

SD Series

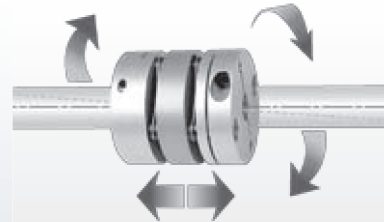
Zero Backlash Disk Coupling

DISK COUPLING of SI is built-in coupling which provides big torsion rigidity and superior mobility, and it is high precision coupling that has nearly permanent lifespan.

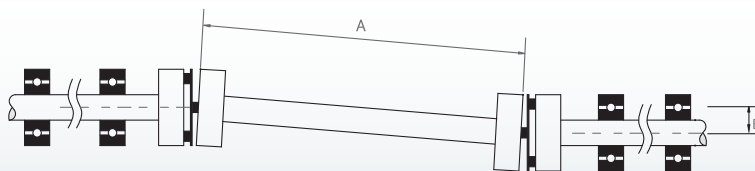
DISK COUPLING of SI can rotate with high speed in one or two directions and is often used mainly in high-precision measuring equipments, high speed movement control system, critical weight, dynamometer, precision encoder and so forth.

Features

- Designed with high torsion rigidity
- Not affected by backlash and has semi permanent lifespan
- Accept amplitude, eccentricity and misalignment between shafts
- Single-stage and double-stage types
- Built-in metal structure
- Low inertia
- High-precision position controlling system
- Identical regular and reverse rotational characteristics
- Maintenance free and excellent resistance against oil



Allowance Parallel applying floaton shaft

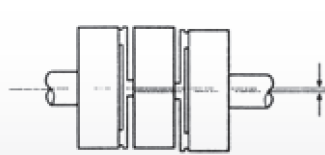


Allowance Parallel B $B = A \times \sin \theta$
 Here, A : Floaton shaft length
 θ : Allowance Angle of Coupling

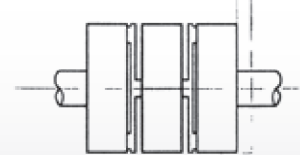
Misalignment



Angle allowance : $\pm^\circ$



Parallel(Center line Difference) : $\pm\text{mm}$



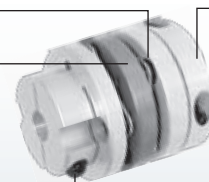
End-Play allowance : $\pm\text{mm}$

Application

- Servo motor, stepping motor, precision motor and so forth
- High precision encoder and dynamometer drive
- High speed and high precision position controlling system, centrifugal separator
- Copy machine, information, communication and audio equipment

Structure & Material

Disk : Stainless
 Plate : Aluminum Alloy and Alumite
 Hub : Aluminum Alloy and Alumite
 Fastening Bolt : High Tensile Bolt



How to order product



※ Please mark each inner diameter size.

※ It is impossible for you to ask additional keyway process and change inner dia size after order SI disk coupling.

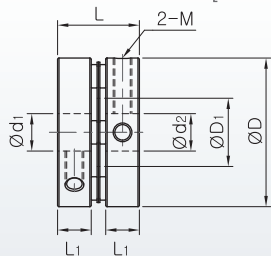
※ When you assemble your machinery by our coupling, please disassemble our disk coupling arbitrarily because of SI dick coupling is assembled by optimal situation.

SD Series

Zero Backlash Disk Coupling

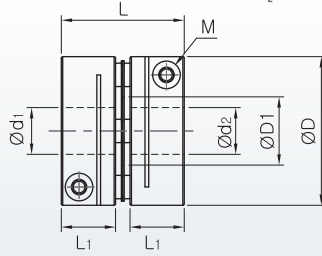
SDS - ■ ■ ■

[SET SCREW TYPE]



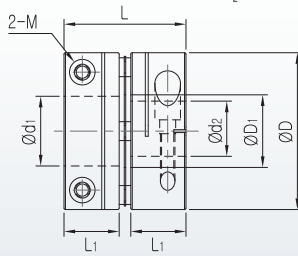
SD ■ S - ■ ■ ■ C

[CLAMP TYPE]



SDCS-54C

[CLAMP TYPE]

