

SHD SERIES

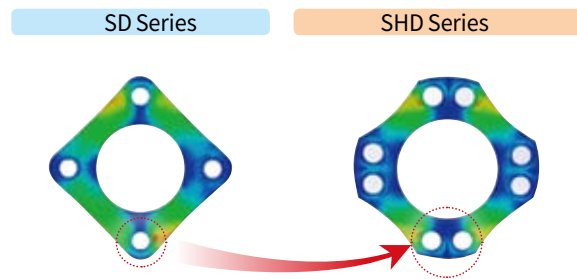


High Torque Disk Coupling

SHD vs SD

SHD Series is an advanced version of SD series with revised shape of its plate springs to disperse stress concentration and to enhance the stiffness and strength of the plate spring modules. In response to the advanced strength of SHD series, AL-7075-T6 material (Ultra high strength Aluminum Alloy) has been adopted as the body material to increase the overall durability.

1. Advanced version of Plate Spring shape



- Sung-il developed the improved version of plate spring with doubled assembly holes to disperse stress concentration, and it enhances both strength and stiffness to the higher extent.

2. Improved durability with advanced body material

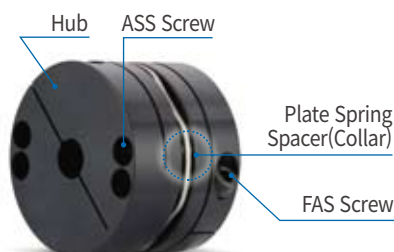
SD Series	AL2024
SHD Series	AL7075
Ratio (= AL7075 / AL2024)	
Yield Strength	1.7 ~ 1.8
Tensile Strength	1.3 ~ 1.4
Shearing Strength	1.15 ~ 1.2
Fatigue Strength	1.15 ~ 1.2

Index

Size (OD)	Body Material	Plate-Spring Modules	Clamping Methods		
			Set-screw	Side-clamp	Taper-ring
56 ~ 110	Al-7075-T6	Single Disk (SHDS)			
		Double Disk (SHDW)			
126 ~ 144	Steel	Single Disk (SHDS)			-
		Double Disk (SHDW)			-

SHD SERIES (SHDS)

Single Disk High Torque Disk Coupling



Structure and Material Size : 56 ~ 110

Structure	Material	Surface Treatment
Hub	Al-7075-T6	Anodizing
Plate Spring	Stainless Steel	-
Spacer(Collar)	Steel	Black Oxide
Assembly Screw	SCM435	Black Oxide
Fastening Screw	SCM435	Black Oxide

Structure and Material Size : 126 ~ 144

Structure	Material	Surface Treatment
Hub	Steel	Black Oxide (Standard)
Plate Spring	Stainless Steel	-
Spacer(Collar)	Steel	Black Oxide
Assembly Screw	SCM435	Black Oxide
Fastening Screw	SCM435	Black Oxide

※ Please contact Sung-il Customer Service team for eletroless nickel plating surface treatment option.

Product Features & Application

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

Application : Cartesian Robot, Belt Drive, Machine tools, Index Table, Logistics facilities, Servo Press etc.

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
SUS/ASS	Stainless Steel	-



No mark



SUS/ASS

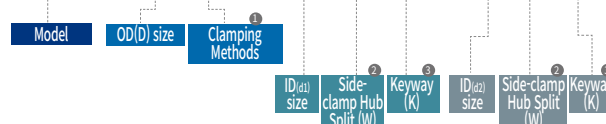
- Caution: Slip torque would become lower if the body material or surface treatment of screws are changed from the standard version.

Clamping Methods

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

How to Order

SHDS - 56 CW - 20 W K6 x 25 W K8



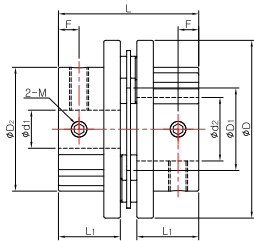
1 Clamping Methods		No mark	Set-screw
		C	General Side-clamp
		CW	Side-clamp Hub Split
		T	Taper-ring
2 Side-clamp Hub Split		3 Keyway	
		No mark	No Keyway
W		Split (Only applicable on Side-clamp Type)	Keyway processed according to the indicated b size. (Keyway is not applicable on Taper-ring type)

