

# SD SERIES



## Disk Type Coupling

### Classification: SD Series

The plate springs in the middle part of SD Series transmit motion & power and absorb the misalignment. SD Series is usually adopted for high-precision applications thanks to its excellent static torsional stiffness and the backlash-free full metal structure.

Body Material	Plate-Spring Modules	Clamping Methods	
		Set-screw	Side-clamp
High Strength Aluminum Alloy	Single Disk (SDS)		
	Double Disk (SDW, SDA)		
Stainless Steel	Single Disk (SDSS)	-	
	Double Disk (SDWS)	-	

### Single Module vs Double Module

	Single Disk	Double Disk
Plate-Spring Modules	1	2
Transmission Level of Torque (Max./Rated Torque)	Identical	
Static Torsional Stiffness	High	Low
Absorption of Misalignment	Low	High

- SD Series absorbs the misalignment through the plate springs in the middle part. Therefore, the double module is better at absorption of misalignment than the single module.
- On the other hand, the single module has higher stiffness and precise positioning feature as well as it saves space in terms of shorter length(L).

### Custom Service : Extra plate springs Reinforcement

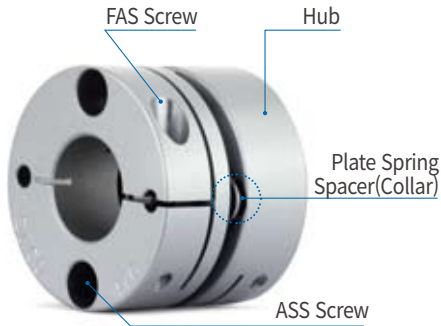
- The most important part that determines the performance of SD coupling is assembly set of Plate-Springs.
- As a customized service, Sung-il Machinery provides extra quantity of plate springs added according to customer's special requests.
- However, please be aware that this process makes strength of product enhanced, at the same time it may increase reaction force on shafts and would give negative effects on the connected devices.



- Please contact Sung-il Customer Service team for more details.

# SD SERIES (SDS)

Single Disk Type Coupling (High Strength Aluminum Alloy Body)



## Structure and Material

Structure	Material	Surface Treatment
Hub	High Strength Aluminum Alloy	Anodizing
Plate Spring	Stainless Steel	-
Spacer(Collar)	Steel	Black Oxide
Assembly Screw	SCM435	Black Oxide
Fastening Screw	SCM435	Black Oxide

## Product Features & Application

Backlash free (Precision)		☆
High Torque (Durability)		○
Torsional Stiffness		☆
Vibration Absorption		-
Misalignment Absorption		△
Applicable Motors	Servo	○
	Stepping	○
	Encoder	○
	General	-

**Application :** Semi-conductor manufacturing machine, SMT, Cartesian Robot, UVW Stage, Machine tools, Index Table

## Parts with Alternative Material Options

- Sung-il Machinery provides alternative material options for Coupling parts for customers who are worried about corrosion on Black oxide finish. Please see the below table for more details.

Mark	Material	Surface Treatment
No mark	Steel	Black Oxide
NI/ASS	Steel	Electroless Nickel Plating
SUS/ASS	Stainless Steel	-



- Caution: Slip torque would become lower if the body material or surface treatment of screws are changed from the standard version.

## Clamping Methods

Set-screw (No mark)	General	○
	With Keyway	○
Side-clamp (C)	General	○
	Hub Split	△
	With Keyway	○
Taper-ring (T)		X

※ You may check the sizes that Side-clamp Hub Split type is applicable from the “Dimensions / Performance” tables in the following pages.

## How to Order

**SDS - 80 CW - 20 W K6 x 35 W K10**

**1 Clamping Methods**

No mark	Set-screw
C	General Side-clamp
CW	Side-clamp Hub Split

**2 Side-clamp Hub Split**

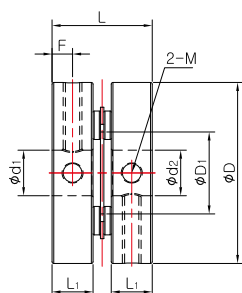
No mark	Not Split	Keyway	No Keyway
W	Split (Only applicable on Side-clamp Type)	K(b size)	Keyway processed according to the indicated b size.

# SD SERIES (SDS)

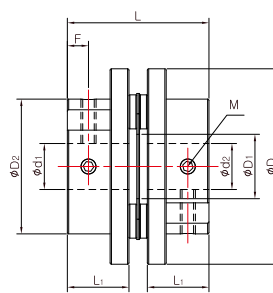
Single Disk Type Coupling (High Strength Aluminum Alloy Body)

## Set-Screw

Cylinder-shaped



Flange-shaped



### Dimensions / Performance

Model	Shape	Size (±0.3mm)						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
		D	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)
SDS-16	Cylinder	16	6.7	-	12	5.1	2.5	M2.5	0.5	0.5	1	16,000	1.8×10 <sup>-7</sup>	270	5	0.5	0.02	±0.1
SDS-19	Cylinder	19	8.5	-	14.05	6.1	3	M3	0.7	0.9	1.8	16,000	3.0×10 <sup>-7</sup>	600	6	1	0.02	±0.1
SDS-22	Cylinder	22.2	10	-	14.8	6.2	3	M3	0.7	1.1	2.2	12,000	6.9×10 <sup>-7</sup>	600	10	1	0.02	±0.1
SDS-26	Cylinder	26.6	12.2	-	17.6	7.4	3.6	M4	1.7	1.5	3	12,000	2.0×10 <sup>-6</sup>	900	20	1	0.02	±0.15
SDS-31	Cylinder	31.8	14.4	-	17.6	7.2	3.6	M4	1.7	3	6	10,000	4.4×10 <sup>-6</sup>	1,700	30	1	0.02	±0.2
SDS-42	Flange	42.5	18	29.3	30.8	13.4	4.6	M4	1.7	7	14	8,000	1.7×10 <sup>-5</sup>	2,800	65	1	0.02	±0.25
SDS-47	Flange	47	20.4	33	31.4	13.9	4.5	M5	4	12	24	8,000	2.7×10 <sup>-5</sup>	6,000	91	1	0.02	±0.25
SDS-54	Flange	54	25	38.5	42.3	19	5.8	M5	4	22	44	7,500	4.9×10 <sup>-5</sup>	11,000	130	1	0.02	±0.25
SDS-64	Flange	64	25.8	48	58.2	26	8	M8	15	31	62	7,000	1.8×10 <sup>-4</sup>	20,000	292	1	0.02	±0.25

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft. (In general, the clamping force on set-screw type is weaker, therefore it is recommended that an additional keyway is processed for the enhanced clamping force.)

### Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (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	21	22	24	25	26	28	30	
SDS-16	●	●	●	●																										
SDS-19	●	●	●	●	●																									
SDS-22	●	●	●	●	●	●	●	●	●★	●★																				
SDS-26		●	●	●	●	●	●	●	●	●	●																			
SDS-31				●	●	●	●	●	●	●	●	●	●	●	●	●★														
SDS-42					●	●	●	●	●	●	●	●	●	●	●	●														
SDS-47								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
SDS-54											●	●	●	●	●	●	●	●	●	●	●	●	●							
SDS-64													●	●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★

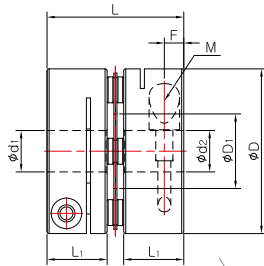
- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

# SD SERIES (SDS)

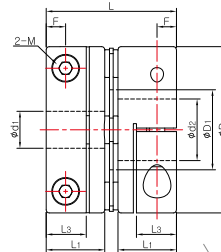
Single Disk Type Coupling (High Strength Aluminum Alloy Body)