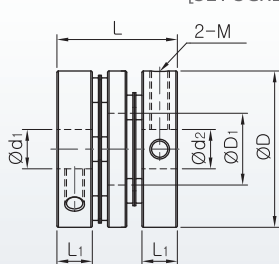


Standards & Performance

Product Number	Dimension (± 0.3)				Fastening Bolt M	Fastening Torque (N · m)	Max. RPM (min^{-1})	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia ($\text{kg} \cdot \text{m}^2$)	Mass (g)	Errors of Misalignment		
	D	D ₁	L	L ₁									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-16	16	6.2	11.9	5.1	M2.5	0.5	12,000	1	0.5	270	1.8×10^{-7}	5	1	0	0.1
SDS-16C	16	6.2	17.4	7.8	M2	0.5	10,000	1	0.5	270	2.6×10^{-7}	7	1	0	0.1
SDS-19	19	8.2	14	6.1	M3	0.7	12,000	1.8	0.9	500	3.0×10^{-7}	6	1	0	0.1
SDS-19C	19	8.2	19.2	8.7	M2.5	1	10,000	1.8	0.9	500	4.0×10^{-7}	8	1	0	0.1
SDS-22	22.2	9	14.7	6.2	M3	0.7	12,000	2.2	1.1	600	6.9×10^{-7}	10	1	0	0.1
SDS-22C	22.2	9	19.6	8.7	M2.5	1	10,000	2.2	1.1	600	1.0×10^{-6}	15	1	0	0.1
SDS-26	26.2	12.2	17.5	7.35	M4	1.7	10,000	3	1.5	900	2.0×10^{-6}	20	1	0	0.15
SDS-26C	26.2	12.2	24.1	10.7	M3	1.7	9,000	3	1.5	900	2.4×10^{-6}	15	1	0	0.15
SDS-31	31.8	14.5	17.5	7.2	M4	1.7	9,000	6	3	1,700	4.4×10^{-6}	30	1	0	0.2
SDS-31C	31.8	14.5	26.5	11.6	M3	1.7	8,500	6	3	1,700	5.8×10^{-6}	40	1	0	0.2
SDS-39C	39	13.6	31.2	13.6	M4	3.5	8,000	10	5	2,300	1.6×10^{-5}	70	1	0	0.2
SDCS-42C	42.5	18	31.4	13.6	M4	3.5	8,000	12	6	2,800	3.4×10^{-5}	95	1	0	0.2
SDCS-47C	47	20.4	35.6	16	M4	3.5	7,000	20	10	6,000	5.4×10^{-5}	140	1	0	0.2
SDCS-54C	54	25	42	19	M5	8	6,000	44	22	11,000	9.8×10^{-5}	200	1	0	0.2

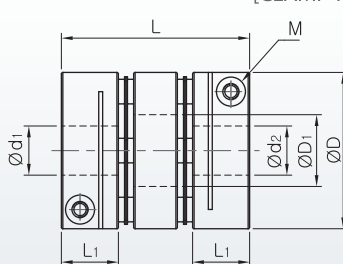
SDW ■ - ■ ■ ■

[SET SCREW TYPE]



SDW ■ - ■ ■ ■ C

[CLAMP TYPE]



Standards & Performance

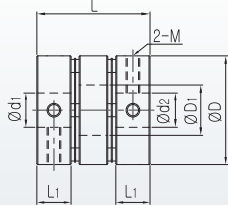
Product Number	Dimension (± 0.3)				Fastening Bolt M	Fastening Torque (N · m)	Max. RPM (min^{-1})	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia ($\text{kg} \cdot \text{m}^2$)	Mass (g)	Errors of Misalignment		
	D	D ₁	L	L ₁									Angle (°)	Parallel (mm)	End-Play (mm)
SDWA-16	16	6.2	15.6	5.1	M2.5	0.5	12,000	1	0.5	200	2.2×10^{-7}	6	3	0.2	0.2
SDWB-16	16	6.2	17.6	5.1	M2.5	0.5	12,000	1	0.5	200	2.6×10^{-7}	7	3	0.2	0.2
SDWA-16C	16	6.2	21	7.8	M2	1	10,000	1	0.5	200	3.3×10^{-7}	9	3	0.2	0.2
SDWB-16C	16	6.2	23	7.8	M2	1	10,000	1	0.5	200	3.7×10^{-7}	10	3	0.2	0.2
SDWA-19	19	8.2	18	6.1	M3	0.7	12,000	1.8	0.9	300	5.3×10^{-7}	10	3	0.2	0.2
SDWB-19	19	8.2	21	6.1	M3	0.7	12,000	1.8	0.9	300	5.8×10^{-7}	11	3	0.2	0.2
SDWA-19C	19	8.2	23	8.7	M2.6	1	10,000	1.8	0.9	300	7.4×10^{-7}	14	3	0.2	0.2
SDWB-19C	19	8.2	26.2	8.7	M2.6	1	10,000	1.8	0.9	300	7.9×10^{-7}	15	3	0.2	0.2

