

### Features

- Ultra Compact, light weight and space saving cylinder.
- Wide range of bore sizes and strokes (12mm~100mm).
- Single and double acting available.
- Ideal for use in machinery where space is limited and incorporating sensor groove which enables flush fitting of sensors.
- Sensor can be mounted on any one of three faces on 12 and 16 bore and on four faces on 20~100 bore.

### Specification

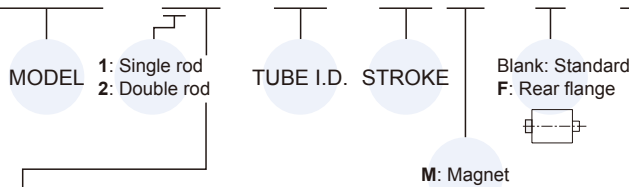
Model	MCJQ									
Acting type	Double acting / Single acting			Double						
Tube I.D. (mm)	12	16	20	25	32	40	50	63	80	100
Port size	M5×0.8			Rc1/8	Rc1/4	Rc3/8				
Medium	Air									
Operating pressure range (MPa)	Double acting	0.07~1		0.05~1						
	Single acting	0.2~1	0.15~1	0.1~1	—					
Proof pressure	1.5 MPa									
Ambient temperature	-5°C~+60°C (No freezing)									
Available speed range	50~500 mm/sec									
Sensor switch (*)	RCB, RCE, RCE1, RDEP									

### Order example

\* Order example for special specification, refer to page 0-7.

\* RCB, RCE, RCE1, RDEP specification, please refer to page 8-8, 10, 14. RCB sensor switch only for tube I.D. ø50~100.

**MCJQ – 12 – 20 – 25 M – F – G**



### STYLE

Code	Symbol	Description
1 1		Double acting / Male thread
1 2		Double acting / Female thread
1 3		Single acting / Normally extended male thread
1 4		Single acting / Normally extended female thread
1 5		Single acting / Normally returned male thread
1 6		Single acting / Normally returned female thread
2 1		Double rod / Male thread
2 2		Double rod / Female thread
2 3		Single acting / Double rod / Male thread
2 4		Single acting / Double rod / Female thread
2 7		Double rod / Adjustable male thread
2 8		Double rod / Adjustable female thread

### Mounting accessories

**FAC – MCJQ – 20**

MOUNTING TYPE		MODEL	TUBE I.D.
	LB		FBC
	CB		RF
	FAC	* Only for double acting / single rod type.	

### Single acting – Table for standard stroke

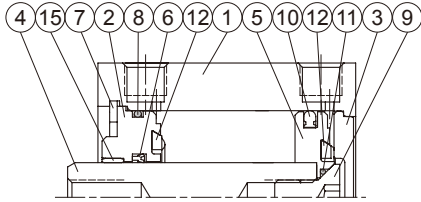
Tube I.D.	Standard stroke (mm)
ø12,16,20,25,32,40	5,10
ø50	5,10,15,20

### Double acting – Table for standard stroke

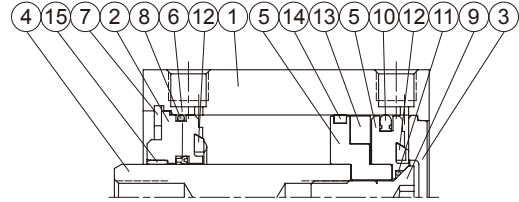
Tube I.D.	Standard stroke	Long stroke (mm)
ø12,16	5,10,15,20,25,30	35,40,45,50,75,100
ø20	5,10,15,20,25,30,35,40,45,50	75,100,125,150,175,200
		75,100,125,150,175,200,250,300
ø32~80	5,10,15,20,25,30,35,40,45,50,75,100	125,150,175,200,250,300
Tube I.D.	Standard stroke (mm)	
ø100	5,10,15,20,25,30,35,40,45,50,75,100	

- Stroke out of specification is also available.
- Please consult us if stroke out of specification.

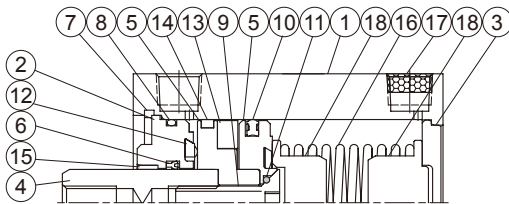
### Double acting



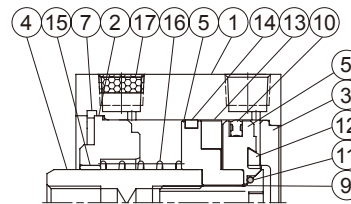
### Double acting (with magnet)



### Single acting Normally extended



### Single acting Normally returned



## Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	100	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Body	Aluminum alloy										Hard anodized	1		
2	Rod cover	Aluminum alloy										*	1	●	
3	End cover	Aluminum alloy										Anodized	1	●	
4	Piston With magnet rod Without magnet	Stainless steel					Carbor steel						1		
		SUS					Carbor steel						1		
5	Piston	Aluminum alloy										ø12~32 anodized	1	●	
6	Rod packing	NBR											1	●	●
7	Snap ring	Stainless steel					Spring steel						1	●	
8	Cover ring	NBR											1	●	●
9	Piston bolt	Stainless steel					SCM						1	●	
10	Piston packing	NBR											1	●	●
11	Piston gasket	NBR											1	●	●
12	Cushion packing	NBR											2	●	●
13	Magnet	Magnet											1	●	
14	Wear ring	—					Teflon						1	●	
15	Bush	—					Bearing alloy						1	●	
16	Spring	SWP					—						1	●	
17	Silencer	Brass					—						1	●	
18	Spring holder	Aluminum alloy					—						2	●	

\* ø12~ø32 hard anodized, ø40~ø100 anodized.

## Seal kit

Acting type	Rod packing		Piston packing		Cover ring		Piston gasket
	Double acting / Normally extended	Normally retruned	Double acting	Single acting	Double acting / Normally extended	Normally retruned	Double acting / Single acting
Q'y	1	0	1	1	1	0	1
12	KSYR-6	—	OPA-12	OPA-12	S-11	—	d4×w1
16	KSYR-8	—	OPA-16	OPA-16	S-14	—	d5×w1
20	KSYR-10A	—	OPA-20	OPA-20	S-18	—	d6×w1
25	KSYR-12	—	OPA-25	OPA-25	S-22,4	—	d8×w1
32	KSYR-16	—	OPA-32	OPA-32	S-28	—	S-9
40	KSYR-16	—	OPA-40	OPA-40	S-36	—	S-10
50	KSYR-20	—	OPA-50	OPA-50	S-46	—	S-16
63	KSYR-20	—	OPA-63	—	S-60	—	S-16
80	ORA-25	—	OPA-80	—	G-75	—	d20×w1
100	ORA-30	—	OPA-100	—	G-95	—	S-26

## Order example Component parts

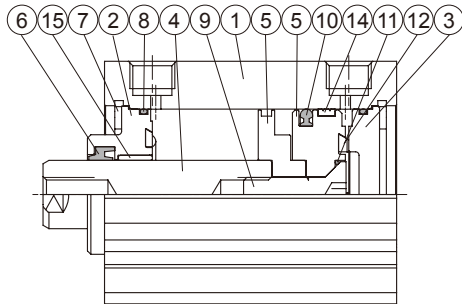
Tube I.D.	Component parts
ø12	CP-MCJQ-12(M)
ø16	CP-MCJQ-16(M)
ø20	CP-MCJQ-20(M)
ø25	CP-MCJQ-25(M)
ø32	CP-MCJQ-32(M)
ø40	CP-MCJQ-40(M)
ø50	CP-MCJQ-50(M)
ø63	CP-MCJQ-63(M)
ø80	CP-MCJQ-80(M)
ø100	CP-MCJQ-100(M)

M: With magnet

## Repair kits

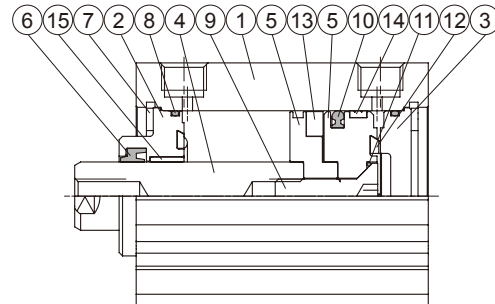
Tube I.D.	Repair kits
ø12	PS-MCJQ-12
ø16	PS-MCJQ-16
ø20	PS-MCJQ-20
ø25	PS-MCJQ-25
ø32	PS-MCJQ-32
ø40	PS-MCJQ-40
ø50	PS-MCJQ-50
ø63	PS-MCJQ-63
ø80	PS-MCJQ-80
ø100	PS-MCJQ-100

Long stroke



Long stroke

(with magnet)



### Long stroke – Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Body	Aluminum alloy									Hard anodized	1		
2	Rod cover	Aluminum alloy									*	1	●	
3	End cover	Aluminum alloy									Anodized	1	●	
4	Piston rod	With magnet	Stainless steel			Carbor steel					1			
		Without magnet	SUS	Carbor steel										1
5	Piston	Aluminum alloy									ø12~32 anodized	1	●	
6	Rod packing	NBR										1	●	●
7	Snap ring	Stainless steel			Spring steel							2	●	
8	Cover ring	NBR										2	●	●
9	Piston bolt	Stainless steel			SCM							1	●	
10	Piston packing	NBR										1	●	●
11	Piston gasket	NBR										1	●	●
12	Cushion packing	NBR										2	●	●
13	Magnet	Magnet										1	●	
14	Wear ring	Teflon										1	●	
15	Bush	-			Bearing alloy							1	●	

\* ø12~ø32 hard anodized, ø40~ø80 anodized.

### Long stroke – Seal kit

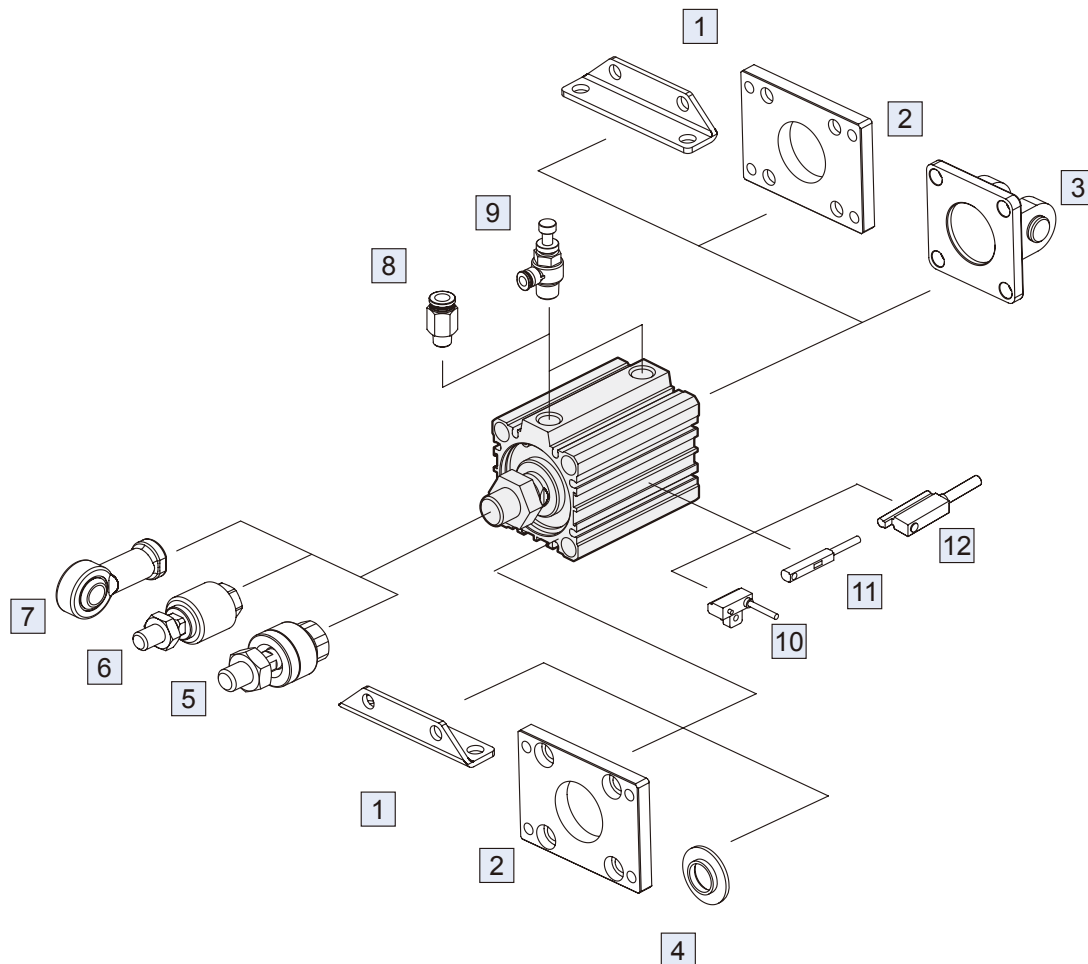
	Rod packing	Piston packing	Cover ring	Piston gasket
Acting type	Double acting			
Q'y	1	1	2	1
12	KSYR-6	OPA-12	S-11	d4×w1
16	KSYR-8	OPA-16	S-14	d5×w1
20	KSYR-10A	OPA-20	S-18	d6×w1
25	KSYR-12	OPA-25	S-22	d8×w1
32	KSYR-16	OPA-32	d28×w2	S-9
40	ORA-16	OPA-40	S-36	S-10
50	ORA-20	OPA-50	S-46	S-16
63	ORA-20	OPA-63	S-60	S-16
80	ORA-25	OPA-80	AS-41   G-75	d20×w1

