



Features



Video



Special spec



Rod end shape



Technical data



Caution for safety  
(Read before installing)



### Features

#### ■ Non lubrication

Special housing and bushing enables self lubrication of piston rod.

#### ■ High quality long service life

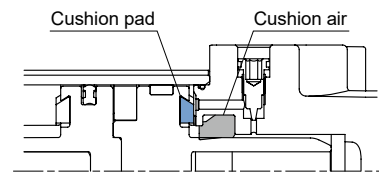
Hard anodised aluminium cylinder tubes offer a high resistance to corrosion and low internal friction.

#### ■ Automatic air cushioning

Pneumatic cushioning at both ends without adjusting.

#### ■ Low noise level

Add cushion pad to reduce impact sound and vibration.



#### ■ ISO 15552 standard specification

Conforms to ISO 15552 specification enabling worldwide interchangeability.

#### ■ Easy to insert reed switch

With four grooves on the tube, proximity and reed sensors can be easily inserted into any position.

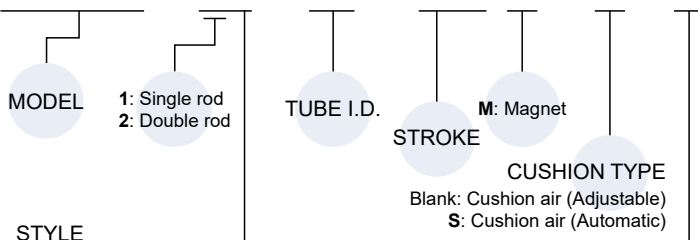
### Table for standard stroke

Tube I.D.	Stroke (mm)	Max. stroke(mm)	
		Style 11	Style 21/27
ø32,40	50, 75, 100, 125, 150, 175,	1800	850
ø50,63	200, 250, 300, 350, 400, 450,	2000	950
ø80,100	500, 600, 700, 800	2500	1200




\* Please contact us if the stroke is out of specification.

### Order example

**MCQI3 - 11 - 63 - 100 M - S - T**



STYLE



Code	Symbol	Description
1 1		Double acting / Male thread
2 1		Double rod / Double acting / Male thread
2 7		Double rod / Adjustable male thread Please mark "adjustable stroke" at order list

TYPE





T: Add "T" when both M and TA / TB are selected.






\* When both magnet (M) and mounting accessories (TA or TB) are selected, please add the suffix "T" at the end of the model number.







### Specification

Model	MCQI3
Tube I.D. (mm)	32, 40, 50, 63, 80, 100
Medium	Air
Operating pressure range	0.05~1 MPa
Proof pressure	1.5 MPa
Ambient temperature	-5~+60°C (No freezing)
Available speed range	50~500 mm/sec
Sensor switch	RDT, RQT  , RCI 




### Accessories & Connector

Accessories							
Code	LB (Purchase 2 pcs)	CA	CA2	CB	CB2	CDB (Purchase CB+PIN)	CDB2 (Purchase CB2+PIN)
Mounting Tube I.D.							
ø32	LB-Q2-32	CA-Q2-32	CA2-Q2-32	CB-Q2-32	CB2-Q2-32	CDB-Q2-32	CDB2-Q2-32
ø40	LB-Q2-40	CA-Q2-40	CA2-Q2-40	CB-Q2-40	CB2-Q2-40	CDB-Q2-40	CDB2-Q2-40
ø50	LB-Q2-50	CA-Q2-50	CA2-Q2-50	CB-Q2-50	CB2-Q2-50	CDB-Q2-50	CDB2-Q2-50
ø63	LB-Q2-63	CA-Q2-63	CA2-Q2-63	CB-Q2-63	CB2-Q2-63	CDB-Q2-63	CDB2-Q2-63
ø80	LB-Q2-80	CA-Q2-80	CA2-Q2-80	CB-Q2-80	CB2-Q2-80	CDB-Q2-80	CDB2-Q2-80
ø100	LB-Q2-100	CA-Q2-100	CA2-Q2-100	CB-Q2-100	CB2-Q2-100	CDB-Q2-100	CDB2-Q2-100

Accessories				Rod nut	
Code	FAC	FBC	FAC2	FBC2	NUT
Mounting Tube I.D.					
ø32	FAC-Q2-32		FAC2-Q2-32		NUT-M10x1.25x5Hx17B
ø40	FAC-Q2-40		FAC2-Q2-40		NUT-M12x1.25x6Hx19B
ø50	FAC-Q2-50		FAC2-Q2-50		NUT-M16x1.5x8Hx24B
ø63	FAC-Q2-63		FAC2-Q2-63		
ø80	FAC-Q2-80		FAC2-Q2-80		NUT-M20x1.5x10Hx30B
ø100	FAC-Q2-100		FAC2-Q2-100		

Accessories <small>△ Factory-installed, not available for separate purchase or field assembly</small>				Connector		
Code	TA	TB	TC	Y	I	YS (Y+Floating pin)
Mounting Tube I.D.						
ø32	TC-Q3-32			Y-Q2-32	I-Q2-32	YS-Q2-32
ø40	TC-Q3-40			Y-Q2-40	I-Q2-40	YS-Q2-40
ø50	TC-Q3-50			Y-Q2-50	I-Q2-50	YS-Q2-50
ø63	TC-Q3-63					
ø80	TC-Q3-80			Y-Q2-80	I-Q2-80	YS-Q2-80
ø100	TC-Q3-100					

### Pin

Applicable	YS connector	Y&I connector	CA&CB accessories
Code	PIN-S	PIN-Y-P (with split pin)	PIN-CB-P (with split pin)
Fig Tube I.D.			
ø32	PIN-Q2-32-S	PIN-Q2-32-2-P	PIN-Q2-32-1-P
ø40	PIN-Q2-40-S	PIN-Q2-40-2-P	PIN-Q2-40-1-P
ø50	PIN-Q2-50-S	PIN-Q2-50-2-P	PIN-Q2-50-1-P
ø63			PIN-Q2-63-1-P
ø80	PIN-Q2-80-S	PIN-Q2-80-2-P	PIN-Q2-80-1-P
ø100			PIN-Q2-100-1-P

### Order example of self-assembled

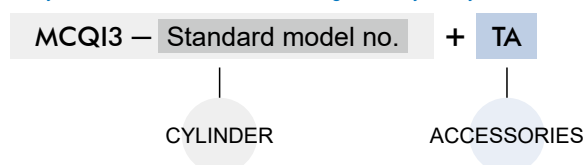
The tube I.D. ø40 of LB accessories, Y connector and pin.

No.	Order number	Qty
1	LB-Q2-40	2
2	Y-Q2-40	1
3	PIN-Q2-40-2-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 "+".



# MCQI3-11 Inside structure & Parts list

ISO 15552 **STANDARD PROFILE CYLINDER**

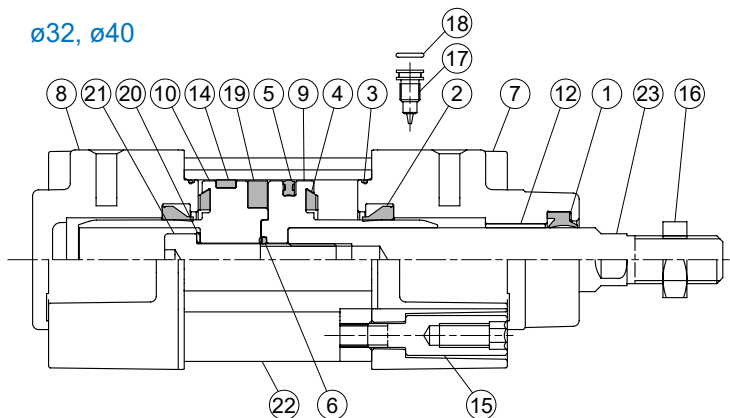


Mindman

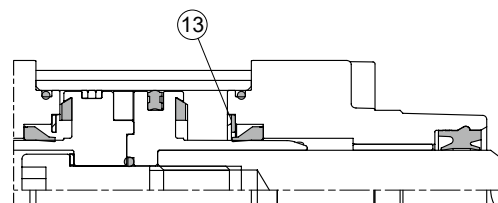
## Single rod 11 type

Cushion air (Adjustable)

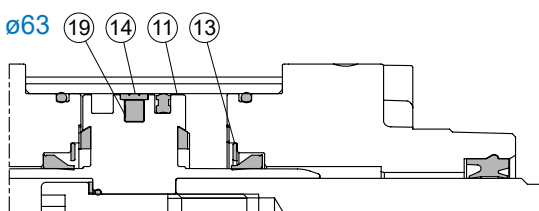
ø32, ø40



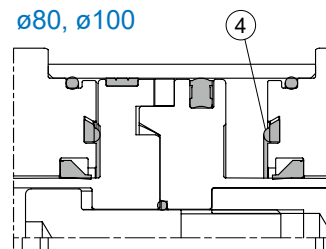
ø50



ø63



ø80, ø100



## Material

No.	Part name	Material	Q'y	Component parts (inclusion)	Repair kits (inclusion)	Note
1	Rod packing	NBR / TPU	1	●	●	ø50, 63: TPU
2	Cushion packing	NBR	2	●	●	
3	O-ring	NBR	2	●	●	
4	Cushion pad	NBR	2	●	●	
5	Piston packing	NBR	1	●	●	
6	O-ring	NBR	1	●	●	
7	Rod cover	Aluminum alloy	1	●		
8	Head cover	Aluminum alloy	1	●		
9	Piston #1	Aluminum alloy	1	●		
10	Piston #2	Aluminum alloy	1	●		
11	Piston	Aluminum alloy	1	●		Only for ø63
12	Bush	Bearing alloy	1	●		
13	Washer	Carbon steel	2	●		Only for ø50, ø63
14	Wear ring	Resin	1	●		
15	Screw	Carbon steel	8	●		
16	Piston rod nut	Carbon steel	1	●		
17	Needle valve	Copper alloy	2	●		
18	O-ring	NBR	2	●		
19	Magnet ring	Magnet material	1	◎		◎ Option
20	Washer	Carbon steel	1	●		
21	Hex bolt	Carbon steel	1	●		
22	Cylinder tube	Aluminum alloy	1			
23	Piston rod *1	Carbon steel	1			

\*1. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

# MCQI3-11-S Inside structure & Parts list

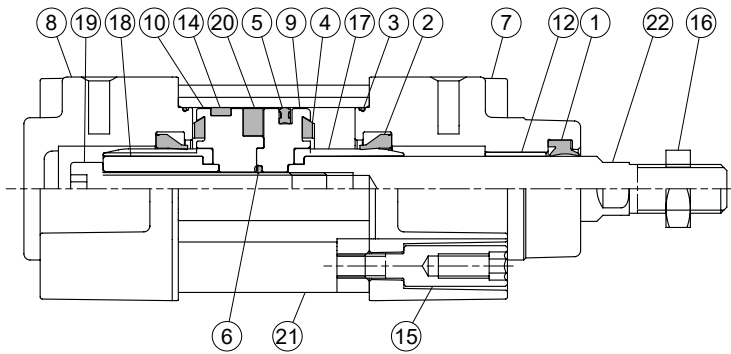
ISO 15552 **STANDARD PROFILE CYLINDER**



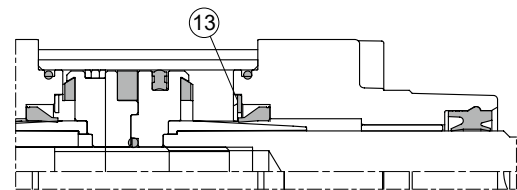
## Single rod 11 type

Cushion air (Automatic)

