Couplings (High Torque Disc)

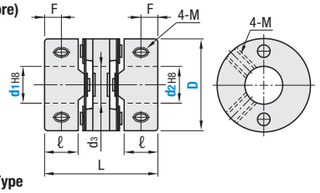
Set Screw

Couplings – High Torque Disc with Set Screw

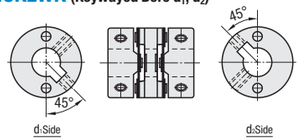
RoHS 10

Double Disc Type

MCKL (Standard Bore)

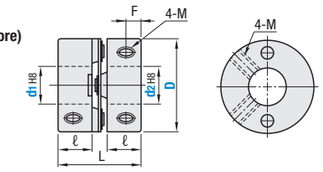


MCKLLK (Keywayed Bore d_1)
MCKLRK (Keywayed Bore d_2)
MCKLWK (Keywayed Bore d_1, d_2)

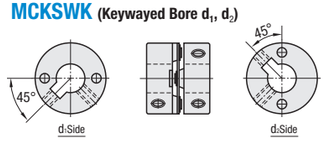


Single Disc Type

MCKS (Standard Bore)



MCKSRK (Keywayed Bore d_2)
MCKSWK (Keywayed Bore d_1, d_2)



Standard Bores	Keywayed Bore			Material		Surface Treatment	Accessories
	d_1 (One Side)	d_2 (One Side)	d_1, d_2 (Both Sides)	Body	Disc	Body	
MCKL	MCKLLK	MCKLRK	MCKLWK	Aluminum Diecast	Carbon Fiber	Electroless Nickel Plating	Set Screws
MCKS	—	MCKSRK	MCKSWK				

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

Part Number Type	D	d_1, d_2 ($d_1 \leq d_2$) Keywayed Bore Type is selectable for diameter 6 or larger. (D=13 is not available)	d3	L	ℓ	F	Set Screw M	Set Screw Tightening Torque (N-m)
Double Disc Type MCKL MCKLLK MCKLRK MCKLWK	10	2 3 4	4.1	15	4.2	2	M2	0.3
	13	3 4 5 6	5.5	19	5.5	2.5		
	16	4 5 6 6.35 7 8	6.8	23.2	7	3	M3	0.7
	20	4 5 6 6.35 7 8 10	8.1	26	7.5	3.7		
	25	5 6 6.35 7 8 9.53 10 11 12	10.4	30.2	9	4	M4	1.7
	32	6 6.35 7 8 9.53 10 11 12 14 15 16	15	41	12.4	6		
	40	8 9.53 10 11 12 14 15 16 18 20	19.5	47	15.5	7.8	M5	4
	50	14 15 16 18 20 22 24 25	25	53	18	9	M6	7

- MCKLLK, MCKLRK and MCKLWK are not available for D10 and D13.

Part Number Type	D	d_1, d_2 ($d_1 \leq d_2$) Keywayed Bore Type is selectable for diameter 6 or larger. (D=13 is not available)	L	ℓ	F	Set Screw M	Set Screw Tightening Torque (N-m)
Single Disc Type MCKS MCKSRK MCKSWK	10	2 3 4	10.5	4.2	2	M2	0.3
	13	3 4 5 6	13.5	5.5	3		
	16	4 5 6 6.35 7 8	16.5	7	3	M3	0.7
	20	4 5 6 6.35 7 8 10	18.4	7.5	4		
	25	5 6 6.35 7 8 9.53 10 11 12	21.6	9	4	M4	1.7
	32	6 6.35 7 8 9.53 10 11 12 14 15 16	29	12.4	6		
	40	8 9.53 10 11 12 14 15 16 18 20	35	15.5	7.8	M5	4
	50	14 15 16 18 20 22 24 25	41	18	9	M6	7

- MCKSRK and MCKSWK are not available for D10 and D13.

Double Disc Type

Part Number Type	D	Allow. Torque (N-m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max Rotational Speed (r/min)	Moment of Inertia (Kg-m²)	Allow. Axial Misalign. (mm)	Mass (g)
MCKL MCKLLK MCKLRK MCKLWK	10	0.25	2.5	0.2	31	32000	4.6×10^{-8}	±0.2	3
	13	0.35			80	24000	8.0×10^{-8}		5
	16	0.6			130	23000	2.4×10^{-7}	±0.3	9
	20	1.0			220	22000	7.2×10^{-7}		14
	25	2.2			440	19000	2.2×10^{-6}	±0.4	27
	32	3.8			960	15000	6.0×10^{-6}		60
	40	6.8		0.3	1900	10000	1.7×10^{-5}	±0.5	104
	50	11.0			2250	8000	4.6×10^{-5}		210

