTS-40		40	17	56	8.5	M5	4
MSTS-50		50	21	71	10.5	M6	7
MSTS-63		63	26	90	13	M8	15

Catalog Number	Stock Bores D1×D2 (Tolerance H8)							
MST - 8	2 × 2	2 × 3	3 × 3					
MSTS- 8								
MST -12	3 × 3	3 × 4	4 × 4	4 × 5	4.5 × 5	5 × 5	5 × 6	
MSTS-12								
MST -16	4 × 4	4 × 5	4 × 6	4.5 × 5	4.5 × 6	5 × 5	5 × 6	5 × 7
MSTS-16	5 × 8	6 × 6	6 × 6.35	6 × 7	6 × 8	6.35× 8		
MST -20	5 × 5	5 × 6	5 × 7	6 × 6	6 × 6.35	6 × 7	6 × 8	6 ×10
MSTS-20	6.35× 8	8 × 8	8 × 9.525	8 ×10	9.525×10	10 ×10		
MST -25	5 × 6	6 × 6	6 × 6.35	6 × 8	6 ×10	6.35× 8	6.35 ×10	8 × 8
MSTS-25	8 × 9.525	8 ×10	8 ×12	9.525×10	10 ×10	10 ×11	10 ×12	12 ×12
MST -32	6 × 8	6.35 × 8	8 × 8	8 × 9.525	8 ×10	8 ×12	9.525×10	9.525×12
MSTS-32	10 ×10	10 ×11	10 ×12	10 ×14	12 ×12	12 ×14	14 ×14	14 ×16
MST -40	8 × 9.525	9.525×10	9.525×12	10 ×10	12 ×12	14 ×14	14 ×16	14 ×18
MSTS-40	15 ×15	16 ×16	16 ×18	18 ×18				
MST -50	12 ×12	12 ×14	14 ×14	14 ×16	15 ×15	16 ×16	16 ×18	18 ×18
MSTS-50								
MST -63	14 ×14	15 ×15	16 ×16	18 ×18				
MSTS-63								

- All products come with setscrews.
- Hubs with shaft bore diameters of $\phi 4$ or less have one setscrew.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MST - 8	4	0.1	0.2	48000	1.2×10^{-8}	25	0.10	2	±0.2	1.4
MST -12	6	0.2	0.4	32000	8.3×10^{-8}	35	0.10	2	±0.3	3.7
MST -16	8	0.3	0.6	24000	3.3×10^{-7}	47	0.10	2	±0.4	8.1
MST -20	10	0.5	1	19000	9.0×10^{-7}	120	0.10	2	±0.4	14
MST -25	12	1	2	15000	2.6×10^{-6}	170	0.15	2	±0.5	27
MST -32	16	2	4	12000	9.6×10^{-6}	280	0.15	2	±0.5	60
MST -40	20	5	10	9600	3.2×10^{-5}	350	0.20	2	±0.5	130
MST -50	25	10	20	7700	1.0×10^{-4}	590	0.20	2	±0.5	260
MST -63	35	20	40	6100	3.2×10^{-4}	850	0.20	2	±0.5	490
MSTS- 8	4	0.2	0.4	48000	3.1×10^{-8}	50	0.10	2	±0.2	3
MSTS-12	6	0.3	0.6	32000	2.1×10^{-7}	64	0.10	2	±0.3	9.3
MSTS-16	8	0.5	1	24000	8.4×10^{-7}	85	0.10	2	±0.3	21
MSTS-20	10	1	2	19000	2.4×10^{-6}	250	0.10	2	±0.3	38
MSTS-25	12	2	4	15000	6.8×10^{-6}	330	0.15	2	±0.4	71
MSTS-32	16	3.5	7	12000	2.6×10^{-5}	850	0.15	2	±0.5	160
MSTS-40	20	8	16	9600	8.7×10^{-5}	1000	0.20	2	±0.5	350
MSTS-50	25	15	30	7700	2.7×10^{-4}	1400	0.20	2	±0.5	700
MSTS-63	35	35	70	6100	8.4×10^{-4}	1800	0.20	2	±0.5	1300

* Moment of inertia and mass figures based on the maximum shaft bores.

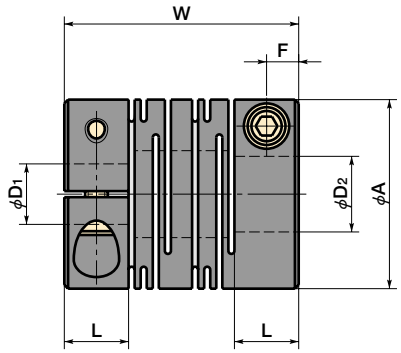
When Ordering

● Specify product No. and both bore diameters.

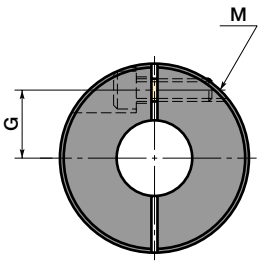
MST-25-ϕ8×ϕ10

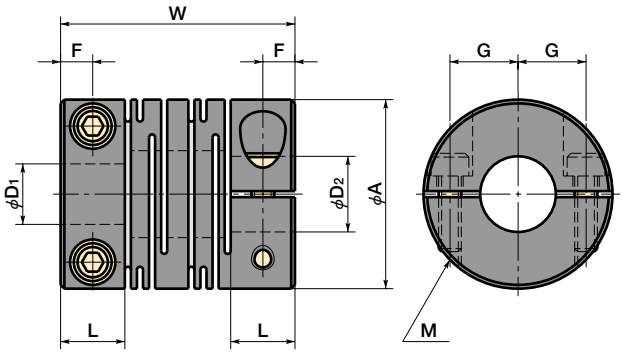
Product No. D_1 D_2

MST-C MSTS-C Clamp Type



Outside Dia. ϕ12~ϕ32





Outside Dia. ϕ40~ϕ63

Dimensions

unit:mm

Catalog Number		A	L	W	F	G	M	Wrench Torque (N·m)
MST -12C		12	5	18.5	2.5	4	M2	0.5
MST -16C		16	6.5	23	3.25	5	M2.5	1
MST -20C		20	7.5	26	3.75	6.5	M2.5	1
MST -25C		25	8.5	31	4.25	9	M3	1.5
MST -32C		32	12	41	6	11	M4	2.5
MST -40C		40	17	56	8.5	14	M5	4
MST -50C		50	21	71	10.5	18	M6	8
MST -63C		63	26	90	13	24	M8	16
MSTS-12C		12	5	18.5	2.5	4	M2	0.5
MSTS-16C		16	6.5	23	3.25	5	M2.5	1
MSTS-20C		20	7.5	26	3.75	6.5	M2.5	1
MSTS-25C		25	8.5	31	4.25	9	M3	1.5
MSTS-32C		32	12	41	6	11	M4	2.5
MSTS-40C		40	17	56	8.5	14	M5	4
MSTS-50C		50	21	71	10.5	18	M6	8
MSTS-63C		63	26	90	13	24	M8	16

Catalog Number	Stock Bores D1×D2							
MST -12C	4 × 4	4 × 5	4.5 × 5	5× 5				
MSTS-12C								
MST -16C	4.5 × 5	4.5× 6	5 × 5	5× 6	6 × 6			
MSTS-16C								
MST -20C	5 × 6	5 × 6.35	5 × 7	5× 8	6 × 6	6 × 6.35	6 × 7	6× 8
MSTS-20C	6.35× 8	8 × 8						
MST -25C	5 × 6	6 × 6	6 × 6.35	6× 8	6 ×10	6.35 × 8	6.35×10	8× 8
MSTS-25C	8 × 9.525	8 ×10	9.525×10	10×10				
MST -32C	8 × 8	8 × 9.525	8 ×10	8×12	9.525×10	9.525×12	10 ×10	10×11
MSTS-32C	10 ×12	10 ×14	12 ×12	12×14				
MST -40C	8 × 8	12 ×12	12 ×14	14×14	14 ×16	15 ×15	16 ×16	
MSTS-40C								
MST -50C	12 ×14	14 ×14	14 ×16	15×15	16 ×16	18 ×18		
MSTS-50C								
MST -63C	14 ×14	15 ×15	16 ×16	18×18				
MSTS-63C								

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MST -12C	5	0.2	0.4	12000	7.8×10^{-8}	35	0.10	2	±0.3	3.6
MST -16C	6	0.3	0.6	9500	3.4×10^{-7}	47	0.10	2	±0.4	9.2
MST -20C	8	0.5	1	7600	9.1×10^{-7}	120	0.10	2	±0.4	16
MST -25C	10	1	2	6100	2.6×10^{-6}	170	0.15	2	±0.5	28
MST -32C	14	2	4	4800	9.7×10^{-6}	280	0.15	2	±0.5	64
MST -40C	18	5	10	3800	3.3×10^{-5}	350	0.20	2	±0.5	140
MST -50C	22	10	20	3100	1.0×10^{-4}	590	0.20	2	±0.5	270
MST -63C	30	20	40	2400	3.2×10^{-4}	850	0.20	2	±0.5	530
MSTS-12C	5	0.3	0.6	12000	2.2×10^{-7}	64	0.10	2	±0.2	10
MSTS-16C	6	0.5	1	9500	9.0×10^{-7}	85	0.10	2	±0.3	25
MSTS-20C	8	1	2	7600	2.5×10^{-6}	250	0.10	2	±0.3	43
MSTS-25C	10	2	4	6100	7.1×10^{-6}	330	0.15	2	±0.4	78
MSTS-32C	14	3.5	7	4800	2.7×10^{-5}	850	0.15	2	±0.5	170
MSTS-40C	18	8	16	3800	9.0×10^{-5}	1000	0.20	2	±0.5	370
MSTS-50C	22	15	30	3100	2.8×10^{-4}	1400	0.20	2	±0.5	750
MSTS-63C	30	35	70	2400	8.8×10^{-4}	1800	0.20	2	±0.5	1400

* Moment of inertia and mass figures based on the maximum shaft bores.

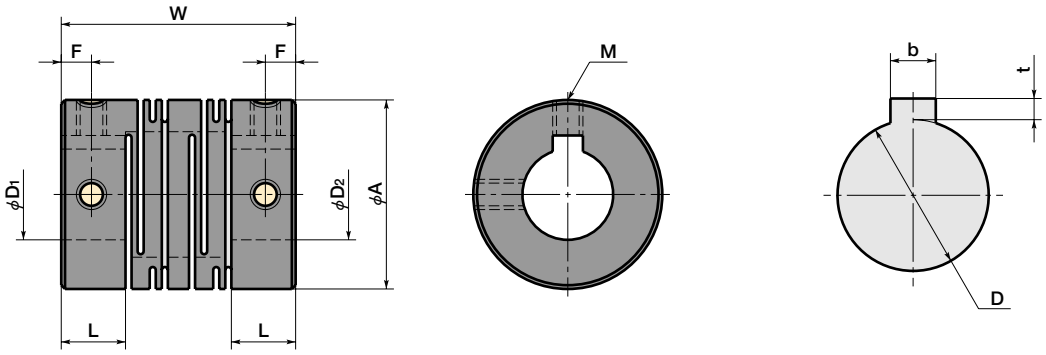
When Ordering

● Specify product No. and both bore diameters.

MST-25C-ϕ8×ϕ9.525

Product No. D_1 D_2

MST-K MSTS-K Keyway Type



Dimensions

unit:mm

Catalog Number		A	L	W	F	M	Wrench Torque (N·m)	Stock Bores D1×D2 (Tolerance H8)		
MST -32K		32	12	41	6	M4	1.7	12×12	14×14	
MST -40K		40	17	56	8.5	M5	4	14×14	16×16	18×18
MST -50K		50	21	71	10.5	M6	7	16×16	18×18	20×20
MST -63K		63	26	90	13	M8	15	20×20	25×25	30×30
MSTS-32K		32	12	41	6	M4	1.7	12×12	14×14	
MSTS-40K		40	17	56	8.5	M5	4	14×14	16×16	18×18
MSTS-50K		50	21	71	10.5	M6	7	16×16	18×18	20×20
MSTS-63K		63	26	90	13	M8	15	20×20	25×25	30×30

- All products come with setscrews.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MST -32K	14	2	4	4800	9.6×10^{-6}	280	0.15	2	±0.5	59
MST -40K	18	5	10	3800	3.2×10^{-5}	350	0.20	2	±0.5	130
MST -50K	20	10	20	3100	1.0×10^{-4}	590	0.20	2	±0.5	270
MST -63K	30	20	40	2400	3.2×10^{-4}	850	0.20	2	±0.5	490
MSTS-32K	14	3.5	7	4800	2.6×10^{-5}	850	0.15	2	±0.5	160
MSTS-40K	18	8	16	3800	8.6×10^{-5}	1000	0.20	2	±0.5	340
MSTS-50K	20	15	30	3100	2.8×10^{-4}	1400	0.20	2	±0.5	730
MSTS-63K	30	35	70	2400	8.5×10^{-4}	1800	0.20	2	±0.5	1300

* Moment of inertia and mass figures based on the maximum shaft bores.

Stock Bores D	Keyways b Basic Size	Keyways b Tolerance (JS9)	Keyways t Basic Size	Keyways t Tolerance	Keys b×h
12	4	±0.0150	1.8	+0.1 0	4×4
14 16	5	±0.0150	2.3	+0.1 0	5×5
18 20	6	±0.0150	2.8	+0.1 0	6×6
25 30	8	±0.0180	3.3	+0.2 0	8×7

When Ordering

- Specify product No. and both bore diameters.

MST-32K-φ12×φ12

Product No. D1 D2

MWS

Miniature Slit Type Flexible Coupling

For Stepping Motor

Compact

Features

- One-piece metallic spring coupling
- Zero backlash
- Absorption of angular misalignment and shaft end-play by spring action
- Parallel misalignment is not absorbed
- High torsional stiffness and response
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free and excellent resistance to oil and chemicals
- Available in aluminum alloy and stainless steel
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material

MWS

MWS-C

Body: Aluminum Alloy, Anodic Oxide Coating

MWSS

MWSS-C

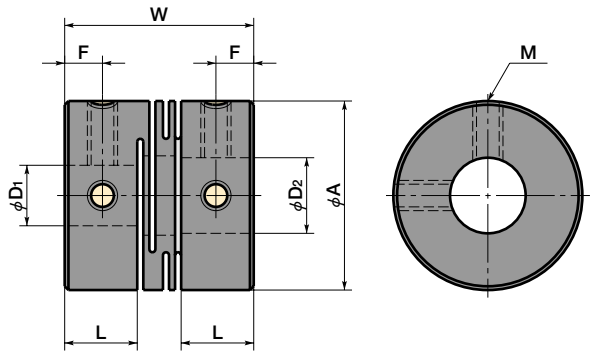
Body: Stainless Steel

Setscrew Type

Clamp Type

Material	Attachment	
	Setscrew Type	Clamp Type
Aluminum Alloy	MWS -✻✻	MWS -✻✻C
Stainless Steel	MWSS-✻✻	MWSS-✻✻C

MWS MWSS Setscrew Type



Dimensions

unit : mm

Catalog Number		A	L	W	F	M	Wrench Torque (N·m)	Stock Bores D1×D2 (Tolerance H8)						
MWS - 8		8	3.4	10	1.7	M2	0.3	2 ×2	3 × 3					
MWS -12		12	5.2	14	2.5	M2.5	0.5	4 ×4	4 × 5	4.5× 5	5× 5			
MWS -16		16	6.8	18	3	M3	0.7	4.5×5	4.5× 6	5 × 5	5× 6	6× 6		
MWS -20		20	7.65	20	3	M3	0.7	5 ×6	5 × 7	5 × 8	6× 6	6× 7	6× 8	8× 8
MWS -25		25	9.6	25	4	M4	1.7	5 ×6	6 × 6	6 × 8	6×10	8× 8	8×10	10×10
MWS -32		32	12.6	32	6	M4	1.7	8 ×8	8 ×10	10 ×10	10×12	12×12	12×14	
MWSS- 8		8	3.4	10	1.7	M2	0.3	2 ×2	3 × 3					
MWSS-12		12	5.2	14	2.5	M2.5	0.5	4 ×4	4 × 5	4.5× 5	5× 5			
MWSS-16		16	6.8	18	3	M3	0.7	4.5×5	4.5× 6	5 × 5	5× 6	6× 6		
MWSS-20		20	7.65	20	3	M3	0.7	5 ×6	5 × 7	5 × 8	6× 6	6× 7	6× 8	8× 8
MWSS-25		25	9.6	25	4	M4	1.7	5 ×6	6 × 6	6 × 8	6×10	8× 8	8×10	10×10
MWSS-32		32	12.6	32	6	M4	1.7	8 ×8	8 ×10	10 ×10	10×12	12×12	12×14	

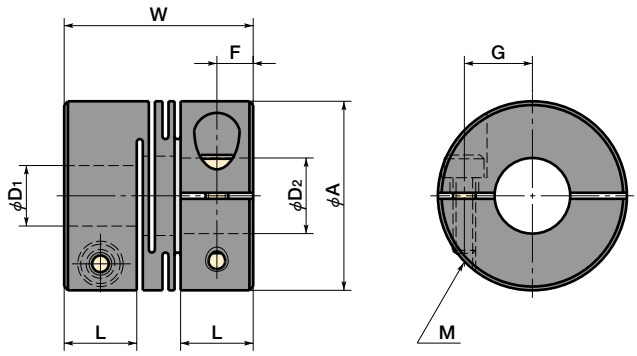
- All products come with setscrews.
- Hubs with shaft bore diameters of ϕ4 or less have one setscrew.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MWS - 8	4	0.1	0.2	48000	1.0×10^{-8}	24	1	±0.1	1
MWS -12	6	0.2	0.4	32000	7.0×10^{-8}	60	1	±0.1	3.1
MWS -16	8	0.3	0.6	24000	2.8×10^{-7}	110	1	±0.2	7.4
MWS -20	10	0.5	1	19000	7.5×10^{-7}	130	1	±0.2	12
MWS -25	12	1	2	15000	2.3×10^{-6}	350	1	±0.2	24
MWS -32	16	2	4	12000	8.0×10^{-6}	650	1	±0.2	50
MWSS- 8	4	0.2	0.4	48000	2.4×10^{-8}	49	1	±0.1	2.7
MWSS-12	6	0.3	0.6	32000	1.8×10^{-7}	140	1	±0.1	7.8
MWSS-16	8	0.5	1	24000	7.2×10^{-7}	240	1	±0.1	18
MWSS-20	10	1	2	19000	2.0×10^{-6}	330	1	±0.1	32
MWSS-25	12	2	4	15000	6.1×10^{-6}	720	1	±0.2	63
MWSS-32	16	3.5	7	12000	2.1×10^{-5}	1300	1	±0.2	130

* Moment of inertia and mass figures based on the maximum shaft bores.

