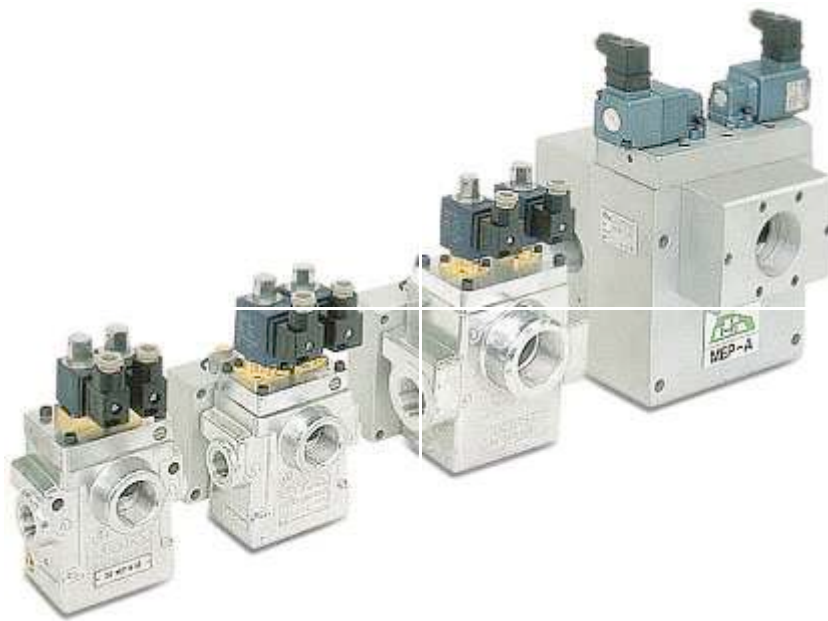




MEP-A Press safety valves

Definition

MEP-A is a series of safety valves for presses and pneumatically acting safety subject groups; they are 3 way/2 pos. NC active components for compressed air powered single acting actuators control. To achieve their safety duties according to effective standards, such as EN 692 for CEE countries, these valves must be redundant (double-body) and equipped with a dynamic failure monitoring device. They now spread in four models from nominal size 10 to 40, all with BG approval.



Accomplishment

MEP-A are redundant double-body, parallel flow pneumatically actuated valves, rated to limit, in case of malfunction, the residual pressure to values under 3% of the inlet pressure. Their inherent dynamic monitoring system blocks valve operation safety in case an inner leakage occurs, also if very low and not detectable by usual position sensors. A phase difference between the two bodies of a few tenth of a second causes the self locking of the valve, which cannot be inserted back until the safe running in the rest position will be restored (delivery sealed and parallel exhaust of both bodies). Reset is automatic when the normal function is restored in the stand by position. An ancillary monitoring system with manual reset can be actuated by two pressure switches, delivered as an option, mounted on the relevant connections.

