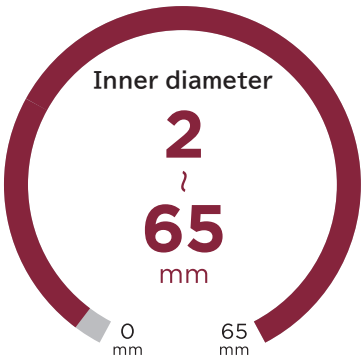
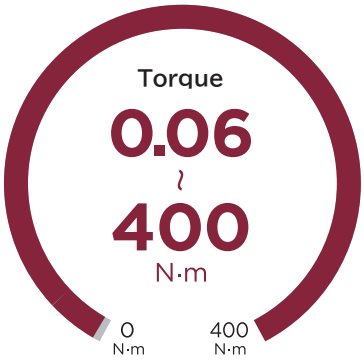
Oldham Couplings

MJ series

MJ / MJC / MJX





MJ

Set screw

MJC

Clamp

MJX

Clamp

Features

Principle	An Oldham coupling consists of 2 hubs and 1 intermediate torque disc, classified as flexible coupling. It compensates misalignments by taking advantage of sliding convex and concave configuration of hub and torque disc.
Misalignment	Large lateral misalignment compensation
Mounting and Dismounting	Easy to mount and dismount with the aid of press fit design
Hub-Shaft Connection	Set screw Fixes a shaft by digging sets crews into the shaft directly Clamp Fixes a shaft using elastic deformation of hub notch by tightening cap screws
Flexibility	Variety of torque transmission characteristics can be achieved by various versions of torque discs
Consumable materials	Torque discs
Fail-Safe	Resin torque discs fracture to disengage troque transmission when there is excessive overload
Backlash	Zero backlash except torque discs SA, A, AJ
Electric isolation	Electrically isolated
Magnetic properties	No magnetic properties except screws

INNER DIA. [mm]

LATERAL | ANGULAR | ENDPLAY | STIFFNESS | BACKLASH | KEYWAY | PRESS FIT | Q T A | M T O | CUSTOM

Oldham Couplings

MJ/MJC

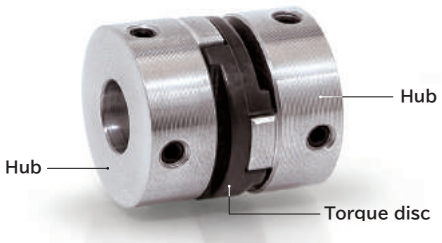
Coupling size
6～57

Inner diameter $^{+0.03}_{0}$
2～30 mm

Torque
0.06～37.5 N·m

TORQUE [N·m]

MJ



Set screw

MJC

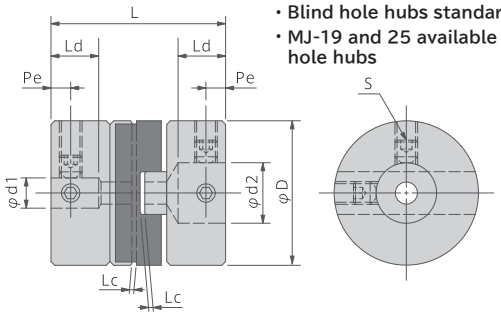
Clamp

Specifications

Type	Size	Torque [N·m]	Lateral misalignment [mm]	Angular misalignment [°]	Endplay [mm]	Inertia [kg·m²×10⁻⁸]	Spring constant [N·m/rad]	Mass [g]
MJ	6	0.06	0.8	1	0.1	6	10	2.5
MJ	9	0.21	1.3	1	0.1	18	30	4.0
MJ	13	0.50	1.6	1	0.1	26	65	11.0
MJ	19	1.70	2.4	1	0.2	67	115	12.0
MJC	19	1.70	2.4	1	0.2	67	115	12.0
MJ	19L	1.70	2.4	1	0.2	59	115	15.0
MJC	19L	1.70	2.4	1	0.2	59	115	14.0
MJ	25	4.00	3.0	1	0.2	252	205	31.0
MJC	25	4.00	3.0	1	0.2	252	205	31.0
MJ	33	10.0	3.8	1	0.3	1,133	166	79.0
MJC	33	10.0	3.8	1	0.3	1,210	166	75.0
MJ	41	17.0	5.0	1	0.3	3,177	185	127
MJC	41	17.0	5.0	1	0.3	3,273	185	122
MJ	50	30.0	6.0	1	0.4	7,550	570	209
MJC	50	30.0	6.0	1	0.4	7,963	570	197
MJ	57	37.5	7.0	1	0.4	12,410	575	347
MJC	57	37.5	7.0	1	0.4	18,365	575	340

