AKME
SOLUÇÕES EM AUTOMAÇÃO

MA

Stainless Steel Mini Cylinder
(ISO6432 Standard)

MA Series

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Ordering Code

MA	-	25	x	50	-	S	-	I	-	-
Series		Bore		Stroke		Magnet		Piston Rod Material		Extension
MA: Double Acting Rubber Buffer		8				S: With magnet		Blank: Carbon steel		Blank: Standard
MSA: Single Action Retracted Piston rod		10						I: Stainless steel		PH XX: MM Extension Tie rod
MTA: Single Action Extended Piston rod		12								PR XX: MM Extension thread
MAD: Double-shaft		16								
MAR: Double-shaft adjustable air buffer		20								
		25								
		32								
		40								

Specification

Bore (mm)	08	10	12	16	20	25	32	40
Operation	Double Acting or Single Acting							
Working Medium	Air							
Operating Pressure	1 ~ 10 Bar							
Proof Pressure	15 Bar							
Operating Temperature Range	-20~80°C							
Operating Speed Range	50~800mm/s							
Port Size	M5x0.8				G1/8"			
Ø Rod (mm)	4		6		8	10	12	16
Rod Thread	M4x0.7		M6x1		M8x1.25	M10x1.25	M10x1.25	M12x1.25

Features

1. Improving for adapting wide range applications, using precisepolishing of piston rod, more sense of products quality and longer life of front seal.

2. Optima design and improve the production efficiency.

3. Combined with enterprise color planning and new structure design, stainless steel series cylinder integrated as the semicircular groove cramping.

4. Using embedded gasket, increase the pressured area of pistons after collision.

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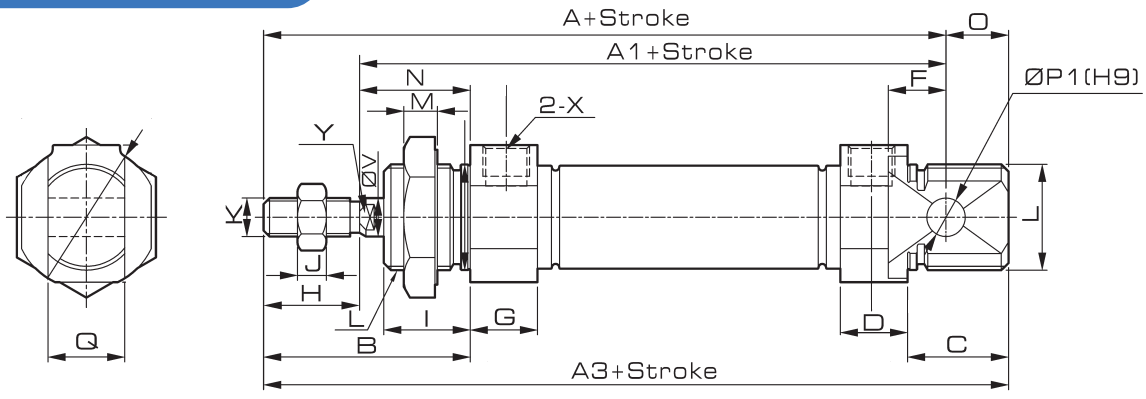
Overall Dimension

MA/MAR Series



Dimension

Symbol		A	A1	A3	B	C	D	G	H	I
8		76	64	86	28	12	10	10	12	12
10		76	64	86	28	12	10	10	12	12
12		91	74	105	38	17	10	10	16	17
16		98	82	111	37	19	10.5	10.5	16	16
20		115	95	128	43	21	14	14	20	18
25		126	104	137	50	21	15	15	22	22
32		139.5	117.5	151.5	56	26	19	19	22	26
40		163.6	136.6	177.6	63	30	25	25	24	30
MAC	32	135	113	147	44	27	16	16	22	14
	40	137	113	149	46	27	16.7	16.7	24	14
MAL	32	148	126	160	57	27	16	16	22	27
	40	150	126	162	57	27	16.7	16.7	24	27