### Order example

#### Component parts / Repair kits

Tube I.D.	Component parts	Repair kits
ø12	CPL-MCJQ-12(M)	PSL-MCJQ-12
ø16	CPL-MCJQ-16(M)	PSL-MCJQ-16
ø20	CPL-MCJQ-20(M)	PSL-MCJQ-20
ø25	CPL-MCJQ-25(M)	PSL-MCJQ-25
ø32	CPL-MCJQ-32(M)	PSL-MCJQ-32
ø40	CPL-MCJQ-40(M)	PSL-MCJQ-40
ø50	CPL-MCJQ-50(M)	PSL-MCJQ-50
ø63	CPL-MCJQ-63(M)	PSL-MCJQ-63
ø80	CPL-MCJQ-80(M)	PSL-MCJQ-80

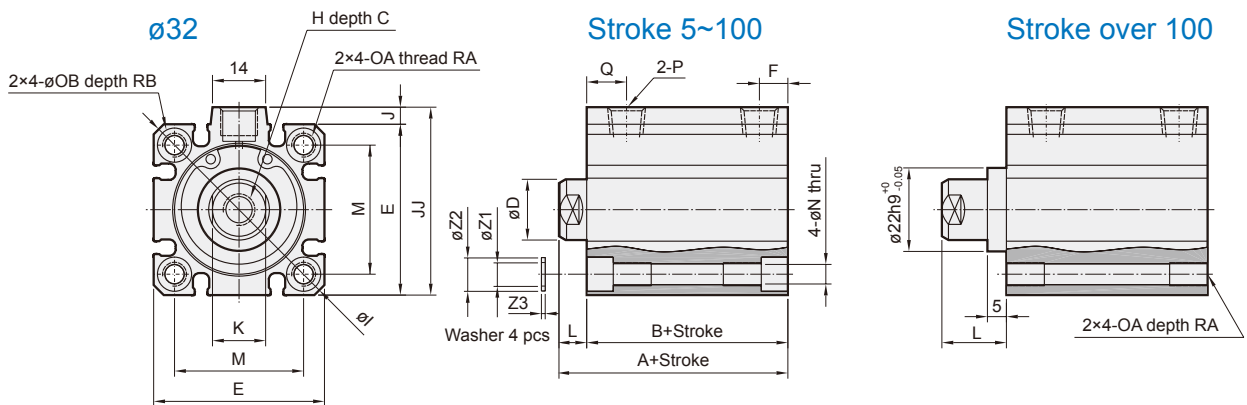
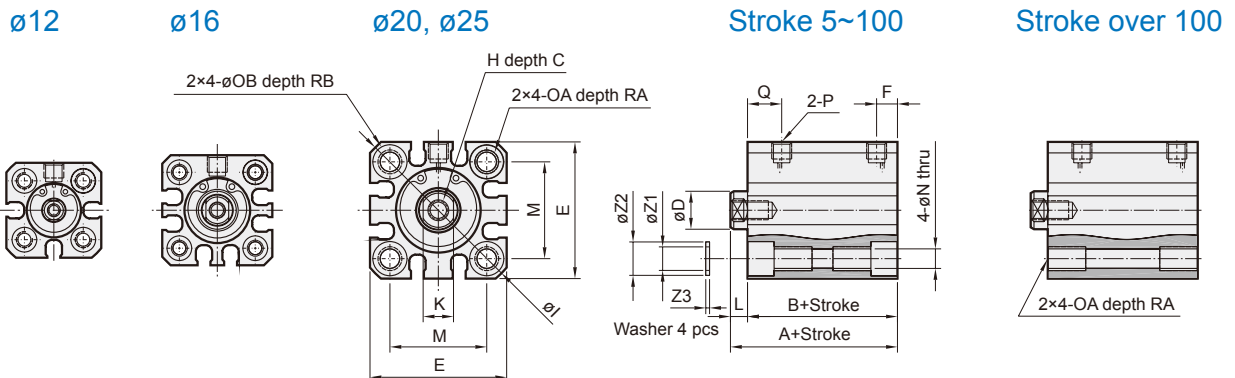
M: With magnet



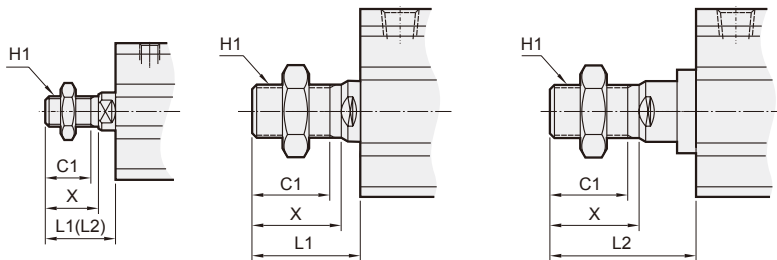
No.	Accessories	Material	Page
1	Mounting accessories LB	Carbon steel	2-36, 38
2	Mounting accessories FAC/FBC	Carbon steel	2-36, 37, 39, 40
3	Mounting accessories CB+PIN	Cast iron / *	2-37, 41, 42
4	Mounting accessories RF	Aluminum	2-42
5	Floating joint MFC	Carbon steel	8-2
6	Floating joint MFCS	Carbon steel	8-4

No.	Accessories	Material	Page
7	Female rod ends PHS	Carbon steel	8-5
8	Fitting PC (PISCO)	-	8-5 (Vol.1)
9	Speed controller JSC (PISCO)	-	8-18 (Vol.1)
10	Sensor switch RCB	-	8-8
11	Sensor switch RCE/RCE1	-	8-10
12	Sensor switch RDEP	-	8-14

\* PIN and  $\phi 12$ ,  $\phi 16$  CB accessories material are carbon steel.



$\phi 12\sim 25$        $\phi 32$  for stroke 5~100       $\phi 32$  for stroke over 100



MCJQ-11 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

\* L1: Standard stroke, L2: Long stroke

### $\phi 12\sim 25$

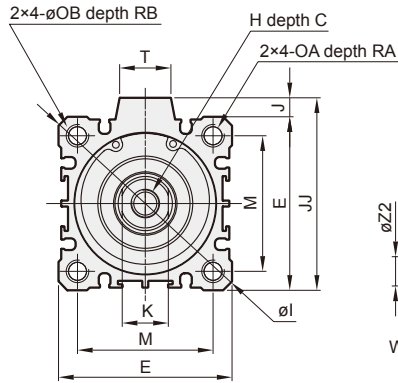
Code Tube I.D.	Standard stroke										Long stroke										C	D	E	H	I	K	M	N	OA	OB	P	Q	RA	RB	Z1	Z2	Z3
	Stroke range	Without magnet				Magnet				Stroke range	A	B	F	L																							
		A	B	F	L	A	B	F	L																												
12	5~30	20.5	17	5	3.5	25.5	22	5	3.5	31~100	45.5	32	7.5	13.5	6	6	25	M3×0.5	32	5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5						
16	5~30	20.5	17	5	3.5	25.5	22	5	3.5	31~100	45.5	32	7.5	13.5	8	8	29	M4×0.7	38	6	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5						
20	5~50	24	19.5	5.5	4.5	34	29.5	5.5	4.5	51~200	55.5	41	9	14.5	7	10	36	M5×0.8	47	8	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	6.2	8.8	1						
25	5~50	27.5	22.5	5.5	5	37.5	32.5	5.5	5	51~300	59	44	11	15	12	12	40	M6×1.0	52	10	28	5.4	M6×1.0	9	M5×0.8	11	10	7	6.2	8.8	1						

### $\phi 32$

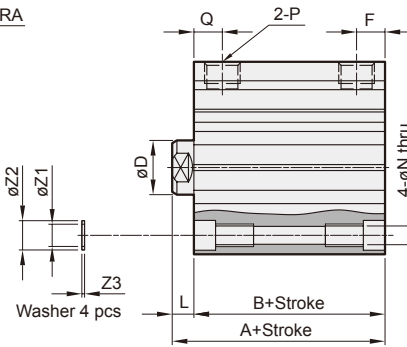
Code Tube I.D.	Standard stroke							Long stroke							P	C	D	E	H	I	J	JJ	K	M	N	OA	OB	RA	RB	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet		F	L	Q	Stroke range	A	B	F	L	Q																		
		A	B	A	B																											
32	5~50	30	23	40	33	7.5	7	10.5	101~300	62.5	45.5	12.5	17	12.5	Rc1/8 (*1)	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	10	7	6.2	8.8	1
	51~100	40	33	40	33	7.5	7	10.5																								

\*1. Without magnet with stroke=5mm, P=M5×0.8, Q=11.5, F=5.5

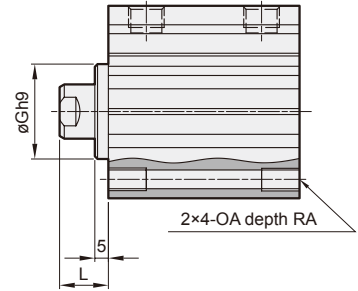
### $\phi 50\sim\phi 100$



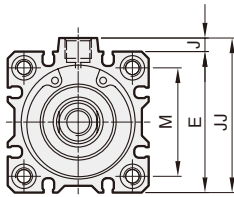
### Stroke 5~100



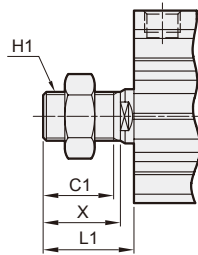
### Stroke over 100



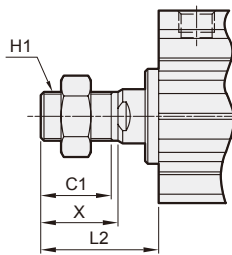
### $\phi 40$



### $\phi 40\sim\phi 100$ (Stroke 5~100)



### $\phi 40\sim\phi 80$ (Stroke over 100)



### MCJQ-11 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	—	35.5

Code Tube I.D.	Standard stroke									Long stroke				
	Stroke range	Without magnet		Magnet		F	L	Q	Stroke range	A	B	F	L	Q
		A	B	A	B									
40	5~50	36.5	29.5	46.5	39.5	8	7	11	125~300	72	55	14	17	14
	75,100	46.5	39.5											
50	5~50	38.5	30.5	48.5	40.5	10.5	8	10.5	125~300	73.5	55.5	14	18	14
	75,100	48.5	40.5											
63	5~50	44	36	54	46	10.5	8	15	125~300	75	57	16.5	18	16.5
	75,100	54	46											
80	5~50	53.5	43.5	63.5	53.5	12.5	10	16	125~300	86	66	19	20	19
	75,100	63.5	53.5											
100	5~50	65	53	75	63	13	12	23	—	—	—	—	—	—
	75,100	75	63											

