



Special spec



Rod end shape



Technical data



Caution for safety
(Read before installing)



Table for standard stroke

Acting type	Tube I.D.	Stroke (mm)	Min. stroke (mm)	Max. stroke (mm)
Single 13 15	ø16,20,25	10,25,50,75,100	RCM: 15 RDC: 40 RDT: 45 (Sensor installation is limited by stroke)	150
Double acting 11	ø8	10,25,40,50,80,100		200
	ø10,12	10,25,40,50,80,100, 125,160,200		300
	ø16,20,25 ø32,40	10,25,50,75,100,125, 150,200,300,400,500		1000
21 27	ø16,20,25	10,25,50,75,100,125, 150,200,300,400		450

* Intermediate stroke are available, please contact us.

Features

■ Non lubrication

Special housing and bushing enables self lubrication of piston rod.

■ High quality long service life

Hard anodised stainless steel cylinder tubes offer a high resistance to corrosion and low internal friction.

■ Cylinder mountings

Available with a comprehensive range of accessories for rigid or flexible mounting.

■ ISO 6432 standard (ø8~ø25)

Enables world-wide inter-changeability.

■ Port thread Rc. NPT. are also available

■ Magnetic as standard

Specification

Model			MCMI							
Tube I.D. (mm)			8	10	12	16	20	25	32	40
Port size			M5×0.8				G1/8		G1/4	
Medium			Air							
Max. operating perssure			0.7 MPa							
Min. operating perssure (MPa)	Double acting		0.1	0.08		0.06				
	Single acting	Extended	—			0.23			—	
		Returned	—			0.18			—	
Proof pressure			1 MPa							
Lubricator			Not required							
Ambient temperature			-5~+60°C (No freezing)							
Available speed range			50~750 mm/sec							
Max. allowable kinetic energy (J)	Cushion pad		0.02	0.03	0.04	0.09	0.27	0.4	0.65	1.2
	Cushion air		—	—	—	0.4	0.66	0.97	1.27	2.35
Sensor switch (*1)			RDC, RQC  , RDT, RQT  , RCM 							
Sensor switch (band)	R°C		BKC-1 (Not for R°CV angle cable)							
	R°T		BKT-1							
	RCM		BM8	BM10	BM12	BM16	BM20	BM25	BM32	BM40

Tightening torque

Tube I.D.	Rod thread	Tightening torque (kgf·cm)
ø8	M4×0.7	11.8
ø10	M4×0.7	11.8
ø12	M6×1.0	41
ø16	M6×1.0	41
ø20	M8×1.25	170
ø25	M10×1.25	340
ø32	M10×1.5	340
ø40	M12×1.75	590

* Make sure the tightening torque of rod thread does not exceed the value above. The tolerance of tightening torque is ±5%.

Order example

MCMC — 11 — 16 — 100 — A — 10 — N

MODEL

1: Single rod
2: Double rod

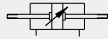
TUBE I.D.

STROKE

Blank: Cushion pad (Unadjustable)
A: Cushion air (Adjustable)  (*)
* ø8~12 not applicable.

ADJUSTABLE
STROKE
* Only for STYLE 27.

STYLE

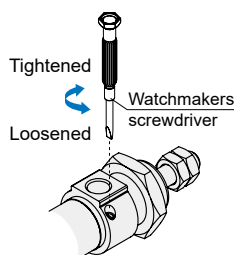
Code	Symbol	Description	Tube I.D.
1 1		Double acting / Male thread	ø8~ø40
1 3		Single acting / Normally extended male thread	ø16~ø25
1 5		Single acting / Normally returned male thread	
2 1		Double rod / Male thread	
2 7		Double rod / Adjustable male thread	

* Single acting type, please contact us.

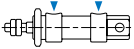
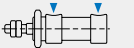
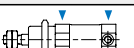
Caution

For (A) Cushion air (Adjustable)

1. To adjust a cushion needle, please slowly turn the needle valve from the fully closed status to the required status which needs to be within 2.5 turns.
2. If the needle valve loosen excessively, the buffer doesn't take effect and the lifetime of cylinder would be shortened.

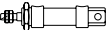


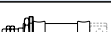
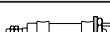
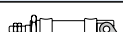
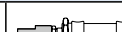
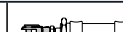
COVER TYPE

Code	Symbol	Description	Port position	Tube I.D.
	Standard type	Standard		ø8~ø25
N				
				Non-pivot type
R				Rod trunnion / Non-pivot type
H				Head trunnion / Non-pivot type
F		Head foot type	Axial port	ø32~ø40
C		Non-pivot type		
RC		Rod trunnion / Non-pivot type		

* (R), (H), (RC) not suitable for ø32 (A) cushion air.

■ Accessories & Connector

		Accessories				□ : Standard type	
Code	LB (LB×2, with cover nut ×1)		LB (LB×1, without cover nut)		NUT		
	□	F	N	R, H, C, RC	—		
Cover type							
Mounting Tube I.D.					Rod nut 	Cover nut 	
ø8	LB-M3-8x2	—	LB-M3-8	—	NUT-M4x0.7x3.2Hx7B	NUT-M12x1.25x6Hx19B	
ø10							
ø12	LB-M3-12x2	—	LB-M3-12	—	NUT-M6x1.0x5Hx10B	NUT-M16x1.5x8Hx24B	
ø16						NUT-M16x1.5x6Hx22B	
ø20	LB-M3-20x2	—	LB-M3-20	—	NUT-M8x1.25x5Hx13B	NUT-M22x1.5x6Hx30B	
ø25					NUT-M10x1.25x6Hx17B		
ø32	—	LB-M3-32x2	LB-M3-32		NUT-M10x1.5x5Hx17B	NUT-M30x1.5x7Hx38B	
ø40	—	LB-M3-40x2	LB-M3-40		NUT-M12x1.75x7Hx19B	NUT-M38x1.5x8Hx46B	

		Accessories				Connector		
Code	FA	FB	SDB (with pin×1 + snap ring×2)	SDB (with bush + trunnion pin)		Y	I	YS (Y+Floating pin)
Cover type				R, RC	H	All applicable		
Mounting Tube I.D.								
ø8	FA-M3-8		SDB-M3-8	—	—	Y-M3-8	—	—
ø10				—	—		—	—
ø12	FA-M3-12		SDB-M3-12	—	—	Y-M3-12	I-M3-12	YS-M3-16
ø16				—	—			
ø20				FA-M3-20	SDB-M3-20			
ø25	—	—	Y-Q2-32			I-Q2-32	YS-Q2-32	
ø32	—	—	SDB-M3-32			Y-M3-32	I-M3-32	YS-M3-32
ø40	—	—	SDB-M3-40			Y-M3-40	I-M3-40	YS-M3-40

Pin

Applicable	YS connector	Y&I connector	SDB connector
Code	PIN-S	PIN-Y-P (with split pin / snap ring)	PIN-SDB-P (with snap ring)
Fig Tube I.D.		 $\varnothing 8 \sim \varnothing 16$  $\varnothing 20 \sim \varnothing 40$	
$\varnothing 8$	—	PIN-M3-8-2-P	PIN-M3-8-1-P
$\varnothing 10$	—		
$\varnothing 12$	PIN-M3-16-S	PIN-M3-12-2-P	PIN-M3-12-1-P
$\varnothing 16$			
$\varnothing 20$	PIN-M3-20-S	PIN-M3-20-2-P	PIN-M3-20-1-P
$\varnothing 25$	PIN-Q2-32-S	PIN-Q2-32-2-P	
$\varnothing 32$		—	
$\varnothing 40$	PIN-Q2-40-S	PIN-Q2-40-2-P	—

■ Order example of self-assembled

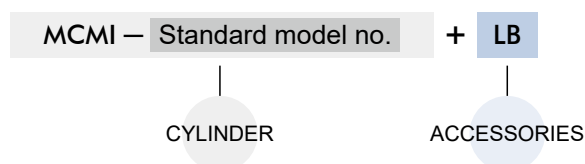
The tube I.D. $\varnothing 32$ of LB accessories. Y connector and pin.