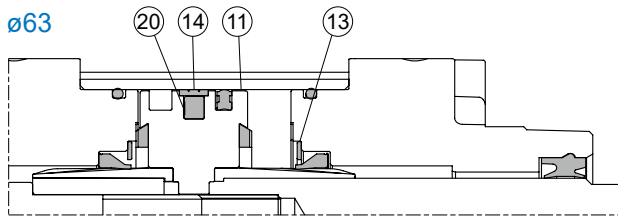
ø32, ø40



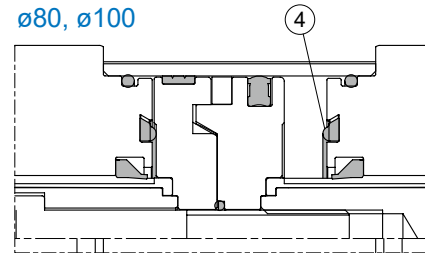
ø50



ø63



ø80, ø100



## Material

No.	Part name	Material	Q'y	Component parts (inclusion)	Repair kits (inclusion)	Note
1	Rod packing	NBR / TPU	1	●	●	ø50, 63: TPU
2	Cushion packing	NBR	2	●	●	
3	O-ring	NBR	2	●	●	
4	Cushion pad	NBR	2	●	●	
5	Piston packing	NBR	1	●	●	
6	O-ring	NBR	1	●	●	
7	Rod cover	Aluminum alloy	1	●		
8	Head cover	Aluminum alloy	1	●		
9	Piston #1	Aluminum alloy	1	●		
10	Piston #2	Aluminum alloy	1	●		
11	Piston	Aluminum alloy	1	●		Only for ø63
12	Bush	Bearing alloy	1	●		
13	Washer	Carbon steel	2	●		Only for ø50, ø63
14	Wear ring	Resin	1	●		
15	Screw	Carbon steel	8	●		
16	Piston rod nut	Carbon steel	1	●		
17	Shock absorber axis	Resin	2	●		
18	Piston nut	Aluminum alloy	1	●		
19	Hex bolt	Carbon steel	1	●		
20	Magnet ring	Magnet material	1	◎		◎ Option
21	Cylinder tube	Aluminum alloy	1			
22	Piston rod *1	Carbon steel	1			

\*1. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

# MCQI3-21/27 Inside structure & Parts list

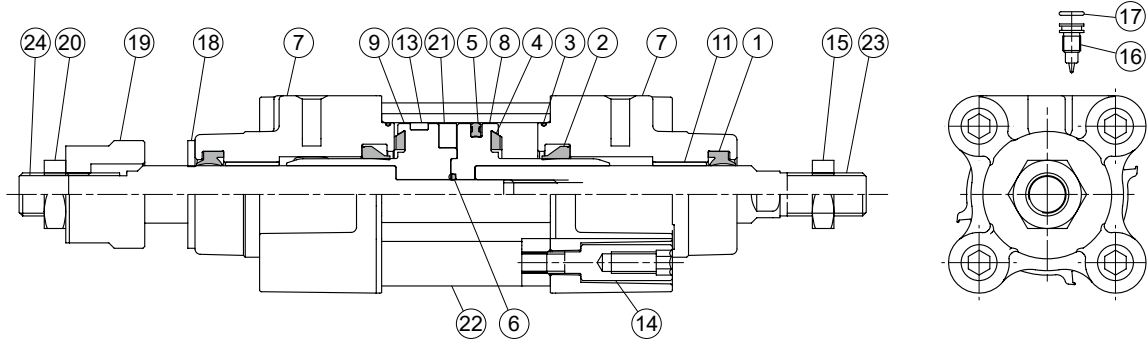
ISO 15552 **STANDARD PROFILE CYLINDER**



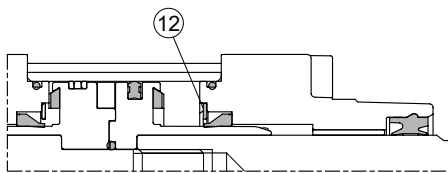
## Double rod 21 / 27 type

Cushion air (Adjustable)

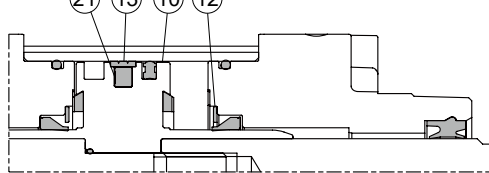
ø32, ø40



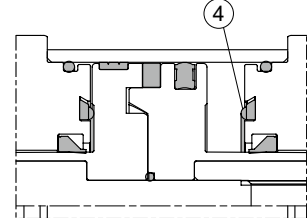
ø50



ø63



ø80, ø100



## Material

No.	Part name	Material	Q'y	Component parts (inclusion)		Repair kits (inclusion)	Note
				21 type	27 type		
1	Rod packing	NBR / TPU	2	●	●	●	ø50, 63: TPU
2	Cushion packing	NBR	2	●	●	●	
3	O-ring	NBR	2	●	●	●	
4	Cushion pad	NBR	2	●	●	●	
5	Piston packing	NBR	1	●	●	●	
6	O-ring	NBR	1	●	●	●	
7	Rod cover	Aluminum alloy	2	●	●		
8	Piston #1	Aluminum alloy	1	●	●		
9	Piston #2	Aluminum alloy	1	●	●		
10	Piston	Aluminum alloy	1	●	●		Only for ø63
11	Bush	Bearing alloy	2	●	●		
12	Washer	Carbon steel	2	●	●		Only for ø50, ø63
13	Wear ring	Resin	1	●	●		
14	Screw	Carbon steel	8	●	●		
15	Piston rod nut	Carbon steel	1	●	●		
16	Needle valve	Copper alloy	2	●	●		
17	O-ring	NBR	2	●	●		
18	Gasket	PU	1		●		
19	Adjustable nut	Carbon steel	1		●		
20	Hex nut	Carbon steel	1		●		
21	Magnet ring	Magnet material	1	◎	◎		◎ Option
22	Cylinder tube	Aluminum alloy	1				
23	Piston rod #1 *1	Carbon steel	1				
24	Piston rod #2 *1	Carbon steel	1				

\*1. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

# MCQI3-21/27-S Inside structure & Parts list

ISO 15552 **STANDARD PROFILE CYLINDER**

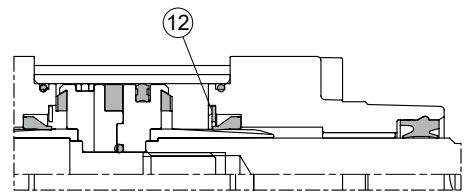
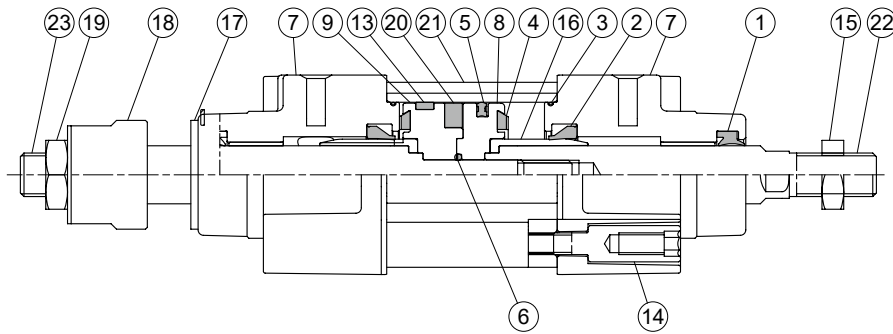


## Double rod 21 / 27 type

Cushion air (Automatic)

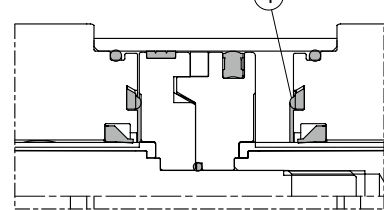
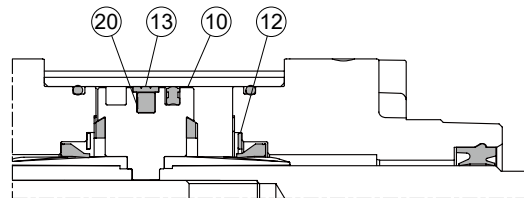
ø32, ø40

ø50



ø63

ø80, ø100



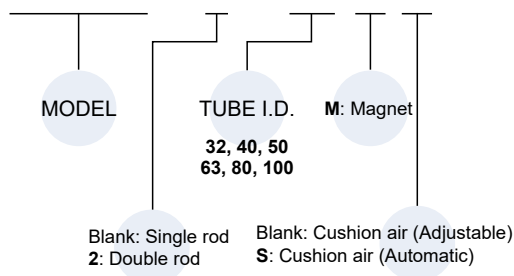
## Material

No.	Part name	Material	Q'y	Component parts (inclusion)		Repair kits (inclusion)	Note
				21 type	27 type		
1	Rod packing	NBR / TPU	2	●	●	●	ø50, 63: TPU
2	Cushion packing	NBR	2	●	●	●	
3	O-ring	NBR	2	●	●	●	
4	Cushion pad	NBR	2	●	●	●	
5	Piston packing	NBR	1	●	●	●	
6	O-ring	NBR	1	●	●	●	
7	Rod cover	Aluminum alloy	2	●	●		
8	Piston #1	Aluminum alloy	1	●	●		
9	Piston #2	Aluminum alloy	1	●	●		
10	Piston	Aluminum alloy	1	●	●		Only for ø63
11	Bush	Bearing alloy	2	●	●		
12	Washer	Carbon steel	2	●	●		Only for ø50, ø63
13	Wear ring	Resin	1	●	●		
14	Screw	Carbon steel	8	●	●		
15	Piston rod nut	Carbon steel	1	●	●		
16	Shock absorber axis	Resin	2	●	●		
17	Gasket	PU	1		●		
18	Adjustable nut	Carbon steel	1		●		
19	Hex nut	Carbon steel	1		●		
20	Magnet ring	Magnet material	1	◎	◎		◎ Option
21	Cylinder tube	Aluminum alloy	1				
22	Piston rod #1 *1	Carbon steel	1				
23	Piston rod #2 *1	Carbon steel	1				

\*1. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

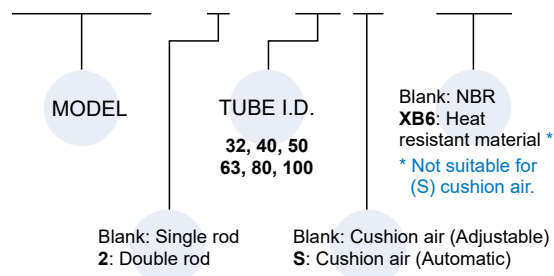
### Order example of component parts

CP – MCQI3 – 2 – 63 M S



### Order example of repair kits

PS – MCQI3 – 2 – 63 S – XB6



\* Order example for Rc or NPT thread please contact us.

