

**MAL Series Aluminum alloy Mini Cylinder**



MAL 25 x 50

MALJ 25 x 50-25

Ordering Code

**MAL** □ 20 × 50 - 25 - S - □

**Series Code**  
 MAL: Double Action type  
 MSAL: Single Extrusion Type  
 MTAL: Single Drwing-in Type  
 MALD: Double-shaft Double Action Type  
 MALCD: Double-shaft Action Damping Type  
 MALJ: Double-shaft And Adjustable Stroke Type  
 MALC: With Cushion Type

**Back Cover Type**  
 Blank: Fishtail type  
 CM: Rounded type  
 U: Horizontal type

**Cylinder Bore**  
 16mm~40mm

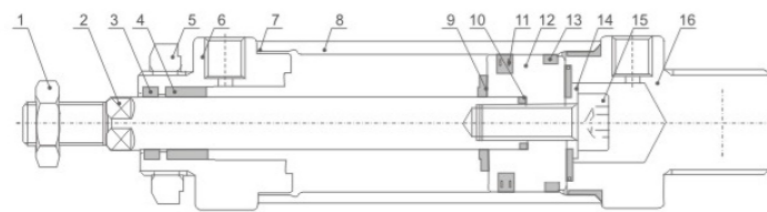
**Stroke**  
 0~100mm

**Adjustable Stroke Type**  
 0~100mm

**Magnet Code**  
 Blank: Without Magnet  
 S: With Magnet

**Fixed Type**  
 Blank: Normal type  
 LB: Front and back fixed type  
 FA: Front cover fixed type  
 SDB: Back cover swinging type

Internal structure



NO	Designation	NO	Designation
1	Piston Rod Nut	2	Piston Rod
3	Front Cover Seal Ring	4	Oiled Bearing
5	Front Cover Nut	6	Front Cover
7	Pipe wall O-ring	8	Aluminum tube
9	Anti-crash cushion	10	Piston rod O-Ring
11	Piston O-Ring	12	Piston
13	Wear ring	14	Back cushion
15	Hex socket screw	16	Back Cover

Specification

Bore(mm)	16	20	25	32	40
Motion pattern	Double Action or Single Action				
Working Medium	Air				
Fixed Type	Normal Type LB Type FA Type SDB Type				
Operating Pressure Range	0.1~0.9MPa				
Ensured Pressure Resistance	1.35MPa				
Operating Temperature Range	-5~70°C				
Operating Speed Range	30~800mm/s				
Buffer Type	Standard Type Anti-crash cushion Damping Type Adjustable cushion				
Port Size	M5×0.8	G1/8"	G1/8"	G1/8"	G1/4"

