벤처기업

벤처디자인

ISO9001 2008/ISO 14001 2004

INNOBIZ
중소기업 기술혁신 협회

koita
기업부설연구소

SUNG-IL

Ultra-precision Couplings
Connecting Shaft
Support Units
F.A. Units
A.P. Lock

Sung-il Machinery Co., Ltd.

SD Series

Zero Backlash Disk Coupling

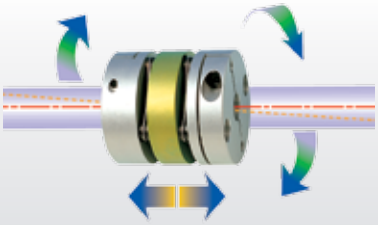
'SI. CO' mark(Trademark : 40-2012-0061376) indicates that the authenticity is certified.
'SDS, SDW'(Trademark : 40-2012-0044877, 0044876) is the original trademark for SUNG-IL's Disk Coupling.

Sung-il's DISK COUPLING has large torsional stiffness and zero backlash, and it is a highly precise coupling that has a infinite life expectancy . Sung-il's DISK COUPLING can rotate with high speed in uni-direction or bi-directions and is used mainly in high-precision measuring equipments, high speed movement control systems, dynamometer, precision encoder and so forth.

RoHS COMPLIANT REACH The new EU chemicals legislation

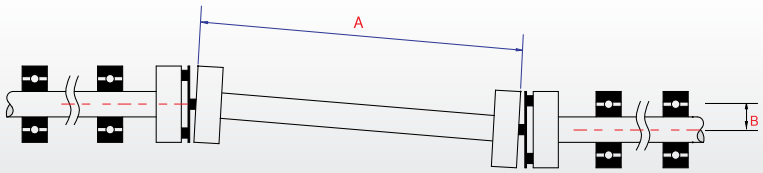
Features

- Absorbs misalignment by plat spring (Single disk type cannot accept parallel misalignment)
- High torsional stiffness
- Zero backlash
- Semi-permanent life time
- Identical clockwise and counter-clockwise rotational characteristics
- Low moment of inertia
- Accurate and fast response performance
- 2 types: Single disk, Double disk
- Assembly of Disk Coupling with stainless steel component(bolt, collar) is available(please contact us)



※ Patent application : 10-2012-0057200

Allowance for Parallel misalignment when applying midde shaft



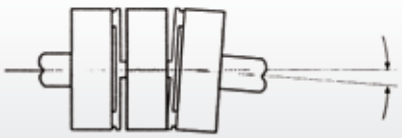
Allowance for parallel misalignment B

$B = A \times \sin\theta$

A : Fluctuating shaft length

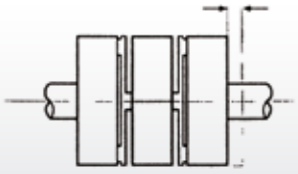
θ : Allowance for Angular misalignment of Coupling

Misalignment



Angular Misalignment : ± °

Parallel Misalignment : ±mm



End-Play : ±mm

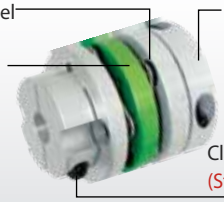
Application

- Servo motor, Stepping Motor
- Encorder for high precision
- High speed & precise position controlling system
- X-Y positioning, Linear Robot

Structure & Material

Disk : Stainless steel

Middle Plate: High strength aluminum Surface treatment: Alumite



Hub: High strength aluminum Surface treatment: Alumite

Clamping : SCM435 (Stainless bolts are available)

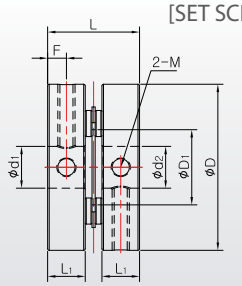
How to order product

※ Please mark each inner diameter size.
※ It is impossible to ask for additional keyways and change inner diameter size after ordering.
※ Do not disassemble because each part is assembled in an optimized position.
※ The clamp split hub can be applied to SDWB,C-54CW, SD □ □-64CW(cylindrical hub), SD □ □-80CW, SD □ □-90CW and SD □ □-100CW.)

Please, download CAD DATA from www.sungilfa.com

SDS - ■ ■

[SET SCREW TYPE]



SD ■ S - ■ ■ C

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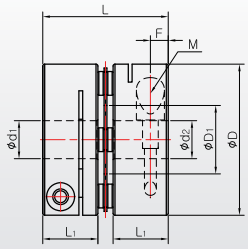

SDCS-54C

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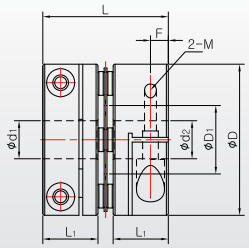

