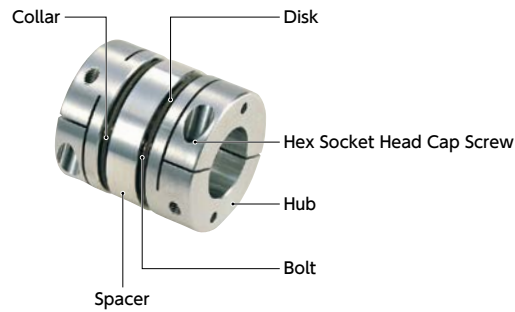


**Structure**

- Clamping type → P.81
- **XBWS-C** Made of all stainless steel



- Recommended applicable motor

	XBWS
Servomotor	⊙
Stepping motor	⊙
General-purpose motor	△

⊙: Excellent ○: Very good △: Available

- Property

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

⊙: Excellent ○: Very good

- This is a disk type flexible coupling.
- The stainless steel disk allows the eccentricity, angular misalignment and end-play.
- Wide variation of outside diameter  $\phi$  15 -  $\phi$  104 and bore diameter  $\phi$  3 -  $\phi$  50.
- **XBWS** is the all stainless steel type with stainless steel hubs.

- Application

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

- Material/Finish



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

**Related Products**

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

→ P.65



- Part number specification

**XBWS-25C2A-8-8**

Product Code    Size    Bore Diameter

Please refer to dimensional table for part number specification.

Additional Keyway at Shaft Hole → P.803

Available / Add'l charge

Cleanroom Wash & Packaging → P.807

Available / Add'l charge

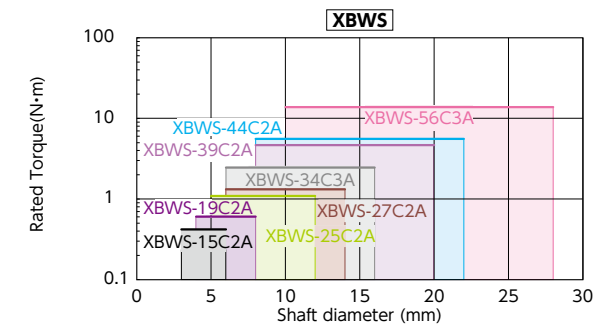
Change to Stainless Steel Screw → P.805

Available / Add'l charge

**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  $\phi$  15 and load torque of 2 N·m, the selection size is

**XBWS-34C3A**.

- Selection based on the rated output of the servomotor

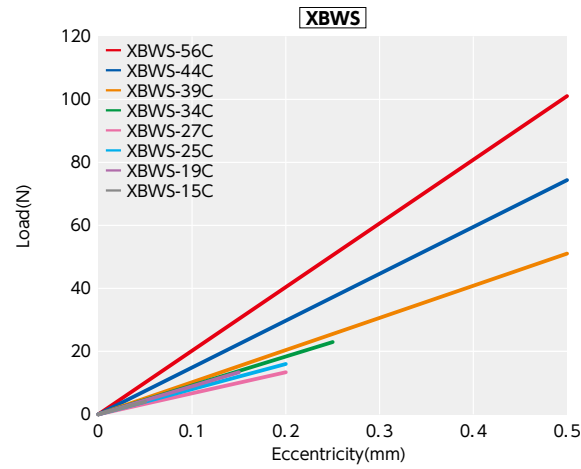
Rated output (W)	Servomotor specifications*1			Selection size
	Diameter of motor shaft (mm)	Rated torque (N·m)	Instantaneous max. torque (N·m)	
10	5 - 6	0.032	0.096	<b>XBWS-C</b> Made of all stainless steel
20	5 - 6	0.064	0.19	XBWS-15C
30	5 - 7	0.096	0.29	XBWS-19C
50	6 - 8	0.16	0.48	XBWS-19C
100	8	0.32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