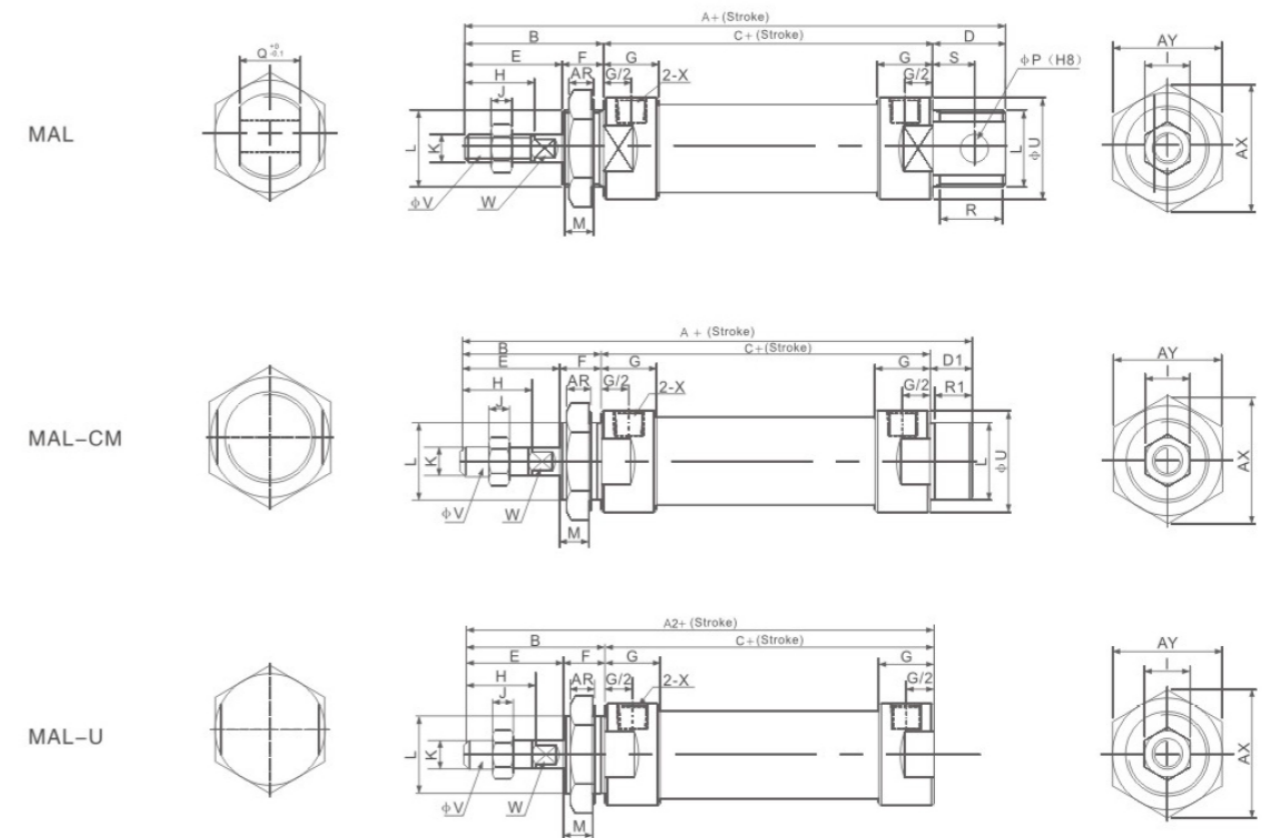
Our Company can also make flat for cylinder covers inlet and outlet position. If you require this, it should be specified.

**MAL Series Aluminum alloy Mini Cylinder**

Stroke

Bore(mm)	Standard Stroke										Max.Stroke	Permissible Stroke			
16	25	50	75	80	100	125	160	175	200		300	500			
20	25	50	75	80	100	125	160	175	200	250	300	500	650		
25	25	50	75	80	100	125	160	175	200	250	300	350	400	450	500
32	25	50	75	80	100	125	160	175	200	250	300	350	400	450	500
40	25	50	75	80	100	125	160	175	200	250	300	350	400	450	500

Overall Dimensions



Dimension Sheet

Bore/Symbol	A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K
16	110	114	98	38	56	16	16	22	16	10	16	10	5	M6×1
20	131	122	110	40	70	21	12	28	12	16	20	12	6	M8×1.25
25	135	128	114	44	70	21	14	30	14	16	22	17	6	M10×1.25
32	141	128	114	44	70	27	14	30	14	16	22	17	6	M10×1.25
40	165	152	138	46	92	27	14	32	14	22	24	17	7	M12×1.25

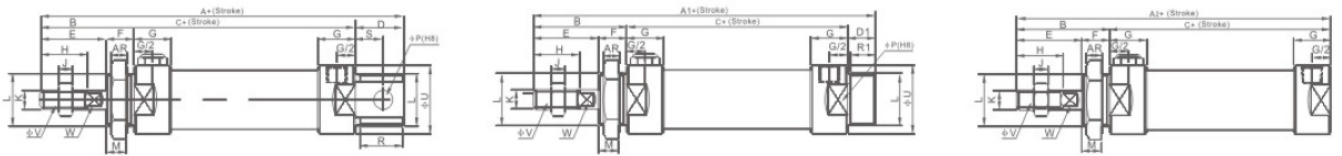
  

Bore/Symbol	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
16	M16×1.5	14	6	12	14	14	9	24	6	5	M5	6	25	22
20	M22×1.5	10	8	16	19	10	12	29	8	6	G1/8"	7	33	29
25	M22×1.5	1	8	16	19	12	12	34	10	8	G1/8"	7	33	29
32	M24×2.0	12	10	16	25	12	15	39.5	12	10	G1/8"	8	37	32
40	M30×2.0	12	12	20	25	12	15	49.5	16	14	G1/4"	9	37	41