Dimensions & Performance

Product Number	Dimension (mm) (±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)	Permissible Misalignment		
	D	D_1	L	L_1	F									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-16	16	6.7	12	5.1	2.5	M2.5	0.5	16,000	1	0.5	270	1.8×10^{-7}	5	0.5	0.02	±0.1
SDS-16C	16	6.7	17.4	7.8	2.5	M2	0.5	14,000	1	0.5	270	2.6×10^{-7}	7	1	0.02	±0.1
SDS-19	19	8.5	14.5	6.1	3	M3	0.7	16,000	1.8	0.9	600	3.0×10^{-7}	6	1	0.02	±0.1
SDS-19C	19	8.5	19.3	8.7	2.9	M2.6	1	14,000	1.8	0.9	600	4.0×10^{-7}	8	1	0.02	±0.1
SDS-22	22.2	10	14.8	6.2	3	M3	0.7	12,000	2.2	1.1	600	6.9×10^{-7}	10	1	0.02	±0.1
SDS-22C	22.2	10	19.7	8.7	2.8	M2.6	1	10,000	2.2	1.1	600	1.0×10^{-6}	15	1	0.02	±0.1
SDS-26	26.6	12.2	17.6	7.4	3.6	M4	1.7	12,000	3	1.5	900	2.0×10^{-6}	20	1	0.02	±0.15
SDS-26C	26.6	12.2	24.1	10.6	3.4	M3	1.7	10,000	3	1.5	900	2.4×10^{-6}	25	1	0.02	±0.15
SDS-31	31.8	14.4	17.6	7.2	3.6	M4	1.7	10,000	6	3	1,700	4.4×10^{-6}	30	1	0.02	±0.2
SDS-31C	31.8	14.4	26.4	11.6	3.7	M3	1.7	9,000	6	3	1,700	5.8×10^{-6}	40	1	0.02	±0.2
new SDS-35C	35	16.2	28	12.7	4.4	M4	3.5	8,500	8	4	2,000	1.0×10^{-5}	57	1	0.02	±0.2
SDS-39C	39	17	31.3	13.7	4.3	M4	3.5	8,000	10	5	2,300	1.6×10^{-5}	70	1	0.02	±0.25
SDCS-42C	42.5	18	31.4	13.7	4.3	M4	3.5	8,000	14	7	2,800	3.4×10^{-5}	95	1	0.02	±0.25
SDCS-47C	47	20.4	35.6	16	5.2	M4	3.5	8,000	24	12	6,000	5.4×10^{-5}	140	1	0.02	±0.25
SDCS-54C	54	25	42.3	19	6.3	M5	8	8,000	44	22	11,000	9.8×10^{-5}	200	1	0.02	±0.25

* Mass and mass moment of inertia are measured with max. bore size

SDWA - ■ ■

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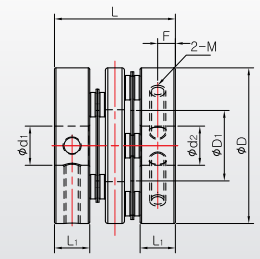

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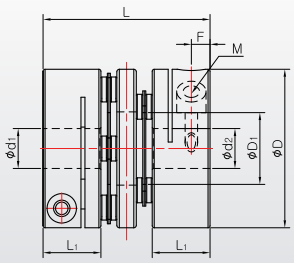


Dimensions & Performance

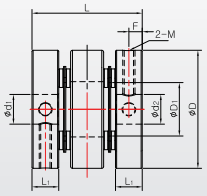
Product Number	Dimension (mm) (±0.3)					Fastening Bolt M	Fastening Torque (N · m)	Max• RPM(min^{-1})	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia (kg · m^2)	Mass (g)	Permissible Misalignment		
	D	D_1	L	L_1	F									Angle (°)	Parallel (mm)	End-Play (mm)
SDWA-16	16	6.3	15.8	5.1	2.5	M2.5	0.5	16,000	1	0.5	200	2.2×10^{-7}	6	1	0.05	±0.2
SDWB-16	16	6.3	17.8	5.1	2.5	M2.5	0.5	16,000	1	0.5	200	2.6×10^{-7}	7	1	0.05	±0.2
SDWA-16C	16	6.3	21.2	7.8	2.5	M2	1	14,000	1	0.5	200	3.3×10^{-7}	9	1	0.05	±0.2
SDWB-16C	16	6.3	23.2	7.8	2.5	M2	1	14,000	1	0.5	200	3.7×10^{-7}	10	1	0.05	±0.2
SDWA-19	19	8.5	18.1	6.1	3	M3	0.7	16,000	1.8	0.9	300	5.3×10^{-7}	10	1	0.05	±0.2
SDWB-19	19	8.5	21.1	6.1	3	M3	0.7	16,000	1.8	0.9	300	5.8×10^{-7}	11	1	0.05	±0.2
SDWA-19C	19	8.5	23.3	8.7	2.9	M2.6	1	14,000	1.8	0.9	300	7.4×10^{-7}	14	1	0.05	±0.2
SDWB-19C	19	8.5	26.3	8.7	2.9	M2.6	1	14,000	1.8	0.9	300	7.9×10^{-7}	15	1	0.05	±0.2