Code Tube I.D.	C	D	E	G <sup>h9</sup>	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
40	13	16	52	28 <sup>+0</sup> <sub>-0.052</sub>	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	15	20	64	35 <sup>+0</sup> <sub>-0.062</sub>	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4 (*1)	14	8	19	8.2	10.8	1
63	15	20	77	35 <sup>+0</sup> <sub>-0.062</sub>	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*2)	18	10.5	19	10.2	13.8	1
80	21	25	98	43 <sup>+0</sup> <sub>-0.062</sub>	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*3)	22	13.5	26	12.2	17.3	2
100	27	30	117	—	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*3)	22	13.5	26	12.2	17.3	2

\*1. Without magnet with stroke=5mm, P=Rc1/8, Q=12, F=8

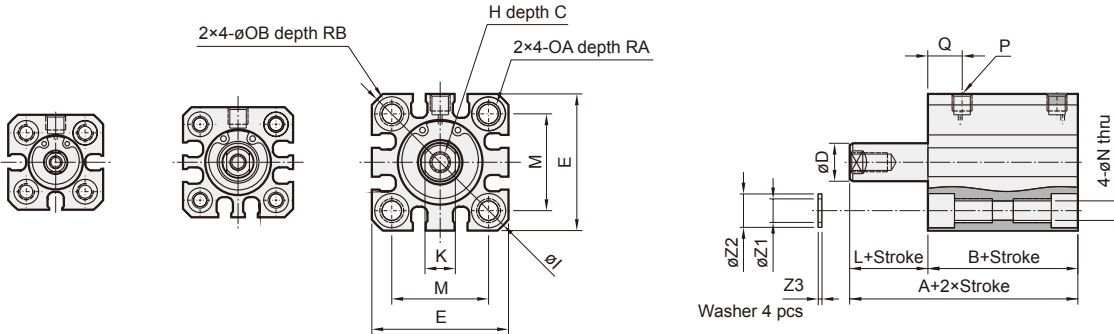
\*2. Without magnet with stroke=5mm, P=Rc1/8

\*3. Without magnet with stroke=5mm, P=Rc1/4

$\phi 12$

$\phi 16$

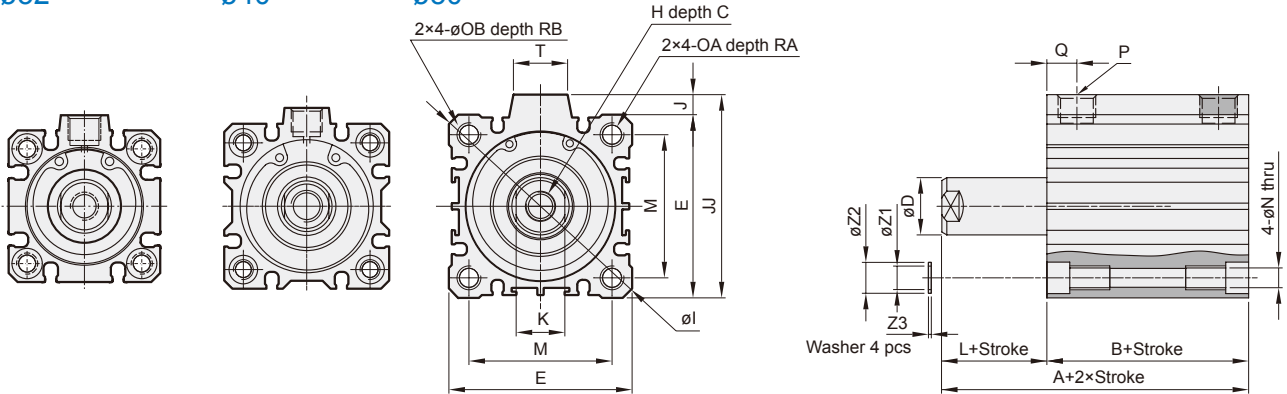
$\phi 20, \phi 25$

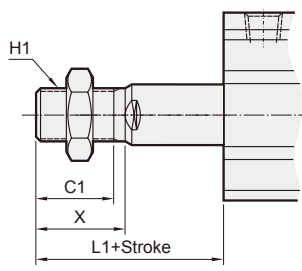


$\phi 32$

$\phi 40$

$\phi 50$





### MCJQ-13 male thread size

Code Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

\* L1: Standard stroke

Note: The value B of  $\phi 12\sim\phi 40$  type is greater than double acting type.

Code Tube I.D.	Stroke range	Standard stroke				C	D	E	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z1	Z2	Z3
		Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	30.5	27	35.5	32	6	6	25	M3×0.5	32	-	-	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	-	4.2	6.3	0.5
16	5,10	35.5	32	40.5	37	8	8	29	M4×0.7	38	-	-	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	-	4.2	6.3	0.5
20	5,10	34	29.5	44	39.5	7	10	36	M5×0.8	47	-	-	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	-	6.2	8.8	1
25	5,10	47.5	42.5	57.5	52.5	12	12	40	M6×1.0	52	-	-	10	5	28	5.4	M6×1.0	9	M5×0.8	11	10	7	-	6.2	8.8	1
32	5,10	55	48	65	58	13	16	45	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8	10.5	10	7	14	6.2	8.8	1
40	5,10	61.5	54.5	71.5	64.5	13	16	52	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	11	10	7	14	6.2	8.8	1
50	5~20	38.5	30.5	48.5	40.5	15	20	64	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4 (*1)	10.5	14	8	19	8.2	10.8	1

\*1. Without magnet with stroke=5mm, P=Rc1/8, Q=12



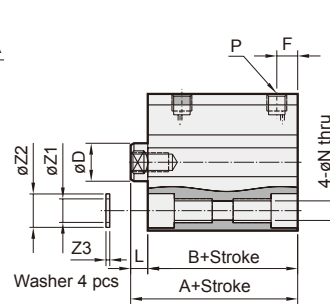
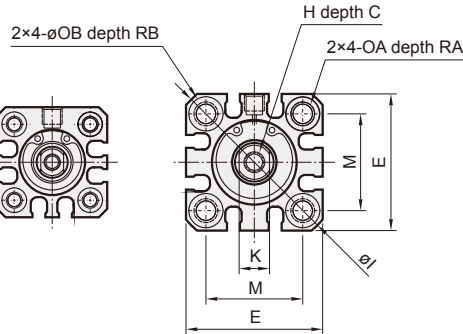
$\phi 12$



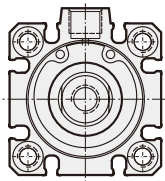
$\phi 16$



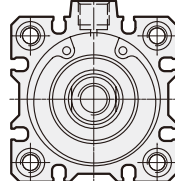
$\phi 20, \phi 25$



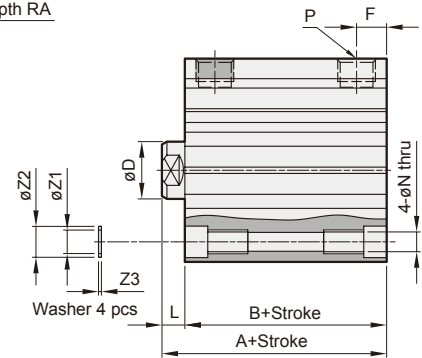
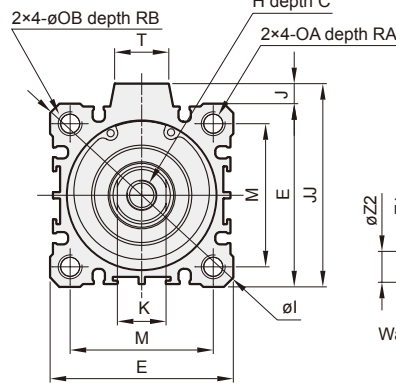
$\phi 32$

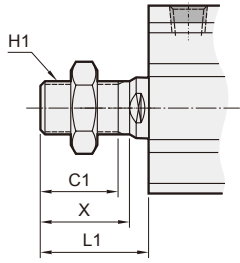


$\phi 40$



$\phi 50$





### MCJQ-15 male thread size

Code Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

\* L1: Standard stroke

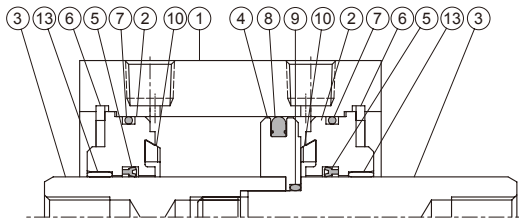
Code Tube I.D.	Stroke range	Standard stroke				C	D	E	F	H	I	J	JJ	K	L	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
		Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	20.5	17	25.5	22	6	6	25	5	M3×0.5	32	–	–	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7	4	–	4.2	6.3	0.5
16	5,10	20.5	17	25.5	22	8	8	29	5	M4×0.7	38	–	–	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7	4	–	4.2	6.3	0.5
20	5,10	24	19.5	34	29.5	7	10	36	5.5	M5×0.8	47	–	–	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	10	7	–	6.2	8.8	1
25	5,10	27.5	22.5	37.5	32.5	12	12	40	5.5	M6×1.0	52	–	–	10	5	28	5.4	M6×1.0	9	M5×0.8	10	7	–	6.2	8.8	1
32	5,10	30	23	40	33	13	16	45	7.5	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8 (*1)	10	7	14	6.2	8.8	1
40	5,10	36.5	29.5	46.5	39.5	13	16	52	8	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	5~20	38.5	30.5	48.5	40.5	15	20	64	10.5	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4 (*2)	14	8	19	8.2	10.8	1

\*1. Without magnet with stroke=5mm, P=M5×0.8, F=5.5

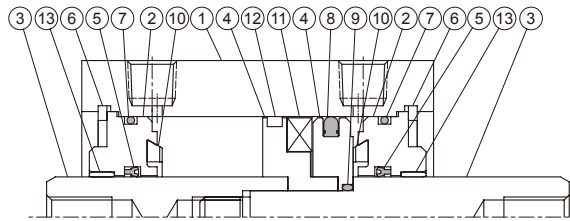
\*2. Without magnet with stroke=5mm, P=Rc1/8, F=8



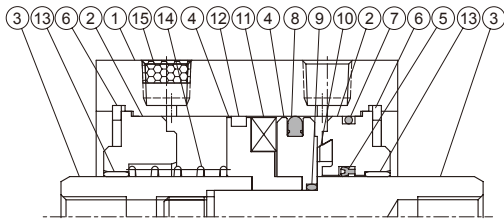
### Double acting



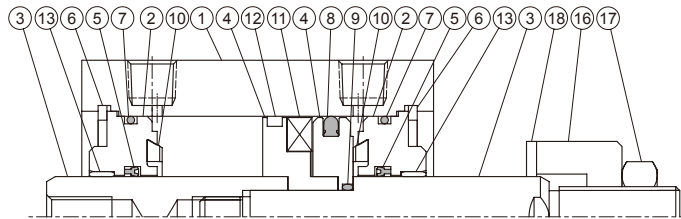
### Double acting (with magnet)



### Single acting



### Adjustable stroke



## Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	100	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Body	Aluminum alloy										Hard anodized	1		
2	Rod cover	Aluminum alloy										*1	2	●	
3	Piston rod	With magnet	Stainless steel		Carbor steel							2			
		Without magnet	SUS	Carbor steel							2				
4	Piston	Aluminum alloy										1	●		
5	Rod packing	NBR										2	●	●	
6	Snap ring	Stainless steel				Spring steel						2	●		
7	Cover ring	NBR										*2	2	●	●
8	Piston packing	NBR										1	●	●	
9	Piston gasket	NBR										1	●	●	
10	Cushion packing	NBR										2	●	●	
11	Magnet	Magnet										1	●		
12	Wear ring	-				Teflon						1	●		
13	Bush	-				Bearing alloy						2	●		
14	Spring	SWP						-				1	●		
15	Silencer	Brass						-				1	●		
16	Adjustble nut	Carbor steel										1	●		
17	Hexagon nut	Carbor steel										1	●		
18	Cushion packing	PU										1	●		

\*1.  $\phi 12 \sim \phi 32$  hard anodized,  $\phi 40 \sim \phi 100$  anodized. \*2. Single acting (Q'y=1 pc)