SD Series

Zero Backlash Disk Coupling

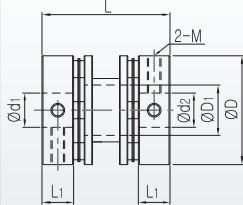
SDW ■ - ■ ■ ■

[SET SCREW TYPE]



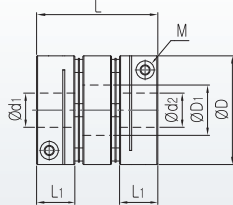
SDA - ■ ■ ■

[SET SCREW TYPE]



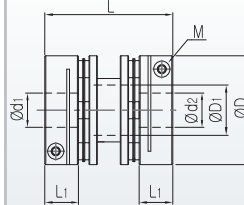
SDW ■ - ■ ■ ■ C

[CLAMP TYPE]



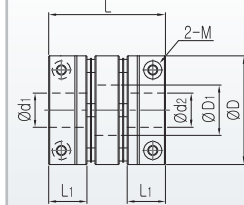
SDA - ■ ■ ■ C

[CLAMP TYPE]



SDWB(C)-54C

[CLAMP TYPE]



Standards & Performance

Product Number	Dimension (±0.3)				Fastening Bolt M	Fastening Torque (N·m)	Max. RPM (min ⁻¹)	Max Torque (N·m)	Rated Torque (N·m)	Torsional Stiffness (N·m/rad)	Moment of Inertia (kg·m ²)	Mass (g)	Errors of Misalignment		
	D	D ₁	L	L ₁									Angle (°)	Parallel (mm)	End-Play (mm)
SDWA-22	22.2	9	20	6.2	M3	0.7	12,000	2.2	1.1	400	1.0 × 10 ⁻⁶	16	2	0.2	0.2
SDWB-22	22.2	9	22.2	6.2	M3	0.7	12,000	2.2	1.1	400	1.1 × 10 ⁻⁶	17	2	0.3	0.2
SDA-22	22.2	8.3	28.2	6.2	M3	0.7	12,000	2.2	1.1	400	1.3 × 10 ⁻⁶	18	2	0.4	0.2
SDWA-22C	22.2	9	25	8.7	M2.6	1	10,000	2.2	1.1	400	1.3 × 10 ⁻⁶	18	2	0.2	0.2
SDWB-22C	22.2	9	27	8.7	M2.6	1	10,000	2.2	1.1	400	1.4 × 10 ⁻⁶	19	2	0.3	0.2
SDA-22C	22.2	8.3	33	8.7	M2.6	1	10,000	2.2	1.1	400	1.5 × 10 ⁻⁶	20	2	0.4	0.2
SDWA-26	26.6	12.2	26	7.35	M4	1.7	10,000	3	1.5	600	2.3 × 10 ⁻⁶	28	2	0.3	0.3
SDA-26	26.6	10.5	31.5	7.35	M4	1.7	10,000	3	1.5	600	3.2 × 10 ⁻⁶	32	2	0.4	0.3
SDWA-26C	26.6	12.2	32.6	10.7	M3	1.7	9,000	3	1.5	600	3.4 × 10 ⁻⁶	34	2	0.3	0.3
SDA-26C	26.6	10.5	38.5	10.7	M3	1.7	9,000	3	1.5	600	3.9 × 10 ⁻⁶	39	2	0.4	0.3
SDWA-31	31.8	14.5	24.5	7.2	M4	1.7	9,000	6	3	1,300	4.3 × 10 ⁻⁶	30	2	0.2	0.4
SDWB-31	31.8	14.5	29.5	7.2	M4	1.7	9,000	6	3	1,300	5.5 × 10 ⁻⁶	38	2	0.3	0.4
SDA-31	31.8	12.5	36	7.2	M4	1.7	9,000	6	3	1,300	5.5 × 10 ⁻⁶	38	2	0.4	0.4
SDWA-31C	31.8	14.5	33.5	11.6	M3	1.7	8,500	6	3	1,300	7.5 × 10 ⁻⁶	52	2	0.2	0.4
SDWB-31C	31.8	14.5	38.5	11.6	M3	1.7	8,500	6	3	1,300	8.8 × 10 ⁻⁶	60	2	0.3	0.4
SDA-31C	31.8	12.5	44.7	11.6	M3	1.7	8,500	6	3	1,300	8.8 × 10 ⁻⁶	60	2	0.4	0.4
SDWA-39C	39	17	39	13.6	M4	3.5	8,000	10	5	1,800	2.1 × 10 ⁻⁵	95	2	0.2	0.4
SDWC-39C	39	17	44.8	13.6	M4	3.5	8,000	10	5	1,800	2.4 × 10 ⁻⁵	110	2	0.3	0.4
SDA-39C	39	17	56.2	13.6	M4	3.5	8,000	10	5	1,800	3.0 × 10 ⁻⁵	120	2	0.4	0.4
SDWC-42C	42.5	18	46	13.6	M4	3.5	8,000	12	6	2,000	3.3 × 10 ⁻⁵	120	2	0.3	0.5
SDWC-47C	47	20.4	50	16	M4	3.5	7,000	20	10	4,000	5.5 × 10 ⁻⁵	160	2	0.4	0.5
SDWB-54C	54	25	52	19	M5	8	6,000	44	22	7,000	1.1 × 10 ⁻⁴	250	2	0.3	0.5
SDWC-54C	54	25	58	19	M5	8	6,000	44	22	7,000	1.2 × 10 ⁻⁴	280	2	0.4	0.5

