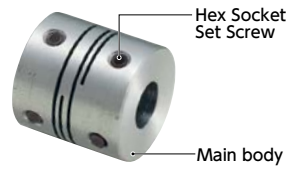


Structure

- Set Screw type → P.119
- MWS** Made of aluminum alloy
- MWSS** Made of all stainless steel



- Clamping type → P.121
- MWS-C** Made of aluminum alloy



● Recommended applicable motor

	MWS	MWSS
Servomotor	-	-
Stepping motor	⊙	⊙
General-purpose motor	△	△

⊙: Excellent ○: Very good △: Available

● Property

	MWS	MWSS
Zero Backlash	⊙	⊙
High Torque	○	○
High Torsional Stiffness	○	○
Corrosion Resistance (All S.S.)	-	⊙

⊙: Excellent ○: Very good

- This is a metal spring coupling with single-piece construction. Slits are made into a cylindrical material.
- A plate spring formed by slits allows angular misalignment, and end-play to be accepted.
- There are two types of units made of aluminum alloy or all stainless steel.

● Application

Transport device/XY stage/Parts feeder

● Material/Finish



	MWS / MWS-C	MWSS / MWSS-C
Main body	A2017 Alumite Treatment	SUS303
Hex Socket Set Screw	SCM435 Ferrosferric oxide film	SUSXM7
Hex Socket Head Cap Screw	SCM435 Ferrosferric oxide film	SUSXM7

● Related Products

The slit-type coupling **XWSS** SUS316L material, finished with clean washing and clean packaging, which is best suited to FPD and semiconductor manufacturing equipments is available.
→ P.227



● Part number specification

MWS-20C-5-6

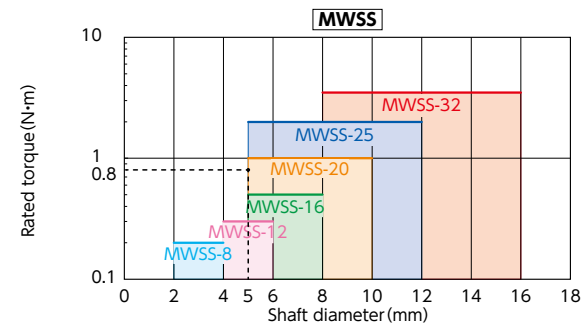
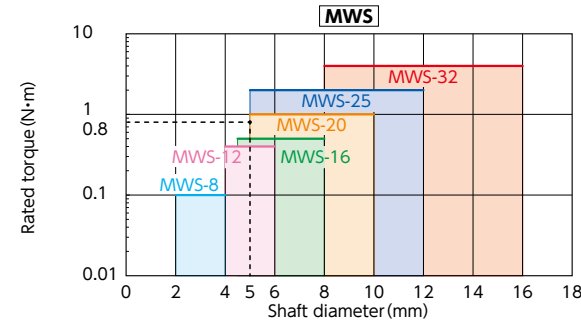
Product Code Size Bore Diameter

Please refer to dimensional table for part number specification.

Selection

- Selection based on shaft diameter and rated torque

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



● Selection example

In case of selected parameters of shaft diameter of ϕ 5 and load torque of 0.8 N·m, the selected size for

MWS **MWSS** is **MWS-20** **MWSS-20**.