## Side-clamp

Cylinder-shaped



Size: 12C~47C



Size: 54C~100C

### Dimensions / Performance

Model	Size (±0.3mm)						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D <sub>1</sub>	L	L <sub>1</sub>	L <sub>3</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SDS-12C	12	5.5	12.3	5.9	-	1.9	M1.6	0.25	0.2	0.4	14,000	6.9×10 <sup>-8</sup>	170	3	0.5	0.01	±0.04	X
SDS-16C	16	6.7	17.4	7.8	-	2.5	M2	0.5	0.5	1	14,000	2.6×10 <sup>-7</sup>	270	7	1	0.02	±0.1	X
SDS-19C	19	8.5	19.3	8.7	-	2.9	M2.6	1	0.9	1.8	14,000	4.0×10 <sup>-7</sup>	600	8	1	0.02	±0.1	X
SDS-22C	22.2	10	19.7	8.7	-	2.8	M2.6	1	1.1	2.2	10,000	1.0×10 <sup>-6</sup>	600	15	1	0.02	±0.1	X
SDS-26C	26.6	12.2	24.1	10.6	-	3.4	M3	1.7	1.5	3	10,000	2.4×10 <sup>-6</sup>	900	25	1	0.02	±0.15	X
SDS-31C	31.8	14.4	26.4	11.6	-	3.7	M3	1.7	3	6	9,000	5.8×10 <sup>-6</sup>	1,700	40	1	0.02	±0.2	X
SDCS-35C	35	16.2	28	12.7	-	4.4	M4	3.5	4	8	8,500	1.0×10 <sup>-5</sup>	2,000	57	1	0.02	±0.2	X
SDS-39C	39	17	31.3	13.7	-	4.3	M4	3.5	5	10	8,000	1.6×10 <sup>-5</sup>	2,300	70	1	0.02	±0.25	X
SDCS-42C	42.5	18	31.4	13.7	-	4.3	M4	3.5	7	14	8,000	3.4×10 <sup>-5</sup>	2,800	95	1	0.02	±0.25	X
SDCS-47C	47	20.5	35.6	16	-	5.2	M4	3.5	12	24	7,500	5.4×10 <sup>-5</sup>	6,000	140	1	0.02	±0.25	X
SDCS-54C	54	25	42.3	19	13	6.3	M5	8	22	44	7,500	9.8×10 <sup>-5</sup>	11,000	200	1	0.02	±0.25	○
SDCS-64C	64	25.8	58.2	26	15.2	7.5	M6	13	31	62	7,000	2.2×10 <sup>-4</sup>	20,000	355	1	0.02	±0.25	○
SDS-80C	80	35.8	66.1	29.7	19	9.4	M8	30	75	150	7,000	7.5×10 <sup>-4</sup>	40,000	800	1	0.02	±0.4	○
SDS-90C	94.5	41.6	68.9	30.4	19	9.3	M8	30	150	300	6,000	1.2×10 <sup>-3</sup>	60,000	930	1	0.02	±0.5	○
SDS-100C	104.5	47.7	71.7	30.7	19	9.3	M8	30	220	440	6,000	2.2×10 <sup>-3</sup>	70,000	1,300	1	0.02	±0.6	○

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.

### Standard Inner Diameter (ID) 12C~47C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (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
SDS-12C	●	●		●																		
SDS-16C	●	●	●	●																		
SDS-19C	●	●	●	●	●																	
SDS-22C	●	●	●	●	●	●	●	●	●★	●★												
SDS-26C		●	●	●	●	●	●	●	●	●	●											
SDS-31C				●	●	●	●	●	●	●	●	●	●	●	●	●★						
SDCS-35C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SDS-39C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SDCS-42C					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★
SDCS-47C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

# SD SERIES (SDS)

## Single Disk Type Coupling (High Strength Aluminum Alloy Body)

### Standard Inner Diameter (ID) 54C~100C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																							
	10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	45	50	
SDCS-54C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
SDCS-64C			●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★					
SDS-80C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SDS-90C												●	●	●	●	●	●	●	●	●	●	●	●★	
SDS-100C												●	●	●	●	●	●	●	●	●	●	●	●★	●★

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Side-clamp Hub Split is available (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

### Slip Torque

- The below table shows the actual permissible torque values when the slip torque value is lower than the coupling's max. torque value.
- If the slip torque value is lower than the coupling's max. torque value, please check and compare between the slip torque in the below table and the operating torque value of the connected motor. It is safer to size up the coupling or use a key/keyway when the slip torque value is lower than the motor's operating torque.
- The below slip torque values may be subject to change according to different testing conditions. (e.g. shaft tolerance, Surface roughness, or acceleration/deceleration of driving shafts). On the other hand, the values could be affected when a different kind of fastening screw is used (body material or surface treatment). Therefore, we recommend you test under the same conditions before mounting.

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																					
		3	4	4.5	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16				
SDS-16C	1	0.6	0.7	0.8	0.9																		
SDS-19C	1.8	1	1.3	1.4	1.5	1.7																	
SDS-22C	2.2	1.1	1.4	1.5	1.7	2	2.1																
SDS-26C	3		2	2	2.9																		
SDS-31C	6				3	3.3	3.9	4.6	5.6														
SDCS-35C	8				3.2	3.5	3.8	6	7														
SDS-39C	10				4	4.5	5	6.5	8	9													
SDCS-42C	14					4.5	5.5	8	10	11	11	12	12.5										
SDCS-47C	24								9	10	11	12	12.5	13.6	14	17.6	22	22	23.6				

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																					
		10	11	12	12.7	14	15	16	18	19	20	22	24	25	28	30	32	35	40	45	50		
SDCS-54C	44	25	27	30	34	42																	
SDCS-64C	62			36	38	45	50	55	60														
SDS-80C	150						80	85	101	109	128	149											
SDS-90C	300										128	135	150	160	180	200	210	220	230	240			
SDS-100C	440										136	140	144	152	180	185	192	216	230	240	250		

### Side-clamp Hub Split(W) Option is available

- From certain outer diameter(OD) sizes, we can provide Side-clamp Hub Split products.
- Please refer to "HOW TO ORDER" page for more details.

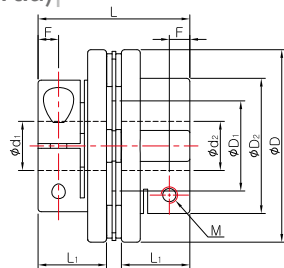


# SD SERIES (SDS)

## Single Disk Type Coupling (High Strength Aluminum Alloy Body)

### Side-clamp

#### Flange-shaped (Low-inertia)



### Dimensions / Performance

Model	Size ( $\pm 0.3\text{mm}$ )						Screw			Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm ( $\text{min}^{-1}$ )	Moment of Inertia ( $\text{kg}\cdot\text{m}^2$ )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	F	Size	Fastening Torque (N·m)	Angular (°)							Parallel (mm)	End-play (mm)	
SDS-35C	35	16.2	21.5	28	12.7	4.4	M3	1.7	4	8	8,500	$4.6 \times 10^{-6}$	2,000	35	1	0.02	$\pm 0.2$	
SDS-42C	42.5	18	29.3	30.8	13.4	3.8	M3	1.7	7	14	8,000	$1.7 \times 10^{-5}$	2,800	65	1	0.02	$\pm 0.25$	
SDS-47C	47	20.5	33/*38	37	16.7	5	M4	3.5	12	24	8,000	$3.2 \times 10^{-5}$	6,000	108	1	0.02	$\pm 0.25$	
SDS-54C	54	25	38.5	47.1	21.4	6.1	M5	8	22	44	8,000	$5.5 \times 10^{-5}$	11,000	145	1	0.02	$\pm 0.25$	
SDS-64C	64	25.8	48	58.2	26	7.5	M6	13	31	62	7,000	$1.8 \times 10^{-4}$	20,000	292	1	0.02	$\pm 0.25$	

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.
- For OD 47C products, please refer to D<sub>2</sub> values with \* mark when inner diameters are bigger than 18mm.

### Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																						
	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	
SDS-35C	●	●	●	●	●	●	●	●															
SDS-42C		●	●	●	●	●	●	●	●	●	●	●	●										
SDS-47C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
SDS-54C								●	●	●	●	●	●	●	●	●	●	●	●	●			
SDS-64C										●	●	●	●	●	●	●	●	●	●	●	●	●	★

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

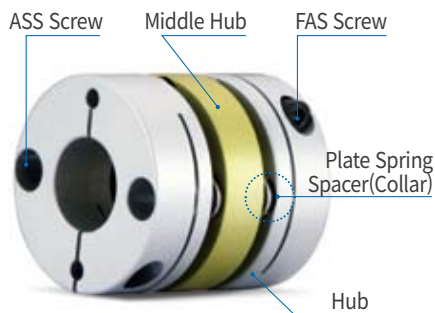
### Slip Torque

- The below table shows the actual permissible torque values when the slip torque value is lower than the coupling's max. torque value.
- If the slip torque value is lower than the coupling's max. torque value, please check and compare between the slip torque in the below table and the operating torque value of the connected motor. It is safer to size up the coupling or use a key/keyway when the slip torque value is lower than the motor's operating torque.
- The below slip torque values may be subject to change according to different testing conditions. (e.g. shaft tolerance, Surface roughness, or acceleration/deceleration of driving shafts). On the other hand, the values could be affected when a different kind of fastening screw is used (body material or surface treatment). Therefore, we recommend you test under the same conditions before mounting.