### Cylinder & accessories weight

#### Cylinder weight

Unit: kg

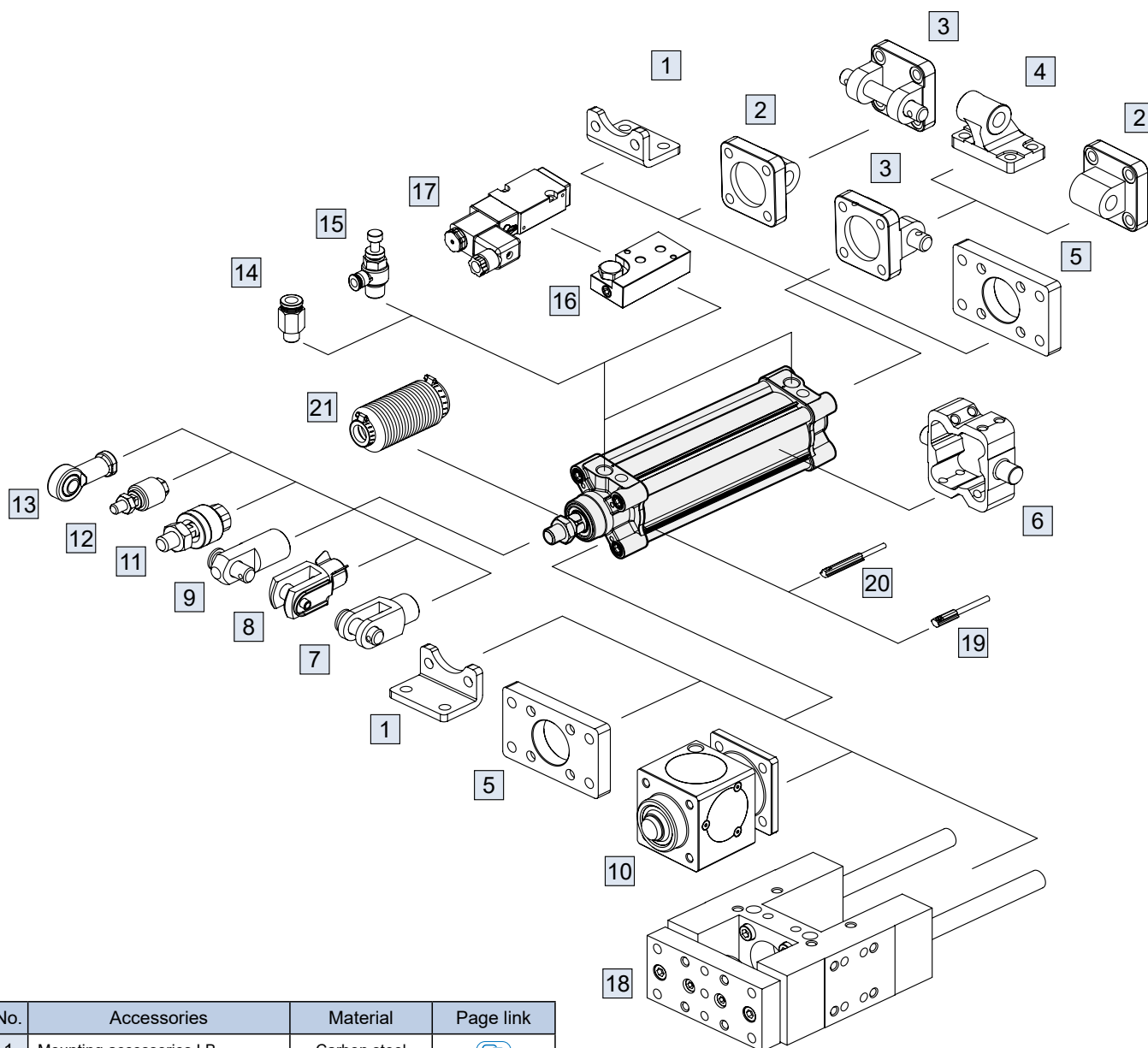
Model	Basic weight MCQI3-11	Basic weight (magnet) MCQI3-11	Basic weight MCQI3-11-S	Basic weight (magnet) MCQI3-11-S	Stroke 25 mm MCQI3-11-(S)
Tube I.D.					
ø32	0.534	0.540	0.531	0.537	0.062
ø40	0.789	0.801	0.783	0.795	0.088
ø50	1.300	1.317	1.293	1.310	0.120
ø63	1.785	1.805	1.774	1.794	0.129
ø80	2.653	2.680	2.638	2.665	0.185
ø100	3.949	3.984	3.885	3.920	0.236

#### Accessories weight

Unit: kg

Model	LB	CA	CA2	CB	CB2	CDB	CDB2	FAC/ FBC	FAC2/ FBC2	TA/TB/TC
Tube I.D.										
ø32	0.163	0.213	0.07	0.185	0.07	0.170	0.06	0.235	0.07	0.208
ø40	0.211	0.253	0.09	0.211	0.10	0.230	0.08	0.265	0.09	0.282
ø50	0.315	0.390	0.16	0.352	0.15	0.410	0.12	0.460	0.17	0.377
ø63	0.395	0.670	0.23	0.544	0.23	0.550	0.18	0.684	0.20	0.675
ø80	0.816	1.076	0.40	0.982	0.45	0.870	0.28	1.508	0.40	1.025
ø100	1.014	1.587	0.50	1.493	0.60	1.400	0.45	1.975	0.56	1.680

Model	Y	I	Pin		YS
			Y / I	CA / CB	
Tube I.D.					
ø32	0.070	0.080	0.02	0.040	0.018
ø40	0.115	0.141	0.03	0.065	0.031
ø50	0.272	0.334	0.08	0.072	0.070
ø63	0.272	0.334	0.08	0.145	0.070
ø80	0.551	0.553	0.16	0.179	0.150
ø100	0.551	0.553	0.16	0.330	0.150

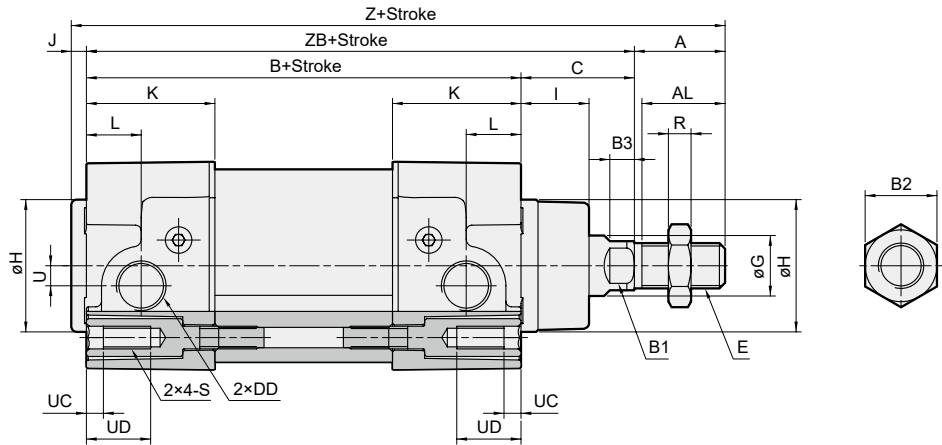
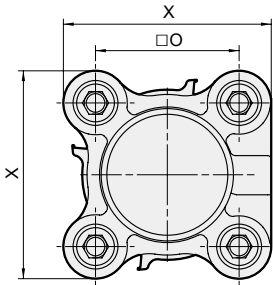


No.	Accessories	Material	Page link
1	Mounting accessories LB	Carbon steel	<a href="#">↗</a>
2	Mounting accessories CA	Cast iron	<a href="#">↗</a>
	Mounting accessories CA2	Aluminum alloy	<a href="#">↗</a>
3	Mounting accessories CB+PIN	Cast iron / *1	<a href="#">↗</a> , <a href="#">↗</a>
	Mounting accessories CB2+PIN	Aluminum alloy	<a href="#">↗</a> , <a href="#">↗</a>
4	Mounting accessories CDB	Cast iron	<a href="#">↗</a>
	Mounting accessories CDB2	Aluminum alloy	<a href="#">↗</a>
5	Mounting accessories FAC/FBC	Carbon steel	<a href="#">↗</a>
	Mounting accessories FAC2/FBC2	Aluminum alloy	<a href="#">↗</a>
6	Mounting accessories TA/TB/TC	Cast iron	<a href="#">↗</a>
7	Accessories Y+PIN	Cast iron / *1	<a href="#">↗</a>
8	Accessories YS (Y+Floating pin)	Carbon steel	<a href="#">↗</a>
9	Accessories I+PIN	Carbon steel	<a href="#">↗</a>
10	Locking unit MCBQI3	Aluminum alloy+*2	<a href="#">↗</a>

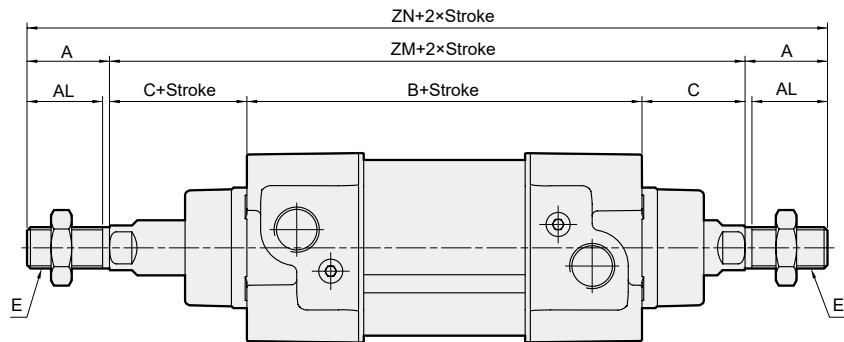
No.	Accessories	Material	Page link
11	Floating joint MFC	Carbon steel	<a href="#">↗</a>
12	Floating joint MFCS	Carbon steel	<a href="#">↗</a>
13	Female rod ends PHS	Carbon steel	<a href="#">↗</a>
14	Fitting PC (PISCO)	—	<a href="#">↗</a>
15	Speed controller JSC (PISCO)	—	<a href="#">↗</a>
16	Cylinder link seats MVSN-300-C *3	Aluminum alloy	<a href="#">↗</a>
17	Solenoid valve MVSN-220 / 300 *3	—	<a href="#">↗</a> , <a href="#">↗</a>
18	Twin-guide cylinders MGTB/TU/TX	—	<a href="#">↗</a>
19	Sensor switch R*T	—	<a href="#">↗</a>
20	Sensor switch RCI	—	<a href="#">↗</a>
21	Protective bellows kit	NBR	—

\*1. PIN material is carbon steel. \*2. Bronze alloy.  
\*3. Only for tube I.D. ø40, ø50.

