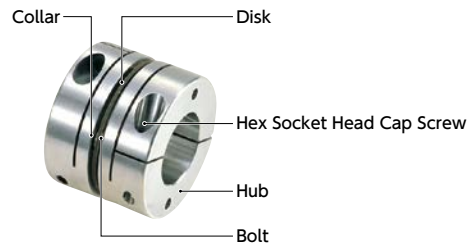


Structure

- Clamping type → P.87
- XBSS-C** Made of all stainless steel



Recommended applicable motor

	XBSS
Servomotor	⊙
Stepping motor	⊙
General-purpose motor	△

⊙: Excellent ○: Very good △: Available

Property

	XBSS
Zero Backlash	⊙
High Torque	○
High Torsional Stiffness	⊙
Allowable Misalignment	○
Corrosion Resistance (All S.S.)	⊙

⊙: Excellent ○: Very good

- This is a disk type flexible coupling.
- It has compact design with short entire length.
- The stainless steel disk allows the eccentricity, angular misalignment and end-play.
- Wide variation of outside diameter ϕ 15 - ϕ 104 and bore diameter ϕ 3 - ϕ 50.
- XBSS** is the all stainless steel type with stainless steel hubs.

Application

Actuator / Surface-mount machine / High precision XY stage / Index table

Material/Finish



	XBSS-C
Hub	SUS303
Bolt	SUSXM7
Disk	SUS304
Collar	SUS304
Hex Socket Head Cap Screw	SUSXM7

Related Products

The Single-Disk type Flexible Coupling **XHS** is compatible with the servomotor with 350% instantaneous max. torque is available.

→ P.71



Part number specification

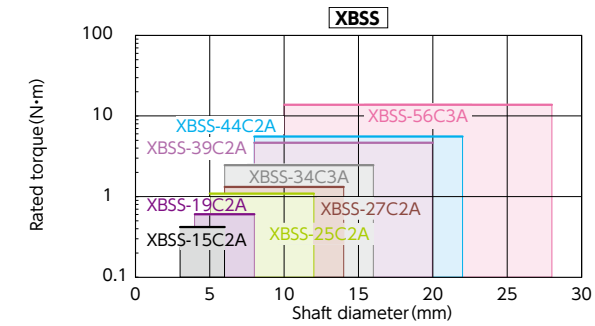
XBSS - 25C2A - 8-8

Product Code Size Bore Diameter

Please refer to dimensional table for part number specification.

Selection

Selection based on shaft diameter and rated torque



Selection example

In case of selected parameters of shaft diameter of ϕ 15 and load torque of 2 N·m, the selected size is

XBSS-34C3A.

Selection based on the rated output of the servomotor

Rated output (W)	Servomotor specifications*1			Selection size
	Diameter of motor shaft (mm)	Rated torque (N·m)	Instantaneous max. torque (N·m)	XBSS-C Made of all stainless steel
10	5 - 6	0.032	0.096	XBSS-15C
20	5 - 6	0.064	0.19	XBSS-15C
30	5 - 7	0.096	0.29	XBSS-19C
50	6 - 8	0.16	0.48	XBSS-19C
100	8	0.32	0.95	XBSS-25C
200	9 - 14	0.64	1.9	XBSS-34C
400	14	1.3	3.8	XBSS-39C
750	16 - 19	2.4	7.2	XBSS-56C

*1: Motor specifications are based on general values. For details, please refer to catalogs of each motor manufacturers. Recommended sizes are for the cases where reduction gears are not used.



[Additional Keyway at Shaft Hole → P.803](#)

Available / Add'l charge

[Cleanroom Wash & Packaging → P.807](#)

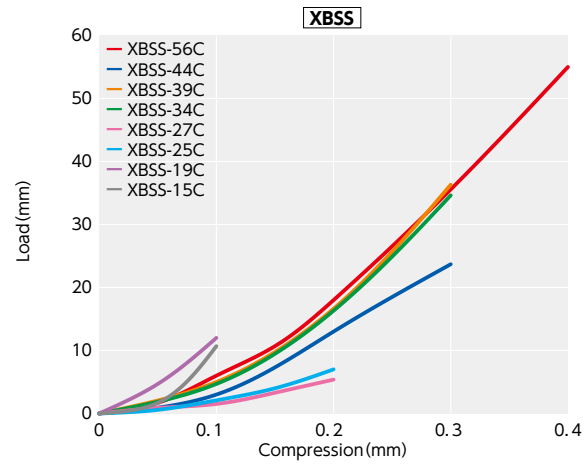
Available / Add'l charge

[SUS Change to Stainless Steel Screw → P.805](#)