No.	Order number	Qty
1	LB-M3-32x2	1
2	Y-M3-32	1
3	PIN-Q2-32-2-P	1

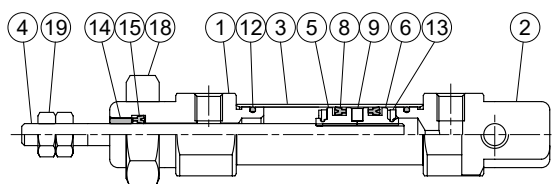
* To order accessories/
connectors/ pin separately,
please place orders separately
according to the order codes
in the above table.

■ Order example of factory assembled

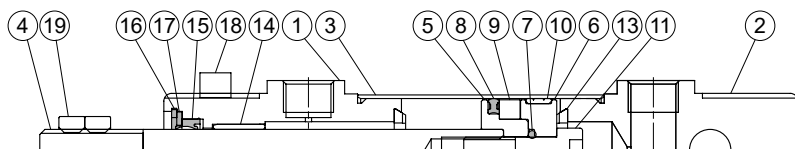
⚠ Cylinders and accessories are distinguished by the symbol " + ".



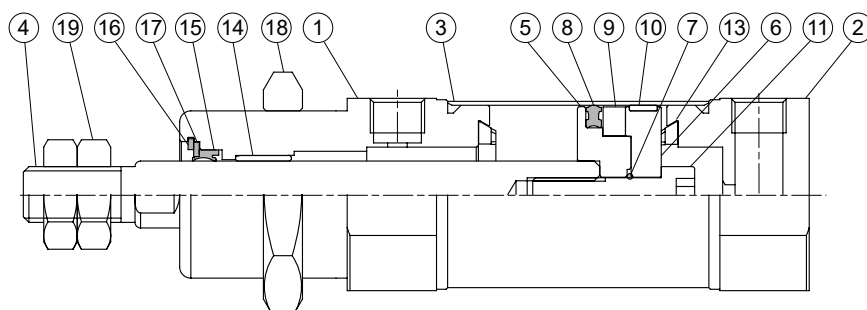
ø8~ø12



ø16~ø25



ø32, ø40



Material

No.	Tube I.D. Part name	8	10	12	16	20	25	32	40	Q'y		Component parts (inclusion)	
										11 type	21 type	11 type	21 type ^{*3}
1	Rod cover	Aluminum alloy								1	2	●	●
2	Head cover	Aluminum alloy								1	—	●	
3	Tube	Stainless steel								1	1		
4	Piston rod	Stainless steel				Carbon steel				1	1		
5	Piston-R	Aluminum alloy								1	1	●	●
6	Piston-H	Aluminum alloy								1	1	●	●
7	Piston gasket	—			NBR					1	1	●	●
8	Piston packing	NBR								1 ^{*1}	1 ^{*1}	●	●
9	Magnet ring	Magnet material								1	1	●	●
10	Wear ring	—			Resin					1	1	●	●
11	Piston bolt	—			SCM					1	—	●	
12	Cover ring	NBR			—					2	2	●	●
13	Cushion gasket	NBR								2	2	●	●
14	Rod bush	Bearing alloy								1	2	●	●
15	Rod packing ^{*2}	NBR								1	2	●	●
16	Snap ring	—			Spring steel					1	2	●	●
17	Washer	—			Carbon steel					1	2	●	●
18	Tie nut	Carbon steel								1	2	●	●
19	Rod front nut	Carbon steel								2	2	●	●

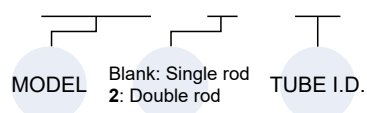
*1. ø8~ø12 (Q'y: 2 pcs)

*2. Only the rod packing ø16~ø40 is repairable, please contact our sales if needed.

*3. Style 21 is not suitable for ø8~ø12.

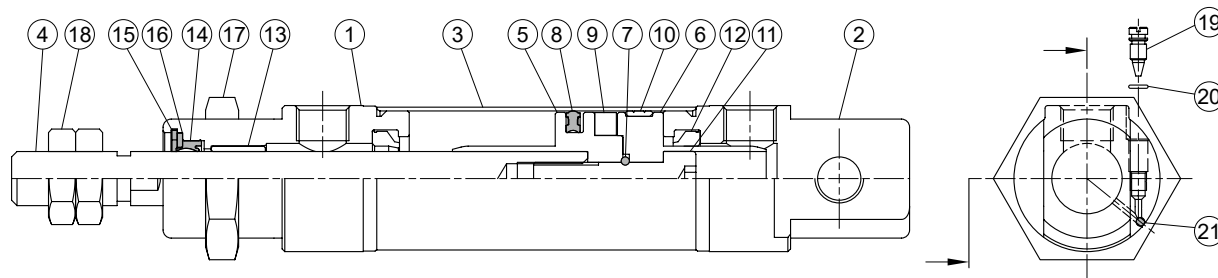
Order example of component parts

CP — MCMI — 2 — 16 — N



END COVER TYPE *ø32, ø40 are not available for the double rod type.

Tube I.D.	Blank: Standard type	N: Non- pivot type	R: Rod trunnion	H: Head trunnion	F: Head foot type	C: Non- pivot type	RC: Rod trunnion
ø8~ø25	●	●	—	—	—	—	—
ø32, ø40	—	●	●	●	●	●	●



Material

No.	Tube I.D. Part name	16	20	25	32	40	Q'y		Component parts (inclusion)	
							11 type	21 type	11 type	21 type
1	Rod cover	Aluminum alloy				1	2	●	●	
2	Head cover	Aluminum alloy				1	—	●		
3	Tube	Stainless steel				1	1			
4	Piston rod	Stainless steel	Carbon steel			1	1			
5	Piston-R	Aluminum alloy				1	1	●	●	
6	Piston-H	Aluminum alloy				1	1	●	●	
7	Piston gasket	NBR				1	1	●	●	
8	Piston packing	NBR				1*1	1*1	●	●	
9	Magnet ring	Magnet material				1	1	●	●	
10	Wear ring	Resin				1	1	●	●	
11	Piston bolt	SCM				1	—	●		
12	Cushion packing	NBR				2	2	●	●	
13	Rod bush	Bearing alloy				1	2	●	●	
14	Rod packing *2	NBR				1	2	●	●	
15	Snap ring	Spring steel				1	2	●	●	
16	Washer	Carbon steel				1	2	●	●	
17	Tie nut	Carbon steel				1	2	●	●	
18	Rod front nut	Carbon steel				2	2	●	●	
19	Needle valve	Stainless steel				2	2	●	●	
20	Needle valve packing	NBR				2	2	●	●	
21	Steel ball	Stainless steel				2	2	●	●	

*1. $\phi 8 \sim \phi 12$ (Q'y: 2 pcs)

*2. Only the rod packing is repairable, please contact our sales if needed.

Order example of component parts

CP — MCMC — 2 — 16 — A — N

MODEL

TUBE I.D.

