

### Features:

- Ultra-compact, lightweight, space-saving type.
- Available with a comprehensive selection of bore size ( $\phi$  12mm ~  $\phi$  100mm) for the various needs.
- The highly accurate, air-driven push-pull work.
- Ideal for machine designs with small space requirements sensor switches will not protrude from switch mounting groove.
- Sensor switch mounting allows for flexible designing requirements 3 faces on  $\phi$  12 &  $\phi$  16, and all 4 faces including port side on  $\phi$  20 ~  $\phi$  100.

### Specification:

Model	MCJQ				
Acting type	Double acting				
Tube I.D.(mm)	12, 16	20, 25	32, 40	50, 63	80, 100
Port size	M5×0.8		PT 1/8	PT 1/4	PT 3/8
Medium	Air				
Operating pressure range	0.7~9.9	0.5~9.9 kgf/cm <sup>2</sup>			
Proof pressure	15 kgf/cm <sup>2</sup>				
Ambient temperature	-5°C~+60°C (No freezing)				
Sensor switch	RCE, RCE1		RCB, RCE, RCE1		

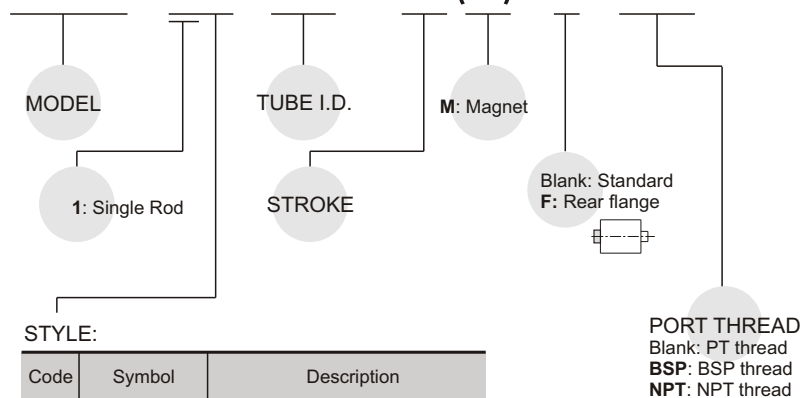
### Double acting-Table for standard stroke

Tube I.D.	Standard stroke	Long stroke (mm)
$\phi$ 12, 16	5, 10, 15, 20, 25, 30	35, 40, 45, 50, 75, 100
$\phi$ 20	5, 10, 15, 20, 25,	75, 100, 125, 150, 175, 200
$\phi$ 25	30, 35, 40, 45, 50	75, 100, 125, 150, 175, 200, 250, 300
$\phi$ 32	5, 10, 15, 20, 25, 30,	125, 150, 175, 200, 250, 300
	35, 40, 45, 50, 75, 100	
Tube I.D.	Standard stroke (mm)	
$\phi$ 40~100	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.

### Order example:

MCJQ – 12 – 20 – 25(M) F – BSP

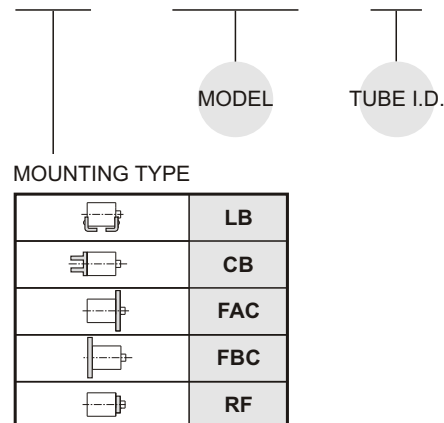


#### STYLE:

Code	Symbol	Description
1 1		Double acting / Male thread
1 2		Double acting / Female thread

