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

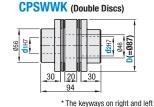
Feature: The keywayed bore type are available up to high torque of 180N·m max.

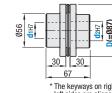
Couplings – High Rigidity Disc Keywayed Bore / Clamping





# **Both Sides Keywayed Bores**



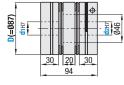


**CPSHWK** (Single Disc)

The keyways on right and

#### **Both Sides Clamping**

## **CPSWC** (Double Discs)





The coupling with Ø35 mm bore diameter conforms to servo motor shaft tolerance of Ø35 +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 occuring individually. When more than one misalignments are occuring simultaneously, the allowable maximum value of each will be reduced by 1/2.
O Shipped after center-aligned and assembled.

① For the selection criteria and alignment procedures, see P.1091, 1093.

Typ	ie –	Di	Bo	dy	Disc	Accessories		
Both Sides Keywayed Bore	Both Sides Clamping	Disc Type	Material	Surface Treatment	Material	Material	Surface Treatment	
CPSWWK	CPSWC	Double	1045 Carbon		301 Stainless	4137 Alloy	Black Oxide	
CPSHWK	_	Single	Steel or Equivalent	_	Steel	Steel	BIACK UXIUE	

#### **Double Disc Coupling**

RoHS10

Part Number			Clamp	Screw	A11	A	1 -41	Otatia Tanaianal	Max.	to contin	Allow.		
Туре	D	d <sub>1</sub> , d <sub>2</sub>	Size	Tightening Torque (N·m)	Allow. Torque (N·m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N·m/rad)	Rotational Speed (r/min)	Inertia Moment (Kg·m²)	Axial Misalign. (mm)	Comp. Factor	Mass (Kg)
Double Disc Coupling Both Sides Keywayed Bore CPSWWK	87	20 22 24 25 30 35	M8 x 25	28 -	180	0.6	0.2	140000	6000	1.94 x 10 <sup>-3</sup>		1.5	1.9
Both Sides Clamping CPSWC					100	0.6				3.40 x 10 <sup>-3</sup>	±1.0		3.0

 $\bigcirc$  For products with shaft diameter  $\varphi$ 35mm, the servo motor shaft tolerance is  $^{+0.01}_0$ 

### Single Disc Counting

Part Number			Clamp	Screw				Max.				
Туре	D	d <sub>1</sub> , d <sub>2</sub>	Size	Tightening Torque (N·m)	Allowable Torque (N·m)	Angular Misalign. (°)	Static Torsional Spring Constant (N·m/rad)	Rotational Speed (r/min)	Inertia Moment (Kg·m²)	Allow. Axial Misalign. (mm)	Comp. Factor	Mass (Kg)
Single Disc Coupling Both Sides Keywayed Bore CPSHWK	87	20 22 24 25 30 35	M8 x 25	28	180	0.6	330000	6000	1.11 x 10 <sup>-3</sup>	±0.5	1.5	1.3

O Static torsional spring constant, inertia moment, and mass values are for cases of maximum shaft diameter. Usingle Disc Couplers cannot tolerate lateral misalignment. • For selection criteria and alignment adjustment, please refer to **P.1091, 1093**.







## **Keyway Dimension**

b
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d1, d2

Shaft Bore	b	)		t	Key	Set Screw			
Dia. d <sub>1</sub> , d <sub>2</sub>	Dim.	Tol.	Dim.	Tol.	Nominal Dim. b x h	Size	Tightening Torque (N-m)		
20, 22	6	±0.015	2.8	+0.1 0	6 x 6	M5	4		
24, 25, 30	8	±0.018	3.3	+0.2	8 x 7	M6	7		
35	10	±0.018	3.3	0	10 x 8	M8	15		

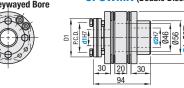
Feature: The Keyless Clamping Type are available up to high torque of 250N·m max.

# **Both Sides Keyless Clamping CPSWN** (Double Discs)

**CPSHN** (Single Disc)



One Side Keyless Clamping / One Side Keywayed Bore **CPSWMK** (Double Discs)





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Туре	es S One Side Keyless Clamping / One Side Keywayed Bore CPSWMK		Bod	у	Disc	Accessories		
Keyless Clamp	ing / One Side	Disc Type	Material	Surface Treatment	Material	Material	Surface Treatment	
CPSWN C	PSWMK	Double	1045 Carbon Steel or	_	301 Stainless	4137	Black Oxide	
CPSHN C	PSHMK	Single	Equivalent	_	Steel	Alloy Steel	DIACK UXIUE	

Part Number		d <sub>1</sub> , d <sub>2</sub> Selection	d <sub>2</sub> Selection				Locking Screws		
Туре	D		(With Keywayed Bore)	<b>d</b> <sub>1</sub> , <b>d</b> <sub>2</sub>	D <sub>1</sub>	P.C.D.	Size	Tightening torque (N·m)	
Double Disc Coupling Both Sides Keyless Clamping		25 30 35 38 40 45	20 22 24 25 30 35	25	62	50		13.7	
CPSWN	07			30	66	54	M6 x 30		
One Side Keyless Clamping – One Side Keywayed Bore	87			35	68	54			
CPSWMK				38–45	78	64			

O For products with shaft diameter Φ35mm, the servo motor shaft tolerance is +0.01 tolerance.