## Seal kit

Acting type	Rod packing		Piston packing		Cover ring		Piston gasket
	Double acting	Single acting	Double acting	Single acting	Double acting	Single acting	Double acting Single acting
Q'y	2	1	1	1	2	1	1
12	KSYR-6	KSYR-6	OPA-12	OPA-12	S-11	S-11	d4×w1
16	KSYR-8	KSYR-8	OPA-16	OPA-16	S-14	S-14	d6×w1
20	KSYR-10A	KSYR-10A	OPA-20	OPA-20	S-18	S-18	d6×w1
25	KSYR-12	KSYR-12	OPA-25	OPA-25	S-22	S-22	S-9
32	KSYR-16	KSYR-16	OPA-32	OPA-32	d28×w2	d28×w2	d11×w1
40	KSYR-16	KSYR-16	OPA-40	OPA-40	S-36	S-36	S-10
50	KSYR-20	KSYR-20	OPA-50	OPA-50	S-46	S-46	S-16
63	KSYR-20	-	OPA-63	-	S-60	-	S-14
80	ORA-25	-	OPA-80	-	G-75	-	d20×w1
100	ORA-30	-	OPA-100	-	G-95	-	S-24

## Order example

### Component parts / Repair kits

Tube I.D.	Component parts	Repair kits
$\phi 12$	CP-MCJQ-2-12(M)	PS-MCJQ-2-12
$\phi 16$	CP-MCJQ-2-16(M)	PS-MCJQ-2-16
$\phi 20$	CP-MCJQ-2-20(M)	PS-MCJQ-2-20
$\phi 25$	CP-MCJQ-2-25(M)	PS-MCJQ-2-25
$\phi 32$	CP-MCJQ-2-32(M)	PS-MCJQ-2-32
$\phi 40$	CP-MCJQ-2-40(M)	PS-MCJQ-2-40
$\phi 50$	CP-MCJQ-2-50(M)	PS-MCJQ-2-50
$\phi 63$	CP-MCJQ-2-63(M)	PS-MCJQ-2-63
$\phi 80$	CP-MCJQ-2-80(M)	PS-MCJQ-2-80
$\phi 100$	CP-MCJQ-2-100(M)	PS-MCJQ-2-100

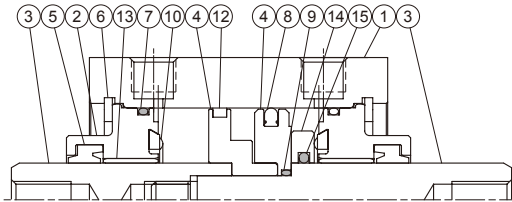
M: With magnet

# MCJQ Inside structure & Parts list – Double rod / Long stroke

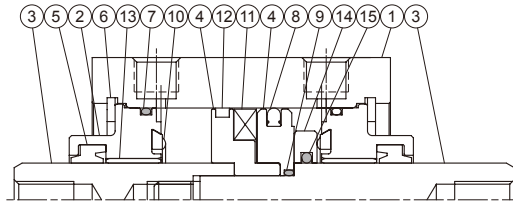


## COMPACT CYLINDER

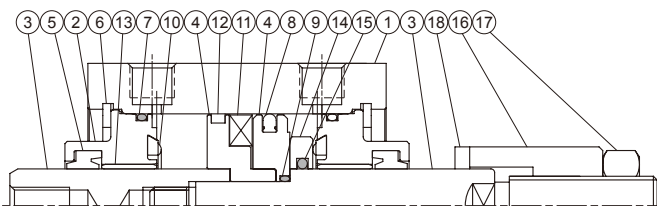
### Double acting



### Double acting (with magnet)



### Adjustable stroke



## Long stroke – Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)	
1	Body	Aluminum alloy									Hard anodized	1			
2	Rod cover	Aluminum alloy									*	2	●		
3	Piston rod	With magnet	Stainless steel			Carbor steel				2					
		Without magnet	SUS			Carbor steel				2					
4	Piston	Aluminum alloy										2	●		
5	Rod packing	NBR										2	●	●	
6	Snap ring	Stainless steel			Spring steel							2	●		
7	Cover ring	NBR										2	●	●	
8	Piston packing	NBR										1	●	●	
9	Piston gasket	NBR										1	●	●	
10	Cushion packing	–	NBR										2	●	●
11	Magnet	Magnet										1	●		
12	Wear ring	–			Teflon							1	●		
13	Bush	–			Bearing alloy							2	●		
14	Sub-piston	–	PU		Aluminum alloy						1	●			
15	Sub-piston gasket	–			NBR							1	●	●	
16	Adjust nut	Carbor steel										1	●		
17	Hexagon nut	Carbor steel										1	●		
18	Cushion gasket	PU										1	●		

\*  $\phi 12\sim\phi 32$  hard anodized,  $\phi 40\sim\phi 80$  anodized.

## Long stroke – Seal kit

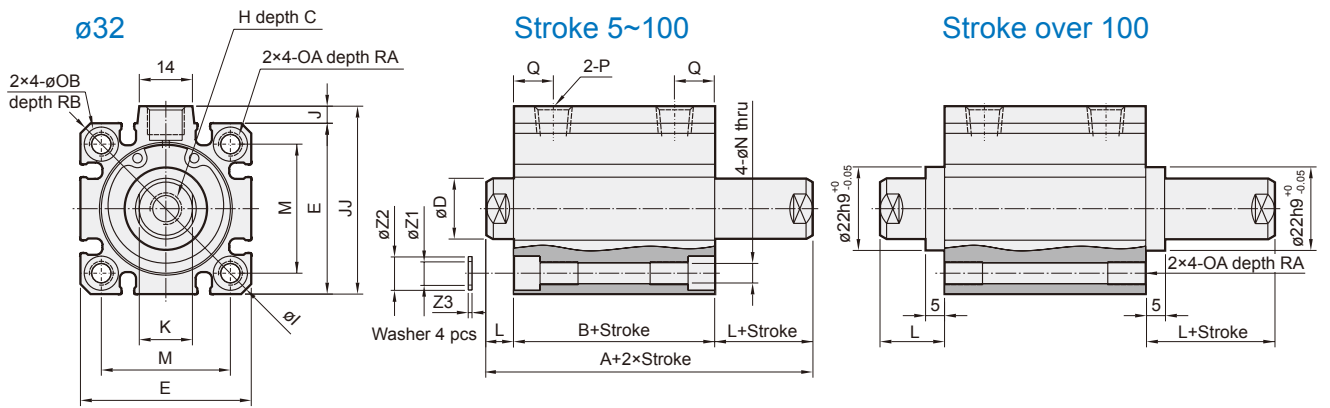
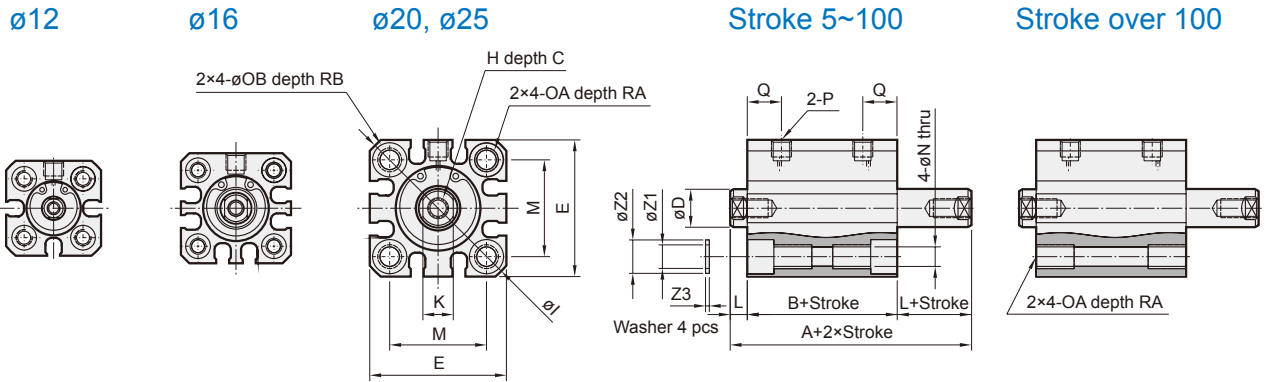
	Rod packing	Piston packing	Cover ring	Piston gasket	Sub-piston gasket
Acting type	Double acting				
Q'y	2	1	2	1	1
12	KSYR-6	OPA-12	S-11	d4×w1	–
16	KSYR-8	OPA-16	S-14	d5×w1	–
20	KSYR-10A	OPA-20	S-18	d6×w1	–
25	KSYR-12	OPA-25	S-22	S-9	–
32	KSYR-16	OPA-32	d28×w2	d11×w1	P-16
40	ORA-16	OPA-40	S-36	S-10	P-16
50	ORA-20	OPA-50	S-46	S-16	P-20
63	ORA-20	OPA-63	S-60	S-14	P-20
80	ORA-25	OPA-80	G-75	S-18	S-25

## Order example

### Component parts / Repair kits

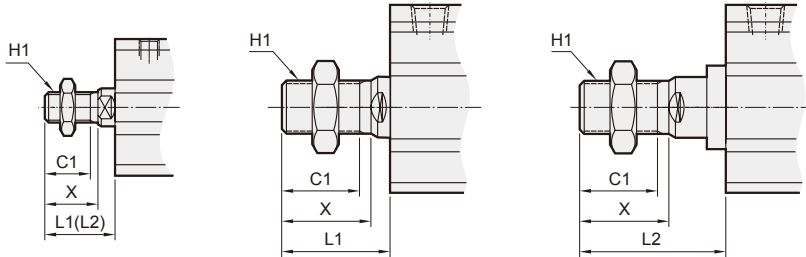
Tube I.D.	Component parts	Repair kits
$\phi 12$	CPL-MCJQ-2-12(M)	PSL-MCJQ-2-12
$\phi 16$	CPL-MCJQ-2-16(M)	PSL-MCJQ-2-16
$\phi 20$	CPL-MCJQ-2-20(M)	PSL-MCJQ-2-20
$\phi 25$	CPL-MCJQ-2-25(M)	PSL-MCJQ-2-25
$\phi 32$	CPL-MCJQ-2-32(M)	PSL-MCJQ-2-32
$\phi 40$	CPL-MCJQ-2-40(M)	PSL-MCJQ-2-40
$\phi 50$	CPL-MCJQ-2-50(M)	PSL-MCJQ-2-50
$\phi 63$	CPL-MCJQ-2-63(M)	PSL-MCJQ-2-63
$\phi 80$	CPL-MCJQ-2-80(M)	PSL-MCJQ-2-80

M: With magnet



$\phi 12\sim 25$

$\phi 32$  for stroke 5~100     $\phi 32$  for stroke over 100



**MCJQ-21 male thread size**

Code Tube I.D.	C1	H1	L1	L2	X
12	9	M5x0.8	14	24	10.5
16	10	M6x1.0	15.5	25.5	12
20	12	M8x1.25	18.5	28.5	14
25	15	M10x1.25	22.5	32.5	17.5
32	20.5	M14x1.5	28.5	38.5	23.5

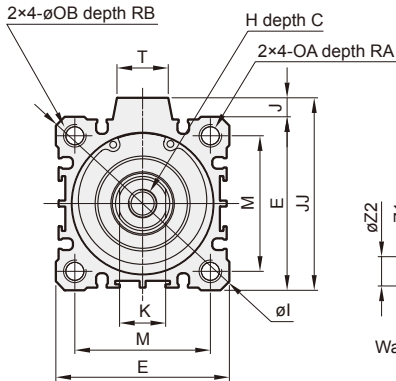
\* L1: Standard stroke, L2: Long stroke

Code Tube I.D.	Standard stroke						Long stroke																							
	Stroke range	Without magnet			Magnet			Stroke range	A	B	L	C	D	E	H	I	J	JJ	K	M	N	OA	OB	P	Q	RA	RB	Z1	Z2	Z3
		A	B	L	A	B	L																							
12	5~30	29	22	3.5	34	27	3.5	31~100	59	32	13.5	6	6	25	M3x0.5	32	-	-	5	15.5	3.5	M4x0.7	6.5	M5x0.8	7.5	7	4	4.2	6.3	0.5
16	5~30	29	22	3.5	34	27	3.5	31~100	59	32	13.5	8	8	29	M4x0.7	38	-	-	6	20	3.5	M4x0.7	6.5	M5x0.8	7.5	7	4	4.2	6.3	0.5
20	5~50	35	26	4.5	45	36	4.5	51~200	70	41	14.5	7	10	36	M5x0.8	47	-	-	8	25.5	5.4	M6x1.0	9	M5x0.8	9	10	7	6.2	8.8	1
25	5~50	39	29	5	49	39	5	51~300	74	44	15	12	12	40	M6x1.0	52	-	-	10	28	5.4	M6x1.0	9	M5x0.8	11	10	7	6.2	8.8	1
32	5~50	44.5	30.5	7	54.5	40.5	7	101~300	79.5	45.5	17	13	16	45	M8x1.25	60	4.5	49.5	14	34	5.5	M6x1.0	9	Rc1/8 (*1)	12.5	10	7	6.2	8.8	1
	51~100	54.5	40.5	7	54.5	40.5	7																							

