MCMJP series

PEN CYLINDER

Features

- Space saving, compact design enables simple mounting.
- Flush fitting sensor switch.

Specification

Model	MCMJP		
Acting type	Double acting		
Tube I.D. (mm)	6	10	16
Port size	M3×0.5		M5×0.8
Medium	Air		
Max. operating perssure	0.7 MPa		
Min. operating perssure	0.12 MPa		0.06 MPa
Proof pressure	1 MPa		
Lubrication	Not required		
Ambient temperature	-5~+60°C (No freezing)		
Available speed range	50~500 mm/sec		
Max. allowable kinetic energy	0.012J	0.025J	0.05J
Sensor switch (*)	RDFE(V), RDGV		

* RDFE(V), RDGV specification, please refer to page 8-19, 20.

Table for standard stroke

Tube I.D.		Stroke (mm)	Max. stroke (mm)	
			Without	With magnet
Standard type	ø6	5,10,15,20,25	30	25
	ø10	5,10,15,20,25,30	35	30
	ø16	5,10,15,20,25,30,40	45	40
End-plain	ø6	5,10,15,20	25	20
	ø10	5,10,15,20	25	20
	ø16	5,10,15,20,25	30	25

* It can't be supplied if the stroke is out of the maximum of above table.

Cylinder weight

Unit: g

Stroke (mm)	11: Male thread			18: Threadless		
	ø6	ø10	ø16	ø6	ø10	ø16
5	19	29	46	18	28	45
10	21	31	50	20	30	49
15	24	34	54	23	33	53
20	26	36	58	25	35	57
25	29	39	62	28	38	61
30	–	41	66	–	40	65
40	–	–	74	–	–	73

Order example

MCMJP — 11 — 6 — 10M — E

MODEL | 1: Single rod | TUBE I.D. | STROKE | M: Magnet

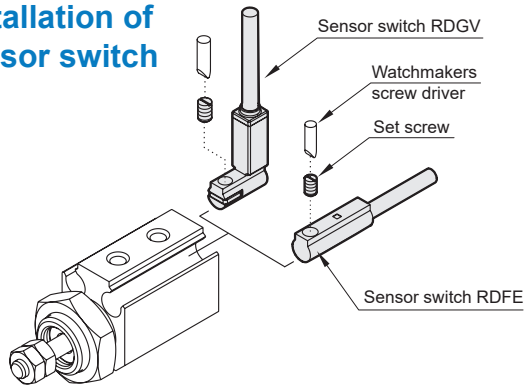
STYLE

Code		Symbol	Description
1	1		Double acting / Male thread
1	8		Double acting / Threadless

TYPE

Code	Symbol	Description
Blank		Standard type
E		End-plain

Installation of sensor switch



Order example of mounting accessories

Code	Accessories			
	LB	FA	SDB (With pin×1 + snap ring×2)	NUT
Type	Standard type		End-plain (E)	–
Mounting / Tube I.D.				Rod nut
ø6	LB-M5-6	FA-M5-6	SDB-M5-6	NUT-M3x0.5x2.4Hx5.5B
ø10	LB-M5-10	FA-M5-10	SDB-M5-10	NUT-M4x0.7x3.2Hx7B
ø16	LB-M5-16	FA-M5-16	SDB-M5-16	NUT-M5x0.8x4Hx8B

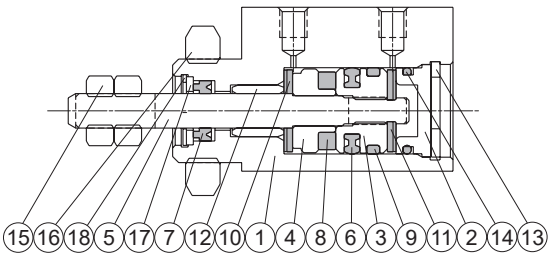
Pin

Applicable	SDB accessories
Code	PIN-SDB-P (With snap pin)
Fig / Tube I.D.	
ø6	PIN-M5-6-1-P
ø10	PIN-M5-10-1-P
ø16	PIN-M5-16-1-P

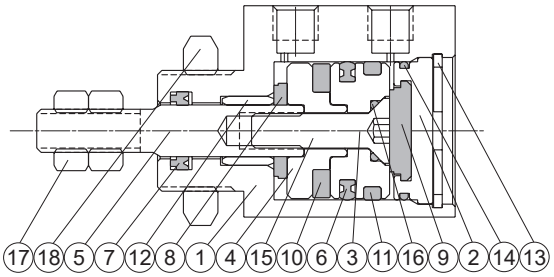
MCMJP Inside structure & Parts list ø6~ø16