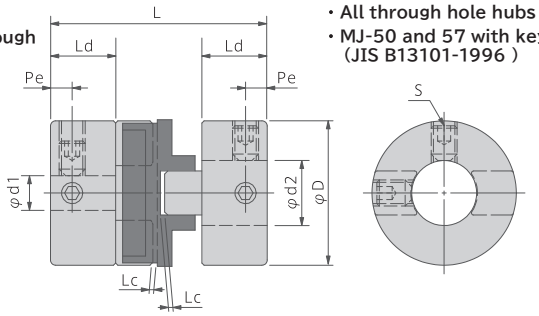
Drawings

MJ-6 MJ-9 MJ-13 MJ-19 MJ-25



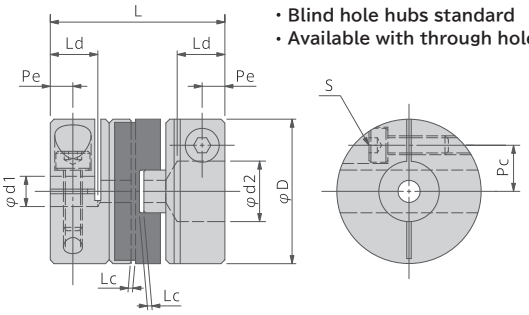
- Blind hole hubs standard
- MJ-19 and 25 available with through hole hubs

MJ-19L MJ-33 MJ-41 MJ-50 MJ-57



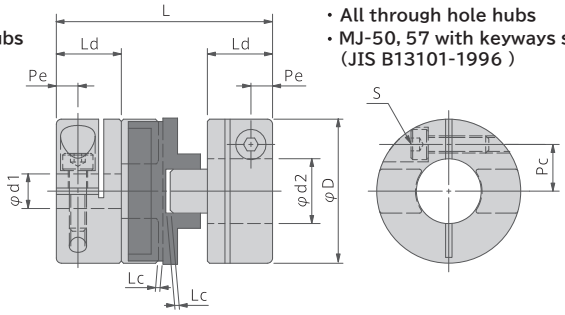
- All through hole hubs
- MJ-50 and 57 with keyways standard (JIS B13101-1996)

MJC-19 MJC-25



- Blind hole hubs standard
- Available with through hole hubs

MJC-19L MJC-33 MJC-41 MJC-50 MJC-57



- All through hole hubs
- MJ-50, 57 with keyways standard (JIS B13101-1996)

Dimensions

Type	Size	Inner diameter d1, d2 [mm]		Overall length L [mm]	Outer diameter D [mm]	Clearance Lc [mm]	Max. mounting length Ld [mm]	Min. mounting length Ld [mm]	Distance Pe [mm]	Distance Pc [mm]	Screw S [mm]	Tightening Torque [N·m]
MJ	6	2 , 3		12.8	6.4	0.05	3.8	—	2.3	—	M3	0.72
MJ	9	3～5		12.8	9.5	0.05	3.8	—	2.3	—	M3	0.72
MJ	13	3～6		16.0	12.7	0.05	4.3	—	2.3	—	M3	0.72
MJ	19	3～8		22.2	19.1	0.10	6.3	—	2.6	—	M3	0.72
MJC	19	3～8		22.2	19.1	0.10	6.3	—	3.0	6.1	M2.5	1.2
MJ	19L	3～8		26.2	19.1	0.10	9.4	7.2	3.6	—	M4	2.0
MJC	19L	3～8		26.2	19.1	0.10	9.4	7.2	2.9	6.1	M2.5	1.2
MJ	25	6～12		28.7	25.4	0.10	8.6	7.0	3.5	—	M4	2.0
MJC	25	6～12		28.7	25.4	0.10	8.6	8.2	3.6	8.1	M3	2.1
MJ	33	8～15		48.3	33.3	0.15	15.0	10.0	5.0	—	M6	6.5
MJC	33	8～15		48.3	33.3	0.15	15.0	13.0	5.0	10.8	M4	4.8
MJ	41	8～20		51.5	41.3	0.15	18.1	11.9	5.8	—	M6	6.5
MJC	41	8～20		51.5	41.3	0.15	18.1	15.5	5.8	14.0	M5	9.6
MJ	50	10～25	Keyways Standard	60.4	50.0	0.20	20.8	14.0	7.0	—	M6	6.5
MJC	50	10～25	Keyways Standard	60.4	50.0	0.20	20.8	18.0	7.0	17.3	M5	9.6
MJ	57	12～30	Keyways Standard	78.9	57.0	0.20	28.8	18.4	8.0	—	M6	6.5
MJC	57	12～30	Keyways Standard	78.9	57.0	0.20	28.8	23.3	8.0	21.0	M6	16.3