Standard Inner diameter

Product Number	Standard Inner diameter (d ₁ , d ₂) Standard INNER Diameter (mm)																							
	3	4	4,5	5	6	6,35	7	8	9	9,525	10	11	12	12,7	14	15	15,875	16	17	18	19	20	24	25
SD□□-16□	●	●	●	●																				
SD□□-19□	●	●	●	●	●																			
SD□□-22□	●	●	●	●	●	●	●	●	●★	●★														
SD□□-26□		●	●	●	●	●	●	●	●	●	●													
SD□□-31□				●	●	●	●	●	●	●	●	●	●	●	●	●★								
SD□□-39□				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
SD□□-42C					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★			
SD□□-47C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
SD□□-54□											●	●	●	●	●	●	●	●	●	●	●	●	●	●

■ INNER diameter INCH type is also available

■ Non standard inner diameter product is also available

■ We recommend that tolerance of shaft is H7.

■ KEY TYPE is also available

■ Inner diameter size of SDWA-□ □ is same with SDWB-□ □

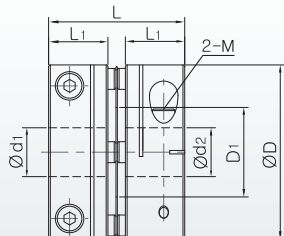
The inner diameter that is marked ★ is not available by shaft through type

SD Series

Zero Backlash Disk Coupling

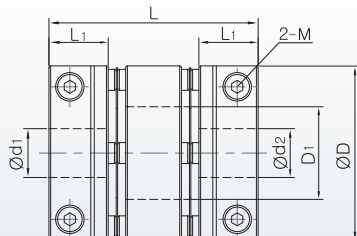
SDS - ■ ■ ■ C

[CLAMP TYPE]



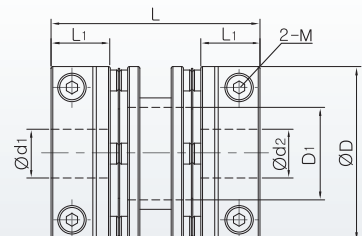
SDW - ■ ■ ■ C

[CLAMP TYPE]



SDA - ■ ■ ■ C

[CLAMP TYPE]