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																					
		5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	17	18	19	20	21		
SDS-35C	8	3.2	3.5	3.8	6	7																	
SDS-42C	14		4	4.5	5	6.4	7	7	7.5	8	10.4	11	12										
SDS-47C	24					4.9	6	7	7.8	8.4	11.3	12.2	13.9	17.6	19	22							
SDS-54C	44								20	25	30	32	35	38	40								
SDS-64C	62										36	37	41	42	42	43	44	50	52	58	60		

# SD SERIES (SDW)

Double Disk Type Coupling (High Strength Aluminum Alloy Body)



## Structure and Material

Structure	Material	Surface Treatment
Hub	High Strength Aluminum Alloy	Anodizing
Middle Hub	High Strength Aluminum Alloy	Anodizing
Plate Spring	Stainless Steel	-
Spacer(Collar)	Steel	Black Oxide
Assembly Screw	SCM435	Black Oxide
Fastening Screw	SCM435	Black Oxide

## Product Features & Application

Backlash free (Precision)		☆
High Torque (Durability)		○
Torsional Stiffness		☆
Vibration Absorption		-
Misalignment Absorption		○
Applicable Motors	Servo	○
	Stepping	○
	Encoder	○
	General	-

**Application :** Semi-conductor manufacturing machine, SMT, Cartesian Robot, UVW Stage, Machine tools, Index Table

## Parts with Alternative Material Options

- Sung-il Machinery provides alternative material options for Coupling parts for customers who are worried about corrosion on Black oxide finish. Please see the below table for more details.

Mark	Material	Surface Treatment
No mark	Steel	Black Oxide
NI/ASS	Steel	Electroless Nickel Plating
SUS/ASS	Stainless Steel	-



No mark      NI/ASS      SUS/ASS

- Caution: Slip torque would become lower if the body material or surface treatment of screws are changed from the standard version.

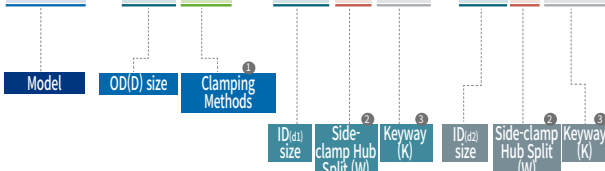
## Clamping Methods

Set-screw (No mark)	General	○
	With Keyway	○
Side-clamp (C)	General	○
	Hub Split	△
	With Keyway	○
Taper-ring (T)		X

※ You may check the sizes that Side-clamp Hub Split type is applicable from the “Dimensions / Performance” tables in the following pages.

## How to Order

**SDW - 80 CW - 20 W K6 x 35 W K10**



1 Clamping Methods	No mark	Set-screw
	C	General Side-clamp
	CW	Side-clamp Hub Split
2 Side-clamp Hub Split	No mark	Keyway
	W	No Split
	W	Split (Only applicable on Side-clamp Type)
3 Keyway	No mark	No Keyway
	K(b size)	Keyway processed according to the indicated b size.

# SD SERIES (SDW)

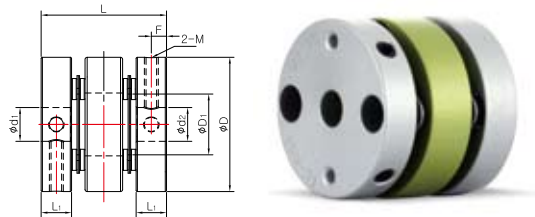
Double Disk Type Coupling (High Strength Aluminum Alloy Body)

## Set-Screw

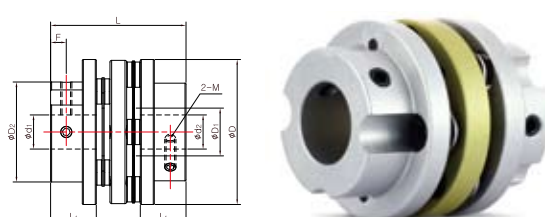
Cylinder-shaped

Flange-shaped

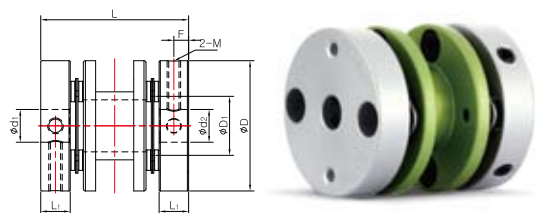
General Type



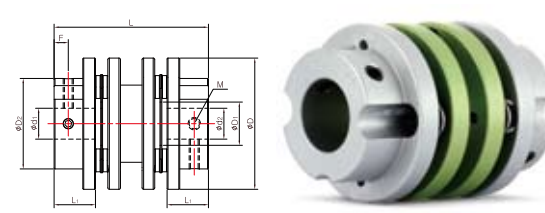
General Type



Lengthy Middle Body Type



Lengthy Middle Body Type



### Dimensions / Performance General Type

Model	Shape	Size (±0.3mm)						Screw Size	Fastening Torque (N·m)	Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
		D	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	F									Angular (°)	Parallel (mm)	End-play (mm)
SDWA-16	Cylinder-shaped	16	6.3	-	15.8	5.1	2.5	M2.5	0.5	0.5	1	16,000	2.2×10 <sup>-7</sup>	200	6	1	0.05	±0.2
SDWB-16	Cylinder-shaped	16	6.3	-	17.8	5.1	2.5	M2.5	0.5	0.5	1	16,000	2.6×10 <sup>-7</sup>	200	7	1	0.05	±0.2
SDWA-19	Cylinder-shaped	19	8.5	-	18.1	6.1	3	M3	0.7	0.9	1.8	16,000	5.3×10 <sup>-7</sup>	300	10	1	0.05	±0.2
SDWB-19	Cylinder-shaped	19	8.5	-	21.1	6.1	3	M3	0.7	0.9	1.8	16,000	5.8×10 <sup>-7</sup>	300	11	1	0.05	±0.2
SDWA-22	Cylinder-shaped	22.2	9	-	20.1	6.3	3	M3	0.7	1.1	2.2	12,000	1.0×10 <sup>-6</sup>	400	16	1.5	0.12	±0.2
SDWB-22	Cylinder-shaped	22.2	9	-	22.3	6.3	3	M3	0.7	1.1	2.2	12,000	1.1×10 <sup>-6</sup>	400	17	1.5	0.12	±0.2
SDWA-26	Cylinder-shaped	26.6	12.2	-	26	7.4	3.6	M4	1.7	1.5	3	12,000	2.3×10 <sup>-6</sup>	600	28	1.5	0.15	±0.3
SDWA-31	Cylinder-shaped	31.8	14.4	-	24.7	7.2	3.6	M4	1.7	3	6	10,000	4.3×10 <sup>-6</sup>	1,300	30	1.5	0.15	±0.4
SDWB-31	Cylinder-shaped	31.8	14.4	-	29.7	7.2	3.6	M4	1.7	3	6	10,000	5.5×10 <sup>-6</sup>	1,300	38	1.5	0.15	±0.4
SDWA-42	Flange-shaped	42.5	18	29.3	39.7	13.4	4.6	M4	1.7	7	14	8,000	2.1×10 <sup>-5</sup>	2,000	84	1.5	0.18	±0.5
SDWB-42	Flange-shaped	42.5	18	29.3	44.2	13.4	4.6	M4	1.7	7	14	8,000	2.4×10 <sup>-5</sup>	2,000	94	1.5	0.18	±0.5
SDWA-47	Flange-shaped	47	20.4	33	39.9	13.9	4.5	M5	4	12	24	8,000	3.4×10 <sup>-5</sup>	4,000	115	1.5	0.2	±0.5
SDWB-47	Flange-shaped	47	20.4	33	45.7	13.9	4.5	M5	4	12	24	8,000	3.6×10 <sup>-5</sup>	4,000	120	1.5	0.2	±0.5
SDWA-54	Flange-shaped	54	25	38.5	55.8	19	5.8	M5	4	22	44	7,500	6.7×10 <sup>-5</sup>	7,000	177	1.5	0.2	±0.5
SDWA-64	Flange-shaped	64	25.8	48	74.4	26	8	M8	15	31	62	7,000	2.2×10 <sup>-4</sup>	11,000	373	1.5	0.3	±0.5