SHD SERIES (SHDS)

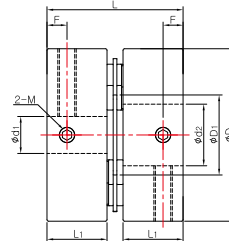
Single Disk High Torque Disk Coupling

Set-Screw

Flange-shaped



Cylinder-shaped



Size (OD)	56	66	88	110
Flange-shaped	< ID 22mm	< ID 26mm	< ID 32mm	< ID 48mm

Size (OD)	56	66	88	110
Cylinder-shaped	≥ ID 22mm	≥ ID 26mm	≥ ID 32mm	≥ ID 48mm

- Only flange-shaped products are available for OD126 and OD144

Dimensions / Performance

Model	Size (±0.3mm)						Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min ⁻¹)	Moment of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D ₁	D ₂	L	L ₁	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)
SHDS-56	56	30.6	39	44.2	19.5	6.5	M6	7	35	70	7,700	2.9×10 ⁻⁵	2.0×10 ⁴	150	0.7	0.02	±0.3
SHDS-66	66	35.6	46	56.5	24.5	7.5	M8	15	60	120	7,000	8.0×10 ⁻⁵	3.0×10 ⁴	300	0.7	0.02	±0.3
SHDS-88	88	46	63	69.9	30	9.5	M8	15	180	360	5,500	2.9×10 ⁻⁴	7.0×10 ⁴	600	0.7	0.02	±0.3
SHDS-110	108	60.5	77	77.7	34.5	13	M10	30	280	560	4,000	2.0×10 ⁻³	1.4×10 ⁵	1190	0.7	0.02	±0.5
SHDS-126	126	65	78/*92	91.2	40	12	M10	30	360	720	3,500	4.4×10 ⁻³	4.4×10 ⁵	3200	1	0.02	±1.6
SHDS-144	144	75	88/*104	101.7	45	15	M10	30	530	1,060	3,000	8.4×10 ⁻³	7.8×10 ⁵	4700	1	0.02	±1.8

- 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. (Set-screw type is usually less durable than other clamping method, thus please consider it has a complementary option e.g. keyway along with.)
- OD 126 & 144: Please refer to * marked values for D₂ when ID is over 55mm (OD126) and 66mm (OD144)

Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d ₁ , d ₂) (mm)																			
	10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42
SHDS-56	●	●	●	●	●	●	●	●	●	●	●	●								
SHDS-66					●	●	●	●	●	●	●	●	●	●	●	●				
SHDS-88									●	●	●	●	●	●	●	●	●	●	●	●
SHDS-110															●	●	●	●	●	●
SHDS-126								●	●	●	●	●	●	●	●	●	●	●	●	●
SHDS-144										●	●	●	●	●	●	●	●	●	●	●

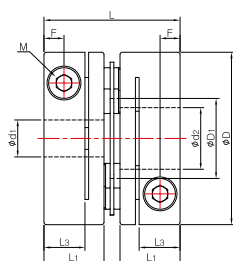
- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)

SHD SERIES (SHDS)

Single Disk High Torque Disk Coupling

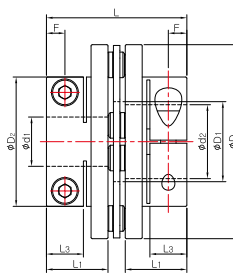
Side-clamp

Cylinder-shaped



Size: 56C ~ 110C

Flange-shaped (Low-inertia)



Size: 126C

Dimensions / Performance

Model	Size ($\pm 0.3\text{mm}$)							Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min^{-1})	Moment of Inertia ($\text{kg}\cdot\text{m}^2$)	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D ₁	D ₂	L	L ₁	L ₂	F	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SHDS-56C	56	30.6	-	44.2	19.5	13.3	6.5	M6	13	35	70	7,000	4.0×10^{-5}	2.0×10^4	210	0.7	0.02	± 0.3	○
SHDS-66C	66	35.6	-	56.5	24.5	15.5	7.5	M6	13	60	120	6,500	1.0×10^{-4}	3.0×10^4	380	0.7	0.02	± 0.3	○
SHDS-88C	88	46	-	69.9	30	19	10	M8	30	180	360	5,500	4.3×10^{-4}	7.0×10^4	900	0.7	0.02	± 0.3	○
SHDS-110C	108	60.5	-	77.7	34.5	21	10.5	M10	50	280	560	4,000	2.3×10^{-3}	1.4×10^5	1,350	0.7	0.02	± 0.5	○
SHDS-126C	126	65	84/*100	91.2	40	24	12	M10	50	360	720	3,500	6.0×10^{-3}	4.4×10^5	4,000	1	0.02	± 1.6	○