Bore Symbol		J	K	L	M	N	O	P1	Q	X	V	Y
8		6	M4×0.7	M12×1.25	6	16	10	4	8	M5×0.8	4	-
10		6	M4×0.7	M12×1.25	6	16	10	4	8	M5×0.8	4	-
12		5	M6×1	M16×1.5	6	22	14	6	12	M5×0.8	6	5
16		5	M6×1	M16×1.5	6	21	13	6	12	M5×0.8	6	5
20		6	M8×1.25	M22×1.5	7	23	13	8	16	G1/8	8	6
25		6	M10×1.25	M22×1.5	7	28	11	8	16	G1/8	10	8
32		5	M10×1.25	M30×1.5	8	34	13	10	16	G1/8	12	10
40		6	M12×1.25	M38×1.5	10	39	15	12	18	G1/4	16	13
MAC	32	6	M10x1.25	M24x2.0	8	22	12	10	16	G1/8	12	10
	40	7	M12x1.25	M30x2.0	9	22	12	12	20	G1/8	16	14
MAL	32	6	M10x1.25	M24x2.0	8	35	12	10	16	G1/8	12	10
	40	7	M12x1.25	M30x2.0	9	33	12	12	20	G1/8	16	14

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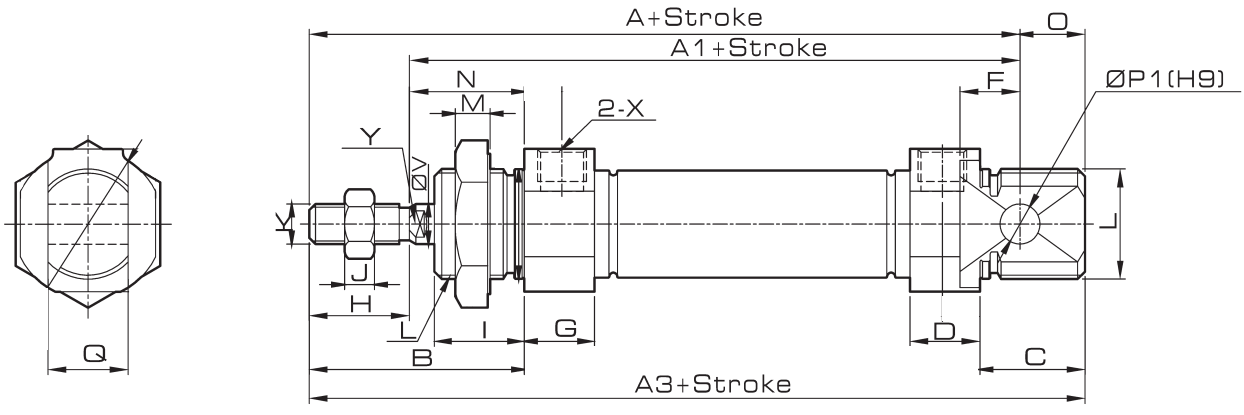
Overall Dimension

MSA Series



Dimension

Symbol	A			A1			A3		
Bore/Stroke	0-50	50-100	100-150	0-50	50-100	100-150	0-50	50-100	100-150
8	101	-	-	89	-	-	111	-	-
10	101	-	-	89	-	-	111	-	-
12	116	-	-	99	-	-	130	-	-
16	123	148	-	107	132	-	136	161	-
20	140	165	190	120	145	170	153	178	203
25	151	176	201	129	154	179	162	187	212

Bore/Stroke	B	C	D	G	H	I	J	K	L
8	28	12	10	10	12	12	6	M4×0.7	M12×1.25
10	28	12	10	10	12	12	6	M4×0.7	M12×1.25
12	38	17	10	10	16	17	5	M6×1	M16×1.5
16	37	19	10.5	10.5	16	16	5	M6×1	M16×1.5
20	43	21	14	14	20	16	6	M8×1.25	M22×1.5
25	50	21	15	15	22	22	6	M10×1.25	M22×1.5