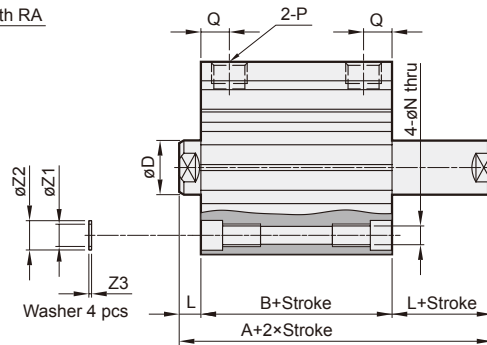
\*1. Without magnet with stroke=5mm, P=M5x0.8

## COMPACT CYLINDER

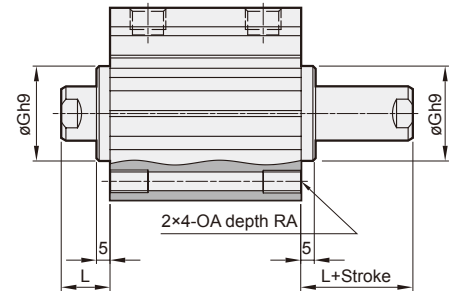
$\phi 50\sim\phi 100$



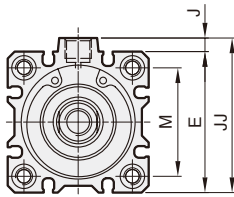
Stroke 5~100



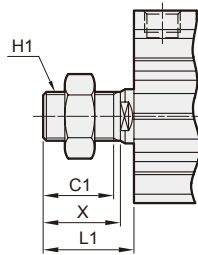
Stroke over 100



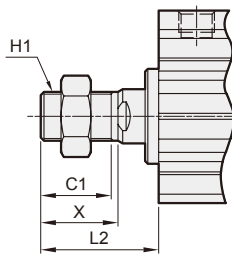
$\phi 40$



$\phi 40\sim\phi 100$   
(Stroke 5~100)



$\phi 40\sim\phi 80$   
(Stroke over 100)



MCJQ-21 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	—	35.5

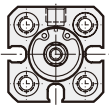
Code Tube I.D.	Standard stroke						Long stroke					
	Stroke range	Without magnet		Magnet		L	Q	Stroke range	A	B	L	Q
		A	B	A	B							
40	5~50	54	40	64	50	7	14	101~300	89	55	17	14
	51~100	64	50	64	50	7	14	101~300	89	55	17	14
50	5~50	56.5	40.5	66.5	50.5	8	14	101~300	91.5	55.5	18	14
	51~100	66.5	50.5	66.5	50.5	8	14	101~300	91.5	55.5	18	14
63	5~50	58	42	68	52	8	15.5	101~300	93	57	18	16.5
	51~100	68	52	68	52	8	15.5	101~300	93	57	18	16.5
80	5~50	71	51	81	61	10	18	101~300	106	66	20	19
	51~100	81	61	81	61	10	18	101~300	106	66	20	19
100	5~50	84.5	60.5	94.5	70.5	12	22	—	—	—	—	—
	51~100	94.5	70.5	94.5	70.5	12	22	—	—	—	—	—

Code Tube I.D.	C	D	E	G <sup>H9</sup>	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
40	13	16	52	28 <sup>+0</sup> <sub>-0.052</sub>	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	15	20	64	35 <sup>+0</sup> <sub>-0.062</sub>	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4	14	8	19	8.2	10.8	1
63	15	20	77	35 <sup>+0</sup> <sub>-0.062</sub>	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*1)	18	10.5	19	10.2	13.8	1
80	21	25	98	43 <sup>+0</sup> <sub>-0.062</sub>	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	12.2	17.3	2
100	27	30	117	—	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	12.2	17.3	2

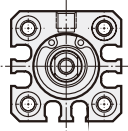
\*1. Without magnet with stroke=5mm, P=Rc1/8

\*2. Without magnet with stroke=5mm, P=Rc1/4

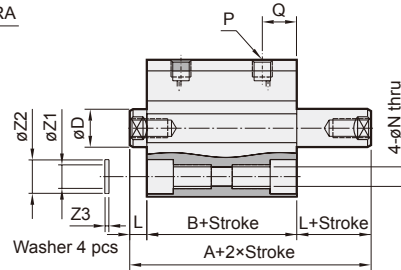
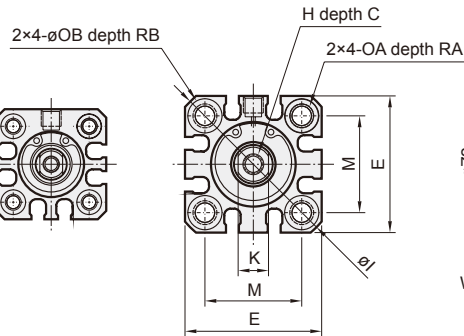
$\phi 12$



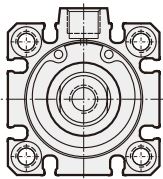
$\phi 16$



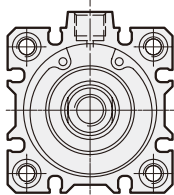
$\phi 20, \phi 25$



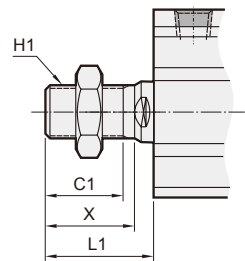
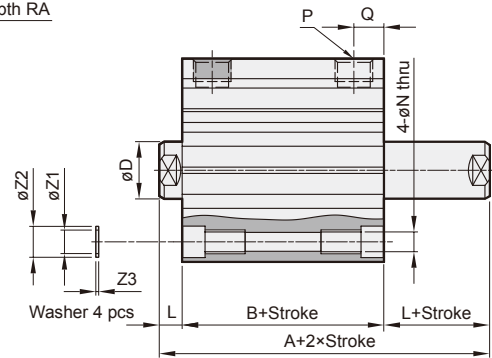
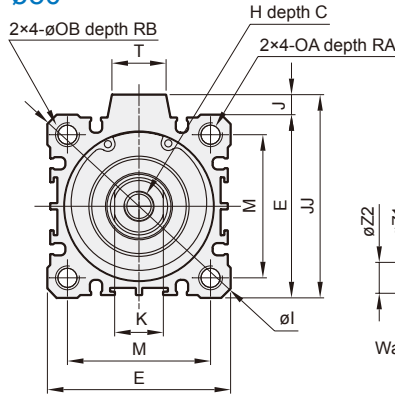
$\phi 32$



$\phi 40$



$\phi 50$



MCJQ-23 male thread size

Code Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

\* L1: Standard stroke

Code Tube I.D.	Standard stroke				C	D	E	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z1	Z2	Z3	
	Without magnet		Magnet																							
	A	B	A	B																						
12	5,10	29	22	34	27	6	6	25	M3×0.5	32	–	–	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
16	5,10	29	22	34	27	8	8	29	M4×0.7	38	–	–	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
20	5,10	35	26	45	36	7	10	36	M5×0.8	47	–	–	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	–	6.2	8.8	1
25	5,10	39	29	49	39	12	12	40	M6×1.0	52	–	–	10	5	28	5.4	M6×1.0	9	M5×0.8	11	10	7	–	6.2	8.8	1
32	5,10	44.5	30.5	54.5	40.5	13	16	45	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5	10	7	14	6.2	8.8	1
40	5,10	54	40	64	50	13	16	52	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	14	10	7	14	6.2	8.8	1
50	5~20	56.5	40.5	66.5	50.5	15	20	64	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4	14	14	8	19	8.2	10.8	1

\*1. Without magnet with stroke=5mm, P=M5×0.8



## COMPACT CYLINDER

mindman

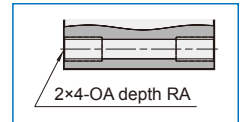
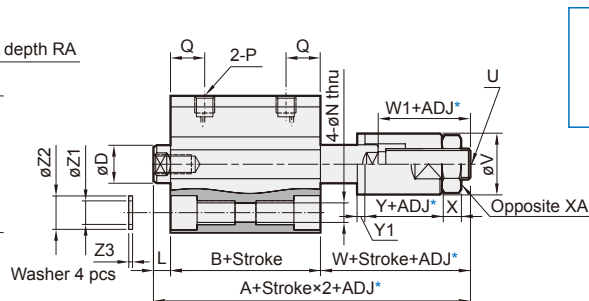
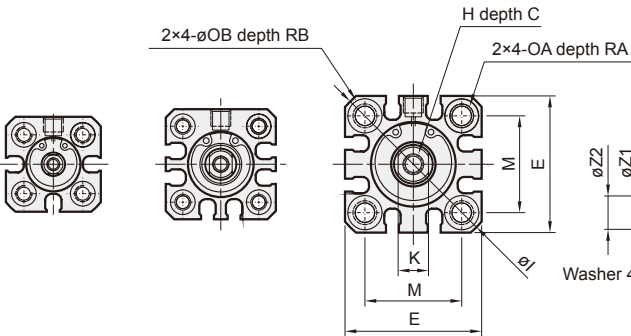
$\phi 12$

$\phi 16$

$\phi 20, \phi 25$

Stroke 5~100

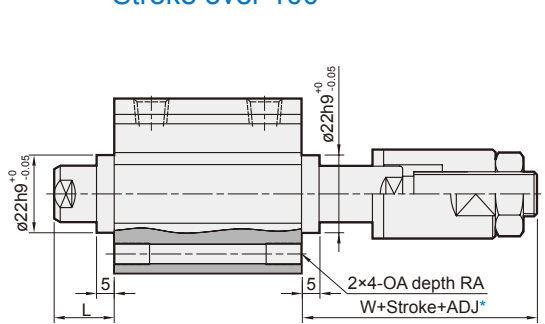
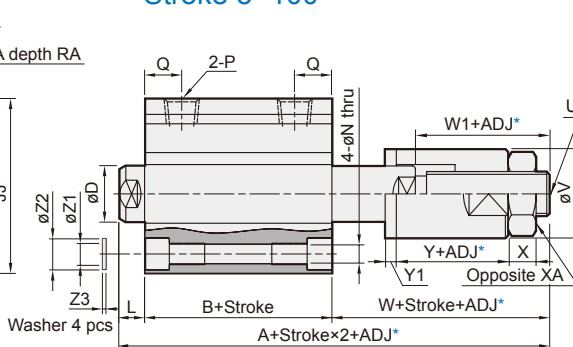
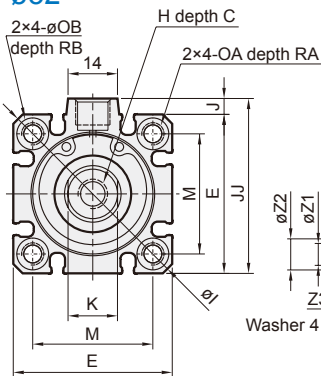
Stroke over 100



$\phi 32$

Stroke 5~100

Stroke over 100

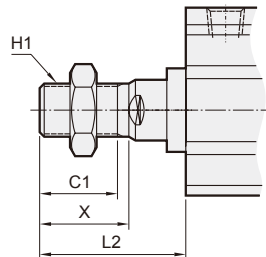
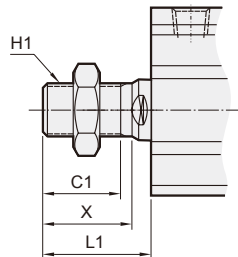
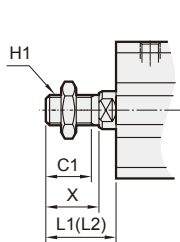