* Mass and mass moment of inertia are measured with max. bore size

SD Series

Zero Backlash Disk Coupling

SDW ■ - ■ ■ [SET SCREW TYPE]



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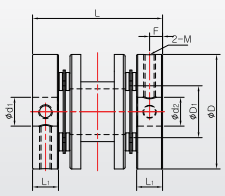

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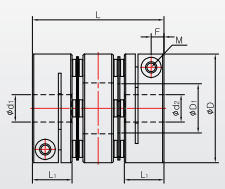

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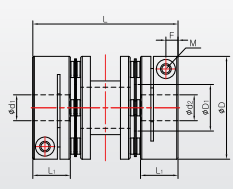

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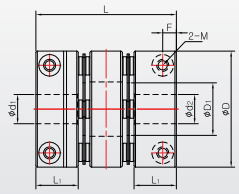

Dimensions & Performance

Product Number	Dimension (mm) (±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)	Permissible Misalignment		
	D	D_1	L	L_1	F									Angle (°)	Parallel (mm)	End-Play (mm)
SDWA-22	22.2	9	20.1	6.3	3	M3	0.7	12,000	2.2	1.1	400	1.0×10^{-6}	16	1.5	0.12	±0.2
SDWB-22	22.2	9	22.3	6.3	3	M3	0.7	12,000	2.2	1.1	400	1.1×10^{-6}	17	1.5	0.12	±0.2
SDA-22	22.2	8.3	28.3	6.3	3	M3	0.7	12,000	2.2	1.1	400	1.3×10^{-6}	18	1.5	0.12	±0.2
SDWA-22C	22.2	9	25	8.7	2.8	M2.6	1	10,000	2.2	1.1	400	1.3×10^{-6}	18	1.5	0.12	±0.2
SDWB-22C	22.2	9	27.2	8.7	2.8	M2.6	1	10,000	2.2	1.1	400	1.4×10^{-6}	19	1.5	0.12	±0.2
SDA-22C	22.2	8.3	33.2	8.7	2.8	M2.6	1	10,000	2.2	1.1	400	1.5×10^{-6}	20	1.5	0.12	±0.2
SDWA-26	26.6	12.2	26	7.4	3.6	M4	1.7	12,000	3	1.5	600	2.3×10^{-6}	28	1.5	0.15	±0.3
SDA-26	26.6	10.5	31.7	7.4	3.6	M4	1.7	12,000	3	1.5	600	3.2×10^{-6}	32	1.5	0.15	±0.3
SDWA-26C	26.6	12.2	32.5	10.6	3.4	M3	1.7	10,000	3	1.5	600	3.4×10^{-6}	34	1.5	0.15	±0.3
SDA-26C	26.6	10.5	38.2	10.6	3.4	M3	1.7	10,000	3	1.5	600	3.9×10^{-6}	39	1.5	0.15	±0.3
SDWA-31	31.8	14.4	24.7	7.2	3.6	M4	1.7	10,000	6	3	1,300	4.3×10^{-6}	30	1.5	0.15	±0.4
SDWB-31	31.8	14.4	29.7	7.2	3.6	M4	1.7	10,000	6	3	1,300	5.5×10^{-6}	38	1.5	0.15	±0.4
SDA-31	31.8	12.7	36.1	7.2	3.6	M4	1.7	10,000	6	3	1,300	5.5×10^{-6}	38	1.5	0.15	±0.4
SDWA-31C	31.8	14.4	33.5	11.6	3.7	M3	1.7	9,000	6	3	1,300	7.5×10^{-6}	52	1.5	0.15	±0.4
SDWB-31C	31.8	14.4	38.5	11.6	3.7	M3	1.7	9,000	6	3	1,300	8.8×10^{-6}	60	1.5	0.15	±0.4
SDA-31C	31.8	12.7	44.9	11.6	3.7	M3	1.7	9,000	6	3	1,300	8.8×10^{-6}	60	1.5	0.15	±0.4
NEW SDWA-35C	35	16.2	34.6	12.7	4.4	M4	3.5	8,500	8	4	1,500	1.21×10^{-5}	66.8	1.5	0.16	±0.4
NEW SDWC-35C	35	16.2	38.1	12.7	4.4	M4	3.5	8,500	8	4	1,500	1.37×10^{-5}	75	1.5	0.16	±0.4
SDWA-39C	39	17	39.5	13.7	4.3	M4	3.5	8,000	10	5	1,800	2.1×10^{-5}	95	1.5	0.18	±0.4
SDWC-39C	39	17	45	13.7	4.3	M4	3.5	8,000	10	5	1,800	2.4×10^{-5}	110	1.5	0.18	±0.4
SDA-39C	39	15.3	56.5	13.7	4.3	M4	3.5	8,000	10	5	1,800	3.0×10^{-5}	120	1.5	0.18	±0.4
SDWC-42C	42.5	18	46.2	13.7	4.3	M4	3.5	8,000	14	7	2,000	3.3×10^{-5}	120	1.5	0.18	±0.5
SDWC-47C	47	20.4	50	16	5.2	M4	3.5	8,000	24	12	4,000	5.5×10^{-5}	160	1.5	0.2	±0.5
SDWB-54C	54	25	52.6	19	6.3	M5	8	8,000	44	22	7,000	1.1×10^{-4}	250	1.5	0.2	±0.5
SDWC-54C	54	25	58.6	19	6.3	M5	8	8,000	44	22	7,000	1.2×10^{-4}	280	1.5	0.2	±0.5

