RoHS Compliant

NewAddition in Size | Specification Change | Stainless Steel | Bore Modifications

MWS

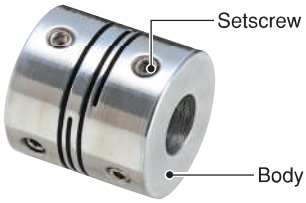
For Stepping Motors

Compact

Configuration

MWS Setscrew Type

MWSS Setscrew Type



MWS-C Clamp Type

MWSS-C Clamp Type

＊ Configuration for MWS-C Aluminum alloy clamp coupling has changed.

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

Material & Finish

Code	MWS	MWSS
Body	A2017, Anodized Aluminum Coating	SUS303
Setscrew	SCM435, Black Oxide Coating＊	SUSXM7
Cap Screw	SCM435, Black Oxide Coating＊	SUSXM7

＊Stock screws can be replaced with stainless steel screws.
Please take advantage of our stainless steel screw option.
For more information please refer to page 16.

Features

Merits

■ Zero Backlash

- Design changes in the aluminum alloy's slit pattern have improved performance
- One-piece metallic spring coupling
- Absorption of parallel, angular misalignments and shaft end-play by spring action
- Parallel misalignment is not absorbed
- High torsional stiffness and response
- Identical clockwise and counter-clockwise rotational characteristics
- Available in aluminum alloy and stainless steel
- Finished products featuring two different end bore diameters available in stock
- We produce clean washed, single piece specialty couplings constructed of SUS304 steel for special environment use
  Please inquire for price and delivery time

Application	
Servomotor	—
Stepping Motor	◎
General-purpose Motor	—
Encoder	—
Features	
Zero Backlash	◎
High Torsional Stiffness	●
High Torque	●
Absorption of Misalignment	—
Vibration Absorption	—
Electrical Insulation	—
Corrosion Resistant (All Stainless Steel)	◎

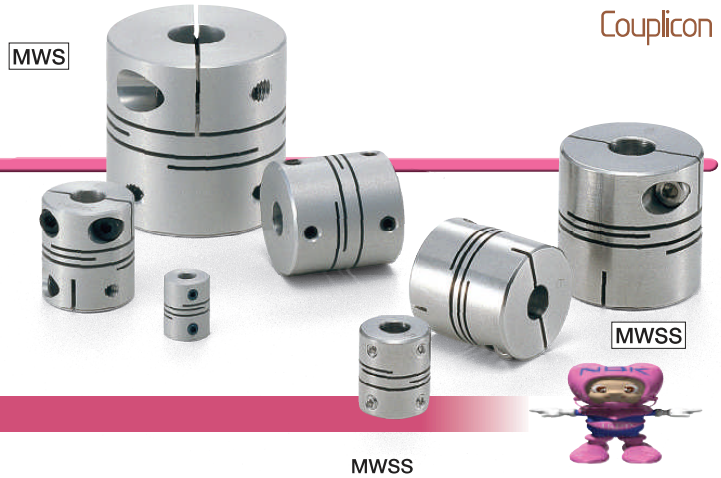
◎: Excellent ●: Very Good

When Ordering

Specify product code and both bore diameters.