## MAL Series Aluminum alloy Mini Cylinder

### Overall Dimensions



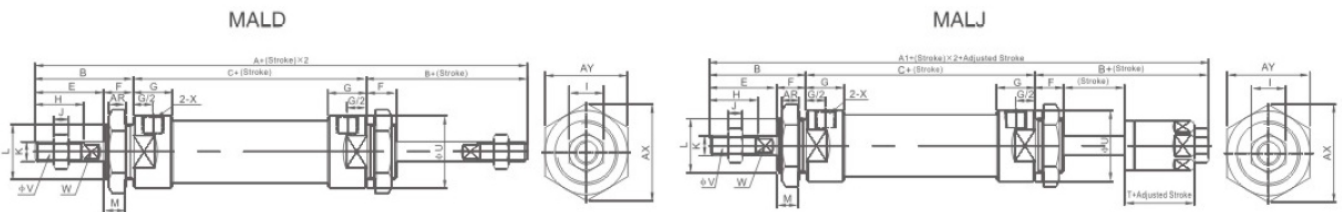
### Dimension Sheet

Symbol Bore/Stroke	A		A1		A2		B	C		D	D1	E	F	G	H	I	J
	0-50	51-100	0-50	51-100	0-50	51-100		0-50	51-100								
20	131	156	122	147	110	135	40	70	95	21	12	28	12	16	20	12	6
25	135	160	160	153	114	139	44	70	95	21	14	30	14	16	22	17	6
32	141	166	166	153	114	139	44	70	95	27	14	30	14	16	22	17	6
40	165	190	190	177	138	163	46	92	117	27	14	32	14	22	24	17	7

Inside Diameter/Symbol	K	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
20	M8×1.25	M22×1.5	10	8	16	19	10	12	29	8	6	G1/8"	7	33	29
25	M10×1.25	M22×1.5	12	8	16	19	12	12	34	10	8	G1/8"	7	33	29
32	M10×1.25	M24×2.0	12	10	16	25	12	15	39.5	12	10	G1/8"	8	37	32
40	M12×1.25	M30×2.0	12	12	20	25	12	15	49.5	16	14	G1/4"	9	47	41

### Overall Dimensions



### Dimension Sheet

Inside Diameter/Symbol	A	A1	B	C	E	F	G	H	I	I	K
20	150	147	40	70	28	12	16	20	12	6	M8×1.25
25	158	155	44	70	30	14	16	22	17	6	M10×1.25
32	158	155	44	70	30	14	16	22	17	6	M10×1.25
40	184	180	46	92	32	14	22	24	17	7	M12×1.25

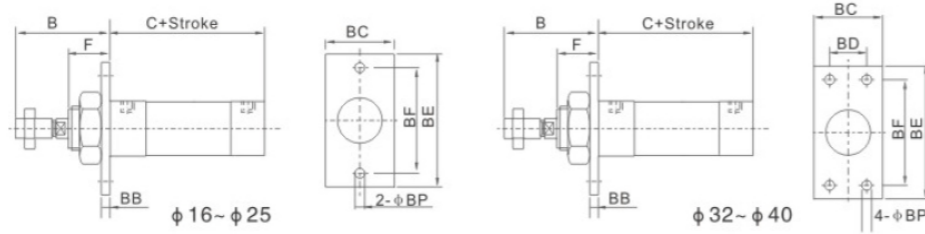
  

Inside Diameter/Symbol	L	M	U	V	W	X	AR	AX	AY	T
20	M22×1.5	10	29	8	6	G1/8"	7	33	29	19
25	M22×1.5	12	34	10	8	G1/8"	7	33	29	21
32	M24×1.5	12	39.5	12	10	G1/8"	8	37	32	21
40	M30×2.0	12	49.5	16	14	G1/4"	9	47	41	21