PEN CYLINDER

ø6, ø10



ø16



Material

No.	Tube I.D. / Part name	6	10	Note	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy			1	
2	End cover	Aluminum alloy			1	
3	Piston	Aluminum alloy			1	
4	Piston	Aluminum alloy		for with magnet	1	
5	Piston rod	Stainless steel			1	
6	Pistion packing	NBR			1	●
7	Rod packing	NBR			1	●
8	Magnet ring	Magnet material		for with magnet	1	
9	Wear ring	Resin			1	
10	Cushion	NBR			1	●
11	Cushion	NBR			1	●
12	Rod bush	Copper			1	
13	Stop ring	Carbon steel			1	
14	Cover ring	NBR			1	●
15	Rod front nut	Carbon steel			2	
16	Tie nut	Carbon steel			1	
17	Fixed ring	Aluminum alloy			1	
18	Stop ring	Carbon steel			1	

No.	Tube I.D. / Part name	16	Note	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy		1	
2	End cover	Aluminum alloy		1	
3	Piston	Aluminum alloy		1	
4	Piston	Aluminum alloy	for with magnet	1	
5	Piston rod	Stainless steel		1	
6	Pistion packing	NBR		1	●
7	Rod packing	NBR		1	●
8	Cushion	NBR		1	●
9	Cushion	NBR		1	●
10	Magnet ring	Magnet material	for with magnet	1	
11	Wear ring	Resin		1	
12	Rod bush	Copper		1	
13	Stop ring	Carbon steel		1	
14	Cover ring	NBR		1	●
15	Piston bolt	SCM		1	
16	Piston gasket	NBR		1	●
17	Rod front nut	Carbon steel		2	
18	Tie nut	Carbon steel		1	

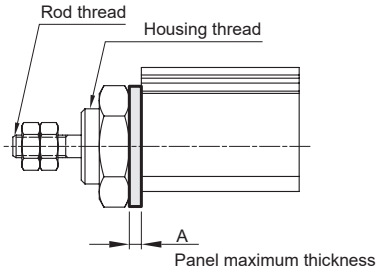
Order example of repair kits

Tube I.D.	Repair kits
ø6	**PS-MCMJP-6**
ø10	**PS-MCMJP-10**
ø16	**PS-MCMJP-16**

Tightening torque

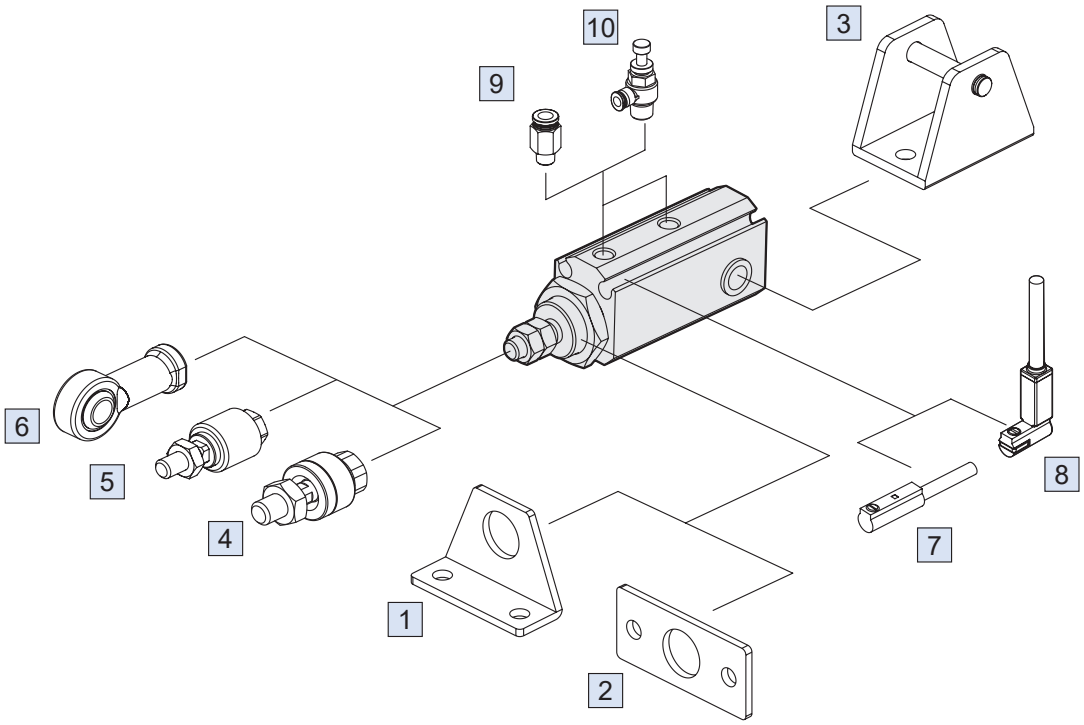
Tube I.D.	Rod thread	Maximum Tightening torque (kgf·cm)
ø6	M3×0.5	3.1
ø10	M4×0.7	8.2
ø16	M5×0.8	16.3

Tube I.D.	Housing thread	Maximum Tightening torque (kgf·cm)	A (mm)
ø6	M10×1	125	4
ø10	M12×1	214	4
ø16	M14×1	347	5



- Make sure the tightening torque of thread does not exceed the value above.