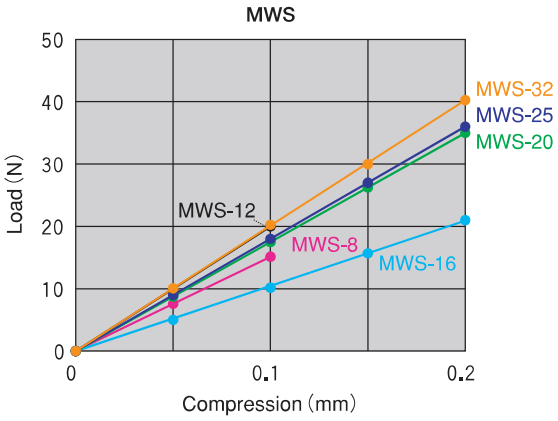
MWS-20C-5×6

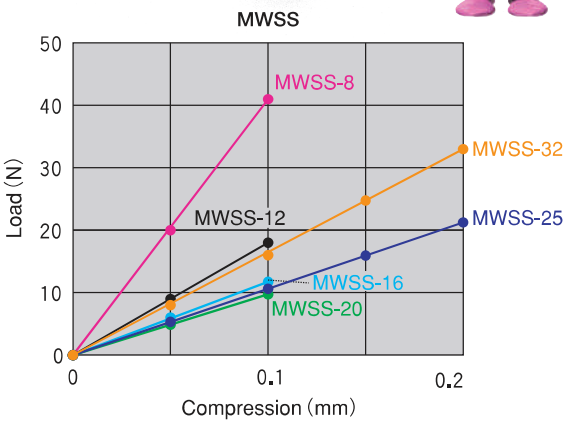
Product Code D_1 D_2



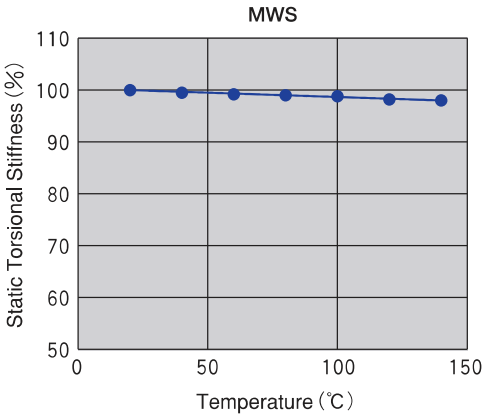
Technical Data

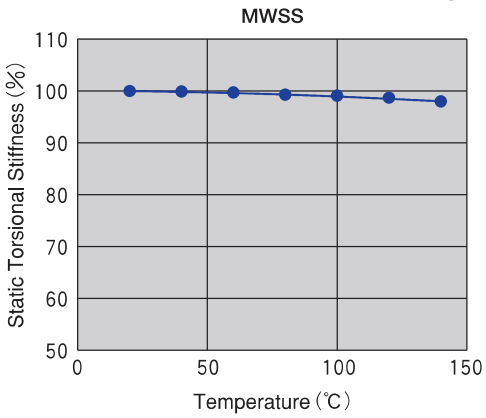
Thrust Reaction Force





Changes in Static Torsional Stiffness Caused by Temperature





100% values represent product performance at 20℃.
Because MWS and MWSS experience very little change in static torsional stiffness caused by temperature, the effect on response is minimal.
However, please take into consideration that operating at high temperatures may lead to misalignment due to shaft distortion or elongation from thermal expansion.

Slip Torque

Please be aware that for the bore sizes shown in the table below, the slip torque is smaller than MWS-C and MWSS-C's maximum torque.

unit:N·m

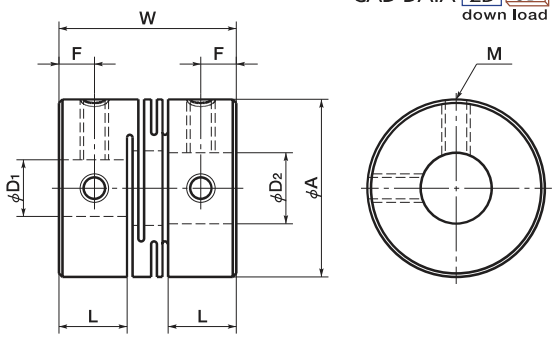
Product Code	Bore Diameter (mm)							
	4	4.5	5	6	8	10	12	14
MWS -25C	—	—	3	3.1	3.5	—	—	—
MWSS-12C	0.3	0.4	0.5	—	—	—	—	—
MWSS-20C	—	—	0.9	1.9	—	—	—	—
MWSS-25C	—	—	1.2	1.4	1.9	3.1	—	—
MWSS-32C	—	—	—	—	1.9	2.4	3.4	4.1

∗ Testing performed with a permissible dimensional deviation of h7, hardness of 34~40 HRC and wrench torque shown on page 75.

● The technical data contained in this catalog is for convenient reference, but they are not guaranteed values. More detailed technical data can be downloaded from our homepage.

MWS **MWSS** Setscrew Type

CAD DATA 2D 3D
down load



Dimensions

MWS **MWSS** Setscrew Type

unit : mm

Product Code		A	L	W	F	M	Wrench Torque (N·m)	Stock Bore Diameters 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	5× 5	5 × 6	6× 6		
MWS -20		20	7.65	20	3	M3	0.7	5 ×6	5× 8	6 × 6	6× 8	8× 8	
MWS -25		25	9.6	25	4	M4	1.7	5 ×6	6× 6	6 × 8	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	5 ×5	5× 6	6 × 6			
MWSS-20		20	7.65	20	3	M3	0.7	5 ×6	5× 8	6 × 6	6× 8	8× 8	
MWSS-25		25	9.6	25	4	M4	1.7	5 ×6	6× 6	6 × 8	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.
- Bore and keyway modifications are available on request. Please take advantage of our bore modification services. For more information please refer to pages 17～19.