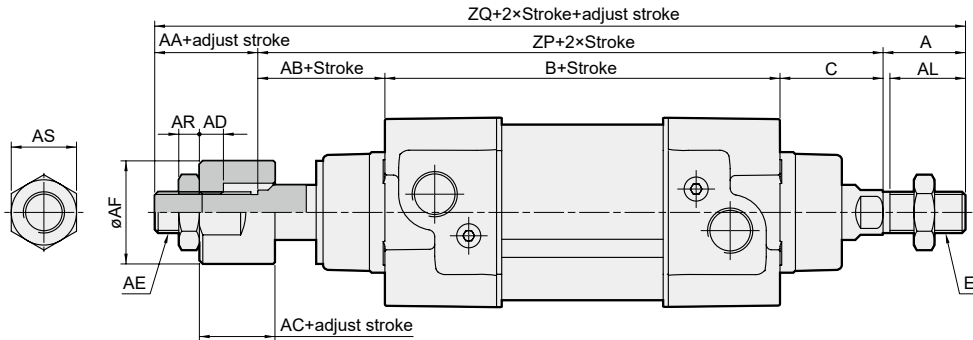
11



21



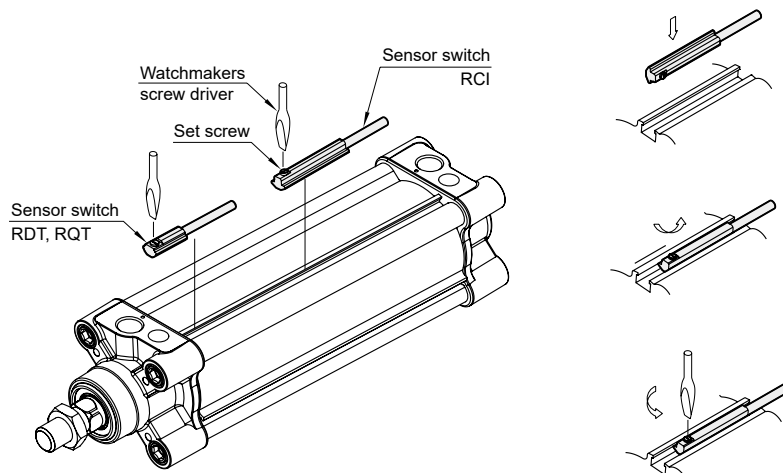
27



Code Tube I.D.	A	AA	AB	AC	AD	AE	AF	AL	AR	AS	B	B1	B2	B3	C	DD	E	G	H	I	J	K	L	O
32	22	16	26	12	7	M10×1.25	20	20	5	17	94	10	17	4	26	G1/8	M10×1.25	12	30	15	4	30.5	20	32.5
40	24	20	27	12	7	M12×1.25	30	22	6	19	105	13	19	6.5	30	G1/4	M12×1.25	16	35	18	4	34	14.5	38
50	32	18	34	15	10	M16×1.5	40	30	8	24	106	17	24	6	37	G1/4	M16×1.5	20	40	28	4	31	16	46.5
63	32	20	32	15	10	M16×1.5	40	30	8	24	121	17	24	8	37	G3/8	M16×1.5	20	45	26	4	33	17	56.5
80	40	32	41	20	14	M22×1.5	50	38	13	32	128	22	30	10	46	G3/8	M20×1.5	25	45	32.5	4	35.5	20.5	72
100	40	30	46	20	14	M22×1.5	50	38	13	32	138	22	30	10	51	G1/2	M20×1.5	25	55	37.5	4	37	19	89

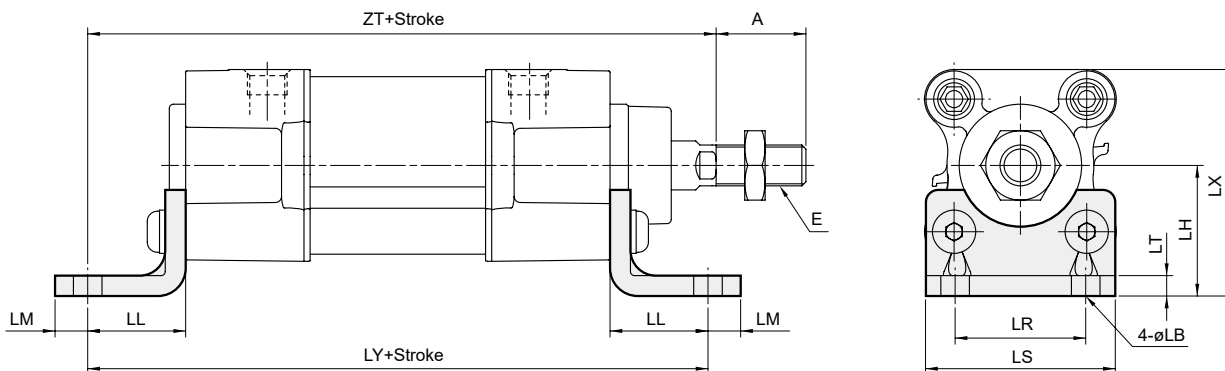
Code Tube I.D.	R	S	U	UC	UD	X	Z	ZB	ZM	ZN	ZP	ZQ
32	5	M6×1.0	4.5	4.5	16	47	146	120	146	190	146	184
40	6	M6×1.0	5.3	4.5	16	55	163	135	165	213	162	206
50	8	M8×1.25	8.5	4.5	16	65	179	143	180	244	177	227
63	8	M8×1.25	8	4.5	16	78	194	158	195	259	190	242
80	10	M10×1.5	9	4.5	18	95	218	174	220	300	215	287
100	10	M10×1.5	13	4.5	18	115	233	189	240	320	235	305

### ■ Installation of sensor switch



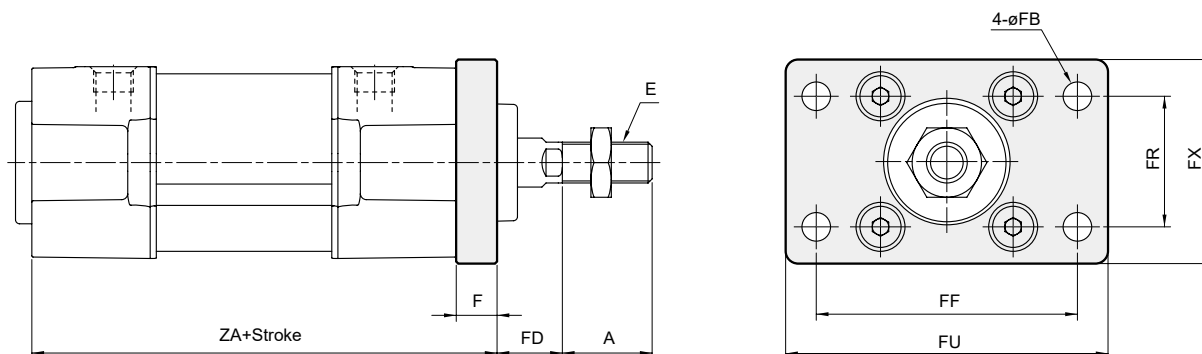
### ■ Mounting accessories

#### LB

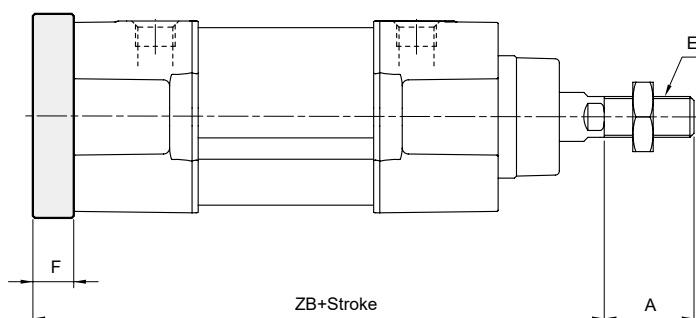


Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
32	22	M10×1.25	7	32	24	8	32	47	5	55.5	142	144
40	24	M12×1.25	9	36	28	10	36	53	5	63.2	161	163
50	32	M16×1.5	9	45	32	10	45	65	5	77.5	170	175
63	32	M16×1.5	9	50	32	10	50	75	5	89.0	185	190
80	40	M20×1.5	12	63	41	13	63	95	6	110.5	210	215
100	40	M20×1.5	14	71	41	13	75	115	6	128.5	220	230

### FAC

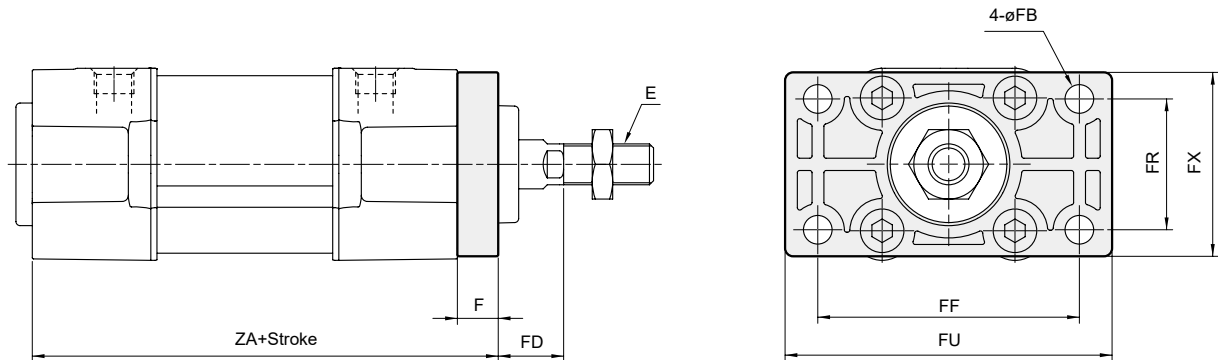


### FBC

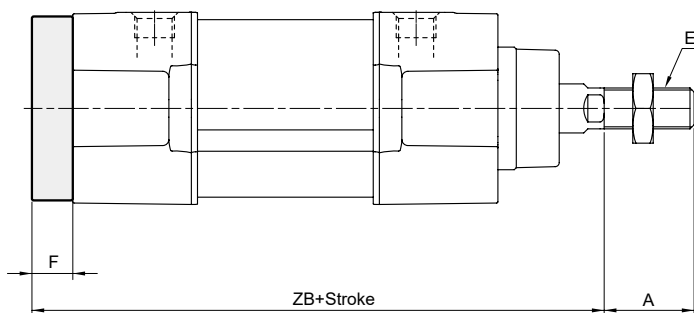


Code Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZA	ZB
32	22	M10×1.25	10	7	16	64	32	79	50	104	130
40	24	M12×1.25	10	9	20	72	36	90	52	115	145
50	32	M16×1.5	12	9	25	90	45	110	65	118	155
63	32	M16×1.5	12	9	25	100	50	125	76	133	170
80	40	M20×1.5	16	12	30	126	63	154	94	144	190
100	40	M20×1.5	16	14	35	150	75	180	112	154	205

### FAC2

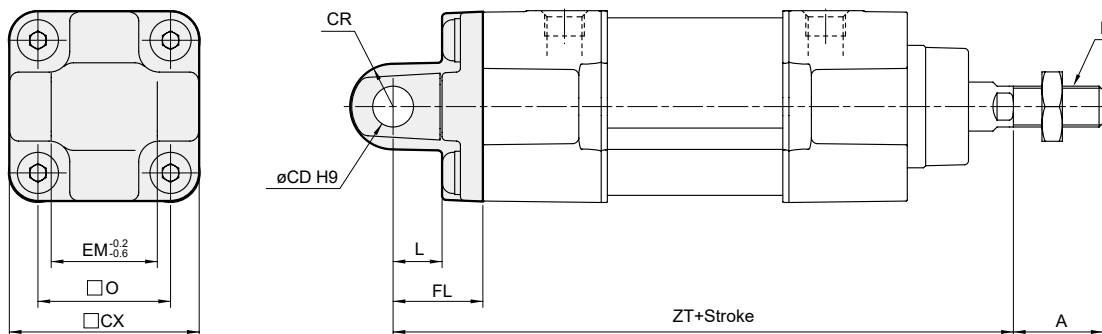


### FBC2

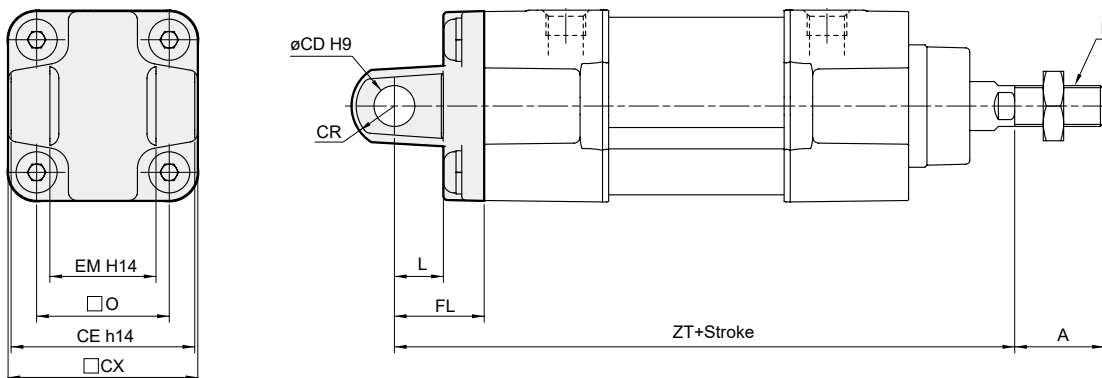


Code Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZA	ZB
32	22	M10×1.25	10	7	16	64	32	80	45	104	130
40	24	M12×1.25	10	9	20	72	36	90	52	115	145
50	32	M16×1.5	12	9	25	90	45	110	65	118	155
63	32	M16×1.5	12	9	25	100	50	120	75	133	170
80	40	M20×1.5	16	12	30	126	63	150	95	144	190
100	40	M20×1.5	16	14	35	150	75	175	115	154	205