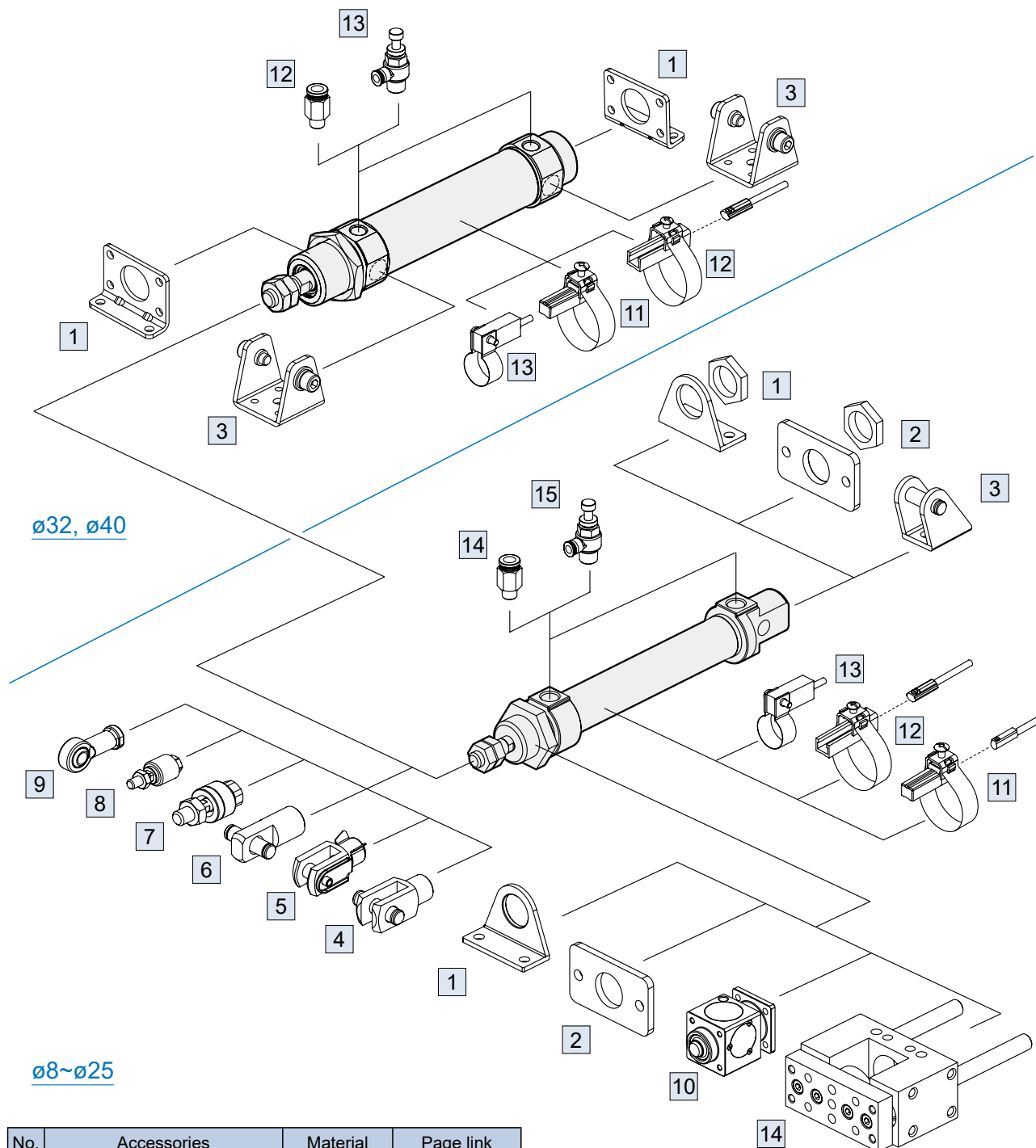
Blank: Single rod
2: Double rod

A: Cushion air
(Adjustable)

END COVER TYPE

Tube I.D.	Blank: Standard type	N: Non-pivot type	F: Head foot type	C: Non-pivot type
$\phi 16 \sim \phi 25$	●	●		
$\phi 32, \phi 40$		●	●	●

* $\phi 32, \phi 40$ are not available for the double rod type.



No.	Accessories	Material	Page link
1	Mounting accessories LB	Carbon steel	↗ , ↘
2	Mounting accessories FA/FB	Carbon steel	↗ , ↘
3	Mounting accessories SDB+PIN	Carbon steel	↗ , ↘ , ↙
4	Accessories Y+PIN	Carbon steel	↗
5	Accessories YS (Y+Floating pin)	Carbon steel	↗
6	Accessories I+PIN	Carbon steel	↗
7	Floating joint MFC	Carbon steel	↗
8	Floating joint MFCS	Carbon steel	↗
9	Female rod ends PHS	Carbon steel	↗

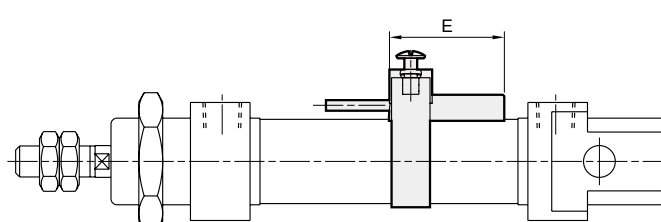
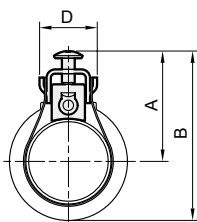
* Aluminum alloy + copper alloy

No.	Accessories	Material	Page link
10	Locking unit MCBMI	(*)	↗
11	Sensor switch R*C+BKC-1	—	↗
12	Sensor switch R*T+BKT-1	—	↗
13	Sensor switch RCM+BM**	—	↗
14	Fitting PC	—	↗
15	Fitting JSC	—	↗
16	Twin-guide cylinders MGTB/TK/TU	—	↗

Installation of sensor switch

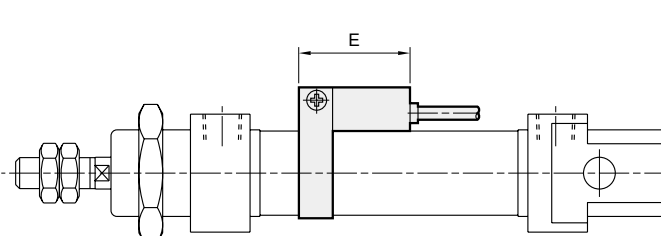
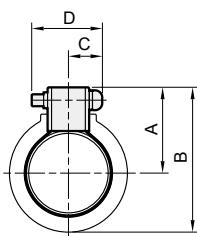
Sensor switch: R*C / R*T (Band: BKC-1 / BKT-1)

Code Band Tube I.D.	A		B		D	E	
	BKC-1	BKT-1	BKC-1	BKT-1		BKC-1	BKT-1
8	20.5	22.5	28	30	13.5	27	30
10	21.5	23	29	30.5	13.5	27	30
12	22.5	24.5	31.5	33.5	13.5	27	30
16	24.5	26	34.5	36	13.5	27	30
20	27	28.5	40.5	42	13.5	27	30
25	29.5	31	43	44.5	13.5	27	30
32	33	34.5	50	51.5	13.5	27	30
40	37	38.5	58.5	60	13.5	27	30



Sensor switch: RCM (Band: BM**)

Code Tube I.D.	A	B	C	D	E
8	16	23.5	10	16	28
10	17	24.5	10	16	28
12	18	28	10	16	28
16	20	30	10	16	28
20	22	35.5	10	16	28
25	25	38.5	10	16	28
32	28	45.5	10	16	28
40	32	54	10	16	28



