MCMOB series

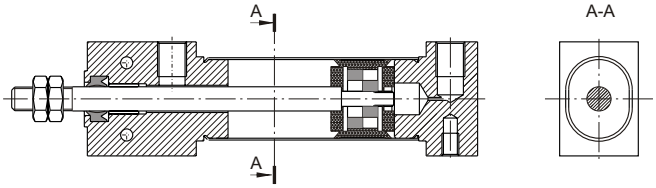
FLAT CYLINDER with no-rotation

Features:

- With this flat design, the construction is more easy. A twin-rod cylinder can be assembling at the low cost.Le The choice of fixing is large and give more solution to integrate the cylinder in the mechanical part.
- The flat oval design matching piston shape prevents no-rotating rod (self guidance). This technology come from ISO oval cylinders.
- Piston as standard goes automatically with magnet from size 10 to 25.

Options

- Hole-rod (X) with cylinders double end rod (10-16-25)



Order example:

MCMOB－11－16－25

MODEL

TUBE I.D.

1: Single Rod
2: Double Rod

STROKE

STYLE:

Code		Symbol	Description
1	**1**		Double acting / Male thread
1	**3**		Single acting / Normally extended male thread
1	**5**		Single acting / Normally returned male thread
2	**1**		Dual rod / Male thread
2	**3**		Single action / Dual rod male thread
2	**5**		Dual rod / Male thread hole-rod
2	**6**		Single action / Dual rod / Male thread hole-rod

Model		**MCMOB**		
Acting type		Double acting / Single acting		
Tube I.D. (mm)		10	16	25
Port size Rc(PT)		M5×0.8		
Medium		Filter air 50 μm lubricated or not		
Operating pressure kgf/cm^2	Double acting	1.5~10	1.2~10	1~10
	Single acting Push	2.0~10	2.3~10	1.5~10
	Single acting Pull	3~10	2.5~10	2~10
Work temperature		-10~60℃ (No freezing)		
Stocking temperature		0~15℃		
Tolerance of stoke		1.5mm		
Cushioning of end stroke		Elastic by polyurethan internal stop built into piston		
Speed m/sec		0.6		0.7
Non-rotating accruacy		±3.5°	±2.5°	
Minimum stroke with sensor		5		
Pneumatic cushioning		No		
Sensor switch		RCS		
Sensor switch holder		BK-81		

Material

Oval tube	Stainless steel
End cover	Anodized aluminium
Piston rod	Stainless steel
Piston	Composit polyurethan
Piston rod bearing	Bronge & PTFE
Seals	Polyurethan
Spring	Bronge & PTFE
Magnet	Ferrite
Spacer spring	Brass & Acetal resin

MCMOB ϕ10~ϕ25

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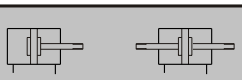
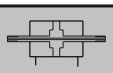
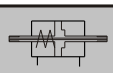
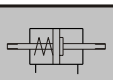
Mindman

Forces for oval cylinder

(unit:kg)

Tube I.D.	Rod ϕ	Function		Area mm^2	Pressure kgf/cm^2					
					2	3	4	5	6	7
10	4		Push	100	1.25	2.37	3.63	4.12	5	6.12
			Pull	88	0.91	1.79	2.67	3.55	4.43	5.31
			Double action Push	100	2.00	3.00	4.00	5.00	6.00	7.00
			Pull	88	1.76	2.64	3.52	4.40	5.28	6.16
16	6		Push	200	3.50	5.00	7.40	8.20	9.10	12.00
			Pull	173	1.51	3.25	4.95	6.75	8.45	10.15
			Double action Push	200	4.00	6.00	8.00	10.00	12.00	14.00
			Pull	173	3.46	5.20	6.90	8.70	10.40	12.10
25	10		Push	430	6.40	11.70	16.20	21.50	26.30	31.20
			Pull	352	3.52	4.14	7.66	11.18	14.70	18.22
			Double action Push	430	8.60	12.90	17.20	21.50	25.80	30.10
			Pull	352	7.04	10.56	14.08	17.60	21.12	24.64