MWS-C MWSS-C Clamp Type



Dimensions

unit : mm

Catalog Number		A	L	W	F	G	M	Wrench Torque (N·m)	Stock Bores D1×D2						
MWS -12C		12	5.2	14	2.6	4	M2	0.5	4 ×4	4 × 5	4.5× 5	5× 5			
MWS -16C		16	6.8	18	3.4	5	M2.5	1	4.5×5	4.5× 6	5 × 5	5× 6	6× 6		
MWS -20C		20	7.65	20	3.8	6.5	M2.5	1.5	5 ×6	5 × 7	5 × 8	6× 6	6× 7	6× 8	8× 8
MWS -25C		25	9.6	25	4.8	9	M3	1.5	5 ×6	6 × 6	6 × 8	6×10	8× 8	8×10	10×10
MWS -32C		32	12.6	32	6.3	11	M4	2.5	8 ×8	8 ×10	10 ×10	10×12	12×12	12×14	
MWSS-12C		12	5.2	14	2.6	4	M2	0.5	4 ×4	4 × 5	4.5× 5	5× 5			
MWSS-16C		16	6.8	18	3.4	5	M2.5	1	4.5×5	4.5× 6	5 × 5	5× 6	6× 6		
MWSS-20C		20	7.65	20	3.8	6.5	M2.5	1.5	5 ×6	5 × 7	5 × 8	6× 6	6× 7	6× 8	8× 8
MWSS-25C		25	9.6	25	4.8	9	M3	1.5	5 ×6	6 × 6	6 × 8	6×10	8× 8	8×10	10×10
MWSS-32C		32	12.6	32	6.3	11	M4	2.5	8 ×8	8 ×10	10 ×10	10×12	12×12	12×14	

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MWS -12C	5	0.2	0.4	12000	6.4×10^{-8}	60	1	±0.1	3
MWS -16C	6	0.3	0.6	9500	2.9×10^{-7}	110	1	±0.2	8
MWS -20C	8	0.5	1	7600	7.5×10^{-7}	130	1	±0.2	13
MWS -25C	10	1	2	6100	2.3×10^{-6}	350	1	±0.2	25
MWS -32C	14	2	4	4800	8.1×10^{-6}	650	1	±0.2	53
MWSS-12C	5	0.3	0.6	12000	1.8×10^{-7}	140	1	±0.1	8.5
MWSS-16C	6	0.5	1	9500	7.8×10^{-7}	240	1	±0.1	21
MWSS-20C	8	1	2	7600	2.1×10^{-6}	330	1	±0.1	36
MWSS-25C	10	2	4	6100	6.3×10^{-6}	720	1	±0.2	69
MWSS-32C	14	3.5	7	4800	2.2×10^{-5}	1300	1	±0.2	150

* Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

- Specify product No. and both bore diameters.

MWS-20C-φ5×φ6

Product No. D1 D2

MDW

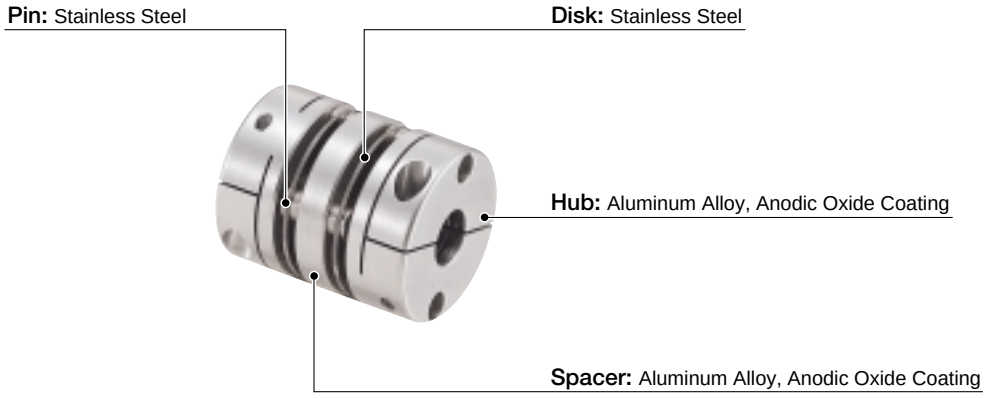
Miniature Double Disk Flexible Coupling

For Servomotor

Features

- Disk type flexible coupling
- High torque capacity, torsional stiffness and excellent response
- Zero backlash
- Double stainless steel disks absorb parallel, angular misalignments and shaft end-play
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free and excellent resistance to oil and chemicals
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material

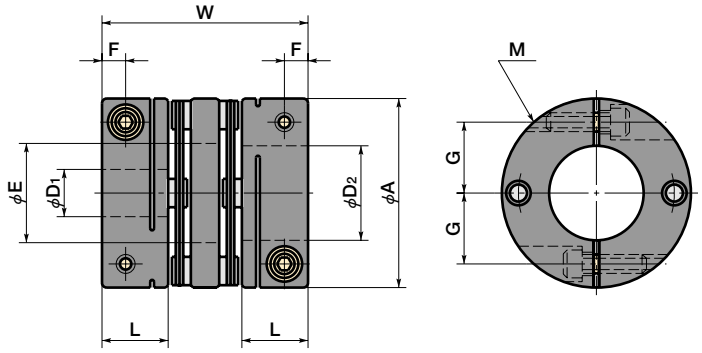


When Ordering

- Specify product No. and both bore diameters.

MDW-25C-ϕ6×ϕ8

Product No. D_1 D_2



Dimensions

unit : mm

Catalog Number		A	L	W	E	F	G	M	Wrench Torque (N·m)
MDW-19C		19	8	27	8.5	2.5	6.5	M2	0.5
MDW-25C		25	10	31	12.5	3.5	9	M2.5	1
MDW-32C		32	12	40	16	4	11	M3	1.5
MDW-40C		40	14	44	21	5	15	M4	2.5
MDW-50C		50	18	57	26	6	18	M5	7
MDW-63C		63	20	61	35	7	24	M6	12

Catalog Number	Stock Bores D1·D2																						
	5	6	6.35	7	8	9	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30
MDW-19C	●	●	●	●	●																	
MDW-25C		●	●	●	●	●	●	●	●	●												
MDW-32C					●	●	●	●	●	●	●	●										
MDW-40C										●	●	●	●	●	●	●	●					
MDW-50C											●	●	●	●	●	●	●	●	●	●		
MDW-63C												●	●	●	●	●	●	●	●	●	●	

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MDW-19C	8	0.7	1.5	10000	8.7×10^{-7}	200	0.12	1.5	±0.5	18
MDW-25C	12	1	2	8000	2.7×10^{-6}	450	0.12	1.5	±0.5	25
MDW-32C	15	2.5	5	6000	9.6×10^{-6}	1100	0.15	1.5	±0.5	60
MDW-40C	20	3.5	7	5000	1.9×10^{-5}	1400	0.15	1.5	±0.5	100
MDW-50C	25	9	18	4000	8.1×10^{-5}	2200	0.15	1.5	±0.5	210
MDW-63C	30	12.5	25	3000	2.1×10^{-4}	3000	0.15	1.5	±0.5	340

* Moment of inertia and mass figures based on the maximum shaft bores.

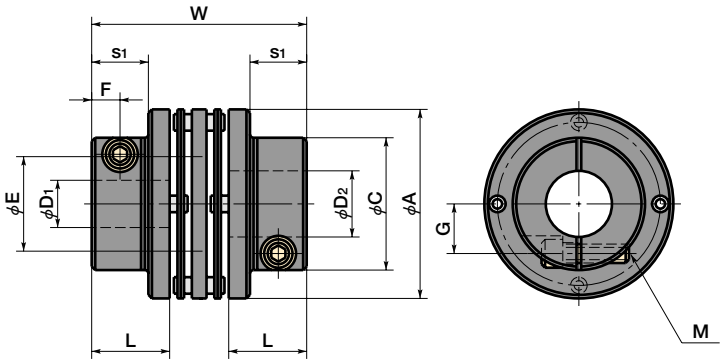
MHW

Miniature Double Disk Flexible Coupling

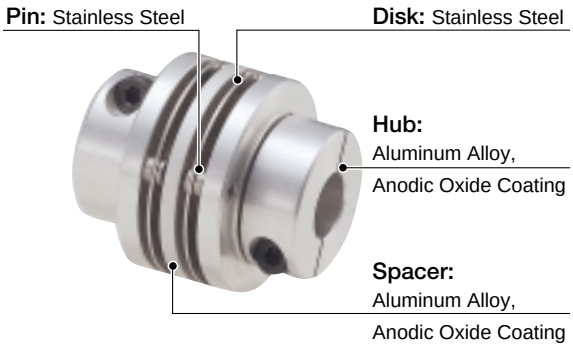
Industrie Forum Design Hannover — Award for good industrial design 1993

Features

- Disk type flexible coupling
- High torque capacity, torsional stiffness and excellent response
- Zero backlash
- Stainless steel disks absorb parallel, angular misalignments and shaft end-play
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free and excellent resistance to oil and chemicals
- Finished bore product-Models featuring two different end bores also in stock



Configuration & Material



When Ordering

- Specify product No. and both bore diameters.

MHW-32C-φ8×φ10

Product No. D1 D2

Dimensions

unit: mm

Catalog Number		A	L	W	C	S1	E	F	G	M	Wrench Torque (N·m)	Stock Bores D1·D2											
												6	7	8	10	11	12	14	15	16	18	19	20	25
MHW-32C		32	13.7	40	22	9	15	4	8	M3	1.5	●	●	●	●									
MHW-40C		40	16.5	46	28	12	20	6	10.5	M4	2.5		●	●	●	●	●	●						
MHW-50C		50	19.4	52	39	15	25	7	14.75	M5	7						●	●	●	●	●	●	●	
MHW-63C		63	22.3	58	45	18	32	8	17	M6	12								●	●	●	●	●	●

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MHW-32C	10	2	4	4800	6.2×10^{-6}	1000	0.15	2	±0.4	48
MHW-40C	14	4	8	3800	1.6×10^{-5}	1500	0.20	2	±0.5	81
MHW-50C	20	7.5	15	3100	4.6×10^{-5}	2000	0.20	2	±0.6	150
MHW-63C	25	10	20	2400	1.1×10^{-4}	2500	0.30	2	±0.8	230

* Moment of inertia and mass figures based on the maximum shaft bores.

MHS

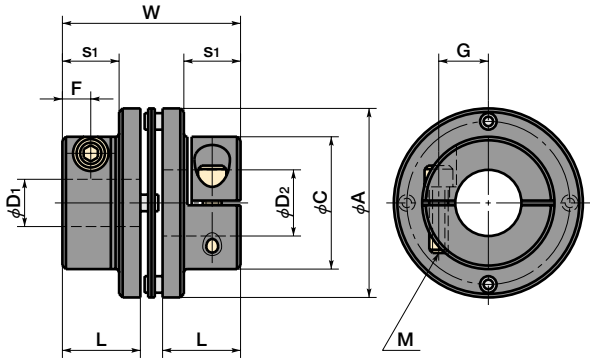
Miniature Single Disk Flexible Coupling

Industrie Forum Design Hannover — Award for good industrial design 1993

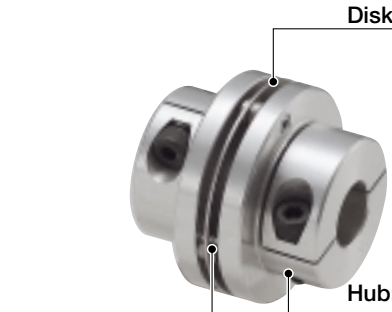
Compact

Features

- Disk type flexible coupling
- High torque capacity, torsional stiffness and excellent response
- Zero backlash
- Stainless steel disks absorb angular misalignments and shaft end-play
- Parallel misalignment is not absorbed
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free and excellent resistance to oil and chemicals
- Finished bore product-Models featuring two different end bores also in stock



Configuration & Material



When Ordering

- Specify product No. and both bore diameters.

MHS-32C-ϕ8×ϕ10

Product No. — D1 — D2

Dimensions

unit: mm

Catalog Number		A	L	W	C	s1	F	G	M	Wrench Torque (N·m)	Stock Bores D1·D2											
											6	7	8	10	11	12	14	15	16	18	19	20	25
MHS-32C		32	13.7	32	22	9	4	8	M3	1.5	●	●	●	●									
MHS-40C		40	16.5	38	28	12	6	10.5	M4	2.5		●	●	●	●	●	●						
MHS-50C		50	19.4	44	39	15	7	14.75	M5	7						●	●	●	●	●	●	●	
MHS-63C		63	22.3	50	45	18	8	17	M6	12								●	●	●	●	●	●

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MHS-32C	10	2	4	4800	4.5×10^{-6}	1300	1	±0.2	38
MHS-40C	14	4	8	3800	1.2×10^{-5}	2800	1	±0.2	66
MHS-50C	20	7.5	15	3100	3.7×10^{-5}	3700	1	±0.2	120
MHS-63C	25	10	20	2400	8.4×10^{-5}	5000	1	±0.2	190

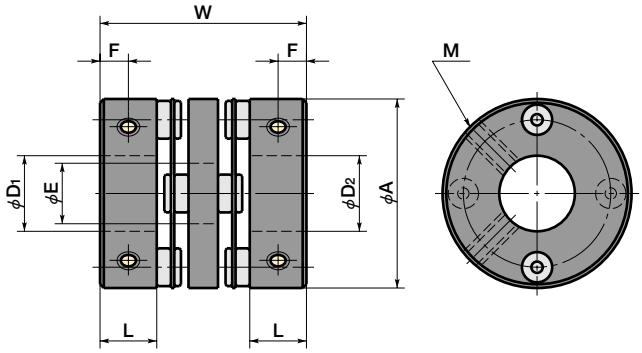
* Moment of inertia and mass figures based on the maximum shaft bores.

MTD

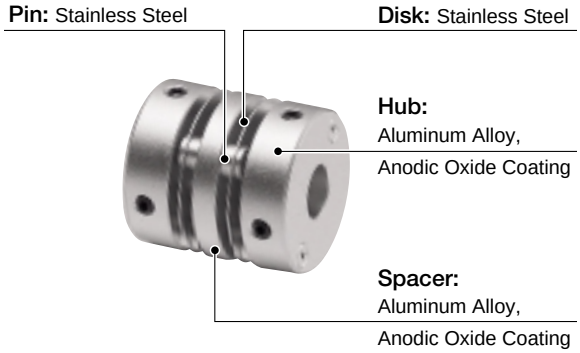
Miniature Double Disk Flexible Coupling

Features

- Disk type flexible coupling
- High torsional stiffness, light weight and excellent response
- Zero backlash
- Identical clockwise and anticlockwise rotational characteristics
- Stainless steel disks absorb parallel, angular misalignments and shaft end-play
- Finished bore product-Models featuring two different end bores also in stock



Configuration & Material



When Ordering

- Specify product No. and both bore diameters.

MTD-25-ϕ8×ϕ10

Product No. D1 D2

Dimensions

unit: mm

Catalog Number		A	L	W	E	F	M	Wrench Torque (N·m)	Stock Bores D1·D2 (Tolerance H8)										
									3	4	5	6	6.35	8	9.525	10	11	12	14
MTD-20		20	7.5	27.3	6	3.7	M3	0.7	●	●	●	●	●	●					
MTD-25		25	7.5	27.4	10	3.7	M3	0.7				●	●	●	●	●	●	●	
MTD-32		32	7.5	27.5	15	3.7	M4	1.7						●	●	●	●	●	●

- All products come with setscrews.
- Hubs with shaft bore diameters of ϕ4 or less have one setscrew.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MTD-20	8	0.5	1	19000	1.2×10^{-6}	120	0.10	1	±0.4	21
MTD-25	12	1	2	15000	2.6×10^{-6}	210	0.15	1.5	±0.5	27
MTD-32	14	2	4	12000	6.7×10^{-6}	230	0.15	2	±0.6	43

* Moment of inertia and mass figures based on the maximum shaft bores.

MFB

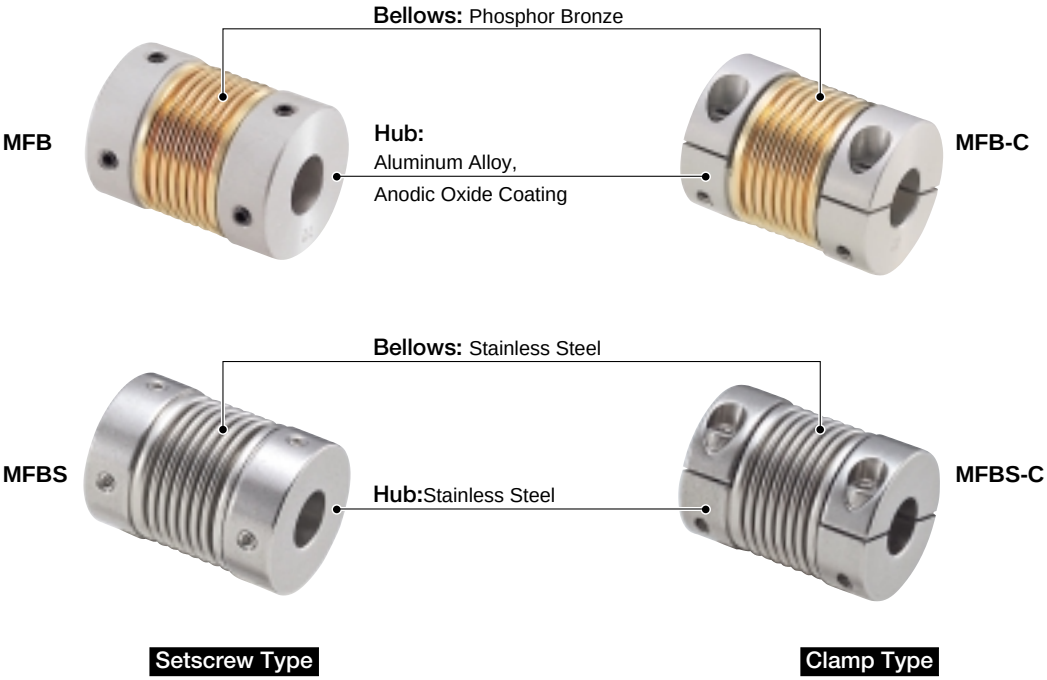
Miniature Bellows Flexible Coupling

For Encoder

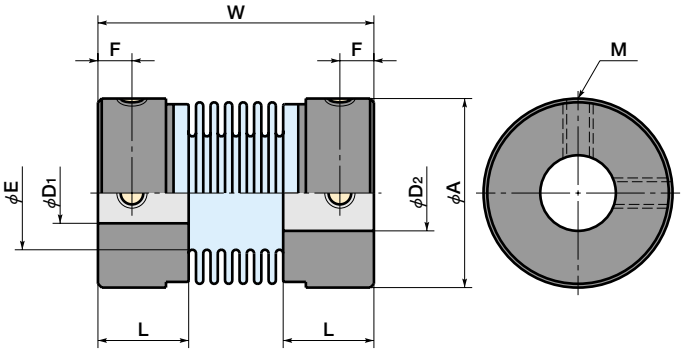
Features

- Bellows type flexible coupling
- Zero backlash
- High torsional stiffness and response
- Spring action bellows configuration absorbs parallel, angular misalignments and shaft end-play
- Constant velocity even under misalignment
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free and excellent resistance to oil and chemicals
- Bellows available in stainless steel or phosphor bronze (hub : aluminum alloy)
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material



Material		Attachment	
Hub	Bellows	Setscrew Type	Clamp Type
Aluminum Alloy	Phosphor Bronze	MFB -✻✻	MFB -✻✻C
Stainless Steel	Stainless Steel	MFBS-✻✻	MFBS-✻✻C



