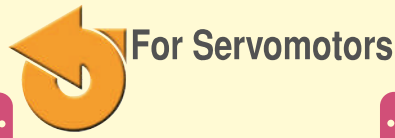
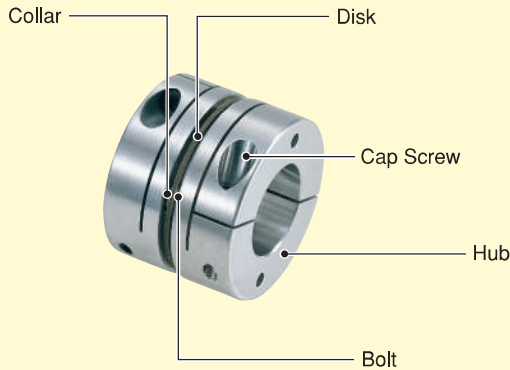


XBS



Configuration

XBS Aluminum Alloy



XBSS Stainless Steel



Material & Finish

Code	XBS	XBSS
Hub	A7075*	SUS303
Bolt	SCM435, Black Oxide Coating	SUSXM7
Disk	SUS304	
Collar	SUS304	
Cap Screw	SCM435, Black Oxide Coating**	SUSXM7

* Anodized coating is also possible. Please contact the customer service center for more information.

** 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.



* For more detailed information, please refer to pages 10~11.

Features

Merits

- High Torque, High Torsional Stiffness, High Response
- Zero Backlash

- Flexible disk coupling
- Compact design with short overall length
- Stainless steel disks absorb angular and shaft end-play misalignments, but do not absorb parallel misalignment
- Identical clockwise and counter-clockwise rotational characteristics
- **XBS** hub is manufactured from extra super duralumin (A7075) - the highest strength aluminum alloy
- **XBSS** features all stainless steel structure
- Available in a wide range of sizes. Outer diameter: $\phi 15 \sim \phi 104$
Bore Diameter: $\phi 3 \sim \phi 50$
- Finished products featuring two different end bore diameters available in stock

Application	
Servomotor	◎
Stepping Motor	◎
General-Purpose Motor	—
Encoder	—
Special Characteristics	
Zero Backlash	◎
High Torsional Stiffness	◎
High Torque	◎
Allowable Misalignment	—
Vibration Absorption	—
Electrical Insulation	—
Corrosion Resistant (All Stainless Steel)	◎

◎ : Excellent ● : Very Good

When Ordering

Specify product code and both bore diameters.

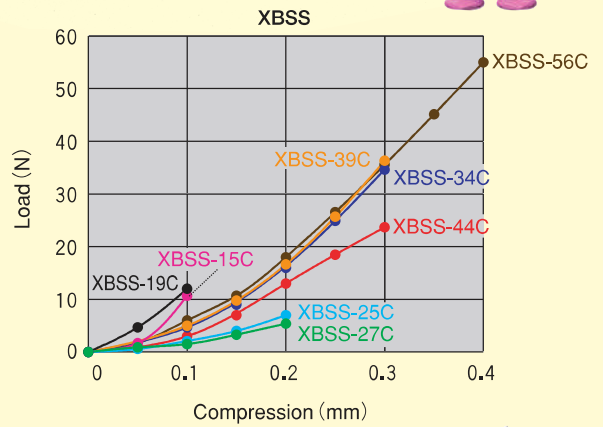
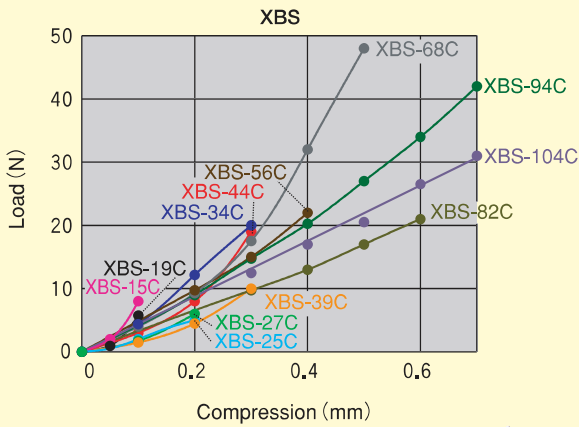
XBS-25C2-8×8