Single Disc Type

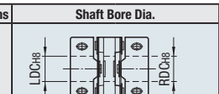
Part Number Type	D	Allow. Torque (N-m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max Rotational Speed (r/min)	Moment of Inertia (Kg-m²)	Allow. Axial Misalign. (mm)	Mass (g)
MCKS MCKSRK MCKSWK	10	0.25	1	0.05	40	32000	4.0×10^{-8}	±0.1	2
	13	0.35			100	24000	7.0×10^{-8}		4
	16	0.6			160	23000	2.0×10^{-7}		7
	20	1.0			290	22000	6.0×10^{-7}		11
	25	2.2			550	19000	1.8×10^{-6}	±0.2	22
	32	3.8			1200	15000	5.2×10^{-6}		50
	40	6.8		0.1	2200	10000	1.3×10^{-5}		85
	50	11.0			2600	8000	3.6×10^{-5}		170

Part Number Example

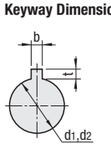
Part Number	-	Shaft Bore Dia. d_1	-	Shaft Bore Dia. d_2
MCKL20	-	5	-	10
MCKLWK25	-	10	-	12

Part Number Alterations

Part Number	-	Shaft Bore Dia. d_1 (LDC)	-	Shaft Bore Dia. d_2 (RDC)	-	(KLH-KRH)
MCKL20	-	LDC6.5	-	RDC9		
MCKLWK32	-	8	-	10	-	KRH4

Alterations	Shaft Bore Dia.		Keyway Width	
Spec.	 0.1 mm Increment **Ordering Code:** LDC7.8 RDC9.3	D / LDC, RDC: 10 2–4; 13 3–6; 16 4–8; 20 4–10; 25 5–12; 32 6–16; 40 8–20; 50 14–25	Keyway Width (b) is changed as table below. **Ordering Code:** KLH4 KRH4	Shaft Bore Dia. d_1, d_2 / 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 +0.1 0; 12 5 ±0.0150 2.3 +0.1 0; 22 8 ±0.0180 3.3 +0.2 0  ⊗ Cannot be combined with Shaft Bore Dia. Change (LDC, RDC) alteration. ⓘ Applicable to Keyawed Bores only
Code	LDC (Left Shaft)	RDC (Right Shaft)	KLH (Left Shaft)	KRH (Right Shaft)

Keyway Dimension



Shaft Bore Dia. d_1, d_2	b Dim.	b Tolerance	t Dim.	t Tolerance	Key Nom. Dim. b x h
6–7.9	2	±0.0125	1.0	+0.1 0	2 x 2
8–10	3		1.4		3 x 3
10.1–12	4	±0.0150	1.8		4 x 4
12.1–17	5		2.3		5 x 5
17.1–22	6		2.8		6 x 6
22.1–25	8	±0.0180	3.3	+0.2 0	8 x 7

MiSUMi

Couplings (High Torque Disc)

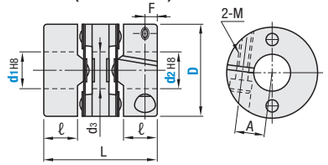
Clamping

Couplings – High Torque Disc with Clamping

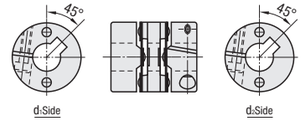
RoHS 10

Double Disc Type

MCKLC (Standard Bore)

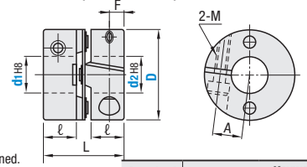


MCKLCLK (Keywayed Bore d_1)
MCKLCRK (Keywayed Bore d_2)
MCKLCWK (Keywayed Bore d_1, d_2)

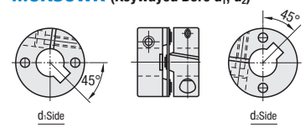


Single Disc Type

MCKSC (Standard Bore)



MCKSCWK (Keywayed Bore d_1, d_2)



Standard Bores	Keywayed Bore			Material		Surface Treatment	Accessories
	d_1 (One Side)	d_2 (One Side)	d_1, d_2 (Both Sides)	Body	Disc	Body	
MCKLC	MCKLCLK	MCKLCRK	MCKLCWK	Aluminum Diecast	Carbon Fiber	Electroless Nickel Plating	Hex Socket Head Cap Screw
MCKSC	—	—	MCKSCWK				

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

Part Number Type	D	d_1, d_2 ($d_1 \leq d_2$) Keywayed Bore Type is selectable for diameter 6 or larger	d_3	L	ℓ	A	F	Clamp Screw M	Clamp Screw Tightening Torque (N-m)
Double Disc Type MCKLC MCKLCLK MCKLCRK MCKLCWK	13	*3 4 5	5.5	19	5.5	4.1	2.5	M2	0.42
	16	*4 5 6	6.8	23.2	7	5	3	M2.5	1
	20	*4 5 6 6.35 7 8	8.1	26	7.5	6.5	3.7		
	25	*5 6 6.35 7 8 9.53 10	10.4	30.2	9	8.5	4	M3	1.7
	32	8 9.53 10 11 12 14	15	41	12.4	10	6	M4	2.5
	40	8 9.53 10 11 12 14 15 16 18	19.5	47	15.5	13.1	7.8	M5	7
	50	14 15 16 18 20 22 24	25	53	18	16.7	9	M6	12

- MCKLCLK, MCKLCRK, and MCKLCWK are not available for D13.

