Disc Couplings For Servo Motors

Ultra High Torque Clamping (Single Disc)

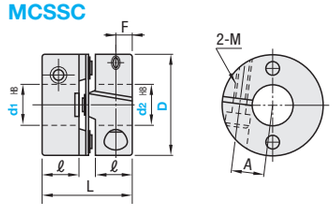
Points of comparison between similar products | Max. Rotational Speed: 3,500~6,000rpm

RoHS10

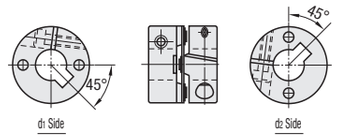
Type	Parts	M Material	S Surface Treatment	A Accessory
MCSSC MCSSCWK	Main Body	Aluminum Diecast	Electroless Nickel Plating	Hex Socket Head Cap Screw
	Disc	Stainless Steel	-	
	Screw	EN 1.7220 Equiv.	Black Oxide	

Tolerances for d1 and d2 are values before slit machining.
For keyway dimension, refer to the following.

Standad Bore
MCSSC



Keywayed Bore (d1·d2Both Sides)
MCSSCWK



Part Number Type	D	d1, d2 Selection (d1≤d2) Keywayed Bore Type is selectable for diameter 6 or larger	L	ℓ	A	F	Clamp Screw M	Clamp Screw Tightening Torque (N·m)	Unit Price MCSSC	Unit Price MCSSCWK
Clamping MCSSC MCSSCWK	16	*4 5 6	16.5	7	5	3	M2.5	1		
	20	*4 5 6 6.35 7 8	18.4	7.5	6.5	3.7				
	25	*5 6 6.35 7 8 9.53 10	21.6	9	8.5	4	M3	1.7		
	32	8 9.53 10 11 12 14	29	12.4	10	6	M4	2.5		
	40	8 9.53 10 11 12 14 15 16 18	35	15.5	13.1	7.8	M5	7		
	50	14 15 16 18 20 22 24	41	18	16.7	9	M6	12		

When d1, d2 is *4, *5, use with load torque 50% or less than shown in the table to prevent slipping.

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·m²)	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (g)
MCSSC MCSSCWK	16	0.9	1	-	650	6000	$2.2x10^{-7}$	±0.1	5~10	8
	20	1.3			950	5500	$7.0x10^{-7}$			13
	25	2.8			1300	5000	$2.2x10^{-6}$	±0.2		24
	32	5			1400	4000	$5.6x10^{-6}$			53
	40	9			3300	3800	$1.5x10^{-5}$			90
	50	16			4000	3500	$3.9x10^{-5}$	±0.3		180

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, 1062.

Ordering Example

Part Number	-	Shaft Bore Dia. d1	-	Shaft Bore Dia. d2
MCSSC40	-	10	-	15
MCSSCWK32	-	8	-	10

Alterations

Part Number	-	Shaft Bore Dia. d1 (LDC)	-	Shaft Bore Dia. d2 (RDC)	-	
MCSSC40	-	LDC9.5	-	RDC10.5		
MCSSCWK40	-	8	-	10	-	KRH4

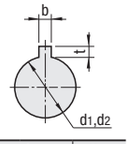
Alterations	Shaft Bore Dia.	Keyway Width	Keyway
Spec.	LDCH8, RDCH8 0.1mm Increment Ordering Code LDC7.8 RDC9.3	Keyway Width (b) is changed as the table below. Ordering Code KLH4 KRH4 Cannot be combined with shaft bore change (LDC, RDC) alterations. Applicable to Keywayed Bore only.	45° Ordering Code LK3 RK4 Keyway machining is available for Ø6 ~. For keyway dimensions, refer to the right table.
Code	LDC (Left Shaft) RDC (Right Shaft)	KLH (Left Shaft) KRH (Right Shaft)	LK (Left Shaft) RK (Right Shaft)

D	LDC, RDC
16	4~6
20	4~8
25	5~10
32	6~14
40	8~18
50	14~24

Shaft Dia. d1, d2	KLH, KRH (b) Reference Dia.	KLH, KRH (b) Tolerance	t Reference Dia.	t Tolerance
8	2	±0.0125	1.0	+0.1 0
10	4	±0.0150	1.8	
12	5		2.3	
22	8	±0.0180	3.3	+0.2 0

Shaft Dia. d1, d2	LK, RK
6~8	2
8~10	3
10~12	4
12~17	5
17~22	6
22~24	8

Keyway Dimension



Shaft Bore Dia. d1, d2	b Reference Dia.	b Tolerance	t Reference Dia.	t Tolerance	Key Nominal Dim. bxh
6~7.9	2	±0.0125	1.0	+0.1 0	2x2
8~10	3		1.4		3x3
10.1~12	4	±0.0150	1.8		4x4
12.1~17	5		2.3		5x5
17.1~22	6		2.8		6x6
22.1~24	8	±0.0180	3.3	+0.2 0	8x7

Disc Couplings For Servo Motors

Ultra High Torque Clamping/Set Screw (Single Disc)

Points of comparison between similar products | Max. Rotational Speed: 10,000rpm

Similar products page P.1065

Features: General purpose model with excellent flexibility and high rigidity. Lowest price model in MISUMI's disc coupling range for Servo Motors.