Product Code Disk Quantity D₁ D₂

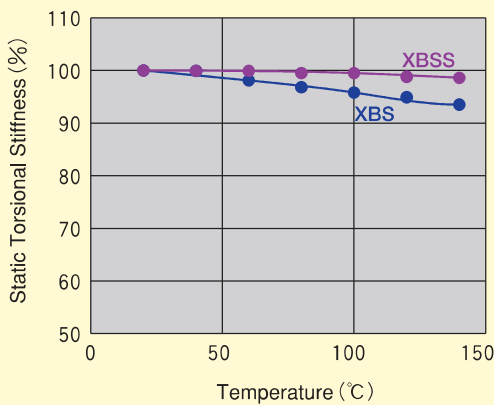


Technical Data

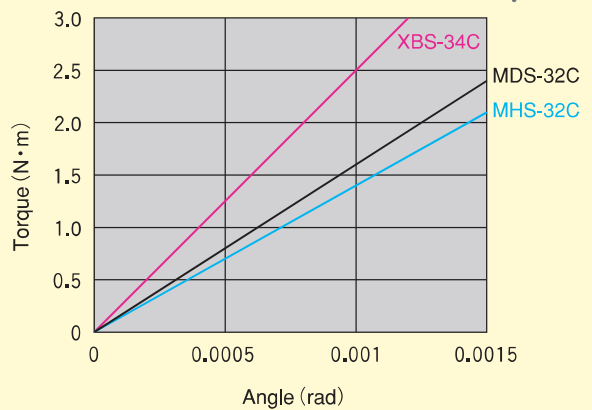
Thrust Reaction Force



Changes in Static Torsional Stiffness Caused by Temperature



Static Torsional Stiffness Comparisons



100% values represent product performance at 20°C. Because [XBS] and [XBSS] 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.

[XBS] has a high torsional stiffness and excellent response. Ideal for servomotors' high speed, precise positioning.

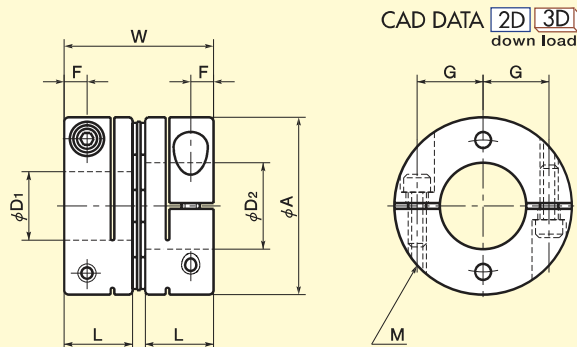
Disk Couplings

1mm length specifications & disk quantity specifications



* For more detailed information, please refer to pages 20~23.

● 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.



Dimensions

unit:mm

Product Code	A	L	W	F	G	M	Wrench Torque (N·m)
XBS - 15C2	15	7,5	16	2,3	5,25	M2	0,5
XBS - 19C2	19	9	19	2,5	7,1	M2	0,5
XBS - 25C2	25	11	23,6	3,5	9,25	M2,5	1
XBS - 27C2	27	11	23,6	3,5	10,25	M2,5	1
XBS - 34C3	34	12	26,2	4	13	M3	1,5
XBS - 39C2	39	15	32,8	5	14,5	M4	3,5
XBS - 44C2	44	15	32,8	5	17	M4	3,5
XBS - 56C3	56	20	43,2	6	21,25	M5	8
XBS - 68C5	68	24	53	7	25	M6	13
XBS - 82C5	82	31	68	9	29,5	M8	30
XBS - 94C7	94	31	68,8	9	35,5	M8	30
XBS -104C8	104	32	71,2	9	40,5	M8	30
XBSS- 15C2	15	7,5	16	2,3	5,25	M2	0,5
XBSS- 19C2	19	9	19	2,5	7,1	M2	0,5
XBSS- 25C2	25	11	23,6	3,5	9,25	M2,5	1
XBSS- 27C2	27	11	23,6	3,5	10,25	M2,5	1
XBSS- 34C3	34	12	26,2	4	13	M3	1,5
XBSS- 39C2	39	15	32,8	5	14,5	M4	3,5
XBSS- 44C2	44	15	32,8	5	17	M4	3,5
XBSS- 56C3	56	20	43,2	6	21,25	M5	8

Slip Torque

Please be aware that for the bore sizes shown in the table below, the slip torque is smaller than XBS and XBSS's maximum torque.

