

# Couplings

## High Rigidity Disc (Outer Dia. 65) Keywayed / Clamping

For Servo Motors

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

Couplings – High Rigidity Disc Both Sides Keywayed



Couplings – High Rigidity Disc Both Sides Clamping



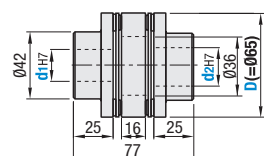
Couplings – High Rigidity Disc One Side Clamping / One Side Keywayed Bore



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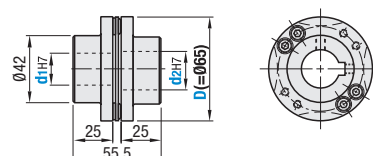
Both Sides Keywayed Type

**CPSWWK (Double Discs)**



\* The keyways on right and left sides are 90° offset.

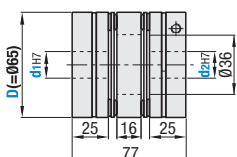
**CPSHWK (Single Disc)**



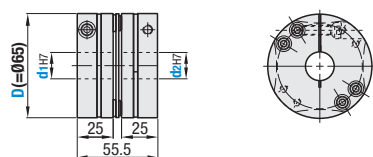
\* The keyways on right and left sides face the same direction.

Both Sides Clamping Type

**CPSWC (Double Discs)**

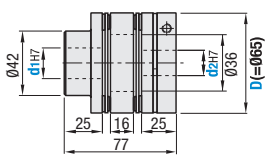


**CPSHC (Single Disc)**

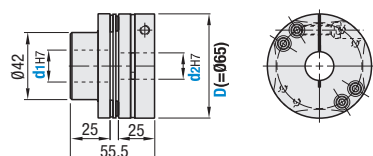


One Side Clamping / One Side Keywayed Bore

**CPSWCK (Double Discs)**



**CPSHCK (Single Disc)**



- Ⓞ Tolerance values for d1, d2, are applied before slit is machined.
- Ⓞ The lateral, angular, and axial misalignment values shown are for each occurring individually. When more than one misalignments are occurring simultaneously, the allowable maximum value of each will be reduced by 1/2.
- Ⓞ Shipped after center-aligned and assembled.
- Ⓞ For the selection criteria and alignment procedures, see P.1091, 1093.

Type			Disc Type	Body		Disc	Accessories	
Both Sides Keywayed	Both Sides Clamping	One Side Clamping / One Side Keywayed Bore		Material	Surface Treatment		Material	Material
CPSWWK	CPSWC	CPSWCK	Double	1045 Carbon Steel or Equivalent	—	301 Stainless Steel	4137 Alloy Steel	Black Oxide
CPSHWK	CPSHC	CPSHCK	Single	—	—	—	—	—

Part Number		D	d1, d2 Selection (Keywayed bores are available up to 025)	Clamp Screw	
Type				Size	Tightening Torque (N-m)
Double Disc Coupling					
Both Sides Keywayed	CPSWWK	65	15 16 17 18 19 20 22 24 25 30	M6 x 20	15.7
Both Sides Clamping	CPSWC				
One Side Clamping / One Side Keywayed Bore	CPSWCK				

Part Number		D	d1, d2 Selection (Keywayed bores are available up to 025)	Clamp Screw	
Type				Size	Tightening Torque (N-m)
Single Disc Coupling					
Both Sides Keywayed	CPSHWK	65	15 16 17 18 19 20 22 24 25 30	M6 x 20	15.7
Both Sides Clamping	CPSHC				
One Side Clamping / One Side Keywayed Bore	CPSHCK				

Double Disc Coupling									
Part Number	Type	D	d1, d2	Allow. Torque (N-m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max. Rot. Speed (r/min)	Mass (g)
CPSWWK	65	65	15-25	60	0.6	0.2	58000	8000	884
CPSWC			15-30						1275
CPSWCK			15-30						1080

Single Disc Coupling											
Part Number	Type	D	d1, d2	Allow. Torque (N-m)	Angular Misalign. (°)	Static Torsional Spring Constant (N-m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (Kg-m²)	Allow. Axial Misalign. (mm)	Comp. Factor	Mass (g)
CPSHWK	65	65	15-25	60	0.6	120000	8000	2.87 x 10 <sup>-4</sup>	±0.3	1.5	595
CPSHC			15-30					985			
CPSHCK			15-30					790			

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

Ⓞ Single Disc Type cannot tolerate lateral misalignment.

Part Number Example: CPSWC65 - 20 - 30

Keyway Dimension

Shaft Bore Dia. d1, d2	b		t		Key Nom. Dim. b x h	Set Screw	
	Dim.	Tol.	Dim.	Tol.		Size	Tightening Torque (N-m)
15, 16, 17	5	±0.015	2.3	+0.1	5 x 5	M4	1.7
18, 19, 20, 22	6	±0.015	2.8	0	6 x 6	M5	4
24, 25	8	±0.018	3.3	+0.2	8 x 7	M6	7

# Couplings

## High Rigidity Disc (Outer Dia. 65) Keyless Clamping

For Servo Motors

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

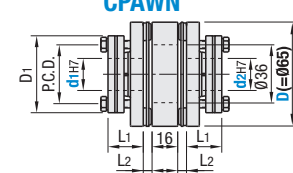
Couplings – High Rigidity Disc Keyless Clamping



