## MCJQ series COMPACT CYLINDERS





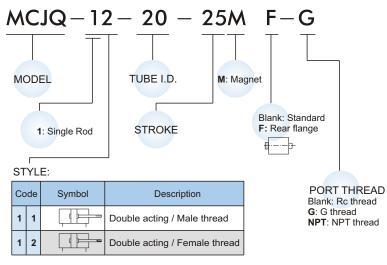
#### Double acting-Table for standard stroke

Tube I.D.	Standard stroke	Long stroke (mm)					
φ 12,16	5,10,15,20,25,30	35, 40, 45, 50, 75,100					
φ20	5,10,15,20,25,	75,100,125,150,175,200					
φ25	30,35,40,45,50	75,100,125,150,175,200,250,300					
φ 32~80	5,10,15,20,25,30,	125 150 175 200 250 200					
φ 32~00	35,40,45,50,75,100	125,150,175,200,250,300 5,40,45,50,75,100					
Tube I.D	. S	tandard stroke (mm)					
φ100	5,10,15,2	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



% Order example for special specification, refer to page J-03.

#### **Features**

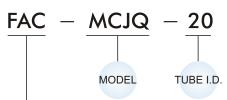
- Ultra Compact, light weight and space saving cylinder.
- Wide range of bore sizes and strokes (12mm~100mm).
- Single and double acting available.
- Ideal for use in machinery where space is limited and incorporating sensor groove which enables flush fitting of sensors.
- Sensor can be mounted on any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

#### **Specification**

Model	MCJQ						
Acting type	Double acting						
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	0.07~1		0.05~	1 MPa			
Proof pressure	1.5 MPa						
Ambient temperature	$-5^{\circ}C^{+}+60^{\circ}C$ (No freezing)						
Available speed range	50~500 mm/sec						
Sensor switch ( * )	RCE, RCE1 RCB, RCE, RCE						

% RCB, RCE, RCE1 specification, please refer to page V-07, V-09.

#### Mounting accessories



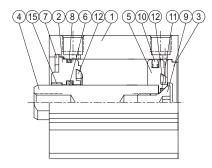
#### MOUNTING TYPE

	LB
	СВ
+	FAC
· []	FBC
]P	RF





## Standard stroke



Standard stroke (with magnet) (4)157286121514(3510(21)93)

#### Standard 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				Alu	iminu	ım all	оу				Hard anodized	1		
2	Rod cover				Alu	iminu	ım all	оу				$\phi$ 12~ $\phi$ 32 hard anodized $\phi$ 40~ $\phi$ 100 anodized	1	•	
3	End cover				Alu	ıminu	ım all	оу				Anodized	1	•	
4	Piston With magnet	Sta	ainle	ss ste	eel		С	arbo	or stee	əl			1		
4	rod Without magnet	SUS	SUS Carbor steel							1					
5	Piston				Alu	ıminu	ım all	оу				$\phi$ 12~32 anodized	1	•	
6	Rod packing					NE	ßR						1	•	
7	Snap ring		Stainless steel Spring steel							1	•				
8	Cover ring					NE	ßR						1	•	
9	Piston bolt		Stair	nless	steel				SCM				1	•	
10	Piston packing					NE	ßR						1	•	
11	Piston gasket					NE	ßR						1	•	•
12	Cushion packing		NBR									2	•		
13	Magnet		Plastic									1	•		
14	Wear ring		_	_		Teflon							1	•	
15	Bush			—				Bea	ring a	alloy			1	•	

#### Standard stroke — Seal kit

	Rod packing	Piston packing	Cover ring	Piston gasket					
Acting type	Double action								
Qty.	1	1	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-22.4	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	G-75	d20×w1					
100	ORA-30	OPA-100	G-95	S-26					

#### Order example Component parts

r	parto
Tube I.D.	Component parts
φ12	CP-MCJQ-12-12(M)
φ16	CP-MCJQ-12-16(M)
φ20	CP-MCJQ-12-20(M)
φ25	CP-MCJQ-12-25(M)
φ32	CP-MCJQ-12-32(M)
φ40	CP-MCJQ-12-40(M)
$\phi$ 50	CP-MCJQ-12-50(M)
φ63	CP-MCJQ-12-63(M)
φ80	CP-MCJQ-12-80(M)
φ 100	CP-MCJQ-12-100(M)