* Mass and mass moment of inertia are measured with max. bore size

Standard Inner diameter

Product Number	Standard Inner Diameter(d_1, d_2, unit: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□□-35□				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
SD□□-39□				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
SD□□-42C					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★			
SD□□-47C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
SD□□-54□											●	●	●	●	●	●	●	●	●	●	●	●	●	●

■ For the inner diameter, INCH type is available ■ Non-standard inner diameter is also available
■ Keyway is available ■ The recommendation for shaft tolerance is h7.
■ In case of the ★ inner bore diameter, a shaft cannot penetrate through the stainless steel plate spring.

Please, download CAD DATA from www.sungilfa.com

SDS - ■■C

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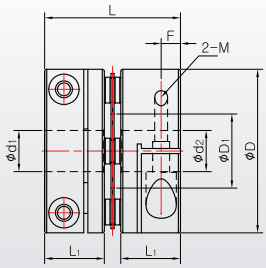

SDW(C) - ■■C

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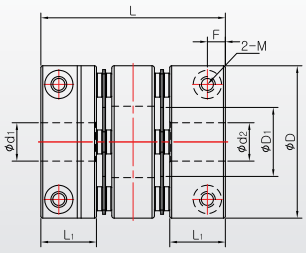


Dimensions & Performance

Product Number	Dimension (mm) (±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 ($kg \cdot m^2$)	Mass (g)	Permissible Misalignment		
	D	D1	L	L1	F									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-80C	80	35.8	66.1	29.7	9.4	M8	30	7,000	150	75	40,000	7.5×10^{-4}	800	1	0.02	±0.4
SDW-80C	80	35.8	81.8	29.7	9.4	M8	30	6,000	150	75	20,000	8.4×10^{-4}	900	2	0.4	±0.6
SDWC-80C	80	32	98.3	29.7	9.4	M8	30	6,000	150	75	20,000	9.5×10^{-4}	1,000	2	0.5	±0.6
SDS-90C	94.5	41.6	68.9	30.4	9.3	M8	30	6,000	300	150	60,000	1.2×10^{-3}	930	1	0.02	±0.5
SDW-90C	94.5	41.6	98.9	30.4	9.3	M8	30	6,000	300	150	35,000	1.8×10^{-3}	1,350	2	0.4	±0.8
SDS-100C	104.5	47.7	71.7	30.7	9.3	M8	30	6,000	440	220	70,000	2.2×10^{-3}	1,300	1	0.02	±0.6
SDW-100C	104.5	47.7	103.8	30.7	9.3	M8	30	6,000	440	220	50,000	2.9×10^{-3}	1,700	2	0.4	±0.8

* Mass and mass moment of inertia are measured with max. bore size

Standard Inner diameter

Product Number	Standard Inner Diameter(d_1, d_2, unit:mm)														
	15	16	18	19	20	22	24	25	28	30	32	35	40	45	50
SDS-80C	●	●	●	●	●	●	●	●	●	●	●				
SDW-80C	●	●	●	●	●	●	●	●	●	●	●				
SDS-90C					●	●	●	●	●	●	●	●	●	●	
SDW-90C					●	●	●	●	●	●	●	●	●	●	
SDS-100C					●	●	●	●	●	●	●	●	●	●	●★
SDW-100C					●	●	●	●	●	●	●	●	●	●	●★

■ For the inner diameter, INCH type is available ■ Non-Standard inner diameter is also available
■ Keyway is available ■ The recommendation for shaft tolerance is h7.
■ In case of the ★ inner bore diameter, a shaft cannot penetrate through the stainless steel plate spring.