# SD SERIES (SDW)

## Double Disk Type Coupling (High Strength Aluminum Alloy Body)

### Dimensions / Performance Lengthy Middle Body Type

Model	Shape	Size ( $\pm 0.3\text{mm}$ )						Screw Size	Fastening Torque (N·m)	Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm ( $\text{min}^{-1}$ )	Moment of Inertia ( $\text{kg}\cdot\text{m}^2$ )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
		D	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	F									Angular ( $^{\circ}$ )	Parallel (mm)	End-play (mm)
SDA-22	Cylinder-shaped	22.2	8.3	-	28.3	6.3	3	M3	0.7	1.1	2.2	12,000	$1.3 \times 10^{-6}$	400	18	1.5	0.12	$\pm 0.2$
SDA-26	Cylinder-shaped	26.6	10.5	-	31.7	7.4	3.6	M4	1.7	1.5	3	12,000	$3.2 \times 10^{-6}$	600	32	1.5	0.15	$\pm 0.3$
SDA-31	Cylinder-shaped	31.8	12.7	-	36.1	7.2	3.6	M4	1.7	3	6	10,000	$5.5 \times 10^{-6}$	1,300	38	1.5	0.15	$\pm 0.4$
SDAA-42	Flange-shaped	42.5	18	29.3	50	13.4	4.6	M4	1.7	7	14	8,000	$2.7 \times 10^{-5}$	2,000	105	1.5	0.18	$\pm 0.5$
SDAB-42	Flange-shaped	42.5	18	29.3	57.9	13.4	4.6	M4	1.7	7	14	8,000	$2.8 \times 10^{-5}$	2,000	110	1.5	0.18	$\pm 0.5$
SDAC-42	Flange-shaped	42.5	18	29.3	67.3	13.4	4.6	M4	1.7	7	14	8,000	$2.9 \times 10^{-5}$	2,000	115	1.5	0.18	$\pm 0.5$
SDAA-47	Flange-shaped	47	20	33	58.1	13.9	4.5	M5	4	12	24	8,000	$4.2 \times 10^{-5}$	4,000	140	1.5	0.2	$\pm 0.5$
SDAB-47	Flange-shaped	47	20	33	85	13.9	4.5	M5	4	12	24	8,000	$4.7 \times 10^{-5}$	4,000	160	1.5	0.2	$\pm 0.5$
SDAA-54	Flange-shaped	54	24.3	38.5	71.2	19	5.8	M5	4	22	44	7,500	$9.0 \times 10^{-5}$	7,000	230	1.5	0.2	$\pm 0.5$
SDAB-54	Flange-shaped	54	24.3	38.5	85.1	19	5.8	M5	4	22	44	7,500	$1.1 \times 10^{-4}$	7,000	250	1.5	0.2	$\pm 0.5$
SDA-64	Flange-shaped	64	25.8	48	89.9	26	8	M8	15	31	62	7,000	$2.7 \times 10^{-4}$	11,000	450	1.5	0.3	$\pm 0.5$

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Non-standard lengthy middle body type can be customized.**
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft. (In general, the clamping force on set-screw type is weaker, therefore it is recommended that an additional keyway is processed for the enhanced clamping force.)

### Standard Inner Diameter (ID)

Model	Standard Inner Diameter ( $d_1, d_2$ ) (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	21	22	24	25	26	28	30	
SD□□-16	●	●	●	●																										
SD□□-19	●	●	●	●	●																									
SD□□-22	●	●	●	●	●	●	●	●	●★	●★																				
SD□□-26		●	●	●	●	●	●	●	●	●	●																			
SD□□-31				●	●	●	●	●	●	●	●	●	●	●	●★															
SD□□-42					●	●	●	●	●	●	●	●	●	●	●															
SD□□-47								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
SD□□-54											●	●	●	●	●	●	●	●	●	●	●	●	●							
SD□□-64												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

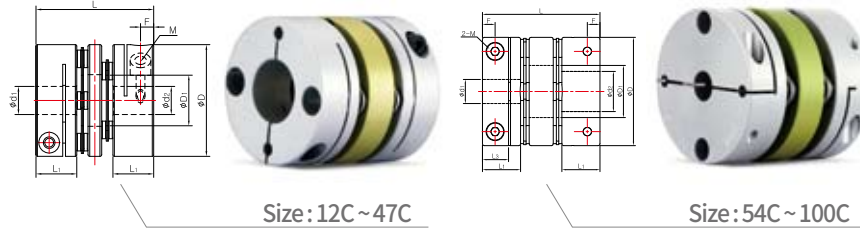
# SD SERIES (SDW)

## Double Disk Type Coupling (High Strength Aluminum Alloy Body)

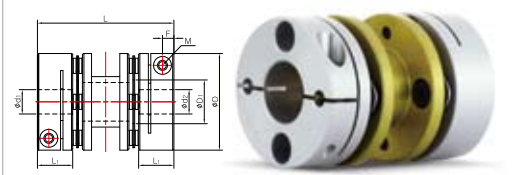
### Side-clamp

#### Cylinder-shaped

##### General Type



##### Lengthy Middle Body Type



### Dimensions / Performance General Type

Model	Size (±0.3mm)						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D <sub>1</sub>	L	L <sub>1</sub>	L <sub>3</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SDWA-12C	12	5.5	15.7	5.9	-	1.9	M1.6	0.25	0.2	0.4	14,000	7.5×10 <sup>-8</sup>	85	4	1	0.03	±0.08	X
SDWA-16C	16	6.3	21.2	7.8	-	2.5	M2	0.5	0.5	1	14,000	3.3×10 <sup>-7</sup>	200	9	1	0.05	±0.2	X
SDWB-16C	16	6.3	23.2	7.8	-	2.5	M2	0.5	0.5	1	14,000	3.7×10 <sup>-7</sup>	200	10	1	0.05	±0.2	X
SDWA-19C	19	8.4	23.3	8.7	-	2.9	M2.6	1	0.9	1.8	14,000	7.4×10 <sup>-7</sup>	300	14	1	0.05	±0.2	X
SDWB-19C	19	8.4	26.3	8.7	-	2.9	M2.6	1	0.9	1.8	14,000	7.9×10 <sup>-7</sup>	300	15	1	0.05	±0.2	X
SDWA-22C	22.2	9	25	8.7	-	2.8	M2.6	1	1.1	2.2	10,000	1.3×10 <sup>-6</sup>	400	18	1.5	0.12	±0.2	X
SDWB-22C	22.2	9	27.2	8.7	-	2.8	M2.6	1	1.1	2.2	10,000	1.4×10 <sup>-6</sup>	400	19	1.5	0.12	±0.2	X
SDWA-26C	26.6	12.2	32.5	10.6	-	3.4	M3	1.7	1.5	3	10,000	3.4×10 <sup>-6</sup>	600	34	1.5	0.15	±0.3	X
SDWA-31C	31.8	14.4	33.5	11.6	-	3.7	M3	1.7	3	6	9,000	7.5×10 <sup>-6</sup>	1,300	52	1.5	0.15	±0.4	X
SDWB-31C	31.8	14.4	38.5	11.6	-	3.7	M3	1.7	3	6	9,000	8.8×10 <sup>-6</sup>	1,300	60	1.5	0.15	±0.4	X
SDWA-35C	35	16.2	34.6	12.7	-	4.4	M4	3.5	4	8	8,500	1.2×10 <sup>-5</sup>	1,500	67	1.5	0.16	±0.4	X
SDWC-35C	35	16.2	38.1	12.7	-	4.4	M4	3.5	4	8	8,500	1.4×10 <sup>-5</sup>	1,500	75	1.5	0.16	±0.4	X
SDWA-39C	39	17	39.5	13.7	-	4.3	M4	3.5	5	10	8,000	2.1×10 <sup>-5</sup>	1,800	95	1.5	0.18	±0.4	X
SDWC-39C	39	17	45	13.7	-	4.3	M4	3.5	5	10	8,000	2.4×10 <sup>-5</sup>	1,800	110	1.5	0.18	±0.4	X
SDWC-42C	42.5	18	46.2	13.7	-	4.3	M4	3.5	7	14	8,000	3.3×10 <sup>-5</sup>	2,000	120	1.5	0.18	±0.5	X
SDWC-47C	47	20.5	50	16	-	5.2	M4	3.5	12	24	7,500	5.5×10 <sup>-5</sup>	4,000	160	1.5	0.2	±0.5	X
SDWB-54C	54	25	52.6	19	13	6.3	M5	8	22	44	7,500	1.1×10 <sup>-4</sup>	7,000	250	1.5	0.2	±0.5	○
SDWC-54C	54	25	58.6	19	13	6.3	M5	8	22	44	7,500	1.2×10 <sup>-4</sup>	7,000	280	1.5	0.2	±0.5	○
SDWB-64C	64	25.8	74.4	26	15.2	7.5	M6	13	31	62	6,500	3.5×10 <sup>-4</sup>	11,000	455	1.5	0.3	±0.5	○
SDWC-64C	64	25.8	84.4	26	15.2	7.5	M6	13	31	62	6,500	4.8×10 <sup>-4</sup>	11,000	530	1.5	0.3	±0.5	○
SDW-80C	80	35.8	81.8	29.7	19	9.4	M8	30	75	150	6,000	8.4×10 <sup>-4</sup>	20,000	900	2	0.4	±0.6	○
SDWC-80C	80	35.8	98.3	29.7	19	9.4	M8	30	75	150	6,000	9.5×10 <sup>-4</sup>	20,000	1,000	2	0.5	±0.6	○
SDW-90C	94.5	41.6	98.9	30.4	19	9.3	M8	30	150	300	6,000	1.8×10 <sup>-3</sup>	35,000	1,350	2	0.4	±0.8	○
SDW-100C	104.5	47.7	103.8	30.7	19	9.3	M8	30	220	440	6,000	2.9×10 <sup>-3</sup>	50,000	1,700	2	0.4	±0.8	○