#### **Repair kits**

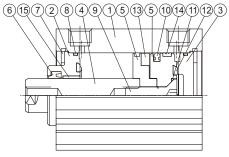
Tube I.D.	Repair kits
φ12	PS-MCJQ-12-12
φ16	PS-MCJQ-12-16
φ20	PS-MCJQ-12-20
φ25	PS-MCJQ-12-25
φ32	PS-MCJQ-12-32
φ40	PS-MCJQ-12-40
φ50	PS-MCJQ-12-50
φ63	PS-MCJQ-12-63
φ80	PS-MCJQ-12-80
φ 100	PS-MCJQ-12-100

M: With magnet



# 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				Alum	inum	alloy	/			Hard anodized	1		
2	Rod cover			1	Alumi	inum	alloy	/			$\phi$ 12~ $\phi$ 32 hard anodized $\phi$ 40~ $\phi$ 80 anodized	1	•	
3	End cover			1	Alum	inum	alloy	/			Anodized	1	•	
4	Piston With magnet	Sta	ainle	ss ste	eel		Car	bor s	steel			1		
4	rod Without magnet	SUS	SUS Carbor steel								1			
5	Piston		Aluminum alloy							$\phi$ 12~32 anodized	1	•		
6	Rod packing					NBR						1	•	•
7	Snap ring		Stainless steel Spring steel					g stee	el		2	•		
8	Cover ring					NBR						2	•	•
9	Piston bolt		Stair	nless	steel			SC	CM			1	•	
10	Piston packing					NBR						1	•	•
11	Piston gasket					NBR						1	•	•
12	Cushion packing		NBR								2	•	•	
13	Magnet		Plastic									1	•	
14	Wear ring		Teflon									1	•	
15	Bush			_			В	earin	g allo	у		1	•	

#### ${\rm Long\ stroke-Seal\ kit}$

	Rod packing	Piston packing	Cove	r ring	Piston gasket			
Acting type	Double action							
Qty.	1	1	2	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**

Tube I.D.	Component parts
φ12	CPL-MCJQ-12-12(M)
φ16	CPL-MCJQ-12-16(M)
φ20	CPL-MCJQ-12-20(M)
φ25	CPL-MCJQ-12-25(M)
φ32	CPL-MCJQ-12-32(M)
φ40	CPL-MCJQ-12-40(M)
$\phi$ 50	CPL-MCJQ-12-50(M)
$\phi 63$	CPL-MCJQ-12-63(M)
φ80	CPL-MCJQ-12-80(M)

#### Repair kits

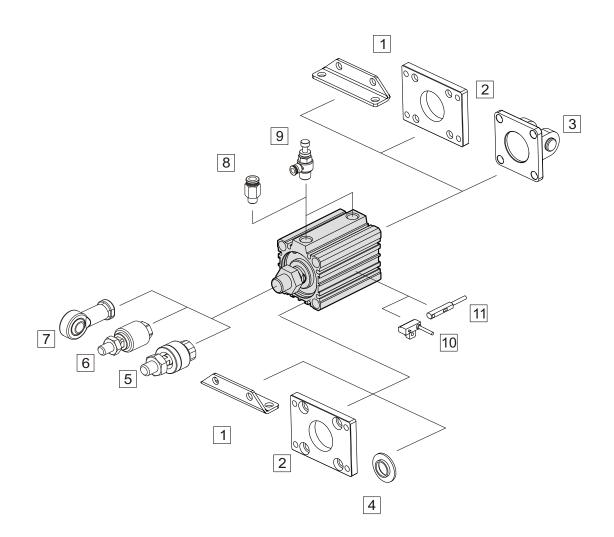
Tube I.D.	Repair kits
φ12	PSL-MCJQ-12-12
φ16	PSL-MCJQ-12-16
φ20	PSL-MCJQ-12-20
φ25	PSL-MCJQ-12-25
φ32	PSL-MCJQ-12-32
φ40	PSL-MCJQ-12-40
φ50	PSL-MCJQ-12-50
$\phi$ 63	PSL-MCJQ-12-63
φ80	PSL-MCJQ-12-80