### Mounting accessories:

FAC – MCJQ – 20

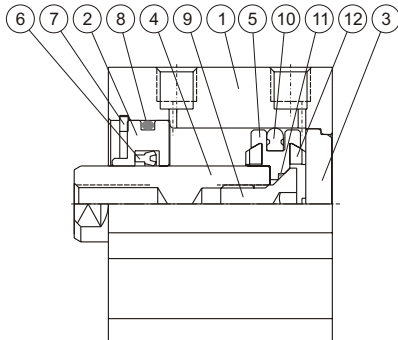


# MCJQ Inside structure & Parts list

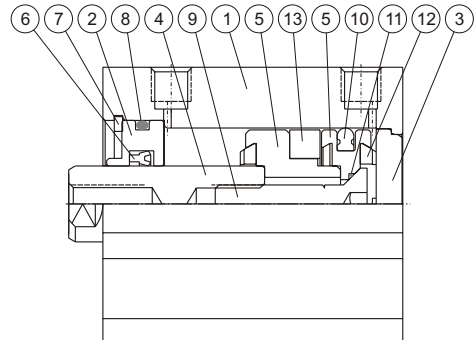
## COMPACT CYLINDERS



### Double acting



### Double acting (with magnet)



### Seal kit

	Rod packing	Piston packing	Cover ring	Piston gasket
Acting type	Double action			
Qty.	1	1	2	1
12	KSYR-6	OPA-12	S-12	d4 × w1
16	KSYR-8	OPA-16	S-14	d4 × w1
20	KSYR-10A	OPA-20	S-18	d6 × w1
25	KSYR-12	OPA-25	S-22.4	d8 × w1
32	KSYR-16	OPA-32	S-28	S-9
40	KSYR-16	OPA-40	S-36	S-10
50	KSYR-20	OPA-50	S-46	S-16
63	KSYR-20	OPA-63	S-60	S-16
80	ORA-25	OPA-80	S-75	d20 × w1
100	ORA-30	OPA-100	S-95	S-26

### Material

No.	Part name	Tube I.D.	12~32	40~100	Note
1	Body		Aluminum alloy		Hard anodized
2	Rod cover		Aluminum bearing alloy	Aluminum alloy	Anodized
3	End cover		Aluminum alloy		Anodized
4	Piston rod		Stainless steel	Carbor steel	
5	Piston		Aluminum alloy		Anodized
6	Rod packing		NBR		
7	Snap ring		Stainless steel	Spring steel	
8	Cover ring		NBR		
9	Piston bolt		Stainless steel	SCM	
10	Piston packing		NBR		
11	Piston gasket		NBR		
12	Cushion packing		NBR		
13	Magnet		Plastic		

