

AIR CYLINDER

Series A12, A13

Cat No A12, A13 - 01 - 01

AIR CYLINDERS Double Acting ($\varnothing 32 - 160$) mm

As per ISO 6431 / CETOP RP43P, RP53P standards

Features

- Adjustable cushioning at both ends
- Wide varieties of mountings
- Low friction
- Long life



Technical Specifications

Cylinder bore \varnothing (mm)	32	40	50	63	80	100	125	160	
Cushion stroke (mm)	21	23	23	23	28	28	40	40	
Standard strokes* (mm)	25 50 80 100 125 160 200 250 300 320 400 500						50 80 100 125 160 200 250 300 320 400 500		
Medium	Compressed air – filtered – lubricated								
Working pressure	0.5 - 10 bar								
Medium temperature	5 ° - 60 ° c								
Materials of construction	Aluminium, Brass, Nitrile, Steel, Acetal, Iron, Bronze, polyurethane								
Mountings	Basic cylinder	Foot mounting	Front flange	Rear flange					
Accessories	Male clevis	Female clevis	Centre trunnion					Trunnion bracket	Rod end spherical eye
	Clevis foot bracket	Wall mounting bracket							
	Rod end fork	Rod end aligner							

* For Non standard or longer stroke cylinders , contact your regional dealer or JANATICS

Output force (force in N: 1N = 0.1 kgf)

Cylinder bore (in mm)	Rod dia (in mm)	Working pressure in bar									
		2	3	4	5	6	7	8	9	10	
32	12	Extend	145	217	289	362	434	507	579	651	724
		Retract	124	187	249	311	373	435	498	559	621
40	16	Extend	226	339	452	565	678	792	905	1018	1130
		Retract	190	285	380	475	570	665	760	855	950
50	20	Extend	353	530	706	884	1060	1237	1414	1590	1767
		Retract	297	445	594	742	891	1039	1187	1336	1484
63	20	Extend	561	842	1122	1403	1683	1964	2244	2525	2805
		Retract	505	757	1009	1261	1514	1766	2018	2270	2523
80	25	Extend	905	1357	1809	2262	2714	3167	3619	4072	4524
		Retract	816	1225	1633	2041	2449	2857	3266	3674	4082
100	25	Extend	1414	2120	2828	3534	4241	4948	5655	6362	7069
		Retract	1325	1988	2650	3313	3976	4640	5300	5965	6625
125	32	Extend	2209	3313	4417	5522	6626	7731	8835	9940	11044
		Retract	2064	3096	4128	5160	6192	7224	8256	9288	10320
160	40	Extend	3619	5428	7238	9047	10857	12666	14476	16286	18095
		Retract	3392	5089	6785	8482	10178	11875	13571	15268	16964

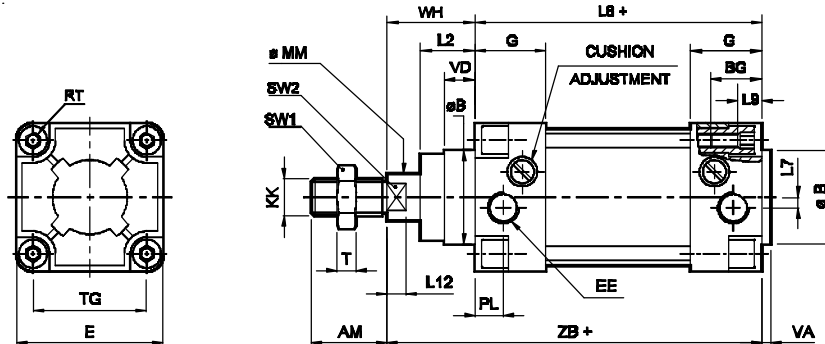
(Above values have been worked out taking frictional loss into consideration)

