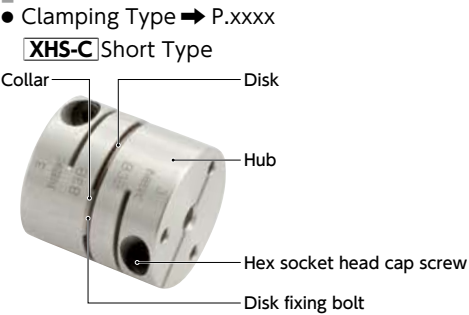


XHS-C Flexible Couplings - Single - Disk Type

Zero Backlash
 High torque
 High Rigidity

Structure



Applicable motors	XHS-C
Servomotor	○
Stepping Motor	○
General-purpose Motor	●

○: Excellent ●: Available

Property	XHS-C
Zero Backlash	○
High-gain Supported	○
High Torque	○
High Torsional Stiffness	○
Allowable Misalignment	○

○: Excellent ○: Very good

- This is a single disk type flexible coupling.
- High-torque specification with rated torque 1.5 times higher than conventional products.
- This is the most appropriate for a servomotor with instantaneous max. torque of 350%.
- The stainless steel disk allows eccentricity, and angular misalignment, and end-play.

Application	Actuator / Surface-mount machine / High precision XY stage / Index table
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Material/Finish	XHS-C	RoHS
Hub	A2017 Anodized*1	
Disk Fixing Bolts	SCM435 Ferrosioferric Oxide Film (Black)	
Disk	SUS304	
Collar	SUS304	
Hex Socket Head Cap Screw	SCM435 Ferrosioferric Oxide Film (Black)	

* 1 : Due to manufacturing process requirements, couplings may have bores with or without surface treatment. This does not affect the performance of the couplings.

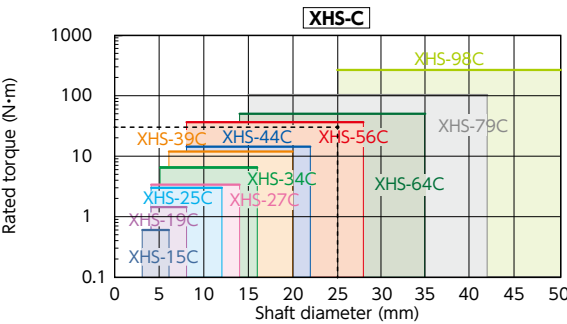
Part number specification		
XHS-27C-10 - 11		
Product Code	Size	Bore Diameter
Please refer to dimensional table for part number specification.		



Selection

Selection Based on Shaft Diameter and Rated Torque

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



- Selection Example
In case of selected parameters of shaft diameter of ϕ 25 and load torque of 30 N•m, the selected size is **XHS-56C**.

- Selection Based on the Rated Output of the Servomotor
XHS-C supports the servomotor with instantaneous max. torque increased to 350% of the rated torque and the size can be more reduced than the size of conventional product **XBS-C**.

Rated Output (W)	Servomotor Type				Servomotor Specifications*1			Selection Size	
	Mitsubishi Electric Corporation	YASKAWA Electric Corporation	SANYO DENKI Co., Ltd.	KEYENCE CORPORATION	Diameter of Motor Shaft (mm)	Rated Torque (N・m)	Instantaneous Max. Torque (N・m)	XHS-C	XBS-C
100					8	0.32	1.1	XHS-19C	XBS-25C
200					14	0.64	2.2	XHS-27C	XBS-34C
400	HG-KR	SGMJV	R2	SV	14	1.3	4.5	XHS-34C	XBS-39C
750					16 - 19	2.4	8.4	XHS-39C	XBS-44C

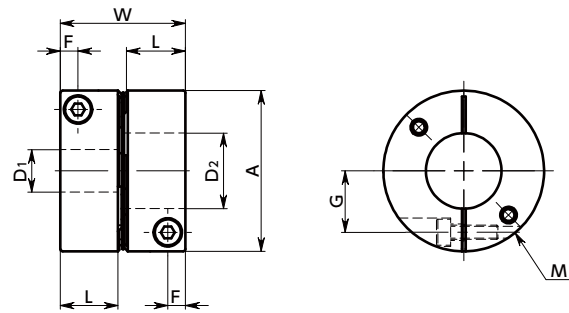
*1 : Motor specifications are based on general values. For details, see the motor manufacturer's catalogs. This is the size for cases where devices such as reduction gears are not used.