Bore/Stroke	M	N	O	P1	Q	X	V	Y
8	6	16	10	4	8	M5×0.8	4	-
10	6	16	10	4	8	M5×0.8	4	-
12	6	22	14	6	12	M5×0.8	6	5
16	6	21	13	6	12	M5×0.8	6	5
20	7	23	13	8	16	G1/8	8	6
25	7	28	11	8	16	G1/8	10	8

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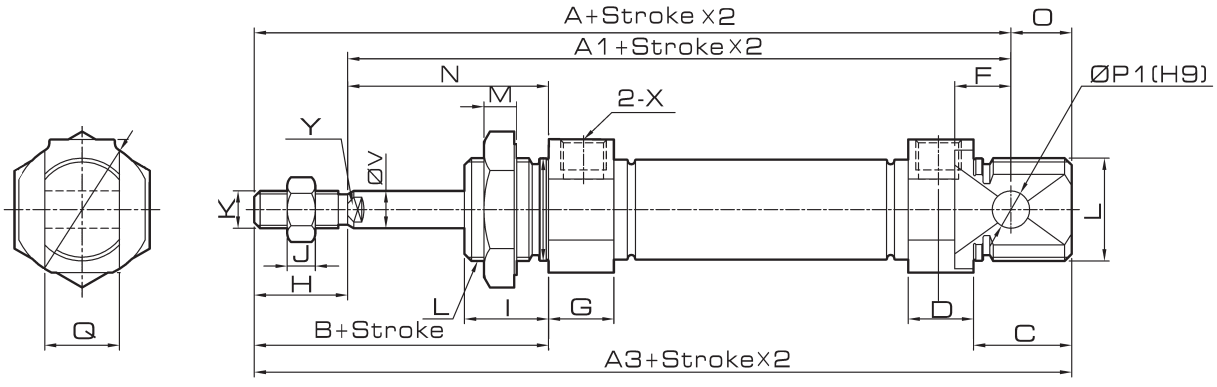
Overall Dimension

MTA Series



Dimension

Symbol	A			A1			A3		
Bore/Stroke	0-50	50-100	100-150	0-50	50-100	100-150	0-50	50-100	100-150
8	101	-	-	89	-	-	111	-	-
10	101	-	-	89	-	-	111	-	-
12	116	-	-	99	-	-	130	-	-
16	123	148	-	107	132	-	136	161	-
20	140	165	190	120	145	170	153	178	203
25	151	176	201	129	154	179	162	187	212

Bore Symbol	B	C	D	G	H	I	J	K	L
8	28	12	10	10	12	12	6	M4×0.7	M12×1.25
10	28	12	10	10	12	12	6	M4×0.7	M12×1.25
12	38	17	10	10	16	17	5	M6×1	M16×1.5
16	37	19	10.5	10.5	16	16	5	M6×1	M16×1.5
20	43	21	14	14	20	16	6	M8×1.25	M22×1.5
25	50	21	15	15	22	22	6	M10×1.25	M22×1.5

Bore Symbol	M	N	O	P1	Q	X	V	W	Y
8	6	16	10	4	8	M5×0.8	4	9.3	-
10	6	16	10	4	8	M5×0.8	4	9.3	-
12	6	22	14	6	12	M5×0.8	6	14	5
16	6	21	13	6	12	M5×0.8	6	15.5	5
20	7	23	13	8	16	G1/8	8	17.5	6
25	7	28	11	8	16	G1/8	10	17.5	8