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.

### Dimensions / Performance Lengthy Middle Body Type

Model	Size (±0.3mm)					Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D <sub>1</sub>	L	L <sub>1</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SDA-22C	22.2	8.3	33.2	8.7	2.8	M2.6	1	1.1	2.2	10,000	1.5×10 <sup>-6</sup>	400	20	1.5	0.12	±0.2	X
SDA-26C	26.6	10.5	38.2	10.6	3.4	M3	1.7	1.5	3	10,000	3.9×10 <sup>-6</sup>	600	39	1.5	0.15	±0.3	X
SDA-31C	31.8	12.7	44.9	11.6	3.7	M3	1.7	3	6	9,000	8.8×10 <sup>-6</sup>	1,300	60	1.5	0.15	±0.4	X
SDA-39C	39	15.3	56.5	13.7	4.3	M4	3.5	5	10	8,000	3.0×10 <sup>-5</sup>	1,800	120	1.5	0.18	±0.4	X

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- **Non-standard lengthy middle body type can be customized.**
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.

# SD SERIES (SDW)

## Double Disk Type Coupling (High Strength Aluminum Alloy Body)

### Standard Inner Diameter (ID) 12C ~ 47C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (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
SD□□-12C	●	●		●																		
SD□□-16C	●	●	●	●																		
SD□□-19C	●	●	●	●	●																	
SD□□-22C	●	●	●	●	●	●	●	●	●★	●★												
SD□□-26C		●	●	●	●	●	●	●	●	●	●											
SD□□-31C				●	●	●	●	●	●	●	●	●	●	●	●★							
SD□□-35C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SD□□-39C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SD□□-42C					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	
SD□□-47C							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

### Standard Inner Diameter (ID) 54C ~ 100C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																						
	10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	45	50
SD□□-54C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
SD□□-64C			●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★	●★				
SD□□80C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
SD□□-90C												●	●	●	●	●	●	●	●	●	●	●★	
SD□□-100C												●	●	●	●	●	●	●	●	●	●	●	●★

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.
- Side-clamp Hub Split is available (Optional)

# SD SERIES (SDW)

## Double Disk Type Coupling (High Strength Aluminum Alloy Body)

### Slip Torque

- The below table shows the actual permissible torque values when the slip torque value is lower than the coupling's max. torque value.
- If the slip torque value is lower than the coupling's max. torque value, please check and compare between the slip torque in the below table and the operating torque value of the connected motor. It is safer to size up the coupling or use a key/keyway when the slip torque value is lower than the motor's operating torque.
- The below slip torque values may be subject to change according to different testing conditions. (e.g. shaft tolerance, Surface roughness, or acceleration/deceleration of driving shafts). On the other hand, the values could be affected when a different kind of fastening screw is used (body material or surface treatment). Therefore, we recommend you test under the same conditions before mounting.

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																	
		3	4	4.5	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16
SD□□-16C	1	0.6	0.7	0.8	0.9														
SD□□-19C	1.8	1	1.3	1.4	1.5	1.7													
SD□□-22C	2.2	1.1	1.4	1.5	1.7	2	2.1												
SD□□-26C	3		2	2	2.9														
SD□□-31C	6				3	3.3	3.9	4.6	5.6										
SD□□-35C	8				3.2	3.5	3.8	6	7										
SD□□-39C	10				4	4.5	5	6.5	8	9									
SD□□-42C	14					4.5	5.5	8	10	11	11	12	12.5						
SD□□-47C	24								9	10	11	12	12.5	13.6	14	17.6	22	22	23.6

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																			
		10	11	12	12.7	14	15	16	18	19	20	22	24	25	28	30	32	35	40	45	50
SD□□-54C	44	25	27	30	34	42															
SD□□-64C	62			36	38	45	50	55	60												
SD□□-80C	150						80	85	101	109	128	149									
SD□□-90C	300										128	135	150	160	180	200	210	220	230	240	
SD□□-100C	440										136	140	144	152	180	185	192	216	230	240	250

### Side-clamp Hub Split(W) Option is available

- From certain outer diameter(OD) sizes, we can provide Side-clamp Hub Split products.
- Please refer to "HOW TO ORDER" page for more details.



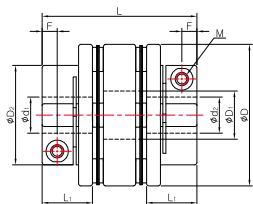
# SD SERIES (SDW)

## Double Disk Type Coupling (High Strength Aluminum Alloy Body)

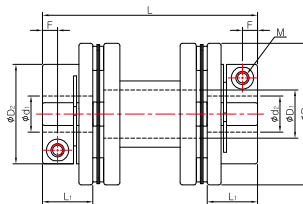
### Side-clamp

#### Flange-shaped (Low-inertia)

##### General Type



##### Lengthy Middle Body Type



#### Dimensions / Performance General Type

Model	Size ( $\pm 0.3\text{mm}$ )						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm ( $\text{min}^{-1}$ )	Moment of Inertia ( $\text{kg}\cdot\text{m}^2$ )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)
SDWB-35C	35	16.2	21.5	34.6	12.7	4.4	M3	1.7	4	8	8,500	$6.1 \times 10^{-6}$	1,500	44	1.5	0.16	$\pm 0.4$
SDWD-35C	35	16.2	21.5	38.1	12.7	4.4	M3	1.7	4	8	8,500	$8.2 \times 10^{-6}$	1,500	55	1.5	0.16	$\pm 0.4$
SDWA-42C	42.5	18	29.3	39.7	13.4	3.8	M3	1.7	7	14	8,000	$2.1 \times 10^{-5}$	2,000	84	1.5	0.18	$\pm 0.5$
SDWB-42C	42.5	18	29.3	44.2	13.4	3.8	M3	1.7	7	14	8,000	$2.4 \times 10^{-5}$	2,000	94	1.5	0.18	$\pm 0.5$
SDWA-47C	47	20.5	33/*38	45.6	16.7	5	M4	3.5	12	24	7,500	$3.6 \times 10^{-5}$	4,000	120	1.5	0.2	$\pm 0.5$
SDWB-47C	47	20.5	33/*38	51.4	16.7	5	M4	3.5	12	24	7,500	$3.9 \times 10^{-5}$	4,000	132	1.5	0.2	$\pm 0.5$
SDWA-54C	54	25	38.5	60.6	21.4	6.1	M5	8	22	44	7,500	$7.2 \times 10^{-5}$	7,000	192	1.5	0.2	$\pm 0.5$
SDWA-64C	64	25.8	48	74.4	26	7.5	M6	13	31	62	6,500	$2.2 \times 10^{-4}$	11,000	373	1.5	0.3	$\pm 0.5$

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.
- Please refer to \* marked value for D2 of OD 47 products when ID is over 18mm.