M: With magnet









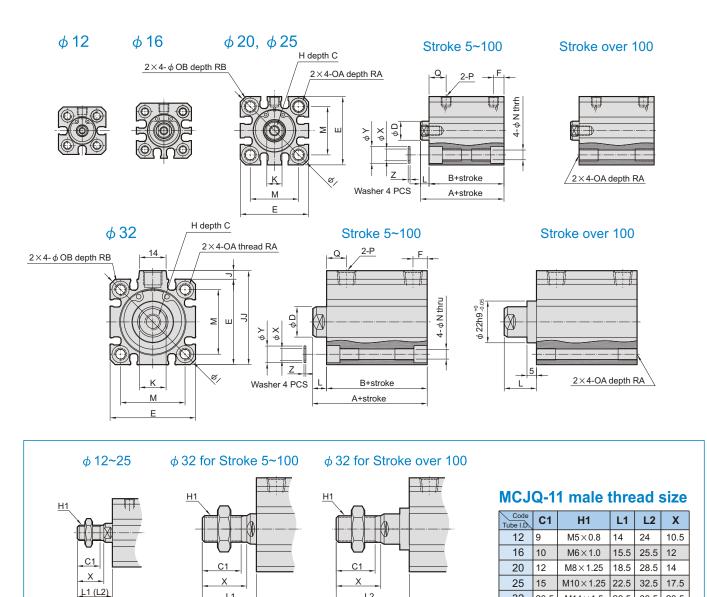
No.	Accessories	Page
1	Mounting accessories LB	K-08,10
2	Mounting accessories FAC/FBC	K-08,09,11,12
3	Mounting accessories CB+PIN	K-09,13,14
4	Mounting accessories RF	K-14
5	Floating joint MFC	V-01
6	Floating joint MFCS	V-03
7	Female rod ends PHS	V-04

No.	Accessories	Page
8	Fitting PC (PISCO)	H-03
9	Speed controller JSC (PISCO)	H-14
10	Sensor switch RCB	V-07
11	Sensor switch RCE/RCE1	V-09





## MCJO Dimensions $\phi 12 \sim \phi 32$ **COMPACT CYLINDERS**



#### *φ* 12~25

Code			St	anda	ard s	troke				l	Long	stro	ke																		
	Stroke	Wi	thout r	nagn	et		Mag	net		Stroke	^	в	П	-	С	D	Е	н	Т	κ	Μ	Ν	OA	ΟВ	Р	Q	RA	RB	X	Υ	Ζ
Tube I.D.	range	Α	В	F	L	Α	В	F	L	range	Α	Р	Г	-																	
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  imes 0.7	6.5	M5  imes 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	$M4 \times 0.7$	38	6	20	3.5	M4  imes 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	$M6\!\times\!1.0$	9	M5  imes 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  imes 1.0	52	10	28	5.4	M6  imes 1.0	9	M5  imes 0.8	11	10	7	6.2	8.8	1

L2

#### φ 32

1	Code		ę	Stand	dard	strok	ke				Lo	ng str	oke																				
1		Ouono		magnet	Ма	gnet	E	-		Stroke	>	D	П			Р	С	D	E	Н	Т	J	JJ	κ	м	Ν	OA	ОВ	RA	RB	X	Y	z
Т	ibe I.D.	range	Α	В	Α	В	F	-	Q	range	A	Р	r	L.	Q																		
	22	5~50	30	23	40	33	7.5	7	10.5	101~300	60 F	4 E E	10 E	17	10 E	Rc1/8	10	16	45	M0 v 4 0E	60	4 5	40 E	14	24		M6×1.0	0	10	7	6.2		1
	32	51~100	40	33	40	33	7.5	7	10.5	101~300	02.5	45.5	12.5	17	12.5	( <b>※1</b> )	13	10	45	IVIO X 1.20	60	4.5	49.5	14	34	5.5	IVIO X 1.U	9	10	'	0.2	0.0	1