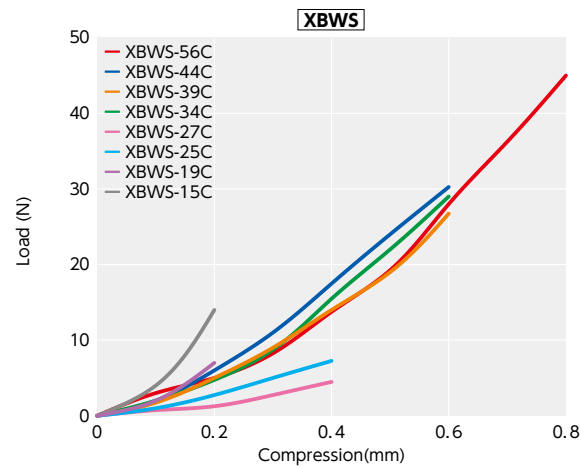


## Technical Information

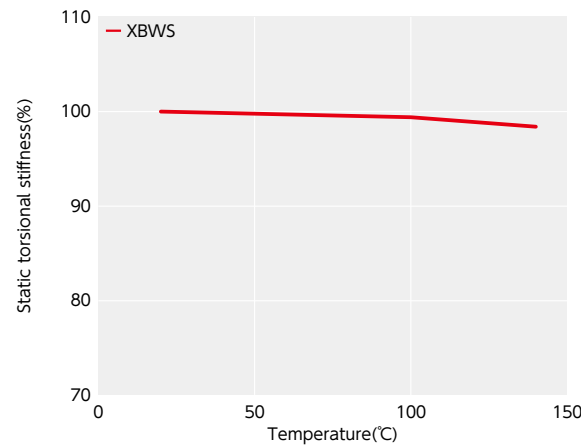
### • Eccentric Reaction Force



### • 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 **XBWS** 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.

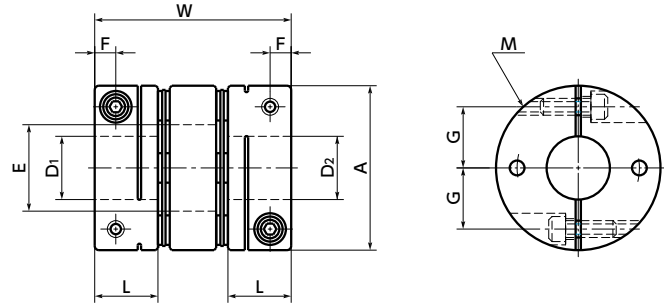
### • Slip Torque

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

Part Number	Bore Diameter (mm)		
	8	10	11
<b>XBWS-44C2A</b>	4.5		
<b>XBWS-56C3A</b>		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 **XBWS-C** Dimension table.

**XBWS-C** Made of all stainless steel



### Dimensions

Part Number <sup>1</sup>	A	L	W	E	F	G	M	Screw Tightening Torque (N·m)
<b>XBWS-15C2A</b>	15	7.5	22	6.1	2.3	5.25	M2	0.5
<b>XBWS-19C2A</b>	19	9	25.5	8.5	2.5	7.1	M2	0.5
<b>XBWS-25C2A</b>	25	11	32.2	12.5	3.5	9.25	M2.5	1
<b>XBWS-27C2A</b>	27	11	32.2	14.5	3.5	10.25	M2.5	1
<b>XBWS-34C3A</b>	34	12	37.4	16.5	4	13	M3	1.5
<b>XBWS-39C2A</b>	39	15	46.6	20.5	5	14.5	M4	3.5
<b>XBWS-44C2A</b>	44	15	46.6	23	5	17	M4	3.5
<b>XBWS-56C3A</b>	56	20	60.4	29	6	21.25	M5	8

Part Number	Standard Bore Diameter D1 - D2 <sup>2</sup>																		
	3	4	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	
<b>XBWS-15C2A</b>	●	●	●	●															
<b>XBWS-19C2A</b>		●	●	●	●														
<b>XBWS-25C2A</b>			●	●	●	●	●	●											
<b>XBWS-27C2A</b>				●	●	●	●	●	●										
<b>XBWS-34C3A</b>				●	●	●	●	●	●	●	●								
<b>XBWS-39C2A</b>					●	●	●	●	●	●	●	●	●	●					
<b>XBWS-44C2A</b>						●	●	●	●	●	●	●	●	●	●				
<b>XBWS-56C3A</b>							●	●	●	●	●	●	●	●	●	●	●	●	●

- 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* <sup>1</sup> torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment* <sup>2</sup> of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass* <sup>2</sup> (g)
<b>XBWS-15C2A</b>	6	0.42	42000	5.0×10 <sup>-7</sup>	300	0.05	1	±0.2	20
<b>XBWS-19C2A</b>	8	0.6	33000	1.6×10 <sup>-6</sup>	550	0.15	2	±0.2	38
<b>XBWS-25C2A</b>	12	1.1	25000	6.1×10 <sup>-6</sup>	1100	0.2	2	±0.4	71
<b>XBWS-27C2A</b>	14	1.3	23000	8.2×10 <sup>-6</sup>	1300	0.2	2	±0.4	88
<b>XBWS-34C3A</b>	16	2.5	18000	2.5×10 <sup>-5</sup>	1800	0.25	2	±0.6	160
<b>XBWS-39C2A</b>	20	4.8	16000	5.1×10 <sup>-5</sup>	3500	0.3	2	±0.6	260
<b>XBWS-44C2A</b>	22	5.6	14000	8.9×10 <sup>-5</sup>	5500	0.3	2	±0.6	400
<b>XBWS-56C3A</b>	28	14	11000	2.9×10 <sup>-4</sup>	10000	0.3	2	±0.8	800

\*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

**XBWS-27C2A- 11-12**