#### Dimensions / Performance Lengthy Middle Body Type

Model	Size ( $\pm 0.3\text{mm}$ )						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm ( $\text{min}^{-1}$ )	Moment of Inertia ( $\text{kg}\cdot\text{m}^2$ )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)
SDAA-42C	42.5	18	29.3	50	13.4	3.8	M3	1.7	7	14	8,000	$2.7 \times 10^{-5}$	2,000	105	1.5	0.18	$\pm 0.5$
SDAB-42C	42.5	18	29.3	57.9	13.4	3.8	M3	1.7	7	14	8,000	$2.8 \times 10^{-5}$	2,000	110	1.5	0.18	$\pm 0.5$
SDAC-42C	42.5	18	29.3	67.3	13.4	3.8	M3	1.7	7	14	8,000	$2.9 \times 10^{-5}$	2,000	115	1.5	0.18	$\pm 0.5$
SDAA-47C	47	20	33/*38	63.8	16.7	5	M4	3.5	12	24	7,500	$4.5 \times 10^{-5}$	4,000	152	1.5	0.2	$\pm 0.5$
SDAB-47C	47	20	33/*38	90.7	16.7	5	M4	3.5	12	24	7,500	$5.1 \times 10^{-5}$	4,000	172	1.5	0.2	$\pm 0.5$
SDAA-54C	54	24.3	38.5	76	21.4	6.1	M5	8	22	44	7,500	$9.0 \times 10^{-5}$	7,000	240	1.5	0.2	$\pm 0.5$
SDAB-54C	54	24.3	38.5	89.9	21.4	6.1	M5	8	22	44	7,500	$1.1 \times 10^{-4}$	7,000	266	1.5	0.2	$\pm 0.5$
SDA-64C	64	25.8	48	89.9	26	7.5	M6	13	31	62	6,500	$2.7 \times 10^{-4}$	11,000	450	1.5	0.3	$\pm 0.5$

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Non-standard lengthy middle body type can be customized.**
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.
- Please refer to \* marked value for D2 of OD 47 products when ID is over 18mm.

# SD SERIES (SDW)

## Double Disk Type Coupling (High Strength Aluminum Alloy Body)

### Standard Inner Diameter (ID)

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

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into  $L_1$  depth for IDs with ★ mark.

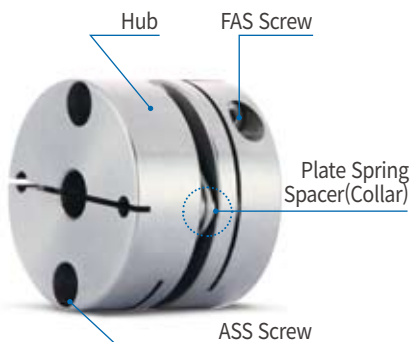
### Slip Torque

- The below table shows the actual permissible torque values when the slip torque value is lower than the coupling's max. torque value.
- If the slip torque value is lower than the coupling's max. torque value, please check and compare between the slip torque in the below table and the operating torque value of the connected motor. It is safer to size up the coupling or use a key/keyway when the slip torque value is lower than the motor's operational torque.
- The below slip torque values may be subject to change according to different testing conditions. (e.g. shaft tolerance, Surface roughness, or acceleration/deceleration of driving shafts). On the other hand, the values could be affected when a different kind of fastening screw is used (body material or surface treatment). Therefore, we recommend you test under the same conditions before mounting.

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter ( $d_1, d_2$ )																				
		5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	17	18	19	20	21	
SD□□-35C	8	3.2	3.5	3.8	6	7																
SD□□-42C	14		4	4.5	5	6.4	7	7	7.5	8	10.4	11	12									
SD□□-47C	24					4.9	6	7	7.8	8.4	11.3	12.2	13.9	17.6	19	22						
SD□□-54C	44								20	25	30	32	35	38	40							
SD□□-64C	62										36	37	41	42	42	43	44	50	52	58	60	

# SD SERIES (SDSS)

## Single Disk Type Coupling (Stainless Steel Body)



### Structure and Material

Structure	Material
Hub	Stainless Steel
Plate Spring	Stainless Steel
Spacer(Collar)	Stainless Steel
Assembly Screw	SUSXM7
Fastening Screw	SUSXM7

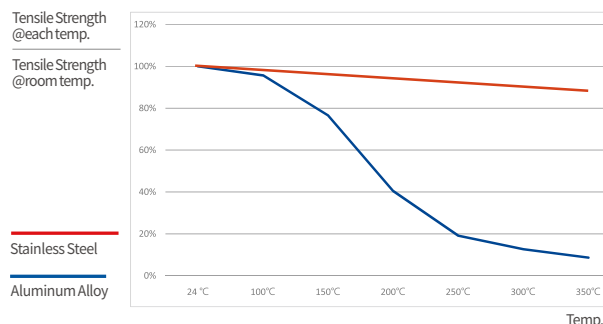
### Product Features & Application

Backlash free (Precision)		☆
High Torque (Durability)		○
Torsional Stiffness		☆
Vibration Absorption		-
Misalignment Absorption		△
Corrosion resistance		☆
Applicable Motors	Servo	○
	Stepping	○
	Encoder	○
	General	-

**Application :** Semi-conductor manufacturing machine, SMT, Cartesian Robot, UVW Stage, Machine tools, Index Table, and Corrosion resistant / High-precision / High-heated environment

### Why Stainless Steel Products are recommended?

1. Corrosion Resistance allows to be used in rusty environment.
2. The heat resistance is better than aluminum alloy material's so that it keeps the mechanical properties of materials staying normal in high temperature applications.



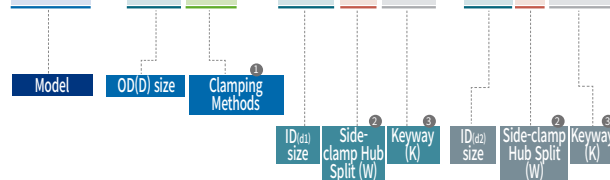
### Clamping Methods

Set-screw (No mark)	General	X
	With Keyway	X
Side-clamp (C)	General	○
	Hub Split	△
	With Keyway	○
Taper-ring (T)		X

※ You may check the sizes that Side-clamp Hub Split type is applicable from the "Dimensions / Performance" tables in the following pages.

### How to Order

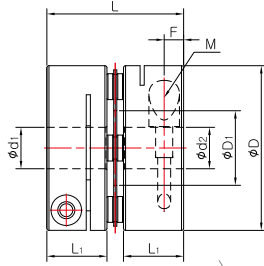
**SDSS - 80 CW - 20 W K6 x 35 W K10**



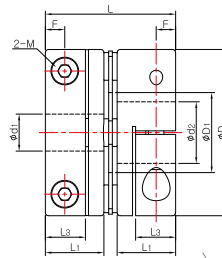
1. Clamping Methods
  - C General Side-clamp
  - CW Side-clamp Hub Split
2. Side-clamp Hub Split
  - No mark Not Split
  - W Split
3. Keyway
  - No mark No Keyway
  - K(b size) Keyway processed according to the indicated b size.