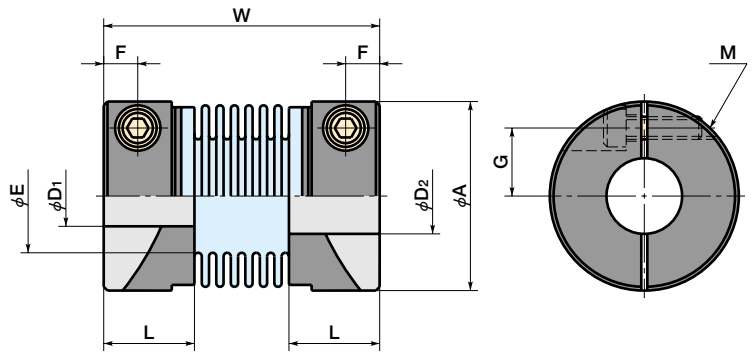
Dimensions

unit : mm

Catalog Number		A	L	W	E	F	G	M	Wrench Torque (N·m)	Stock Bores D1·D2										
										3	4	4.5	5	6	6.35	8	9.525	10	12	14
MFB -12		12	7.5	23.5	7	2.5	—	M2.5	0.5	●	●	●	●	●	●					
MFB -16		16	9	26.5	9.5	3	—	M3	0.7		●	●	●	●	●	●				
MFB -20		20	10	32	12.5	3.5	—	M3	0.7				●	●	●	●	●	●		
MFB -25		25	12	36.5	15	4.5	—	M4	1.7					●	●	●	●	●	●	
MFB -32		32	13.5	42	21	5.5	—	M4	1.7					●		●	●	●	●	●
MFBS-12		12	7.5	23.5	7	2.5	—	M2.5	0.5	●	●	●	●	●	●					
MFBS-16		16	9	26.5	9.5	3	—	M3	0.7		●	●	●	●	●	●				
MFBS-20		20	10	32	12.5	3.5	—	M3	0.7				●	●	●	●	●	●		
MFBS-25		25	12	36.5	15	4.5	—	M4	1.7					●	●	●	●	●	●	
MFBS-32		32	13.5	42	21	5.5	—	M4	1.7					●		●	●	●	●	●
MFB -12C		12	7.5	23.5	7	2.25	4	M2	0.5		●	●	●							
MFB -16C		16	9	26.5	9.5	3	5	M2.5	1				●	●	●					
MFB -20C		20	10	32	12.5	3.5	6.5	M2.5	1					●	●	●				
MFB -25C		25	12	36.5	15	4.5	9	M3	1.5						●	●	●	●		
MFB -32C		32	13.5	42	21	5	11	M4	2.5							●	●	●	●	●
MFBS-12C		12	7.5	23.5	7	2.25	4	M2	0.5		●	●	●							
MFBS-16C		16	9	26.5	9.5	3	5	M2.5	1				●	●	●					
MFBS-20C		20	10	32	12.5	3.5	6.5	M2.5	1					●	●	●				
MFBS-25C		25	12	36.5	15	4.5	9	M3	1.5						●	●	●	●		
MFBS-32C		32	13.5	42	21	5	11	M4	2.5							●	●	●	●	●

- All products come with setscrews (MFB • MFBS) or cap screws (MFB-C • MFBS-C).
- Hubs with shaft bore diameters of ϕ4 or less have one setscrew.
- Tolerance on shaft bores of setscrew type coupling is H8.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

MFB-C **MFBS-C** Clamp Type



Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MFB -12	6.35	0.3	0.6	32000	9.0×10^{-8}	82	0.10	1.5	$^{+0.4}_{-1.2}$	4.1
MFB -16	8	0.5	1	24000	3.5×10^{-7}	110	0.10	1.5	$^{+0.4}_{-1.2}$	9
MFB -20	10	0.8	1.6	19000	9.9×10^{-7}	180	0.15	2	$^{+0.6}_{-1.8}$	16
MFB -25	12	1.3	2.6	15000	3.1×10^{-6}	240	0.15	2	$^{+0.6}_{-1.8}$	32
MFB -32	16	2	4	12000	9.2×10^{-6}	330	0.20	2	$^{+0.8}_{-2.5}$	57
MFBS-12	6.35	0.5	1	32000	2.1×10^{-7}	100	0.10	1.5	$^{+0.4}_{-1.2}$	9.1
MFBS-16	8	1	2	24000	8.0×10^{-7}	150	0.10	1.5	$^{+0.4}_{-1.2}$	20
MFBS-20	10	1.5	3	19000	2.3×10^{-6}	220	0.15	2	$^{+0.6}_{-1.8}$	37
MFBS-25	12	2	4	15000	7.0×10^{-6}	330	0.15	2	$^{+0.6}_{-1.8}$	73
MFBS-32	16	3	6	12000	2.1×10^{-5}	490	0.20	2	$^{+0.8}_{-2.5}$	130
MFB -12C	5	0.3	0.6	13000	9.7×10^{-8}	82	0.10	1.5	$^{+0.4}_{-1.2}$	3.8
MFB -16C	6.35	0.5	1	9500	3.7×10^{-7}	110	0.10	1.5	$^{+0.4}_{-1.2}$	9.8
MFB -20C	8	0.8	1.6	7700	1.0×10^{-6}	180	0.15	2	$^{+0.6}_{-1.8}$	16
MFB -25C	10	1.3	2.6	6100	3.1×10^{-6}	240	0.15	2	$^{+0.6}_{-1.8}$	32
MFB -32C	14	2	4	4800	9.6×10^{-6}	330	0.20	2	$^{+0.8}_{-2.5}$	58
MFBS-12C	5	0.5	1	13000	2.1×10^{-7}	100	0.10	1.5	$^{+0.4}_{-1.2}$	9.2
MFBS-16C	6.35	1	2	9500	8.1×10^{-7}	150	0.10	1.5	$^{+0.4}_{-1.2}$	22
MFBS-20C	8	1.5	3	7700	2.3×10^{-6}	220	0.15	2	$^{+0.6}_{-1.8}$	38
MFBS-25C	10	2	4	6100	6.9×10^{-6}	330	0.15	2	$^{+0.6}_{-1.8}$	74
MFBS-32C	14	3	6	4800	2.1×10^{-5}	490	0.20	2	$^{+0.8}_{-2.5}$	130

* Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

● Specify product No. and both bore diameters.

MFB-20-φ8×φ10

Product No. D1 D2

MKM

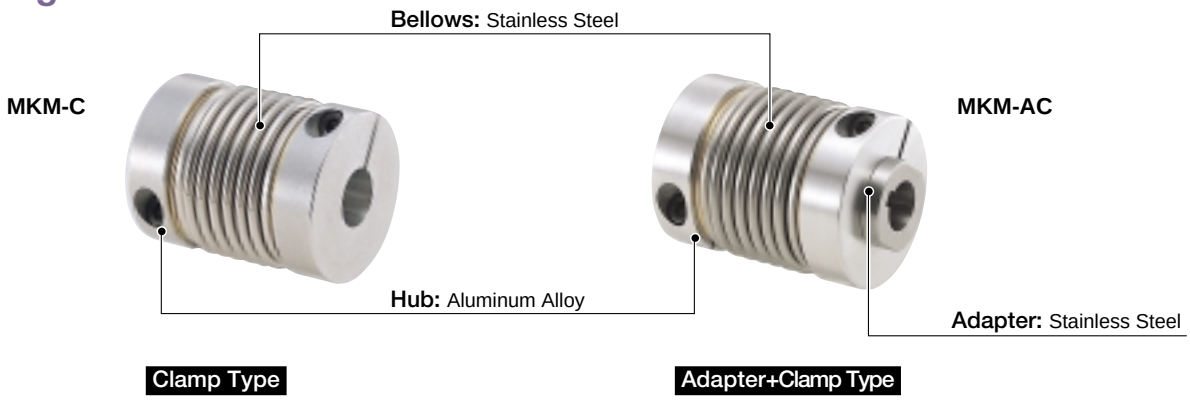
Miniature Bellows Flexible Coupling

For Servomotor

Features

- Bellows type flexible coupling for high torque applications
- Zero backlash
- High torsional stiffness, low inertia and excellent response
- Spring action bellows configuration absorbs parallel, angular misalignments and shaft end-play
- Constant velocity even under misalignment
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free and excellent resistance to oil and chemicals
- Operational temperature : –20°C~300°C
- Finished bore product-Models featuring two different end bores also in stock
- Can be applied to tapered shafts of servomotors

Configuration & Material



Bore	Attachment	
	Clamp Type	Adapter+Clamp Type
Straight Bore×Straight Bore	MKM-✻✻C	—
Taper Bore×Straight Bore	—	MKM-✻✻AC

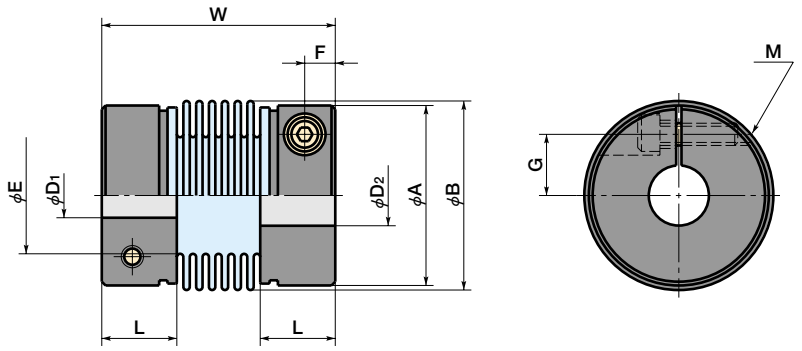
When Ordering

- Specify product No. and both bore diameters.

MKM-56C-H-ϕ20×ϕ22

Product No. D1 D2

MKM-C Clamp Type



Dimensions

unit: mm

Catalog Number		A	B	L	W	E	F	G	M	Wrench Torque (N·m)
MKM-17C-H		16.5	14.5	9	31.5	9	3.3	4.6	M 2.5	1
MKM-25C		24.5	24	13	42	16	4.5	7.5	M 3	2
MKM-25C-H		24.5	24	13	43.5	16	4.5	7.5	M 3	2
MKM-40C-H		39.5	39.5	16.5	60.5	27	6	13	M 5	7
MKM-56C		56	56	20	70	38	8	19	M 6	14
MKM-56C-H		56	56	20	70	38	7.5	19	M 6	14
MKM-63C		63	66	22	77	47	8.5	22	M 8	30
MKM-80C-H		79.5	82	26	92	60	10.5	28.5	M10	65
MKM-99C		99	101	29	100	76	12	35	M12	115

Catalog Number	Stock Bores $D_1 \times D_2$						
MKM-17C-H	3× 6	4× 6	4.5× 6	5 × 6	6× 6		
MKM-25C	6× 7	6× 8	7 × 8	8 × 8	8×10		
MKM-25C-H	8× 9	9×10					
MKM-40C-H	10×11	11×12	12 ×14	14 ×14	14×15	15×16	16×17
MKM-56C	12×16	14×16	15 ×16				
MKM-56C-H	15×24	17×19	17 ×24	19 ×20	20×22	22×25	
MKM-63C	20×24	24×25	25 ×28	28 ×30			
MKM-80C-H	30×35M	30×42	35 ×35M	35M×42			
MKM-99C	30×35M	35×35M					

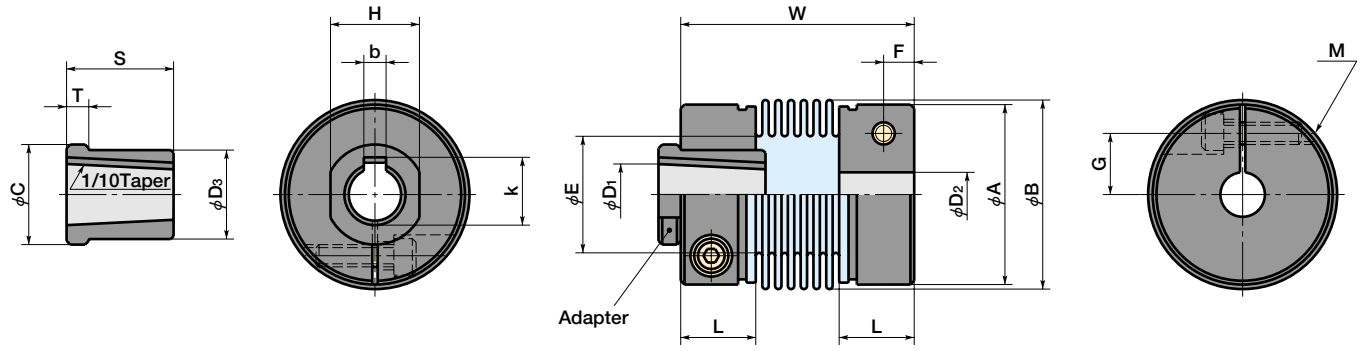
- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7, but 35M mentioned in the above table is for servomotors. Its recommended tolerance is $^{+0.010}_{0}$.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MKM-17C-H	6	0.9	1.8	20000	1.2×10^{-7}	400	0.10	2	±0.3	12
MKM-25C	10	2	4	12000	6.5×10^{-7}	900	0.10	2	±0.5	30
MKM-25C-H	10	4	8	12000	1.3×10^{-6}	1800	0.10	2	±0.4	36
MKM-40C-H	19	12	24	12000	2.9×10^{-5}	6800	0.20	2	±0.7	120
MKM-56C	30	20	40	10000	1.3×10^{-4}	18000	0.20	2	±0.8	250
MKM-56C-H	30	35	70	10000	1.4×10^{-4}	22000	0.20	2	±0.8	270
MKM-63C	34	60	120	8000	2.5×10^{-4}	33000	0.20	2	±0.9	370
MKM-80C-H	43	170	250	8000	7.2×10^{-4}	63000	0.20	2	±1.2	660
MKM-99C	54	270	400	8000	1.8×10^{-3}	111000	0.20	2	±1.2	1100

* Moment of inertia and mass figures based on the maximum shaft bores.

MKM-AC Adapter + Clamp Type



Dimensions

unit:mm

Catalog Number		A	B	L	W	E	F	G	M	D3	C	S	T	H	Wrench Torque (N·m)
MKM-56AC		56	56	20	70	38	7.5	19	M6	16	20	16	4	16	14
MKM-56AC-H		56	56	20	70	38	7.5	19	M6	24	30	29	6	27	14
MKM-63AC		63	66	22	77	47	8.5	22	M8	24	30	29	6	27	30

Catalog Number	Stock Bores D1×D2		
MKM-56AC	11T×12	11T×14	11T×15
MKM-56AC-H	16T×15	16T×17	
MKM-63AC	16T×20	16T×25	

Stock Bores	Keyways			
	b		k	
D1	Basic Size	Tolerance (JS9)	Basic Size	Tolerance
11T	4	±0.015	12.7	+0.1 0
16T	5	±0.015	18.3	+0.2 0

- All products come with adapters and cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MKM-56AC	30	20	40	10000	1.3×10^{-4}	18000	0.20	2	±0.8	250
MKM-56AC-H	30	35	70	10000	1.4×10^{-4}	22000	0.20	2	±0.8	270
MKM-63AC	34	60	120	8000	2.5×10^{-4}	33000	0.20	2	±0.9	370

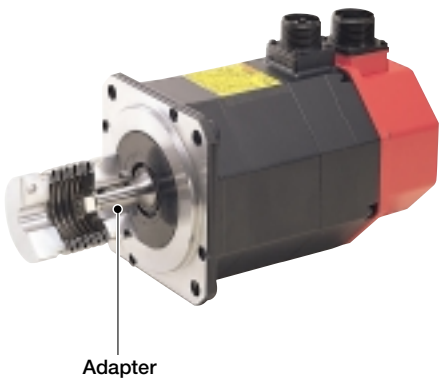
* Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

- Specify product No. and both bore diameters.

MKM-56AC-H-φ16T×φ15

Product No. D1 D2



MWBS

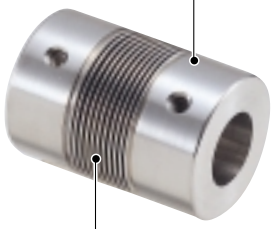
Miniature Super Bellows Flexible Coupling

For Encoder

Features

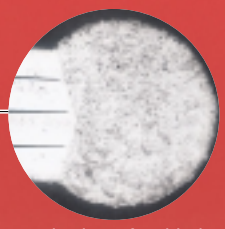
- High precision welded bellows — All stainless steel body
- Super flexibility
- Zero backlash
- Low inertia and excellent response
- Constant velocity even under misalignment
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free
- Ideal for use in systems requiring a high degree of precision and reliability, such as measurement, control, information processing, and communication equipment

Configuration & Material



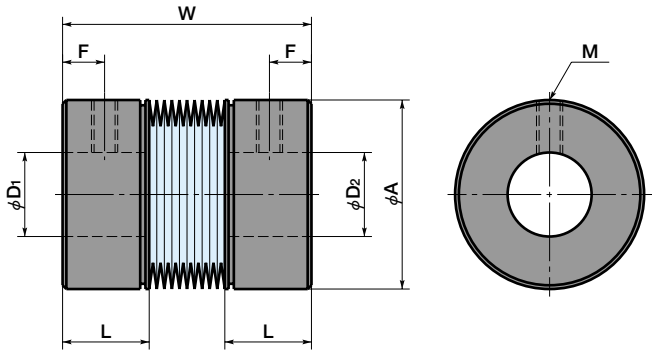
We design and manufacture complete custom-made super bellows couplings. See page 33 for more details.

Cross-sectional view of double bellows



Microscopic view of welded section

The coupling for encoder performance test systems
10^5 pulse/rotation



Dimensions

unit:mm

Catalog Number		A	L	W	F	M	Wrench Torque (N·m)	Stock Bores D1·D2 (Tolerance H8)							
								4	5	6	8	10	11	12	14
MWBS-13		13	6	16.5	3	M2	0.5	●	●	●					
MWBS-18		18	8	22	4	M2.5	1		●	●	●				
MWBS-22		22	10	27	5	M3	1.5			●	●	●			
MWBS-28		28	14	37	7	M4	2.5				●	●	●	●	●

- All sizes are non-stock items (The delivery is made in 3 weeks after receipt of order).
- All products come with setscrews.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment* of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass* (g)
MWBS-13	6	0.07	0.15	10000	2.5×10^{-7}	30	0.15	3.5	0.5	9.8
MWBS-18	8	0.15	0.3	10000	1.2×10^{-6}	40	0.15	5	0.5	25
MWBS-22	10	0.35	0.7	10000	3.4×10^{-6}	200	0.15	4	0.5	48
MWBS-28	14	0.65	1.3	10000	1.4×10^{-5}	900	0.15	4.5	0.5	110

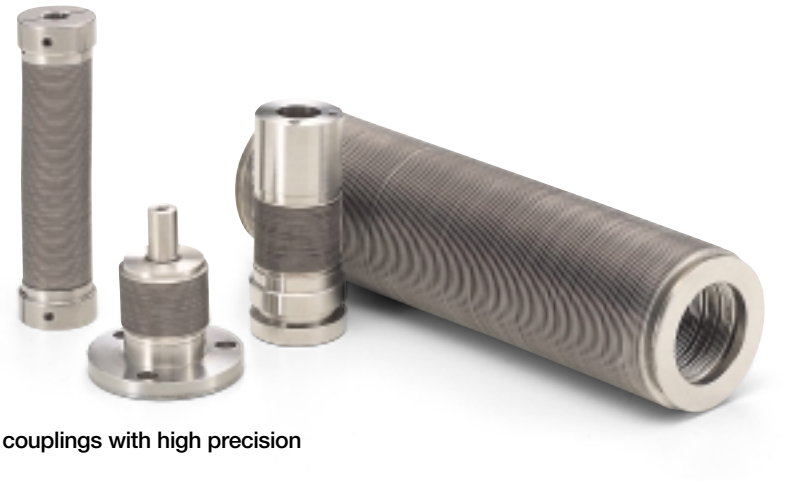
* Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

- Specify product No. and both bore diameters.