Weight

Cylinder weight

Unit: g

Model	Basic weight MCMI-11	Basic weight MCMI-11-A	Stroke 25 mm MCMI-11	Basic weight MCMI-11-N	Basic weight MCMI-11-A-N	Stroke 25 mm MCMI-11-*
Tube I.D.						
ø8	36	—	6	32	—	6
ø10	38	—	8	35	—	8
ø12	78	—	11	69	—	11
ø16	95	93	13	88	85	13
ø20	162	190	18	151	179	18
ø25	206	229	28	191	214	28

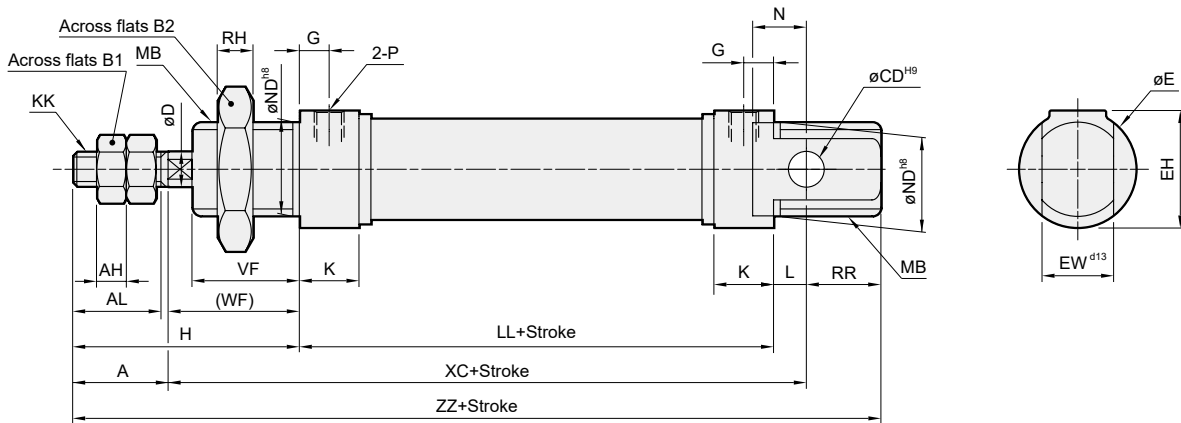
Model	Basic weight MCMI-11-F	Basic weight MCMI-11-A-F	Stroke 25 mm MCMI-11-F	Basic weight MCMI-11-N/C/R/H	Basic weight MCMI-11-A-N/C	Stroke 25 mm MCMI-11-*
Tube I.D.						
ø32	334	402	39	307	375	39
ø40	591	601	60	639	649	60

Accessories weight

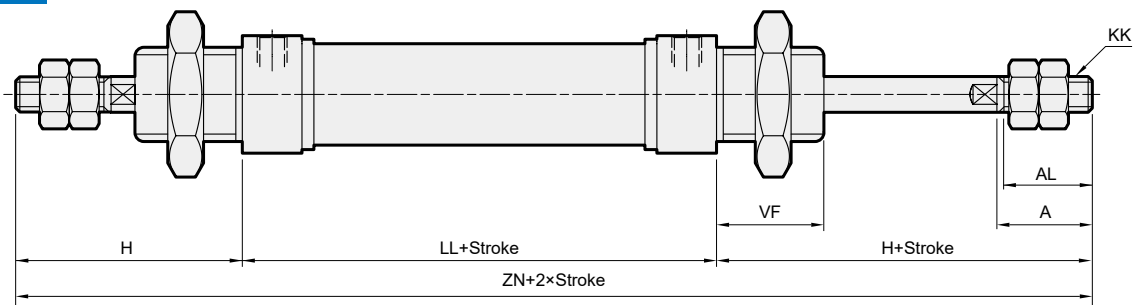
Unit: g

Model	LB	FA/FB	SDB	Y	I	YS	Pin	Floating pin	Rod nut	Cover nut
Tube I.D.										
ø8	42	16	16	4	—	—	2	—	1	8
ø10	42	16	16	4	—	—	2	—	1	8
ø12	65	25	24	13	15	—	4	—	2	16
ø16	65	25	24	13	15	18	5	5	2	11
ø20	103	67	103	40	42	50	10	10	4	20
ø25	103	67	103	72	82	90	19	18	8	20
ø32	160	—	111	—	—	—	—	—	8	28
ø40	246	—	164	—	—	—	—	—	10	41

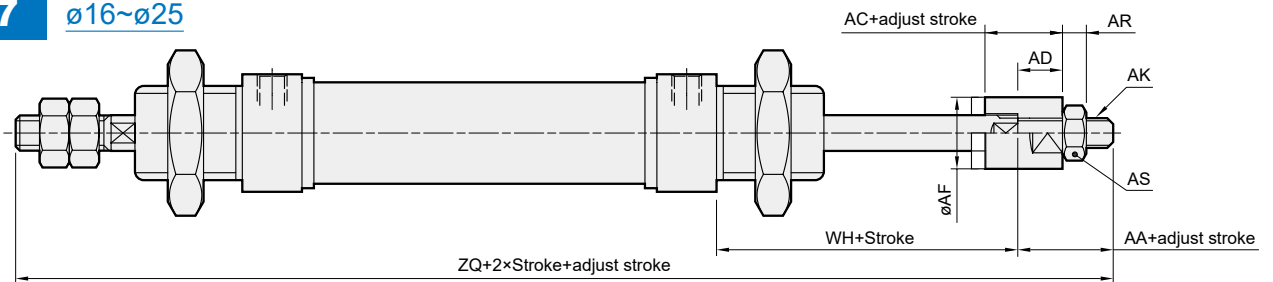
11 ø8~ø25 * ø32~ø40 dimensions, please refer to the link.



21 ø16~ø25



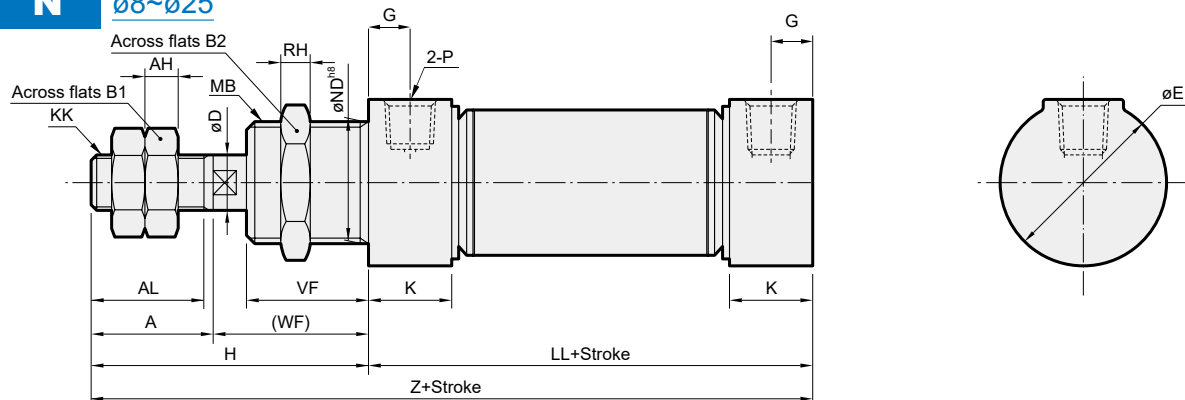
27 ø16~ø25



Code Tube I.D.	A	AA	AC	AD	AF	AH	AK	AL	AR	AS	B1	B2	CD	D	E	EH	EW	G	H	K	KK	L	LL
8,10	12	—	—	—	—	3.2	—	10.5	—	—	7	19	4	4	15	15	8	6	28	11	M4×0.7	2	46
12	16	—	—	—	—	5	—	14	—	—	10	24	6	6	20	20	12	6	38	11	M6×1.0	3	50
16	16	16	13	7.5	12	5	M5×0.8	14	4	8	10	22	6	6	20	20	12	5	38	10	M6×1.0	5.5	54.5
20	20	19	15	9.5	16	5	M8×1.25	17.5	5	13	13	30	8	8	27	27	16	8	44	15	M8×1.25	3	68
25	22	19	15	9.5	16	6	M8×1.25	19.5	5	13	17	30	8	10	27	27	16	7.5	50	15	M10×1.25	9	67