**Mini Cylinder Accessories**



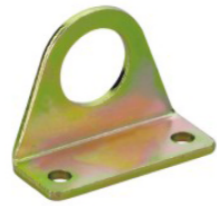
M-FA Type Flange



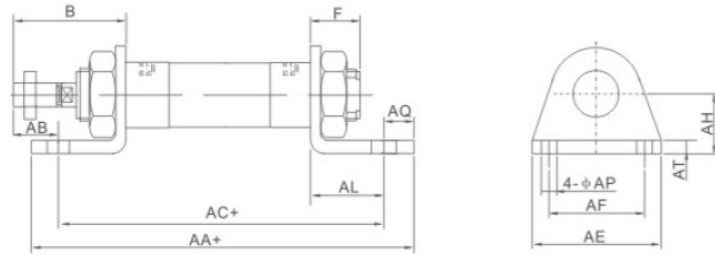
M-FA-A Type

Bore	B	C		C(MSA Series)		C(MSAL Series)		BB	BC	BD	BE	BF	BP	F
		MA Series	MAL Series	0-50	51-100	0-50	51-100							
16	38	60	-	60	85	-	-	3	26	-	52	40	5.5	16
20	40	76	70	76	101	70	95	4	33	-	64	50	6.5	12
25	44	76	70	76	101	70	95	4	33	-	64	50	6.5	14
32	44	76	70	76	101	70	95	4	47	33	72	58	6.5	14
40	46	76	92	76	101	92	117	4	50	36	84	70	6.5	14

Our company can also provide this used for mini cylinder flange from 16~25, if you need, pls add A after all ordering code, like M-FA-20-A



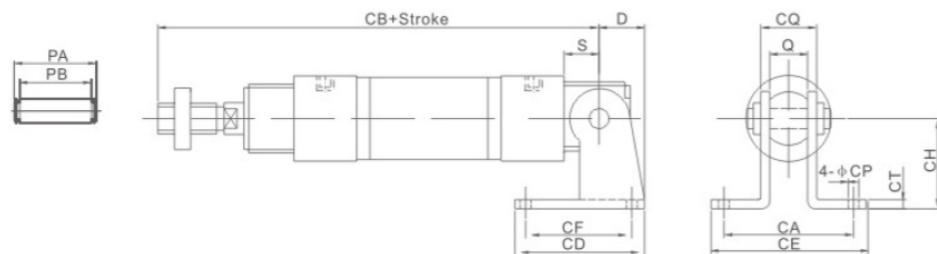
M-LB Type Foot Bracket



Symbol	Bore	B	F	AA (MA Series)	AA (MAL Series)	AA(MSA Series)		AB	AC (MA Series)	AC (MAL Series)	AC(MSA Series)		AC(MSAL Series)		AE	AF	AL	AQ	AP	AT	AH	
						0-50	51-100				0-50	51-100	0-50	51-100								0-50
16	38	16	98	-	98	123	-	25	86	-	86	111	-	-	44	32	13	6	5.5	3	20	
20	40	12	122	116	122	147	116	141	25	106	100	106	131	100	125	54	40	15	8	6.5	3	25
25	44	14	122	116	122	147	116	141	29	106	100	106	131	100	125	54	40	15	8	6.5	3	25
32	44	14	142	136	142	167	136	161	19	126	120	126	151	120	145	59	45	25	8	6.5	4	32
40	46	14	142	158	142	167	158	183	21	126	142	126	151	142	167	64	50	25	8	6.5	4.5	36



M-SDB Type Bracket



Symbol	Bore	D	S	Q	CA	CB(MA Series)	CB(MAL Series)	CB (MSA Series)		CB (MSAL Series)		CD	CE	CF	CH	CT	CP	CQ	PA	PB
								0-50	51-100	0-50	51-100									
16	16	9	12	-	107	-	107	132	-	-	23	-	12	20	3	5.5	16.5	21	17	
20	21	12	16	51	128	122	128	153	122	147	48	67	32	32	3	6.5	22	27	22.5	
25	21	12	16	51	132	126	132	157	126	151	48	67	32	32	3	6.5	22	27	22.5	
32	27	15	16	51	135	129	135	160	129	154	52	67	36	36	3	6.5	24	30	24.5	
40	27	15	20	55	137	153	137	162	153	178	56	71	40	40	3	6.5	28	34	28.5	