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

\* L1 :Standard stroke, L2 :Long stroke

L1



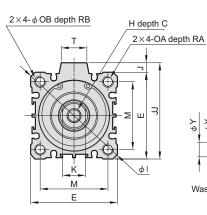
M14×1.5 28.5

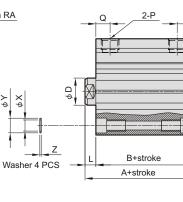
32 20.5

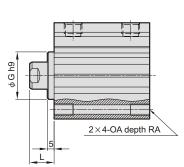
38.5 23.5



#### $\phi$ 50~ $\phi$ 100

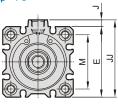


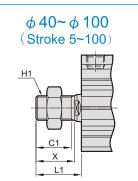




Stroke over 100

φ40

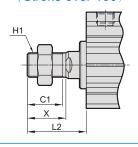




# $\phi$ 40~ $\phi$ 80 (Stroke over 100)

4- φ N thrh

Stroke 5~100



#### **MCJQ-11** male thread size

Code Tube I.D.	C1	H1	L1	L2	Х
40	20.5	M14  imes 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			Stand	ard st	roke					L	ong str	oke		
	Stroke	Without	magnet	Mag	gnet	F	L	Q	Stroke	Α	в	F		Q
Tube I.D	range	Α	В	Α	В	Г	L.	Q	range	۲,	Б	F	<b>L</b>	y y
40	5~50	36.5	29.5	16 5	39.5	8	7	11	125~300	72	55	14	17	14
40	75,100	46.5	39.5	40.5	39.5	0	'	' '	125~300	12	55	14	17	14
50	5~50	38.5	30.5	10 E	40.5	10.5	8	10.5	125~300	73.5	55.5	14	18	14
50	75,100	48.5	40.5	40.0	40.5	10.5	0	10.5	125~300	13.5	55.5	14	10	14
63	5~50	44	36	54	46	10.5	8	15	125~300	75	57	16.5	18	16.5
03	75,100	54	46	54	40	10.5	0	15	125~300	75	57	10.5	10	10.5
80	5~50	53.5	43.5	63.5	53.5	12.5	10	16	125~300	86	66	19	20	19
00	75,100	63.5	53.5	03.5	55.5	12.0	10	10	125~300	00	00	19	20	19
100	5~50	65	53	75	63	13	12	23						
100	75,100	75	63	13	03	15	12	23						

Code Tube I.D.	С	D	Е	G <sup>h9</sup>	Н	I	J	JJ	κ	Μ	Ν	OA	ОВ	Р	RA	RB	т	х	Y	z
40	13	16	52	$28  {}^{+0}_{-0.052}$	$M8 \times 1.25$	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	$35  {}^{+0}_{-0.062}$	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4( <b>%1</b> )	14	8	19	8.2	10.8	1
63	15	20	77	$35  {}^{+0}_{-0.062}$	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4( <b>%2</b> )	18	10.5	19	10.2	13.8	1
80	21	25	98	$43{}^{+0}_{-0.062}$	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8( <b>%3</b> )	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(X3)	22	13.5	26	12.2	17.3	2

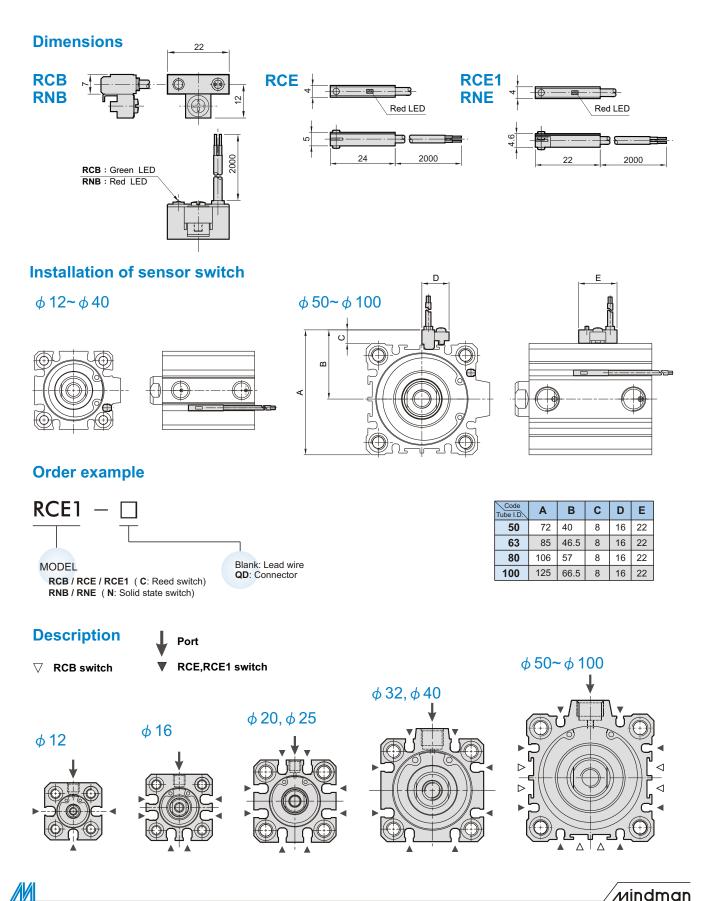
\*1: Without magnet with stroke=5mm, P=Rc1/8 \ Q=12 \ F=8