Accessories

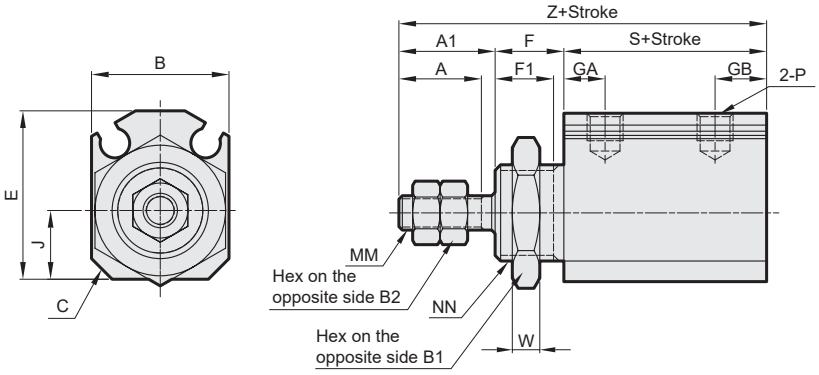


No.	Accessories	Material	Page
1	Mounting accessories LB	Carbon steel	3-80
2	Mounting accessories FA	Carbon steel	3-80
3	Mounting accessories SDB+PIN	Carbon steel / *1	3-80, 79
4	Floating joint MFC	Carbon steel	8-2
5	Floating joint MFCS	Carbon steel	8-5
6	Female rod ends PHS	Carbon steel	8-6
7	Sensor switch RDFE	–	8-19
8	Sensor switch RDGV	–	8-20
9	Fitting PC (PISCO)	–	8-3 (Vol.1)
10	Speed controller JSC (PISCO)	–	8-15 (Vol.1)

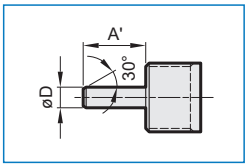
*1. PIN material is stainless steel.

MCMJP Dimensions ø6~ø16

PEN CYLINDER

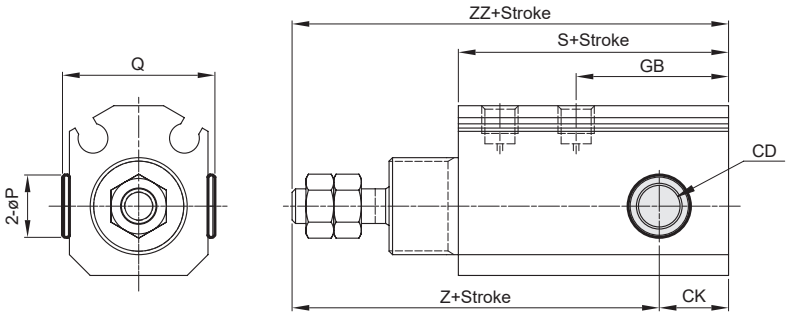


MCMJP-18



Code / Tube I.D.	A	A1	B	B1	B2	C	D	E	F	F1	GA	GB	J	MM	NN	P	W	Without magnet		Magnet	
																		S	Z	S	Z
6	7	9	14	14	5.5	2	3	16.5	8	6.5	5.5	6	6	M3×0.5	M10×1.0	M3×0.5	4	16	33	21	38
10	10	12	15	17	7	2.5	4	19	8	6.5	6	7	7	M4×0.7	M12×1.0	M3×0.5	4	19.5	39.5	24.5	44.5
16	12	14	20	19	8	3	6	24.5	10	8.5	6	7.5	10	M5×0.8	M14×1.0	M5×0.8	4	19.5	43.5	24.5	48.5

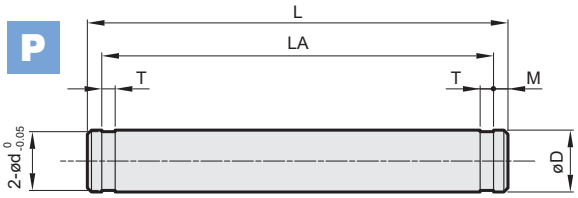
E



Code / Tube I.D.	CD	CK	GB	P	Q	Without magnet			Magnet		
						S	Z	ZZ	S	Z	ZZ
6	3 $^{+0.04}_{+0}$	4	11	—	—	21	34	38	26	39	43
10	5 $^{+0.06}_{+0}$	6.5	18	8	17	30.5	44	50.5	35.5	49	55.5
16	6 $^{+0.06}_{+0}$	10	22	9	22	34	48	58	39	53	63