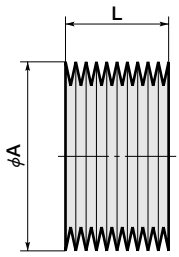
MWBS-22-φ6×φ8

Product No. D1 D2

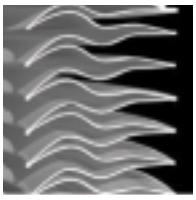


Custom-made Coupling

- We design and manufacture complete custom-made couplings with high precision welded double bellows.
- In the following table, we show some examples of performances that the super bellows couplings achieve. The performance depends on the type, the outside diameter, the number of bellows and the bellow thickness that is used.



Single Bellows



Double Bellows

Type of Bellows	A (mm)	No. of Convolution	L (mm)	Thickness of Bellows (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)
Single Bellows	13	10	4.5	0.05~0.1	0.07	0.15	0.15	3.5	±0.5
		20	9		0.07	0.15	0.30	6.5	±1
		30	13.5		0.07	0.15	0.45	10	±1.5
	18	10	6	0.05~0.1	0.15	0.3	0.15	5	±0.5
		20	12		0.15	0.3	0.30	9.5	±1
		30	18		0.15	0.3	1.45	14.5	±1.5
	22	10	7	0.06~0.1	0.35	0.7	0.20	4	±0.5
		20	14		0.35	0.7	0.40	8	±1
		30	21		0.35	0.7	0.60	12	±1.5
	28	10	9	0.1 ~0.15	0.65	1.3	0.25	6.5	±0.5
		20	18		0.65	1.3	0.50	9	±1
		30	27		0.65	1.3	0.75	14	±1.5
Double Bellows	13	10	6	0.05~0.1	0.15	0.3	0.15	3.6	±0.5
		20	12		0.15	0.3	0.30	7.2	±1
		30	18		0.15	0.3	0.45	10	±1.5
	18	10	8	0.05~0.1	0.7	1.4	0.15	5.7	±0.5
		20	16		0.7	1.4	0.30	11.5	±1
		30	24		0.7	1.4	0.45	17.2	±1.5
	22	10	8	0.06~0.1	1.25	2.5	0.20	4.7	±0.5
		20	16		1.25	2.5	0.40	9.4	±1
		30	24		1.25	2.5	0.60	14	±1.5
	28	10	11	0.1 ~0.15	1.3	2.6	0.25	3.7	±0.5
		20	22		1.3	2.6	0.50	7.4	±1
		30	33		1.3	2.6	0.75	11	±1.5

You can download the most current CAD data on Couplicon® mini couplings directly from our website. The file is available in DXF format.

* DXF is the registered trademark of Autodesk, Inc.

http://www.nbk1560.com/

e-mail : info@nbk1560.com

MOL

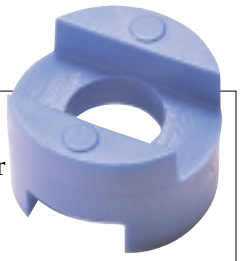
Miniature Oldham Type Flexible Coupling

Recipient of
1991 MITI
Good Design Award

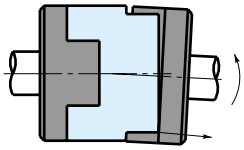
Industrie Forum Design Hannover
Award for good industrial design 1993

Features

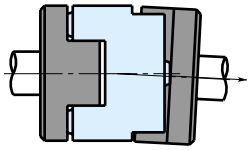
- Oldham type flexible coupling
- Slippage between hubs and spacer allows high parallel and angular misalignments
- Minimized load derived from misalignments on shafts
- High torsional stiffness and response
- Simple configuration enables ease of assembly
- Excellent resistance to oil and electrical insulation
- Operational temperature : –20°C~80°C
- Finished bore product-Models featuring two different end bores also in stock



The protruded spacer design enables high allowable angular misalignment and minimized load on shafts.



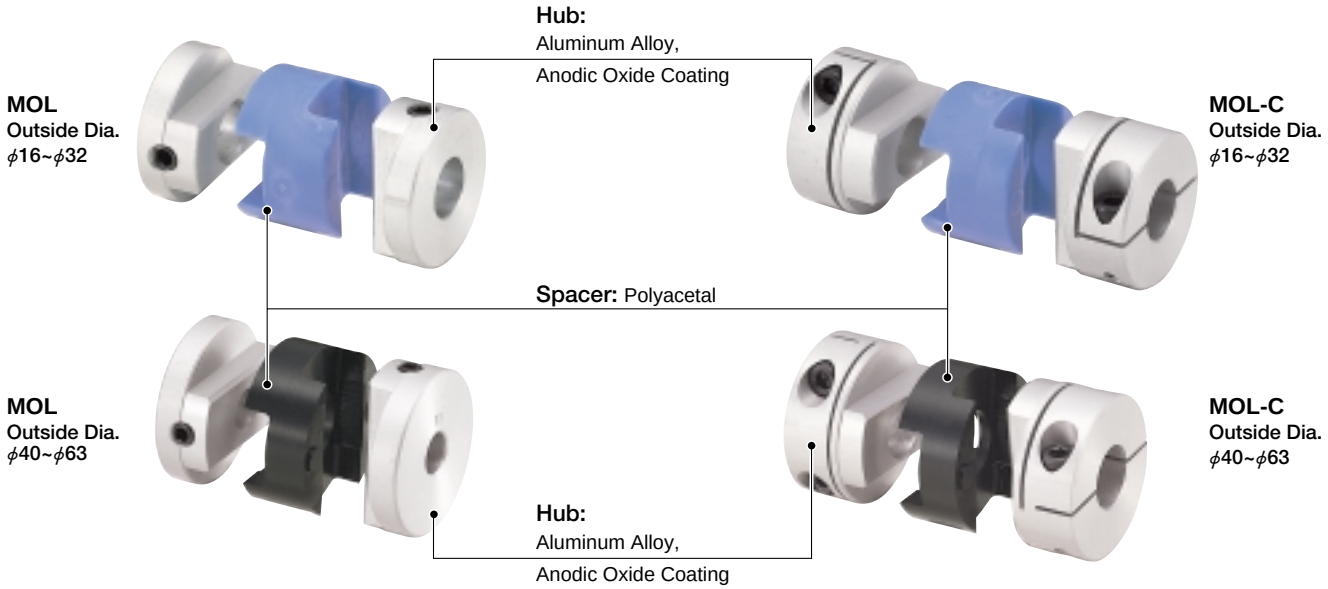
Conventional Coupling
(Without Protrusion)

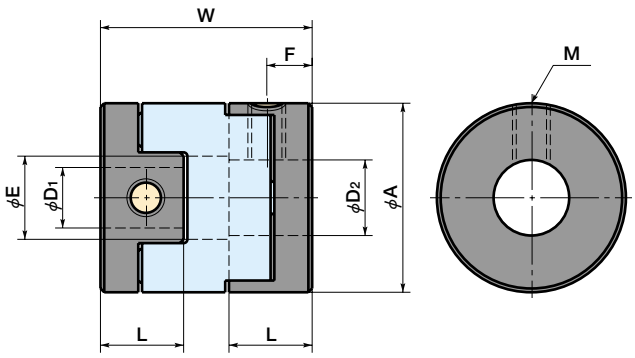


MOL
(With Protrusion)

Conventional Oldham type couplings with no protrusions feature low allowable misalignment (1°~1.5°) due to interference between the spacer and hubs at the proximity of the outside diameter. A bending moment is generated as well.
The MOL series features a high maximum angular misalignment (3°), enabled by the protrusions which act as points of support. No bending moment is generated and the shaft load is minimized.

Configuration & Material





Dimensions

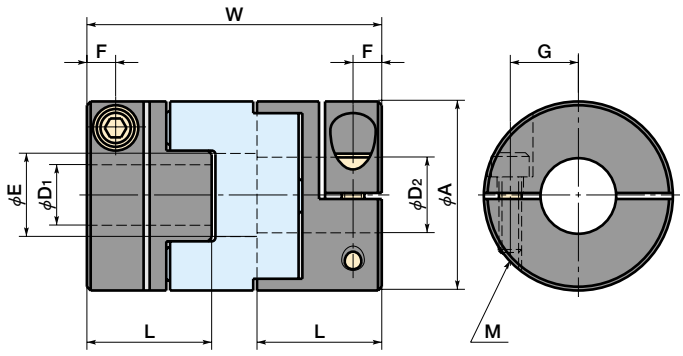
unit:mm

Catalog Number			A	L	W	E	F	G	M	Wrench Torque (N·m)
MOL-16			16	7	18	7	3.5	—	M 3	0.7
MOL-20			20	9	23	9	4.5	—	M 4	1.7
MOL-25			25	11	28	11	5.5	—	M 5	4
MOL-32			32	13	33	14.5	6.5	—	M 6	7
MOL-40			40	14	32	17	7	—	M 6	7
MOL-50			50	17	38	23	8.5	—	M 8	15
MOL-63			63	21	47	28	10.5	—	M10	30
MOL-16C			16	13	29	7	3	5	M 2.5	1
MOL-20C			20	14	33	9	3	6.5	M 2.5	1
MOL-25C			25	17	39	11	3.8	9	M 3	1.5
MOL-32C			32	19	45	14.5	4.5	11	M 4	2.5
MOL-40C			40	23	50	17	7	13	M 5	4
MOL-50C			50	27	58	23	8	16	M 6	8
MOL-63C			63	33	71	28	10	21	M 8	16

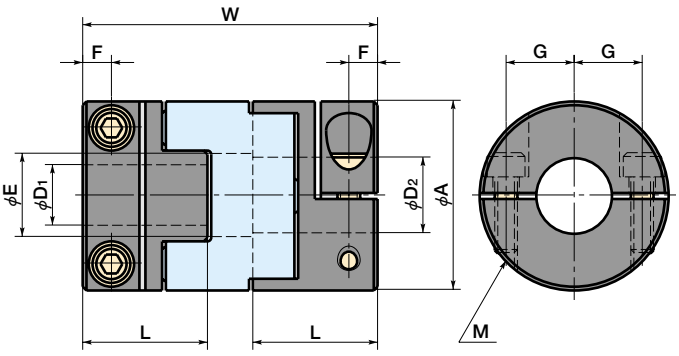
Catalog Number	Stock Bores D1·D2																	
	3	4	4.5	5	6	6.35	7	8	9.525	10	11	12	14	15	16	18	20	25
MOL-16	●	●	●	●	●	●												
MOL-20		●	●	●	●	●	●	●										
MOL-25				●	●	●	●	●	●	●								
MOL-32								●	●	●	●	●	●					
MOL-40										●	●	●	●	●	●			
MOL-50													●	●	●	●	●	
MOL-63															●	●	●	●
MOL-16C			●	●	●													
MOL-20C					●	●	●	●										
MOL-25C						●	●	●	●	●								
MOL-32C								●	●	●	●	●	●					
MOL-40C												●	●	●	●			
MOL-50C															●	●	●	
MOL-63C																●	●	●

- All products come with setscrews (MOL) and cap screws (MOL-C).
- Tolerance of shaft bore on setscrew type is H8.
- Recommended tolerance on shaft diameters is h6 and h7.
- Setscrew type/clamp type and other combination couplings are available on request.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

MOL-C Clamp Type



Outside Dia. ϕ16~ϕ32



Outside Dia. ϕ40~ϕ63

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment** of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Mass** (g)
MOL-16	6.35	0.7	1.4	9500	3.2×10^{-7}	31	1.0	3	7
MOL-20	8	1.2	2.4	7600	1.0×10^{-6}	60	1.5	3	14
MOL-25	10	2	4	6100	3.0×10^{-6}	140	2.0	3	27
MOL-32	14	4.5	9	4800	9.5×10^{-6}	280	2.5	3	50
MOL-40	16	9	18	3800	2.3×10^{-5}	540	3.0	3	80
MOL-50	20	18	36	3100	6.7×10^{-5}	820	3.5	3	150
MOL-63	25	36	72	2400	2.2×10^{-4}	1900	4.0	3	300
MOL-16C	6	0.7	1.4	9500	5.8×10^{-7}	31	1.0	3	12
MOL-20C	8	1.2	2.4	7600	1.5×10^{-6}	60	1.5	3	19
MOL-25C	10	2	4	6100	4.4×10^{-6}	140	2.0	3	36
MOL-32C	14	4.5	9	4800	1.4×10^{-5}	280	2.5	3	69
MOL-40C	16	9	18	3800	4.1×10^{-5}	540	3.0	3	130
MOL-50C	20	18	36	3100	1.2×10^{-4}	820	3.5	3	230
MOL-63C	25	36	72	2400	3.7×10^{-4}	1900	4.0	3	450

✻ Operational temperature of MOL is –20°C~80°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

✻✻ Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

● Specify product No. and both bore diameters.

MOL-20-ϕ6×ϕ8

Product No. D1 D2

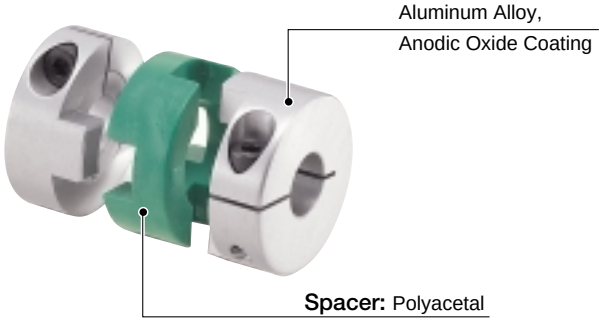
MOS

Miniature Oldham Type Flexible Coupling

Features

- Oldham type flexible coupling
- Compact coupling with short overall length
- Slippage between hubs and spacer allows high parallel and angular misalignments
- Minimized load derived from misalignments on shafts
- High torsional stiffness and response
- Simple configuration enables ease of assembly
- Excellent resistance to oil and electrical insulation
- Operational temperature : –20°C~80°C
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material

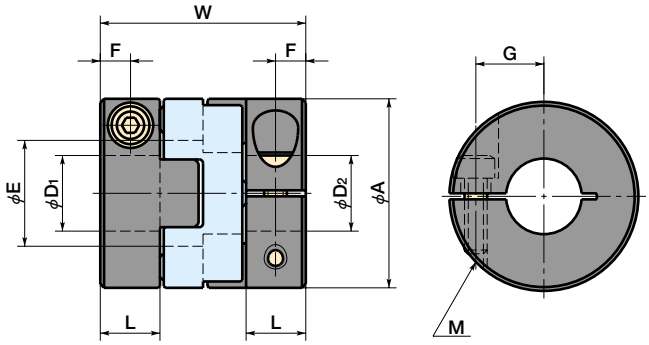


When Ordering

- Specify product No. and both bore diameters.

MOS-16C-ϕ5×ϕ6

Product No. D_1 D_2



Dimensions

unit : mm

Catalog Number			A	L	W	E	F	G	M	Wrench Torque (N·m)
MOS-12C			12	5	14.9	6	2.5	4	M2	0.5
MOS-16C			16	7	21	8	3.5	5	M2.5	1
MOS-20C			20	7	22.1	10	3.5	6.5	M2.5	1
MOS-25C			25	8	27.2	14	4	9	M3	1.5
MOS-32C			32	10	33.3	18	5	11	M4	2.5

Catalog Number	Stock Bores D1·D2												
	3	4	4.5	5	6	6.35	7	8	9.525	10	11	12	14
MOS-12C	●	●	●	●									
MOS-16C	●	●	●	●	●								
MOS-20C			●	●	●	●	●	●					
MOS-25C						●	●	●	●	●			
MOS-32C							●	●	●	●	●	●	●

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment** of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Mass** (g)
MOS-12C	5	0.2	0.4	13000	7.1×10^{-8}	9	0.6	2	3
MOS-16C	6	0.4	0.8	9500	3.0×10^{-7}	30	1.0	2	8
MOS-20C	8	0.7	1.4	7600	7.4×10^{-7}	47	1.3	2	13
MOS-25C	10	1.2	2.4	6100	2.2×10^{-6}	85	1.5	2	24
MOS-32C	14	2.8	5.6	4800	7.3×10^{-6}	190	2.0	2	48

* Operational temperature of MOS is –20°C~80°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

** Moment of inertia and mass figures based on the maximum shaft bores.

MCT

Miniature Cross Joint Type Flexible Coupling

Features

- High torsional stiffness and excellent response
- Slippage between bushes and pins allows high parallel and angular misalignments
- Almost zero backlash achieved by precise fit of pins and bushes
- Minimized load derived from misalignments on shafts
- Identical clockwise and anticlockwise rotational characteristics
- Maintenance free, excellent resistance to oil and chemicals
- Finished bore product-Models featuring two different end bores also in stock

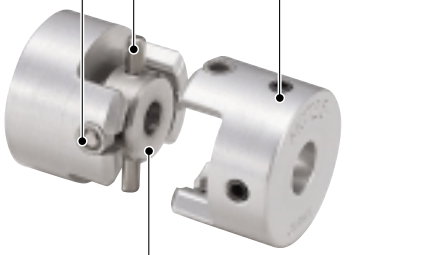
When Ordering

- Specify product No. and both bore diameters.

