

Couplings

High Positioning Accuracy / High Rigidity Disc Clamping

The stainless steel discs of this product have sharp edges that may cause injuries. Use of thick protective gloves is recommended.

For Servo Motors

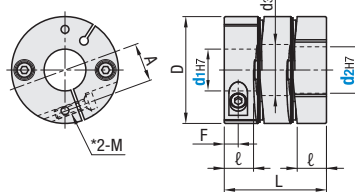
Couplings

Couplings – High Positioning Accuracy



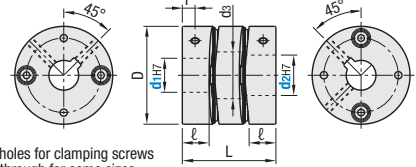
RoHS 10

SCXW (Double Disc Type)



- ① Tolerance values for d_1 , d_2 , are applied before slit is machined.
- ② The lateral, angular, and axial misalignment values shown are for each occurring individually. When more than one misalignments are occurring simultaneously, the allowable maximum value of each will be reduced by 1/2.
- ③ For the selection criteria and alignment procedures, see P1091, 1093.

SCXWK (Double Disc – Keywayed Bore) (Keywayed Bore d_1 , d_2)



*Tapped holes for clamping screws may go through for some sizes.

Type	Material			Surface Treatment			Accessories
	Body	Disc	Screw	Body	Disc	Screw	
SCXW SCXWK	Aluminum Alloy	Stainless Steel	4137 Alloy Steel	Clear Anodize	—	Trivalent Chromate	Hex Socket Head Cap Screw, Set Screw

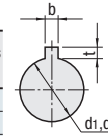
Part Number		d_1, d_2 ($d_1 \leq d_2$)										D	d_3	L	l	F		A	Clamp Screw			
Type	No.	① Only the dimensions marked with * are selectable for Keywayed Bore Type														SCXW	SCXWK		M	Tightening Torque (N-m)		
Double Disc Type SCXW	21	4	5	6	8*							21	9.5	24.5	7	3.5	3	7	M2.6	1.2		
	28		5	6	8*	10*						28	12	32	9	4	4	9.5	M3	1.5		
Double Disc Type – Keywayed Bore SCXWK	34			6	8*	10*	12*	14*				34	17	35	9.8	5	4.5	12	M3	1.5		
	46				8	10*	12*	14*	15	17	19	46	22	44	12.6	6	6	16.5	M4	3.5		
	55					12	14	15	17	19	20	22	24	25	54.5	26	55	16	7	—	20.5	M5

① SCXWK not available for No. 55.

② Static torsional spring constant, inertia moment, and mass values are for cases of maximum shaft diameter.

Part Number	Allowable Torque (N-m)	Ang. Misalign. (°)	Lat. Misalign. (mm)	Static Torsional Spring Const. (N-m/rad)	Max Rot. Speed (r/min)	Moment of Inertia (Kg-m ²)	Allowable Axial Misalign. (mm)	Comp. Factor	Mass (g)
SCXW SCXWK	21	1.2	1.0	0.10	900	1.20×10^{-6}	±0.20	1.5	18
	28	1.6	1.2	0.15	3600	4.68×10^{-6}			42
	34	4.0	1.5	0.20	5700	1.10×10^{-5}	65		
	46	10.0		0.25	14500	4.70×10^{-5}	151		
	55	25.0		23000	1.19×10^{-4}	260			

Keyway Dimension



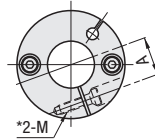
Shaft Bore Dia. d_1, d_2	b		t		Key Nominal Dim. b x h	Set Screw	
	Dim.	Tol.	Dim.	Tol.		Size	Tightening Torque (N-m)
8, 10	3	±0.0125	1.4	+0.1	3 x 3	M2	0.3
12	4	±0.0150	1.8	0	4 x 4	M3	0.7
14	5		2.3		5 x 5	M4	1.7

Highly suitable for applications requiring high speeds and high positioning accuracies, such as ball screw drives.