- 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.
- For OD 126C products, please refer to D₂ values with * mark when inner diameters are bigger than 45mm.

Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d ₁ , d ₂) (mm)																			
	10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42
SHDS-56C	●	●	●	●	●	●	●	●	●	●	●	●								
SHDS-66C					●	●	●	●	●	●	●	●	●	●	●	●				
SHDS-88C									●	●	●	●	●	●	●	●	●	●	●	●
SHDS-110C															●	●	●	●	●	●
SHDS-126C															●	●	●	●	●	●

- 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)

SHD SERIES (SHDS)

Single Disk High Torque Disk Coupling

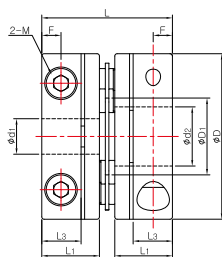
Slip Torque

- 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 ₁ , d ₂)																									
		10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42	45	48	50	55	60	
SHDS-56C	70	22	24	30	30	32	40	45	55	61																	
SHDS-66C	120					40	40	45	60	62	64	68	70	97	100	104	117										
SHDS-88C	360									76	83	98	104	130	136	162	169	188	193	208	215	220					
SHDS-110C	560															162	170	182	199	221	235	247	253	273	299	273	
SHDS-126C	720															191	209	232	268	305	323	355	379	385	400	400	

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.
- The no. of fastening screws for OD 56~110 products is only 1 each, however we provide 2 screws for Side-clamp Split (W) type according to the below drawing.



Electroless Nickel Plating for Steel-body Products

- The standard surface treatment (finish) for steel-body product is **Black Oxide**.
- If corrosion is highly concerned, there is another surface treatment option of 'Electroless Nickel Plating' adding an additional code "NI" next to the part no. as shown below.

SHDS - 126C - NI - 30 - 40

- All other parts (collars, ASS screws and FAS screws) will be Electroless Nickel Plated as well.



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

Single Disk High Torque Disk Coupling

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Model	Size (±0.3mm)						Screw		Permissible Torque (N·m)	Max. rpm (min ⁻¹)	Moment of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D ₁	L ₁	L ₂	L ₃	L ₄	Size	Fastening Torque (N·m)						Angular (°)	Parallel (mm)	End-play (mm)
SHDS-56T	56	30.6	20.2	24.7	45.6	54.6	M5	8	60	7,700	3.6×10 ⁻⁵	2.0×10 ⁴	190	0.7	0.02	±0.3
SHDS-66T	66	35.6	25	30	57.5	67.5	M6	13	120	7,000	8.6×10 ⁻⁵	3.0×10 ⁴	320	0.7	0.02	±0.3
SHDS-88T	88	46	30	35.2	69.9	80.3	M6	13	200	6,000	3.2×10 ⁻⁴	7.0×10 ⁴	670	0.7	0.02	±0.3
SHDS-110T	108	60.5	30.7	35.9	70.1	80.5	M6	13	350	4,500	1.6×10 ⁻³	1.4×10 ⁵	980	0.7	0.02	±0.5

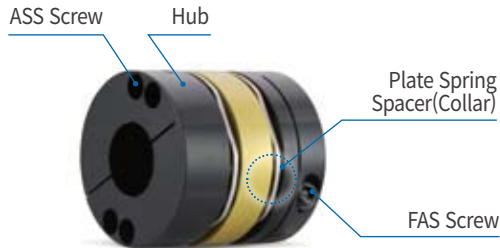
- [illegible]

- 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 different kind of fastening screw is used. Therefore, we recommend you test under the same conditions before mounting.