MCT-25-ϕ6×ϕ8

Product No. D_1 D_2

Configuration & Material



MCT
Outside Dia. ϕ20~ϕ50

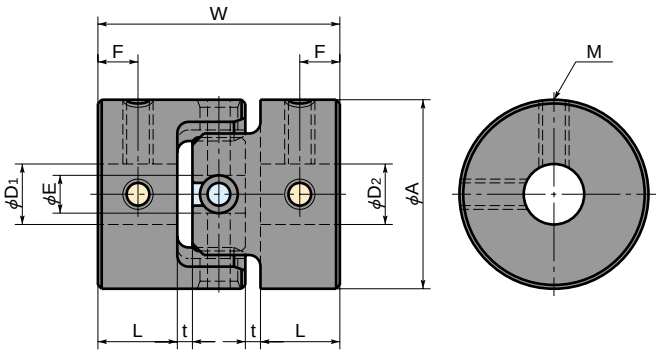
Setscrew Type

MCT-C
Outside Dia. ϕ20~ϕ32

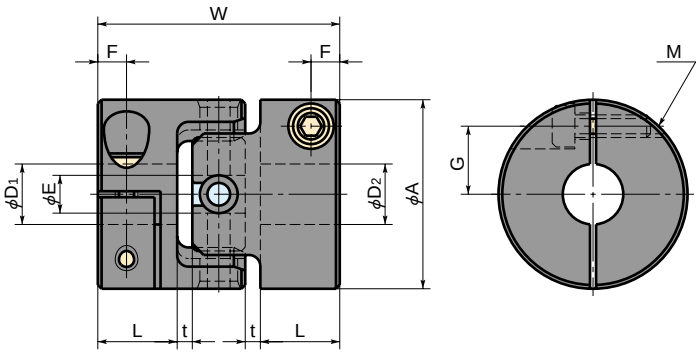
MCT-C
Outside Dia. ϕ40~ϕ50

Clamp Type

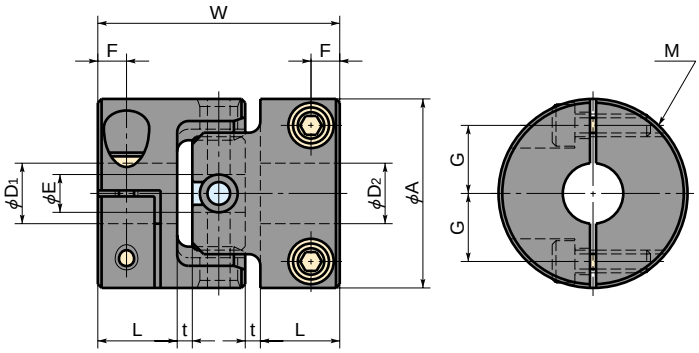
MCT Setscrew Type



MCT-C Clamp Type



Outside Dia. ϕ20~ϕ32



Outside Dia. ϕ40~ϕ50

Dimensions

unit: mm

Catalog Number		A	L	W	t	E	F	G	M	Wrench Torque (N·m)	Stock Bores D1·D2												
											4.5	5	6	7	8	10	11	12	14	15	16	18	19	20
MCT-20		20	8.5	24	0.5	5	4.5	—	M3	0.7	●	●	●	●	●	●							
MCT-25		25	10.5	32	2	5	5.3	—	M4	1.7			●	●	●	●							
MCT-32		32	13.5	40	2	8	6.8	—	M4	1.7				●	●	●	●	●	●	●			
MCT-40		40	16	47	2	10	8	—	M5	4								●	●	●	●		
MCT-50		50	21.5	60	2	14	10.8	—	M6	7										●	●	●	●	●
MCT-20C		20	8.5	24	0.5	5	3	6.5	M2.5	1	●	●	●	●	●								
MCT-25C		25	10.5	32	2	5	3.8	9	M3	1.5			●	●	●	●							
MCT-32C		32	13.5	40	2	8	4.5	11	M4	2.5				●	●	●	●	●	●				
MCT-40C		40	16	47	2	10	7	13	M5	4								●	●	●	●		
MCT-50C		50	21.5	60	2	14	8	16	M6	8										●	●	●	●	●

- All products come with setscrews (MCT) and cap screws (MCT-C).
- Tolerance on shaft bores of setscrew type coupling is H8.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Mass* (g)
MCT-20	10	0.5	1	7600	1.0×10^{-6}	170	0.3	2	19
MCT-25	12	1	2	6100	3.1×10^{-6}	490	0.5	3	33
MCT-32	16	2	4	4800	1.0×10^{-5}	820	0.5	3	68
MCT-40	20	5	10	3800	3.0×10^{-5}	1000	0.5	3	130
MCT-50	25	10	20	3100	9.6×10^{-5}	2000	0.5	3	260
MCT-20C	8	0.5	1	7600	1.0×10^{-6}	170	0.3	2	19
MCT-25C	10	1	2	6100	2.8×10^{-6}	490	0.5	3	32
MCT-32C	14	2	4	4800	1.0×10^{-5}	820	0.5	3	68
MCT-40C	16	5	10	3800	2.9×10^{-5}	1000	0.5	3	130
MCT-50C	20	10	20	3100	9.1×10^{-5}	2000	0.5	3	250

* Moment of inertia and mass figures based on the maximum shaft bores.

MJT

Miniature Curved Jaw Type Flexible Coupling

For Servomotor

For Stepping Motor

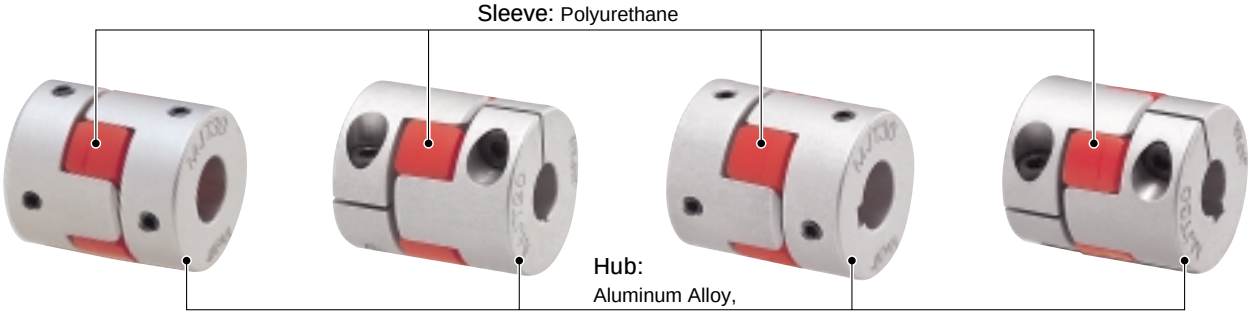
Features

- Compression type coupling assembled by pressing a polyurethane sleeve into hubs on both sides
- Zero backlash in low torque application
- Can be used as a flexible coupling in high torque application
- Excellent flexibility-Torsional vibration can be absorbed as well as parallel and angular misalignments
- Three different hardness sleeves are available
- Resistance to oil, and electrical insulation
- Identical clockwise and anticlockwise rotational characteristics
- Operational temperatures: –20°C~60°C
- Finished bore product-Models featuring two different end bores also in stock

Configuration & Material

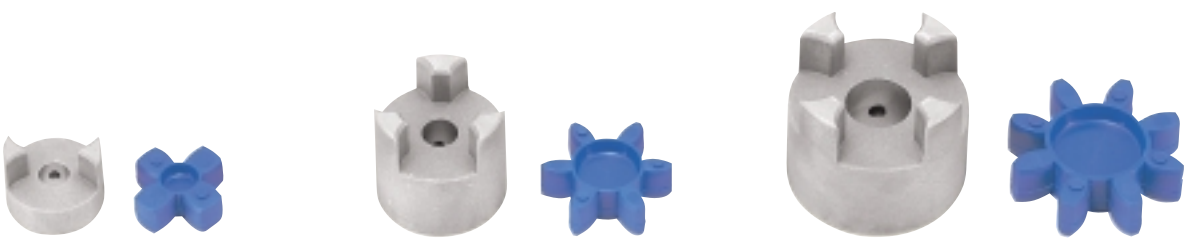
MJT **MJT-C** **MJT-K** **MJT-CK**

Sleeve: Polyurethane



Hub:
Aluminum Alloy,
Anodic Oxide Coating

Setscrew Type | Clamp Type | Keyway Type | Clamp+Keyway Type



Outside Dia. ϕ14~ϕ30 | Outside Dia. ϕ40 | Outside Dia. ϕ55~ϕ65

Sleeve		Attachment			
Hardness*	Color	Setscrew Type	Clamp Type	Keyway Type	Clamp+Keyway Type
80	Blue	MJT-✻✻-BL	MJT-✻✻C-BL	MJT-✻✻K-BL	MJT-✻✻CK-BL
92	White	MJT-✻✻-WH	MJT-✻✻C-WH	MJT-✻✻K-WH	MJT-✻✻CK-WH
98	Red	MJT-✻✻-RD	MJT-✻✻C-RD	MJT-✻✻K-RD	MJT-✻✻CK-RD

✻ Durometer hardness (Shore A).

Selecting MJT Couplings

Due to its unique construction, MJT couplings exhibit features not seen in other coupling types. This coupling consists of both side hubs and an elastic sleeve pressed in the hubs. MJT couplings combine the features of a metallic spring coupling with zero backlash and a flexible coupling with an elastic rubber sleeve.
Therefore, MJT couplings can be used for rotational angle transmission with zero backlash and for torque transmission. There are three different types of sleeves with different hardness. Check the following points for the proper selection of MJT couplings.

❶ Zero Backlash Transmission

In applications where rotational angle transmission and motion control at low torque are needed, MJT couplings can be used like metallic spring couplings with zero backlash. In addition, MJT couplings can absorb torsional vibration, which other zero backlash couplings cannot absorb.
The permissible torque in zero backlash applications is smaller than the rated torque mentioned in the specification tables. Please refer to the table below.
Any of the three different sleeves have the same permissible torque in zero backlash applications, however, the harder the sleeve the better the response of angular transmission. You may select the best sleeve for your requirements, referring to the static torsional stiffness in the table below or the specification tables.

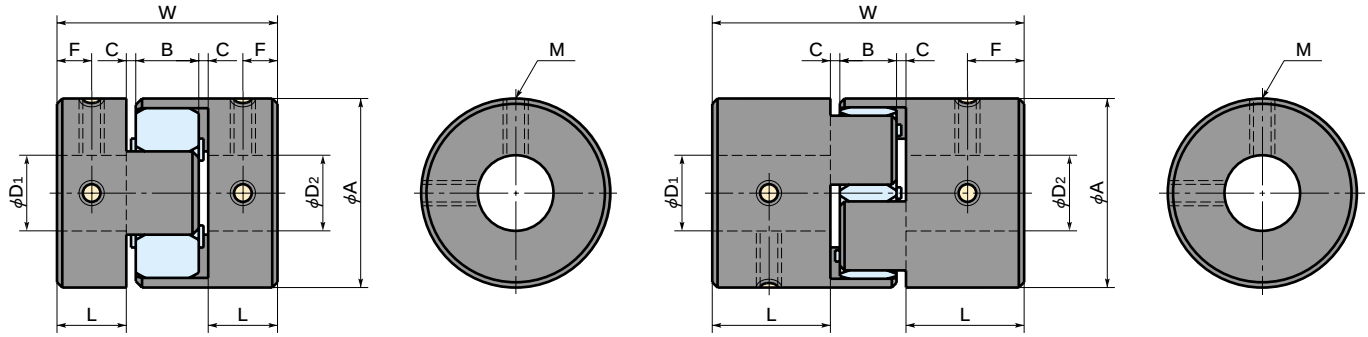
❷ Torque Transmission

The MJT, a compression type coupling, can transmit generally higher torque than metallic spring couplings, and this coupling can be recommended for the applications of general industrial machinery like pumps, where a backlash is acceptable.
The rated and maximum torque of blue, white and red sleeves are respectively low, medium and high, while the permissible misalignment of blue, white and red sleeves are respectively large, medium and small.
You may select the most suitable sleeve for your application.
For torque transmission applications, we recommend an MJT with keyway (MJT-✻✻K) or an MJT with clamp hub and keyway (MJT-✻✻CK) for safe and sure shaft attachment.

Catalog Number		Hardness* of Sleeve	Zero Backlash Permissible Torque (N·m)	Rated** Torque (N·m)	Max.** Torque (N·m)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)
MJT-14	BL	80	0.1	0.7	1.4	8	0.15	1.0	+0.6 0
	WH	92		1.2	2.4	14	0.10		
	RD	98		2	4	22	0.10		
MJT-20	BL	80	0.2	1.8	3.6	16	0.20	1.0	+0.8 0
	WH	92		3	6	29	0.15		
	RD	98		5	10	55	0.10		
MJT-30	BL	80	0.5	4	8	46	0.20	1.0	+1.0 0
	WH	92		7.5	15	73	0.15		
	RD	98		12.5	25	130	0.10		
MJT-40	BL	80	1.2	4.9	9.8	380	0.15	1.0	+1.2 0
	WH	92		10	20	570	0.10		
	RD	98		17	34	1200	0.10		
MJT-55	BL	80	—	17	34	1400	0.20	1.0	+1.4 0
	WH	92		35	70	1600	0.15		
	RD	98		60	120	2600	0.10		
MJT-65	BL	80	—	46	92	2800	0.20	1.0	+1.5 0
	WH	92		95	190	3000	0.15		
	RD	98		160	320	4900	0.10		

✻ Durometer hardness (Shore A).
✻✻ Operational temperature of MJT is –20°C~60°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures.
If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

MJT Setscrew Type



Outside Dia. ϕ14~ϕ30

Outside Dia. ϕ40

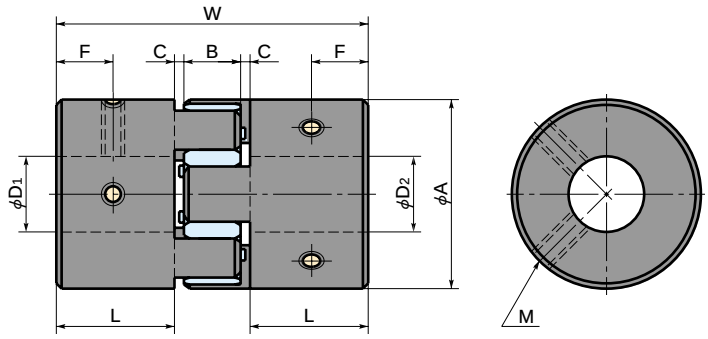
Dimensions

unit:mm

Catalog Number			A	L	W	B	C	F	M	Wrench Torque (N·m)
MJT-14-BL			14	7	22	6	1	3.5	M3	0.7
MJT-20-BL			20	10	30	8	1	5	M3	0.7
MJT-30-BL			30	11	35	10	1.5	5.5	M4	1.7
MJT-40-BL			40	25	66	12	2	12.5	M5	4
MJT-55-BL			55	30	78	14	2	15	M6	7
MJT-65-BL			65	35	90	15	2.5	17.5	M8	15
MJT-14-WH			14	7	22	6	1	3.5	M3	0.7
MJT-20-WH			20	10	30	8	1	5	M3	0.7
MJT-30-WH			30	11	35	10	1.5	5.5	M4	1.7
MJT-40-WH			40	25	66	12	2	12.5	M5	4
MJT-55-WH			55	30	78	14	2	15	M6	7
MJT-65-WH			65	35	90	15	2.5	17.5	M8	15
MJT-14-RD			14	7	22	6	1	3.5	M3	0.7
MJT-20-RD			20	10	30	8	1	5	M3	0.7
MJT-30-RD			30	11	35	10	1.5	5.5	M4	1.7
MJT-40-RD			40	25	66	12	2	12.5	M5	4
MJT-55-RD			55	30	78	14	2	15	M6	7
MJT-65-RD			65	35	90	15	2.5	17.5	M8	15

Catalog Number	Stock Bores $D_1 \cdot D_2$ (Tolerance H8)																		
	3	4	$4^{.5}$	5	6	$6^{.35}$	7	8	$9^{.525}$	10	11	12	14	15	16	18	19	20	25
MJT-14-BL・WH・RD	●	●	●	●	●														
MJT-20-BL・WH・RD				●	●	●	●	●	●										
MJT-30-BL・WH・RD							●	●	●	●	●	●	●						
MJT-40-BL・WH・RD										●	●	●	●	●	●				
MJT-55-BL・WH・RD														●	●	●	●	●	●
MJT-65-BL・WH・RD														●	●	●	●	●	●

- All products come with setscrews.
- Hubs with shaft bore diameters of ϕ4 or less have one setscrew.
- Recommended tolerance on shaft diameters is h6 and h7.
- Setscrew type/clamp type and other combination couplings are available on request.
- Non-standard shaft bores and keyways are machined on request. Please contact us.



Outside Dia. ϕ55~ϕ65

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment** of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass** (g)
MJT-14-BL	6.35	0.7	1.4	27000	2.1×10^{-7}	8	0.15	1.0	$^{+0.6}_{0}$	7.3
MJT-20-BL	9.525	1.8	3.6	19000	1.0×10^{-6}	16	0.20	1.0	$^{+0.8}_{0}$	18
MJT-30-BL	14	4	8	13000	5.9×10^{-6}	46	0.20	1.0	$^{+1.0}_{0}$	46
MJT-40-BL	20	4.9	9.8	9600	4.0×10^{-5}	380	0.15	1.0	$^{+1.2}_{0}$	150
MJT-55-BL	25	17	34	7000	1.7×10^{-4}	1400	0.20	1.0	$^{+1.4}_{0}$	350
MJT-65-BL	30	46	92	5900	3.9×10^{-4}	2800	0.20	1.0	$^{+1.5}_{0}$	570
MJT-14-WH	6.35	1.2	2.4	27000	2.1×10^{-7}	14	0.10	1.0	$^{+0.6}_{0}$	7.3
MJT-20-WH	9.525	3	6	19000	1.0×10^{-6}	29	0.15	1.0	$^{+0.8}_{0}$	18
MJT-30-WH	14	7.5	15	13000	5.9×10^{-6}	73	0.15	1.0	$^{+1.0}_{0}$	46
MJT-40-WH	20	10	20	9600	4.0×10^{-5}	570	0.10	1.0	$^{+1.2}_{0}$	150
MJT-55-WH	25	35	70	7000	1.7×10^{-4}	1600	0.15	1.0	$^{+1.4}_{0}$	350
MJT-65-WH	30	95	190	5900	3.9×10^{-4}	3000	0.15	1.0	$^{+1.5}_{0}$	570
MJT-14-RD	6.35	2	4	27000	2.1×10^{-7}	22	0.10	1.0	$^{+0.6}_{0}$	7.3
MJT-20-RD	9.525	5	10	19000	1.0×10^{-6}	55	0.10	1.0	$^{+0.8}_{0}$	18
MJT-30-RD	14	12.5	25	13000	5.9×10^{-6}	130	0.10	1.0	$^{+1.0}_{0}$	46
MJT-40-RD	20	17	34	9600	4.0×10^{-5}	1200	0.10	1.0	$^{+1.2}_{0}$	150
MJT-55-RD	25	60	120	7000	1.7×10^{-4}	2600	0.10	1.0	$^{+1.4}_{0}$	350
MJT-65-RD	30	160	320	5900	3.9×10^{-4}	4900	0.10	1.0	$^{+1.5}_{0}$	570

✻ Operational temperature of MJT is –20°C~60°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

✻✻ Moment of inertia and mass figures based on the maximum shaft bores.

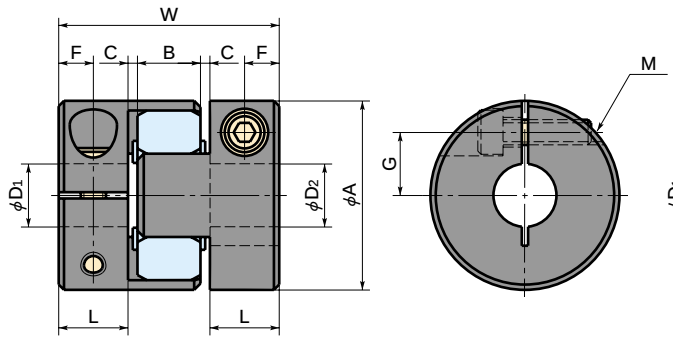
When Ordering

● Specify product No. and both bore diameters.