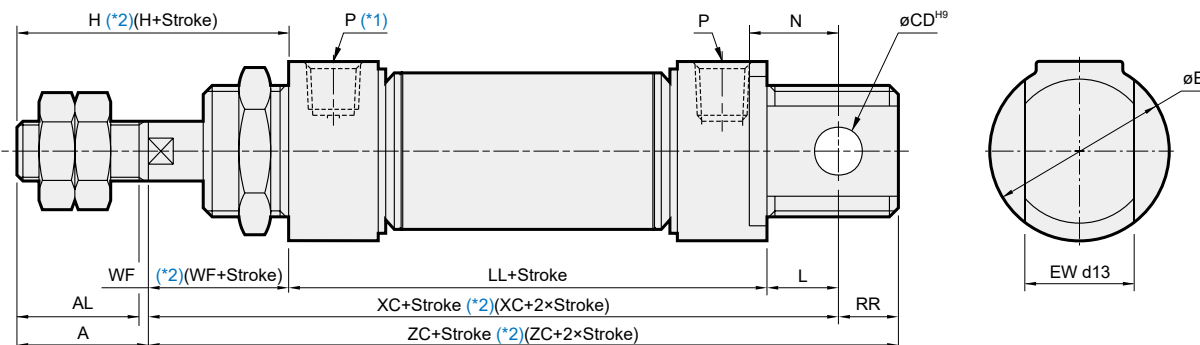
Code Tube I.D.	MB	N	ND	P	RH	RR	VF	WF	WH	XC	ZN	ZP	ZQ	ZZ
8,10	M12×1.25	6	12	M5×0.8	6	10	12	16	—	64	—	—	—	86
12	M16×1.5	9	16	M5×0.8	8	14	17	22	—	75	—	—	—	105
16	M16×1.5	9	16	M5×0.8	6	12.5	18	22	25.5	82	130.5	102	134	110.5
20	M22×1.5	12	22	G1/8	6	17	20	24	27	95	156	119	158	132
25	M22×1.5	12	22	G1/8	6	13	22	28	29.5	104	167	124.5	165.5	139

N $\phi 8 \sim \phi 25$



Code Tube I.D.	A	AH	AL	B1	B2	D	E	G	H	KK	K	LL	MB	ND	P	RH	VF	WF	Z
8	12	3.2	10.5	7	19	4	16.7	6	28	M4×0.7	11	46	M12×1.25	12	M5×0.8	6	12	16	74
10	12	3.2	10.5	7	19	4	16.7	6	28	M4×0.7	11	46	M12×1.25	12	M5×0.8	6	12	16	74
12	16	5	14	10	24	6	19.7	6	38	M6×1.0	11	50	M16×1.5	16	M5×0.8	8	17	22	88
16	16	5	14	10	22	6	20	5	38	M6×1.0	10	54.5	M16×1.5	16	M5×0.8	6	18	22	92.5
20	20	5	17.5	13	30	8	27	8	44	M8×1.25	15	68	M22×1.5	22	G1/8	6	20	24	112
25	22	6	19.5	17	30	10	27	7.5	50	M10×1.25	15	67	M22×1.5	22	G1/8	6	22	28	117

13 15 $\phi 16 \sim \phi 25$



*1. 15 type $\phi 16$ without this air port.

*2. () Dimension for 13 type.

Code Tube I.D.	A	AL	CD	E	EW	H	L	N	P	RR	WF	ZN
16	16	14	6	20	12	38	5.5	9	M5×0.8	12.5	22	130.5
20	20	17.5	8	27	16	44	3	12	G1/8	17	24	156
25	22	19.5	8	27	16	50	9	12	G1/8	13	28	167

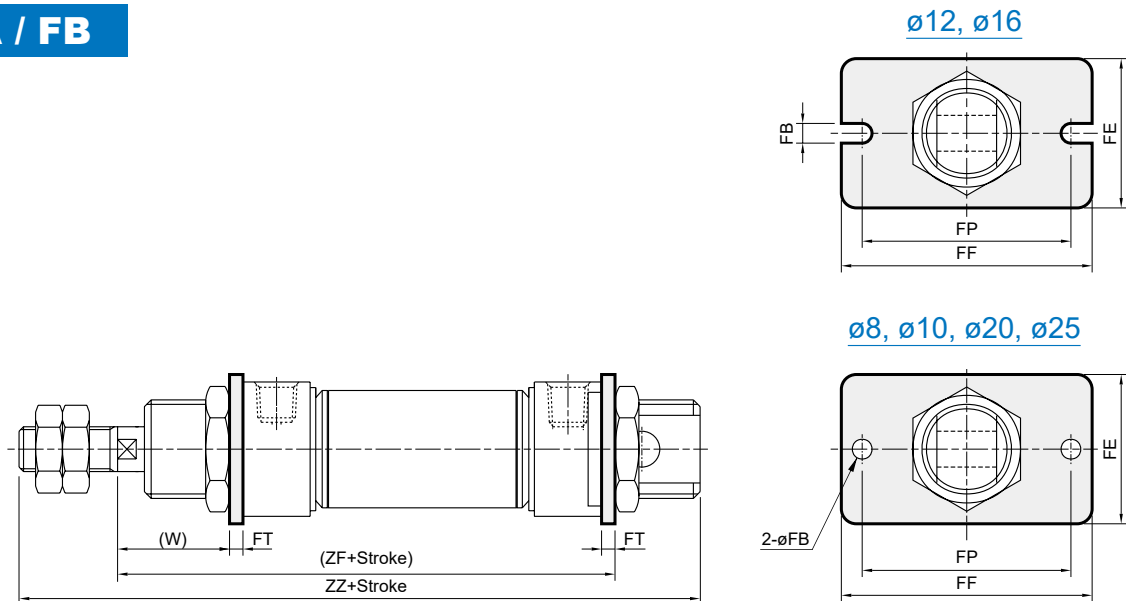
MCMI-13

Code Stroke Tube I.D.	LL			XC			ZC		
	1~50	51~100	101~150	1~50	51~100	101~150	1~50	51~100	101~150
16	73.5	99.5	125.5	101	127	153	113.5	139.5	165.5
20	93	118	143	120	145	170	137	162	187
25	90.5	115.5	140.5	127.5	152.5	177.5	140.5	165.5	190.5

MCMI-15

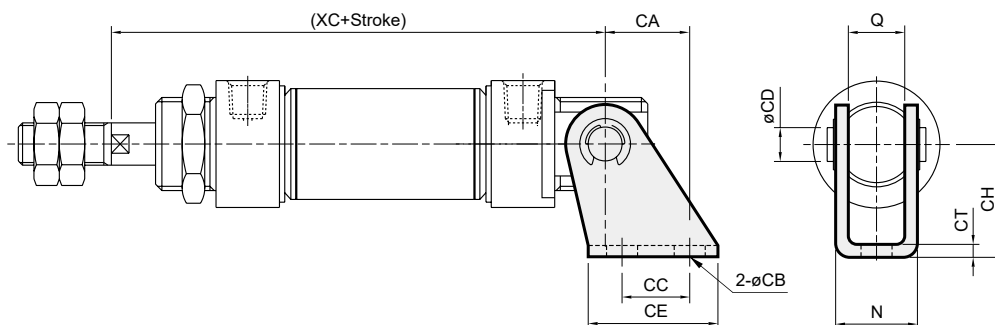
Code Stroke Tube I.D.	LL			XC			ZC		
	1~50	51~100	101~150	1~50	51~100	101~150	1~50	51~100	101~150
16	54.5	70	85.5	82	97.5	113	94.5	110	125.5
20	68	118	143	95	145	170	112	162	187
25	67	115.5	140.5	104	152.5	177.5	117	165.5	190.5