MA Series

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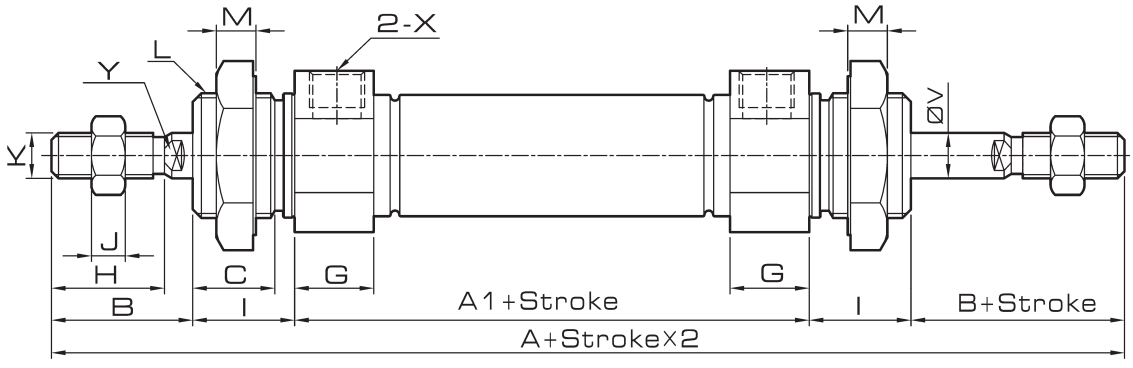
Overall Dimension

MAD Series



Cylinder with or without magnet is the same size

Dimension

Bore Symbol	A	A1	B	Y	G	H	I	J	K	L	M	V	X
8	102	46	16	-	10	12	12	6	M4×0.7	M12×1.25	6	4	M5×0.8
10	102	46	16	-	10	12	12	6	M4×0.7	M12×1.25	6	4	M5×0.8
12	126	50	21	5	10	16	17	5	M6×1	M16×1.5	6	6	M5×0.8
16	129	55	21	5	10.5	16	16	5	M6×1	M16×1.5	6	6	M5×0.8
20	150	64	27	6	14	20	18	6	M8×1.25	M22×1.5	7	8	G1/8
25	166	66	28	8	15	22	22	6	M10×1.25	M22×1.5	7	10	G1/8

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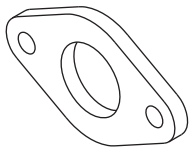
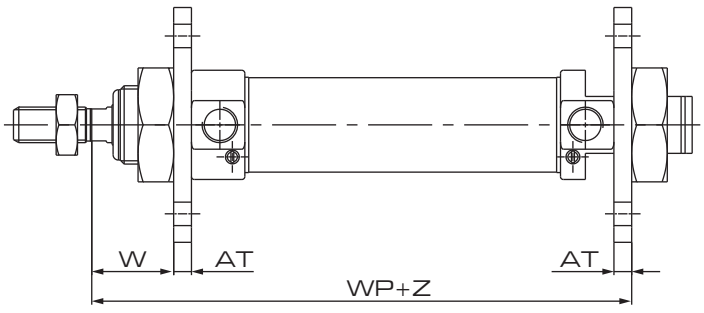
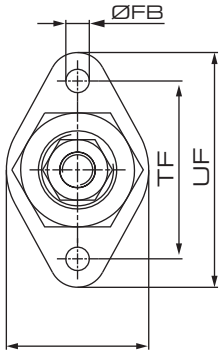
Overall Dimension