Standards & Performance

Product Number	Dimension (±0.3)				Fastening Bolt M	Fastening Torque (N · m)	Max. RPM (min ⁻¹)	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia (kg · m ²)	Mass (g)	Errors of Misalignment		
	D	D ₁	L	L ₁									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-80C	80	35	66.8	30	M8	30	6,000	150	75	32,000	7.5×10^{-4}	800	2	0	0.3
SDW-80C	80	35	82.5	30	M8	30	6,000	150	75	16,000	8.4×10^{-4}	900	2	0.4	0.6
SDA-80C	80	32	98.5	30	M8	30	6,000	150	75	16,000	9.5×10^{-4}	1,000	2	0.5	0.6
SDS-90C	94.5	41.6	68.5	30.4	M8	30	6,000	300	150	150,000	1.2×10^{-3}	930	2	0	0.4
SDW-90C	94.5	41.6	98	30.4	M8	30	6,000	300	150	70,000	1.8×10^{-3}	1,350	2	0.4	0.8
SDS-100C	104.5	47	71	30.6	M8	30	6,000	440	220	200,000	2.2×10^{-3}	1,300	2	0	0.4
SDW-100C	104.5	47	102.5	30.6	M8	30	6,000	440	220	100,000	2.9×10^{-3}	1,700	2	0.4	0.8

Standard Inner diameter

Product Number	Standard Inner diameter (d ₁ , d ₂) Standard INNER Diameter (mm)															
	15	16	18	19	20	22	24	25	28	30	32	35	40	45	50	50
SDS-80C	●	●	●	●	●	●	●	●	●	●	●					
SDW-80C	●	●	●	●	●	●	●	●	●	●	●					
SDS-90C					●	●	●	●	●	●	●	●	●	●		
SDW-90C					●	●	●	●	●	●	●	●	●	●		
SDS-100C					●	●	●	●	●	●	●	●	●	●	●★	
SDW-100C					●	●	●	●	●	●	●	●	●	●	●★	

- INNER diameter INCH type is also available
- We recommend that tolerance of shaft is H7.

- Non standard inner diameter product is also available
- The inner diameter that is marked ★ is not available by shaft through type