FA / FB



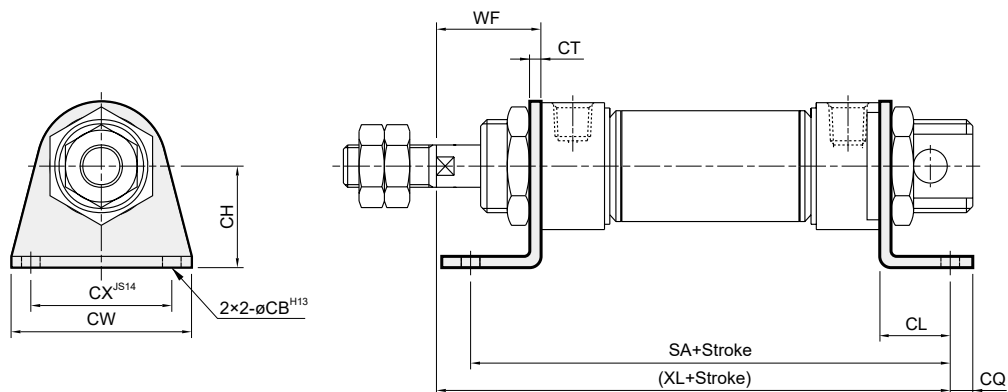
Code Tube I.D.	FB	FE	FF	FP	FT	W	ZF	ZZ
8	4.5	22	40	30	3.2	12.8	65.2	86
10	4.5	22	40	30	3.2	12.8	65.2	86
12	5.5	26	52	40	3.2	18.8	75.2	105
16	5.5	26	52	40	3.2	18.8	79.7	110.5
20	6.6	38	64	50	4.5	19.5	96.5	132
25	6.6	38	64	50	4.5	23.5	99.5	139

SDB



Code Tube I.D.	CA	CB	CC	CD	CE	CH	CT	N	Q	XC
8	11	4.5	12.5	4	20	24	2.5	13.1	8.1	64
10	11	4.5	12.5	4	20	24	2.5	13.1	8.1	64
12	13	5.5	15	6	25	27	3.2	18.5	12.1	75
16	13	5.5	15	6	25	27	3.2	18.5	12.1	82
20	16	6.6	20	8	32	30	3.2	22.5	16.1	95
25	16	6.6	20	8	32	30	3.2	22.5	16.1	104

LB

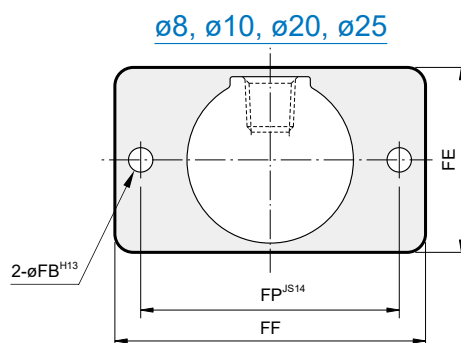
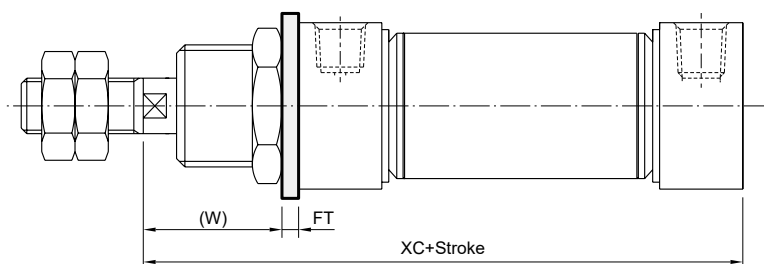
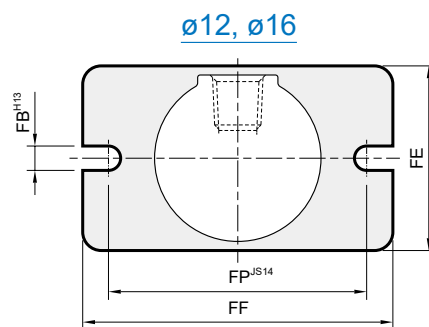


Code Tube I.D.	CB	CH	CL	CQ	CT	CW	CX	SA	XL	WF
8	4.5	16	11	5	3.2	35	25	68	73	28
10	4.5	16	11	5	3.2	35	25	68	73	28
12	5.5	20	14	6	4	42	32	78	86	38
16	5.5	20	14	6	4	42	32	82.5	90.5	38
20	6.6	25	15	8	3.2	54	40	98	107	44
25	6.6	25	15	8	3.2	54	40	97	110	50

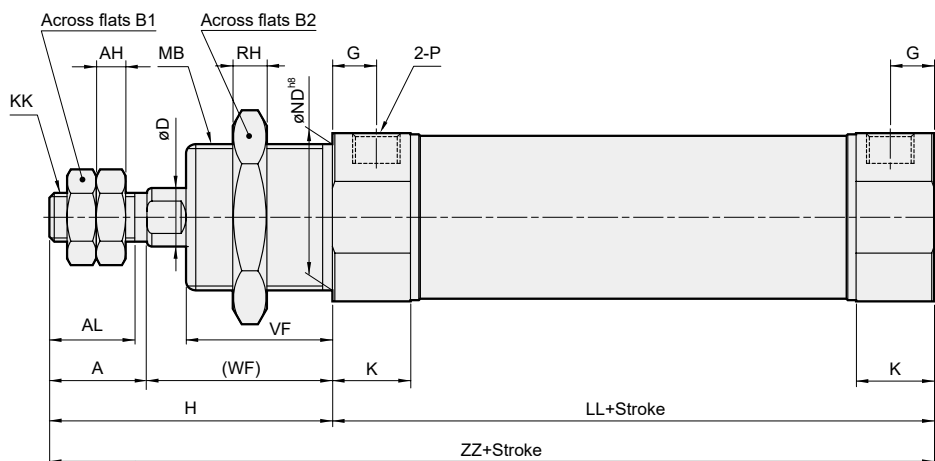
FA

N Non-pivot type

Code Tube I.D.	FB	FE	FF	FP	FT	W	XC
8	4.5	22	40	30	3.2	12.8	62
10	4.5	22	40	30	3.2	12.8	62
12	5.5	26	52	40	3.2	18.8	72
16	5.5	26	52	40	3.2	18.8	76.5
20	6.6	38	64	50	4.5	19.5	92
25	6.6	38	64	50	4.5	23.5	96