# MCJQ Dimensions $\phi 12 \sim \phi 32$

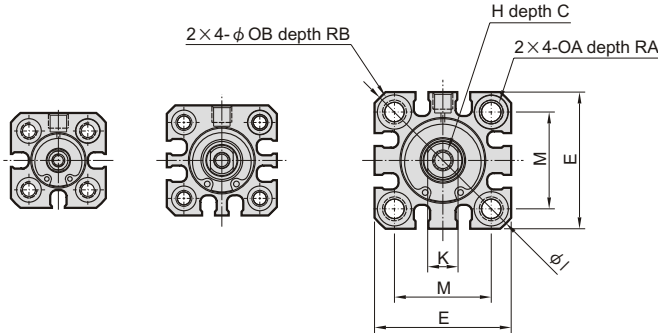
## COMPACT CYLINDERS



$\phi 12$

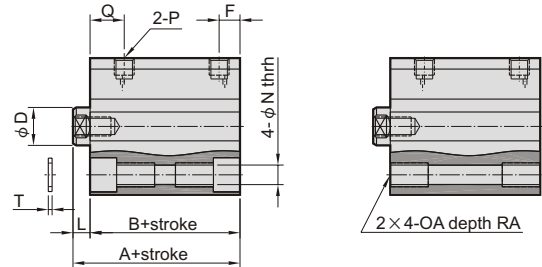
$\phi 16$

$\phi 20, \phi 25$



Stroke 5~100

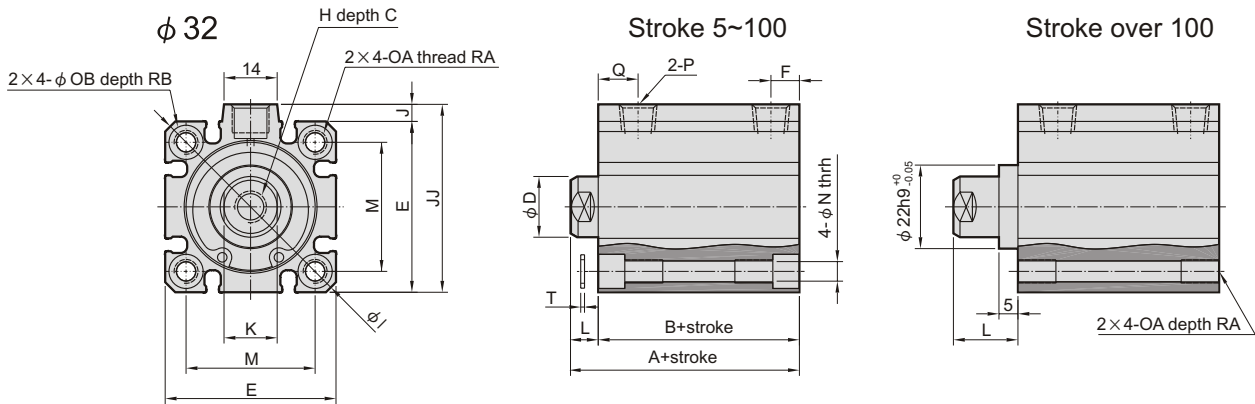
Stroke over 100



$\phi 32$

Stroke 5~100

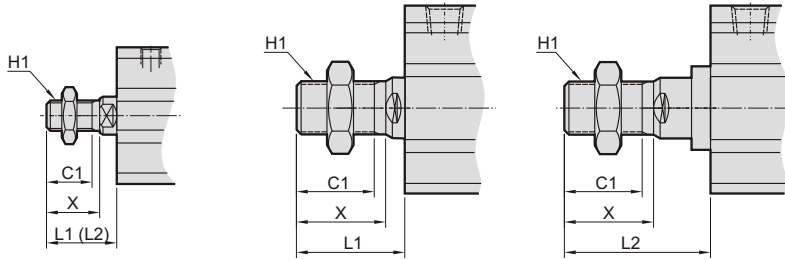
Stroke over 100



$\phi 12 \sim 25$

$\phi 32$  for Stroke 5~100

$\phi 32$  for Stroke 125~300



※ L1 :Standard stroke, L2 :Long stroke

### 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

### $\phi 12 \sim 25$

Code Tube I.D.	Standard stroke								Long stroke								C	D	E	H	I	K	M	N	OA	OB	P	Q	RA	RB	T
	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	35~100	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	0.5		
16	5~30	20.5	17	5	3.5	25.5	22	5	3.5	35~100	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	0.5		
20	5~50	24	19.5	5.5	4.5	34	29.5	5.5	4.5	75~200	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	1		
25	5~50	27.5	22.5	5.5	5	37.5	32.5	5.5	5	75~300	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	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	T		
	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	125~300	62.5	45.5	12.5	17	12.5	PT1/8 (※1)	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	10	7	1
	75,100	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