%2: Without magnet with stroke=5mm, P=Rc1/8

%3: Without magnet with stroke=5mm, P=Rc1/4







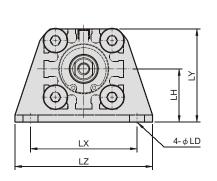
*w*indman

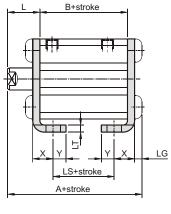


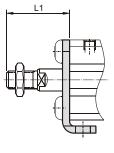
## LB



#### Male thread

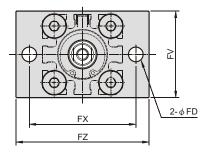




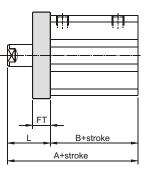


Code		St	andar	d stro	ke			Loi	ng stro	oke												
	Stroke	Witho	out ma	agnet	Ν	Magne	et	Stroke		в	LS	L	L1	LD	LG	LH	LT	LX	LY	LΖ	Х	Y
Tube I.D.	range	Α	В	LS	Α	В	LS	range	A	D	LS											
12	5~30	35.3	17	5	40.3	22	10	35~100	50.3	32	20	13.5	24	4.5	2.8	17	2	34	29.5	44	8	4.5
16	5~30	35.3	17	5	40.3	22	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

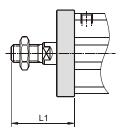




#### Female thread



#### Male thread

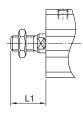


N	Code		Stand	ard stro	ke		Lon	g stroke	)							
		Stroke	Without	magnet	Ма	gnet	Stroke	•	в	FD	FT	FV	FX	FZ	L	L1
	Tube I.D.	range	Α	В	Α	В	range	Α	P							
ſ	12	5~30	30.5	17	35.5	22	35~100	45.5	32	4.5	5.5	25	45	55	13.5	24
	16	5~30	30.5	17	35.5	22	35~100	45.5	32	4.5	5.5	30	45	55	13.5	25.5
	20	5~50	34	19.5	44	29.5	75~200	55.5	41	6.6	8	39	48	60	14.5	28.5
ſ	25	5~50	37.5	22.5	47.5	32.5	75~300	59	44	6.6	8	42	52	64	15	32.5

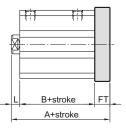


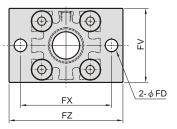


Male thread



Female thread

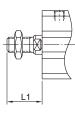




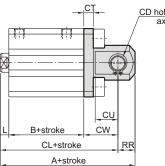
$\setminus$	Code			Sta	andar	d stro	ke					Long	stroke	9						
1		Stroke	W	ithout	magr	net		Mag	gnet		Stroke		в		L1	FD	FT	FV	FX	FΖ
т	ube I.D.	range	Α	В	L	L1	Α	В	L	L1	range	A	D	L .	L1					
	12	5~30	26	17	3.5	14	31	22	3.5	14	35~100	51	32	13.5	24	4.5	5.5	25	45	55
	16	5~30	26	17	3.5	15.5	31	22	3.5	15.5	35~100	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

СВ

Male thread



Female thread



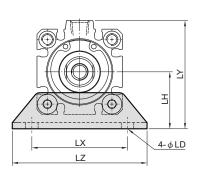
<u>ole H10</u> ixls d9	:	
ŀ	CZ -0.	CX <sup>+0.4</sup>

Code				St	andar	d stro	ke						Lor	ng str	oke									
	Stroke		With	out ma	agnet			Ν	/lagne	et		Stroke		в	CL		L1	CD	СТ	CU	CW	СХ	CZ	RR
Tube I.D.	range	Α	В	CL	L	L1	Α	В	CL	L	L1	range	A	P		L.	<b>L</b> 1							
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