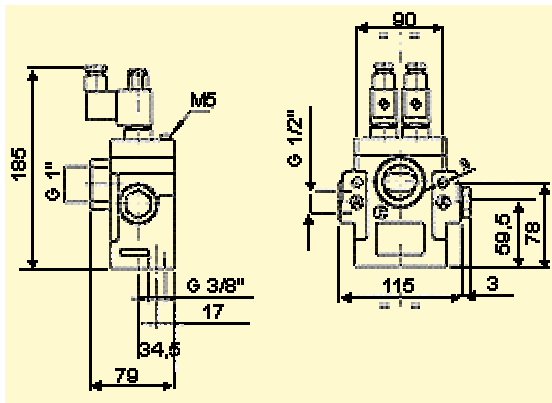


Construction and Dimensions

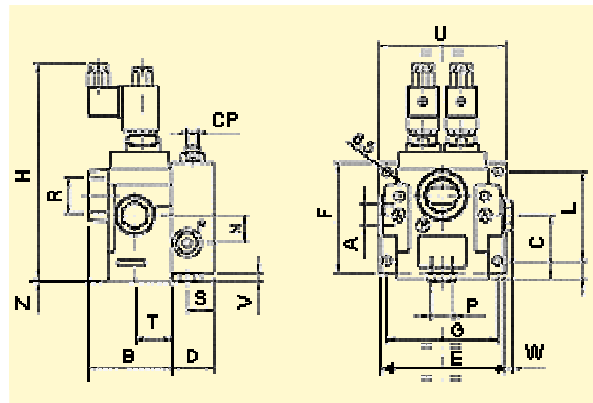
Construction

Function:	3/2 NC	Mounting position:	vertical pilots upwards
Construction type:	poppet	Temperature range:	-10 °C +50 °C
Pilot system:	electropneumatic internally fed	Monitoring circuit:	inherent, dynamic
Fluid:	filtered and lubricated air	Reset:	automatic
Materials:	body aluminium gaskets polyurethan and NBR	Manual reset:	optional
Connectors:	with varistors		

Dimensions



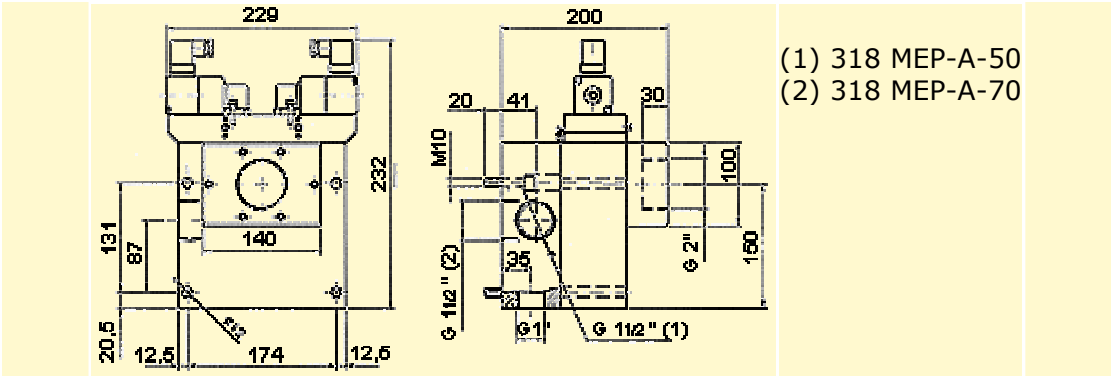
313 MEP-A



314 MEP-A / 316 MEP-A

	A	P	R	B	C	D	E	F	G	H	I	L	N	S	T	U	V	W	Z	CP
313MEP-A-50	1/2"	1/2"	1"	79	60	40	115	100	104	202	17	84	26	25	34,5	120	3	3	-	1/8"
314MEP-A-52	3/4"	1/2"	1"	79	58,2	40	113	100	104	202	17	84	24,2	25	34,5	120	3	3	-	1/8"
316MEP-A	1"	3/4"	1 1/2"	104	63	40	166	120	154	239	8	104	35	20	43,5	170	7	7	7	1/8"

318 MEP-A



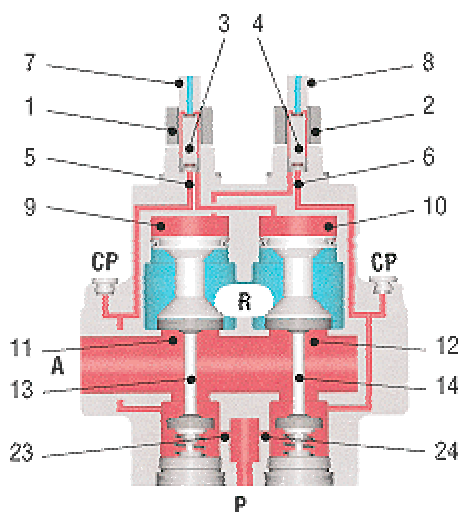
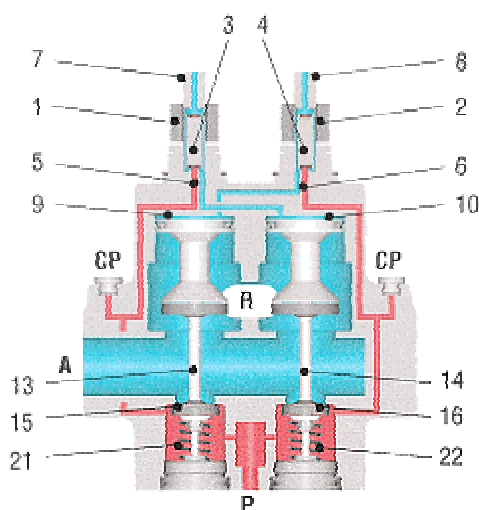
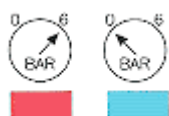