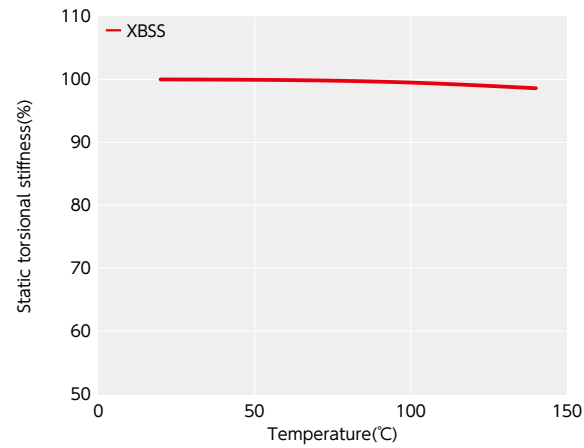
Available / Add'l charge

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%. The change of **XBSS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

• Slip Torque

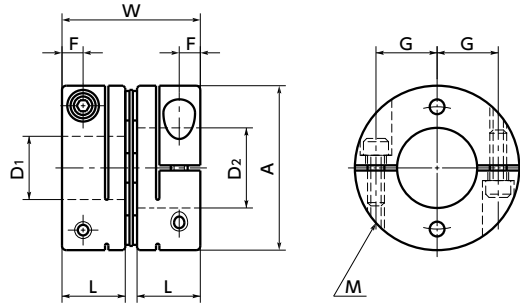
Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **XBSS-C**

Unit: N · m

Part Number	Bore Diameter (mm)		
	8	10	11
XBSS-44C2A	4.5		
XBSS-56C3A		9	13

- 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 **XBSS-C** Dimension table.

XBSS-C Made of all stainless steel



Dimensions

Part Number	A	L	W	F	G	M	Screw Tightening Torque (N·m)
XBSS-15C2A	15	7.5	16	2.3	5.25	M2	0.5
XBSS-19C2A	19	9	19	2.5	7.1	M2	0.5
XBSS-25C2A	25	11	23.6	3.5	9.25	M2.5	1
XBSS-27C2A	27	11	23.6	3.5	10.25	M2.5	1
XBSS-34C3A	34	12	26.2	4	13	M3	1.5
XBSS-39C2A	39	15	32.8	5	14.5	M4	3.5
XBSS-44C2A	44	15	32.8	5	17	M4	3.5
XBSS-56C3A	56	20	43.2	6	21.25	M5	8

Part Number	Stock Bores D1-D2																		
	3	4	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	
XBSS-15C2A	●	●	●	●															
XBSS-19C2A		●	●	●	●														
XBSS-25C2A			●	●	●	●	●	●											
XBSS-27C2A				●	●	●	●	●	●										
XBSS-34C3A				●	●	●	●	●	●	●									
XBSS-39C2A					●	●	●	●	●	●	●								
XBSS-44C2A					●	●	●	●	●	●	●	●	●	●	●				
XBSS-56C3A						●	●	●	●	●	●	●	●	●	●	●	●	●	●

- 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

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. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XBSS-15C2A	6	0.42	42000	2.3×10 ⁻⁷	500	0.02	0.5	±0.1	15
XBSS-19C2A	8	0.6	33000	7.4×10 ⁻⁷	1000	0.02	1	±0.1	29
XBSS-25C2A	12	1.1	25000	2.8×10 ⁻⁶	1500	0.02	1	±0.2	53
XBSS-27C2A	14	1.3	23000	3.8×10 ⁻⁶	2100	0.02	1	±0.2	67
XBSS-34C3A	16	2.5	18000	1.1×10 ⁻⁵	3800	0.02	1	±0.3	115
XBSS-39C2A	20	4.8	16000	2.3×10 ⁻⁵	5500	0.02	1	±0.3	185
XBSS-44C2A	22	5.6	14000	3.9×10 ⁻⁵	7000	0.02	1	±0.3	305
XBSS-56C3A	28	14	11000	1.4×10 ⁻⁴	15000	0.02	1	±0.4	610

*1: Correction of rated torque and max. torque due to load fluctuation is not required.

*2: These are values with max. bore diameter.

- Part number specification

XBSS-39C2A - 12-14