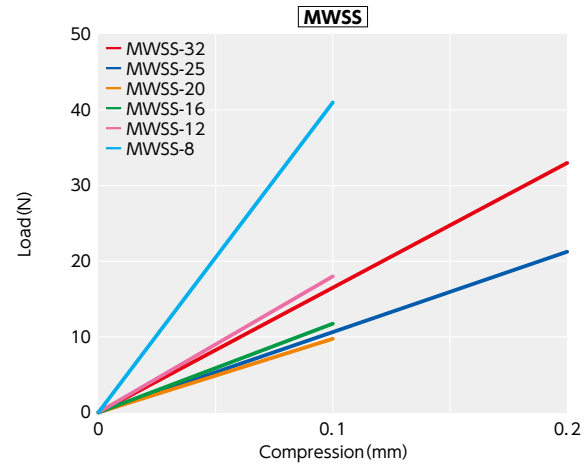
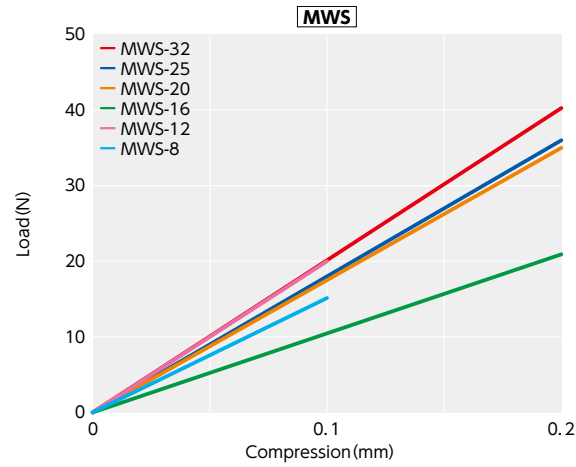
Additional Keyway at Shaft Hole → P.803
Available / Add'l charge

Cleanroom Wash & Packaging → P.807
Available / Add'l charge

SUS Change to Stainless Steel Screw → P.805
Available / Add'l charge

Technical Information

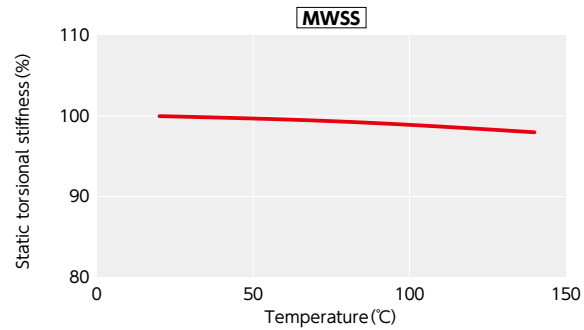
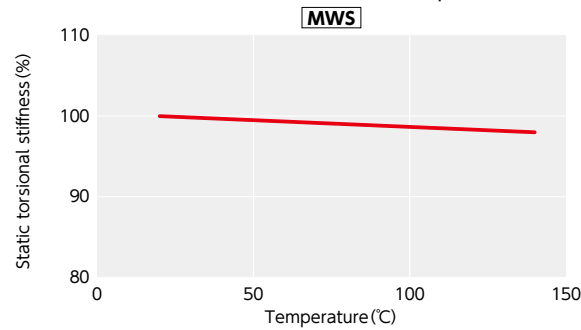
• Thrust Reaction Force



• Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20°C is 100%.

MWS **MWSS**'s change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



• Slip Torque

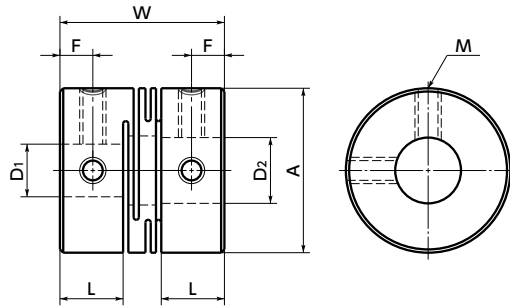
Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **MWSS-C**.

Unit: N·m

Part Number	Bore Diameter (mm)				
	5	6	8	10	12
MWSS-20C	0.9				
MWSS-25C	1.2	1.4	1.9		
MWSS-32C			1.9	2.4	3.4

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

MWS Made of aluminum alloy
MWSS Made of all stainless steel



Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N·m)	Standard Bore Diameter (dimensional allowance H8) D1-D2 2							
							2 - 2	3 - 3	4.5 - 5	5 - 5	6 - 6	8 - 8	10 - 10	12 - 14
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 are provided with hex socket set screw.
- In a case where the bore diameter is $\phi 4$ or less, the set screw is used in only one place.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