VALVE CYCLE

STAND BY (A)

The electropilots (1-2) are deenergized, the cores (3-4) pressed by the spring close the inlets (5-6) and exhaust the pilot chambers (9-10).

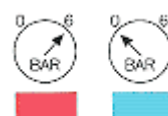
The valve elements (13-14) are kept in the upper position by the springs (21-22) and by air pressure, closing by the gaskets (15-16) the flow of incoming air to outlet A. Outlet A is connected to exhaust R.



OPERATION (B)

Energizing both the electropilots (1-2) the cores (3-4) press the springs closing the exhausts (7-8) and opening the inlets (5-6).

The air pressure which was charged on 5-6 in the stand by position flows to the piston chambers (9-10) shifting downward the valve elements (13-14) connecting the inlet pressure P to the outlet A through passage 23-24 and closing the exhaust path (11-12).



FAILURE (C)

For instance if one solenoid only (2) is deenergized.

The deenergized pilot (4) closes the inlet (6) and connect the piston chamber (9) to the exhaust (8).

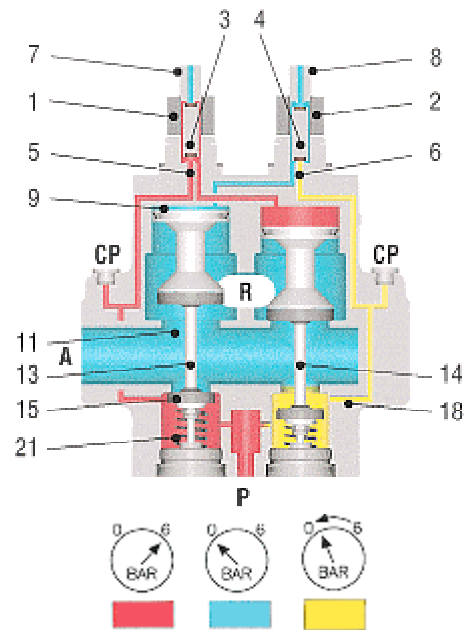
The valve element (13) is pressed upward by the spring (21) and by inlet pressure P. The shutter (15) is closed and the path (11) open.

The valve element (14) is on the contrary open.

Pressure at the outlet A is exhausted through the path (11) which, thanks to its wider section can bear without slowdown also the flow which is coming from P through the open valve elements (14).

Pressure on channel 6, detectable on connection CP, is exhausted, in a few tenth of seconds, by R through 18; after this time a new energizing of the pilot (2) gives no reaction as its internal pneumatic energy is cut. The valve is shut down.

A new operation cycle can be performed again only after restoring the stand by position of both valve elements so that the inlet pressure can refill channels 5-6.