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Basic cylinder



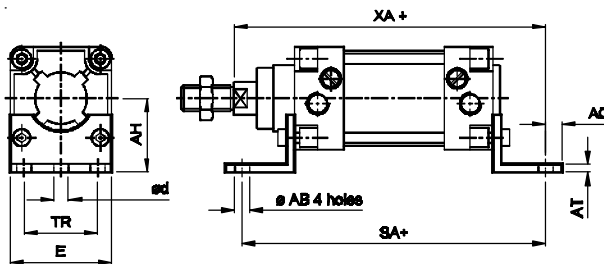
+ Add stroke

Cylinder bore Ø	KK	AM	MM	SW2	L12	SW1	T	B e11	VD	VA	L2	E max	G	TG	RT	BG min	L9	EE	PL	L7	WH	ZB	L8	Stroke tol
32	M10 x 1.25	22	12	10	6	17	5	30	11	3.5	20.5	44	25	32	M6	16	5	G1/8	9	0	26 ± 1.3	120 ± 0.9	94	
40	M12 x 1.25	24	16	13	6.5	19	7	35	12	4	24.5	55	28	40	M6	16	5	G1/4	12	3	30 ± 1.3	135 ± 0.9	105	+2 0
50	M16 x 1.5	32	20	16	8	24	8	40	13	4	30	63	30	48	M6	16	5	G1/4	12	5	37 ± 1.3	143 ± 0.9	106	
63	M16 x 1.5	32	20	16	8	24	8	45	14.5	4	30.5	83	33	60	M8	16	6	G3/8	16.5	10	37 ± 1.7	158 ± 1.1	121	
80	M20 x 1.5	40	25	21	10	30	10	45	18	4	38.5	102	33	72	M10	16	6	G3/8	16	15	46 ± 1.7	174 ± 1.1	128	+2.5 0
100	M20 x 1.5	40	25	21	10	30	10	55	20	4	44	119	37	89	M10	16	6	G1/2	18	15	51 ± 1.7	189 ± 1.1	138	
125	M27 x 2	54	32	27	13	41	12	60	6	6	50.5	142	44	110	M12	20	-	G1/2	20	12	65 ± 2.2	225 ± 1.2	160 ± 1.0	+4 0
160	M36 x 2	72	40	36	16	55	14	65	8	6	60	182	51	140	M16	24	-	G3/4	26	15	80 ± 2.2	260 ± 1.5	180 ± 1.1	

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Foot mounting

+ Add stroke

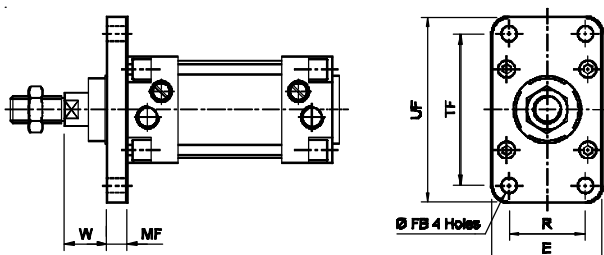


Cylinder bore Ø	TR ±0.3	AB H13	AH Js15 max.	AO	AT	E	SA	tol	d*	XA	tol
32	32	7	32	9	4	43	142	5.8		144	
40	36	9	36	11	4	54	161	± 1.25	7.8	163 ± 1.25	
50	45	9	45	11	6	62	170	7.8		175	
63	50	9	50	14	6	82	185	7.8		190	
80	63	12	63	16	6	100	210	± 1.5	9.8	215 ± 1.5	
100	75	14	71	18	6	117	220	11.8		230	
125	90	16.5	90	17	8	140	250	± 2	11.8	270	
160	115	18.5	115	17	10	180	300	11.8		320	± 2

* Suitable for reaming

Front flange

+ Add stroke



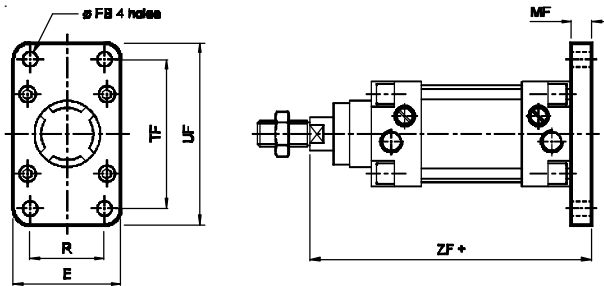
Cylinder bore Ø	TF ± 0.3	R ± 0.3	FB H13	MF	UF	E	W	tol
32	64	32	7	10	78	46	16	
40	72	36	9	10	90	55	20	± 1.5
50	90	45	9	12	110	65	25	
63	100	50	9	12	125	83	25	
80	126	63	12	16	155	101	30	± 1.8
100	150	75	14	16	185	118	35	
125	180	90	16	20	211	141	45	
160	230	115	18	20	276	181	60	± 2.5

