

AIR CYLINDER

Series A108, A109 (Heavy Duty)

Cat No A108, A109 - 01 - 01 - A

AIR CYLINDERS Double Acting (Ø160, 200, 250, 320, 350 mm)

Features

- ☐ Barrel made of MS / FRP
- ☐ Long life
- ☐ Low friction
- ☐ Adjustable cushion at both ends
- ☐ FRP Series: - Excellent thermal stability and lower conductivity
- Shape stability and impact resistance
- Light weight
- Magnetic version also available
- ☐ Optional: Non-corrosive stainless steel piston rod and piston rod lock nut (SS 304)



Technical Specifications

Cylinder bore Ø	(mm)	160	200	250	320	350
Cushion stroke	(mm)	40				
Standard strokes *	(mm)	100, 125, 160, 200, 250, 300, 320, 400, 500, 675, 800, 900, 1000				
Medium		Compressed air - Filtered - Lubricated				
Working pressure		0.5 to 10 bar				
Ambient temperature	Regular	-10° to +80° C (Nitrile Seals)				
	High temperature applications	+5° to +150° C max. (Viton Seals) [#]				
Medium temperature		+5° to +50° C				
Materials of construction		Barrel: MS / FRP; End cover: Cast iron; Piston rod: Stainless steel Seals: Nitrile / Viton [#] ; Others: Brass, Bronze, Polyurethane				
Accessories		Available on request				

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

[#] For MS barrel application.

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

Cylinder bore Ø (in mm)	Rod Ø (in mm)		Working pressure in bar								
			2	3	4	5	6	7	8	9	10
Ø160	32	Extend	3619	5429	7238	9048	10857	12667	14476	16286	18096
		Retract	3474	5212	6949	8686	10423	12160	13897	15635	17372
Ø200	32	Extend	5655	8482	11310	14137	16965	19792	22619	25447	28274
		Retract	5510	8265	11020	13775	16530	19285	22040	24795	27550
Ø250	40	Extend	8836	13254	17671	22089	26507	30925	35343	39761	44179
		Retract	8610	12914	17219	21524	25829	30133	34438	38743	43048
Ø320	40	Extend	14476	21715	28953	36191	43429	50668	57906	65144	72382
		Retract	14250	21375	28501	35626	42751	49876	57001	64126	71251
Ø350	40	Extend	17318	25977	34636	43295	51954	60613	69272	77931	86590
		Retract	17092	25638	34184	42730	51275	59821	68367	76913	85459

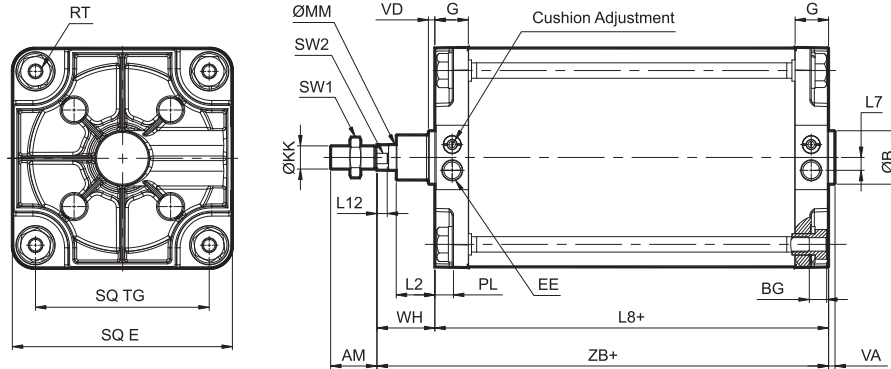
(Above values have been worked out taking frictional loss into consideration)

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Basic cylinder

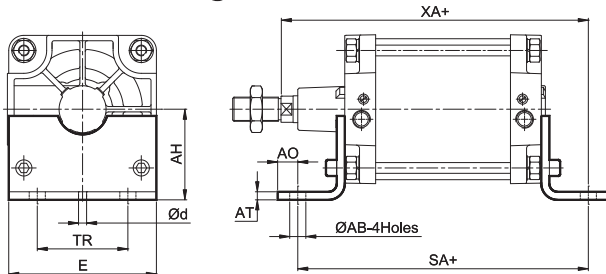


+ Add stroke

Cylinder bore Ø	KK	AM	MM	SW2	L12	SW1	B e11	VD	VA	L2	E max	G	TG	RT	BG min	EE	PL	L7	WH ± 2.2	ZB	L8	Stroke tol
160	M27 x 2	54	32	27	13	41	65	18	18	57	183	36	140	M16	25	G1/2	20	12	78	229±1.1	151±1.5	+4 0
200	M27 x 2	54	32	27	13	41	75	18	18	59	222	36	175	M16	25	G1/2	20	12	79	240±1.6	161±1.5	+5 0
250	M36 x 2	72	40	36	16	55	70	15	15	70	270	45	220	M20	25	G3/4	23	15	102	280±2	178±1.6	+5 0
320	M36 x 2	72	40	36	16	55	83	10	10	60	342	52	270	M24	27	G1	27	20	90	302±2	212±2.2	+5 0
350	M36 x 2	72	40	36	16	55	83	10	10	60	378	52	290	M24	27	G1	27	20	90	303±2	213±2.2	+5 0