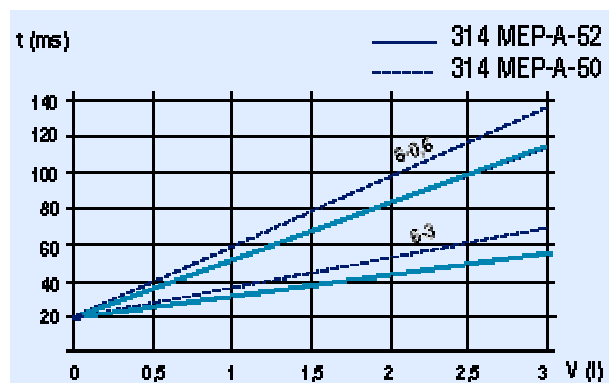
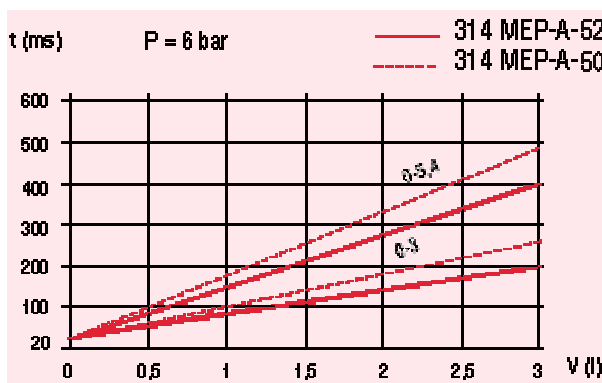
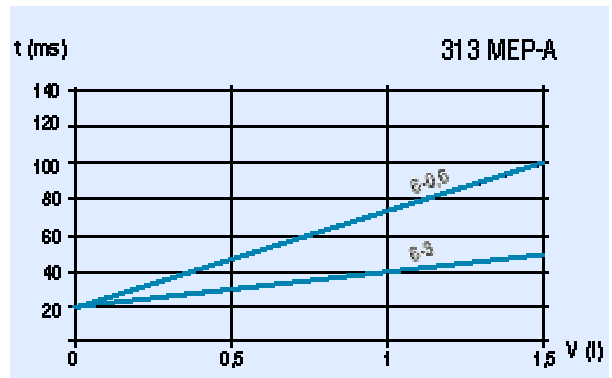
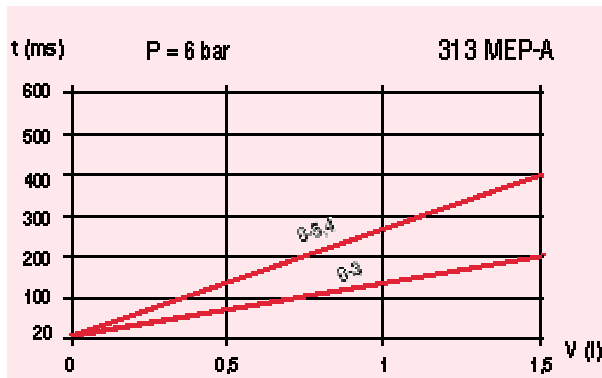
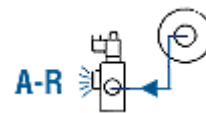
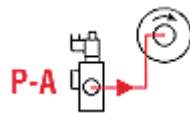