\* ADJ: Adjustable stroke

$\phi 12\sim 25$

$\phi 32$  for stroke 5~100

$\phi 32$  for stroke over 100



MCJQ-27 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

\* L1: Standard stroke, L2: Long stroke

Code Tube I.D.	Standard stroke						Long stroke					
	Stroke range	Without magnet		Magnet		L	W	Stroke range	A	B	L	W
		A	B	A	B							
12	5~30	45.5	22	50.5	27	3.5	20	31~100	65.5	32	13.5	20
16	5~30	49	22	54	27	3.5	23.5	31~100	69	32	13.5	23.5
20	5~50	54.3	26	64.3	36	4.5	23.8	51~200	79.3	41	14.5	23.8
25	5~50	56.5	29	66.5	39	5	22.5	51~300	81.5	44	15	22.5
32	5~50	60.9	30.5	70.9	40.5	7	23.4	101~300	91.5	45.5	17	29
	51~100	70.9	40.5									

\*1. Without magnet with stroke=5mm, P=M5×0.8

Code Tube I.D.	C	D	E	H	I	J	JJ	K	M	N	OA	OB	P	Q
12	6	6	25	M3×0.5	32	-	-	5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5
16	8	8	29	M4×0.7	38	-	-	6	20	3.5	M4×0.7	6.5	M5×0.8	7.5
20	7	10	36	M5×0.8	47	-	-	8	25.5	5.4	M6×1.0	9	M5×0.8	9
25	12	12	40	M6×1.0	52	-	-	10	28	5.4	M6×1.0	9	M5×0.8	11
32	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5

Code Tube I.D.	RA	RB	U	V	W1	X	XA	Y	Y1	Z1	Z2	Z3
12	7	4	M5×0.8	12	16	4	8	13	2	4.2	6.3	0.5
16	7	4	M8×1.25	16	19	5	13	15	2	4.2	6.3	0.5
20	10	7	M8×1.25	16	19	5	13	15	2	6.2	8.8	1
25	10	7	M10×1.25	20	18	6	17	12	2	6.2	8.8	1
32	10	7	M12×1.25	30	19	7	19	12	2	6.2	8.8	1

# MCJQ Dimensions – Double rod / Adjustable stroke $\phi 40\sim\phi 100$

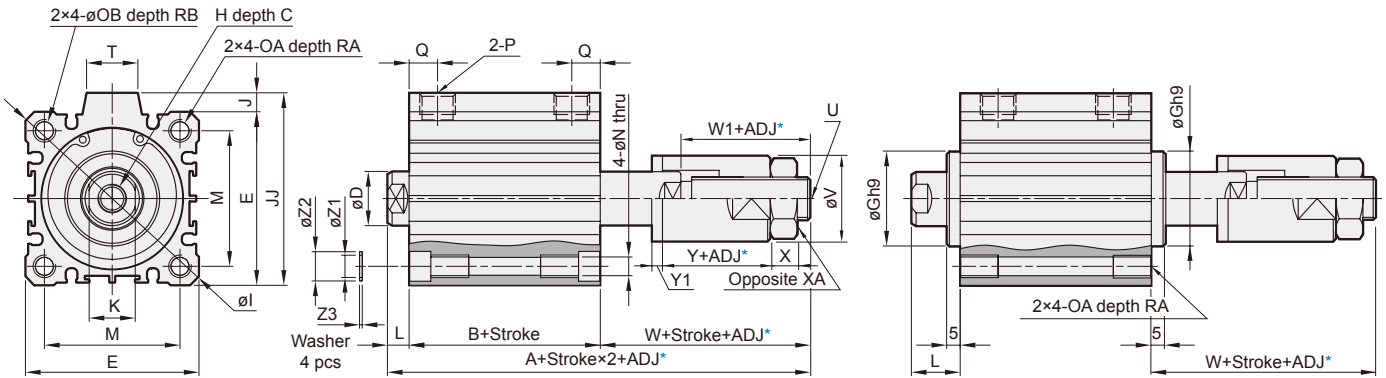
## COMPACT CYLINDER



$\phi 50\sim\phi 100$

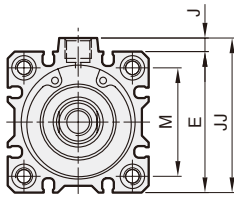
Stroke 5~100

Stroke over 100

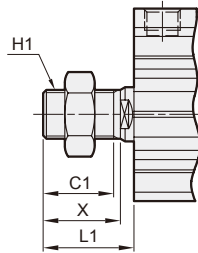


\* ADJ: Adjustable stroke

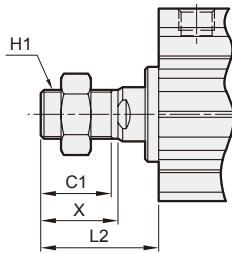
$\phi 40$



$\phi 40\sim\phi 100$   
(Stroke 5~100)



$\phi 40\sim\phi 80$   
(Stroke over 100)



MCJQ-27 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14 $\times$ 1.5	28.5	38.5	23.5
50	26	M18 $\times$ 1.5	33.5	43.5	28.5
63	26	M18 $\times$ 1.5	33.5	43.5	28.5
80	32.5	M22 $\times$ 1.5	43.5	53.5	35.5
100	32.5	M26 $\times$ 1.5	43.5	—	35.5

Code Tube I.D.	Standard stroke								Long stroke					
	Stroke range	Without magnet		Magnet		L	Q	W	Stroke range	A	B	L	Q	W
		A	B	A	B									
40	5~50	71	40	81	50	7	14	24	101~300	102.5	55	17	14	30.5
	51~100	81	50											
50	5~50	75	40.5	85	50.5	8	14	26.5	101~300	105.5	55.5	18	14	32
	51~100	85	50.5											
63	5~50	80	42	90	52	8	15.5	30	101~300	110	57	18	16.5	35
	51~100	90	52											
80	5~50	100	51	110	61	10	18	39	101~300	130	66	20	19	44
	51~100	110	61											
100	5~50	111	60.5	121	70.5	12	22	38.5	—					
	51~100	121	70.5											

Code Tube I.D.	C	D	E	G <sup>h9</sup>	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	U	V	W1	X	XA	Y	Y1	Z1	Z2	Z3
40	13	16	52	28 <sup>+0</sup> <sub>-0.052</sub>	M8 $\times$ 1.25	70	5	57	14	40	5.5	M6 $\times$ 1.0	9	Rc1/8	10	7	14	M12 $\times$ 1.25	30	21	7	19	12	2	6.2	8.8	1
50	15	20	64	35 <sup>+0</sup> <sub>-0.062</sub>	M10 $\times$ 1.5	86	7	71	17	50	6.6	M8 $\times$ 1.25	11	Rc1/4	14	8	19	M16 $\times$ 1.5	40	22.5	8	24	15	2	8.2	10.8	1
63	15	20	77	35 <sup>+0</sup> <sub>-0.062</sub>	M10 $\times$ 1.5	103	7	84	17	60	9	M10 $\times$ 1.5	14	Rc1/4 (*1)	18	10.5	19	M16 $\times$ 1.5	40	25.5	8	24	15	2	10.2	13.8	1
80	21	25	98	43 <sup>+0</sup> <sub>-0.062</sub>	M16 $\times$ 2.0	132	6	104	22	77	11	M12 $\times$ 1.75	17.5	Rc3/8 (*2)	22	13.5	26	M22 $\times$ 1.5	50	33	13	32	20	3	12.2	17.3	2
100	27	30	117	—	M20 $\times$ 2.5	156	6.5	123.5	27	94	11	M12 $\times$ 1.75	17.5	Rc3/8 (*2)	22	13.5	26	M22 $\times$ 1.5	50	33	13	32	20	3	12.2	17.3	2

\*1. Without magnet with stroke=5mm, P=Rc1/8

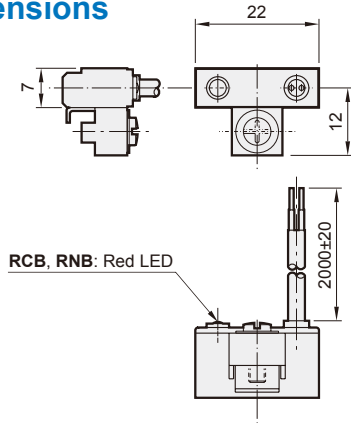
\*2. Without magnet with stroke=5mm, P=Rc1/4



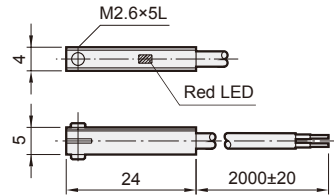
## COMPACT CYLINDER

### Dimensions

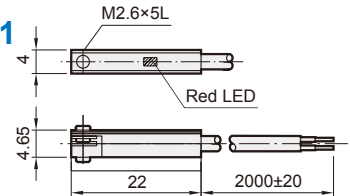
**RCB  
RNB**



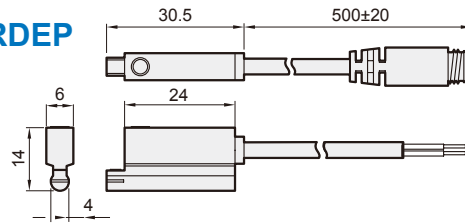
**RCE**



**RCE1  
RNE**

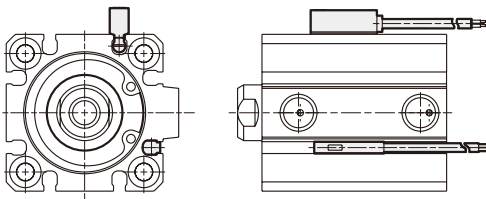


**RDEP**

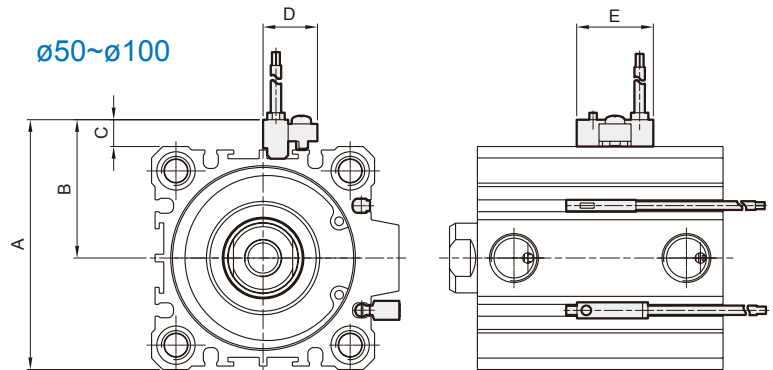


### Installation of sensor switch

$\phi 12\sim\phi 40$



$\phi 50\sim\phi 100$



### Order example

RCE1 — □

MODEL

RCB / RCE / RCE1 (C: Reed switch)  
RNB / RNE (N: Solid state switch)  
RDEP (Solid state switch)

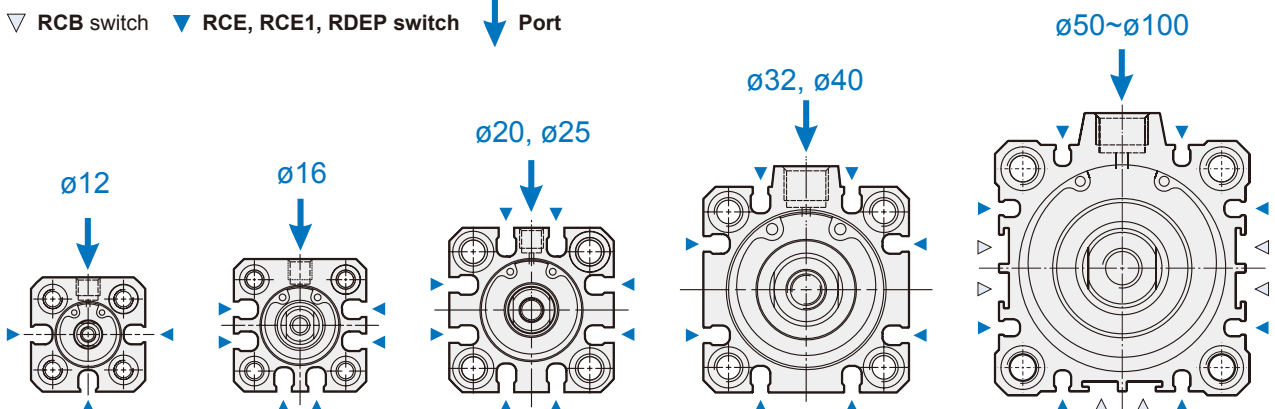
WIRE LENGTH

Blank: L=2000m  
1M: L=1000m  
QD: M8 3Pin connector  
EQD: M8 3Pin connector

Code Tube I.D.	A	B	C	D	E
50	72	40	8	16	22
63	85	46.5	8	16	22
80	106	57	8	16	22
100	125	66.5	8	16	22