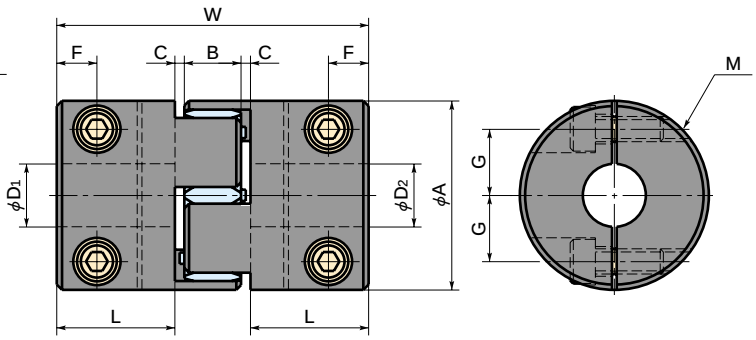
MJT-30-BL-ϕ8×ϕ10

Product No. D1 D2

MJT-C Clamp Type



Outside Dia. ϕ14~ϕ30



Outside Dia. ϕ40

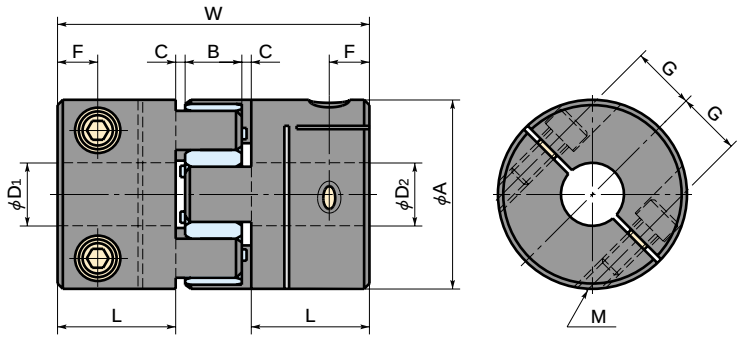
Dimensions

unit : mm

Catalog Number			A	L	W	B	C	F	G	M	Wrench Torque (N·m)
MJT-14C-BL			14	7	22	6	1	3.5	4	M2	0.5
MJT-20C-BL			20	10	30	8	1	5	6.5	M2.5	1
MJT-30C-BL			30	11	35	10	1.5	5.5	10	M4	2.5
MJT-40C-BL			40	25	66	12	2	8.5	14	M5	4
MJT-55C-BL			55	30	78	14	2	10.5	20	M6	8
MJT-65C-BL			65	35	90	15	2.5	13	24	M8	16
MJT-14C-WH			14	7	22	6	1	3.5	4	M2	0.5
MJT-20C-WH			20	10	30	8	1	5	6.5	M2.5	1
MJT-30C-WH			30	11	35	10	1.5	5.5	10	M4	2.5
MJT-40C-WH			40	25	66	12	2	8.5	14	M5	4
MJT-55C-WH			55	30	78	14	2	10.5	20	M6	8
MJT-65C-WH			65	35	90	15	2.5	13	24	M8	16
MJT-14C-RD			14	7	22	6	1	3.5	4	M2	0.5
MJT-20C-RD			20	10	30	8	1	5	6.5	M2.5	1
MJT-30C-RD			30	11	35	10	1.5	5.5	10	M4	2.5
MJT-40C-RD			40	25	66	12	2	8.5	14	M5	4
MJT-55C-RD			55	30	78	14	2	10.5	20	M6	8
MJT-65C-RD			65	35	90	15	2.5	13	24	M8	16

Catalog Number	Stock Bores D1·D2																		
	3	4	4.5	5	6	6.35	7	8	9.525	10	11	12	14	15	16	18	19	20	25
MJT-14C-BL・WH・RD	●	●	●	●															
MJT-20C-BL・WH・RD				●	●	●	●	●											
MJT-30C-BL・WH・RD							●	●	●	●	●	●							
MJT-40C-BL・WH・RD										●	●	●	●	●	●				
MJT-55C-BL・WH・RD														●	●	●	●	●	●
MJT-65C-BL・WH・RD														●	●	●	●	●	●

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Setscrew type/clamp type and other combination couplings are available on request.
- Non-standard shaft bores and keyways are machined on request. Please contact us.



Outside Dia. ϕ55~ϕ65

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min⁻¹)	Moment** of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass** (g)
MJT-14C-BL	5	0.7	1.4	11000	1.6×10^{-7}	8	0.15	1.0	$^{+0.6}_{0}$	6
MJT-20C-BL	8	1.8	3.6	7600	1.1×10^{-6}	16	0.20	1.0	$^{+0.8}_{0}$	19
MJT-30C-BL	12	4	8	5100	6.2×10^{-6}	46	0.20	1.0	$^{+1.0}_{0}$	50
MJT-40C-BL	16	4.9	9.8	3800	3.9×10^{-5}	380	0.15	1.0	$^{+1.2}_{0}$	160
MJT-55C-BL	25	17	34	2800	1.6×10^{-4}	1400	0.20	1.0	$^{+1.4}_{0}$	330
MJT-65C-BL	30	46	92	2350	3.8×10^{-4}	2800	0.20	1.0	$^{+1.5}_{0}$	560
MJT-14C-WH	5	1.2	2.4	11000	1.6×10^{-7}	14	0.10	1.0	$^{+0.6}_{0}$	6
MJT-20C-WH	8	3	6	7600	1.1×10^{-6}	29	0.15	1.0	$^{+0.8}_{0}$	19
MJT-30C-WH	12	7.5	15	5100	6.2×10^{-6}	73	0.15	1.0	$^{+1.0}_{0}$	50
MJT-40C-WH	16	10	20	3800	3.9×10^{-5}	570	0.10	1.0	$^{+1.2}_{0}$	160
MJT-55C-WH	25	35	70	2800	1.6×10^{-4}	1600	0.15	1.0	$^{+1.4}_{0}$	330
MJT-65C-WH	30	95	190	2350	3.8×10^{-4}	3000	0.15	1.0	$^{+1.5}_{0}$	560
MJT-14C-RD	5	2	4	11000	1.6×10^{-7}	22	0.10	1.0	$^{+0.6}_{0}$	6
MJT-20C-RD	8	5	10	7600	1.1×10^{-6}	55	0.10	1.0	$^{+0.8}_{0}$	19
MJT-30C-RD	12	12.5	25	5100	6.2×10^{-6}	130	0.10	1.0	$^{+1.0}_{0}$	50
MJT-40C-RD	16	17	34	3800	3.9×10^{-5}	1200	0.10	1.0	$^{+1.2}_{0}$	160
MJT-55C-RD	25	60	120	2800	1.6×10^{-4}	2600	0.10	1.0	$^{+1.4}_{0}$	330
MJT-65C-RD	30	160	320	2350	3.8×10^{-4}	4900	0.10	1.0	$^{+1.5}_{0}$	560

✻ Operational temperature of MJT is –20°C~60°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

✻✻ Moment of inertia and mass figures based on the maximum shaft bores.

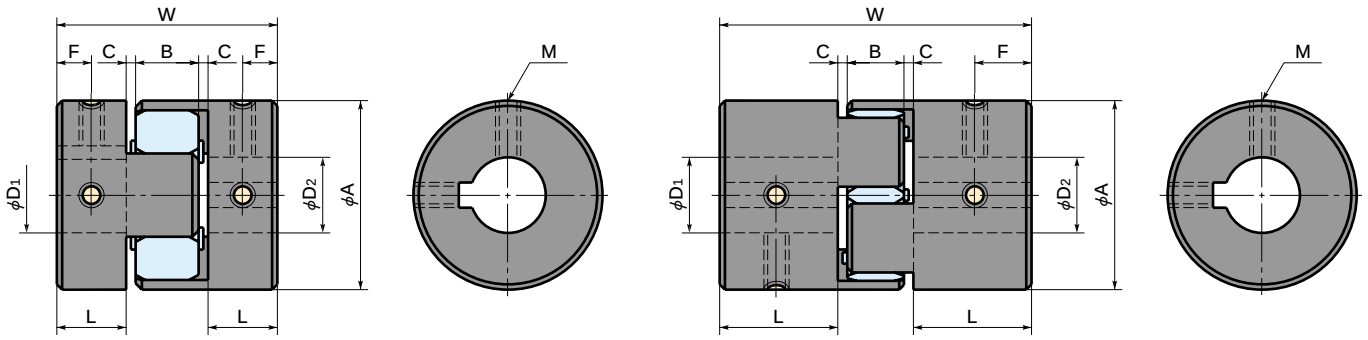
When Ordering

● Specify product No. and both bore diameters.

MJT-20C-RD-ϕ5×ϕ6

Product No. D1 D2

MJT-K Keyway Type



Outside Dia. ϕ30 Outside Dia. ϕ40

Dimensions

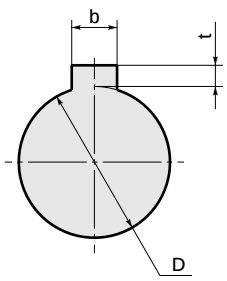
unit:mm

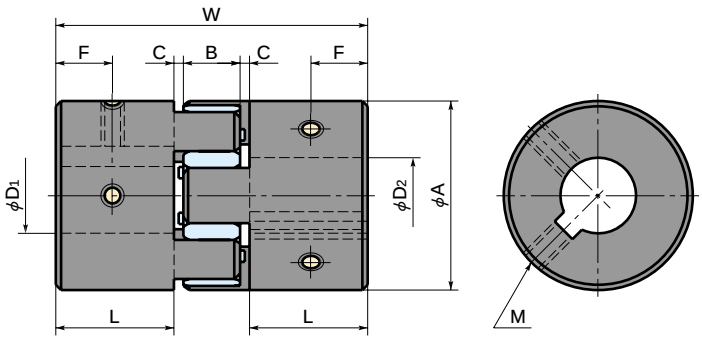
Catalog Number			A	L	W	B	C	F	M	Wrench Torque (N·m)
MJT-30K-BL			30	11	35	10	1.5	5.5	M4	1.7
MJT-40K-BL			40	25	66	12	2	12.5	M5	4
MJT-55K-BL			55	30	78	14	2	15	M6	7
MJT-65K-BL			65	35	90	15	2.5	17.5	M8	15
MJT-30K-WH			30	11	35	10	1.5	5.5	M4	1.7
MJT-40K-WH			40	25	66	12	2	12.5	M5	4
MJT-55K-WH			55	30	78	14	2	15	M6	7
MJT-65K-WH			65	35	90	15	2.5	17.5	M8	15
MJT-30K-RD			30	11	35	10	1.5	5.5	M4	1.7
MJT-40K-RD			40	25	66	12	2	12.5	M5	4
MJT-55K-RD			55	30	78	14	2	15	M6	7
MJT-65K-RD			65	35	90	15	2.5	17.5	M8	15

Catalog Number	Stock Bores $D_1 \cdot D_2$ (Tolerance H8)									
	10	11	12	14	15	16	18	19	20	25
MJT-30K-BL・WH・RD	●	●	●	●						
MJT-40K-BL・WH・RD	●	●	●	●	●	●				
MJT-55K-BL・WH・RD					●	●	●	●	●	●
MJT-65K-BL・WH・RD					●	●	●	●	●	●

- All products come with setscrews.
- Recommended tolerance on shaft diameters is h6 and h7.
- Keyway type/clamp type and other combination couplings are available on request.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Stock Bores D	Keyways b Basic Size	Keyways b Tolerance (JS9)	Keyways t Basic Size	Keyways t Tolerance	Keys b×h
10 11 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 19 20	6	±0.0150	2.8	+0.1 0	6×6
25	8	±0.0180	3.3	+0.2 0	8×7





Outside Dia. ϕ55~ϕ65

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment** of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass** (g)
MJT-30K-BL	14	4	8	5100	5.8×10^{-6}	46	0.20	1.0	$^{+1.0}_{0}$	45
MJT-40K-BL	20	4.9	9.8	3800	3.8×10^{-5}	380	0.15	1.0	$^{+1.2}_{0}$	150
MJT-55K-BL	25	17	34	2800	1.6×10^{-4}	1400	0.20	1.0	$^{+1.4}_{0}$	350
MJT-65K-BL	30	46	92	2350	3.6×10^{-4}	2800	0.20	1.0	$^{+1.5}_{0}$	570
MJT-30K-WH	14	7.5	15	5100	5.8×10^{-6}	73	0.15	1.0	$^{+1.0}_{0}$	45
MJT-40K-WH	20	10	20	3800	3.8×10^{-5}	570	0.10	1.0	$^{+1.2}_{0}$	150
MJT-55K-WH	25	35	70	2800	1.6×10^{-4}	1600	0.15	1.0	$^{+1.4}_{0}$	350
MJT-65K-WH	30	95	190	2350	3.6×10^{-4}	3000	0.15	1.0	$^{+1.5}_{0}$	570
MJT-30K-RD	14	12.5	25	5100	5.8×10^{-6}	130	0.10	1.0	$^{+1.0}_{0}$	45
MJT-40K-RD	20	17	34	3800	3.8×10^{-5}	1200	0.10	1.0	$^{+1.2}_{0}$	150
MJT-55K-RD	25	60	120	2800	1.6×10^{-4}	2600	0.10	1.0	$^{+1.4}_{0}$	350
MJT-65K-RD	30	160	320	2350	3.6×10^{-4}	4900	0.10	1.0	$^{+1.5}_{0}$	570

✻ Operational temperature of MJT is –20°C~60°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

✻✻ Moment of inertia and mass figures based on the maximum shaft bores.

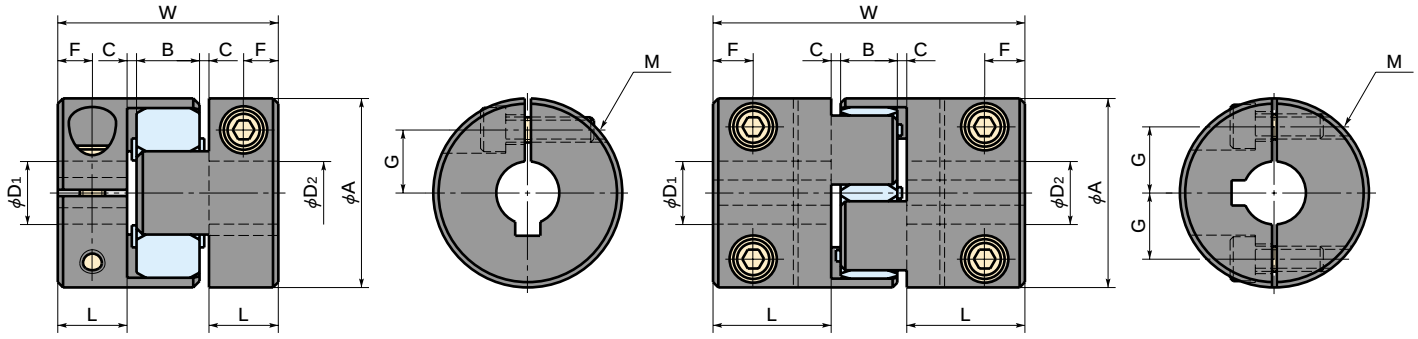
When Ordering

● Specify product No. and both bore diameters.

MJT-55K-WH-ϕ16×ϕ18

Product No. D1 D2

MJT-CK Clamp + Keyway Type



Outside Dia. ϕ30

Outside Dia. ϕ40

Dimensions

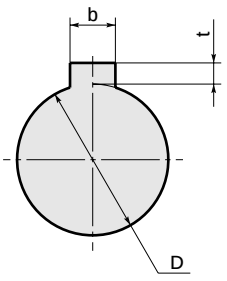
unit : mm

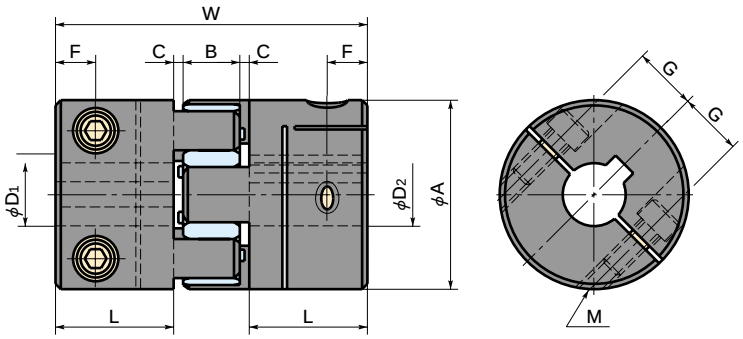
Catalog Number			A	L	W	B	C	F	G	M	Wrench Torque (N·m)
MJT-30CK-BL			30	11	35	10	1.5	5.5	10	M4	2.5
MJT-40CK-BL			40	25	66	12	2	8.5	14	M5	4
MJT-55CK-BL			55	30	78	14	2	10.5	20	M6	8
MJT-65CK-BL			65	35	90	15	2.5	13	24	M8	16
MJT-30CK-WH			30	11	35	10	1.5	5.5	10	M4	2.5
MJT-40CK-WH			40	25	66	12	2	8.5	14	M5	4
MJT-55CK-WH			55	30	78	14	2	10.5	20	M6	8
MJT-65CK-WH			65	35	90	15	2.5	13	24	M8	16
MJT-30CK-RD			30	11	35	10	1.5	5.5	10	M4	2.5
MJT-40CK-RD			40	25	66	12	2	8.5	14	M5	4
MJT-55CK-RD			55	30	78	14	2	10.5	20	M6	8
MJT-65CK-RD			65	35	90	15	2.5	13	24	M8	16

Catalog Number	Stock Bores D1·D2									
	10	11	12	14	15	16	18	19	20	25
MJT-30CK-BL・WH・RD	●	●	●							
MJT-40CK-BL・WH・RD	●	●	●	●	●	●				
MJT-55CK-BL・WH・RD					●	●	●	●	●	●
MJT-65CK-BL・WH・RD					●	●	●	●	●	●

- All products come with cap screws.
- Recommended tolerance on shaft diameters is h6 and h7.
- Clamp+keyway type/clamp type and other combination couplings are available on request.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Stock Bores D	Keyways b Basic Size	Keyways b Tolerance (JS9)	Keyways t Basic Size	Keyways t Tolerance	Keys b×h
10 11 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 19 20	6	±0.0150	2.8	+0.1 0	6×6
25	8	±0.0180	3.3	+0.2 0	8×7





Outside Dia. ϕ55~ϕ65

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment** of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass** (g)
MJT-30CK-BL	12	4	8	5100	4.2×10^{-6}	46	0.20	1.0	$^{+1.0}_{0}$	50
MJT-40CK-BL	16	4.9	9.8	3800	3.7×10^{-5}	380	0.15	1.0	$^{+1.2}_{0}$	160
MJT-55CK-BL	25	17	34	2800	1.5×10^{-4}	1400	0.20	1.0	$^{+1.4}_{0}$	330
MJT-65CK-BL	30	46	92	2350	3.5×10^{-4}	2800	0.20	1.0	$^{+1.5}_{0}$	550
MJT-30CK-WH	12	7.5	15	5100	4.2×10^{-6}	73	0.15	1.0	$^{+1.0}_{0}$	50
MJT-40CK-WH	16	10	20	3800	3.7×10^{-5}	570	0.10	1.0	$^{+1.2}_{0}$	160
MJT-55CK-WH	25	35	70	2800	1.5×10^{-4}	1600	0.15	1.0	$^{+1.4}_{0}$	330
MJT-65CK-WH	30	95	190	2350	3.5×10^{-4}	3000	0.15	1.0	$^{+1.5}_{0}$	550
MJT-30CK-RD	12	12.5	25	5100	4.2×10^{-6}	130	0.10	1.0	$^{+1.0}_{0}$	50
MJT-40CK-RD	16	17	34	3800	3.7×10^{-5}	1200	0.10	1.0	$^{+1.2}_{0}$	160
MJT-55CK-RD	25	60	120	2800	1.5×10^{-4}	2600	0.10	1.0	$^{+1.4}_{0}$	330
MJT-65CK-RD	30	160	320	2350	3.5×10^{-4}	4900	0.10	1.0	$^{+1.5}_{0}$	550

✻ Operational temperature of MJT is –20°C~60°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

✻✻ Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

● Specify product No. and both bore diameters.