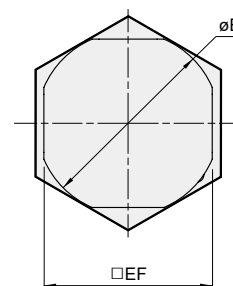


11



N

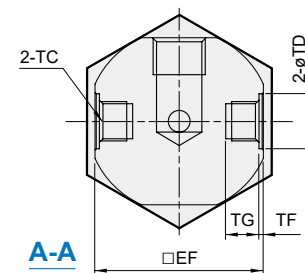
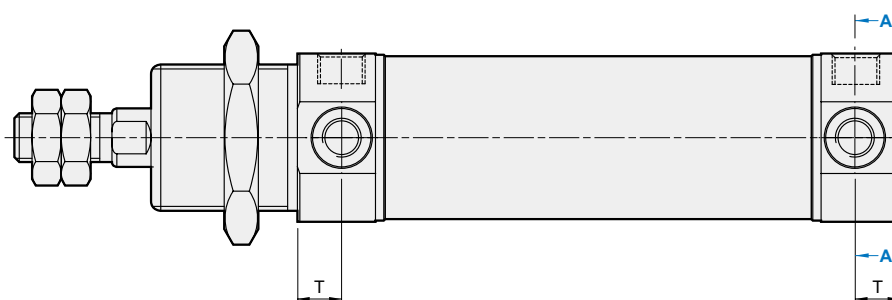
Non-pivot type



R

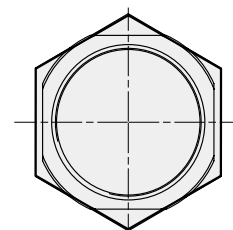
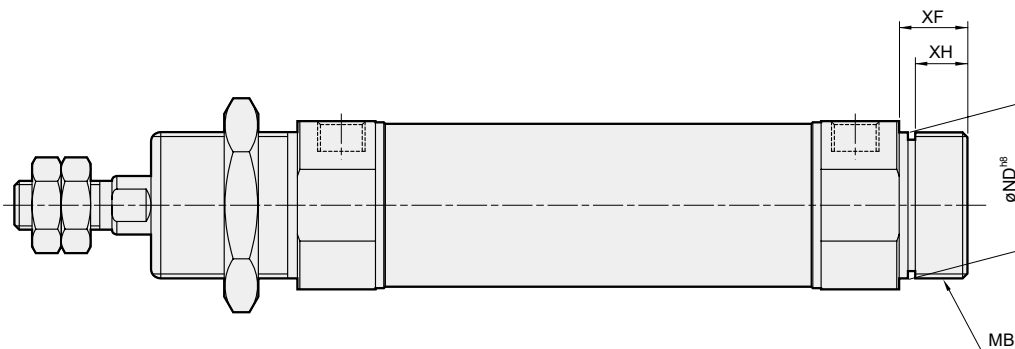
H

Rod / Head trunnion type



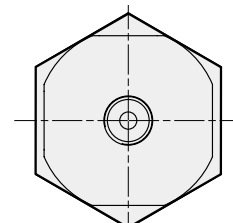
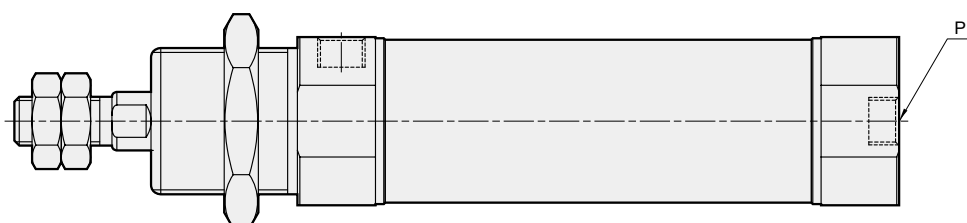
F

Head foot type



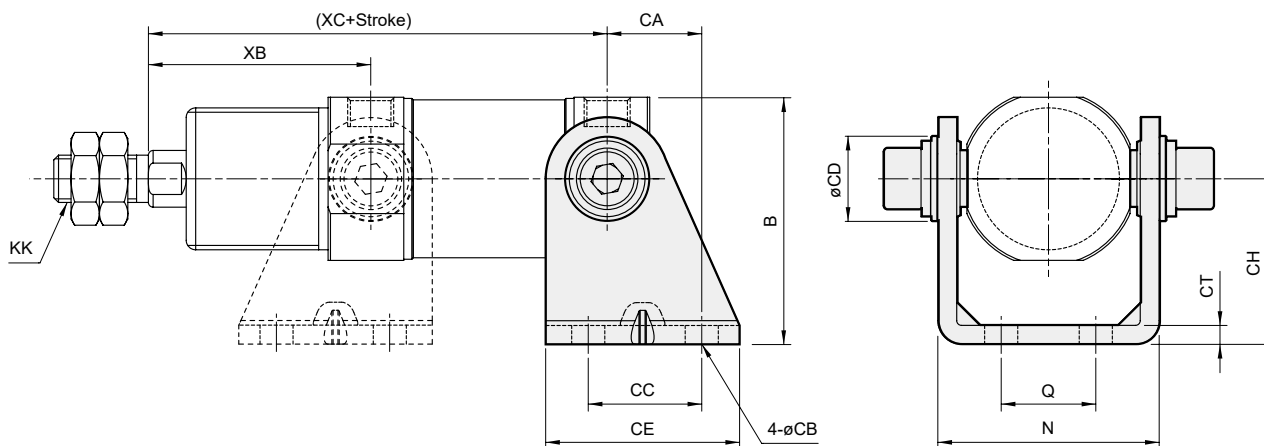
C

Axis port



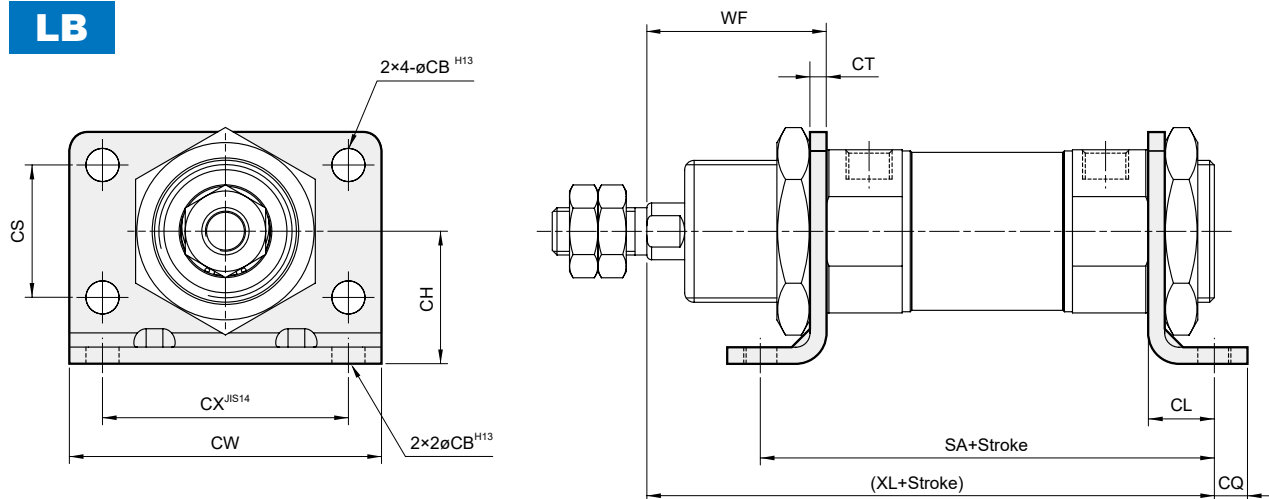
Code Tube I.D.	A	AH	AL	B1	B2	D	E	EF	G	H	KK	K	LL	MB	ND	P	RH	T	TC	TD	VF	WF	XF	XH	ZZ
32	20	5	17.5	17	38	12	37.5	34.5	9	58	M10×1.5	16	68	M30×1.5	30	G1/8	7	9	M8×1.0×6.5 dp	12	30	38	14	10.7	126
40	24	7	21	19	46	14	46.5	42.5	12	69	M12×1.75	22	89	M38×1.5	38	G1/4	8	12	M10×1.0×8 dp	14	35	45	16	12.2	158