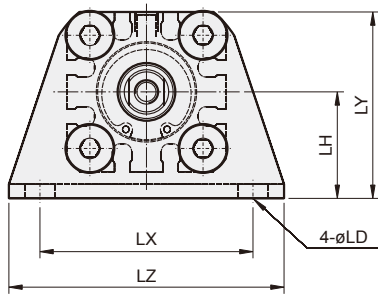
### Description

▽ RCB switch ▼ RCE, RCE1, RDEP switch ↓ Port

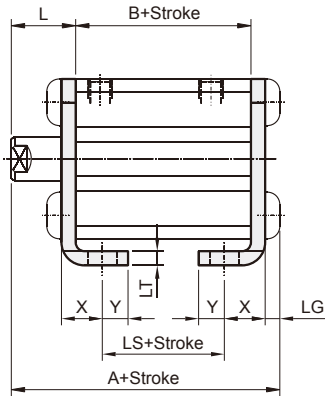


COMPACT CYLINDER

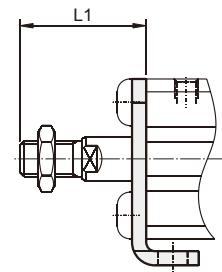
LB



Female thread

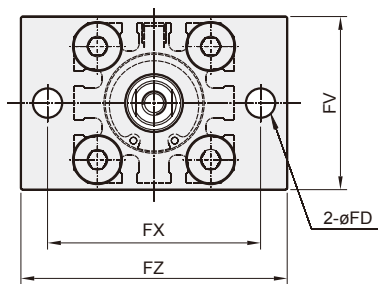


Male thread

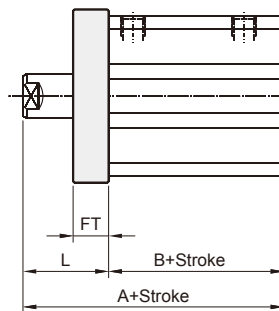


Code	Standard stroke							Long stroke														
	Stroke range	Without magnet			Magnet			Stroke range	A	B	LS	L	L1	LD	LG	LH	LT	LX	LY	LZ	X	Y
		A	B	LS	A	B	LS															
12	5~30	35.3	17	5	40.3	22	10	35~100	50.3	32	20	13.5	24	4.5	2.8	17	2	34	29.5	44	8	4.5
16	5~30	35.3	17	5	40.3	22	10	35~100	50.3	32	20	13.5	25.5	4.5	2.8	19	2	38	33.5	48	8	5
20	5~50	41.2	19.5	7.5	51.2	29.5	17.5	75~200	62.7	41	29	14.5	28.5	6.6	4	24	3.2	48	42	62	9.2	5.8
25	5~50	44.7	22.5	7.5	54.7	32.5	17.5	75~300	66.2	44	29	15	32.5	6.6	4	26	3.2	52	46	66	10.7	5.8

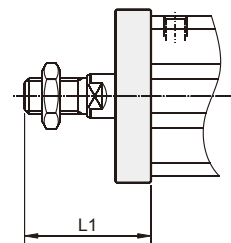
FAC



Female thread



Male thread



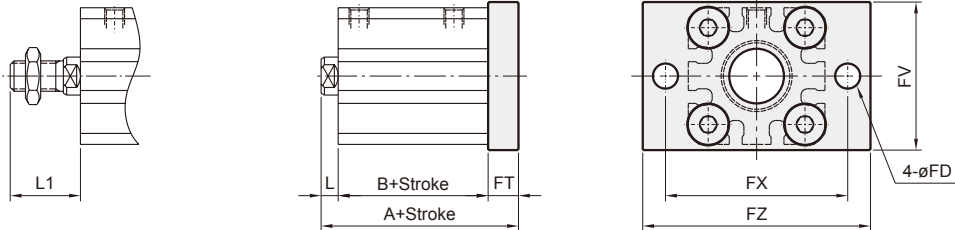
Code	Standard stroke				Long stroke										
	Stroke range	Without magnet		Magnet		Stroke range	A	B	FD	FT	FV	FX	FZ	L	L1
		A	B	A	B										
12	5~30	30.5	17	35.5	22	35~100	45.5	32	4.5	5.5	25	45	55	13.5	24
16	5~30	30.5	17	35.5	22	35~100	45.5	32	4.5	5.5	30	45	55	13.5	25.5
20	5~50	34	19.5	44	29.5	75~200	55.5	41	6.6	8	39	48	60	14.5	28.5
25	5~50	37.5	22.5	47.5	32.5	75~300	59	44	6.6	8	42	52	64	15	32.5

## COMPACT CYLINDER

### FBC

Male thread

Female thread

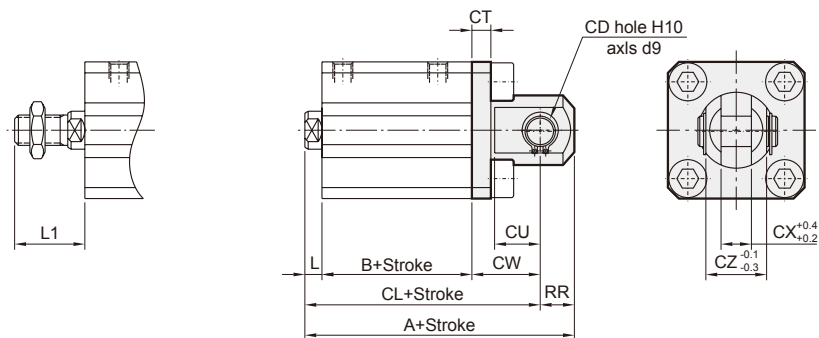


Code	Standard stroke										Long stroke				FD	FT	FV	FX	FZ
	Stroke range	Without magnet				Magnet				Stroke range	A	B	L	L1					
		A	B	L	L1	A	B	L	L1										
12	5~30	26	17	3.5	14	31	22	3.5	14	35~100	51	32	13.5	24	4.5	5.5	25	45	55
16	5~30	26	17	3.5	15.5	31	22	3.5	15.5	35~100	51	32	13.5	25.5	4.5	5.5	30	45	55
20	5~50	32	19.5	4.5	18.5	42	29.5	4.5	18.5	75~200	63.5	41	14.5	28.5	6.6	8	39	48	60
25	5~50	35.5	22.5	5	22.5	45.5	32.5	5	22.5	75~300	67	44	15	32.5	6.6	8	42	52	64

### CB

Male thread

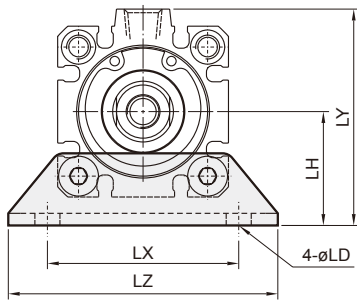
Female thread



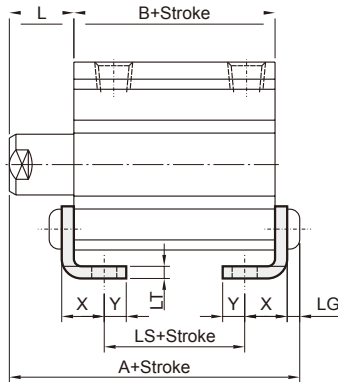
Code	Standard stroke										Long stroke						CD	CT	CU	CW	CX	CZ	RR	
	Stroke range	Without magnet				Magnet				Stroke range	A	B	CL	L	L1									
		A	B	CL	L	L1	A	B	CL							L								L1
12	5~30	40.5	17	34.5	3.5	14	45.5	22	39.5	3.5	14	35~100	65.5	32	59.5	13.5	24	5	4	7	14	5	10	6
16	5~30	41.5	17	35.5	3.5	15.5	46.5	22	40.5	3.5	15.5	35~100	66.5	32	60.5	13.5	25.5	5	4	10	15	6.5	12	6
20	5~50	51	19.5	42	4.5	18.5	61	29.5	52	4.5	18.5	75~200	82.5	41	73.5	14.5	28.5	8	5	12	18	8	16	9
25	5~50	57.5	22.5	47.5	5	22.5	67.5	32.5	57.5	5	22.5	75~300	89	44	79	15	32.5	10	5	14	20	10	20	10

**LB**

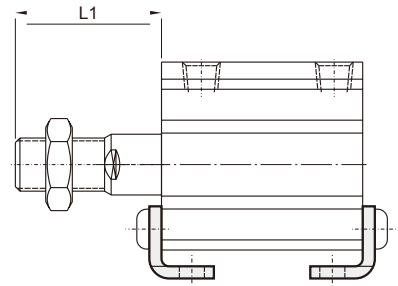
Standard stroke



Female thread

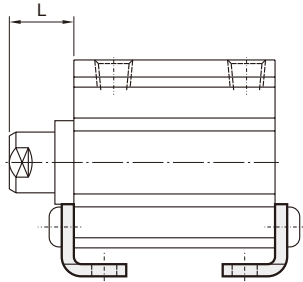


Male thread

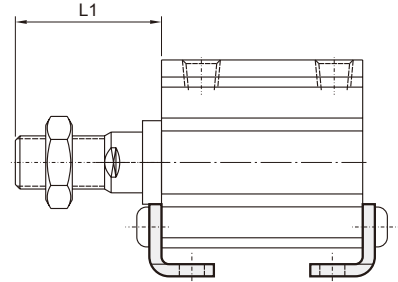


Long stroke

Female thread



Male thread



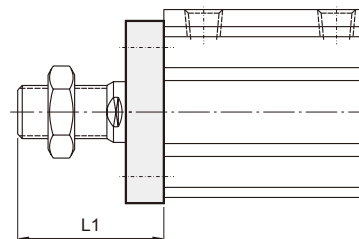
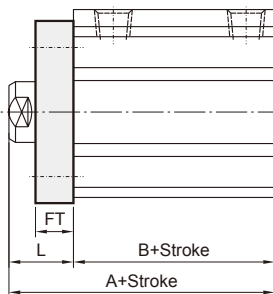
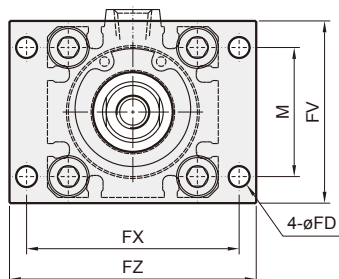
Code	Standard stroke							Long stroke				L	L1	LD	LG	LH	LT	LX	LY	LZ	X	Y
	Stroke range	Without magnet			Magnet			Stroke range	A	B	LS											
A		B	LS	A	B	LS																
32	5~50	47.2	23	7	57.2	33	17	125~300	69.7	45.5	29.5	17	38.5	6.6	4	30	3.2	57	57	71	11.2	5.8
	75,100	57.2	33	17																		
40	5~50	53.7	29.5	13.5	63.7	39.5	23.5	125~300	79.2	55	39	17	38.5	6.6	4	33	3.2	64	64	78	11.2	7
	75,100	63.7	39.5	23.5																		
50	5~50	56.7	30.5	7.5	66.7	40.5	17.5	125~300	81.7	55.5	32.5	18	43.5	9	5	39	3.2	79	78	95	14.7	8
	75,100	66.7	40.5	17.5																		
63	5~50	62.2	36	10	72.2	46	20	125~300	83.2	57	31	18	43.5	11	5	46	3.2	95	91.5	113	16.2	9
	75,100	72.2	46	20																		
80	5~50	75	43.5	13.5	85	53.5	23.5	125~300	97.5	66	36	20	53.5	13	7	59	4.5	118	114	140	19.5	11
	75,100	85	53.5	23.5																		
100	5~50	88	53	19	98	63	29	125~300	—	—	—	22	53.5	13	7	71	6	137	136	162	23	12.5
	75,100	98	63	29																		