### CA

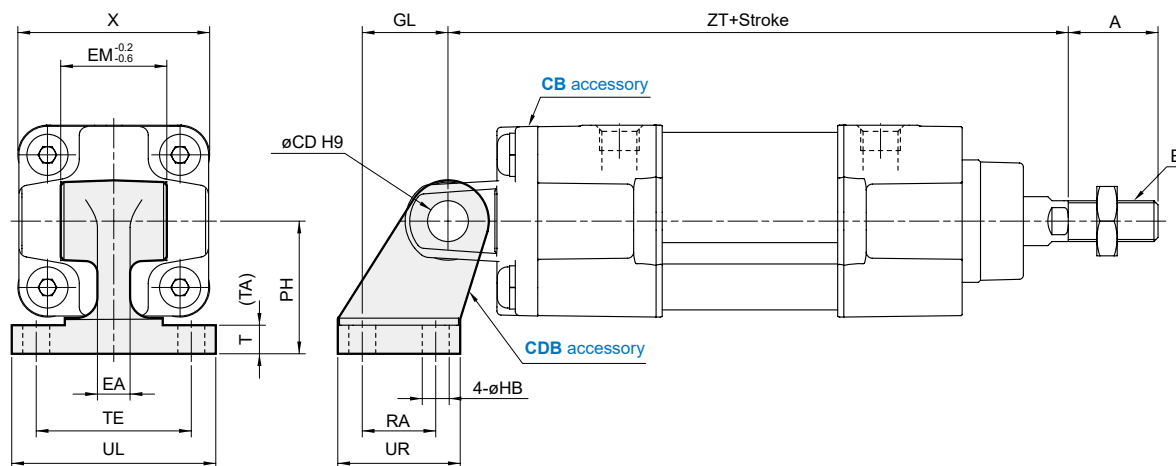


### CB



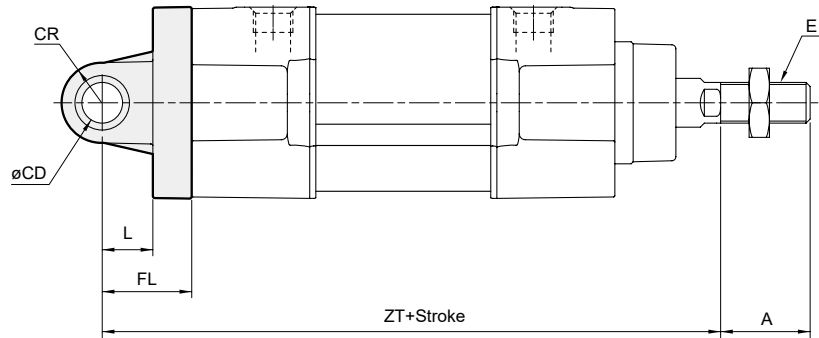
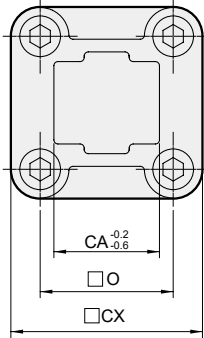
### CDB

CB+Pin (Extra purchase)

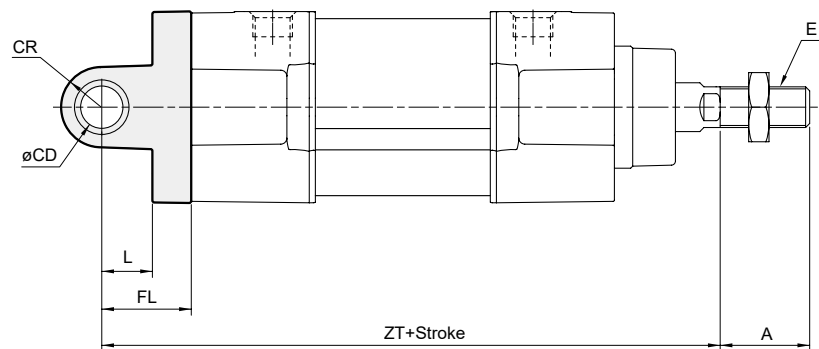
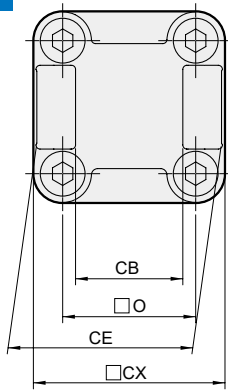


Code Tube I.D.	A	CD	CE	CR	CX	E	EA	EM	FL	GL	HB	L	O	PH	RA	T	TA	TE	UL	UR	X	ZT
32	22	10	45	R10.5	46.5	M10×1.25	8	26	22	21	6.6	12	32.5	32	18	6.5	1.5	38	50	30	47	142
40	24	12	52	R12	54	M12×1.25	10	28	25	24	6.6	15	38	36	22	8.5	1.5	41	53	34	55	160
50	32	12	60	R13	64	M16×1.5	10	32	27	33	9	15	46.5	45	30	10.5	1.5	50	65	45	65	170
63	32	16	70	R17	75	M16×1.5	12	40	32	37	9	20	56.5	50	35	10.5	1.5	52	67	50	78	190
80	40	16	90	R17	93	M20×1.5	12	50	36	47	11	20	72	63	40	11.5	2.5	66	86	60	95	210
100	40	20	110	R21	114	M20×1.5	16	60	41	55	11	25	89	71	50	12.5	2.5	76	96	70	115	230

### CA2

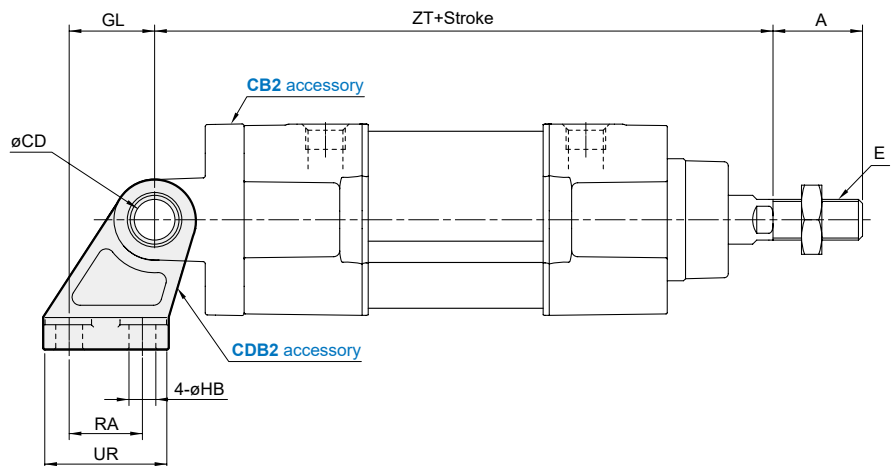
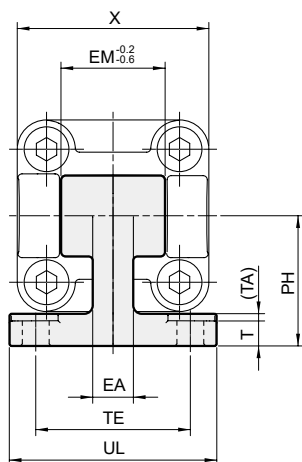


### CB2



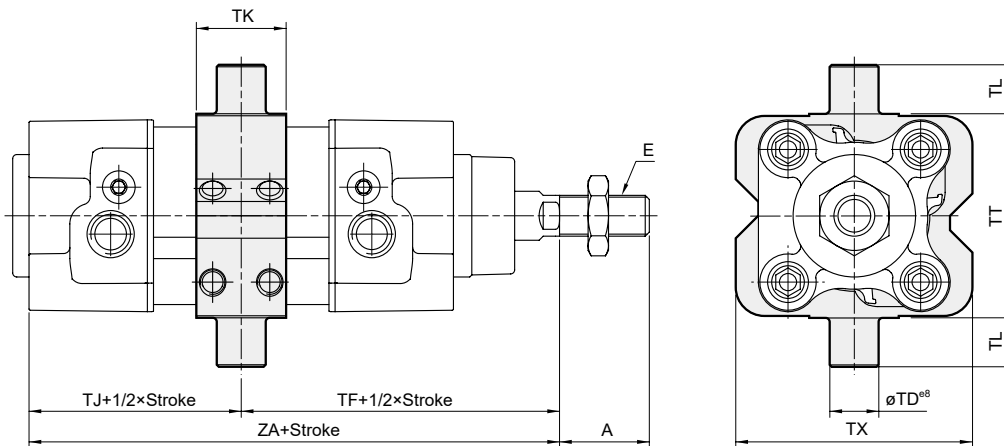
### CDB2

CB2+Pin (Extra purchase)

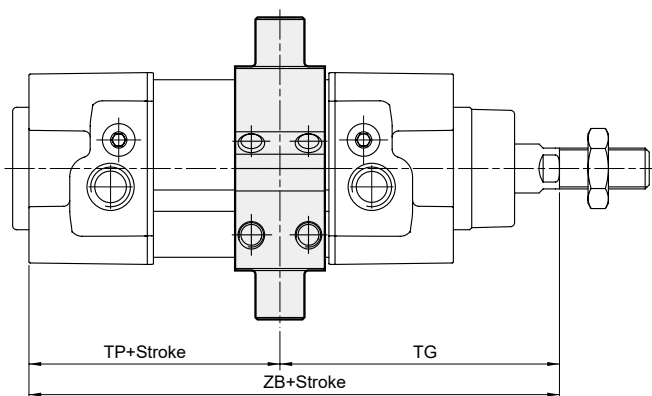


Code Tube I.D.	A	CA	CB <sup>H14</sup>	CD <sup>H9</sup>	CE <sup>H14</sup>	CR	CX	E	EA	EM	FL	GL	HB	L	O	PH	RA	T	TA	TE	UL	UR	X	ZT
32	22	26	26 <sup>+0.052</sup> / <sub>0</sub>	10 <sup>+0.036</sup> / <sub>0</sub>	45 <sup>0</sup> / <sub>-0.62</sub>	R10	47	M10×1.25	10	26	22	21	6.6	12.5	32.5	32	18	8	1.6	38	51	31	47	142
40	24	28	28 <sup>+0.052</sup> / <sub>0</sub>	12 <sup>+0.043</sup> / <sub>0</sub>	52 <sup>0</sup> / <sub>-0.74</sub>	R12	53	M12×1.25	15	28	25	24	6.6	16	38	36	22	10	1.6	41	54	35	55	160
50	32	32	32 <sup>+0.062</sup> / <sub>0</sub>	12 <sup>+0.043</sup> / <sub>0</sub>	60 <sup>0</sup> / <sub>-0.74</sub>	R12	65	M16×1.5	16	32	27	33	9	16	46.5	45	30	12	1.6	50	65	45	65	170
63	32	40	40 <sup>+0.062</sup> / <sub>0</sub>	16 <sup>+0.043</sup> / <sub>0</sub>	70 <sup>0</sup> / <sub>-0.74</sub>	R16	75	M16×1.5	16	40	32	37	9	21	56.5	50	35	14	1.6	52	67	50	78	190
80	40	50	50 <sup>+0.062</sup> / <sub>0</sub>	16 <sup>+0.043</sup> / <sub>0</sub>	90 <sup>0</sup> / <sub>-0.87</sub>	R16	95	M20×1.5	20	50	36	47	11	22	72	63	40	14	2.5	66	86	60	95	210
100	40	60	60 <sup>+0.074</sup> / <sub>0</sub>	20 <sup>+0.052</sup> / <sub>0</sub>	110 <sup>0</sup> / <sub>-0.87</sub>	R20	115	M20×1.5	20	60	41	55	11	27	89	71	50	17	2.5	76	96	70	115	230