The coupling with Ø35 mm bore diameter conforms to servo motor shaft tolerance of Ø35 +0.01 / 0. ① Tolerance values for d1, d2, are applied before slit is machined.

O Shipped after center-aligned and assembled.

10 The lateral, angular, and axial misalignment values shown are for each occuring individually. When more than one misalignments are occuring simultaneously, the allowable maximum value of each will be reduced by 1/2.

① For the selection criteria and alignment procedures, see P.1091, 1093. 1 The locking screw holes have integrated removal screw holes on the keyless clamping flange. Use M8 screws into the screw holes for removal. For installation and removal of Keyless Clamping Type couplings **P.1089**.

Part Number							Locking	Screws
Туре	D	d <sub>1</sub> , d <sub>2</sub> Selection (Keyless Clamping)	d₂ Selection (With Keywayed Bore)	d <sub>1</sub> , d <sub>2</sub>	D <sub>1</sub>	P.C.D.	Size	Tightening torque (N·m)
Single Disc Coupling Both Sides Keyless Clamping			20 22 24 25 30 35	25	62	50		10.7
CPSHN	07	25 30 35 38		30	66	54	MC 00	
One Side Keyless Clamping, One Side Keywayed Bore	87	40 45		35	68	54	M6 x 30	13.7
CPSHMK				38–45	78	64		

 $\bigcirc$  For products with shaft diameter  $\varphi$ 35mm, the servo motor shaft tolerance is  $^{+0.01}_0$ 

### Double Dice Coupling

Couplings – High Rigidity Disc Keyless Clamping

RoHS10

Double D	150 GUU	hiiii	J												
Part N	umber	d <sub>1</sub> , d <sub>2</sub>				Allow.	Angular Misalig.	Lateral	Static Torsional	Max.	Inertia Moment	Allow. Axial	Comp Footox	Mass	
Type D			u <sub>1</sub> , u <sub>2</sub>		Torque Misali (N·m) (°)	(°)	Misalig. (mm)	Spring Constant (N·m/rad)	Rot. Speed (r/min)	(Kg·m²)	Misalign. (mm)	Comp. Factor	(Kg)		
ODCUM				25	5		200					0.40 402			0.0
CPSWN	87	3	0 35	38	3 40	45	250	0.6	0.2	140000	6000	2.49 x 10 <sup>-3</sup>	±1.0	1.5	2.3
CPSWMK			20–45		180					2.22 x 10 <sup>-3</sup>	Ī		2.1		

O Static torsional spring constant, inertia moment, and mass values are for cases of maximum shaft diameter. O For selection criteria and alignment adjustment, please refer to P.1091, 1093.

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	Part Num	ber	4 4	Allow.	Angular Misalig.	Static Torsional Spring Constant	Max. Rot, Speed	Inertia Moment	Allow. Axial	Comp. Factor	Mass
Type D		D	d <sub>1</sub> , d <sub>2</sub>	Torque (N·m)	(°)	(N-m/rad)	(r/min)	(Kg·m²)	Misalign. (mm)	Guilip. Factor	(Kg)
СРЅНМК			25	200							4.0
		87	30 35 38 40 45	<b>3 40 45</b> 250 0.6 330000	330000	6000	1.68 x 10 <sup>-3</sup>	±0.5	1.5	1.6	
			20–45	180				1.40 x 10 <sup>-3</sup>			1.5

**Keyway Dimension** 

O Single Disc Coupling cannot tolerate lateral misalignment.



Part Number -		Shaft Bore Dia. d <sub>1</sub>	-	Shaft Bo Dia. d <sub>2</sub>	
CPSWMK87	-	35	-	20	

b	
<sup>→</sup> \d1, d2	

	Shaft Bore Dia. d <sub>1</sub> , d <sub>2</sub>	b		t		Key	Set Screw	
		Dim.	Tol.	Dim.	Tol.	Nominal Dim. b x h	Size	Tightening Torque (N·m)
12	20, 22	6	±0.015	2.8	+0.1 0	6 x 6	M5	4
	24, 25, 30	8	±0.018	3.3	+0.2	8 x 7	M6	7
	35	10	±0.018	3.3	0	10 x 8	M8	15