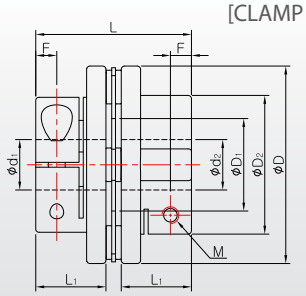
※ Hub design can be changed according to diameter size

SD Series

Zero Backlash Disk Coupling

SDS - ■ ■ C

[CLAMP TYPE]



SDW ■ - ■ ■ C

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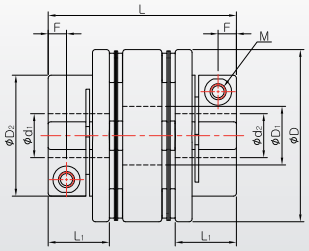

SDA ■ - ■ ■ C

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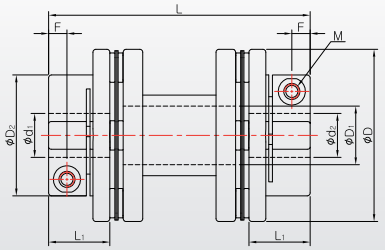


Dimensions & Performance

Product Number	Dimension (mm) (±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)	Permissible Misalignment		
	D	D_1	D_2	L	L_1	F									Angle (°)	Parallel (mm)	End-Play (mm)
new SDS-35C	35	16.2	–	28	12.7	4.4	M3	1.7	8,500	8	4	2,000	4.6×10^{-6}	35	1	0.02	±0.2
new SDWB-35C	35	16.2	–	34.6	12.7	4.4	M3	1.7	8,500	8	4	1,500	6.1×10^{-6}	44	1.5	0.16	±0.4
new SDWD-35C	35	16.2	–	38.6	12.7	4.4	M3	1.7	8,500	8	4	1,500	8.2×10^{-6}	55	1.5	0.16	±0.4
SDS-42C	42.5	18	29.3	30.8	13.4	3.8	M3	1.7	8,000	14	7	2,800	1.7×10^{-5}	65	1	0.02	±0.25
SDWA-42C	42.5	18	29.3	39.7	13.4	3.8	M3	1.7	8,000	14	7	2,000	2.1×10^{-5}	84	1.5	0.18	±0.5
SDWB-42C	42.5	18	29.3	44.2	13.4	3.8	M3	1.7	8,000	14	7	2,000	2.4×10^{-5}	94	1.5	0.18	±0.5
SDAA-42C	42.5	18	29.3	50	13.4	3.8	M3	1.7	8,000	14	7	2,000	2.7×10^{-5}	105	1.5	0.18	±0.5
SDAB-42C	42.5	18	29.3	57.9	13.4	3.8	M3	1.7	8,000	14	7	2,000	2.8×10^{-5}	110	1.5	0.18	±0.5
SDAC-42C	42.5	18	29.3	67.3	13.4	3.8	M3	1.7	8,000	14	7	2,000	2.9×10^{-5}	115	1.5	0.18	±0.5
SDS-47C	47	20.4	33	37	16.7	5	M4	3.5	8,000	24	12	6,000	3.2×10^{-5}	108	1	0.02	±0.25
SDWA-47C	47	20.4	33	45.6	16.7	5	M4	3.5	7,500	24	12	4,000	3.6×10^{-5}	120	1.5	0.2	±0.5
SDWB-47C	47	20.4	33	51.4	16.7	5	M4	3.5	7,500	24	12	4,000	3.9×10^{-5}	132	1.5	0.2	±0.5
SDAA-47C	47	20	33	63.8	16.7	5	M4	3.5	7,500	24	12	4,000	4.5×10^{-5}	152	1.5	0.2	±0.5
SDAB-47C	47	20	33	90.7	16.7	5	M4	3.5	7,500	24	12	4,000	5.1×10^{-5}	172	1.5	0.2	±0.5
SDS-54C	54	25	38.5	47.1	21.4	6.1	M5	8	8,000	44	22	11,000	5.5×10^{-5}	145	1	0.02	±0.25
SDWA-54C	54	25	38.5	60.6	21.4	6.1	M5	8	7,500	44	22	7,000	7.2×10^{-5}	192	1.5	0.2	±0.5
SDAA-54C	54	24.3	38.5	76	21.4	6.1	M5	8	7,500	44	22	7,000	9.0×10^{-5}	240	1.5	0.2	±0.5
SDAB-54C	54	24.3	38.5	89.9	21.4	6.1	M5	8	7,500	44	22	7,000	1.1×10^{-4}	266	1.5	0.2	±0.5
SDS-64C	64	25.8	48	58.2	26	7.5	M6	13	7,000	62	31	20,000	1.8×10^{-4}	292	1	0.02	±0.25
SDWA-64C	64	25.8	48	74.4	26	7.5	M6	13	6,500	62	31	11,000	2.2×10^{-4}	373	1.5	0.3	±0.5
SDA-64C	64	25.8	48	89.9	26	7.5	M6	13	6,500	62	31	11,000	2.7×10^{-4}	450	1.5	0.3	±0.5

* Mass and mass moment of inertia are measured with max. bore size.
■ For SDW □ -64C, cylinderical-shaped hubs are available from bore size Ø15. Please indicate "D" after the bore size when the order is placed.
■ For SDW □ -64C, cylinderical-shaped hubs are used from Φ28(inner bore diameter).