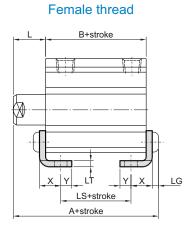


## LB

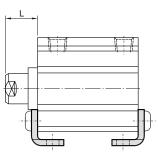
#### **Standard stroke**



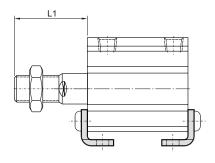
#### Long storke



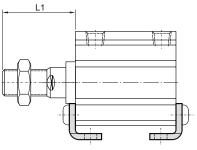
#### Female thread



Male thread



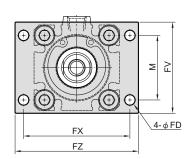




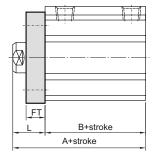
Code		St	andar	d stro	ke			Loi	ng stro	oke												
	Stroke	With	out ma	agnet	Ν	lagne	et	Stroke	Α	в	LS	L	L1	LD	LG	LH	LT	LX	LY	LΖ	Х	Y
Tube I.D.	range	Α	В	LS	Α	В	LS	range	A	Р	LS											
32	5~50	47.2	23	7	57.2	33	17	125~300	60.7	15 5	29.5	17	38.5	6.6	4	30	3.2	57	57	71	11.2	5.8
32	75, 100	57.2	33	17	57.2	33		125~300	09.7	45.5	29.5	17	30.5	0.0	4	30	3.2	57	57	/ 1	11.2	5.0
40	5~50	53.7	29.5	13.5		20 F	23.5	125~300	79.2	FF	39	17	38.5	6.6	4	33	3.2	64	64	78	11.2	7
40	75, 100	63.7	39.5	23.5	03.7	39.5	23.5	125~300	19.2	55	39	17	30.5	0.0	4	33	3.2	64	64	10	11.2	
50	5~50	56.7	30.5	7.5	66.7	40 E	17.5	125~300	01 7		20 F	18	43.5	9	5	39	3.2	79	78	05	14.7	8
50	75, 100	66.7	40.5	17.5	00.7	40.5	17.5	125~300	01.7	55.5	32.5	10	43.5	9	э	39	3.Z	/9	10	95	14.7	°
63	5~50	62.2	36	10	70.0	46	20	125~300	83.2	57	31	18	43.5	11	5	46	3.2	05	91.5	110	16.0	9
03	75, 100	72.2	46	20	72.2	40	20	125~300	03.2	57	51	18	43.5	11	5	40	3.2	95	91.5	113	16.2	9
80	5~50	75	43.5	13.5	85	E2 E	23.5	125~300	97.5	66	36	20	53.5	13	7	59	4.5	118	114	140	19.5	11
00	75, 100	85	53.5	23.5	00	53.5	23.5	125~300	97.5	00	30	20	55.5	13	'	59	4.5	110	114	140	19.5	''
100	5~50	88	53	19	98	63	29	125~300				22	53.5	13	7	71	6	137	136	162	22	10 5
100	75, 100	98	63	29	90	03	29	125-500		_		22	53.5	13	1	71	0	137	130	102	23	12.5



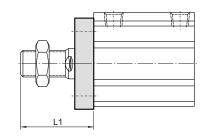
## FAC







Male thread



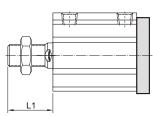
Code		Stand	ard stro	ke		Lon										
	Stroke	Without	Without magnet		gnet	Stroke	Α	в	FD	FT	FV	FX	FZ	L	L1	М
Tube I.D.	range	Α	В	Α	В	range	A	D								
32	5~50	40	23	50	33	125~300	62.5	45.5	5.5	8	48	56	65	17	38.5	34
32	75, 100	50	33	50	33	125~300	02.5	45.5								34
40	5~50	46.5	29.5	56.5	39.5	125~300	72	55	5.5	8	54	62	72	17	38.5	40
40	75, 100	56.5	39.5	50.5	39.0	123-300	12	55	0.0							40
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
50	75, 100	58.5	40.5	50.5		125~300	73.5	55.5	0.0	9	07	70	09	10	43.5	50
63	5~50	54	36	64	46	125~300	75	57	9	9	80	92	108	18	43.5	60
03	75, 100	64	46	04	40	125~300	75	57	9					10		60
80	5~50	63.5	43.5	70 5	F0 F	125~300	00	66	44	11	99	116	134		50.5	77
00	75, 100	73.5	53.5	73.5	53.5	125~300	86	00	11					20	53.5	77
100	5~50	75	53	05	~~~	125-200				11	117	136	154	22	53.5	
100	75, 100	85	63	85	63	125~300			11							94