# MCJQ Dimensions $\phi 40 \sim \phi 100$

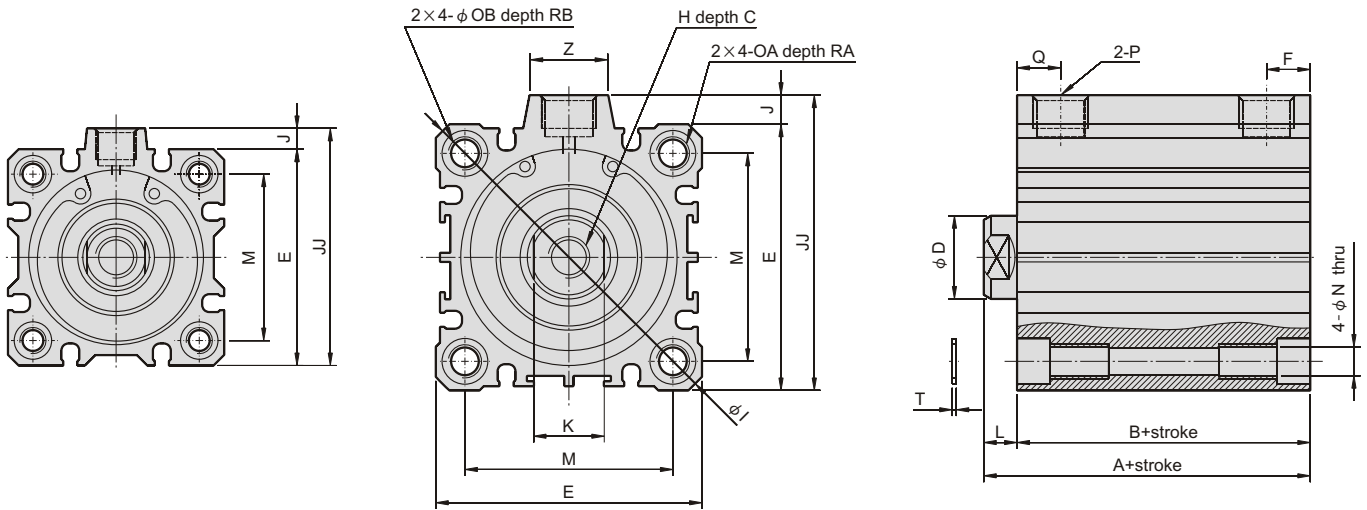
## COMPACT CYLINDERS



$\phi 40$

$\phi 50 \sim 100$

Stroke 5~100



**MCJQ-11 male thread size**

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

Code Tube I.D.	Stroke range	Without magnet		Magnet		C	D	E	F	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z
		A	B	A	B																				
40	5~50	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	PT 1/8	11	10	7	1	14
	75,100	46.5	39.5																						
50	5~50	38.5	30.5	48.5	40.5	15	20	64	10.5	M10×1.5	86	7	71	17	8	50	6.6	M8×1.25	11	PT 1/4 (※1)	10.5	14	8	1	19
	75,100	48.5	40.5																						
63	10~50	44	36	54	46	15	20	77	10.5	M10×1.5	103	7	84	17	8	60	9	M10×1.5	14	PT 1/4 (※2)	15	18	10.5	1	19
	75,100	54	46																						
80	10~50	53.5	43.5	63.5	53.5	21	25	98	12.5	M16×2.0	132	6	104	22	10	77	11	M12×1.75	17.5	PT 3/8 (※3)	16	22	13.5	2	26
	75,100	63.5	53.5																						
100	10~50	65	53	75	63	27	30	117	13	M20×2.5	156	6.5	123.5	27	12	94	11	M12×1.75	17.5	PT 3/8 (※3)	23	22	13.5	2	26
	75,100	75	63																						

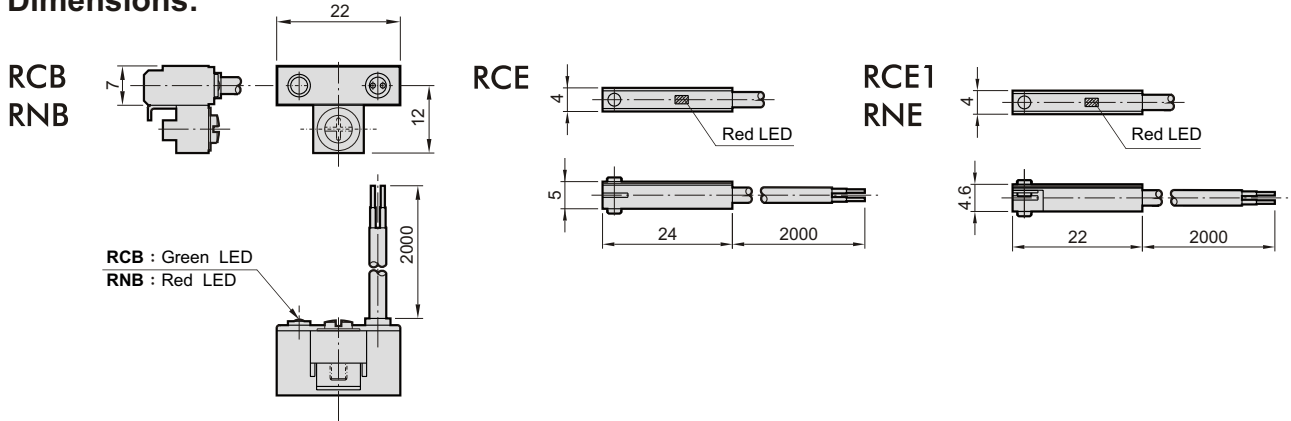
※1: Without magnet with stroke=5mm, P=PT 1/8 · Q=12 · F=8  
 ※2: Without magnet with stroke=5mm, P=PT 1/8  
 ※3: Without magnet with stroke=5mm, P=PT 1/4