Standard Inner diameter

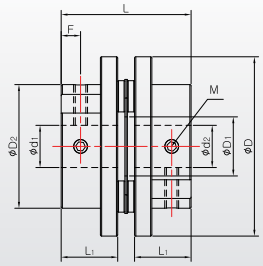
Product Number	Standard Inner Diameter(d_1, d_2, unit:mm)																										
	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	17	18	19	20	21	22	24	25	26	28	30	35
SD□□-42C		●	●	●	●	●	●	●	●	●	●	●	●														
SD□□-47C					●	●	●	●	●	●	●	●	●	●	●	●	●	●									
SD□□-54C								●	●	●	●	●	●	●	●	●	●	●	●								
SD□□-64C										●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★	

■ For the inner diameter, INCH type is available ■ Non-Standard inner diameter is also available
■ Keyway is available ■ The recommendation for shaft tolerance is h7.
■ In case of the ★ inner bore diameter, a shaft cannot penetrate through the stainless steel plate spring.

Please, download CAD DATA from www.sungilfa.com

SDS - ■ ■

[SET SCREW TYPE]



SDW ■ - ■ ■

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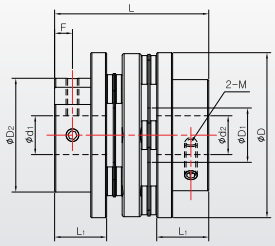

SDA ■ - ■ ■

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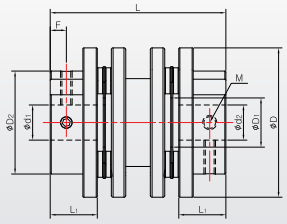


Dimensions & Performance

Product Number	Dimension (mm) (±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)	Permissible Misalignment		
	D	D_1	D_2	L	L_1	F									Angle (°)	Parallel (mm)	End-Play (mm)
SDS-42	42.5	18	29.3	30.8	13.4	4.6	M4	1.7	8,000	14	7	2,800	1.7×10^{-5}	65	1	0.02	±0.25
SDWA-42	42.5	18	29.3	39.7	13.4	4.6	M4	1.7	8,000	14	7	2,000	2.1×10^{-5}	84	1.5	0.18	±0.5
SDWB-42	42.5	18	29.3	44.2	13.4	4.6	M4	1.7	8,000	14	7	2,000	2.4×10^{-5}	94	1.5	0.18	±0.5
SDAA-42	42.5	18	29.3	50	13.4	4.6	M4	1.7	8,000	14	7	2,000	2.7×10^{-5}	105	1.5	0.18	±0.5
SDAB-42	42.5	18	29.3	57.9	13.4	4.6	M4	1.7	8,000	14	7	2,000	2.8×10^{-5}	110	1.5	0.18	±0.5
SDAC-42	42.5	18	29.3	67.3	13.4	4.6	M4	1.7	8,000	14	7	2,000	2.9×10^{-5}	115	1.5	0.18	±0.5
SDS-47	47	20.4	33	31.4	13.9	4.5	M5	4	8,000	24	12	6,000	2.7×10^{-5}	91	1	0.02	±0.25
SDWA-47	47	20.4	33	39.9	13.9	4.5	M5	4	8,000	24	12	4,000	3.4×10^{-5}	115	1.5	0.2	±0.5
SDWB-47	47	20.4	33	45.7	13.9	4.5	M5	4	8,000	24	12	4,000	3.6×10^{-5}	120	1.5	0.2	±0.5
SDAA-47	47	20	33	58.1	13.9	4.5	M5	4	8,000	24	12	4,000	4.2×10^{-5}	140	1.5	0.2	±0.5
SDAB-47	47	20	33	85	13.9	4.5	M5	4	8,000	24	12	4,000	4.7×10^{-5}	160	1.5	0.2	±0.5
SDS-54	54	25	38.5	42.3	19	5.8	M5	4	7,500	44	22	11,000	4.9×10^{-5}	130	1	0.02	±0.25
SDWA-54	54	25	38.5	55.8	19	5.8	M5	4	7,500	44	22	7,000	6.7×10^{-5}	177	1.5	0.2	±0.5
SDAA-54	54	24.3	38.5	71.2	19	5.8	M5	4	7,500	44	22	7,000	9.0×10^{-5}	230	1.5	0.2	±0.5
SDAB-54	54	24.3	38.5	85.1	19	5.8	M5	4	7,500	44	22	7,000	1.1×10^{-4}	250	1.5	0.2	±0.5
SDS-64	64	25.8	48	58.2	26	8	M8	15	7,000	62	31	20,000	1.8×10^{-4}	292	1	0.02	±0.25
SDWA-64	64	25.8	48	74.4	26	8	M8	15	7,000	62	31	11,000	2.2×10^{-4}	373	1.5	0.3	±0.5
SDA-64	64	25.8	48	89.9	26	8	M8	15	7,000	62	31	11,000	2.7×10^{-4}	450	1.5	0.3	±0.5

* Mass and mass moment of inertia are measured with max. bore size.
■ For SDW □-64C, cylindrical-shaped hubs are available from bore size Ø15. Please indicate "D" after the bore size when the order is placed.
■ For SDW □-64C, cylinderical-shaped hubs are used from Φ28(inner bore diameter).