MOUNTINGS FOR AIR CYLINDER Series A108, A109

Foot mounting

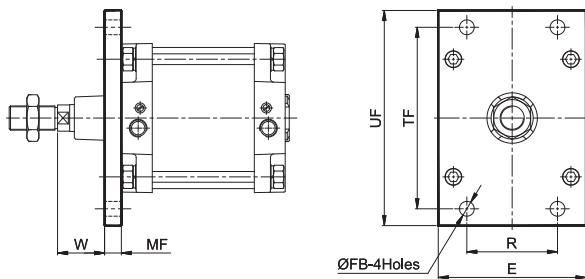


+ Add stroke

Cylinder bore Ø	TR ±0.3	AB H14	AH Js16	AO max	AT	E	SA ±2	d*	XA ±2	Ordering no.
160	115	18.5	115	17	10	182	271	11.8	288	ML0160
200	135	24	135	30	12	222	300	11.8	309	ML0200
250	165	28	165	35	20	265	327	11.8	355	ML0250
320	270	35	200	40	23	335	376	11.8	388	ML0320

* Suitable for reaming

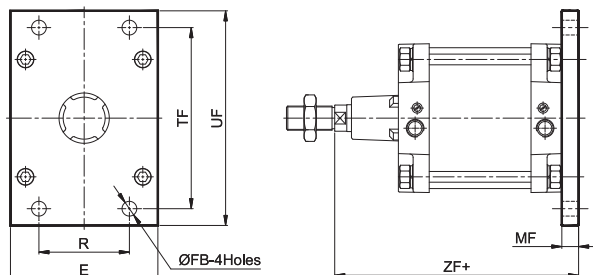
Front flange



+ Add stroke

Cylinder bore Ø	TF ±0.3	R ±0.3	FB H13	MF	UF	E	W ±2.5	Ordering no.
160	230	115	18	20	276	182	59	MF0160
200	270	135	22	25	320	222	54	MF0200
250	330	165	26	25	390	265	77	MF0250
320	400	200	33	30	470	335	60	MF0320

Rear flange



+ Add stroke

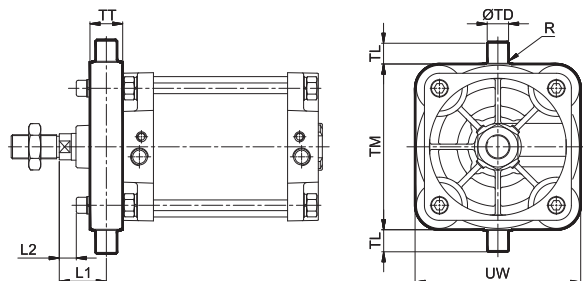
Cylinder bore Ø	TF ±0.3	R ±0.3	FB H13	MF	UF	E	ZF ± 2	Ordering no.
160	230	115	18	20	276	182	249	MF0160
200	270	135	22	25	320	222	264	MF0200
250	330	165	26	25	390	265	301	MF0250
320	400	200	33	30	470	335	332	MF0320

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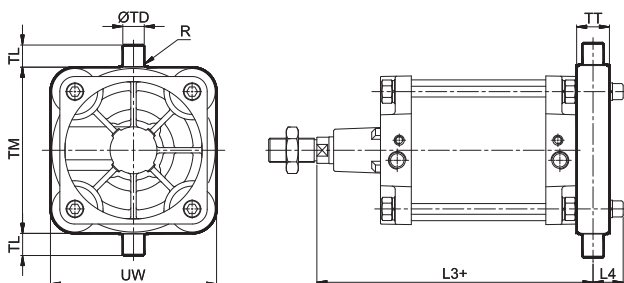
Cat No A108, A109 - 01 - 01 - A

Front trunnion



+ Add stroke									
Cylinder bore Ø	TD e9	TL h14	TM h14	UW	TT	R	L1 ±2.5	L2 Approx.	Ordering no.
160	32	32	200	195	49	2.5	53.5	9.5	MT0160
200	32	32	250	248	49	2.5	54.5	10.5	MT0200
250	40	40	320	318	60	3.2	72	18	MT0250
320	50	50	400	398	70	3.2	58	28	MT0320