MJT-65CK-BL-ϕ20×ϕ25

Product No. D1 D2

MSF

Miniature Soft Flexible Coupling

Features

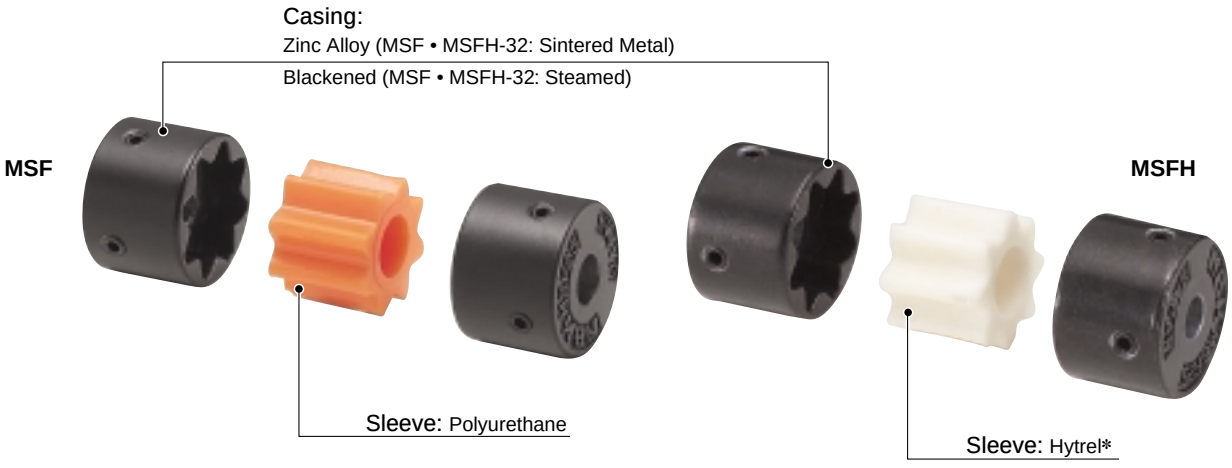
- Simply structured serration type coupling, transmitting torque by casing-sleeve engagement
- Excellent flexibility, high values in parallel and angular misalignments, absorption of torsional vibration
- Almost zero backlash achieved by precise fitness of serration
- Easy attachment on shafts by setscrews
- Resistance to oil, and electrical insulation
- Finished bore product-Models featuring two different end bores also in stock
- Available with Hytrel sleeves as well as polyurethane sleeves for the applications requiring high torque and temperatures

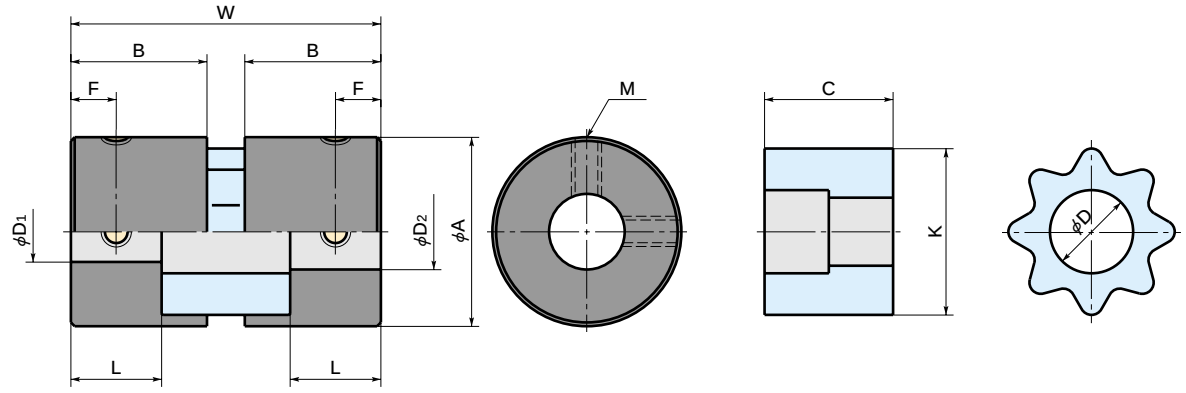
  MSF (Polyurethane sleeve) operational temperature :
  –20°C~60°C

  MSFH (Hytrel sleeve) operational temperature :
  –30°C~100°C

✻ Hytrel is the trademark of E. I. du Pont de Nemours and Company.

Configuration & Material





Dimensions

unit : mm

Catalog Number			A	B	L	W	F	M	Wrench Torque (N·m)	Sleeve			Stock Bores D1·D2 (Tolerance H8)									
										C	K	D	3	4	5	6	6.35	8	9.525	10	11	12	14
MSF -16			16	12	8	27	4	M3	0.7	11	14	6/ 6	●	●	●	●	●	●					
MSF -20			20	15	10	34	5	M3	0.7	14	18	8/ 8			●	●	●	●	●	●			
MSF -25			25	18	12	41	6	M4	1.7	17	22	10/10				●	●	●	●	●	●	●	
MSF -32			32	21	14	48	7	M4	1.7	20	29	12/14						●	●	●	●	●	●
MSFH-16			16	12	8	27	4	M3	0.7	11	14	6/ 6	●	●	●	●	●	●					
MSFH-20			20	15	10	34	5	M3	0.7	14	18	8/ 8			●	●	●	●	●	●			
MSFH-25			25	18	12	41	6	M4	1.7	17	22	10/10				●	●	●	●	●	●	●	
MSFH-32			32	21	14	48	7	M4	1.7	20	29	12/14						●	●	●	●	●	●

- All products come with setscrews.
- Hubs with shaft bore diameters of ϕ4 or less have one setscrew.
- Recommended tolerance on shaft diameters is h6 and h7.
- Couplings with blind hubs are available on request.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

Specifications

Catalog Number	Max. Bore (mm)	Rated* Torque (N·m)	Max.* Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment** of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Errors of Eccentricity (mm)	Errors of Angularity (°)	Mass** (g)
MSF -16	8	0.5	1	24000	9.0×10^{-7}	4.4	0.20	2	22
MSF -20	10	1	2	19000	2.7×10^{-6}	9.5	0.20	2	42
MSF -25	12	1.5	3	15000	8.1×10^{-6}	20	0.20	2	81
MSF -32	15	3	6	12000	2.5×10^{-5}	52	0.20	2	150
MSFH-16	8	0.75	1.5	24000	9.0×10^{-7}	11	0.20	2	22
MSFH-20	10	1.5	3	19000	2.7×10^{-6}	22	0.20	2	42
MSFH-25	12	2.3	4.6	15000	8.1×10^{-6}	38	0.20	2	81
MSFH-32	15	4.5	9	12000	2.5×10^{-5}	85	0.20	2	150

* Operational temperature of MSF is –20°C~60°C and that of MSFH is –30°C~100°C. The rated and max. torque capacities are decreased in case of use in high ambient temperatures. If the ambient temperature exceeds 30°C, adjust the torque capacity, referring to page 5.

** Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

- Specify product No. and both bore diameters.

MSF-20-ϕ6×ϕ8

Product No. D1 D2

You can download the most current CAD data on Couplicon® mini couplings directly from our website. The file is available in DXF format.

* DXF is the registered trademark of Autodesk, Inc.

http://www.nbk1560.com/

e-mail : info@nbk1560.com

MRG

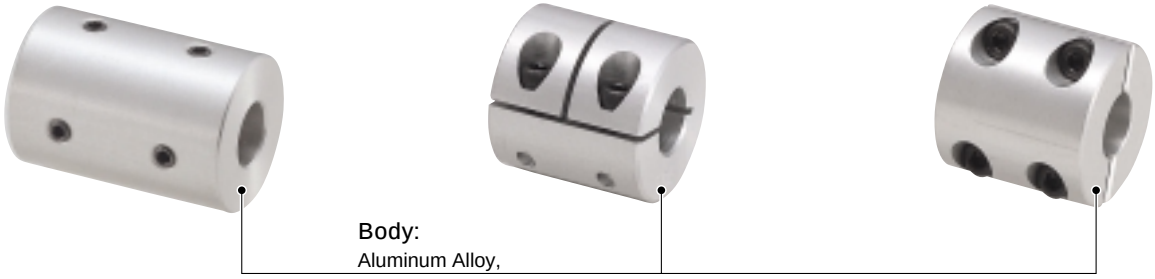
Miniature Rigid Coupling

Features

- Light weight, extremely low inertia and high response
- Maintenance free and excellent resistance to oil and chemicals
- Available in aluminum alloy and stainless steel
- Setscrew type, clamp type and split type are available
- Finished bore product-Models featuring two different end bores also in stock

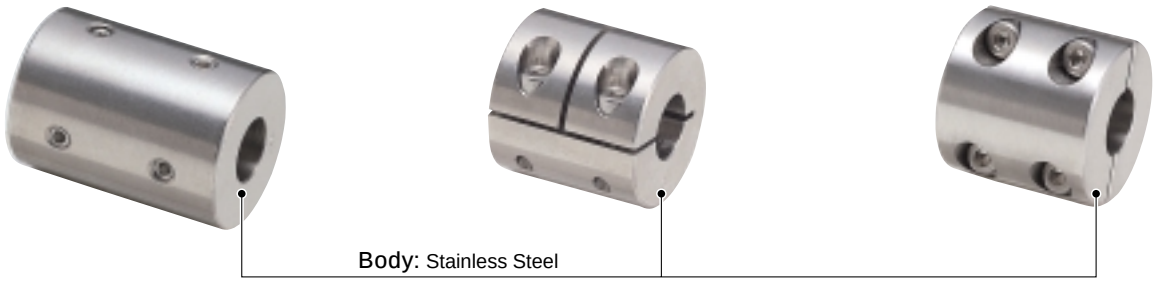
Configuration & Material

MRG **MRG-C** **MRG-W**



Body:
Aluminum Alloy,
Anodic Oxide Coating

MRGS **MRGS-C** **MRGS-W**

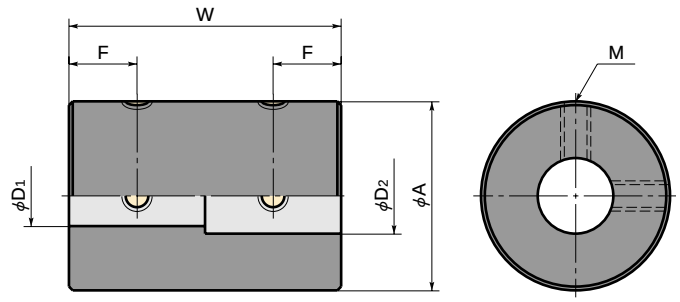


Body: Stainless Steel

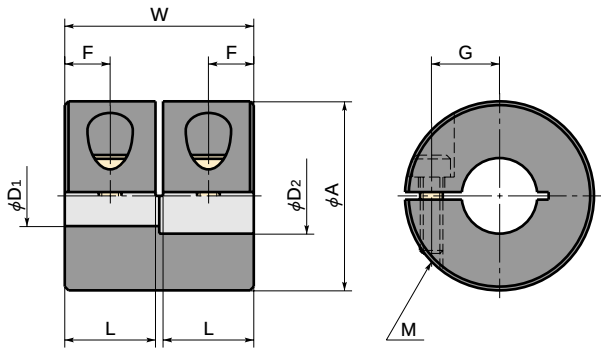
Setscrew Type **Clamp Type** **Split Type**

Material	Attachment		
	Setscrew Type	Clamp Type	Split Type
Aluminum Alloy	MRG -✻✻	MRG -✻✻C	MRG -✻✻W
Stainless Steel	MRGS-✻✻	MRGS-✻✻C	MRGS-✻✻W

MRG MRGS Setscrew Type



MRG-C MRGS-C Clamp Type



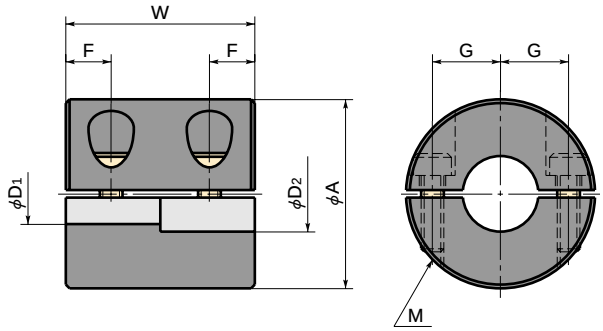
Dimensions

unit:mm

Catalog Number		A	W	L	F	G	M	Wrench Torque (N·m)	Stock Bores D1·D2										
									3	4	5	6	8	10	11	12	14	15	16
MRG -16		16	24	—	6	—	M3	0.7	●	●	●	●							
MRG -20		20	30	—	7	—	M3	0.7			●	●	●	●					
MRG -25		25	36	—	9	—	M4	1.7					●	●	●	●			
MRG -32		32	41	—	10	—	M4	1.7								●	●	●	●
MRGS-16		16	24	—	6	—	M3	0.7	●	●	●	●							
MRGS-20		20	30	—	7	—	M3	0.7			●	●	●	●					
MRGS-25		25	36	—	9	—	M4	1.7					●	●	●	●			
MRGS-32		32	41	—	10	—	M4	1.7								●	●	●	●
MRG -16C		16	16	7.5	3.75	5	M2.5	1			●	●							
MRG -20C		20	20	9.5	4.75	6.5	M2.5	1				●	●						
MRG -25C		25	25	12	6	9	M3	1.5					●	●					
MRG -32C		32	32	15.5	7.75	11	M4	2.5						●		●	●		
MRGS-16C		16	16	7.5	3.75	5	M2.5	1			●	●							
MRGS-20C		20	20	9.5	4.75	6.5	M2.5	1				●	●						
MRGS-25C		25	25	12	6	9	M3	1.5					●	●					
MRGS-32C		32	32	15.5	7.75	11	M4	2.5						●		●	●		
MRG -16W		16	16	—	4	5	M2.5	1			●	●							
MRG -20W		20	20	—	5	6.5	M2.5	1				●	●						
MRG -25W		25	25	—	6	9	M3	1.5					●	●					
MRG -32W		32	32	—	8	11	M4	2.5						●		●	●		
MRGS-16W		16	16	—	4	5	M2.5	1			●	●							
MRGS-20W		20	20	—	5	6.5	M2.5	1				●	●						
MRGS-25W		25	25	—	6	9	M3	1.5					●	●					
MRGS-32W		32	32	—	8	11	M4	2.5						●		●	●		

- All products come with setscrews (MRG • MRGS) or cap screws (MRG-C • MRGS-C • MRG-W • MRGS-W).
- Hubs with shaft bore diameters of $\phi 4$ or less have one setscrew.
- Tolerance on shaft bores of setscrew type coupling is H8.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

MRG-W MRGS-W Split Type



Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Mass* (g)
MRG -16	8	0.3	0.6	24000	4.4×10^{-7}	11
MRG -20	10	0.5	1	19000	1.3×10^{-6}	20
MRG -25	12	1	2	15000	3.9×10^{-6}	39
MRG -32	16	2	4	12000	1.2×10^{-5}	71
MRGS-16	8	0.3	0.6	24000	1.2×10^{-6}	28
MRGS-20	10	0.5	1	19000	3.5×10^{-6}	54
MRGS-25	12	1	2	15000	1.0×10^{-5}	100
MRGS-32	16	2	4	12000	3.1×10^{-5}	190
MRG -16C	6	0.3	0.6	9500	3.0×10^{-7}	8.3
MRG -20C	8	0.5	1	7600	8.7×10^{-7}	15
MRG -25C	10	1	2	6100	2.7×10^{-6}	29
MRG -32C	14	2	4	4800	7.1×10^{-6}	51
MRGS-16C	6	0.3	0.6	9500	8.0×10^{-7}	22
MRGS-20C	8	0.5	1	7600	2.4×10^{-6}	41
MRGS-25C	10	1	2	6100	7.3×10^{-6}	80
MRGS-32C	14	2	4	4800	2.5×10^{-5}	160
MRG -16W	6	0.3	0.6	9500	3.2×10^{-7}	8.8
MRG -20W	8	0.5	1	7600	8.7×10^{-7}	15
MRG -25W	10	1	2	6100	2.7×10^{-6}	29
MRG -32W	14	2	4	4800	9.3×10^{-6}	61
MRGS-16W	6	0.3	0.6	9500	8.2×10^{-7}	22
MRGS-20W	8	0.5	1	7600	2.4×10^{-6}	41
MRGS-25W	10	1	2	6100	7.3×10^{-6}	80
MRGS-32W	14	2	4	4800	2.5×10^{-5}	160

* Moment of inertia and mass figures based on the maximum shaft bores.

When Ordering

● Specify product No. and both bore diameters.

MRG-16W-ϕ5×ϕ6

Product No. D1 D2

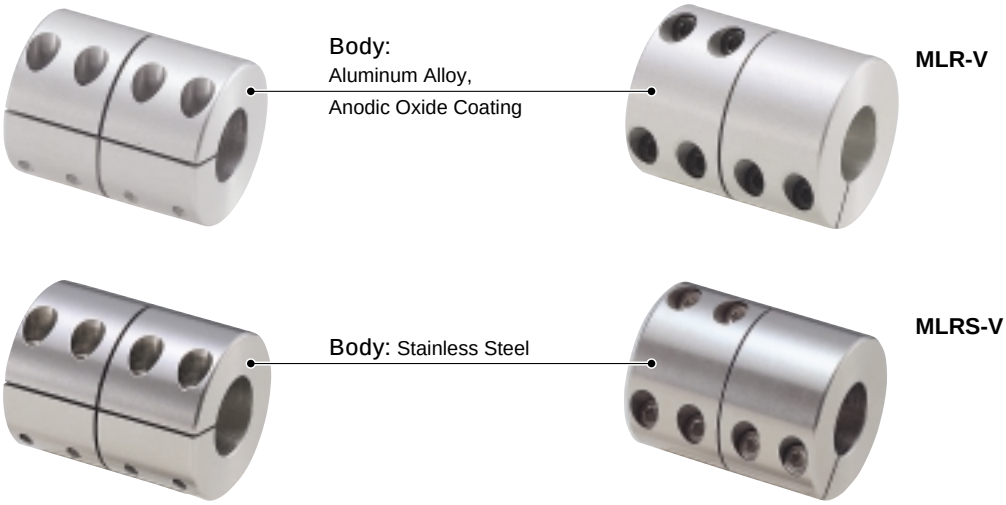
MLR

Miniature Rigid Coupling – Long Version

Features

- Long type rigid coupling
- Can be used as a joint to connect with shafts
- Available in aluminum alloy and stainless steel
- Clamp type and split type are available
- Finished bore product

Configuration & Material



Material	Attachment	
	Clamp Type	Semi-Split Type
Aluminum Alloy	MLR -✻✻C	MLR -✻✻V
Stainless Steel	MLRS-✻✻C	MLRS-✻✻V

When Ordering

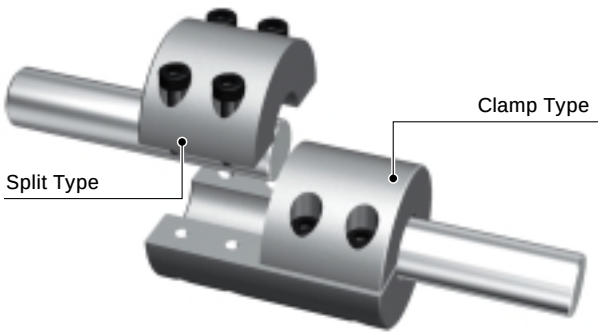
- Specify product No. and both bore diameters.