Storkes

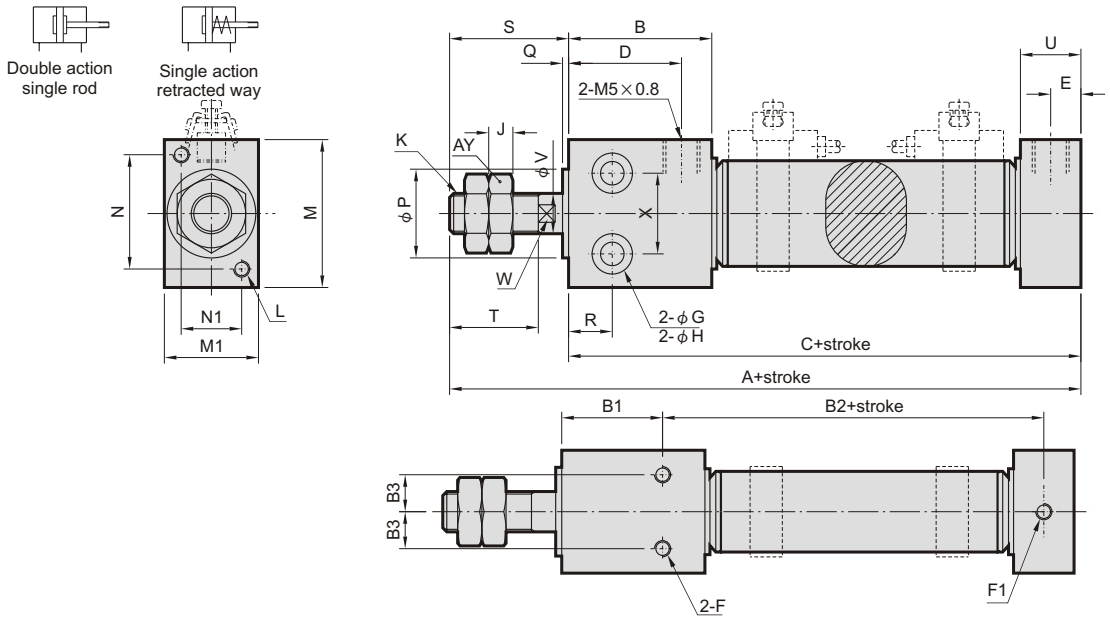
Function / Tube I.D.		Hole-rod 			Hole-rod 	
10	5, 10, 15, 20, 25, 30, 40, 50, 80, 100	25, 50, 80, 100	10, 25, 50	10, 25, 50	25, 50	10, 25, 50
16	5, 10, 15, 20, 25, 30, 40, 50, 80, 100, 160, 200	25, 50, 80, 100, 160	10, 25, 50	10, 25, 50	25, 50	10, 25, 50
25	5, 10, 15, 20, 25, 30, 40, 50, 80, 100, 160, 200, 300, 400, 500, 650	25, 50, 80, 100, 160, 200	10, 25, 50	10, 25, 50	25, 50	10, 25, 50