Additional Keyway at Shaft Hole → P.xxxx Available / Add'l charge	Cleanroom Wash & Packaging → P.xxxx Please feel free to contact us	Change to Stainless Steel Screw → P.xxxx Please feel free to contact us
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XHS-C Flexible Couplings - Single - Disk Type

Zero Backlash High torque High Rigidity

XHS-C

Outside diameter $\phi 15$

Dimensions

Unit : mm

Part Number	A	L	W	F	G	M	Screw Tightening Torque (N·m)
XHS-15C	15	7.8	16.5	2.3	5	M2	0.45
XHS-19C	19	9.2	19.3	2.6	7	M2	0.5
XHS-25C	25	11	23.1	3.3	9.25	M2.5	1
XHS-27C	27	11	23.1	3.3	10.25	M2.5	1
XHS-34C	34	12.5	26.4	3.75	13	M3	1.5
XHS-39C	39	15.5	32.8	4.5	14.5	M4	3.5
XHS-44C	44	15.5	32.8	4.5	17	M4	3.5
XHS-56C	56	20.5	43.5	6	21	M5	8
XHS-64C	64	24	51.2	7	24	M6	13
XHS-79C	79	30	63.6	8.75	29	M8	28
XHS-98C	98	32	69	8.7	38	M8	28

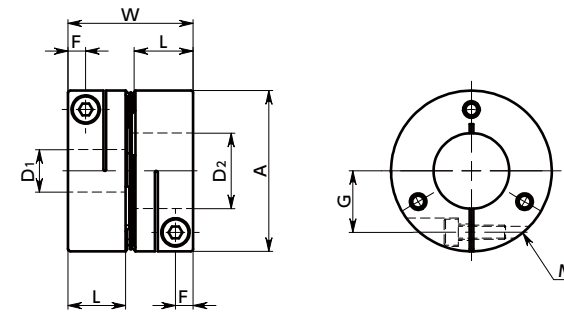
Part Number	Standard Bore Diameter																														
	D1	D2	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	50
XHS-15C			●	●	●	●																									
XHS-19C			●	●	●	●	●	●																							
XHS-25C				●	●	●	●	●	●		●	●	●																		
XHS-27C				●	●	●	●	●	●		●	●	●	●																	
XHS-34C					●	●	●	●	●		●	●	●	●	●																
XHS-39C						●	●				●	●	●	●	●	●	●	●	●												
XHS-44C							●	●			●	●	●	●	●	●	●	●	●	●											
XHS-56C							●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●							
XHS-64C										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
XHS-79C													●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
XHS-98C																							●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended tolerance for shaft diameters is h6 and h7. (Recommended tolerance for shaft diameter $\phi 35$ only is -0.025 to $+0.010$.)
- For the shaft insertion amount to the coupling, see Mounting/maintenance.

⚠ Precautions for Use

- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.xxxx
- There are sizes where the hex socket head bolt exceeds the outer diameter of the coupling and the rotating diameter is larger than the outer diameter. Please be careful of the interference of coupling. → P.xxxx

Additional Keyway at Shaft Hole → P.xxxx Cleanroom Wash & Packaging → P.xxxx Change to Stainless Steel Screw → P.xxxx
Available / Add'l charge Please feel free to contact us Available / Add'l charge