SDB



Code Tube I.D.	B	CA	CB	CC	CD	CE	CH	CT	KK	N	Q	XC	XB
32	52.3	20	7	24	18	41	35	4	M10×1.5	46.8	20	97	49.5
40	61.3	27	9	30	22	52	40	4	M12×1.75	58.2	28	122	60

LB



Code Tube I.D.	CB	CH	CL	CQ	CT	CW	CX	CS	KK	SA	SC	SX	WF	XL
32	7	28	14	7	3.5	66	52	28	M10×1.5	96	47	48.5	38	120
40	9	33	20	10	3.5	80	60	30	M12×1.75	129	56	62.5	45	154

MINIATURE CYLINDER

Y connector

$\varnothing 8 \sim \varnothing 16$

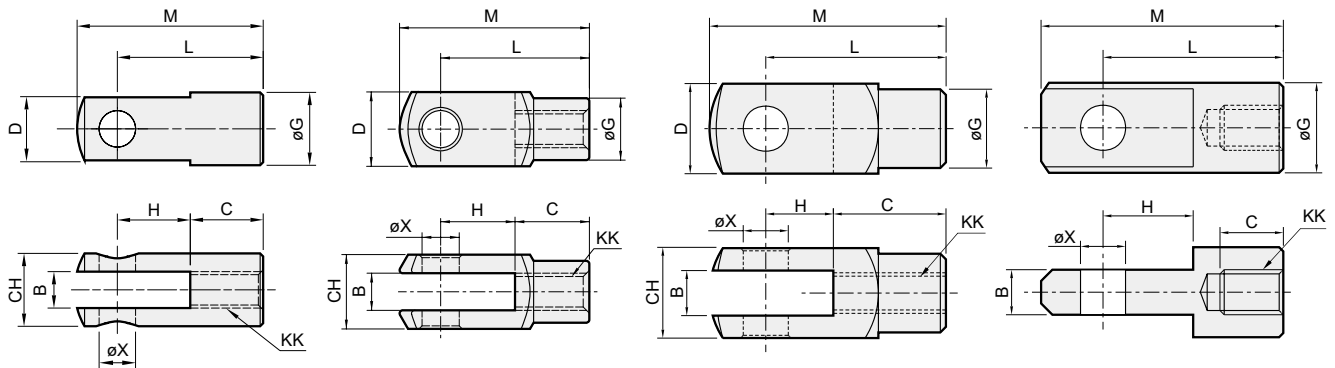
Not suitable for (S) floating pin

$\varnothing 16^*$

For (S) floating pin

$\varnothing 20 \sim \varnothing 40$

I connector

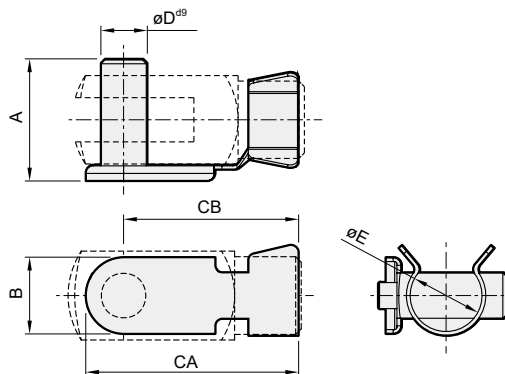


Code	B		C		CH		D		G		H		L		M		X
Tube I.D.	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	
8,10	4 ^{+0.4} _{+0.1}	—	8	—	8	—	8	—	—	—	8	—	16	—	20.75	—	4 ^{+0.1} _{+0.01}
12,16	6 ^{+0.4} _{+0.1}	6 ^{-0.2} _{-0.3}	12	8	12	—	—	—	12	12	12	10	24	21	31	28	6 ^{+0.1} _{+0.01}
16*	6 ^{+0.4} _{+0.1}	—	12	—	12	—	12	—	10	—	12	—	24	—	31	—	6 ^{+0.03} ₀
20	8 ^{+0.5} _{+0.15}	8 ^{-0.1} _{-0.2}	16	14	16	—	16	—	14	16	16	12	32	32	42	42	8 ^{+0.1} _{+0.01}
25,32	10 ^{+0.5} _{+0.15}	10 ^{-0.1} _{-0.2}	20	17	19	—	19	—	18	20	20	15	40	40	52	52	10 ^{+0.1} _{+0.01}
40	12 ^{+0.5} _{+0.15}	12 ^{-0.1} _{-0.2}	24	21	22	—	22	—	20	24	24	18	48	48	62	62	12 ^{+0.1} _{+0.01}

Code	KK (MCMA)		KK (MCM I)	
Tube I.D.	Y	I	Y	I
8,10	M4×0.7	—	M4×0.7	—
12,16,16*	M6×1.0			
20	M8×1.25			
25	M10×1.25			
32	M10×1.25	—	M10×1.5	—
40	M12×1.25	—	M12×1.75	—

PIN

$\varnothing 16^* \sim \varnothing 40$

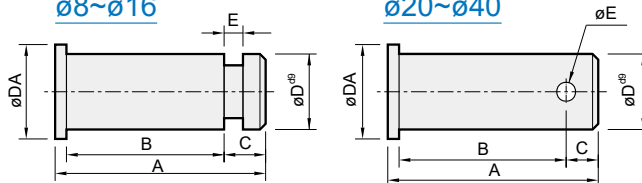


for floating pin

Code	A	B	CA	CB	D ^{d9}	E
Tube I.D.						
16*	16	10	28	23	$\varnothing 6$ ^{-0.03} _{-0.06}	9.5
20	22	12	37	31	$\varnothing 8$ ^{-0.04} _{-0.08}	13.5
25,32	26	14	45	38	$\varnothing 10$ ^{-0.04} _{-0.08}	17
40	31	16	54	46	$\varnothing 12$ ^{-0.05} _{-0.09}	19

$\varnothing 8 \sim \varnothing 16$

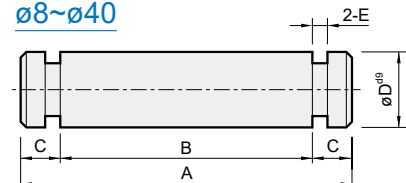
$\varnothing 20 \sim \varnothing 40$



for Y & I connector

Code	A	B	C	D ^{d9}	DA	E	Split pin
Tube I.D.							
8,10	12	8.5	2	4 ^{-0.03} _{-0.06}	8	0.7	E3
12,16	18.5	15	2	6 ^{-0.03} _{-0.06}	10	0.7	E4
20	24.5	20.5	2.5	8 ^{-0.04} _{-0.08}	12	$\varnothing 2.5$	2.5×16L
25,32	30	25	3.5	10 ^{-0.04} _{-0.08}	14	$\varnothing 3.2$	3.2×20L
40	37	30	5	12 ^{-0.05} _{-0.09}	16	$\varnothing 3.2$	3.2×20L

$\varnothing 8 \sim \varnothing 40$



for SDB

Code	A	B	C	D ^{d9}	E	Split pin
Tube I.D.						
8,10	18	14	2	4 ^{-0.03} _{-0.06}	0.7	E3.2
12	23.5	19.5	2	6 ^{-0.03} _{-0.06}	0.7	E5
16	21	17	2	6 ^{-0.03} _{-0.06}	0.7	E5
20,25	30	25	2.5	8 ^{-0.04} _{-0.08}	0.9	E7
32	33	27	3	10 ^{-0.04} _{-0.08}	0.9	E9
40	37	31	3	12 ^{-0.05} _{-0.09}	0.9	E9