Part Number Type	D	d_1, d_2 ($d_1 \leq d_2$) Keywayed Bore Type is selectable for diameter 6 or larger	L	ℓ	A	F	Clamp Screw M	Clamp Screw Tightening Torque (N-m)
Single Disc Type MCKSC MCKSCWK	13	*3 4 5	13.5	5.5	4.1	2.5	M2	0.42
	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

- MCKSCWK is not available for D13.
- For * marked d1, d2 sizes, use with the load torque 50% or less than that shown on the table to prevent slipping.

Double Disc Type

Part Number Type	D	Allow. Torque (N-m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max Rotational Speed (r/min)	Moment of Inertia (Kg-m²)	Allow. Axial Misalign. (mm)	Mass (g)
MCKLC MCKLCLK MCKLCRK MCKLCWK	13	0.35	2.5	0.2	80	12000	8.0×10^{-8}	±0.2	5
	16	0.6			130	9000	2.4×10^{-7}	±0.3	9
	20	0.9			220	7600	7.2×10^{-7}		14
	25	2.2			440	6000	2.2×10^{-6}	±0.4	27
	32	3.8			960	4800	6.0×10^{-6}		60
	40	6.8		0.3	1900	4000	1.7×10^{-5}	±0.5	104
	50	11.0			2250	3500	4.6×10^{-5}		210

Single Disc Type

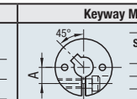
Part Number Type	D	Allow. Torque (N-m)	Angular Misalign. (°)	Lateral Misalign. (mm)	Static Torsional Spring Constant (N-m/rad)	Max Rotational Speed (r/min)	Moment of Inertia (Kg-m²)	Allow. Axial Misalign. (mm)	Mass (g)
MCKSC MCKSCWK	13	0.35	1	0.05	100	12000	7.0×10^{-8}	±0.1	4
	16	0.6			160	9000	2.0×10^{-7}		7
	20	0.9			290	7600	6.0×10^{-7}		11
	25	2.2			550	6000	1.8×10^{-6}	±0.2	22
	32	3.8			1200	4800	5.2×10^{-6}		50
	40	6.8		0.1	2200	4000	1.3×10^{-5}		85
	50	11.0			2600	3500	3.6×10^{-5}		170

Part Number Example

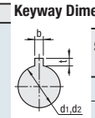
Part Number	-	Shaft Bore Dia. d_1	-	Shaft Bore Dia. d_2
MCKLC16	-	5	-	6
MCKLCWK40	-	12	-	15

Part Number Alterations

Part Number	-	Shaft Bore Dia. d_1 (LDC)	-	Shaft Bore Dia. d_2 (RDC)	-	(KLH, KRL, LK, RK)
MCKLC20	-	LDC6.2	-	RDC6.9		
MCKLCWK32	-	10	-	10	-	KLH4 - KRH4

Alterations	Shaft Bore Dia.		Keyway Width		Keyway Machining	
Spec.	 0.1 mm Increment **Ordering Code:** LDC7.8 RDC9.3	D / LDC, RDC: 13 3–5; 16 4–6; 20 4–8; 25 5–10; 32 8–14; 40 8–18; 50 14–24	Keyway Width (b) is changed as the table below. **Ordering Code:** KLH4 KRH4	Shaft Bore Dia. d_1, d_2 / KLH, KRH (b) Dim. / KLH, KRH (b) Tol. / t Dim. / t Tol.: 8 2 ±0.0125 1.0 +0.1 0; 10 4 ±0.0150 1.8 +0.1 0; 12 5 ±0.0150 2.3 +0.1 0; 22 8 ±0.0180 3.3 +0.2 0  ⊗ Cannot be combined with shaft bore change (LDC, RDC) alterations. ⓘ Applicable to Keyawed Bores only	 Shaft Dia. d_1, d_2 / LK, RK: 6–8 2; 8–10 3; 10–12 4; 12–17 5; 17–22 6; 22–24 8 **Ordering Code:** LK3 RK4 ⓘ Keyway machining available for Ø6– ⓘ For keyway width dimensions, see **P.1104**
Code	LDC (Left Shaft)	RDC (Right Shaft)	KLH (Left Shaft)	KRH (Right Shaft)	LK (Left Shaft)	RK (Right Shaft)

Keyway Dimension



Shaft Bore Dia. d_1, d_2	b Dim.	b Tol.	t Dim.	t Tol.	Key Nom. Dim. b x h
6–7.9	2	±0.0125	1.0	+0.1 0	2 x 2
8–10	3		1.4		3 x 3
10.1–12	4	±0.0150	1.8		4 x 4
12.1–17	5		2.3		5 x 5
17.1–22	6		2.8		6 x 6
22.1–24	8	±0.0180	3.3	+0.2 0	8 x 7