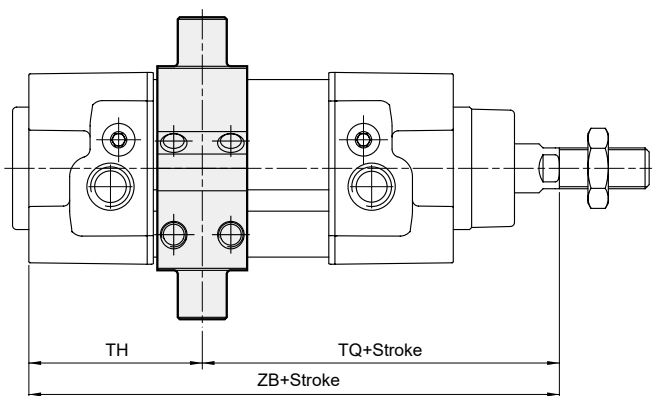
### TC



### TA



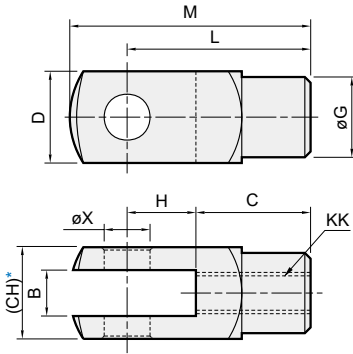
### TB



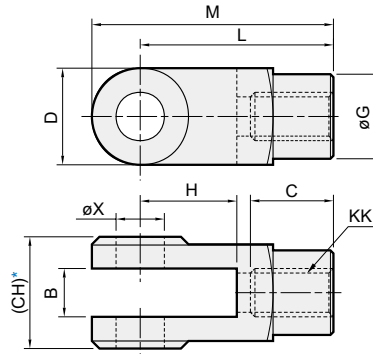
Code Tube I.D.	A	E	TD	TF	TG	TH	TJ	TK	TL	Without magnet			Magnet			TT	TX	ZA
										TP	TQ	ZB	TP	TQ	ZB			
32	22	M10×1.25	12	73	70.5	44.5	47	22	12	49.5	75.5	120	79.5	105.5	150	50	58	120
40	24	M12×1.25	16	82.5	81	51	52.5	28	16	54	84	135	84	114	165	63	70	135
50	32	M16×1.5	16	90	87	50	53	32	16	56	93	143	86	123	173	75	85	143
63	32	M16×1.5	20	97.5	90.5	53.5	60.5	35	20	67.5	104.5	158	97.5	134.5	188	90	100	158
80	40	M20×1.5	20	110	104.5	58.5	64	40	20	69.5	115.5	174	109.5	155.5	214	110	120	174
100	40	M20×1.5	25	120	113.5	62.5	69	45	25	75.5	126.5	189	115.5	166.5	229	132	145	189

### Y connector

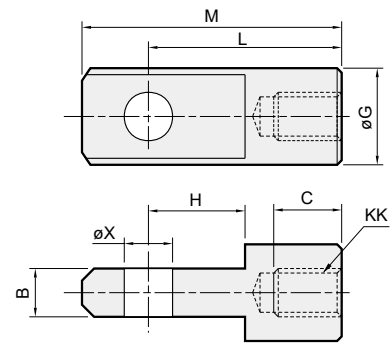
$\phi 32 \sim \phi 40$



$\phi 50 \sim \phi 100$



### I connector

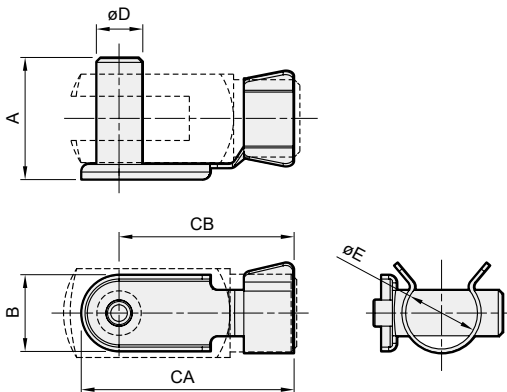


\* Please do not take the sand casting plate as the mounting plate, because we do not machine it.  
If you have this special demand, please contact our sales representative.

Code Tube I.D.	B		C		CH		D		G		H		KK		L		M		X <sup>H9</sup>
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	
32	10 <sup>+0.5 +0.15</sup>	10 <sup>-0.1 -0.2</sup>	20	17	19	—	19	—	ø18	ø20	20	15	M10×1.25	40	40	52	52	ø10 <sup>+0.04 0</sup>	
40	12 <sup>+0.5 +0.15</sup>	12 <sup>-0.1 -0.2</sup>	24	21	22	—	22	—	ø20	ø24	24	18	M12×1.25	48	48	62	62	ø12 <sup>+0.04 0</sup>	
50	16 <sup>+0.3 +0.1</sup>	16 <sup>-0.1 -0.3</sup>	28	23	32	—	32	—	ø28	ø32	32	32	M16×1.5	64	64	89	86	ø16 <sup>+0.04 0</sup>	
63	16 <sup>+0.3 +0.1</sup>	16 <sup>-0.1 -0.3</sup>	28	23	32	—	32	—	ø28	ø32	32	32	M16×1.5	64	64	89	86	ø16 <sup>+0.04 0</sup>	
80	20 <sup>+0.3 +0.1</sup>	20 <sup>-0.1 -0.3</sup>	33	30	45	—	40	—	ø36	ø36	40	40	M20×1.5	80	80	100	108	ø20 <sup>+0.05 0</sup>	
100	20 <sup>+0.3 +0.1</sup>	20 <sup>-0.1 -0.3</sup>	33	30	45	—	40	—	ø36	ø36	40	40	M20×1.5	80	80	100	108	ø20 <sup>+0.05 0</sup>	

### PIN

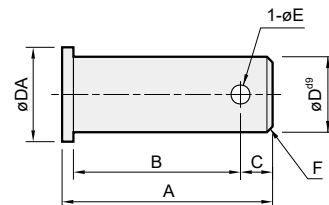
S



for floating pin

Code Tube I.D.	A	B	CA	CB	D <sup>d9</sup>	E
32	26	14	45	38	ø10 <sup>-0.04 -0.07</sup>	17
40	31	16	54	46	ø12 <sup>-0.05 -0.09</sup>	19
50,63	42	20	70	60	ø16 <sup>-0.05 -0.09</sup>	27
80,100	56	30	91	76	ø20 <sup>-0.06 -0.11</sup>	35

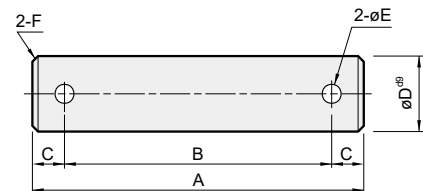
P



for Y & I connector

Code Tube I.D.	A	B	C	D <sup>d9</sup>	DA	E	F	Split pin
32	30	25	3.5	ø10 <sup>-0.06 -0.09</sup>	14	3.2	1	3.2×20L
40	37	30	5	ø12 <sup>-0.06 -0.09</sup>	16	3.2	1	3.2×20L
50,63	47	37	7	ø16 <sup>-0.05 -0.09</sup>	22	4	1	4×25L
80,100	62	50	8	ø20 <sup>-0.06 -0.11</sup>	30	5	1.5	5×35L

P



for CA & CB

Code Tube I.D.	A	B	C	D <sup>d9</sup>	E	F	Split pin
32	69	55	7	ø10 <sup>-0.05 -0.09</sup>	4	1.0	4×20L
40	76	62	7	ø12 <sup>-0.05 -0.09</sup>	4	1.0	4×20L
50	84	70	7	ø12 <sup>-0.05 -0.09</sup>	4	1.0	4×20L
63	94	80	7	ø16 <sup>-0.05 -0.09</sup>	4	1.0	4×30L
80	117	100	8.5	ø16 <sup>-0.05 -0.09</sup>	5	1.5	5×30L
100	137	120	8.5	ø20 <sup>-0.05 -0.09</sup>	5	1.5	5×35L

# MCQI3 / MCKQI3 Solenoid valve link seats $\varnothing 40, \varnothing 50$



ISO 15552 **STANDARD PROFILE CYLINDER**

mindman

## Order example

**MCQI3** — As standard order example — **VR** — **4E2C** — **6A** — **AC110** — **L**

MODEL  
MCQI3  
MCKQI3

SOLENOID VALVE  
LINK SEATS

VR: Installed on the front cover  
VH: Installed on the back cover

4 way (5 port)

E1: Single solenoid  
E2: Double solenoid

C: Closed center  
P: Pressure center  
R: Exhaust center  
(Only for  
MVSN-300-4E2)

PORT  
SIZE

6A: G1/8  
(Only for  
MVSN-220)  
8A: G1/4

VOLTAGE

AC220V(50/60)Hz  
AC110V(50/60)Hz  
DC24V

ELECTRIC CONNECTION

Standard	
Blank	DIN terminal
L	DIN terminal with LED indicator
E	Explosion protection
Power saving (for DC24V)	
KL	DIN terminal with LED indicator

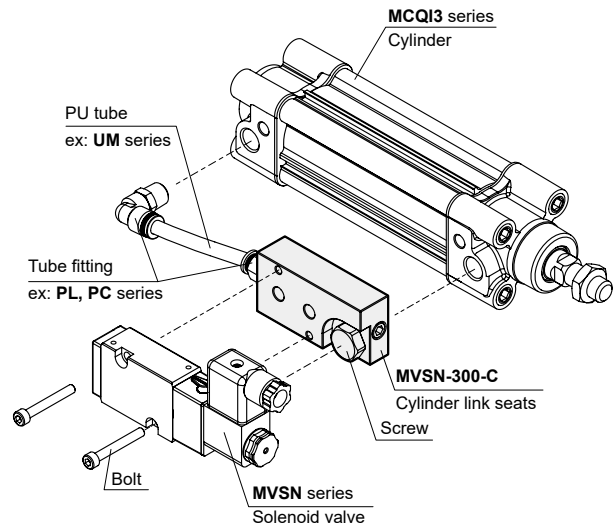
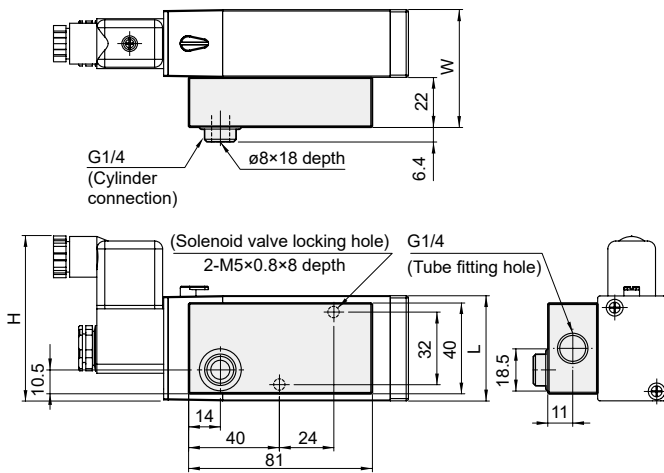
\* MC(K)QI3- $\varnothing 40$  (for MVSN-220 valve )

\* MCQI3- $\varnothing 50$  (for MVSN-300 valve )

## MVSN-300-C

Solenoid valve link seats

## Mounting of solenoid valve link seats



Code Model	H	W	L	Cylinder type
MVSN-220	70	44.3	40	MCQV3 / MCQI3 / MCKQI3 $\varnothing 40$
MVSN-300	73	52	46.4	MCQV3 / MCQI3 $\varnothing 50$



### Features

- Can be used in many applications.
- Strong simple construction designed for repetitive high usage.
- Wide range available.
- Simple structure, high rigidity.
- Reduce the requirement of concentricity between the cylinder and the other connected component.

