

# Disc Couplings

## High Rigidity (O.D. 87), Keywayed Bore / Clamping



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

For Servo Motors

**Features:** The keywayed bore type covers high torque of up to 180N · m.



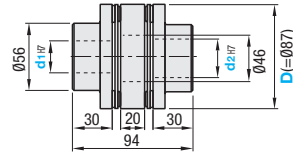
Type		Disc Type	Main Body		Disc	Accessory
Both Sides Keywayed Bore	Both Sides Clamping		M Material	S Surface Treatment	M Material	
CPSWWK	CPSWC	Double	S45C	-	SUS301CSP	Clamp Screw
CPSHWK	-	Single				Set Screw

⚠ Tolerances for d1 and d2 are values before slit machining.

⚠ Shipped after center-aligned and assembled.

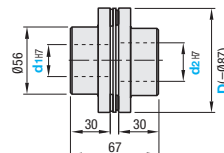
### Both Sides Keywayed Bore

#### CPSWWK (Double Disc)



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

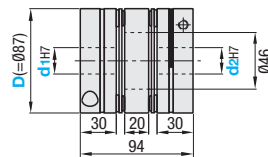
#### CPSHWK (Single Disc)



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

### Both Sides Clamping

#### CPSWC (Double Disc)



RoHS 10

Part Number	Type	D	d1, d2 Selection	Clamp Screw		Allowable Torque (N · m)	Angular Misalignment (°)	Lateral Misalignment (mm)	Static Torsional Spring Constant (N · m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg · m <sup>2</sup> )	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (kg)	Unit Price
				Size	Tightening Torque (N · m)										
Double Disc Type Both Sides Keywayed Bore <b>CPSWWK</b>	87	20 22 24 25 30 35	M8x25	28	180	0.6	0.2	140000	6000	1.94x10 <sup>-3</sup>	±1.0	1.5	1.9		
					100										3.40x10 <sup>-3</sup>
Double Disc Type Both Sides Clamping <b>CPSWC</b>	87	20 22 24 25 30 35	M8x25	28	180	0.6	0.2	140000	6000	1.94x10 <sup>-3</sup>	±1.0	1.5	1.9		

⚠ The coupling with Ø35mm bore diameter conforms to servo <sup>+0.01</sup>/<sub>0</sub> motor shaft tolerance of 35mm.

Part Number	Type	D	d1, d2 Selection	Clamp Screw		Allowable Torque (N · m)	Angular Misalignment (°)	Static Torsional Spring Constant (N · m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg · m <sup>2</sup> )	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (kg)	Unit Price
				Size	Tightening Torque (N · m)									
Single Disc Type Both Sides Keywayed Bore <b>CPSHWK</b>	87	20 22 24 25 30 35	M8x25	28	180	0.6	330000	6000	1.11x10 <sup>-3</sup>	±0.5	1.5	1.3		

⚠ The coupling with Ø35mm bore diameter conforms to servo <sup>+0.01</sup>/<sub>0</sub> motor shaft tolerance of 35mm.

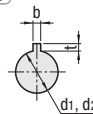
⚠ The lateral, angular, and axial misalignment values shown are for each occurring individually. When multiple misalignments are occurring simultaneously, the allowable maximum value of each will be reduced to 1/2.

⚠ For the selection criteria and alignment procedures, see **P.1061**

**Ordering Example**

Part Number: **CPSWC65** - Shaft Bore Dia. d1: **20** - Shaft Bore Dia. d2: **30**

### Keyway Dimension



Shaft Bore Dia. d1, d2	b		t		Key Nominal Dim. b x h	Set Screw	
	Reference Dia.	Tolerance	Reference Dia.	Tolerance		Size	Tightening Torque (N · m)
20, 22	6	±0.015	2.8	+0.1 0	6x6	M5	4
24, 25, 30	8	±0.018	3.3	+0.2 0	8x7	M6	7
35	10	±0.018	3.3	0	10x8	M8	15

### • Cautions on Installations

- Do not tighten the locking screws before inserting shafts into coupling. (Tightening the lock screws with empty bores will cause bushing distortion.)
- Use a torque wrench to tighten the locking screws.
- Never use screws other than included for the locking screws.

### • Removal

- Ensure that the machine has completely stopped before starting work.
- Loosen the locking screws sequentially in a circumferential order.
- Insert screws into removal screws holes and tighten evenly.
- Repeat the installation procedure for re-installation.



### • Installation

- Wipe the shaft surface clean and apply a thin layer of oil or grease. (Do not use oils or greases containing Molybdenum Sulfide.)
- Wipe clean the contacting inner bores of the coupling, as well as the screw and seating surfaces of the locking screws.
- Insert the shaft into the coupling. (Please do not tighten keyless clamping flange to the bolt before inserting the shaft.)
- After locating, tighten the locking screws using a torque wrench in the diagonal order, beginning lightly (approx. 1/4 of the predetermined tightening torque).
- Tighten the screws to higher torque (Approx. 1/2 of specified max.)
- Tighten the screws to the specified max. torque.
- Finally, tighten the screws in a circumferential order.