Model	Permissible Torque (N·m)	Slip Torque (N.m) by Inner Diameter (d ₁ , d ₂)																
		10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35
SHDS-56T	60	45	50	55														
SHDS-66T	120					80	90	100	110									
SHDS-88T	200									140	168	180						
SHDS-110T	350															250	280	312

SHD SERIES (SHDW)

Double Disk High Torque Disk Coupling



Structure and Material Size : 56 ~ 110

Structure	Material	Surface Treatment
Hub	Al-7075-T6	Anodizing
Middle Hub	Al-7075-T6	
Plate Spring	Stainless Steel	-
Spacer(Collar)	Steel	Black Oxide
Assembly Screw	SCM435	Black Oxide
Fastening Screw	SCM435	Black Oxide

Structure and Material Size : 126 ~ 144

Structure	Material	Surface Treatment
Hub	Steel	Black Oxide (Standard)
Middle Hub	Steel	
Plate Spring	Stainless Steel	-
Spacer(Collar)	Steel	Black Oxide
Assembly Screw	SCM435	Black Oxide
Fastening Screw	SCM435	Black Oxide

※ Please contact Sung-il Customer Service team for electroless nickel plating surface treatment option.

Product Features & Application

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

Application : Cartesian Robot, Belt Drive, Machine tools, Index Table, Logistics facilities, Servo Press etc.

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
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.

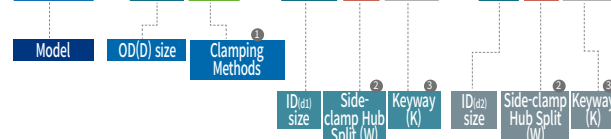
Clamping Methods

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

※ 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

SHDW - 56 CW - 20 W K6 x 25 W K8



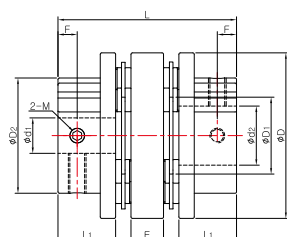
1 Clamping Methods		No mark	Set-screw
		C	General Side-clamp
		CW	Side-clamp Hub Split
		T	Taper-ring
2 Side-clamp Hub Split		3 Keyway	
		No mark	No Keyway
		W	Split (Only applicable on Side-clamp Type)
		K(b size)	Keyway processed according to the indicated b size. (Keyway is not applicable on Taper-ring type)

SHD SERIES (SHDW)

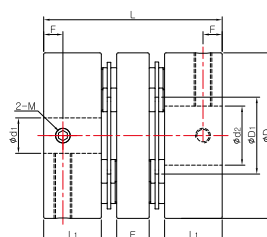
Double Disk High Torque Disk Coupling

Set-Screw

Flange-shaped



Cylinder-shaped



Size (OD)	56	66	88	110
Flange-shaped	< ID 22mm	< ID 26mm	< ID 32mm	< ID 48mm

Size (OD)	56	66	88	110
Cylinder-shaped	≥ ID 22mm	≥ ID 26mm	≥ ID 32mm	≥ ID 48mm

- Only flange-shaped products are available for OD126 and OD144

Dimensions / Performance

Model	Size (±0.3mm)							Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm (min ⁻¹)	Moment of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D ₁	D ₂	L	L ₁	F	E	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)
SHDW-56	56	28.6	39	60.4	19.5	6.5	11	M6	7	35	70	7,700	4.6×10 ⁻⁵	1.0×10 ⁴	240	1	0.2	±0.6
SHDW-66	66	35.6	46	80	24.5	7.5	16	M8	15	60	120	7,000	1.2×10 ⁻⁴	1.5×10 ⁴	440	1	0.2	±0.6
SHDW-88	88	46	63	99.8	30	9.5	20	M8	15	180	360	5,500	4.3×10 ⁻⁴	3.5×10 ⁴	900	1	0.2	±0.6
SHDW-110	108	60.5	77	111	34.5	13	24.6	M10	30	280	560	4,000	3.2×10 ⁻³	7.0×10 ⁴	1,750	1	0.25	±1
SHDW-126	126	65	78/*92	127.4	40	12	25	M10	30	360	720	3,500	1.0×10 ⁻²	2.2×10 ⁵	5,150	1	0.6	±3.2
SHDW-144	144	75	88/*104	143.4	45	15	30	M10	30	530	1,060	3,000	1.9×10 ⁻²	3.9×10 ⁵	7,600	1	0.6	±3.6

- 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. (Set-screw type is usually less durable than other clamping method, thus please consider it has a complementary option e.g. keyway along with.)
- Please refer to * marked value for D₂ of OD 126 & OD 144 products when ID is over 55mm.

Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d ₁ , d ₂) (mm)																			
	10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42
SHDW-56	●	●	●	●	●	●	●	●	●	●	●	●								
SHDW-66					●	●	●	●	●	●	●	●	●	●	●	●				
SHDW-88									●	●	●	●	●	●	●	●	●	●	●	●
SHDW-110															●	●	●	●	●	●
SHDW-126								●	●	●	●	●	●	●	●	●	●	●	●	●
SHDW-144										●	●	●	●	●	●	●	●	●	●	●

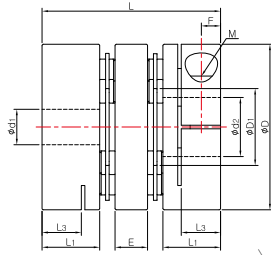
- The recommended shaft tolerance is h7.
- Custom process (e.g. non-standard Inner diameter, special tolerance etc.) is also available upon a special request in prior to order placement.
- Keyway is available. (Optional)

SHD SERIES (SHDW)

Double Disk High Torque Disk Coupling

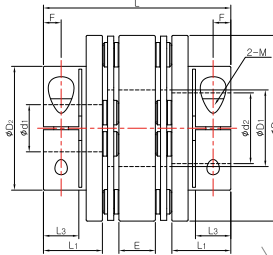
Side-clamp

Cylinder-shaped



Size: 56C~110C

Flange-shaped (Low-inertia)



Size: 126C

Dimensions / Performance

Model	Size (±0.3mm)								Screw		Rated Torque (N·m)	Max. Torque (N·m)	Max. rpm	Moment of Inertia (kg·m²)	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment			Side-clamp Hub Split (W)
	D	D ₁	D ₂	L	L ₁	L ₃	F	E	Size	Fastening Torque (N·m)							Angular (°)	Parallel (mm)	End-play (mm)	
SHDW-56C	56	28.6	-	60.4	19.5	13.3	6.5	11	M6	13	35	70	7,000	5.8×10 ⁻⁵	1.0×10 ⁴	300	1	0.2	±0.6	○
SHDW-66C	66	35.6	-	80	24.5	15.5	7.5	16	M6	13	60	120	6,500	1.4×10 ⁻⁴	1.5×10 ⁴	520	1	0.2	±0.6	○
SHDW-88C	88	46	-	99.8	30	19	10	20	M8	30	180	360	5,500	5.7×10 ⁻⁴	3.5×10 ⁴	1,200	1	0.2	±0.6	○
SHDW-110C	108	60.5	-	111	34.5	21	10.5	24.6	M10	50	280	560	4,000	3.7×10 ⁻³	7.0×10 ⁴	1,920	1	0.25	±1	○
SHDW-126C	126	65	84/*100	127.4	40	24	12	25	M10	50	360	720	3,500	1.3×10 ⁻²	2.2×10 ⁵	5,800	1	0.6	±3.2	○

- 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 126C products, please refer to D₂ values with * mark when inner diameters are bigger than 45mm.

Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d ₁ , d ₂) (mm)																				
	10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42	45
SHDW-56C	●	●	●	●	●	●	●	●	●	●	●	●									
SHDW-66C					●	●	●	●	●	●	●	●	●	●	●	●					
SHDW-88C									●	●	●	●	●	●	●	●	●	●	●	●	●
SHDW-110C															●	●	●	●	●	●	●
SHDW-126C															●	●	●	●	●	●	●

- 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)

SHD SERIES (SHDW)

Double Disk High Torque Disk Coupling

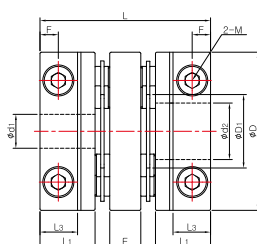
Slip Torque

- 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 different kind of fastening screw is used. 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)																								
		10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42	45	48	50	55	60
SHDW-56C	70	22	24	30	30	32	40	45	55	61																
SHDW-66C	120					40	40	45	60	62	64	68	70	97	100	104	117									
SHDW-88C	360									76	83	98	104	130	136	162	169	188	193	208	215	220				
SHDW-110C	560															162	170	182	199	221	235	247	253	273	299	273
SHDW-126C	720															191	209	232	268	305	323	355	379	385	400	400

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.
- The no. of fastening screws for OD 56~110 products is only 1 each, however we provide 2 screws for Side-clamp Split (W) type according to the below drawing.