# MCJQ Installation of sensor switch $\phi 12 \sim \phi 100$

## COMPACT CYLINDERS

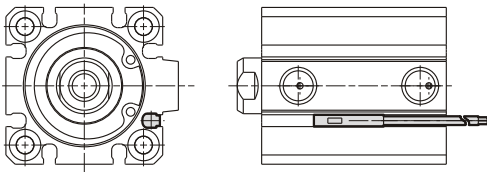


### Dimensions:

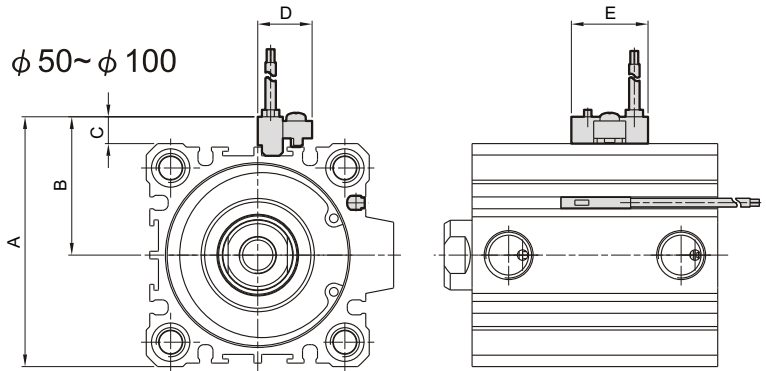


### Installation of sensor switch:

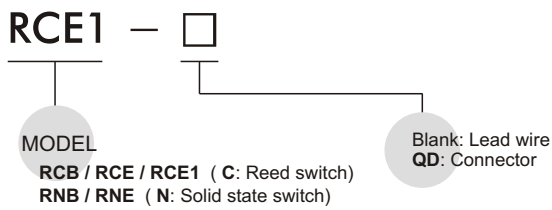
$\phi 12 \sim \phi 40$



$\phi 50 \sim \phi 100$

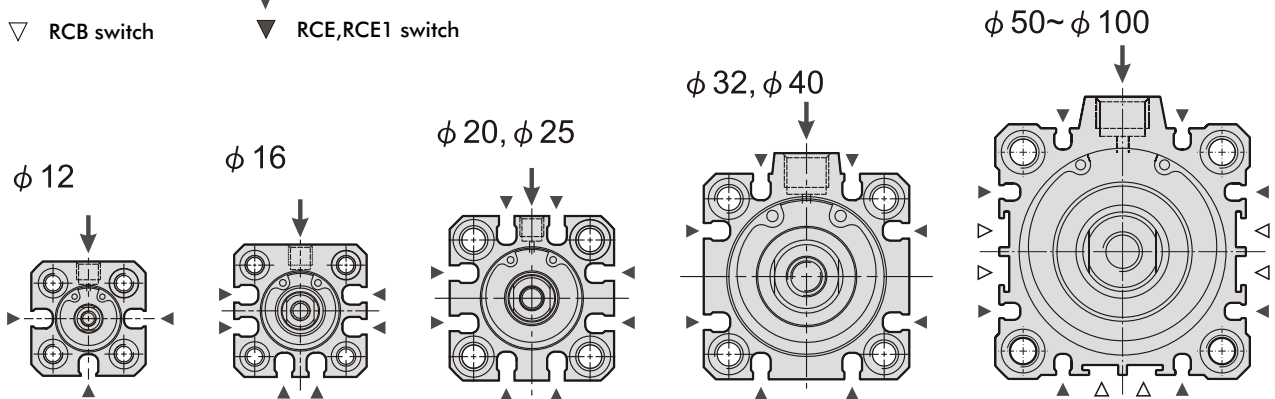
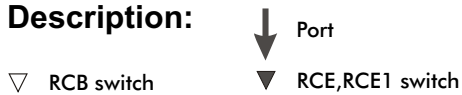


### Order example:

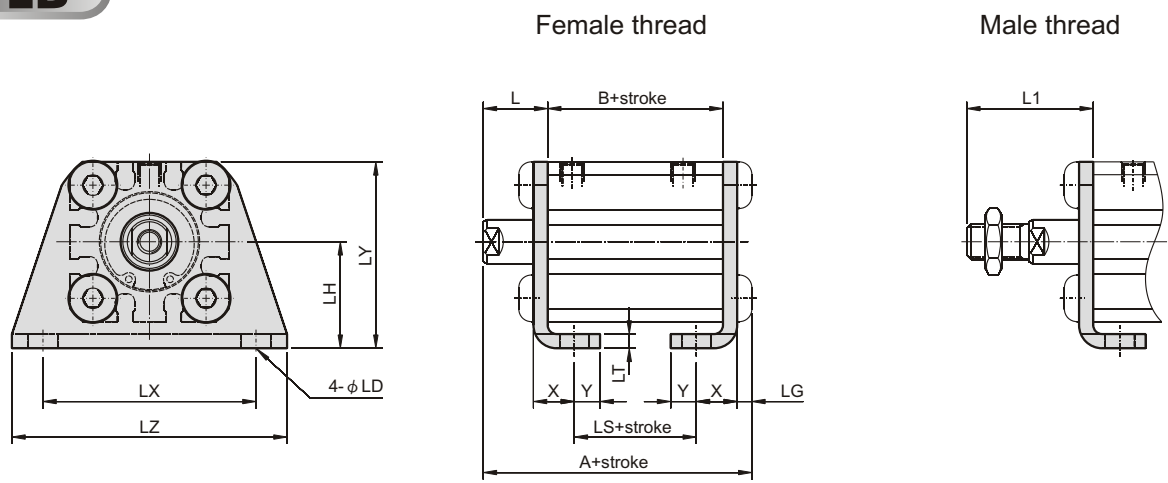


Code Tube I.D.	A	B	C	D	E
50	72	40	8	16	22
63	85	46.5	8	16	22
80	106	57	8	16	22
100	125	66.5	8	16	22