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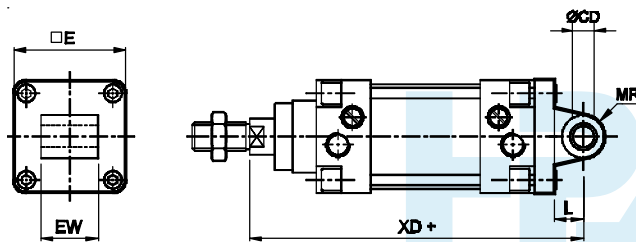
Rear flange



+ Add stroke

Cylinder bore \varnothing	TF ± 0.3	R ± 0.3	FB H13	MF	UF	E	ZF	tol
32	64	32	7	10	78	46	130	
40	72	36	9	10	90	55	145	± 1.25
50	90	45	9	12	110	65	155	
63	100	50	9	12	125	83	170	
80	126	63	12	16	155	101	190	± 1.5
100	150	75	14	16	185	118	205	
125	180	90	16	20	211	141	245	± 2
160	230	115	18	20	276	181	280	

Male clevis

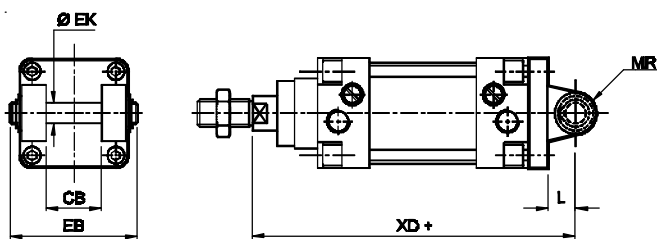


+ Add stroke

Cylinder bore \varnothing	CD H9	EW	tol	L min.	MR max.	E max.	XD	tol
32	10	26		12	11	46	142	
40	12	28		15	13	54	160	± 1.25
50	12	32	-0.2 -0.6	15	13	62	170	
63	16	40		20	17	82	190	
80	16	50		20	17	100	210	± 1.5
100	20	60		25	21	117	230	
125	25	70	-0.5 -1.2	30	26	140	275	
160	30	90		35	30	180	315	± 1.8

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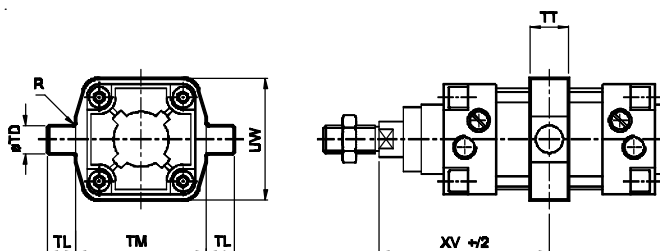
Female clevis



+ Add stroke

Cylinder bore \varnothing	EK e8	L	MR	EB max.	CB H14	XD	tol
32	10	12	11	56	26	142	
40	12	15	13	65	28	160	± 1.25
50	12	15	13	73	32	170	
63	16	20	17	86	40	190	
80	16	20	17	106	50	210	± 1.5
100	20	25	21	129	60	230	
125	25	30	26	148	70	275	
160	30	35	31	191	90	315	± 1.8

Centre trunnion



+ Add stroke

Cylinder bore \varnothing	TD e9	TL h14	TM h14	UW	TT	R	XV	tol
32	12	12	50	48	16	1	73	
40	16	16	63	55	22	1.5	82.5	
50	16	16	75	70	24	1.6	90	± 2
63	20	20	90	86	28	1.6	97.5	
80	20	20	110	110	32	1.6	110	
100	25	25	132	135	40	2	120	
125	25	25	160	155	44	2	145	
160	32	32	200	195	49	2.5	170	± 2.5

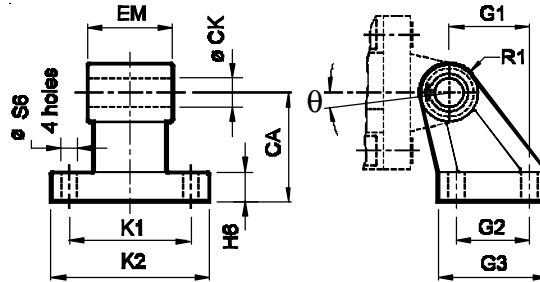
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ACCESSORIES FOR AIR CYLINDER Series A12, A13