MLR-16V-ϕ6×ϕ6

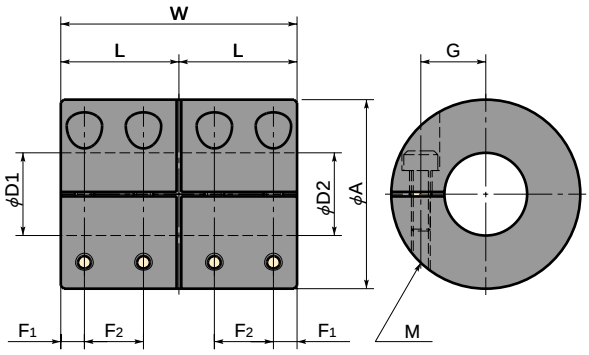
Product No. D_1 D_2

Semi-Split Type

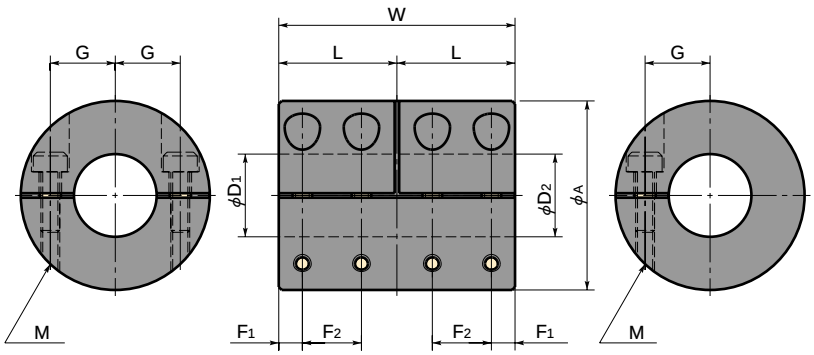
Semi-split type features a combination of one clamp type hub and one split type hub. This fixing style enhances ease of assembly, because it is possible to attach on one shaft without sliding the other on the clamp type hub.



MLR-C MLRS-C Clamp Type



MLR-V MLRS-V Semi-Split Type



Dimensions

unit:mm

Catalog Number		A	L	W	F_1	F_2	G	M	Wrench Torque (N·m)	Stock Bores D_1×D_2	
MLR -16C		16	11	22	2.5	5.5	5	M2	0.5	6× 6	—
MLR -20C		20	12	24	2.5	6	7	M2	0.5	8× 8	—
MLR -25C		25	18	36	4.5	9	9	M2.5	1	10×10	12×12
MLR -32C		32	20	40	4	10	11	M3	1.5	14×14	15×15
MLRS-16C		16	11	22	2.5	5.5	5	M2	0.5	6× 6	—
MLRS-20C		20	12	24	2.5	6	7	M2	0.5	8× 8	—
MLRS-25C		25	18	36	4.5	9	9	M2.5	1	10×10	12×12
MLRS-32C		32	20	40	4	10	11	M3	1.5	14×14	15×15
MLR -16V		16	11	22	2.5	5.5	5	M2	0.5	6× 6	—
MLR -20V		20	12	24	2.5	6	7	M2	0.5	8× 8	—
MLR -25V		25	18	36	4.5	9	9	M2.5	1	10×10	12×12
MLR -32V		32	20	40	4	10	11	M3	1.5	14×14	15×15
MLRS-16V		16	11	22	2.5	5.5	5	M2	0.5	6× 6	—
MLRS-20V		20	12	24	2.5	6	7	M2	0.5	8× 8	—
MLRS-25V		25	18	36	4.5	9	9	M2.5	1	10×10	12×12
MLRS-32V		32	20	40	4	10	11	M3	1.5	14×14	15×15

● All products come with cap screws.
● Recommended tolerance on shaft diameters is h6 and h7.

Specifications

Catalog Number	Max. Bore (mm)	Rated Torque (N·m)	Max. Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment* of Inertia ($kg·m^2$)	Mass* (g)
MLR -16C	6	0.3	0.6	9000	$3.4×10^{-7}$	10
MLR -20C	8	0.5	1	7000	$9.2×10^{-7}$	18
MLR -25C	12	1	2	6000	$3.4×10^{-6}$	38
MLR -32C	15	2	4	4500	$1.0×10^{-5}$	70
MLRS-16C	6	0.3	0.6	9000	$8.9×10^{-7}$	25
MLRS-20C	8	0.5	1	7000	$2.5×10^{-6}$	45
MLRS-25C	12	1	2	6000	$9.2×10^{-6}$	100
MLRS-32C	15	2	4	4500	$2.7×10^{-5}$	180
MLR -16V	6	0.3	0.6	9000	$3.5×10^{-7}$	10
MLR -20V	8	0.5	1	7000	$9.5×10^{-7}$	18
MLR -25V	12	1	2	6000	$3.4×10^{-6}$	38
MLR -32V	15	2	4	4500	$1.0×10^{-5}$	70
MLRS-16V	6	0.3	0.6	9000	$9.1×10^{-7}$	25
MLRS-20V	8	0.5	1	7000	$2.6×10^{-6}$	45
MLRS-25V	12	1	2	6000	$9.3×10^{-6}$	100
MLRS-32V	15	2	4	4500	$2.8×10^{-5}$	180

* Moment of inertia and mass figures based on the maximum shaft bores.

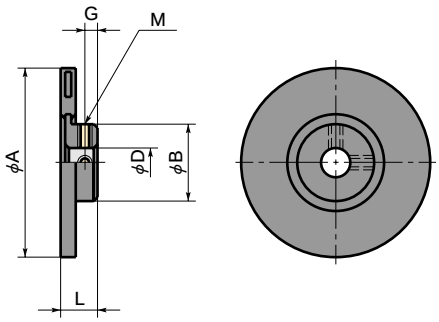
MDR

Damper Roll

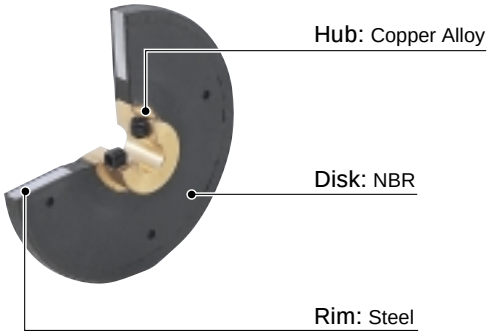
For Stepping Motor

Features

- Reduces vibration in resonance area of stepping motors
- Assists to follow pulse speed in the range of high rotational speed and enhance maximum rotational speed of stepping motors
- Operational temperature : –10°C~40°C
- Finished bore product



Configuration & Material



Dimensions & Specification

unit: mm

Catalog Number		A	L	B	M	G	Moment* of Inertia (g·cm²)	Mass* (g)	Stock Bores D (Tolerance H8)			
									5	6	6.35	8
MDR-41		41	8	10	1–M3	3	48	23	●			
MDR-52		52	9.5	15	2–M4	3.5	139	46	●	●	●	
MDR-57		57	12	15	2–M4	3.5	270	70		●	●	●

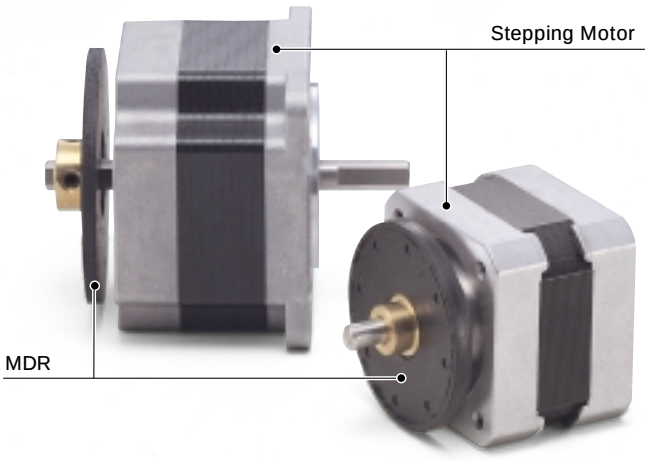
* Moment of inertia and mass figures based on the maximum shaft bores.
- All products come with setscrews.
- Recommended tolerance on shaft diameters is h6 and h7.

When Ordering

- Specify product No. and bore diameter.

MDR-41-ϕ5

Product No. D



Selection

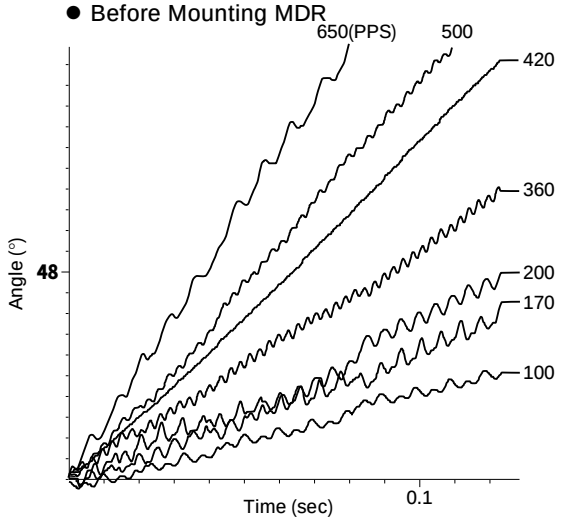
Select the MDR product No. matching the rotor inertia range in the following table.

Catalog Number	Rotor Inertia
MDR-41	50g·cm² or less
MDR-52	150g·cm² or less
MDR-57	250g·cm² or less

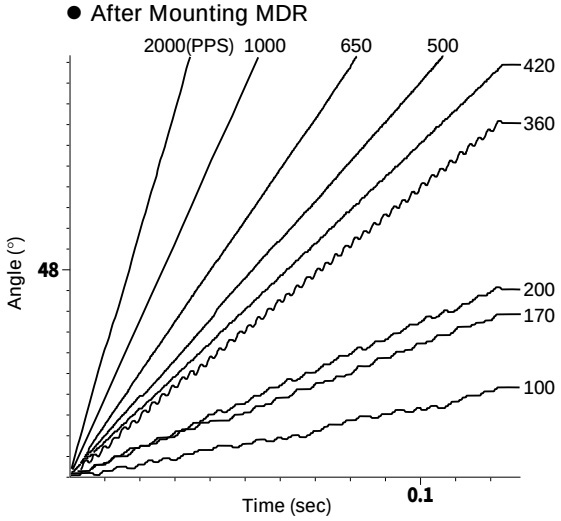
Damping Effect

The following graphs show the damping effect of MDR measured for each speed of stepping motor.
Remarkable vibration reduction results from the MDR.

● Before Mounting MDR



● After Mounting MDR



Custom-made Product

We manufacture custom-made MDR to match your specific application requirements. We also manufacture vibration absorption couplings. Please contact us.

Flexus®

Flexus®

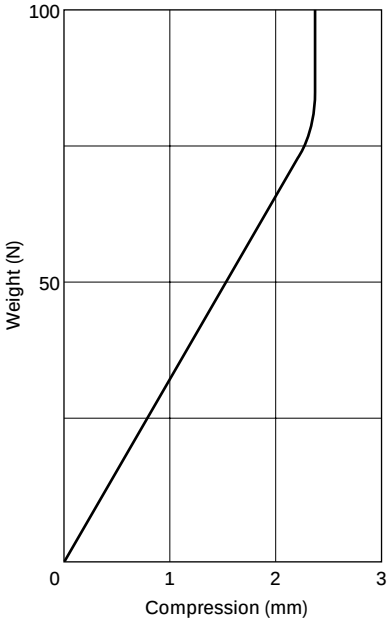
Features

- Multifunctional parts made in a variety of materials and featuring spring action
- Each type has a simple slit type construction
  The same exceptional performance proven by the miniature flexible couplings (MST & MSX)
- Spring performance can be customized for compression, pull, sheering, and bending
- Extremely high torsional stiffness
- Due to the cutting process, exact spring constants can be obtained for use in instruments where precision and reliability are required
- Almost linear graphed spring performance can be achieved
- Heat radiating effect can minimize shrinkage and expansion due to heat
- Nearly any shape or dimension is possible
  Not only cylinders but also polygonal shaped Flexus® can be produced
- The shape of the hub can be customized according to use
- Can be selected in a variety of materials: aluminum alloy, stainless steel, copper beryllium alloy, spring steel, engineering plastic etc.

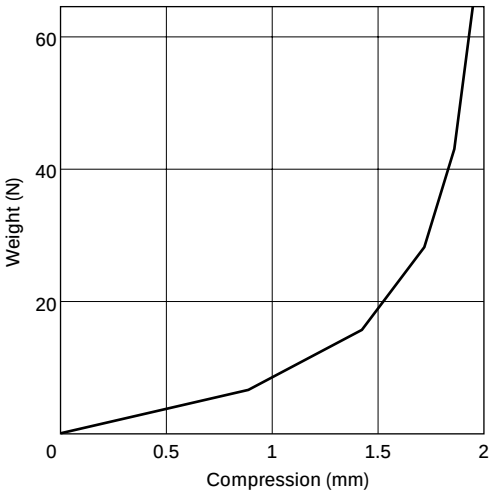
• Component with linear characteristic

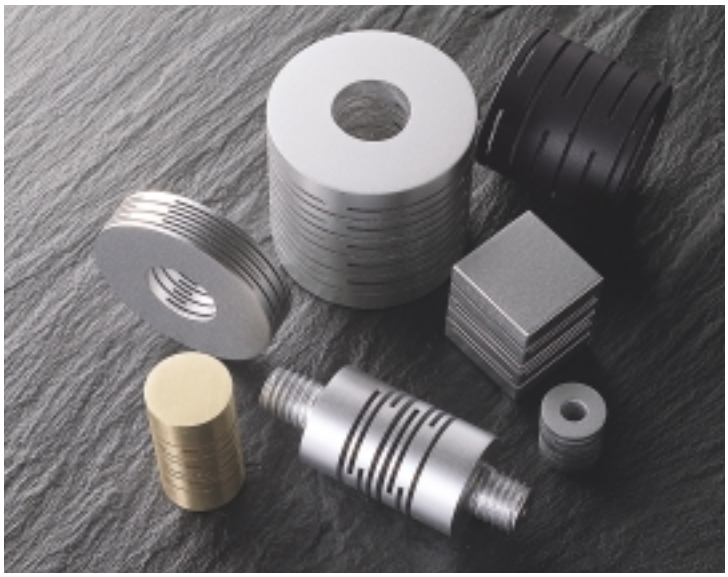
Uncompressed state

Compressed state



• This Flexus® has a performance resembling a quadratic curve due to the uneven pitch of slits.





Slit Pattern

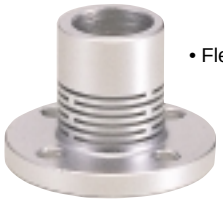
● Customized spring performance can be achieved through adjusting the number, pitch, width, and depth of the slits.

Examples of Use

● Flexus® is a single piece element, which can have the function of a screw, washer, pin, etc. Therefore, assembly time is saved and production costs can be reduced.

• Flexus® one-piece female screw

• Flexus® one-piece male screw



• Flexus® one-piece flange

● A heat radiating effect can be created by increasing the surface area and minimize shrinkage and expansion due to heat. According to the materials selected, heat insulating products can also be made.

• The thin, wide shape of this Flexus® minimizes heat expansion for use in machine tools.

• This Flexus®, used in the spindle of machine tools, absorbs processing error due to heat expansion.

Each Flexus® is a completely custom made, multi functional product. When considering a Flexus®, please instruct us on the following conditions.

- Materials and surface treatment
- Spring performance:
  spring constant (N/mm) and compression allowance (mm)
- Intended application
- Rough design plan

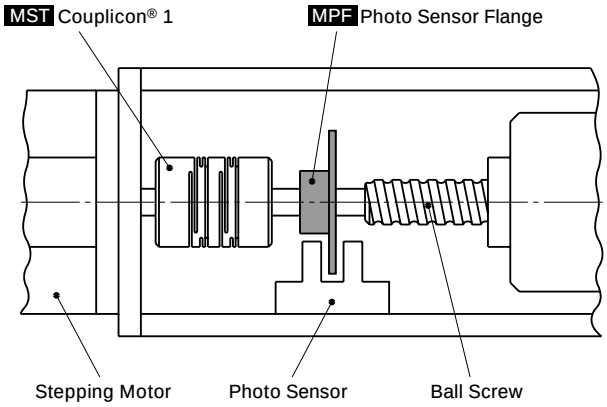
MPF

Miniature Photo Sensor Flange

For Stepping Motor

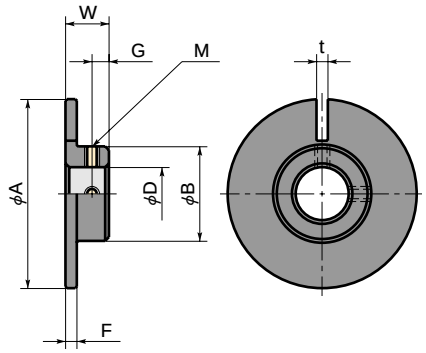
Features

- Photo sensor flange for detection of original position
- Light weight and low inertia
- Finished bore product - Shaft bore diameter : ϕ4~ϕ15
- Custom-made products are available in outer diameter, width of slit, bore diameter, material, surface treatment, etc. Please contact us



Configuration & Material

Body:
Aluminum Alloy,
Anodic Oxide Coating



Dimensions & Specifications

unit : mm

Catalog Number		A	B	W	F	t	G	M	Moment* of Inertia (kg·m²)	Mass* (g)	Stock Bores D (Tolerance H8)									
											4	5	6	6.35	8	9.525	10	12	14	15
MPF-32		32	14	8	1.5	1.5	3.5	M3	5.1×10^{-7}	5.2	●	●	●	●	●					
MPF-40		40	20	10	1.5	2	4.5	M3	1.4×10^{-6}	9.8	●	●	●	●	●	●	●	●		
MPF-50		50	25	10	1.5	2.5	4.5	M4	3.5×10^{-6}	15			●	●	●	●	●	●	●	●

* Moment of inertia and mass figures based on the maximum shaft bores.

- All products come with setscrews.
- Hubs with shaft bore diameters of ϕ4 or less have one setscrew.
- Recommended tolerance on shaft diameters is h6 and h7.
- Non-standard shaft bores and keyways are machined on request. Please contact us.

When Ordering

- Specify product No. and bore diameter.

MPF-32-ϕ8

Product No. D

Note

For safe operation, please read the followings carefully, and keep this catalog so that you can review these important points when necessary.

⚠ Danger

The following incorrect use may lead to death or serious injury.

- For safe operation, couplings and other rotational parts must be protected by covers. You might be injured if you touch the products during operation.
- Safety devices must be equipped to prevent danger.
- Electrical power must be off during attachment and removal process.
- Setscrews or cap screws should be properly tightened using a torque driver or a torque wrench.
- The product must not be operated at rotational speeds beyond the max. rotational frequency.
- Do not disassemble or reorganize the product.

⚠ Caution

The following incorrect use may lead to physical injury or substantial loss.

- Operate the product within the values of allowable misalignment. Operation under misalignment exceeding allowable values may result in the damage of the couplings, and adversely affect the systems in which these couplings are used.
- Torque generated during continuous operation must not exceed the rated torque. If not, the couplings may be damaged, or adversely affect the systems in which these couplings are used.
- For fastening, do not use other screws than the ones (setscrews or cap screws) specified by us.
- Do not operate under an environment which adversely affects the product.
- Stop the rotation machine immediately if you hear an abnormal noise coming from it. Proceed to check the machine for misalignment, whether or not shafts are in contact each other, loose screws, etc.
- If you are using a rotation machine that comes under significant load fluctuation, apply an adhesive on the screws to prevent them from becoming loose, or use a coupling one rank above.
- When disposing, ask specialists for disposal of this kind of product in order not to harm the environment.
- Do not touch the coupling just after finishing operation. You might be scalded by heat inducted from the system in which the couplings are used.

NBK®

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