### Description:

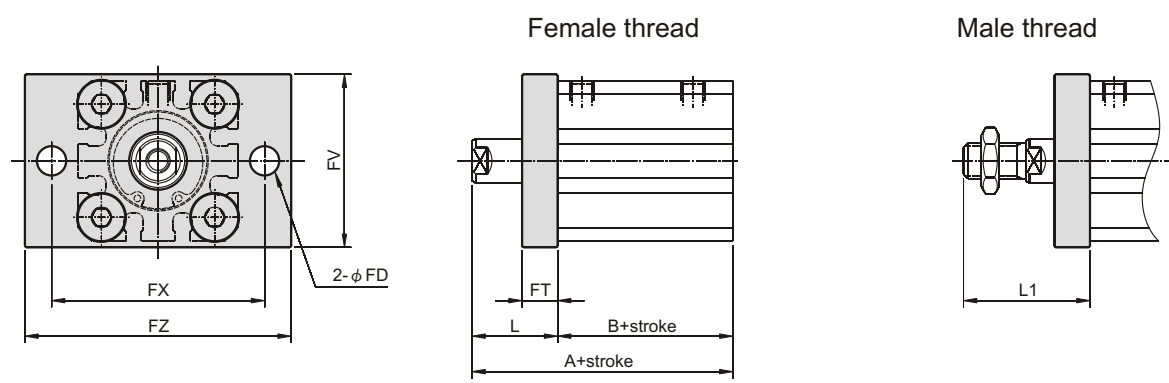


### LB



Code	Stroke range	Standard stroke						Long stroke			L	L1	LD	LG	LH	LT	LX	LY	LZ	X	Y	
		Without magnet			Magnet			Stroke range	A	B												LS
		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



Code	Stroke range	Standard stroke				Long stroke		FD	FT	FV	FX	FZ	L	L1	
		Without magnet		Magnet		Stroke range	A								B
		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

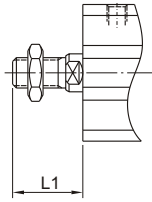
# MCJQ Mounting accessories / Double acting $\phi 12\sim\phi 25$

## COMPACT CYLINDERS

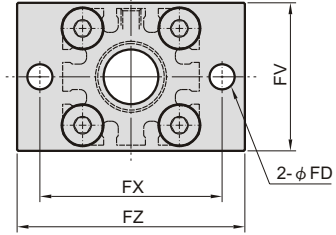
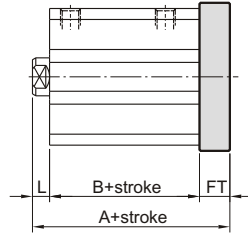


### FBC

Male thread



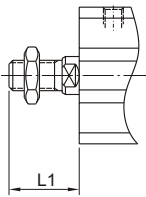
Female thread



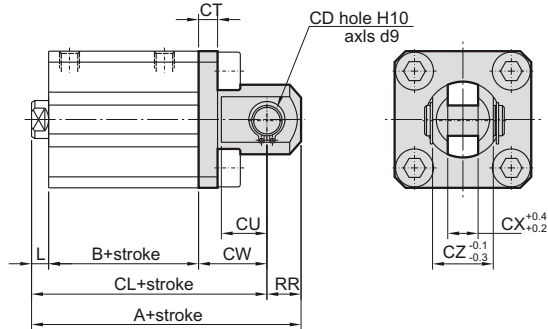
Code Tube I.D.	Stroke range	Standard stroke								Long stroke					FD	FT	FV	FX	FZ
		Without magnet				Magnet				Stroke range	A	B	L	L1					
		A	B	L	L1	A	B	L	L1										
<b>12</b>	5~30	26	17	3.5	14	31	22	3.5	14	35~100	51	32	13.5	24	4.5	5.5	25	45	55
<b>16</b>	5~30	26	17	3.5	15.5	31	22	3.5	15.5	35~100	51	32	13.5	25.5	4.5	5.5	30	45	55
<b>20</b>	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
<b>25</b>	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

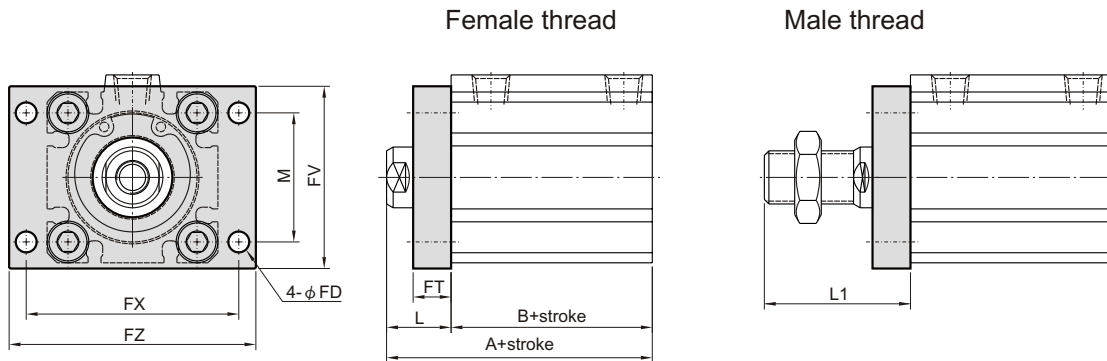


Code Tube I.D.	Stroke range	Standard stroke										Long stroke					CD	CT	CU	CW	CX	CZ	RR	
		Without magnet					Magnet					Stroke range	A	B	CL	L								L1
		A	B	CL	L	L1	A	B	CL	L	L1													
<b>12</b>	5~30	40.5	17	34.5	3.5	14	45.5	22	39.5	3.5	14	35~100	65.5	32	59.5	13.5	24	5	4	7	14	5	10	6
<b>16</b>	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
<b>20</b>	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
<b>25</b>	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