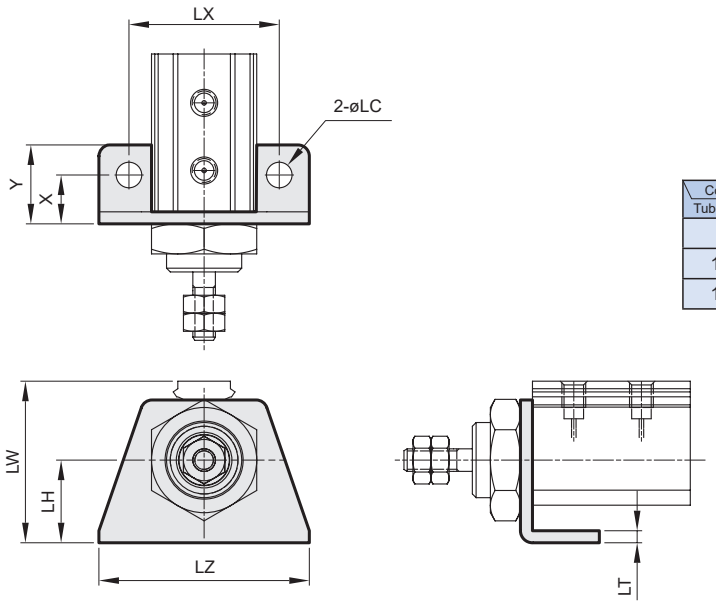
PIN

P



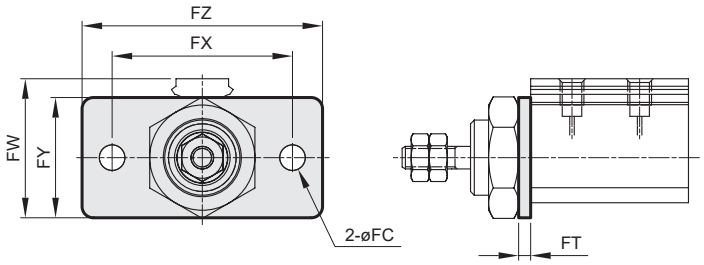
Code / Tube I.D.	D^{d9}	d	L	LA	M	T	Split pin
6	3 $^{-0.02}_{-0.05}$	2.85	20.4	19	0.7	0.5	STW-3
10	5 $^{-0.03}_{-0.06}$	4.8	23.9	21.9	1	0.7	STW-5
16	6 $^{-0.03}_{-0.06}$	5.7	31.9	29.9	1	0.8	STW-6

LB



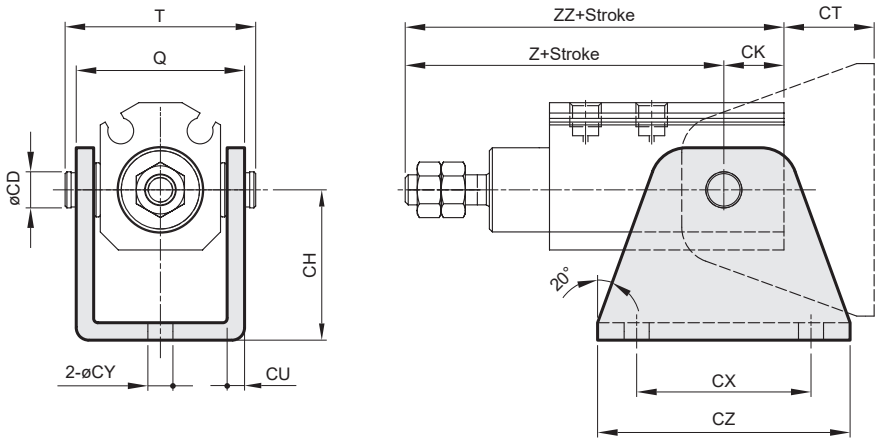
Code / Tube I.D.	LC	LH	LT	LW	LX	LZ	X	Y
6	3.4	11	1.6	21.5	20	28	6.5	10.5
10	4.5	13	1.6	25	24	33	7	12
16	5.5	18	2.3	32.5	30	43	10	16.5

FA



Code / Tube I.D.	FC	FT	FW	FX	FY	FZ
6	3.4	1.6	18.5	24	16	32
10	4.5	1.6	21	28	18	37
16	5.5	2.3	25.5	36	22	49

SDB



Code / Tube I.D.	CD	CH	CK	CT	CU	CX	CY	CZ	Q	T	Without magnet		Magnet	
											Z	ZZ	Z	ZZ
6	3	16	4	12	1.6	18	3.4	26	18.5	20.4	34	38	39	43
10	5	20	6.5	13.5	1.6	24	4.5	33	20.5	23.9	44	50.5	49	55.5
16	6	25	10	15	3	29	5.5	42	28.2	31.9	48	58	53	63