**FAC**

Female thread

Male thread



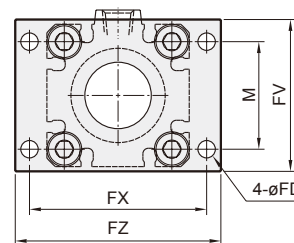
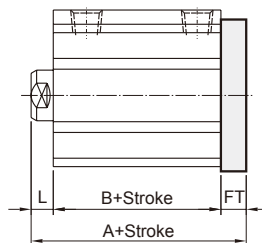
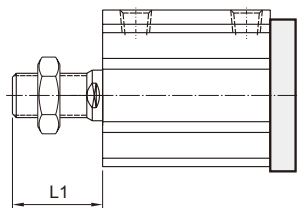
Code	Standard stroke					Long stroke		FD	FT	FV	FX	FZ	L	L1	M	
	Stroke range	Without magnet		Magnet		Stroke range	A									B
		A	B	A	B											
32	5~50	40	23	50	33	125~300	62.5	45.5	5.5	8	48	56	65	17	38.5	34
	75,100	50	33													
40	5~50	46.5	29.5	56.5	39.5	125~300	72	55	5.5	8	54	62	72	17	38.5	40
	75,100	56.5	39.5													
50	5~50	48.5	30.5	58.5	40.5	125~300	73.5	55.5	6.6	9	67	76	89	18	43.5	50
	75,100	58.5	40.5													
63	5~50	54	36	64	46	125~300	75	57	9	9	80	92	108	18	43.5	60
	75,100	64	46													
80	5~50	63.5	43.5	73.5	53.5	125~300	86	66	11	11	99	116	134	20	53.5	77
	75,100	73.5	53.5													
100	5~50	75	53	85	63	125~300	—	—	11	11	117	136	154	22	53.5	94
	75,100	85	63													

**FBC**

Standard stroke

Male thread

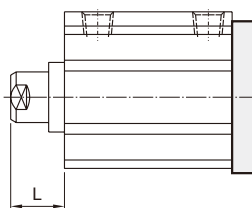
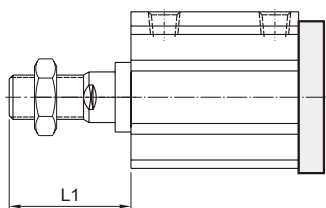
Female thread



Long stroke

Male thread

Female thread



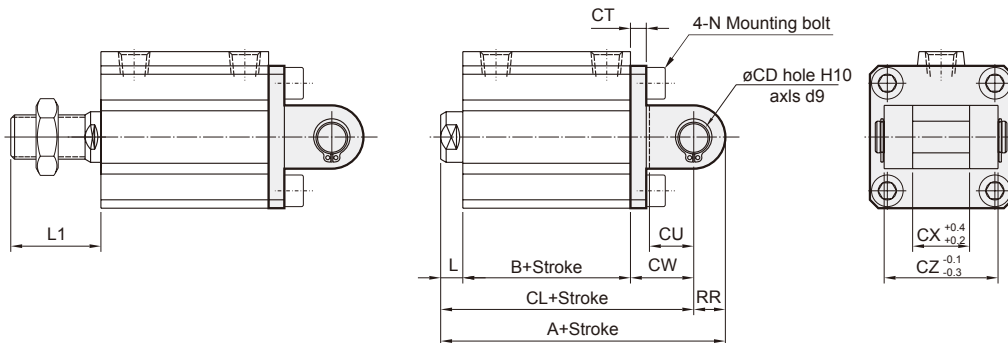
Code	Standard stroke							Long stroke					FD	FT	FV	FX	FZ	M
	Stroke range	Without magnet		Magnet		L	L1	Stroke range	A	B	L	L1						
		A	B	A	B													
32	5~50	38	23	48	33	7	28.5	125~300	70.5	45.5	17	38.5	5.5	8	48	56	65	34
	75,100	48	33															
40	5~50	44.5	29.5	54.5	39.5	7	28.5	125~300	80	55	17	38.5	5.5	8	54	62	72	40
	75,100	54.5	39.5															
50	5~50	47.5	30.5	57.5	40.5	8	33.5	125~300	82.5	55.5	18	43.5	6.6	9	67	76	89	50
	75,100	57.5	40.5															
63	5~50	53	36	63	46	8	33.5	125~300	84	57	18	43.5	9	9	80	92	108	60
	75,100	63	46															
80	5~50	64.5	43.5	74.5	53.5	10	43.5	125~300	97	66	20	53.5	11	11	99	116	134	77
	75,100	74.5	53.5															
100	5~50	76	53	86	63	12	43.5	125~300	-	-	-	-	11	11	117	136	154	94
	75,100	86	63															

**CB**

Standard stroke

Male thread

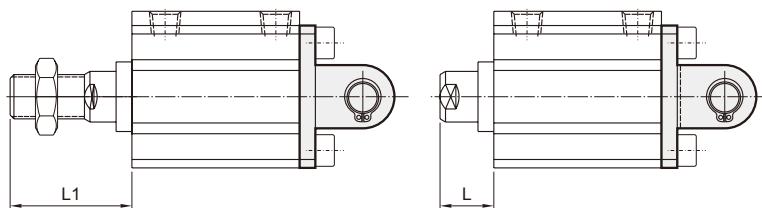
Female thread



Long stroke

Male thread

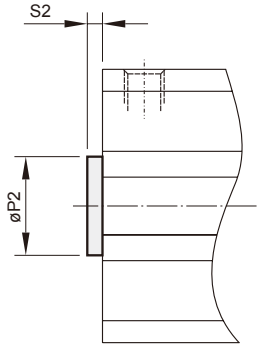
Female thread



Code	Standard stroke										Long stroke												
	Stroke range	Without magnet			Magnet			L	L1	Stroke range	A	B	CL	L	L1	CD	CT	CU	CW	CX	CZ	N	RR
		A	B	CL	A	B	CL																
32	5~50	60	23	50	70	33	60	7	28.5	125~300	92.5	45.5	82.5	17	38.5	10	5	14	20	18	36	M6×1.0	10
	75,100	70	33	60																			
40	5~50	68.5	29.5	58.5	78.5	39.5	68.5	7	28.5	125~300	104	55	94	17	38.5	10	6	14	22	18	36	M6×1.0	10
	75,100	78.5	39.5	68.5																			
50	5~50	80.5	30.5	66.5	90.5	40.5	76.5	8	33.5	125~300	115.5	55.5	101.5	18	43.5	14	7	20	28	22	44	M8×1.25	14
	75,100	90.5	40.5	76.5																			
63	5~50	88	36	74	98	46	84	8	33.5	125~300	119	57	105	18	43.5	14	8	20	30	22	44	M10×1.5	14
	75,100	98	46	84																			
80	5~50	109.5	43.5	91.5	119.5	53.5	101.5	10	43.5	125~300	142	66	124	20	53.5	18	10	27	38	28	56	M12×1.75	18
	75,100	119.5	53.5	101.5																			
100	5~50	132	53	110	142	63	120	12	43.5	125~300	—	—	—	—	—	22	13	31	45	32	64	M12×1.75	22
	75,100	142	63	120																			

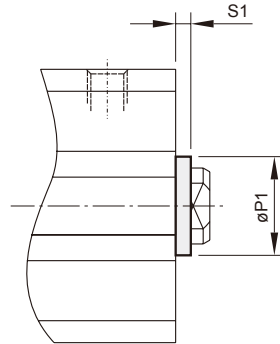


### F Rear flange



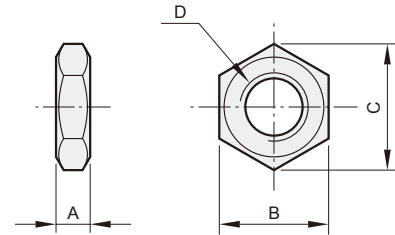
Code Tube I.D.	P2 <sup>h9</sup>	S2
12	6	1.5
16	10	1.5
20	13	2
25	15	2
32	21	2
40	28	2
50	35	2
63	35	2
80	43	2
100	59	2

### RF



Code Tube I.D.	P1 <sup>h9</sup>	S1
12	15	1.5
16	20	1.5
20	13	2
25	15	2
32	21	2
40	28	2
50	35	2
63	35	2
80	43	2
100	59	2

### Rod front nut



Code Tube I.D.	A	B	C	D
12	4	8	9.2	M5×0.8
16	5	10	11.5	M6×1.0
20	5	13	15	M8×1.25
25	6	17	19.6	M10×1.25
32,40	8	22	25.4	M14×1.5
50,63	11	27	31.4	M18×1.5
80	13	32	37	M22×1.5
100	16	41	47.3	M26×1.5

### Pin for CB

#### Order example

PIN — MCJQ — 20 — CB — P

PIN

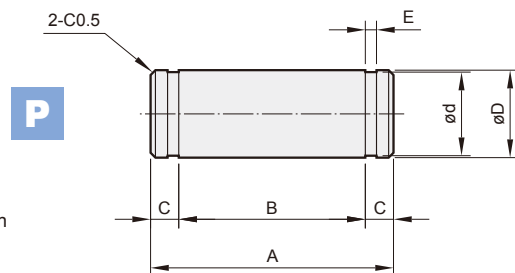
TUBE I.D.

12  
16  
20  
25  
32  
40  
50  
63  
80  
100

TYPE

CB: for CB accessory

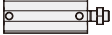
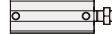
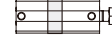


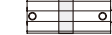
P: With split pin



Code Tube I.D.	A	B	C	$\phi D^{g9}$	$\phi d$	E	Snap ring
12	14.6	10.2	2.2	5 <sup>-0.03 -0.06</sup>	4.8 <sup>0 -0.04</sup>	0.7 <sup>+0.10 0</sup>	STW-5
16	16.6	12.2	2.2	5 <sup>-0.03 -0.06</sup>	4.8 <sup>0 -0.04</sup>	0.7 <sup>+0.10 0</sup>	STW-5
20	21	16.2	2.4	8 <sup>-0.04 -0.08</sup>	7.6 <sup>0 -0.06</sup>	0.9 <sup>+0.10 0</sup>	STW-8
25	25.6	20.2	2.7	10 <sup>-0.04 -0.08</sup>	9.6 <sup>0 -0.06</sup>	1.15 <sup>+0.14 0</sup>	STW-10
32,40	41.6	36.2	2.7	10 <sup>-0.04 -0.08</sup>	9.6 <sup>0 -0.09</sup>	1.15 <sup>+0.14 0</sup>	STW-10
50,63	50.6	44.2	3.2	14 <sup>-0.05 -0.10</sup>	13.4 <sup>0 -0.11</sup>	1.15 <sup>+0.14 0</sup>	STW-14
80	64	56.2	3.9	18 <sup>-0.05 -0.10</sup>	17.0 <sup>0 -0.11</sup>	1.35 <sup>+0.14 0</sup>	STW-18
100	72	64.2	3.9	22 <sup>-0.07 -0.12</sup>	21.0 <sup>0 -0.21</sup>	1.35 <sup>+0.14 0</sup>	STW-22






### Cylinder weight

Unit: g

Model	Basic weight MCJQ-11	Basic weight (magnet) MCJQ-11	Stroke 5 mm MCJQ-11	Basic weight MCJQ-12	Basic weight (magnet) MCJQ-12	Stroke 5 mm MCJQ-12
Tube I.D.						
$\phi 12$	22	31	7	21	28	7
$\phi 16$	33	42	8	28	37	8
$\phi 20$	55	82	12	47	75	12
$\phi 25$	92	140	16	75	110	15
$\phi 32$	129	199	25	109	158	21
$\phi 40$	226	292	23	184	249	23
$\phi 50$	367	461	34	317	385	35
$\phi 63$	530	670	39	446	589	39
$\phi 80$	—	—	—	—	1042	63
$\phi 100$	—	—	—	—	1913	88

### Accessories weight

Unit: g

Model	LB	CB	FAC/FBC	F/RF	Pin
Tube I.D.					
$\phi 12$	51	31	56	—	—
$\phi 16$	60	37	67	—	—
$\phi 20$	145	—	135	—	—
$\phi 25$	166	94	153	—	—
$\phi 32$	107	136	165	—	—
$\phi 40$	125	171	203	—	—
$\phi 50$	209	331	357	—	—
$\phi 63$	296	538	547	—	—
$\phi 80$	586	1034	1046	—	—
$\phi 100$	960	1765	1328	—	—