Standard Inner diameter

Product Number	Standard Inner Diameter(d_1, d_2, unit: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										●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★	

■ For the inner diameter, INCH type is available ■ Non-Standard inner diameter is also available ■ Keyway is available
■ The recommendation for shaft tolerance is h7.
■ In case of the ★ inner bore diameter, a shaft cannot penetrate through the stainless steel plate spring.

SD Series (Stainless)

Zero Backlash Disk Coupling (Stainless)

'SI. CO' mark(Trademark : 40-2012-0061376) indicates that the authenticity is certified.
'SDS, SDW' (Trademark : 40-2012-0044877, 0044876) are the original trademarks for Sung-il's Disk Coupling.

RoHS COMPLIANT REACH The new EU chemicals legislation

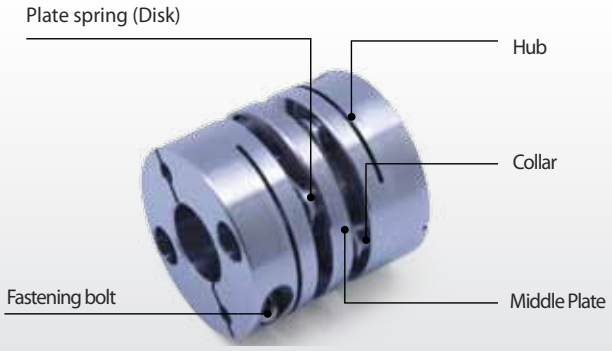
Features

- Domestically standardized disk couplings which is made of stainless steel for the first time.
- Various sizes of outer diameter and inner bore are available
- High torsional stiffness
- Identical clockwise and counter-clockwise rotational characteristics
- Single Disk Type/Double Disk Type
- Excellent corrosion resistance (Suitable for cleanrooms, High vacuum equipments, Humid areas)

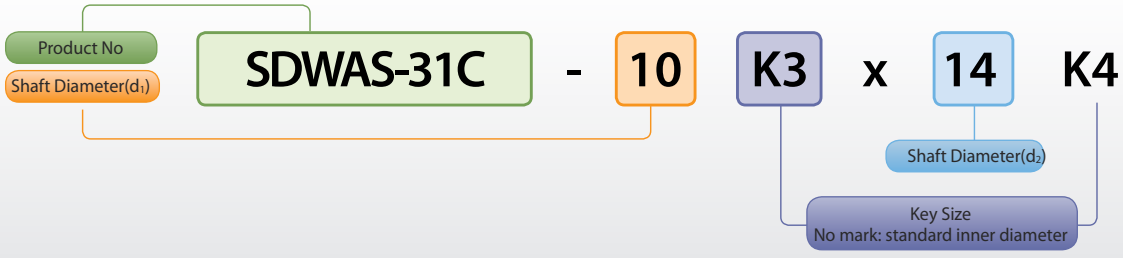
Application

- High precise stages
- Position controlling systems
- Index tables
- Servo Motors, Stepping Motors
- Power and motion transmission in vacuum or cleanrooms
- Used in acidic or alkaline environments

Structure



How to order product



※ Please mark each inner bore diameter.
※ It is impossible to order the additional keyways after ordering.
※ Do not disassemble because each part is optimally assembled for the exact concentricity between each shaft hole.

Please, download CAD DATA from www.sungilfa.com

SDSS - ■■C

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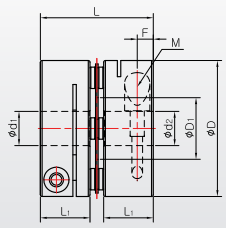

OD : ø19 ~ ø 47

SDSS - ■■C

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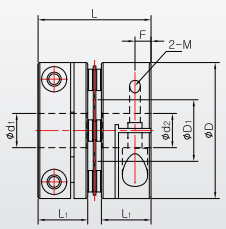

OD : ø54 ~ ø 64

SDW■S - ■■C

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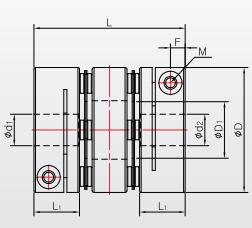

OD : ø19~ø 47

SDW■S - ■■C

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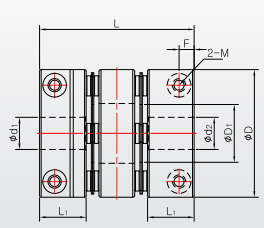