Clevis foot bracket (CETOP - RP 107 P)



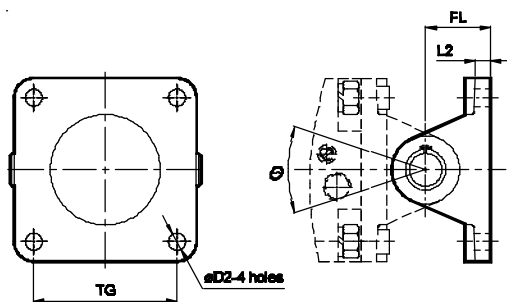
Cylinder bore Ø	K1 Js14	G2 Js14	S6	CA Js16	CK H9	EM	tol	G1 ±0.2	H6	R1 max.	K2	G3	q°	Ordering no. @
32	38	18	5.5	32	10	26		21	9	10	51	32	17	AA032
40	41	22	5.5	36	12	28		24	10	13	54	36	17	AA040
50	50	30	6.6	45	12	32	-0.2	33	12	13	65	48	17	AA050
63	52	35	6.6	50	16	40	-0.6	37	12	17	69	53	17	AA063
80	66	40	9	63	16	50		47	14	17	86	67	11	AA080
100	76	50	9	71	20	60		55	15	21	96	82	10	AA100
125	94	60	14	90	25	70	-0.5	70	20	23.5	124	90	15	AA0125
160	118	88	14	115	30	90	-1.2	97	25	31.5	156	126	10	AA0160

@ Adoptable to cylinder with female clevis

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Wall mounting bracket

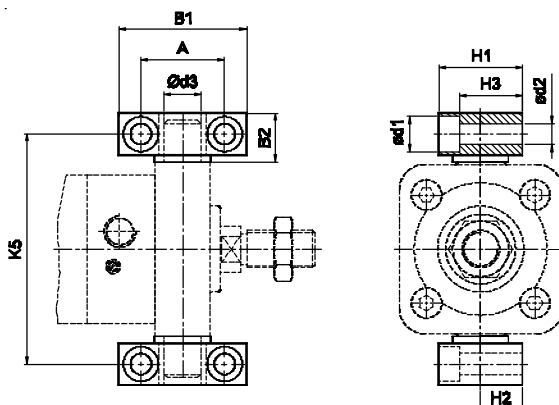


Cylinder bore Ø	TG	D2	L2	FL	q°	Ordering no. @	Ordering no. #
32	32	6.6	5.5	22	50	AV032	AW032
40	40	6.6	8.5	25	50	AV040	AW040
50	48	6.6	8	27	40	AV050	AW050
63	60	9	10.5	32	50	AV063	AW063
80	72	11	14.5	36	36	AV080	AW080
100	89	11	14	41	36	AV100	AW100
125	110	13	10	50	80	AV0125	AW0125
160	140	17	10	55	80	AV0160	AW0160

@ Adoptable to cylinder with male clevis

Adoptable to cylinder with female clevis

Trunnion bracket



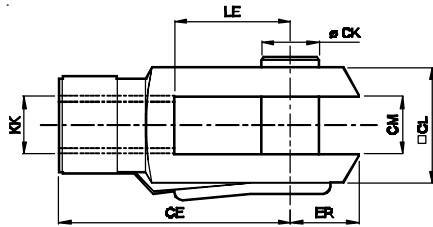
Cylinder bore Ø	B1	B2	A ±0.2	d1	d2 H13	d3 H9	H1	H2 ±0.1	H3	K5 Js14	Ordering no.
32	46	18	32	11	6.6	12	30	15	23	71	AT032
40	55	21	36	15	9	16	36	18	27	87	AT040
50	55	21	36	15	9	16	36	18	27	99	AT040
63	65	23	42	16.5	11	20	40	20	29	116	AT063
80	65	23	42	16.5	11	20	40	20	29	136	AT063
100	75	28.5	50	20	14	25	50	25	37	164	AT100
125	75	28.5	50	20	14	25	50	25	37	192	AT100
160	92	40	60	25	18	32	60	30	43	245	AT0160