IFA Type Flang





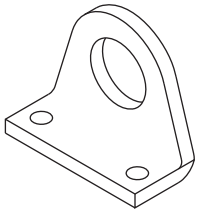


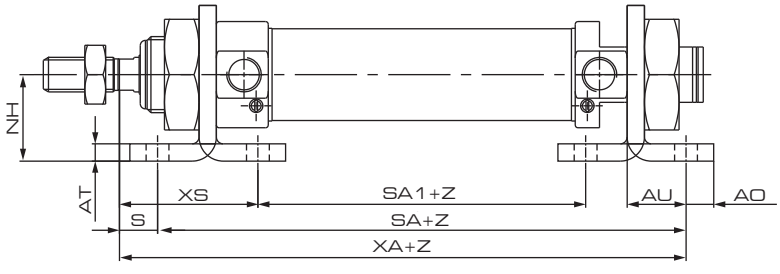
Z = Stroke

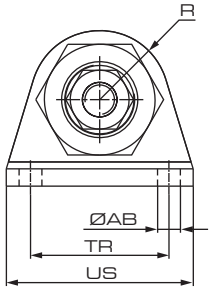
Dimension

Ø	AT	ØFB	TF	UF	UR	W	WP	Mass	Part No.
		H13	Js14			± 1,4		g	
12	4	5,5	40	53	30	18	76	25	IFA-12/16
16	4	5,5	40	53	30	18	82		
20	5	6,6	50	66	40	19	97	49	IFA-20/25
25	5	6,6	50	66	40	23	102		

LB Type Foot Bracket







Z = Stroke

Dimension

Ø	AB	AO	AT	AU	NH	R	S	SA	SA1	TR	US	XA	XS	Mass	Part No.
	H13			$^{+0,3}_{0}$	±0,3					Js14			±1,4	g	
12	5,5	6	4	14	20	13	8	78	30	32	42	86	32	40	LB-D12/16
16	5,5	6	4	14	20	13	8	84	36	32	42	92	32		
20	6,6	8	5	17	25	20	7	102	44	40	54	109	36	90	LB-D20/25
25	6,6	8	5	17	25	20	11	103	45	40	54	114	40		

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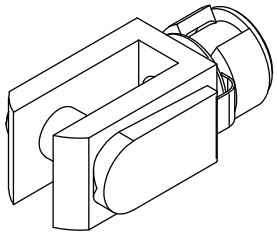
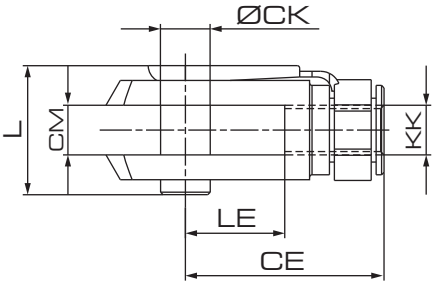
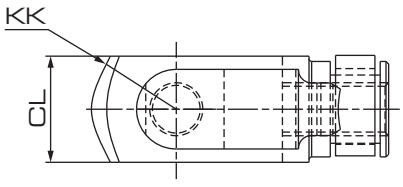
Overall Dimension

Y + Pin



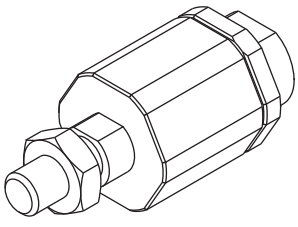


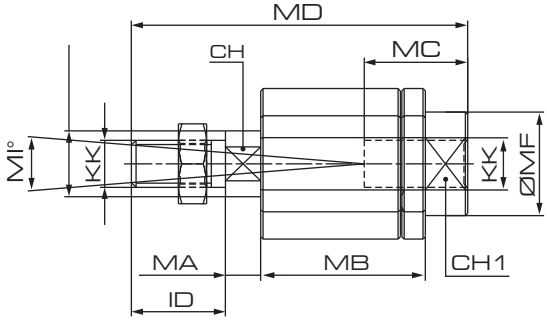


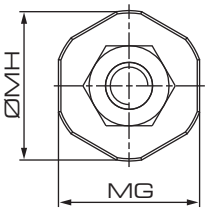
Dimension

Ø	CE	CK	CL	CM	ER	KK	L	LE	Mass	Part No.
				B12					g	
8 - 10	16	4	8	4	5	M4x0,7	11	8	7	Y+PIN D8/10
12 - 16	24	6	12	6	7	M6x1	16	12	19	Y+PIN D12/16
20	32	8	16	8	10	M8x1,25	22	16	46	Y+PIN D20
25	40	10	20	10	16	M10x1,25	26	20	90	Y+PIN D32