### FAC

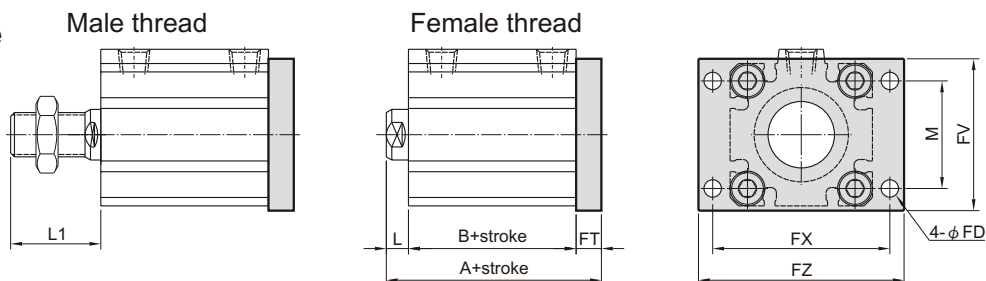


Code Tube I.D.	Standard stroke				Long stroke				FD	FT	FV	FX	FZ	L	L1	M
	Stroke range	Without magnet		Magnet		Stroke range	A	B								
		A	B	A	B											
32	5~50	40	23	50	33	125~300	62.5	45.5	5.5	8	48	56	65	17	38.5	34
	75, 100	50	33													

Code Tube I.D.	Standard stroke				FD	FT	FV	FX	FZ	L	L1	M	
	Stroke range	Without magnet		Magnet									
		A	B	A									B
40	5~50	46.5	29.5	56.5	39.5	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	6.6	9	67	76	89	18	43.5	50
	75, 100	58.5	40.5										
63	5~50	54	36	64	46	9	9	80	92	108	18	43.5	60
	75, 100	64	46										
80	5~50	63.5	43.5	73.5	53.5	11	11	99	116	134	20	53.5	77
	75, 100	73.5	53.5										
100	5~50	75	53	85	63	11	11	117	136	154	22	53.5	94
	75, 100	85	63										

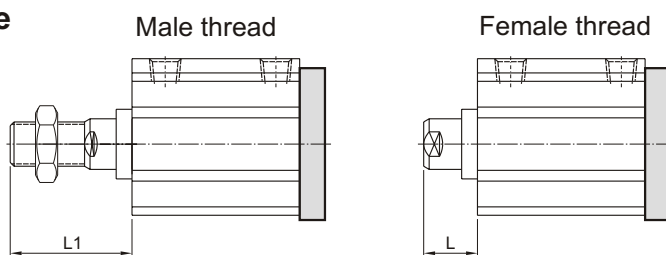
### FBC

#### Standard stroke



#### Long stroke

※ Only for  $\phi 32$

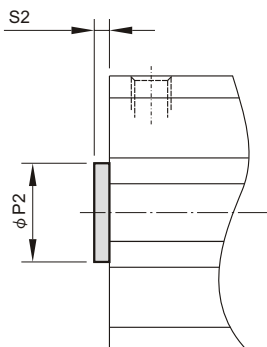


Code	Standard stroke								Long stroke									
	Stroke range	Without magnet				L	L1	Stroke range	A	B	L	L1	FD	FT	FV	FX	FZ	M
		A	B	A	B													
<b>32</b>	5~50 75, 100	38 48	23 33	48 33	7	28.5	125~300	70.5	45.5	17	38.5	5.5	8	48	56	65	34	

Code	Standard stroke												
	Stroke range	Without magnet				FD	FT	FV	FX	FZ	L	L1	M
		A	B	A	B								
<b>40</b>	5~50	44.5	29.5	54.5	39.5	5.5	8	54	62	72	7	28.5	40
	75, 100	54.5	39.5	54.5	39.5	5.5	8	54	62	72	7	28.5	40
<b>50</b>	5~50	47.5	30.5	57.5	40.5	6.6	9	67	76	89	8	33.5	50
	75, 100	57.5	40.5	57.5	40.5	6.6	9	67	76	89	8	33.5	50
<b>63</b>	5~50	53	36	63	46	9	9	80	92	108	8	33.5	60
	75, 100	63	46	63	46	9	9	80	92	108	8	33.5	60
<b>80</b>	5~50	64.5	43.5	74.5	53.5	11	11	99	116	134	10	43.5	77
	75, 100	74.5	53.5	74.5	53.5	11	11	99	116	134	10	43.5	77
<b>100</b>	5~50	76	53	86	63	11	11	117	136	154	12	43.5	94
	75, 100	86	63	86	63	11	11	117	136	154	12	43.5	94