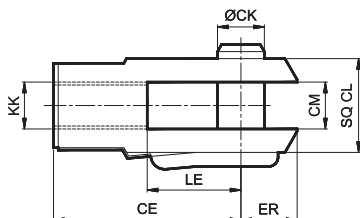
Rear trunnion



+ Add stroke									
Cylinder bore Ø	TD e9	TL h14	TM h14	UW	TT	R	L3 ±1.8	L4	Ordering no.
160	32	32	200	195	49	2.5	253.5	44	MT0160
200	32	32	250	248	49	2.5	263.5	44	MT0200
250	40	40	320	318	60	3.2	310	30	MT0250
320	50	50	400	398	70	3.2	335	30	MT0320

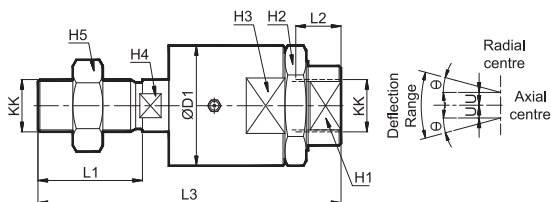
Accessories for Air Cylinder series A108, A109

Rod end fork (ISO 8140)



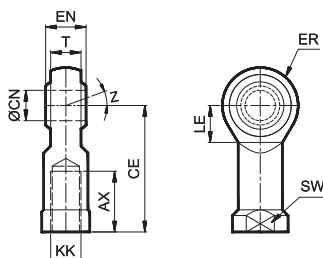
Cylinder bore Ø	KK	CE	CK	CM B12	LE	ER max	CL	Ordering no.
160 & 200	M27 x 2	110	30	30	55	45	55	AF030
250 to 350	M36 x 2	144	35	35	72	53	70	AF035

Rod end aligner



Cylinder bore Ø	KK	L1	L2	L3	H1	H2	H3	H4	H5	ØD1	U	θ°	Ordering no.
160 & 200	M27 x 2	54	42	157	41	55	55	24	41	62	1.5	5	AR027
250 to 350	M36 x 2	72	55	251	60	75	75	32	55	80	1.5	5	AR036

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.
160 & 200	M27 x 2	30	25	37	110	36	35	51	41	15°	AP027
250 to 350	M36 x 2	35	28	43	125	41	40	56	50		AP036

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How to order

A

108

Model	
108	Non-Magnetic
109	Magnetic

160

Cylinder bore mm)	
160	- Ø160
200	- Ø200
250	- Ø250
320	- Ø320
350	- Ø350

250

100	- 100
125	- 125
160	- 160
200	- 200
250	- 250
300	- 300
320	- 320
400	- 400
500	- 500
575	- 575
675	- 675
775	- 775
900	- 900
1000	- 1000

F4

Mountings & Accessories	
1	- Nil
F5#	- Foot Mounting
F4#	- Front Flange
R1#	- Rear Flange
C1#	- Front Trunnion
C2#	- Rear Trunnion
F1	- Rod End Fork
F2	- Rod End Aligner
F3	- Rod End Spherical Eye

Note: # - Mountings are not available for Ø350 Cylinder

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Variables	
1	- Barrel - Mild Steel (Non-Magnetic only) Seals - Nitrile
2	- Barrel - Mild Steel (Non-Magnetic only) Seals - Viton
3	- Barrel - FRP Seals - Nitrile

Note: # - Mountings are not available for Ø350 Cylinder

Ordering Example:

Ordering no. for Non-Magnetic cylinder with 160 dia bore, 250 mm stroke with front flange mounting with high temperature: **A108160250-F4-2**

Note:

If ordered as Magnetic cylinder 250 dia, 200 mm stroke with FRP barrel **A109250200-1-3** 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 Ordering numbers.

For ordering **Magnetic Sensors**, refer corresponding cylinder bore sizes (Ø160 to 250) from A17 series (Page no. 1.3.6 & 1.3.7).

Magnetic Sensors **AM5024-0-FL-04**, **AM5024-1-FL-04**, **AM5024-2-FL-04**, **AM5024-3-FL-04** can be used for both Ø320 & Ø350.

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

Cylinder bore Ø	Foot mounting*	Front / Rear flange*	Front / Rear trunnion*
			
160	ML0160	MF0160	MT0160
200	ML0200	MF0200	MT0200
250	ML0250	MF0250	MT0250
320	ML0320	MF0320	MT0320

* Supplied with 4nos. of screws

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

Subject to change