Note: Special strokes are available on request

MCMOB ϕ10~ϕ25

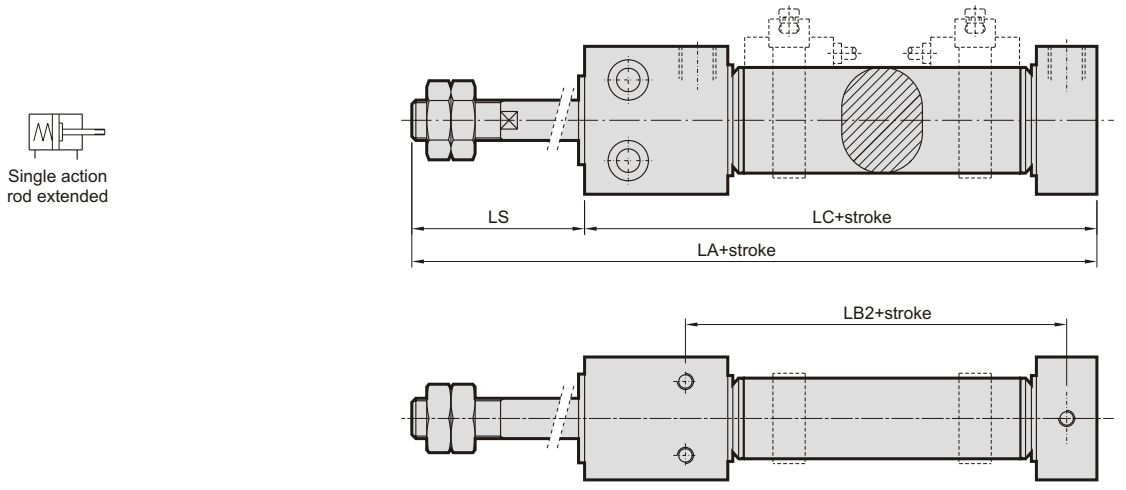
FLAT CYLINDER with no-rotation

Mindman



Code / Tube I.D.	A +1.5 +0	AY	B	B1	B2 +1.5 +0	B3	C +1.5 +0	D	E	F	F1	G	H	J
10	74	7	22	18.3	34.2	2.5	57	16	5	M3 depth:5	M3 depth:5	6.5 depth:3.5	3.2	2
16	89	10	24	19	43	5	67	19	5	M3 depth:6	M3 depth:6	8.2 depth:4.5	4.2	3
25	123	17	35.5	27.5	56	8	91.5	28	8	M4 depth:10	M4 depth:10	11 depth:6.5	6.5	5

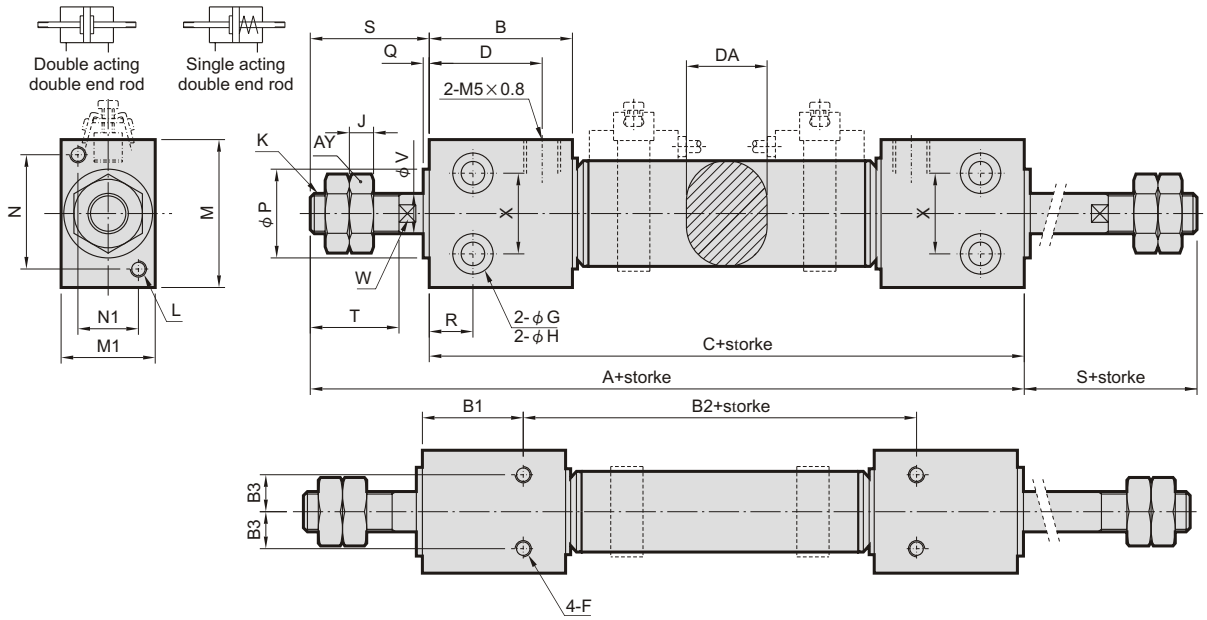
Code / Tube I.D.	K	L	M	M1	N	N1	P +0 -0.05	Q	R	S	T	U	V	W	X
10	M4×0.7	M3 depth:5	20	12	15	7	10	1	9	19	12	10	4	-	12
16	M6×1.0	M3 depth:6	25	16	18	10	14	1	12	22	16	10	6	5	16
25	M10×1.25	M4 depth:10	36	24	28	16	20	1.5	16	31.5	22	16	10	9	24



Code / Tube I.D.	LA +1.5 -0			LB2 +1.5 -0			LC +1.5 -0			LS		
	10	25	50	10	25	50	10	25	50	10	25	50
10	94	124	174	54.2	84.2	134.2	77	107	157	29	44	69
16	109	139	189	63	93	143	87	117	167	32	47	72
25	143	173	223	76	106	156	111.5	141.5	191.5	41.5	56.5	81.5