# SD SERIES (SDSS)

## Single Disk Type Coupling (Stainless Steel Body)



Size: 19C~47C



Size: 54C~90C

### Dimensions / Performance

Model	Size (±0.3mm)						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D <sub>1</sub>	L	L <sub>1</sub>	L <sub>3</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SDSS-19C	19	8.5	19.3	8.7	-	2.9	M2.6	1	0.9	1.8	14,000	1.0 x 10 <sup>-6</sup>	600	21	1	0.02	±0.1	X
SDSS-22C	22.2	10	19.7	8.7	-	2.8	M2.6	1	1.1	2.2	10,000	2.5 x 10 <sup>-6</sup>	600	42	1	0.02	±0.1	X
SDSS-26C	26.6	12.2	24.1	10.7	-	3.4	M3	1.5	1.5	3	10,000	6.0 x 10 <sup>-6</sup>	900	70	1	0.02	±0.15	X
SDSS-31C	31.8	14.4	26.4	11.6	-	3.7	M3	1.5	3	6	9,000	1.5 x 10 <sup>-5</sup>	1,700	112	1	0.02	±0.2	X
SDSS-35C	35	16.2	28	12.7	-	4.4	M4	2.5	4	8	8,500	2.5 x 10 <sup>-5</sup>	2,000	135	1	0.02	±0.2	X
SDSS-39C	39	17	31.3	13.7	-	4.3	M4	2.5	5	10	8,000	4.0 x 10 <sup>-5</sup>	2,300	196	1	0.02	±0.2	X
SDSS-42C	42.5	18	31.4	13.7	-	4.3	M4	2.5	7	14	8,000	8.5 x 10 <sup>-5</sup>	2,800	266	1	0.02	±0.25	X
SDSS-47C	47	20.4	36	16	-	5.2	M4	2.5	12	24	8,000	1.4 x 10 <sup>-4</sup>	6,000	392	1	0.02	±0.25	X
SDSS-54C	54	25	42	19	13	6.3	M5	4	22	44	8,000	2.5 x 10 <sup>-4</sup>	11,000	560	1	0.02	±0.25	○
SDSS-64C	64	25.8	57.5	26	15.2	7.5	M6	8	31	62	7,000	6.5 x 10 <sup>-4</sup>	20,000	950	1	0.02	±0.25	○
SDSS-80C	80	35.8	66.1	29.7	19	9.4	M8	20	75	150	7,000	1.6 x 10 <sup>-3</sup>	40,000	1,800	1	0.02	±0.4	○
SDSS-90C	94.5	41.6	68.9	30.4	19	9.3	M8	20	150	300	6,000	3.2 x 10 <sup>-3</sup>	60,000	2,400	1	0.02	±0.5	○

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.

### Standard Inner Diameter (ID) 19C~47C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																				
	4	4.5	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.88	16	17	18	19	20
SDSS-19C	●	●	●	●																	
SDSS-22C	●	●	●	●	●	●	●	●★	●★												
SDSS-26C			●	●	●	●	●	●	●	●											
SDSS-31C				●	●	●	●	●	●	●	●	●	●	●	●★						
SDSS-35C				●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SDSS-39C							●	●	●	●	●	●	●	●	●	●	●				
SDSS-42C							●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	
SDSS-47C										●	●	●	●	●	●	●	●	●	●	●	●

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.



# SD SERIES (SDSS)

## Single Disk Type Coupling (Stainless Steel Body)

### Standard Inner Diameter (ID) 54C~90C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																							
	10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	45	50	
SDSS-54C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
SDSS-64C			●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★						
SDSS-80C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
SDSS-90C												●	●	●	●	●	●	●	●	●	●	●★		

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.
- Side-clamp Hub Split is available (Optional)

### Slip Torque

- The below table shows the actual permissible torque values when the slip torque value is lower than the coupling's max. torque value.
- If the slip torque value is lower than the coupling's max. torque value, please check and compare between the slip torque in the below table and the operating torque value of the connected motor. It is safer to size up the coupling or use a key/keyway when the slip torque value is lower than the motor's operating torque.
- The below slip torque values may be subject to change according to different testing conditions. (e.g. shaft tolerance, Surface roughness, or acceleration/deceleration of driving shafts). On the other hand, the values could be affected when a different kind of fastening screw is used (body material or surface treatment). Therefore, we recommend you test under the same conditions before mounting.

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																				
		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
SDSS-19C	1.8	0.8	1.2	1.2																		
SDSS-22C	2.2	0.8	1.2	1.2	1.5	1.8																
SDSS-26C	3			1.6	1.6	2	2	2.5	2.5	2.8												
SDSS-31C	6				1.3	1.4	2.5	2.7	3	3	3.5	4	5	5	6							
SDSS-35C	8				1	1	1.6	2.2	3	3	4	5	5.4	6	7.5							
SDSS-39C	10							3	3.5	3.5	3.8	4.2	5.5	6.4	8	9						
SDSS-42C	14							3.2	4	4.2	3	4.8	6	7	9.5	10	10	11	12	13		
SDSS-47C	24										3	4.9	6	6	8	8	9	9	9	14	14	15

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																					
		10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	45
SDSS-54C	44	8	9.4	11	11	13	15	15	17	17	18	20	23	25	26	27							
SDSS-64C	62			10	14	15	16	17	18	19.5	22	24	34	36	40	42	45	46	50				
SDSS-80C	150						52	53	57	60	68	70	75	84	92	98	101	110	114	118	122		
SDSS-90C	300												78	88	101	103	105	111	117	130	137	137	150

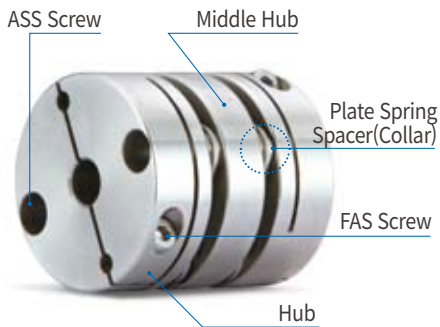
### Side-clamp Hub Split(W) Option is available

- From certain outer diameter(OD) sizes, we can provide Side-clamp Hub Split products.
- Please refer to "HOW TO ORDER" page for more details.



# SD SERIES (SDWS)

## Double Disk Type Coupling (Stainless Steel Body)



### Structure and Material

Structure	Material
Hub	Stainless Steel
Middle Hub	Stainless Steel
Plate Spring	Stainless Steel
Spacer(Collar)	Stainless Steel
Assembly Screw	SUSXM7
Fastening Screw	SUSXM7

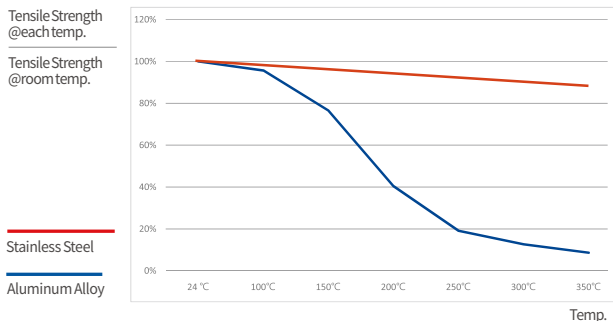
### Product Features & Application

Backlash free (Precision)		☆
High Torque (Durability)		○
Torsional Stiffness		☆
Vibration Absorption		-
Misalignment Absorption		○
Corrosion resistance		☆
Applicable Motors	Servo	○
	Stepping	○
	Encoder	○
	General	-

**Application :** Semi-conductor manufacturing machine, SMT, Cartesian Robot, UVW Stage, Machine tools, Index Table, and Corrosion resistant / High-precision / High-heated environment

### Why Stainless Steel Products are recommended?

1. Corrosion Resistance allows to be used in rusty environment.
2. The heat resistance is better than aluminum alloy material's so that it keeps the mechanical properties of materials staying normal in high temperature applications.



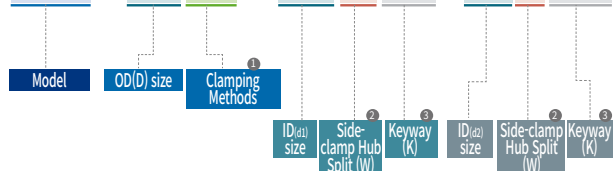
### Clamping Methods

Set-screw (No mark)	General	X
	With Keyway	X
Side-clamp (C)	General	○
	Hub Split	△
	With Keyway	○
Taper-ring (T)		X

※ You may check the sizes that Side-clamp Hub Split type is applicable from the “Dimensions / Performance” tables in the following pages.

### How to Order

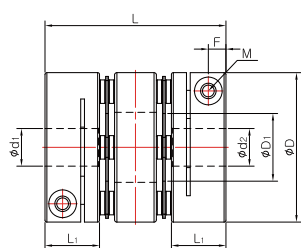
**SDWS - 80 CW - 20 W K6 x 35 W K10**



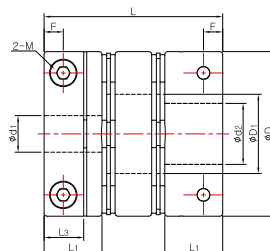
1. Clamping Methods
  - C General Side-clamp
  - CW Side-clamp Hub Split (d1 or d2)
2. Side-clamp Hub Split
  - No mark Not Split
  - W Split
3. Keyway
  - No mark No Keyway
  - K(b size) Keyway processed according to the indicated b size.