### Cautions

- Do not use on universal joint.
- Do not disassemble.
- Lubricant required.
- Usage temperature +5~+60°C
- Do not use the end of the thread of the connecting rod.

### Order example

MFC – 1012 A – M12×1.25

MODEL

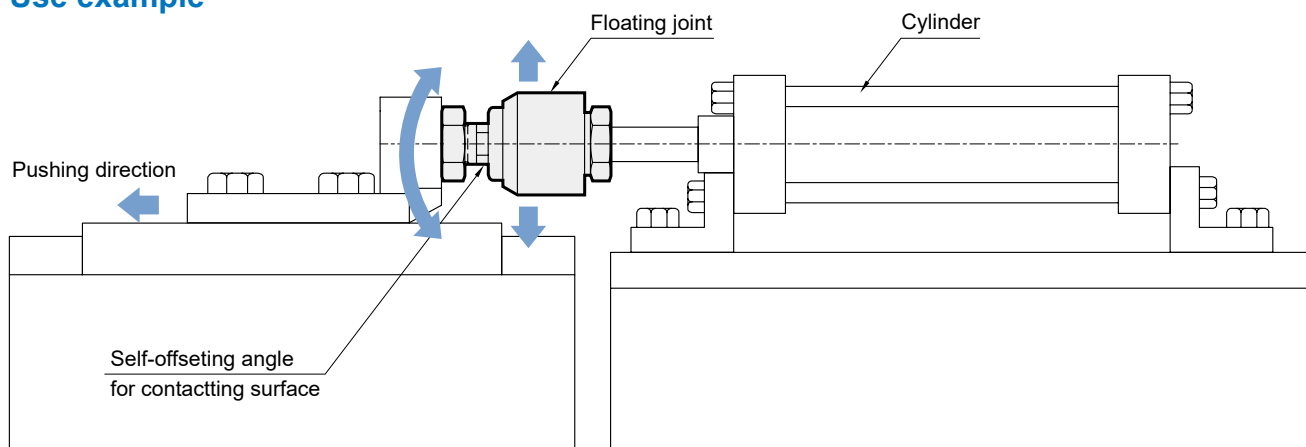
THREAD  
SIZE

TYPE

- A: Standard A type
- T: Standard T type
- S: Short type
- F: FAC type

\* Thread size M.

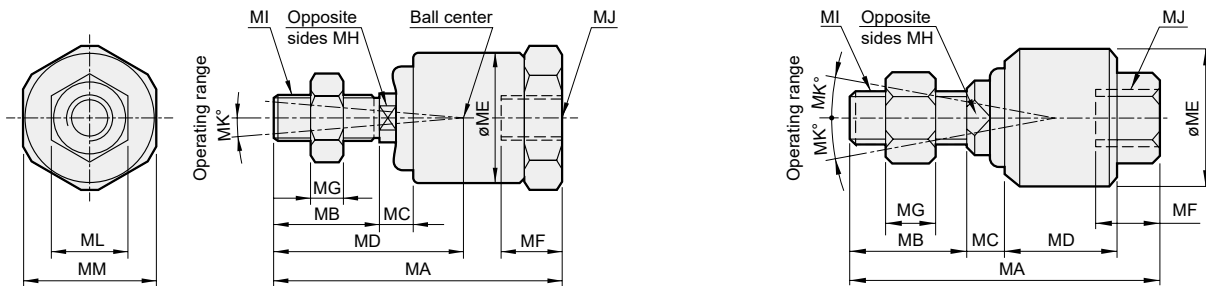
### Use example



**A**

1003A ~ 1006A

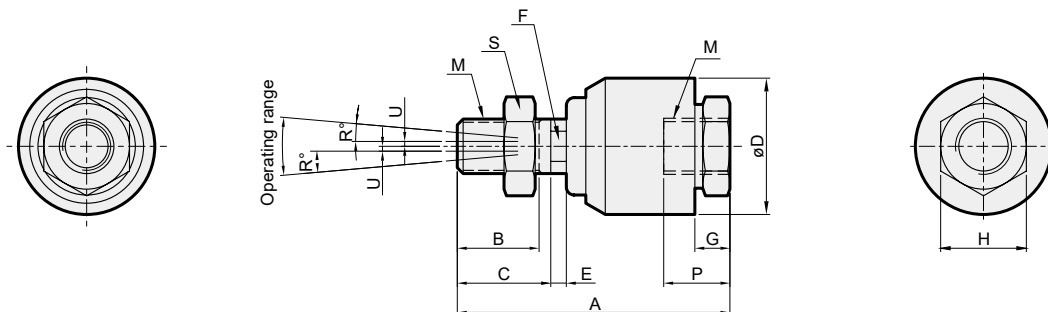
1008A ~ 1036A



Model	Applicable cyl. dia. (mm)	MA	MB	MC	MD	ME	MF	MG	MH	MI/MJ	ML	MM	Rot. angle	Radial compensation	Weight (g)
MFC-1003A	6	23.5	7.5	3	15	12.8	5.5	2.4	4	M3×0.5	5.5	12	±5°	0.5	—
MFC-1004A	8	26	9.5	3	17	12.8	6	3	4	M4×0.7	7	12	±5°	0.5	—
MFC-1005A	10,15	34.5	13.5	3.5	22.8	13.8	8	4	6	M5×0.8	8	14	±5°	0.5	20
MFC-1006A	15	34.5	13.5	3.5	22.8	13.8	8	4	6	M6×1.0	10	14	±5°	0.5	20

Model	Applicable cyl. dia. (mm)	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	Weight (g)
MFC-1008A	20	51	20	6	17	24	12.5	6	8	M8×1.25	M8×1.25	13	90
MFC-1010A	25,30	58	22	7	21	26	13	6	10	M10×1.25	M10×1.25	12	110
MFC-1012A	40	58	22	8	21	28	14	7	12	M12×1.25	M12×1.25	12	110
MFC-1014A	40	70	22.5	8.5	28	34.5	18.5	8	14	M14×1.5	M14×1.5	12	250
MFC-1016A	50,63	90	27	10	41	44.2	22	10	17	M16×1.5	M16×1.5	7	500
MFC-1018A	50,63	92	27	10	41	44.2	24	11	17	M18×1.5	M18×1.5	7	500
MFC-1020A	80	102	29	13	46	53.5	24	10	22	M20×1.5	M20×1.5	10	720
MFC-1022A	80	108	32	13	46	53.5	27	13	22	M22×1.5	M22×1.5	5	720
MFC-1026A	100	120	32	14.5	52.5	59.5	36	13	27	M26×1.5	M26×1.5	5	1300
MFC-1027A	125	136.5	40	14.5	52.5	59.5	44.5	13.5	27	M27×2.0	M27×2.0	5	1620
MFC-1030A	125,140	122	39	16	50	61	35	13.5	29	M30×1.5	M30×1.5	5	1610
MFC-1036A	140,160	194	60	20.5	77.5	84	54	18	36	M36×2.0	M36×2.0	5	—

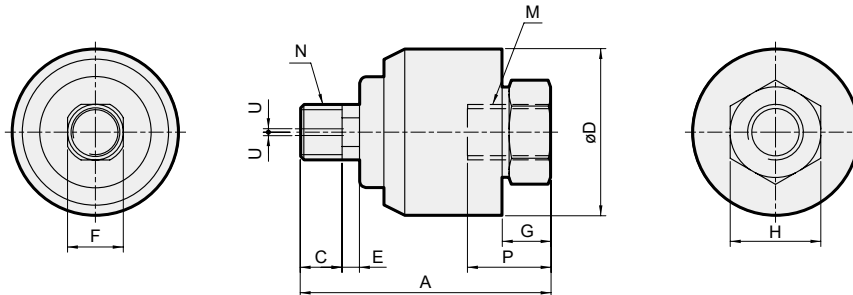
**T**



Model	Applicable cyl. dia. (mm)	A		B		C	øD	E	F	G	H	M	P		R	S	Permissible U deviation	Rot. angle	Permissible pressure	Maximum operating tension and compression force (N)	Weight (g)
		DIM.	TOL.	DIM.	TOL.								DIM.	TOL.							
MFC-1024T	100	123	±2.0	38	±2.0	38	61	12	□26	19	41	M24×1.5	33	±2.0	5	M24×1.5×H11×B35.5	2.5	±5°	3.5 MPa (max.) Pneumatic / Hydraulic	28000	1300
MFC-1039T	140,160	184	±2.0	69	±2.0	70	75	20	□35	23	50	M39×1.5	42	±2.0	5	M39×1.5×H10×B50	4			71000	2820
MFC-1040T	160	194	±2.0	74	±2.0	74	85	15	□43	25	69	M40×1.5/2.0	40	±2.0	5	M40×1.5/2.0×H12×B65	5			71000	4300
MFC-1045T	160	194	±2.0	74	±2.0	74	85	15	□43	25	69	M45×1.5/2.0	40	±2.0	5	M45×1.5/2.0×H12×B65	5			71000	4300
MFC-1050T	160	210	±2.0	70	±2.0	70	105	16	□53	35	85	M50×2.0	55	±2.0	5	M50×2.0×H13×B65	6			80000	6980