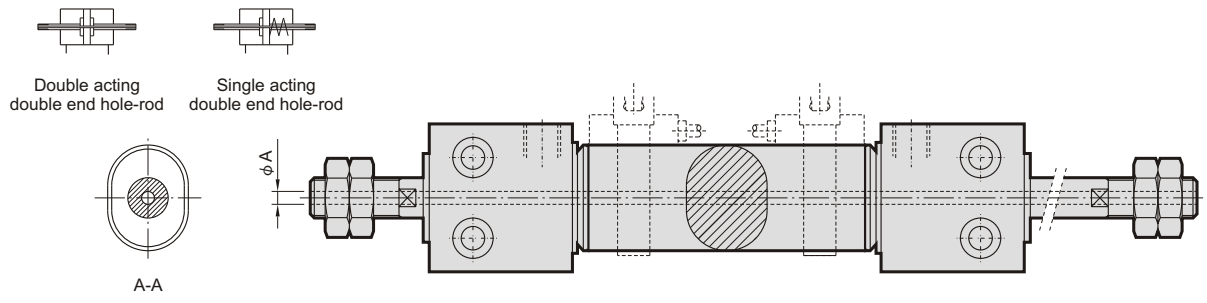
MCMOB ϕ10~ϕ25

FLAT CYLINDER with no-rotation



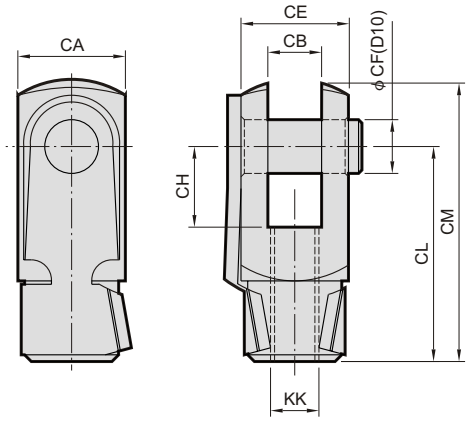
Code / Tube I.D.	A +1.5 +0	AY	B	B1	B2 +1.5 +0	B3	C +1.5 +0	D	DA	F	G	H	J	K
10	74	7	22	18.3	33	2.5	69	16	10.3	M3 depth:5	6.5 depth:3.5	3.2	2	M4×0.7
16	89	10	24	19	43	5	81	19	14.3	M3 depth:6	8.2 depth:4.5	4.2	3	M6×1.0
25	123	17	35.5	28	56	8	111	28	22.5	M4 depth:10	11 depth:6.5	6.5	5	M10×1.25

Code / Tube I.D.	L	M	M1	N	N1	P +0 -0.05	Q	R	S	T	V	W	X
10	M3 depth:5	20	12	15	7	10	1	9	19	12	4	-	12
16	M3 depth:6	25	16	18	10	14	1	12	22	16	6	5	16
25	M4 depth:10	36	24	28	16	20	1.5	16	31.5	22	10	9	24



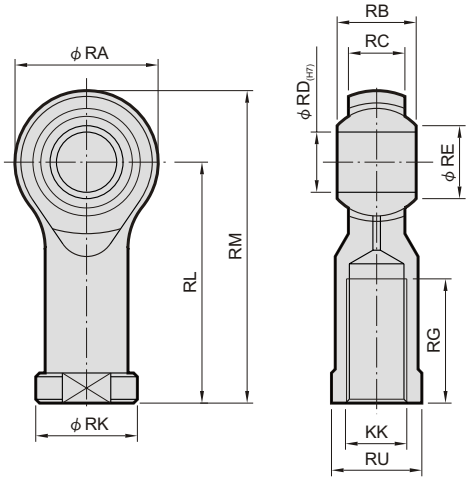
Code / Tube I.D.	A +0.15 +0
10	1
16	1.2
25	3.2

Y connector



Code / Tube I.D.	CA	CB	CE	CF	CH	CL	CM	KK
8	8	4	11	4	8	16	21	M4
10	8	4	11	4	8	16	21	M4
12	12	6	16	6	12	24	31	M6
16	12	6	16	6	12	24	31	M6
20	16	8	22	8	16	32	42	M8
25	20	10	26	10	20	40	52	M10×1.25

Female rod ends



Order example	Code / Tube I.D.	KK	RA	RB	RC	RD	RE	RG	RK	RL	RM	RU
PHS 4	8,10	M4	18	8	6	5	7.7	10	11	27	36	9
PHS 6	12,16	M6	18	9	7	6	8.95	14	12	30	39	10
PHS 8	20	M8	22	12	9	8	10.4	17	16	36	47	13
PHS 10	25	M10×1.25	28	14	9	10	12.9	20	19	43	56	17