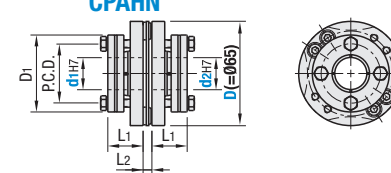
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Both Sides Keyless Clamping

**CPSWN CPAWN (Double Discs)**

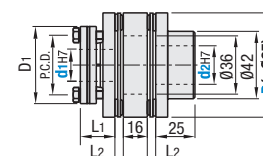


**CPSHN CPAHN (Single Disc)**

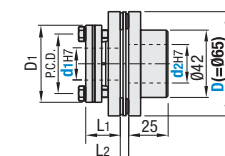


One Side Keyless Clamping / One Side Keywayed Bore

**CPSWMK (Double Discs)**



**CPSHMK (Single Disc)**



- Ⓞ The coupling with 035mm bore diameter conforms to servo motor shaft tolerance of 035 +0.01 / 0.
- Ⓞ Tolerance values for d1, d2, are applied before slit is machined.
- Ⓞ The lateral, angular, and axial misalignment values shown are for each occurring individually. When more than one misalignments are occurring simultaneously, the allowable maximum value of each will be reduced by 1/2.
- Ⓞ Shipped after center-aligned and assembled.
- Ⓞ For the selection criteria and alignment procedures, see P.1091, 1093.
- Ⓞ Keyless Clamping flange has two screw holes for removal. Couplings with 020 or larger bores, the locking screw holes have integrated removal screw holes. Use M6 screws into the screw holes for removal. For installation and removal of Keyless Clamping Type couplings, see P.1089.

Type	Disc Type	Body		Disc	Accessories	
		Material	Surface Treatment		Material	Material
Both Sides Keyless Clamping	Double	1045 Carbon Steel or Equivalent	—	301 Stainless Steel	4137 Alloy Steel	Black Oxide
One Side Keyless Clamping / One Side Keywayed Bore	Single	Aluminum Alloy	Clear Anodize	—	—	—

Part Number		D	d1, d2 (Keywayed Bores Available Up to 025)	d1, d2	L1	L2	D1	P.C.D.	Locking Screws (Keyless Clamping)			
Type									Size	Tightening Torque (N-m)		
Double Disc Coupling												
Both Sides Keyless Clamping	65	65	15 16 *17 18 *19 20 22 24 25 30 35	15	26.5	5.5 (1045 Carbon Steel or Equivalent)	41	29	M5 x 25	6		
CPSWN (1045 Carbon Steel or Equivalent)											16	30
CPAWN (Aluminum)											17	32
One Side Keyless Clamping / One Side Keywayed Bore											18, 19	35
											20, 22	37
											24, 25	42
											30	45
CPSWMK	35	51										

Part Number		D	d1, d2 (Keywayed Bores Available Up to 025)	d1, d2	L1	L2	D1	P.C.D.	Locking Screws (Keyless Clamping)			
Type									Size	Tightening Torque (N-m)		
Single Disc Coupling												
Both Sides Keyless Clamping	65	65	15 16 *17 18 *19 20 22 24 25 30 35	15	26.5	5.5 (1045 Carbon Steel or Equivalent)	41	29	M5 x 25	6		
CPSHN (1045 Carbon Steel or Equivalent)											16	30
CPAHN (Aluminum)											17	32
One Side Keyless Clamping / One Side Keywayed Bore											18, 19	35
											20, 22	37
											24, 25	42
											30	45
CPSHMK	35	51										

Double Disc Coupling											
Part Number	Type	D	d1, d2	Allow. Torque (N-m)	Allow. Angular Misalign. (°)	Allow. Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max. Rotational Speed (r/min)	Inertia Moment (Kg-m²)	Allow. Axial Misalign. (mm)	Mass (g)
CPSWN	65	65	15-19	60	0.6	0.2	58000	8000	6.53 x 10 <sup>-4</sup>	±0.6	984
CPAWN			20-35						2.33 x 10 <sup>-4</sup>		351
CPSWMK			15-35						5.70 x 10 <sup>-4</sup>		934

Single Disc Coupling										
Part Number	Type	D	d1, d2	Allow. Torque (N-m)	Allow. Angular Misalign. (°)	Static Torsional Spring Constant (N-m/rad)	Max. Rotational Speed (r/min)	Inertia Moment (Kg-m²)	Allow. Axial Misalign. (mm)	Mass (g)
CPSHN	65	65	15-19	60	0.6	98000	8000	4.53 x 10 <sup>-4</sup>	±0.3	695
CPAHN			20-35					1.61 x 10 <sup>-4</sup>		248
CPSHMK			15-35					3.70 x 10 <sup>-4</sup>		645

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

Ⓞ Single disc type cannot tolerate lateral misalignment.

Part Number Example: CPSWN65 - 35 - 20

Keyway Dimension

Shaft Bore Dia. d1, d2	b		t		Key Nominal Dim. b x h	Set Screw	
	Dim.	Tolerance	Dim.	Tolerance		Size	Tightening Torque (N-m)
15, 16, 17	5	±0.015	2.3	+0.1	5x5	M4	1.7
18, 19, 20, 22	6	±0.015	2.8	0	6x6	M5	4
24, 25	8	±0.018	3.3	+0.2	8x7	M6	7