## STANDARD CYLINDER FLOATING JOINT

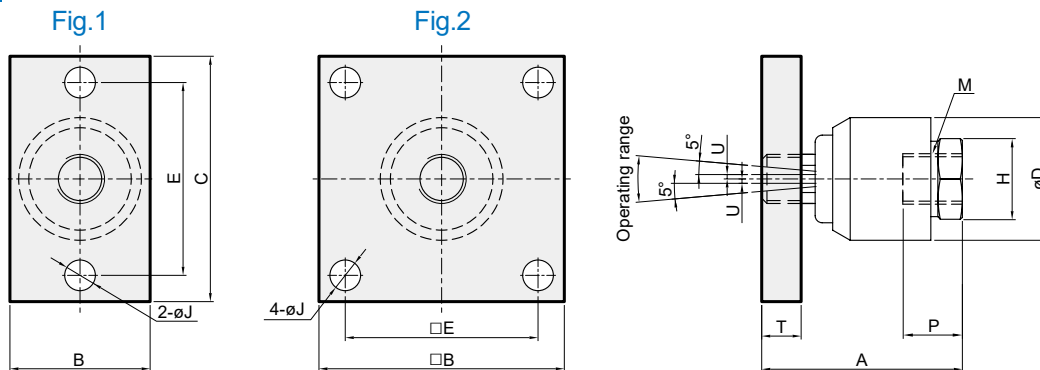
**S**



Model	Applicable cyl. dia. (mm)	A		C		øD	E	F	G	H	P		M	N	Permissible U deviation	Rot. angle	Maximum operating tension and compression force (N)	Weight (g)
		DIM.	TOL.	DIM.	TOL.						DIM.	TOL.						
MFC-1008S	20	36		6		24	4	□8	6.5	13	12		M8×1.0/1.25	M8×1.0/1.25	0.5	±0.5°	1100	60
MFC-1010S	25,30	48	±1.0	9	±1.0	26	5	□10	8	17	14	±1.0	M10×1.25/1.5	M10×1.25/1.5	0.75		2500	97
MFC-1012S	40	46		9		28	5	□12	8	17	12		M12×1.25/1.5	M12×1.25/1.5	4400		100	
MFC-1014S	40	59		11		35	7	□14	9	22	17		M14×1.5	M14×1.5	6000		220	
MFC-1016S	50,63	77	±2.0	13	±2.0	45	9	□18	13	27	23	±2.0	M16×1.5	M18×1.5	1.25		11000	480
MFC-1018S	50,63	77		13		45	9	□18	13	27	23		M18×1.5	M18×1.5	11000		480	
MFC-1020S	80	90		18		50	10	□22	16	32	27		M20×1.5	M20×1.5	2		18000	660
MFC-1022S	80	90		18		50	10	□22	16	32	27		M22×1.5	M20×1.5	18000		660	
MFC-1024S	100	107		20		60	12	□26	19	41	33		M24×1.5	M26×1.5	2.5		28000	1190
MFC-1026S	100	107		20		60	12	□26	19	41	33		M26×1.5	M26×1.5			28000	1180
MFC-1027S	125	117		20		63.5	19	□29	20	41	33		M27×2.0	M30×1.5	28000		1380	
MFC-1030S	125,140	117		20		63.5	19	□29	20	41	33		M30×1.5/2.0/3.5	M30×1.5/2.0/3.5	36000		1420	
MFC-1036S	140,160	133		25		75	20	□35	22	50	40		M36×1.5/2.0	M36×1.5/2.0	3		55000	2800
MFC-1045S	140,160	147		29		85	15	□43	24.5	69	39		M45×1.5/2.0	M45×1.5/2.0	55000		4300	

**F**

With S type floating joints.



Model	A		B	C	øD	E	H	J	T	M	P		Illustration fig no.	Permissible U deviation	Rot. angle	Permissible pressure	Weight (g)
	DIM.	TOL.									DIM.	TOL.					
MFC-1008F	36		25	52	24	40	13	6.6	6	M8×1.0/1.25	12	±1.0	Fig.1	0.5	±0.5°	3.5MPa (max.) Pneumatic / Hydraulic	130
MFC-1010F	48	±1.0	32	56	26	44	17	6.6	9	M10×1.25/1.5	14			0.75			235
MFC-1012F	46		32	56	28	44	17	6.6	9	M12×1.25/1.5	12			1			240
MFC-1014F	59		38	80	35	60	22	11	11.6	M14×1.5	17			510			
MFC-1016F	77	±2.0	74	-	45	45	27	11	15	M16×1.5	23	±2.0	Fig.2	1.25			1120
MFC-1018F	77		74	-	45	45	27	11	15	M18×1.5	23			1120			
MFC-1020F	90		100	-	50	62	32	14	21	M20×1.5	27			2			2280
MFC-1022F	90		100	-	50	62	32	14	21	M22×1.5	27			2280			
MFC-1024F	107		100	-	60	70	41	14	21	M24×1.5	33			2.5			2870
MFC-1026F	107		100	-	60	70	41	14	21	M26×1.5	33						2870
MFC-1027F	117		100	-	63.5	70	41	14	21	M27×2.0	33			3070			
MFC-1030F	117		100	-	63.5	70	41	14	21	M30×1.5/2.0/3.5	33			3070			
MFC-1036F	133		130	-	75	95	50	16	25	M36×1.5/2.0	40			3			5790
MFC-1045F	147		160	-	85	110	69	16	22	M45×1.5/2.0	39			8600			



### Features

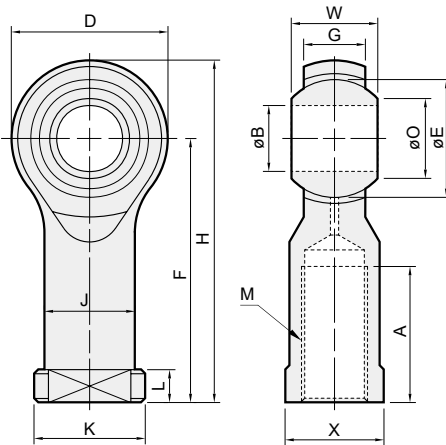
- Copper lining structure embedded.
- Grease nipple as standard.
- Carbon steel body.
- High carbon chromium bearing steel.

### Order example

**PHS 25 – M24×1.5**

MODEL

THREAD SIZE



Model	Dimensions (mm)														Static fracture minimal radial load (kgf)	Dynamic eff. load (kgf)		Weight (g)
	A	B	D	E	F	G	H	J	K	L	M	O	W	X		Radial	Axial	
PHS 5-M5×0.8	14	5	16	11.11	27	7	35	9	12	4	M5×0.8	7.71	8	9	930	620	230	18
PHS 6-M6×1.0	12	6	20	12.7	30	6.75	40	10	13	6.5	M6×1.0	8.96	9	11	1122	439	735	22
PHS 8-M8×1.25	16	8	24	15.875	36	9	48	12.5	16	7	M8×1.25	10.4	12	14	1633	735	1184	47
PHS 10EC-M10×1.25	20	10	26	19.05	43	11	56	15	19	8.5	M10×1.25*	12.9	14	17	2102	1020	1480	77
PHS 12EC-M12×1.25	22	12	32	22.225	50	12	66	17.5	22	10.5	M12×1.25*	15.4	16	19	2449	1367	1735	100
PHS 14EC-M14×1.5	25	14	36	25.4	57	13.5	75	20	25	10.5	M14×1.5*	16.9	19	22	3245	1735	2449	160
PHS 16EC-M16×1.5	28	16	40	28.575	64	15	84	22	27	11	M16×1.5*	19.4	21	24	3857	2204	2908	220
PHS 18-M18×1.5	32	18	46	31.75	71	16.5	94	25	31	13.5	M18×1.5	21.9	23	27	4694	2653	4337	320
PHS 20-M20×1.5	33	20	46	34.925	77	18	100	27.5	34	14	M20×1.5	24.4	25	30	5429	3214	4337	420
PHS 22-M22×1.5	43	22	50	38.1	84	20	109	30	37	12	M22×1.5	25.84	28	32	6100	4070	2290	475
PHS 25-M24×1.5	48	25	56	42.862	94	22	122	33.5	42	12	M24×1.5	29.6	31	36	7420	4950	2830	673
PHS 28-M27×2.0	53	28	67	47.625	110	26	143.5	40	50	15	M27×2.0	32.30	35	41	8870	5210	3240	875
PHS 30-M30×2.0	56	30	67	50.8	110	26	143.5	40	50	15	M30×2.0	34.81	37	41	11000	7370	3960	1050

\* Different from the thread pitch commonly available on the market.



### Order example

**RCI – N – 2M**

MODEL

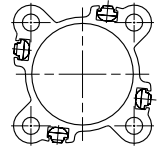
RCI: Reed Switch  
 RCI-N: Reed Switch (NPN)  
 RCI-P: Reed Switch (PNP)  
 RNI: NPN  
 RPI: PNP

WIRE LENGTH

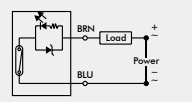
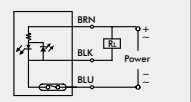
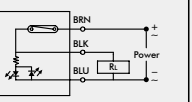
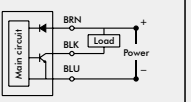
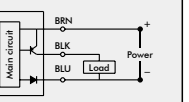
1M: L=1000mm  
 2M: L=2000mm  
 3M: L=3000mm  
 QD: M8, 3 Pin connector  
 EQD: M8, 3 Pin connect

\* Special order is available.

### Assembling style

Cylinder type	Mounting clamp
<b>MCQI*, MCKQI*, MCBQI*,                      MCJI, MCGI, MGTB, MGTU,                      MGTX, METB</b>	

### Specification


Model	RCI	RCI-N	RCI-P	RNI	RPI
Wiring	2 wire	3 wire		3 wire	
Switching logic	Normal open				
Switch Type	Reed switch	Reed switch NPN	Reed switch PNP	NPN current sinking	PNP current sourcing
Voltage range	5~240V DC/AC	10~30V DC		10~30V DC	
Current range	100mA max.	500mA max.		200mA max.	
Contact rating(*1)	10W max.			6W max.	
Current consumption	—	5 mA@24V DC max.		20 mA@24V DC max.	
Voltage drop	3.5V max.	0.1V@100mA max.		1.5V max.	
Leakage current	—	—	—	0.05mA max.	
Indicator	Red LED	Yellow LED		Red LED	Yellow LED
Cable	ø3,2C,PUR	ø3,3C,PUR		ø3,3C,PUR	
Temperature	-10~+70°C (No freezing)				
Shock (*2)	30G			50G	
Vibration (*3)	9G				
Protection classification	IEC 60529 IP67				
Protection circuit (*4)	1			2,3,4	
Weight	23 g (2m cable)				
Connect diagram					

\*1. Warning: Never exceed rating (watt=voltage×amperage). Permanent damage to sensor will occur.

\*2. Sin wave / X.Y.Z. 3 directions / 3 times each direction / 11ms each time.

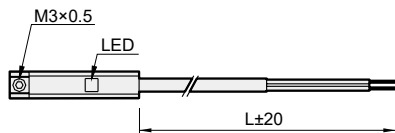
\*3. Double amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X.Y.Z. 3 directions / 1 hour each time.

\*4. 1=None / 2=Short-circuit / 3=Power source reverse polarity / 4=Surge suppression

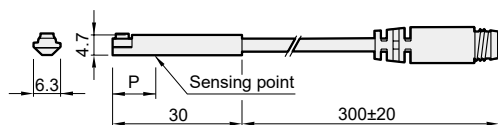
\*5. Caution for safety .

### Dimension

#### Standard lead wire

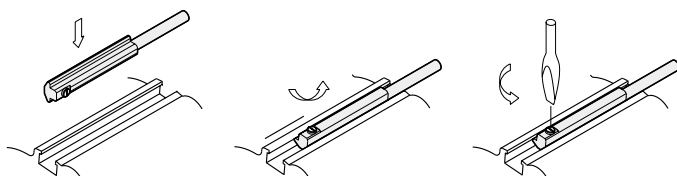


#### QD connector



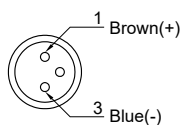
Code Model	P
RCI	13
RCI-N, RCI-P	10
RNI, RPI	8

### Mounting

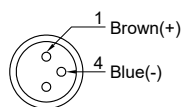


### Wiring of the QD

#### • 2 wire QD wiring



#### • 2 wire EQD wiring



#### • 3 wire QD wiring