unit:N·m

Product Code	Bore Diameter (mm)							
	3	4	6	8	10	11	14	15
XBS-15C2	1	—	—	—	—	—	—	—
XBS-19C2	—	1,6	—	—	—	—	—	—
XBS-34C3	—	—	5,2	6	—	—	—	—
XBS-44C2	—	—	—	15	—	—	—	—
XBS-56C3	—	—	—	—	25	32	—	—
XBS-68C5	—	—	—	—	—	—	80	100

unit:N·m

Product Code	Bore Diameter (mm)								
	3	4	6	8	10	11	12	14	15
XBSS-15C2	1	—	—	—	—	—	—	—	—
XBSS-19C2	—	1	—	—	—	—	—	—	—
XBSS-34C3	—	—	5	6	—	—	—	—	—
XBSS-39C2	—	—	—	5,5	8	—	—	—	—
XBSS-44C2	—	—	—	4,5	6	10	—	—	—
XBSS-56C3	—	—	—	—	9	13	18	25	28

* Testing performed with an h7 tolerance shaft, hardness of 34~40 HRC and wrench torque shown in the above chart.



unit : mm

Product Code	Stock Bore Diameters																									
	D1 • D2																									
	3	4	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	50
XBS - 15C2	●	●	●	●																						
XBSS- 15C2																										
XBS - 19C2		●	●	●	●																					
XBSS- 19C2																										
XBS - 25C2			●	●	●	●	●	●																		
XBSS- 25C2																										
XBS - 27C2				●	●	●	●	●	●																	
XBSS- 27C2																										
XBS - 34C3				●	●	●	●	●	●	●																
XBSS- 34C3																										
XBS - 39C2					●	●	●	●	●	●	●	●	●													
XBSS- 39C2																										
XBS - 44C2					●	●	●	●	●	●	●	●	●	●												
XBSS- 44C2																										
XBS - 56C3						●	●	●	●	●	●	●	●	●	●	●	●	●								
XBSS- 56C3																										
XBS - 68C5										●	●	●	●	●	●	●	●	●	●	●	●					
XBSS- 68C5																										
XBS - 82C5													●	●	●	●	●	●	●	●	●	●				
XBSS- 82C5																										
XBS - 94C7																	●	●	●	●	●	●	●	●	●	●
XBSS- 94C7																										
XBS -104C8																					●	●	●	●	●	●
XBSS-104C8																										

- All products come with cap screws.
- Recommended tolerance for 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·m ²)	Static Torsional Stiffness (N·m/rad)	Errors of Angularity (°)	Errors of Shaft End-Play (mm)	Mass** (g)
XBS - 15C2	6	0.6	1.2	42000	9.8×10 ⁻⁸	300	0.5	±0.1	5
XBS - 19C2	8	1	2	33000	2.9×10 ⁻⁷	600	1	±0.1	9
XBS - 25C2	12	2	4	25000	1.1×10 ⁻⁶	1300	1	±0.2	17
XBS - 27C2	14	2.2	4.4	23000	1.4×10 ⁻⁶	1600	1	±0.2	21
XBS - 34C3	16	4.2	8.4	18000	4.0×10 ⁻⁶	2500	1	±0.3	43
XBS - 39C2	20	8	16	16000	9.8×10 ⁻⁶	4600	1	±0.3	83
XBS - 44C2	22	10	20	14000	1.6×10 ⁻⁵	6000	1	±0.3	105
XBS - 56C3	28	25	50	11000	5.7×10 ⁻⁵	14000	1	±0.4	232
XBS - 68C5	32	60	120	9000	1.6×10 ⁻⁴	25000	1	±0.5	388
XBS - 82C5	35	80	160	7000	4.2×10 ⁻⁴	42000	1	±0.6	740
XBS - 94C7	45	150	300	6000	6.9×10 ⁻⁴	55000	1	±0.7	960
XBS -104C8	50	200	400	6000	1.1×10 ⁻³	68000	1	±0.7	1180
XBSS- 15C2	6	0.5	1	42000	2.3×10 ⁻⁷	500	0.5	±0.1	15
XBSS- 19C2	8	1	2	33000	7.4×10 ⁻⁷	1000	1	±0.1	29
XBSS- 25C2	12	1.2	2.4	25000	2.8×10 ⁻⁶	1500	1	±0.2	53
XBSS- 27C2	14	1.5	3	23000	3.8×10 ⁻⁶	2100	1	±0.2	67
XBSS- 34C3	16	3.5	7	18000	1.1×10 ⁻⁵	3800	1	±0.3	115
XBSS- 39C2	20	5	10	16000	2.3×10 ⁻⁵	5500	1	±0.3	185
XBSS- 44C2	22	7	14	14000	3.9×10 ⁻⁵	7000	1	±0.3	305
XBSS- 56C3	28	15	30	11000	1.4×10 ⁻⁴	15000	1	±0.4	610

* 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.
 ** Moment of inertia and mass figures based on maximum bore dimensions.