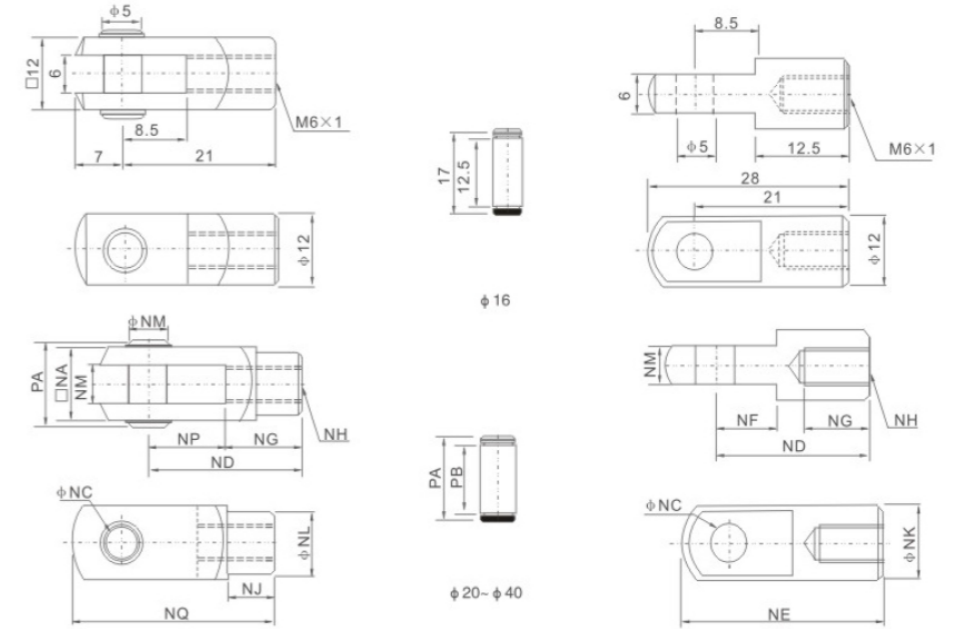
**Mini Cylinder Accessories**



M-Y+Pin M-Y+Clip



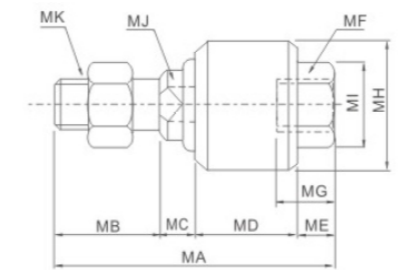
M-I Joint



Symbol/Bore	NA	NC	ND	NE	NF	NG	NH	NJ	NK	NL	NM	NN	NP	NQ	PA	PB
20	16	8	30	40	11	15	M8×1.25	10	16	14	8	8	15	40	21	16.5
25	19	10	40	52	15	20	M10×1.25	12	20	18	10	10	20	52	25	19.5
32	19	10	40	52	15	20	M10×1.25	12	20	18	10	10	20	52	25	19.5
40	25.4	10	45	57	15	25	M12×1.25	15	24	23	14	10	20	57	31	26



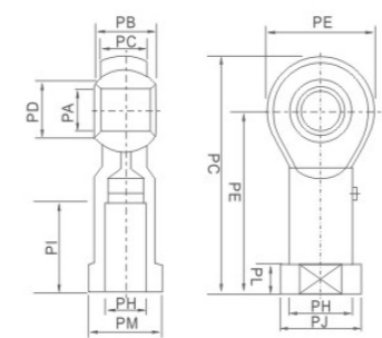
M-UJ Type Float Joint



Symbol/Bore	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK
20	51	20	6	17	8	M8×1.25	12	24	13	8	M8×1.25
25	58	22	7	21	8	M10×1.25	12	26	17	10	M10×1.25
32	58	22	7	21	8	M10×1.25	12	26	17	10	M10×1.25
40	58	22	8	21	7	M12×1.25	12	28	19	12	M12×1.25



M-PHS Type Fish Eye Joint



Symbol/Bore	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM
20	8	12	9	10.4	22	36	47	M8×1.25	17	16	12.5	5	14
25	10	14	11	12.9	26	43	56	M10×1.25	21	19	15	6.5	17
32	10	14	11	12.9	26	43	56	M10×1.25	21	19	15	6.5	17
40	12	16	12	15.4	30	50	65	M12×1.25	24	22	17.5	6.5	19