F Type Float Joint







Dimension

Ø	CH	CH1	ID	KK	MA	MB	MC	MD	ME	MF	MG	MH	MI°	Mass	Part No.
														g	
8 - 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 - 16	5	7	11	M6x1	2,5	17,5	12,5	35	6	8,5	13	14,5	6°	35	F-12/16
20	7	11	21	M8x1,25	5	26	16	57	8	12,5	17	19	8°	60	F-20
25	12	19	20	M10x1,25	7,5	35	22	71,5	14	22	30	32	8°	220	F-32

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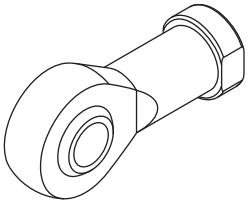
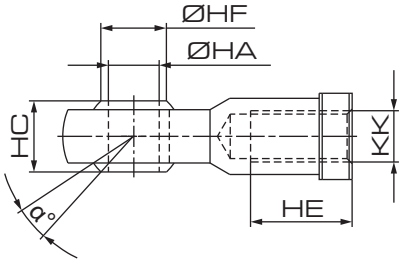
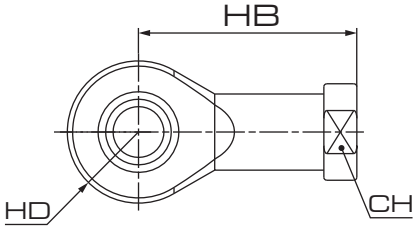
B Type Fish Eye Joint



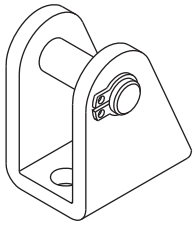


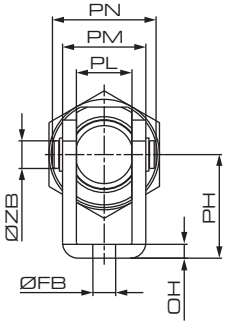


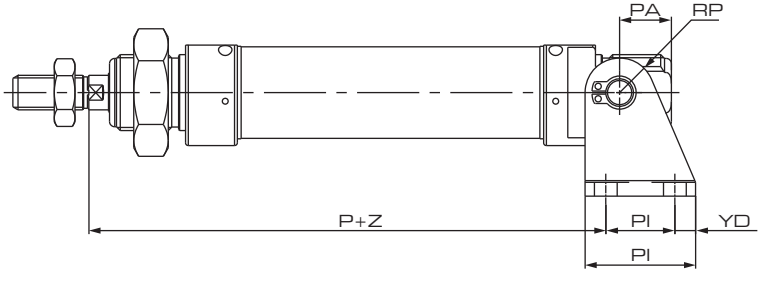
Dimension

Ø	α°	CH	KK	HA	HB	HC	HD	HE	HF	Mass	Part No.
				H7			0 -0,12			g	
8 - 10	13°	9	M4x0,7	5	27	8	9	10	7,7	18	B-D8/10
12 - 16	13°	11	M6x1	6	30	9	10	12	9	26	B-D12/16
20	14°	14	M8x1,25	8	36	12	12	16	10,4	46	B-D20
25	13°	17	M10 x 1,25	10	43	14	14	20	12,9	76	B-D32

LBN







Z = Stroke

Dimension

Ø	FB	OH	P	PA	PH	PI	PL	PM	PN	PV	RP	YD	ZB	Mass	Part No.
	H13						E9						f8	g	
12	5,5	3	73	13	27	15	12,1	18,1	23	25	7	5	6	37	LBN+PIN-D12/16
16	5,5	3	80	13	27	15	12,1	18,1	23	25	7	5	6		
20	6,6	4	91	16	30	20	16,1	24,1	30	32	10	6	8	80	LBN+PIN-D20/25
25	6,6	4	100	16	30	20	16,1	24,1	30	32	10	6	8		