※ Overall length includes clearance
※ Size 50 and 57 available without keyways

Materials

Size	Hub		Torque disc
	Materials	Surface treatment	Material
6, 9, 13	Free-cutting brass	Non-chromium chemical conversion treatment	Polyacetal
19, 19L, 25	Aluminum alloy	Anodization	
33, 41			
50, 57		Electroless nickel plating	

INNER DIA. [mm]

LATERAL ANGULAR ENDPLAY STIFFNESS BACKLASH KEYWAY PRESS FIT Q T A M T O CUSTOM

GOOD DESIGN

Oldham Couplings

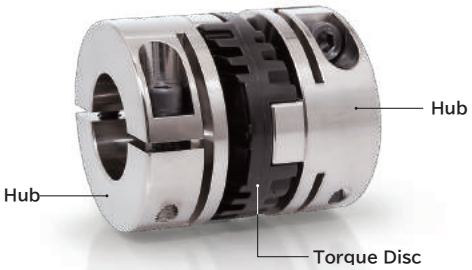
MJX

Coupling size
70～118

Inner diameter G6
14～65 mm

Torque
117～400 N·m

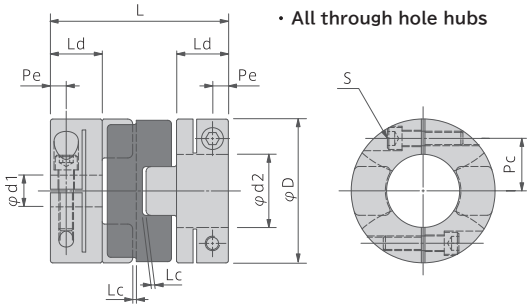
MJX type



Clamp

Drawings

MJX-70 MJX-88 MJX-118



• All through hole hubs

TORQUE [N·m]

Specifications

Type	Size	Inner diameter d1, d2 [mm]	Torque [N·m]	Lateral [mm]	Angular [°]	Endplay [mm]	Inertia [kg·m²×10⁻⁸]	Spring constant [N·m/rad]	Mass [g]
MJX	70	14～37	117	8	1	0.8	42,717	2,265	686
		38～40	117	8	1	0.8	41,410	2,265	650
	88	15～50	210	10	1	0.8	124,500	2,775	1,250
	118	26～65	400	10	1	2.0	574,350	6,837	2,620

Dimensions

Type	Size	Inner diameter d1, d2 [mm]	Overall length L [mm]	Outer diameter D [mm]	Clearance Lc [mm]	Max. mounting length Ld [mm]	Min. mounting length Ld [mm]	Distance Pe [mm]	Distance Pc [mm]	Screw S [mm]	Tightening Torque [N·m]
MJX	70	14～37	84.4	70.0	0.4	28.0	25.3	10.00	25.0	M8	39.4
		38～40	84.4	70.0	0.4	28.0	25.3	9.75	26.0	M8	39.4
	88	15～50	101.0	88.0	0.4	35.0	31.8	12.00	32.5	M8	39.4
	118	26～65	142.0	118.0	1.0	42.5	35.8	13.00	43.0	M12	134

※ Overall length includes clearance

Materials

Size	Hub		Torque disc
	Materials	Surface treatment	Material
70, 88, 118	Aluminum alloy	Electroless nickel plating	Polyacetal

MJ series

Torque Discs for Oldham Couplings

Standard

T

Polyacetal resin
Blind holes

Standard
Size:6~118
Zero backlash

TB

Polyacetal resin
Through holes

Easy to dismount
Size:19~118
Zero backlash

SA

Nylon resin

Vibration damping
Size:6~41
With backlash

PEEK

Poly Ether
Ether Ketone

Heat resistant
Size:6~88(118※1)
Zero backlash

A

Aluminum alloy
Nylon resin coating ※2,3,4

Rigid
Size:19~88
With backlash

AJ

Aluminum alloy
Electroless nickel plating,
Lubricant coating ※3,4,5

Rigid, gall resistant
Size:19~118
With backlash

※1: MJ-118-T-PEEK is make to order.
※2: Apply MoS2(molybdenum(IV) sulfide) contained grease to toque disc A to prevent galling.
※3: For rigidity, select torque disc A for intermittent operation and AJ for continuous operation.
※4: Torque disc A and AJ is recommended for vertical installation. Use thrust bearings to support the load.
※5: Total lengh of torque disc AJ is 1mm longer than standard product due to the thickness of nylon coating.