Specifications

Product Code	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	78000	1.0×10^{-8}	24	1	±0.1	1
MWS -12	6	0.4	0.8	52000	7.0×10^{-8}	80	1	±0.1	3.1
MWS -16	8	0.5	1	39000	2.8×10^{-7}	180	1	±0.2	7.4
MWS -20	10	1	2	31000	7.5×10^{-7}	200	1	±0.2	12
MWS -25	12	2	4	25000	2.3×10^{-6}	780	1	±0.2	24
MWS -32	16	4	8	19000	8.0×10^{-6}	1100	1	±0.2	50
MWSS- 8	4	0.2	0.4	78000	2.4×10^{-8}	49	1	±0.1	2.7
MWSS-12	6	0.3	0.6	52000	1.8×10^{-7}	140	1	±0.1	7.8
MWSS-16	8	0.5	1	39000	7.2×10^{-7}	240	1	±0.1	18
MWSS-20	10	1	2	31000	2.0×10^{-6}	330	1	±0.1	32
MWSS-25	12	2	4	25000	6.1×10^{-6}	720	1	±0.2	63
MWSS-32	16	3.5	7	19000	2.1×10^{-5}	1300	1	±0.2	130

* Adjustment of rated and maximum torque specifications for load fluctuations is not required. For more detailed information, please refer to For Better Drive on page 34.
** Based on the maximum shaft bores.

MWS-C MWSS-C Clamp Type

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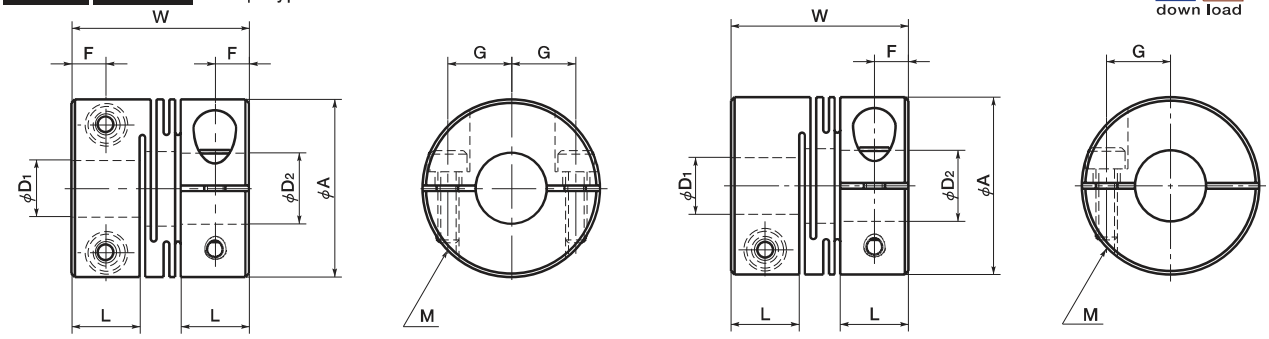

MWS-C

MWSS-C

Dimensions

MWS-C MWSS-C Clamp Type

unit:mm

Product Code		A	L	W	F	G	M	Wrench Torque (N·m)	Stock Bore Diameters D1×D2 (Tolerance H8)						
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	5× 5	5 × 6	6× 6			
MWS -20C		20	7.65	20	3.8	6.5	M2.5	1	5 ×6	5× 8	6 × 6	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	5× 5	5 × 6	6× 6			
MWSS-20C		20	7.65	20	3.8	6.5	M2.5	1	5 ×6	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.
- Bore and keyway modifications are available on request. Please take advantage of our bore modification services. For more information please refer to pages 17～19.

Specifications

Product Code	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 -12C	5	0.4	0.8	52000	6.4×10^{-8}	80	1	±0.1	3
MWS -16C	6	0.5	1	39000	2.9×10^{-7}	180	1	±0.2	8
MWS -20C	8	1	2	31000	7.5×10^{-7}	200	1	±0.2	13
MWS -25C	10	2	4	25000	2.3×10^{-6}	780	1	±0.2	25
MWS -32C	14	4	8	19000	8.1×10^{-6}	1100	1	±0.2	53
MWSS-12C	5	0.3	0.6	52000	1.8×10^{-7}	140	1	±0.1	8.5
MWSS-16C	6	0.5	1	39000	7.8×10^{-7}	240	1	±0.1	21
MWSS-20C	8	1	2	31000	2.1×10^{-6}	330	1	±0.1	36
MWSS-25C	10	2	4	25000	6.3×10^{-6}	720	1	±0.2	69
MWSS-32C	14	3.5	7	19000	2.2×10^{-5}	1300	1	±0.2	150

* Adjustment of rated and maximum torque specifications for load fluctuations is not required. For more detailed information, please refer to For Better Drive on page 34.
** Based on the maximum shaft bores.