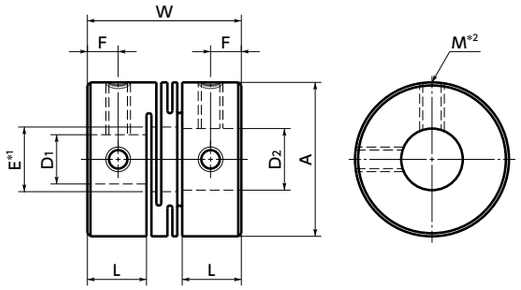
MWS/MWSS Flexible Couplings - Slit Type - Set Screw Type

Zero Backlash SUS Stainless steel

MWS Made of aluminum alloy
MWSS Made of all stainless steel



∗1： E=D2(D2<6)
E=D2+0.5(D2≥6)
∗2： In a case where the bore diameter is ϕ 4 or less, the set screw is used in only one place.

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					
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	3 - 4			
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 screws.
- Recommended tolerance for shaft diameters is h6 and h7.
- For the shaft insertion amount to the coupling, see Mounting/maintenance.

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.

Additional Keyway at Shaft Hole ➡ P.xxxx	Cleanroom Wash & Packaging ➡ P.xxxx	Change to Stainless Steel Screw ➡ P.xxxx
Bore additional modification only/ Add'l charge	Please feel free to contact us	Please feel free to contact us

- Part number specification

MWSS-32 - 10-12
1 2

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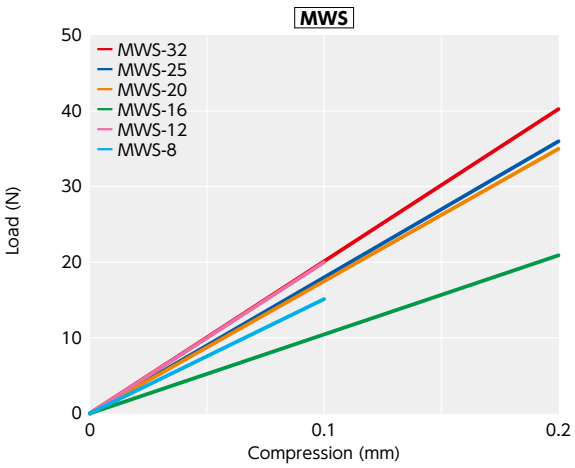
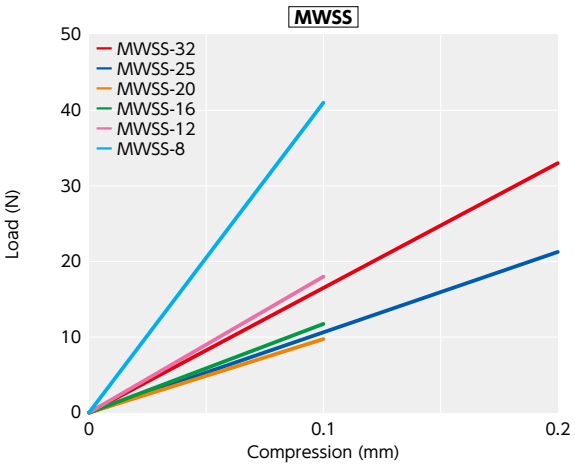
Technical Information

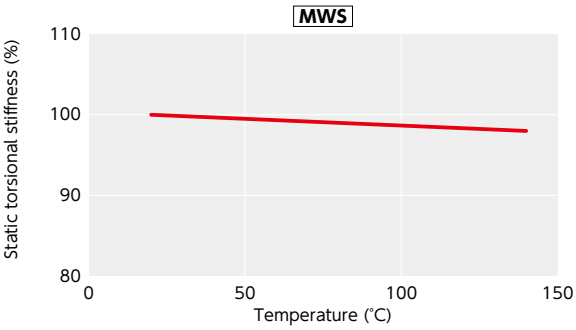
Thrust Reaction Force

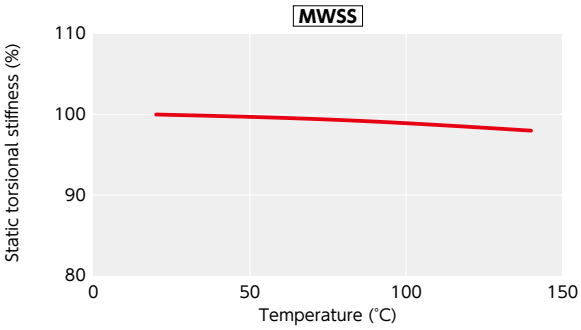




Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%. The change of **MWS** and **MWSS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.





Slip Torque

As in the table below, the clamping types **MWS-C** and **MWSS-C** have different slip torque according to the bore diameter. Take care during selection.

Unit : N・m

Part Number	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

- These are test values based on the conditions of shaft dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MWS-C** **MWSS-C** dimension tables. They are not guaranteed values.
- Slip torque changes with usage conditions. Carry out tests under conditions similar to actual conditions in advance.

MWS/MWSS Flexible Couplings - Slit Type

Zero Backlash SUS Stainless steel

Structure

● Set Screw Type ➡ P.xxxx

MWS Made of aluminum alloy

MWSS Made of all stainless steel

● Clamping Type ➡ P.xxxx

MWS-C Made of aluminum alloy

MWSS-C Made of all stainless steel

● 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. A slit is inserted into a cylindrical material.
- A plate spring formed by a slit 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

RoHS

	MWS / MWS-C	MWSS / MWSS-C
Main Body	A2017 Anodized	SUS303
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film (Black)	SUSXM7
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)	SUSXM7

● Part number specification

MWS - 20C - 5-6

Product Code | Size | Bore Diameter

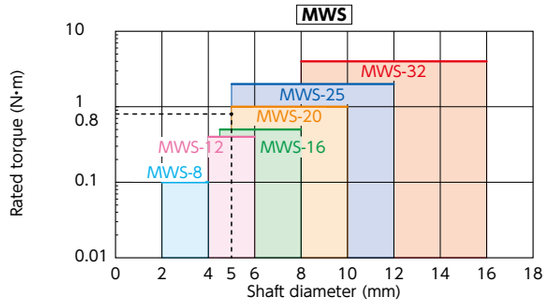
Please refer to dimensional table for part number specification.

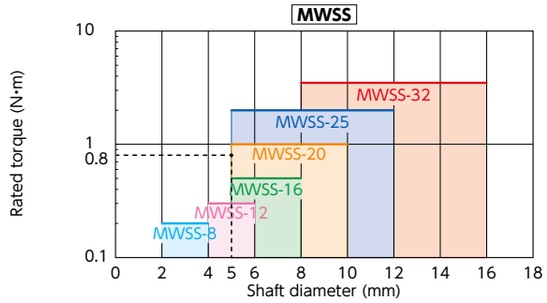
Additional Keyway at Shaft Hole ➡ P.xxxx	Cleanroom Wash & Packaging ➡ P.xxxx	Change to Stainless Steel Screw ➡ P.xxxx
Bore additional modification only/ Add'l charge	Please feel free to contact us	Please feel free to contact us

Selection

● **Selection Based on Shaft Diameter and Rated Torque**

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





● Selection Example

In case of selected parameters of shaft diameter of ϕ 5 and load torque of 0.8 N•m, the selected size for **MWS** **MWSS** is **MWS-20** **MWSS-20**.

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