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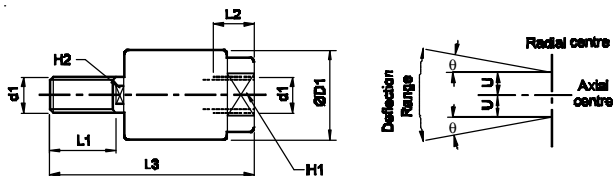
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Rod end Fork (ISO 8140)



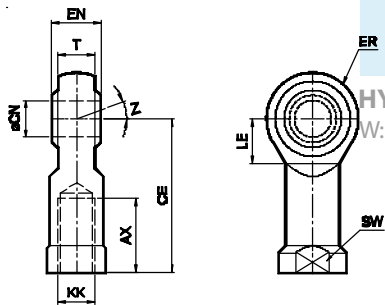
Cylinder bore Ø	KK	CE	CK f 8	CM B 12	LE	ER max.	CL	Ordering no.
32	M10 x 1.25	40	10	10	20	16	20	AF010
40	M12 x 1.25	48	12	12	24	18.5	24	AF012
50 / 63	M16 x 1.5	64	16	16	32	25	32	AF016
80 / 100	M20 x 1.5	80	20	20	40	32	40	AF020
125	M27 x 2	110	30	30	55	45	55	AF030
160	M36 x 2	144	35	35	72	53	70	AF035

Rod end Aligner



Cylinder bore Ø	d1	L1	L2	L3	H1	H2	D1	U	± q°	Ordering no.
32	M10 x 1.25	20	14	65	17	8	28	0.75	5	AR010
40	M12 x 1.25	22	18	75	19	10	32	1	5	AR012
50 / 63	M16 x 1.5	25	22	91	27	13	41	1	5	AR016
80 / 100	M20 x 1.5	30	28	112	32	16	50	1.5	5	AR020

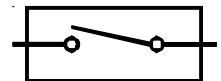
Rod end spherical eye (ISO 8139)



Cylinder bore Ø	KK	CN H9	T	EN h12	CE	LE min	ER max	AX	SW	Z	Ordering no.
32	M10 x 1.25	10	10.5	14	43	15	14	20	17	13°	AP010
40	M12 x 1.25	12	12	16	50	17	16	22	19	13°	AP012
50 / 63	M16 x 1.5	16	15	21	64	22	21	28	22	15°	AP016
80 / 100	M20 x 1.5	20	18	25	77	26	25	33	30	15°	AP020
125	M27 x 2	30	25	37	110	36	35	51	41	15°	AP027
160	M36 x 2	35	28	43	125	41	40	56	50	15°	AP036

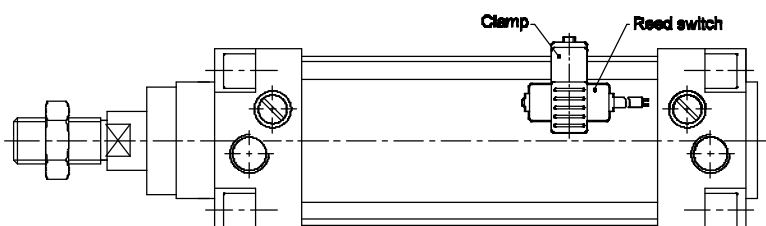
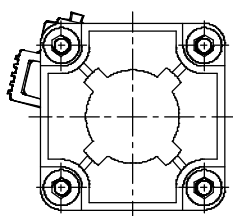
ACCESSORIES FOR MAGNETIC CYLINDERS Series A13

REED SWITCH



Function

The reed switch and clamping kit assembly is mounted on the Air cylinder (Series A13), for proximity sensing. The piston of the cylinder is equipped with a permanent magnet which activates the reed switch on approaching it. The reed switch closes the circuit giving an electrical signal, which could be used further as required. The accuracy of the sensing distance depends on the speed of operation of the piston.