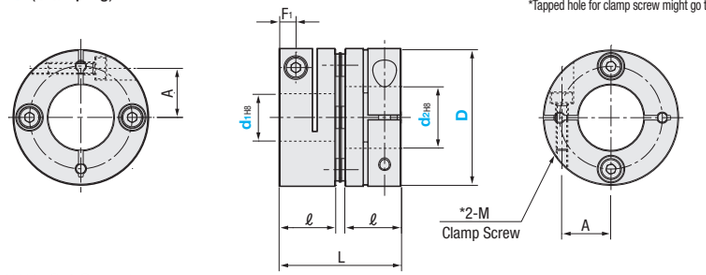
Clamping

Set Screw

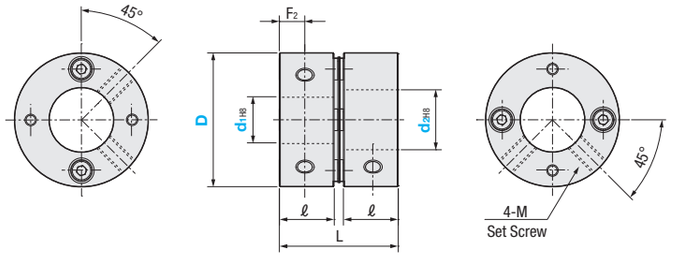
TYPE	M Material Main Body	M Material Disc	M Material Clamp Screw / Set Screw	S Surface Treatment Main Body	S Surface Treatment Clamp Screw / Set Screw	A Accessory
GCPS	Aluminum Alloy	Stainless Steel	EN 1.7220 Equiv.	Clear Anodize	Black Oxide	Clamp Screw
GCPSS						Set Screw

Tolerances for d1 and d2 are values before slit machining.
*Tapped hole for clamp screw might go through for some sizes.

GCPS (Clamping)



GCPSS (Set Screw)



Part Number Type	D	d1, d2 Selection (d1≤d2)	L	ℓ	F1	F2	A	Clamp Screw M	Clamp Screw Tightening Torque (N·m)	Set Screw M	Set Screw Tightening Torque (N·m)	Unit Price GCPS	Unit Price GCPSS
Clamping GCPS Set Screw GCPSS	20	4 5 6 6.35 8	23.05	11	3.5	5.5	6.4	M2.5	1.0	M3	0.7		
	26	5 6 6.35 8 10 11	25.45	11.9	3.5	5.5	9						
	29	5 6 6.35 8 10 11 12 14	25.7	11.9	3.5	5.5	10.5	M2.5	1.0	M4	1.7		
	33	6 8 10 11 12 14 15 16	28.5	13	4	6.5	12	M3	1.5				
	39	8 10 11 12 14 15 16 18	35	16	4.75	8	14	M4	3.5	M5	4.0		

Characteristic Values

Part Number Type	D	Allowable Torque (N·m)	Allowable angle (°)	Static Torsional Rigidity (N·m/rad)	Max. Velocity (r/min)	Moment of Inertia (kg·m²)	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (g) GCPS	Mass (g) GCPSS
GCPS GCPSS	20	1	2	700	10000	$8.8x10^{-7}$	±0.10	2	16	17
	26	2		1000		$2.5x10^{-6}$	±0.10		24	26
	29	3		1350		$4.1x10^{-6}$	±0.15		31	35
	33	5		2000		$7.7x10^{-6}$	±0.20		44	49
	39	8		4250		$1.9x10^{-5}$	±0.25		82	88

Single Disc Type cannot tolerate lateral misalignment.
Static torsional spring constant, inertia moment, and mass values are for cases of maximum shaft diameter.
For the selection criteria and alignment procedures, see P.1061, 1062.

Shaft Slip Torque (N·m)

When slip torque is less than the allowable torque, use within slip torque.

Part Number Type	D	d1,d2 4	5	6	6.35	8	10	11	12	14	15	16	18
GCPS GCPSS	20	1.0	1.0	1.0	1.0	1.0	-	-	-	-	-	-	-
	26	-	1.0	1.5	2.0	2.0	2.0	2.0	-	-	-	-	-
	29	-	1.0	1.5	2.0	2.5	2.5	3.0	3.0	3.0	-	-	-
	33	-	-	2.5	-	2.5	3.5	3.5	4.0	5.0	5.0	5.0	-
	39	-	-	-	-	5.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0

Ordering Example

Part Number	-	Shaft Bore Dia. d1	-	Shaft Bore Dia. d2
GCPS20	-	6	-	8