# SD SERIES (SDWS)

## Double Disk Type Coupling (Stainless Steel Body)



Size: 19C~47C



Size: 54C~90C

### Dimensions / Performance

Model	Size (±0.3mm)						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min <sup>-1</sup> )	Moment of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D <sub>1</sub>	L	L <sub>1</sub>	L <sub>3</sub>	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SDWAS-19C	19	8.5	23.3	8.7	-	2.9	M2.6	1	0.9	1.8	14,000	1.6 x 10 <sup>-6</sup>	300	37	1	0.05	±0.2	X
SDWBS-19C	19	8.5	26.3	8.7	-	2.9	M2.6	1	0.9	1.8	14,000	2.0 x 10 <sup>-6</sup>	300	39	1	0.05	±0.2	X
SDWAS-22C	22.2	9	25	8.7	-	2.8	M2.6	1	1.1	2.2	10,000	3.3 x 10 <sup>-6</sup>	400	47	1.5	0.12	±0.2	X
SDWBS-22C	22.2	9	27.2	8.7	-	2.8	M2.6	1	1.1	2.2	10,000	3.5 x 10 <sup>-6</sup>	400	50	1.5	0.12	±0.2	X
SDWAS-26C	26.6	12.2	32.5	10.7	-	3.4	M3	1.5	1.5	3	10,000	8.5 x 10 <sup>-6</sup>	600	92	1.5	0.15	±0.3	X
SDWAS-31C	31.8	14.4	33.5	11.6	-	3.7	M3	1.5	3	6	8,000	1.9 x 10 <sup>-5</sup>	1,300	140	1.5	0.15	±0.4	X
SDWBS-31C	31.8	14.4	38.5	11.6	-	3.7	M3	1.5	3	6	8,000	2.2 x 10 <sup>-5</sup>	1,300	162	1.5	0.15	±0.4	X
SDWAS-35C	35	16.2	34.6	12.7	-	4.4	M4	2.5	4	8	8,000	3.0 x 10 <sup>-5</sup>	1,500	165	1.5	0.16	±0.4	X
SDWCS-35C	35	16.2	38.1	12.7	-	4.4	M4	2.5	4	8	8,000	3.4 x 10 <sup>-5</sup>	1,500	198	1.5	0.16	±0.4	X
SDWAS-39C	39	17	39.5	13.7	-	4.3	M4	2.5	5	10	8,000	5.3 x 10 <sup>-5</sup>	1,800	257	1.5	0.18	±0.4	X
SDWCS-39C	39	17	45	13.7	-	4.3	M4	2.5	5	10	8,000	6.0 x 10 <sup>-5</sup>	1,800	297	1.5	0.18	±0.4	X
SDWCS-42C	42.5	18	46.2	13.7	-	4.3	M4	2.5	7	14	8,000	8.3 x 10 <sup>-5</sup>	2,000	324	1.5	0.18	±0.5	X
SDWCS-47C	47	20.4	50.7	16	-	5.2	M4	2.5	12	24	7,500	1.4 x 10 <sup>-4</sup>	4,000	432	1.5	0.2	±0.5	X
SDWBS-54C	54	25	52	19	13	6.3	M5	4	22	44	7,500	2.8 x 10 <sup>-4</sup>	7,000	675	1.5	0.2	±0.5	○
SDWAS-54C	54	25	58	19	13	6.3	M5	4	22	44	7,500	3.0 x 10 <sup>-4</sup>	7,000	756	1.5	0.2	±0.5	○
SDWAS-64C	64	25.8	73	26	15.2	7.5	M6	8	31	62	6,500	6.8 x 10 <sup>-4</sup>	11,000	1,200	1.5	0.3	±0.5	○
SDWS-80C	80	35.8	81.8	29.7	19	9.4	M8	20	75	150	6,000	1.9 x 10 <sup>-3</sup>	20,000	2,100	2	0.4	±0.6	○
SDWCS-80C	80	32	98.3	29.7	19	9.4	M8	20	75	150	6,000	2.4 x 10 <sup>-3</sup>	20,000	2,600	2	0.5	±0.6	○
SDWS-90C	94.5	41.6	98.9	30.4	19	9.3	M8	20	150	300	6,000	4.2 x 10 <sup>-3</sup>	35,000	3,100	2	0.4	±0.8	○

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Max. torque/rated torque is the value regarding to a coupling's self-durability and is not related to slip-torque between the coupling bore and the shaft.

### Standard Inner Diameter (ID) 19C~47C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																					
	4	4.5	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.88	16	17	18	19	20	
SDW□S-19C	●	●	●	●																		
SDW□S-22C	●	●	●	●	●	●	●	★	★													
SDW□S-26C			●	●	●	●	●	●	●	●												
SDW□S-31C				●	●	●	●	●	●	●	●	●	●	●	★							
SDW□S-35C				●	●	●	●	●	●	●	●	●	●	●	●	●	●					
SDW□S-39C							●	●	●	●	●	●	●	●	●	●	●					
SDW□S-42C							●	●	●	●	●	●	●	●	●	●	●	●	●	★	★	
SDW□S-47C							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.

# SD SERIES (SDWS)

## Double Disk Type Coupling (Stainless Steel Body)

### Standard Inner Diameter (ID) 54C ~ 90C

Model	Standard Inner Diameter (d <sub>1</sub> , d <sub>2</sub> ) (mm)																							
	10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	45	50	
SDW□S-54C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
SDW□S-64C			●	●	●	●	●	●	●	●	●	●	●	●	●	●★	●★	●★						
SDW□S-80C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
SDW□S-90C												●	●	●	●	●	●	●	●	●	●	●	●★	

- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)
- Due to interference of the middle parts, make sure the shaft is only inserted into L<sub>1</sub> depth for IDs with ★ mark.
- Side-clamp Hub Split is available (Optional)

### Slip Torque

- The below table shows the actual permissible torque values when the slip torque value is lower than the coupling's max. torque value.
- If the slip torque value is lower than the coupling's max. torque value, please check and compare between the slip torque in the below table and the operating torque value of the connected motor. It is safer to size up the coupling or use a key/keyway when the slip torque value is lower than the motor's operating torque.
- The below slip torque values may be subject to change according to different testing conditions. (e.g. shaft tolerance, Surface roughness, or acceleration/deceleration of driving shafts). On the other hand, the values could be affected when a different kind of fastening screw is used (body material or surface treatment). Therefore, we recommend you test under the same conditions before mounting.

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																				
		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
SDW□S-19C	1.8	0.8	1.2	1.2																		
SDW□S-22C	2.2	0.8	1.2	1.2	1.5	1.8																
SDW□S-26C	3			1.6	1.6	2	2	2.5	2.5	2.8												
SDW□S-31C	6				1.3	1.4	2.5	2.7	3	3	3.5	4	5	5	6							
SDW□S-35C	8				1	1	1.6	2.2	3	3	4	5	5.4	6	7.5							
SDW□S-39C	10							3	3.5	3.5	3.8	4.2	5.5	6.4	8	9						
SDW□S-42C	14							3.2	4	4.2	3	4.8	6	7	9.5	10	10	11	12	13		
SDW□S-47C	24										3	4.9	6	6	8	8	9	9	9	14	14	15

Model	Max. Torque (N.m)	Slip Torque (N.m) by Inner Diameter (d <sub>1</sub> , d <sub>2</sub> )																					
		10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	45
SDW□S-54C	44	8	9.4	11	11	13	15	15	17	17	18	20	23	25	26	27							
SDW□S-64C	62			10	14	15	16	17	18	19.5	22	24	34	36	40	42	45	46	50				
SDW□S-80C	150						52	53	57	60	68	70	75	84	92	98	101	110	114	118	122		
SDW□S-90C	300												78	88	101	103	105	111	117	130	137	137	150

### Side-clamp Hub Split(W) Option is available

- From certain outer diameter(OD) sizes, we can provide Side-clamp Hub Split products.
- Please refer to "HOW TO ORDER" page for more details.