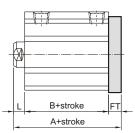
## FBC

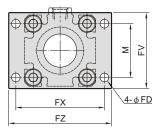
**Standard stroke** 

#### Male thread



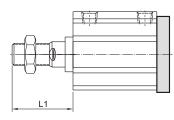
Female thread



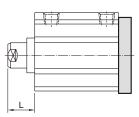


### Long storke

Male thread



#### Female thread



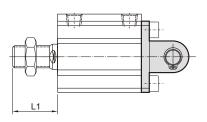
Code		Ś	Standar	d stroke	e				Long	stroke	;													
	Stroke	Without	magnet	Ма	Magnet		L1	Stroke	Α	в		L1	FD	FT	FV	FX	FΖ	М						
Tube I.D.	range	Α	В	Α	В	L		range	A	Б	L	<b>L</b> 1												
32	5~50	38	23	48	33	7	28.5	125~300	70.5	45.5	17	38.5	5.5	8	48	56	65	34						
32	75, 100	48	33	40	33		20.5	125~300	10.5	45.5								34						
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						
40	75, 100	54.5	39.5			ľ	20.5	120 000	00	55	17	00.0	0.0	0	54	02	12	40						
50	5~50	47.5	30.5	E7 E	57 5	57 5	57 5	57 5	57 5	57.5	40.5	8	33.5	125~300	82.5	55.5	18	43.5	6.6	9	67	76	89	50
50	75, 100	57.5	40.5	57.5	40.5	0	00.0	125~300	02.5	55.5	10	43.5	0.0	9	07	70	09	50						
63	5~50	53	36	63	63	46	8	33.5	125~300	84	57	18	43.5	9	9	80	92	108	60					
03	75, 100	63	46			63	63	63	40	0	33.5	123-300	04	57	10	43.5	9	9	80	92	100	00		
80	5~50	64.5	43.5	74.5	74 5	53.5	10	43.5	125~300	97	66	20	E 2 E	11	11	99	110	104	77					
00	75, 100	74.5	53.5	74.5	53.5	10	43.5	125~300	97	66	20	53.5	11	11	99	116	134	77						
100	5~50	76	53	86	60	10	40 E	125~300	_				11	44	447	100	454							
100	75, 100	86	63	00	63	12	43.5	125-500					11	11	117	136	154	94						