- KEY TYPE is also available

SDS - ■ ■ ■ C

SDWA - ■ ■ ■ C

SDWB - ■ ■ ■ C

SDWC - ■ ■ ■ C

SDAA - ■ ■ ■ C

SDAB - ■ ■ ■ C

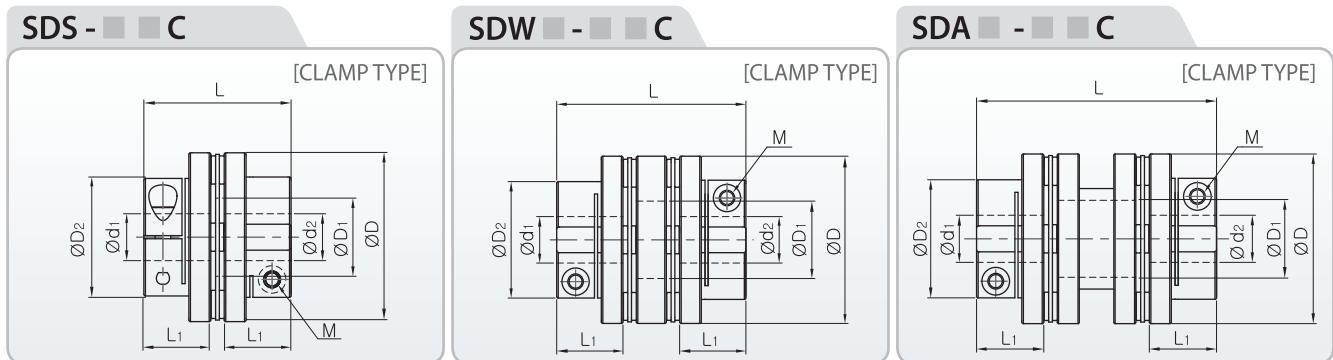
SDAC - ■ ■ ■ C



※ Hub design can be changed according to diameter size

SD Series

Zero Backlash Disk Coupling



Standards & Performance

Product Number	Dimension (± 0.3)					Fastening Bolt M	Fastening Torque (N · m)	Max. RPM (min ⁻¹)	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia (kg · m ²)	Mass (g)	Errors of Misalignment		
	D	D ₁	D ₂	L	L ₁									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-42C	42.5	18	29.2	31	13.5	M3	1.7	8,000	12	6	2,800	1.7×10^{-5}	65	1.5	0	0.2
SDWA-42C	42.5	18	29.2	39.7	13.5	M3	1.7	8,000	12	6	2,000	2.1×10^{-5}	84	3	0.2	0.5
SDWB-42C	42.5	18	29.2	44.2	13.5	M3	1.7	8,000	12	6	2,000	2.4×10^{-5}	94	3	0.3	0.5
SDAA-42C	42.5	18	29.2	50	13.5	M3	1.7	8,000	12	6	2,000	2.7×10^{-5}	105	3	0.4	0.5
SDAB-42C	42.5	18	29.2	58	13.5	M3	1.7	8,000	12	6	2,000	2.8×10^{-5}	110	3	0.5	0.5
SDAC-42C	42.5	18	29.2	67.2	13.5	M3	1.7	8,000	12	6	2,000	2.9×10^{-5}	115	3	0.6	0.5
SDS-47C	47	20.4	33	37	16.7	M4	3.5	7,500	20	10	6,000	3.2×10^{-5}	108	1.5	0	0.2
SDWA-47C	47	20.4	33	45.5	16.7	M4	3.5	7,500	20	10	4,000	3.6×10^{-5}	120	3	0.2	0.5
SDWB-47C	47	20.4	33	51.3	16.7	M4	3.5	7,500	20	10	4,000	3.9×10^{-5}	132	3	0.4	0.5
SDAA-47C	47	20	33	63.7	16.7	M4	3.5	7,500	20	10	4,000	4.5×10^{-5}	152	3	0.5	0.5
SDAB-47C	47	20	33	90.5	16.7	M4	3.5	7,500	20	10	4,000	5.1×10^{-5}	172	3	0.8	0.5
SDS-54C	54	25	38.5	47	21.5	M5	8	7,000	44	22	11,000	5.5×10^{-5}	145	1.5	0	0.2
SDWA-54C	54	25	38.5	60.5	21.5	M5	8	7,000	44	22	7,000	7.2×10^{-5}	192	3	0.2	0.5
SDAA-54C	54	24	38.5	75.6	21.5	M5	8	7,000	44	22	7,000	9.0×10^{-5}	240	3	0.5	0.5
SDAB-54C	54	24	38.5	89.5	21.5	M5	8	7,000	44	22	7,000	1.1×10^{-4}	266	3	0.7	0.5
SDS-64C	64	25.5	48	58	26	M6	13	6,500	62	31	20,000	1.8×10^{-4}	292	1.5	0	0.2
SDWA-64C	64	25.5	48	74	26	M6	13	6,500	62	31	11,000	2.2×10^{-4}	373	3	0.3	0.5
SDA-64C	64	25.5	48	89.5	26	M6	13	6,500	62	31	11,000	2.7×10^{-4}	450	3	0.5	0.5

Standard Inner diameter

Product Number	Standard Inner diameter (d ₁ , d ₂) Standard INNER Diameter (mm)																				
	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	17	18	19	20	21	22
SD□□-42C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SD□□-47C					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SD□□-54C								●	●	●	●	●	●	●	●	●	●	●	●	●	●
SD□□-64C									●	●	●	●	●	●	●	●	●	●	●	●	●

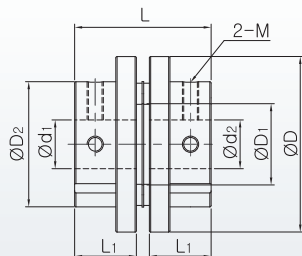
- INNER diameter INCH type is also available
- Non standard inner diameter product is also available
- We recommend that tolerance of shaft is H7.
- KEY TYPE is also available
- Inner diameter size of SDWA-□□ is same with SDWB-□□
- The inner diameter that is marked ★ is not available by shaft through type

SD Series

Zero Backlash Disk Coupling

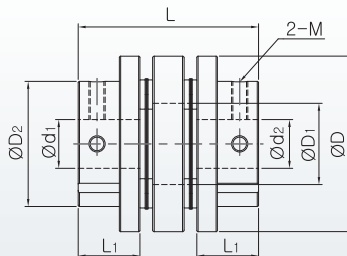
SDS - ■ ■ ■

[SET SCREW TYPE]



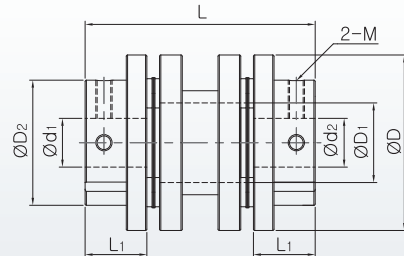
SDW ■ ■ ■

[SET SCREW TYPE]