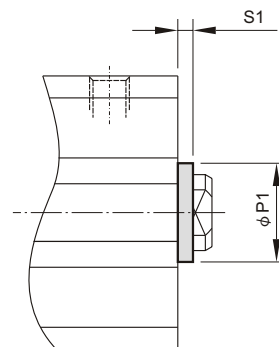


### F Rear flange



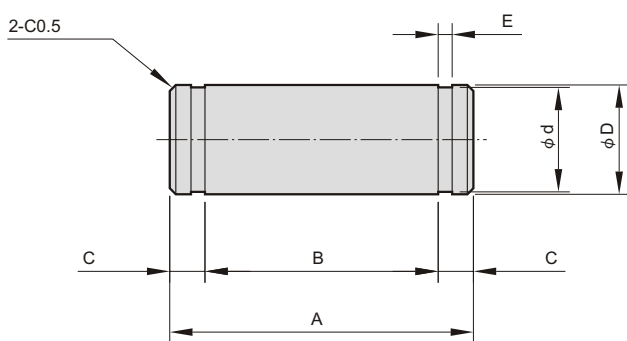
Code Tube I.D.	P2 <sup>h9</sup>	S2
12	6	1.5
16	10	1.5
20	13	2
25	15	2
32	21	2
40	28	2
50	35	2
63	35	2
80	43	2
100	59	2

### RF



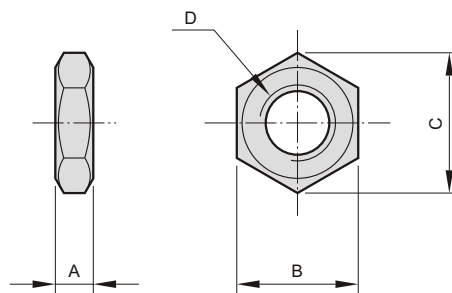
Code Tube I.D.	P1 <sup>h9</sup>	S1
12	15	1.5
16	20	1.5
20	13	2
25	15	2
32	21	2
40	28	2
50	35	2
63	35	2
80	43	2
100	59	2

### Pin for CB



Code Tube I.D.	A	B	C	$\phi D^{d9}$	$\phi d$	E	Snap ring
12	14.6	10.2	2.2	5 <sup>-0.03</sup> <sub>-0.06</sub>	4.8 <sup>0</sup> <sub>-0.04</sub>	0.7 <sup>+0.10</sup> <sub>0</sub>	STW-5
16	16.6	12.2	2.2	5 <sup>-0.03</sup> <sub>-0.06</sub>	4.8 <sup>0</sup> <sub>-0.04</sub>	0.7 <sup>+0.10</sup> <sub>0</sub>	STW-5
20	21	16.2	2.4	8 <sup>-0.04</sup> <sub>-0.08</sub>	7.6 <sup>0</sup> <sub>-0.06</sub>	0.9 <sup>+0.10</sup> <sub>0</sub>	STW-8
25	25.6	20.2	2.7	10 <sup>-0.04</sup> <sub>-0.08</sub>	9.6 <sup>0</sup> <sub>-0.06</sub>	1.15 <sup>+0.14</sup> <sub>0</sub>	STW-10
32,40	41.6	36.2	2.7	10 <sup>-0.04</sup> <sub>-0.08</sub>	9.6 <sup>0</sup> <sub>-0.09</sub>	1.15 <sup>+0.14</sup> <sub>0</sub>	STW-10
50,63	50.6	44.2	3.2	14 <sup>-0.05</sup> <sub>-0.10</sub>	13.4 <sup>0</sup> <sub>-0.11</sub>	1.15 <sup>+0.14</sup> <sub>0</sub>	STW-14
80	64	56.2	3.9	18 <sup>-0.05</sup> <sub>-0.10</sub>	17.0 <sup>0</sup> <sub>-0.11</sub>	1.35 <sup>+0.14</sup> <sub>0</sub>	STW-18
100	72	64.2	3.9	22 <sup>-0.07</sup> <sub>-0.12</sub>	21.0 <sup>0</sup> <sub>-0.21</sub>	1.35 <sup>+0.14</sup> <sub>0</sub>	STW-22

### 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