

Disc Couplings

High Rigidity (O.D. 40) / Keyless Clamping, Keywayed Bore For Servo Motors

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

Disc Couplings

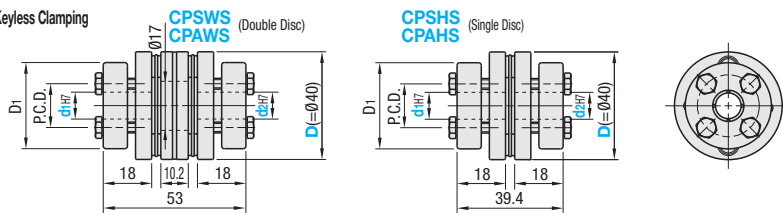
Clamping

Features: Compact and highly rigid couplings for servo motors selectable in keyless clamping and keywayed bore.

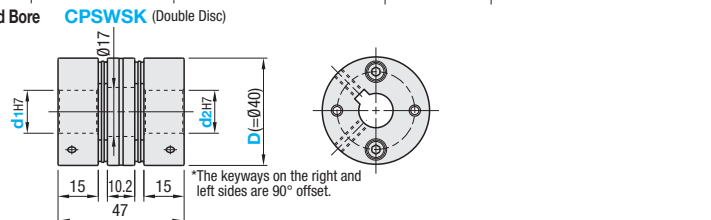
For Servo Motors



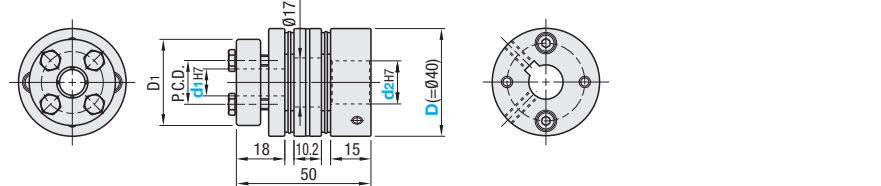
Both Sides Keyless Clamping



Both Sides Keywayed Bore



One Side Keyless Clamping, One Side Keywayed Bore



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.
Shipped after center-aligned and assembled.
For the selection criteria and alignment procedures, see P.1061

Keyless clamping flange has two screw holes for removal.
For installation and removal of Keyless Clamping Type couplings, see P.1079

Type	Main Body Material	Disc Material	Accessories
Both Sides Keyless Clamping	CPSWS, CPAWS	S45C	Locking Screw, Set Screw
Both Sides Keywayed Bore	CPSWSK	Aluminum	Locking Screw, Set Screw
One Side Keyless Clamping, One Side Keywayed Bore	CPSWSMK	Aluminum	Locking Screw, Set Screw



Part Number	Type	D	d1, d2 Selection	d1, d2	D1	P.C.D.	Size	Locking Screw (Keyless Clamping)	Tightening Torque (N·m)	Unit Price			
										Both Sides Keyless Clamping	Both Sides Keywayed Bore	One Side Keyless Clamping, One Side Keywayed Bore	
Double Disc Type Both Sides Keyless Clamping Both Sides Keywayed Bore One Side Keyless Clamping, One Side Keywayed Bore	CPSWS (S45C) CPAWS (Aluminum) CPSWSK (S45C) CPSWSMK (S45C)	40	10 12 14 15 16	10,12	32	23	M4x18	3.5					
				14,15	38	27							
				16	39	28							

Part Number	Type	D	d1, d2 Selection	d1, d2	D1	P.C.D.	Size	Locking Screw (Keyless Clamping)	Tightening Torque (N·m)	Unit Price	
										Both Sides Keyless Clamping	CPAHS
Single Disc Type Both Sides Keyless Clamping	CPSHS (S45C) CPAHS (Aluminum)	40	10 12 14 15 16	10,12	32	23	M4x18	3.5			
				14,15	38	27					
				16	39	28					

Double Disc Type

Type	D	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 ²)	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (g)
CPSWS	40	8	1	0.2	6300	10000	7.43x10 ⁻⁵	±0.5	1.5	329
CPAWS	40	6	1	0.2	6300	10000	2.65x10 ⁻⁵	±0.5	1.5	117
CPSWSK	40	8	1	0.2	6300	10000	7.73x10 ⁻⁵	±0.5	1.5	332
CPSWSMK	40	8	1	0.2	6300	10000	7.58x10 ⁻⁵	±0.5	1.5	331

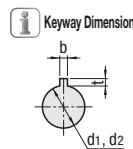
Static torsional spring constant, inertia moment, and mass values are for cases of maximum shaft diameter.