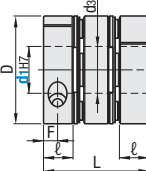
Couplings – High Rigidity Disc Clamping



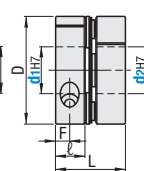
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SCPW (Double Disc Type)



SCPS (Single Disc Type)



- ① Tolerances for d_1 , d_2 are values before slit machining.
- ② The lateral, angular, and axial misalignment values shown are for each occurring individually. When more than one misalignments are occurring simultaneously, the allowable maximum value of each will be reduced by 1/2.
- ③ For the selection criteria and alignment procedures, see P1091, 1093.

*Tapped hole for clamp screw might go through for some sizes.

Type	Material			Surface Treatment			Accessories
	Body	Disc	Screw	Body	Disc	Screw	
SCPW SCPS	Aluminum Alloy	Stainless Steel	4137 Alloy Steel	Clear Anodize	—	Black Oxide	Hex Socket Head Cap Screw

Part Number		d_1, d_2 select (must be $d_1 \leq d_2$)										D	d_3	L		l	F	A	Clamp Screw			
Type	No.													SCPW	SCPS				M	Tightening Torque (N-m)		
Double Disc Type SCPW	16	*3	4	5	6							16.6	6.5	23	16.6	7.2	3	5.3	M2.6	1.0		
	21		4	5	6	8	9					21	9.5	24.5	16.7	7	3.5	7	M2.6	1.2		
	28			5	6	8	9	10				28	12	32.2	21.5	9	4	9.5	M3	1.5		
Single Disc Type SCPS	34			6	8	9	10	11	12	14		34	15	35	23.3	9.8	5	12	M3	1.5		
	46				8	9	10	11	12	14	15	17	19	46	22	44	29.8	12.6	6	16.5	M4	3.5
	55					12	14	15	17	19	20	22	24	25	54.5	26	55	37.2	16	7	20.5	M5

① For * marked d_1, d_2 , use with the load torque 60% or less than shown in the table to prevent slipping.

Double Discs Type (High Rigidity Type)

Part No.	Allowable Torque (N-m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max Rot. Speed (r/min)	Moment of Inertia (Kg-m ²)	Allowable Axial Misalign. (mm)	Comp. Factor	Mass (g)
SCPW	16	1.0	1.0	500	10000	4.22×10^{-7}	±0.20	1.5	11
	21	1.2		800		1.11×10^{-6}			17
	28	1.6	0.15	3000		4.68×10^{-6}			42
	34	4.0	0.20	4800		1.10×10^{-5}			65
	46	10.0	0.25	11500		4.70×10^{-5}			151
55	25.0		19000	1.19×10^{-4}	260				

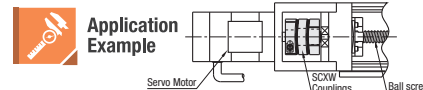
① Static torsional spring constant, inertia moment, and mass values are for cases of maximum shaft diameter.

Single Disc Type (High Rigidity Type)

Part No.	Allowable Torque (N-m)	Ang. Misalign. (°)	Static Torsional Spring Constant (N-m/rad)	Max Rot. Speed (r/min)	Moment of Inertia (Kg-m ²)	Allowable Axial Misalign. (mm)	Comp. Factor	Mass (g)
SCPS	16	1.0	1000	10000	3.16×10^{-7}	±0.10	1.5	8
	21	1.2			7.90×10^{-7}			12
	28	1.6	6000		3.24×10^{-6}			30
	34	4.0	8000		7.60×10^{-6}			45
	46	10.0	20000		3.23×10^{-5}			105
	55	25.0	33000		8.19×10^{-5}			180

① Single Disc Type cannot tolerate lateral misalignment.

Part Number Example	Part Number	Shaft Bore Dia. d_1	Shaft Bore Dia. d_2
	SCXW46	10	14
	SCXWK46	12	14
	SCPW34	8	12



Highly suitable for applications requiring high speeds and high positioning accuracies, such as ball screw drives.