OD : ø54 ~ ø64

Dimensions & Performance

Product Number	Dimension (mm) (±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)	Permissible Misalignment		
	D	D_1	L	L_1	F									Angle (°)	Parallel (mm)	End-Play (mm)
SDSS-19C	19	8.5	19.3	8.7	2.9	M2.6	1	14000	1	0.5	960	1.0×10^{-6}	21	1	0.02	±0.1
SDSS-22C	22.2	10	19.7	8.7	2.8	M2.6	1	10,000	2.2	1.1	960	2.5×10^{-6}	42	1	0.02	±0.1
SDSS-26C	26.6	12.2	24.1	10.7	3.4	M3	1.5	10,000	3	1.5	1,200	6.0×10^{-6}	70	1	0.02	±0.15
SDSS-31C	31.8	14.4	26.4	11.6	3.7	M3	1.5	9,000	6	3	2,600	1.5×10^{-5}	112	1	0.02	±0.2
SDSS-39C	39	17	31.3	13.7	4.3	M4	2.5	8,000	10	5	2,800	4.0×10^{-5}	196	1	0.02	±0.2
SDSS-42C	42.5	18	31.4	13.7	4.3	M4	2.5	8,000	14	7	3,300	8.5×10^{-5}	266	1	0.02	±0.25
SDSS-47C	47	20.4	36	16	5.2	M4	2.5	8,000	24	12	7,000	1.4×10^{-4}	392	1	0.02	±0.25
SDSS-54C	54	25	42	19	6.3	M5	4	8,000	44	22	12,000	2.5×10^{-4}	560	1	0.02	±0.25
SDSS-64C	64	25.8	57.5	26	7.5	M6	8	6,000	62	31	22,000	6.5×10^{-4}	950	1	0.02	±0.25
SDWAS-19C	19	8.5	23.3	8.7	2.9	M2.6	1	14,000	1	0.5	400	1.6×10^{-6}	37	1	0.05	±0.2
SDWBS-19C	19	8.5	26.3	8.7	2.9	M2.6	1	14,000	1	0.5	400	2.0×10^{-6}	39	1	0.05	±0.2
SDWAS-22C	22.2	9	25	8.7	2.8	M2.6	1	10,000	2.2	1.1	520	3.3×10^{-6}	47	1.5	0.12	±0.2
SDWBS-22C	22.2	9	27.2	8.7	2.8	M2.6	1	10,000	2.2	1.1	520	3.5×10^{-6}	50	1.5	0.12	±0.2
SDWAS-26C	26.6	12.2	32.5	10.7	3.4	M3	1.5	10,000	3	1.5	750	8.5×10^{-6}	92	1.5	0.15	±0.3
SDWAS-31C	31.8	14.4	33.5	11.6	3.7	M3	1.5	10,000	6	3	1,650	1.9×10^{-5}	140	1.5	0.15	±0.4
SDWBS-31C	31.8	14.4	38.5	11.6	3.7	M3	1.5	8,000	6	3	1,650	2.2×10^{-5}	162	1.5	0.15	±0.4
SDWAS-39C	39	17	39.5	13.7	4.3	M4	2.5	8,000	10	5	2,250	5.3×10^{-5}	257	1.5	0.18	±0.4
SDWCS-39C	39	17	45	13.7	4.3	M4	2.5	8,000	10	5	2,250	6.0×10^{-5}	297	1.5	0.18	±0.4
SDWCS-42C	42.5	18	46.2	13.7	4.3	M4	2.5	8,000	14	7	2,500	8.3×10^{-5}	324	1.5	0.18	±0.5
SDWCS-47C	47	20.4	50.7	16	5.2	M4	2.5	8,000	24	12	5,000	1.4×10^{-4}	432	1.5	0.2	±0.5
SDWBS-54C	54	25	52	19	6.3	M5	4	8,000	44	22	8,750	2.8×10^{-4}	675	1.5	0.2	±0.5
SDWCS-54C	54	25	58	19	6.3	M5	4	8,000	44	22	8,750	3.0×10^{-4}	756	1.5	0.2	±0.5
SDWAS-64C	64	25.8	73	26	7.5	M6	8	6,500	62	31	13,800	6.8×10^{-4}	1200	1.5	0.3	±0.5

※ Mass and mass moment of inertia are measured with max. bore size

Standard bore diameter

Product Number	Standard Inner Diameter(d_1, d_2, unit:mm)																											
	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	21	22	24	25	26	28	30
SD□□S-19C	●	●	●	●																								
SD□□S-22C	●	●	●	●	●	●	●	●★	●★																			
SD□□S-26C			●	●	●	●	●	●	●	●																		
SD□□S-31C				●	●	●	●	●	●	●	●	●	●	●	●★													
SD□□S-39C							●	●	●	●	●	●	●	●	●	●	●											
SD□□S-42C							●	●	●	●	●	●	●	●	●	●	●	●	●★	●★								
SD□□S-47C										●	●	●	●	●	●	●	●	●	●	●	●							
SD□□S-54C										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
SD□□S-64C												●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★

■ For the inner diameter, INCH type is available ■ Non-standard inner bore diameter is also available ■ h7 shaft tolerance is recommended.
■ Keyway is available. ■ The inner diameter marked ★ is not available for Shaft-penetration type.