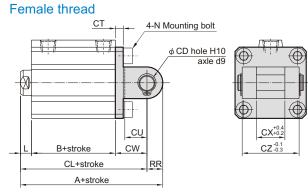






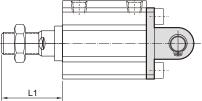
Standard stroke Male thread



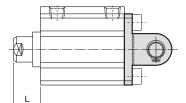


#### Long storke

Male thread

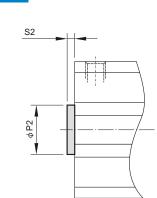


Female thread



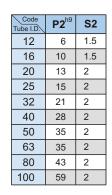
Code			St	andar	d stro	ke					Lo	ong str	oke																					
	Stroke	With	out ma	agnet	Ν	Magnet			L1	Stroke	Α	в	CL	L	L1	CD	СТ	CU	CW	сх	CZ	N	RR											
Tube I.D.	range	Α	В	CL	Α	В	CL		<b>L</b> 1	range	A	Ъ		L																				
32	5~50	60	23	50	70	33	60	7	28.5	125~300	92.5	45.5	82.5	5 17	38.5	10	5	14	20	18	36	M6×1.0	10											
32	75, 100	70	33	60	70	33	00	1	20.5	125~300	92.5	40.5	02.0			10	3	14	20	10														
40	5~50	68.5	29.5	58.5	78.5139	70 5	70 E	70 E	70 E	70 E	70 E	70 5	70 5	70 5	70 5	70 5	30.5	68 5	7	28.5	125~300	104	55	94	17	38.5	10	6	14	22	18	36	M6×1.0	10
40	75, 100	78.5	39.5	68.5		39.5	00.5	· /	20.5	120 000		00	54		50.5	10		14	22	10	30		10											
50	5~50	80.5	30.5	66.5	90.5 40	40.5	76 5	76 5	76 5	76 5	76 5	76 5	76 5	8	33.5	125~300	115 5	55 <b>5</b>	101 5	18	43.5	14	7	20	28	22	44	M8×1.25	14					
50	75, 100	90.5	40.5	76.5			70.5	0	55.5	125~300	115.5	55.5	101.5	10	43.5	14	Ľ	20	20	22	44	10 × 1.25	14											
63	5~50	88	36	74	98 4	46	84	0	33.5	5 125~300	25~300 119	57	105	18	43.5	14	8	20	30	22	44	M10×1.5	14											
03	75, 100	98	46	84	90	40	04	8	33.5			57	105							22	44	WITU × 1.5	14											
80	5~50	109.5	43.5	91.5	110 5	52 E	101.5	10	43.5	125~300	142	66	124	20	0 53.5	18	10	27	38	28	FC	M40×4 75	10											
00	75, 100	119.5	53.5	101.5	119.5	55.5	101.5	10	43.5	125~300	142	00	124	20					38	28	56	M12×1.75	18											
100	5~50	132	53	110	142	63	120	12	40 E	125~300					_	22	13	31	45	32	64	M12×1.75												
100	75, 100	142	63	120	142	03	120	12	43.5	125~300													22											





**Rear flange** 

F





Code Tube I.D.

12

16

20

25

32

40

50

63

80

100

**P1**<sup>h9</sup>

15

20

13 2

15 2

21 2

28 2

35

43 2

**S**1

1.5

1.5

35 2

2

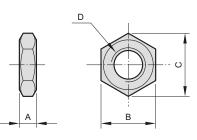
59 2

S1

φP1

ţ

#### Rod front nut



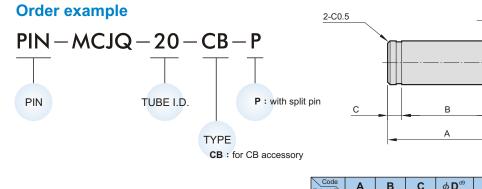
Т	Code Tube I.D.	Α	В	С	D
	12	4	8	9.2	M5×0.8
	16	5	10	11.5	M6×1.0
	20	5	13	15	M8×1.25
	25	6	17	19.6	M10×1.25
	32,40	8	22	25.4	M14×1.5
	50,63	11	27	31.4	M18×1.5
	80	13	32	37	M22×1.5
	100	16	41	47.3	M26×1.5

Е

¢ ¢

С

#### Pin for CB



Code Tube I.D.	Α	В	С	$\phi{f D}^{\scriptscriptstyle d9}$	$\phi$ d	Е	Snap ring
12	14.6	10.2	2.2	$5^{-0.03}_{-0.06}$	$4.8 \ _{-0.04}^{0}$	$0.7 \ {}^{+0.10}_{0}$	STW-5
16	16.6	12.2	2.2	$5^{-0.03}_{-0.06}$	4.8 _0_04	0.7 0+0.10	STW-5
20	21	16.2	2.4	$8^{-0.04}_{-0.08}$	7.6 _0.06	0.9 0.10	STW-8
25	25.6	20.2	2.7	$10^{-0.04}_{-0.08}$	$9.6 \ _{-0.06}^{0}$	$1.15^{+0.14}_{-0}$	STW-10
32,40	41.6	36.2	2.7	$10^{-0.04}_{-0.08}$	9.6 _0.09	$1.15^{+0.14}_{0}$	STW-10
50,63	50.6	44.2	3.2	$14^{-0.05}_{-0.10}$	13.4 <sup>0</sup> <sub>-0.11</sub>	$1.15^{+0.14}_{0}$	STW-14
80	64	56.2	3.9	$18^{-0.05}_{-0.10}$	<b>17.0</b> <sup>0</sup> <sub>-0.11</sub>	$1.35^{+0.14}_{0}$	STW-18
100	72	64.2	3.9	22-0.07	21.0 _0.21	1.35 +0.14	STW-22