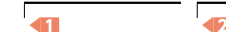
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment*2 of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MWS-8	4	0.1	78000	1.0×10^{-8}	24	1	±0.1	1
MWS-12	6	0.4	52000	7.0×10^{-8}	80	1	±0.1	3.1
MWS-16	8	0.5	39000	2.8×10^{-7}	180	1	±0.2	7.4
MWS-20	10	1	31000	7.5×10^{-7}	200	1	±0.2	12
MWS-25	12	2	25000	2.3×10^{-6}	780	1	±0.2	24
MWS-32	16	4	19000	8.0×10^{-6}	1100	1	±0.2	50
MWSS-8	4	0.2	78000	2.4×10^{-8}	49	1	±0.1	2.7
MWSS-12	6	0.3	52000	1.8×10^{-7}	140	1	±0.1	7.8
MWSS-16	8	0.5	39000	7.2×10^{-7}	240	1	±0.1	18
MWSS-20	10	1	31000	2.0×10^{-6}	330	1	±0.1	32
MWSS-25	12	2	25000	6.1×10^{-6}	720	1	±0.2	63
MWSS-32	16	3.5	19000	2.1×10^{-5}	1300	1	±0.2	130

- *1 : Correction of rated torque due to load fluctuation is not required.
- *2 : These are values with max. bore diameter.

• Part number specification

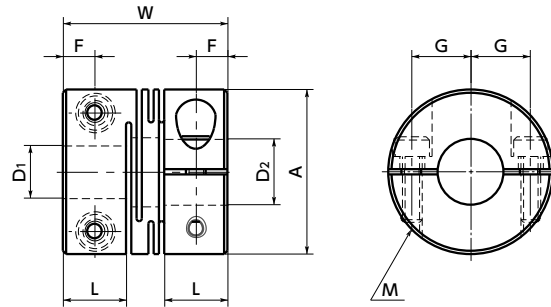
MWSS-32-10-12



MWS-C / MWSS-C Flexible coupling - Slit - type - Clamping type

WEB Selection Tool WEB CAD Download 0 Zero Backlash SUS Stainless steel

MWS-C Made of aluminum alloy



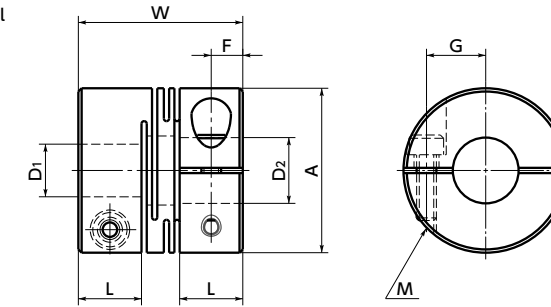
Dimensions

Unit : mm

Part Number	A	L	W	F	G	M	Screw Tightening Torque (N·m)	Standard Bore Diameter							
								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	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 are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.258

MWSS-C Made of all stainless steel



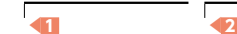
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment*2 of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MWS-12C	5	0.4	52000	6.4×10 ⁻⁸	80	1	±0.1	3
MWS-16C	6	0.5	39000	2.9×10 ⁻⁷	180	1	±0.2	8
MWS-20C	8	1	31000	7.5×10 ⁻⁷	200	1	±0.2	13
MWS-25C	10	2	25000	2.3×10 ⁻⁶	780	1	±0.2	25
MWS-32C	14	4	19000	8.1×10 ⁻⁶	1100	1	±0.2	53
MWSS-12C	5	0.3	52000	1.8×10 ⁻⁷	140	1	±0.1	8.5
MWSS-16C	6	0.5	39000	7.8×10 ⁻⁷	240	1	±0.1	21
MWSS-20C	8	1	31000	2.1×10 ⁻⁶	330	1	±0.1	36
MWSS-25C	10	2	25000	6.3×10 ⁻⁶	720	1	±0.2	69
MWSS-32C	14	3.5	19000	2.2×10 ⁻⁵	1300	1	±0.2	150

- *1: Correction of rated torque due to load fluctuation is not required.
- *2: These are values with max. bore diameter.

• Part number specification

MWS-16C - 5-6



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