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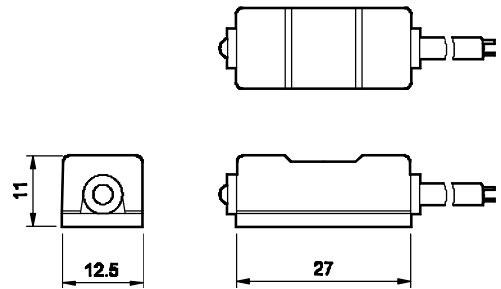
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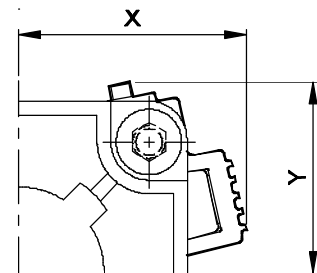
Technical Specifications - Reed Switch

Model	880006
Operating voltage	DC / AC 4 – 240V
Switching current	5 – 40mA
Contact rating	6(3)* W, 8(4) VA
Voltage drop	2.5V max.
Response time	On + off <1ms
Switching logic	Normally open
Operating temperature	5° - 60° C
Type of protection	IP67
Colour of LED	Green
Cable	Ø 4, 2C

* when load is inductive

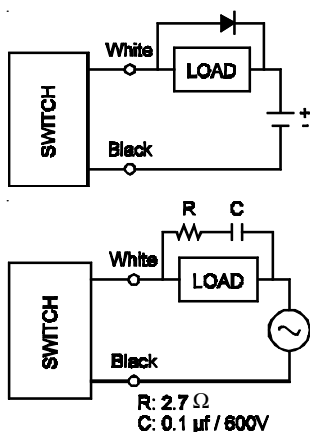


Cylinder bore Ø	X	Y	Ordering no. for Clamp (a)	Ordering no. Reed Switch (b)	Ordering no. (a+b)
32	37	29			
40	40	31	SA0001	880006	AM1032
50	44	37			AM1063
63	45	48	SA0002		AM1080
80	57	-	SA0003		AM1125
100	65	-			AM1160
125	71	76	SA0005		
160	-	92	SA0006		

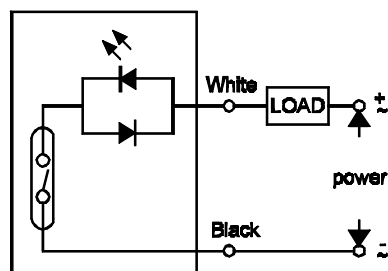


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External protect circuit



Circuit and connect diagram



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How to order

A

Model		Cylinder bore (mm)		Stroke (mm)		Mountings	
12	Standard cylinder	032	- Ø 32	025	- 25	O	- Basic
13	Magnetic cylinder	040	- Ø 40	050	- 50	L	- Foot Mounting
		050	- Ø 50	080	- 80	F	- Front Flange
		063	- Ø 63	100	- 100	R	- Rear Flange
		080	- Ø 80	125	- 125	S	- Male Clevis
		100	- Ø 100	160	- 160	D	- Female Clevis
		125	- Ø 125	200	- 200	T	- Center Trunnion
		160	- Ø 160	250	- 250		
				300	- 300		
				320	- 320		
				400	- 400		
				500	- 500		

Example:

Ordering no. for standard cylinder with 40 dia bore, 50 mm stroke with female clevis mounting : **A12 040 050 D**

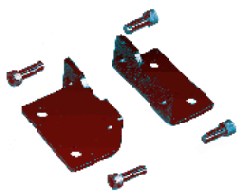
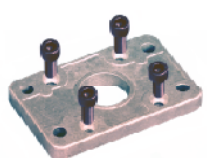
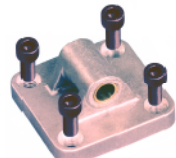
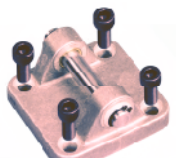
Note:

If ordered as 40 dia, 50 mm stroke cylinder, Basic cylinder **A12 040 050 O** will be supplied.

For repeat order when the details are taken from cylinder nameplate, mention the mounting style separately.

For ordering **Accessories** refer corresponding tables for part numbers.

For ordering individual **Mounting** kits (If needed separately) the order numbers are as below

Cylinder bore Ø	Foot mounting	Front / Rear flange	Male clevis	Female clevis
				
32	ML032	MF032	MS032	MD032
40	ML040	MF040	MS040	MD040
50	ML050	MF050	MS050	MD050
63	ML063	MF063	MS063	MD063
80	ML080	MF080	MS080	MD080
100	ML100	MF100	MS100	MD100
125	ML0125	MF0125	MS0125	MD0125
160	ML0160	MF0160	MS0160	MD0160

For your special requirements of cylinders or for further informations contact your regional dealer or JANATICS

Subject to change