Single Disc Type

Type	D	Allowable Torque (N·m)	Angular Misalignment (°)	Static Torsional Spring Constant (N·m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (g)
CPSHS	40	8	1	15000	10000	5.48x10 ⁻⁵	±0.25	1.5	246
CPAHS	40	6	1	15000	10000	1.96x10 ⁻⁵	±0.25	1.5	88

Single Disc Type cannot tolerate lateral misalignment.

Ordering Example Part Number - Shaft Bore Dia. d1 - Shaft Bore Dia. d2
CPSWSK40 - 10 - 16



Shaft Bore Dia. d1, d2	b	t	Key Nominal Dim. b x h	Set Screw Size	Set Screw Tightening Torque (N·m)
10	3	±0.0125	3x3	M2	0.3
12	4	±0.0150	4x4	M3	0.7
14, 15, 16	5	±0.0150	5x5	M4	1.7

Double Disc Type

CPDD

Single Disc Type

CPDS

CPDS cannot tolerate lateral misalignment.
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

Parts	Material	Surface Treatment	Accessory
Main Body	Aluminum Alloy	Clear Anodize	Hex Socket
Disc, Pin	Stainless Steel	-	Head Cap Screw

Part Number	Type	D	d1, d2 Selection (d1≤d2)										L		Clamp Screw	A	F	Unit Price						
			CPDD	CPDS	l	l1	D1	M	Tightening Torque (N·m)	CPDD	CPDS													
CPDD CPDS		40	6	8	10	12	14	15	16	18	19	20	25	40	32	9	13.7	22	M3	1.5	8	4		
			8	10	11	12	14	15	16	18	19	20	25	46	38	12	16.5	28	M4	2.5	10.5	6		
			12	14	15	16	18	19	20	25	52	44	15	19.4	39	M5	7	14.8	7					
			15	16	18	19	20	25	58	50	18	22.3	45	M6	12	17	8							

Characteristic Values

Part Number	Type	D	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 ²)	Allowable Axial Misalignment (mm)	Mass (g)
Double Disc Type CPDD		40	2	2	0.15	1000	19000	6.2x10 ⁻⁵	±0.4	48
			4	4	0.2	1500	15000	1.6x10 ⁻⁵	±0.5	81
			7.5	7.5	0.2	2000	12000	4.6x10 ⁻⁵	±0.6	150
			10	10	0.3	2500	10000	1.1x10 ⁻⁴	±0.8	230

Part Number	Type	D	Allowable Torque (N·m)	Angular Misalignment (°)	Static Torsional Spring Constant (N·m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Allowable Axial Misalignment (mm)	Mass (g)
Single Disc Type CPDS		40	2	1	1300	19000	4.5x10 ⁻⁵	±0.2	38
			4	4	2800	15000	1.2x10 ⁻⁵	±0.2	66
			7.5	7.5	3700	12000	3.7x10 ⁻⁵	±0.2	120
			10	10	5000	10000	8.4x10 ⁻⁵	±0.2	190

Single Disc Type cannot tolerate lateral misalignment.
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 - Shaft Bore Dia. d1 - Shaft Bore Dia. d2
CPDD40 - 10 - 14
CPDS50 - 12 - 14

Alterations Part Number - Shaft Bore Dia. (LDC) - Shaft Bore Dia. (RDC) - (LK, RK)
CPDD40 - LDC8 - 14 - RK5

Alterations	Shaft Bore Dia.		Keyway
	LDC (Left Shaft)	RDC (Right Shaft)	
Spec.	0.1mm Increment		
	Ordering Code: LDC 15.2 RDC 21.7		
Code	CPDD, CPDS		Ordering Code: Shaft Dia. d1, d2 LK, RK LK4, RK4 8, 10 3 11, 12 4 14-17 5 18-22 6 24, 25 8
	D LDC, RDC 40 8-14 50 12-20 63 15-25		

Keyway Dimension

Shaft Bore Dia. d1, d2	LK, RK	b	t	Key Nominal Dim. b x h
8, 10	3	±0.0125	1.4	3x3
11, 12	4	±0.0150	1.8	4x4
14-17	5	±0.0150	2.3	5x5
18-22	6	±0.0150	2.8	6x6
24, 25	8	±0.0180	3.3	8x8