Outside diameter $\phi 19 - \phi 98$

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)
XHS-15C	6	0.6	42000	2.2×10^{-7}	110	0.01	0.7	± 0.1	6.8
XHS-19C	8	1.5	33000	6.3×10^{-7}	330	0.02	1	± 0.1	13
XHS-25C	12	3	25000	2.3×10^{-6}	1200	0.02	1	± 0.15	25
XHS-27C	14	3.3	23000	3.1×10^{-6}	1800	0.02	1	± 0.2	27
XHS-34C	16	6.3	18000	9.2×10^{-6}	3900	0.02	1	± 0.25	52
XHS-39C	20	12	16000	2.0×10^{-5}	6000	0.02	1	± 0.25	84
XHS-44C	22	15	14000	3.3×10^{-5}	7900	0.02	1	± 0.3	107
XHS-56C	28	37.5	11000	1.1×10^{-4}	14000	0.02	1	± 0.35	233
XHS-64C	35	50	9800	2.2×10^{-4}	16000	0.02	1	± 0.45	328
XHS-79C	42	100	7900	6.7×10^{-4}	23000	0.02	1	± 0.55	748
XHS-98C	50	280	6400	1.7×10^{-3}	52000	0.02	1	± 0.65	1120

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

※ The shaft's slip torque may be smaller than the coupling's rated torque depending on the shaft bore. → P.xxxx

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

- Part number specification

XHS-27C-8-10

1

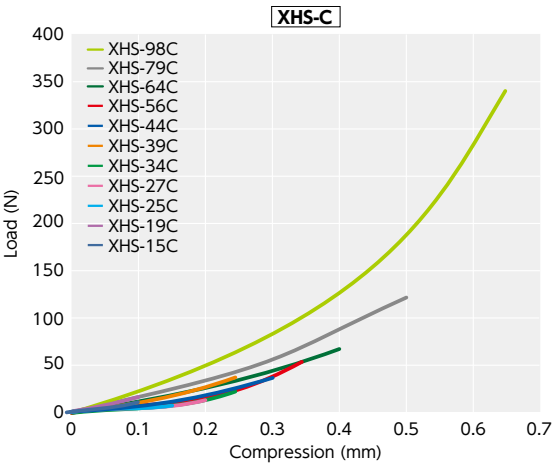
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XHS-C Flexible Couplings - Single - Disk Type

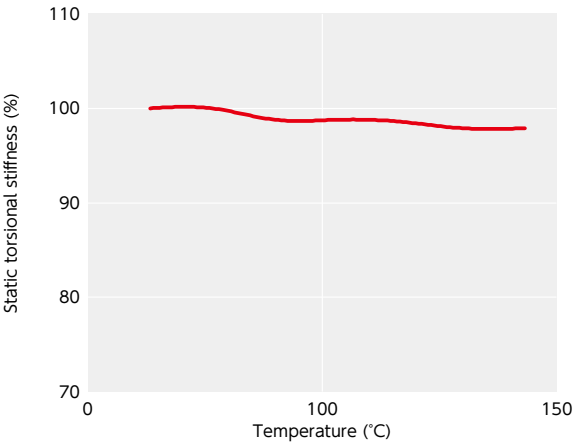
Zero Backlash
 High torque
 High Rigidity

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 **XHS-C** 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 type **XHS-C** has different slip torque according to the bore diameter. Take care during selection.

Outside Diameter	Bore Diameter (mm)																						
	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	25	28	30	32	35	38	40	42	45	
15	0.7																						
19	0.7	1.7	3																				
25		2.5	3.6	4.7	5																		
27		2	2.9	4	4.2	5.8																	
34			3.5	4.9	5.5	7.9	10	11	12														
39				6	8	13	18	19	23														
44						8	13	15	20	26													
56						22	34	37	45	55	66												
64								23	42	60	88												
79											140	150	180										
98														120	140	150	170	190	210	220	240	260	

- 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 **XHS-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.

Comparison of static torsional stiffness (single disk-type)

XHS-C has high static torsional stiffness and responsiveness.

Optimal for high-speed and precision positioning for servomotors, etc.