Electroless Nickel Plating for Steel-body Products

- The standard surface treatment (finish) for steel-body product is **Black Oxide**.
- If corrosion is highly concerned, there is another surface treatment option of 'Electroless Nickel Plating' adding an additional code "NI" next to the part no. as shown below.

SHDW - 126C - NI - 30 - 40

- All other parts (collars, ASS screws and FAS screws) will be Electroless Nickel Plated as well.

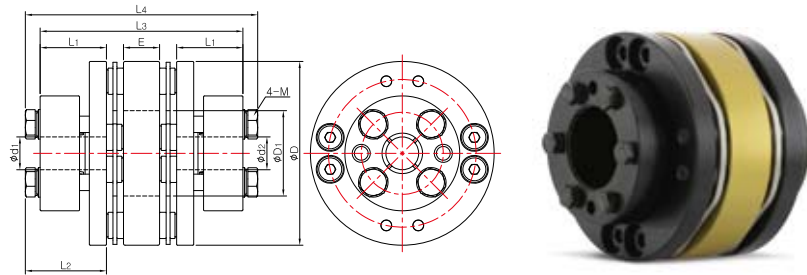


- Caution: Slip torque would become lower if the body material or surface treatment of screws are changed from the standard version.

SHD SERIES (SHDW)

Double Disk High Torque Disk Coupling

Taper-ring



Dimensions / Performance

Model	Size (±0.3mm)							Screw		Permissible Torque (N·m)	Max. rpm (min ⁻¹)	Moment of Inertia (kg·m ²)	Static Torsional Stiffness (N·m/rad)	Mass (g)	Permissible Misalignment		
	D	D ₁	L ₁	L ₂	L ₃	L ₄	E	Size	Fastening Torque (N·m)						Angular (°)	Parallel (mm)	End-play (mm)
SHDW-56T	56	28.6	20.2	24.7	61.8	70.8	11	M5	8	60	7,700	5.4×10 ⁻⁵	1.0×10 ⁴	280	1	0.2	±0.6
SHDW-66T	66	35.6	25	30	81	91	16	M6	13	120	7,000	1.2×10 ⁻⁴	1.5×10 ⁴	460	1	0.2	±0.6
SHDW-88T	88	46	30	35.2	99.8	110.2	20	M6	13	200	6,000	4.6×10 ⁻⁴	3.5×10 ⁴	970	1	0.2	±0.6
SHDW-110T	108	60.5	30.7	35.9	103.4	113.8	24.6	M6	13	350	4,500	3.7×10 ⁻³	7.0×10 ⁴	1530	1	0.25	±1

- The Moment of Inertia and Mass values are based on products with max. Inner diameter.
- Due to the structure of Taper-ring, it's not allowed to have other complementary options to enhance clamping force such as keyway etc. This is the reason why the above-mentioned permissible torques are based on the slip torque at the min. standard inner diameter. (The bigger inner diameter, the higher permissible torque.)

Standard Inner Diameter (ID)

Model	Standard Inner Diameter (d ₁ , d ₂) (mm)																			
	10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	38	40	42
SHDW-56T	●	●	●	●	●	●	●	●	●	●	●	●								
SHDW-66T					●	●	●	●	●	●	●	●	●	●	●	●				
SHDW-88T									●	●	●	●	●	●	●	●	●	●	●	●
SHDW-110T															●	●	●	●	●	●

- 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 **NOT** available

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 different kind of fastening screw is used. 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)																
		10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35
SHDW-56T	60	45	50	55														
SHDW-66T	120					80	90	100	110									
SHDW-88T	200									140	168	180						
SHDW-110T	350															250	280	312