SDA ■ ■ ■

[SET SCREW TYPE]



Standards & Performance

Product Number	Dimension (±0.3)					Fastening Bolt M	Fastening Torque (N·m)	Max. RPM (min ⁻¹)	Max Torque (N·m)	Rated Torque (N·m)	Torsional Stiffness (N·m/rad)	Moment of Inertia (kg·m ²)	Mass (g)	Errors of Misalignment		
	D	D ₁	D ₂	L	L ₁									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-42	42.5	18	29.2	31	13.5	M4	1.7	8,000	12	6	2,800	1.7 × 10 ⁻⁵	65	1.5	0	0.2
SDWA-42	42.5	18	29.2	39.7	13.5	M4	1.7	8,000	12	6	2,000	2.1 × 10 ⁻⁵	84	3	0.2	0.5
SDWB-42	42.5	18	29.2	44.2	13.5	M4	1.7	8,000	12	6	2,000	2.4 × 10 ⁻⁵	94	3	0.3	0.5
SDAA-42	42.5	18	29.2	50	13.5	M4	1.7	8,000	12	6	2,000	2.7 × 10 ⁻⁵	105	3	0.4	0.5
SDAB-42	42.5	18	29.2	58	13.5	M4	1.7	8,000	12	6	2,000	2.8 × 10 ⁻⁵	110	3	0.5	0.5
SDAC-42	42.5	18	29.2	67.2	13.5	M4	1.7	8,000	12	6	2,000	2.9 × 10 ⁻⁵	115	3	0.6	0.5
SDS-47	47	20.4	33	31.7	14	M5	4	8,000	20	10	6,000	2.7 × 10 ⁻⁵	91	1.5	0	0.2
SDWA-47	47	20.4	33	40	14	M5	4	8,000	20	10	4,000	3.4 × 10 ⁻⁵	115	3	0.2	0.5
SDWB-47	47	20.4	33	46	14	M5	4	8,000	20	10	4,000	3.6 × 10 ⁻⁵	120	3	0.4	0.5
SDAA-47	47	20	33	58.5	14	M5	4	8,000	20	10	4,000	4.2 × 10 ⁻⁵	140	3	0.5	0.5
SDAB-47	47	20	33	85	14	M5	4	8,000	20	10	4,000	4.7 × 10 ⁻⁵	160	3	0.8	0.5
SDS-54	54	25	38.5	42.2	19	M5	4	7,500	44	22	11,000	4.9 × 10 ⁻⁵	130	1.5	0	0.2
SDWA-54	54	25	38.5	55.5	19	M5	4	7,500	44	22	7,000	6.7 × 10 ⁻⁵	177	3	0.2	0.5
SDAA-54	54	24	38.5	71	19	M5	4	7,500	44	22	7,000	9.0 × 10 ⁻⁵	230	3	0.5	0.5
SDAB-54	54	24	38.5	85	19	M5	4	7,500	44	22	7,000	1.1 × 10 ⁻⁴	250	3	0.7	0.5
SDS-64	64	25.5	48	58	26	M8	15	7,000	62	31	20,000	1.8 × 10 ⁻⁴	292	1.5	0	0.2
SDWA-64	64	25.5	48	74	26	M8	15	7,000	62	31	11,000	2.2 × 10 ⁻⁴	373	3	0.3	0.5
SDA-64	64	25.5	48	89.5	26	M8	15	7,000	62	31	11,000	2.7 × 10 ⁻⁴	450	3	0.5	0.5

Standard Inner diameter

Product Number	Standard Inner diameter (d ₁ , d ₂) Standard INNER Diameter (mm)																											
	5	6	6,35	7	8	9	9,525	10	11	12	12,7	14	15	15,875	16	17	18	19	20	21	22	24	25	26	28	30	35	
SD□□-42		●	●	●	●	●	●	●	●	●	●	●	●															
SD□□-47					●	●	●	●	●	●	●	●	●	●	●	●	●	●										
SD□□-54								●	●	●	●	●	●	●	●	●	●	●	●	●								
SD□□-64										●	●	●	●	●	●	●	●	●	●	●	●	●	●	★	★	★	★	★

- INNER diameter INCH type is also available
- We recommend that tolerance of shaft is H7.

- Non standard inner diameter product is also available
- The inner diameter that is marked ★ is not available by shaft through type

- KEY TYPE is also available