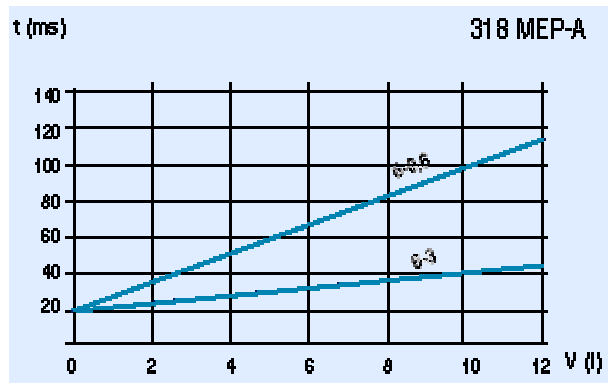
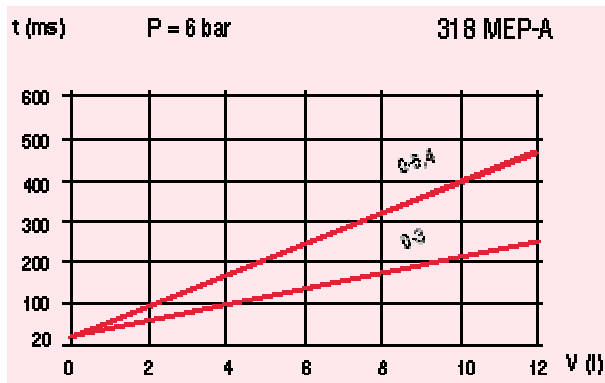
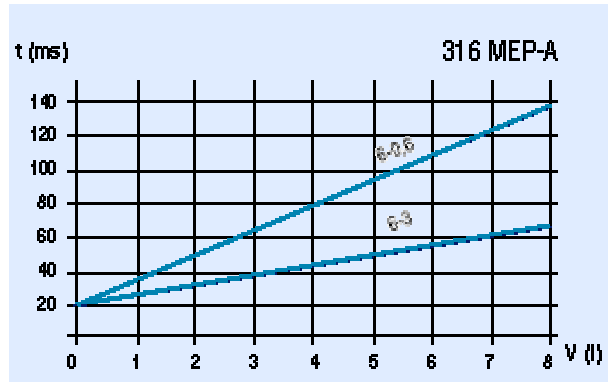
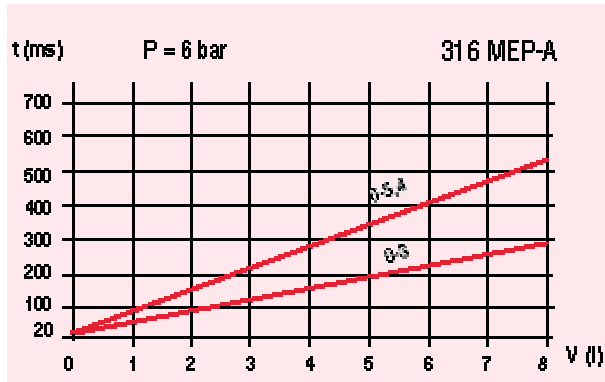
OPERATION TIMES PER VOLUME

The times are measured: P-A line 6 bar, A-R with the recommended SHP silencers, a.c. power supply.

Caution:

reckoning the maximum actuator volume both wear and pipes volumes must be added!

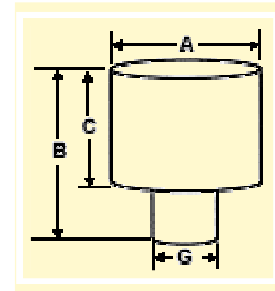






SHP, high performance silencers for MEP-A valves

SHP type silencers are adequately designed for an efficient work bearing the effects of lubrication oil and drainage water which are always present in pneumatic plants



Warning:
programmed maintenance is required.

Model:	SHP1"-R	SHP1"-F	SHP1½"-R	SHP1½"-F	SHP2
G Connection	1"	1"	1½"	1½"	2"
A	80	110	110	150	150
B	110	135	140	170	170
C	75	100	100	130	130
Recommended for	313MEP-A	314MEP-A	-	316MEP-A	318MEP-A
Also available for	314MEP-A-50	-	316MEP-A	-	-
Mass Kg	0,44	0,93	1	1,76	1,8



ORDERING CODES

	Description	Code
Safety valves	313 MEP-A-50	45536-50-(*) (*) tensions ref:
	314 MEP-A-50	45546-50-(*) 24/50=01
	314 MEP-A-52	45546-52-(*) 115/50=02
	316 MEP-A-50	45566-50-(*) 230/50=03
	318 MEP-A-50	45586-50-(*) 24 dc=04
	318 MEP-A-70	45586-70-(*)
	Silencers	Silencer model SHP1"-R
Silencer model SHP1"-F		690271
Silencer model SHP1½"-R		413503
Silencer model SHP1½"-F		690344
Silencer model SHP2"		690347
Accessories	Pressure switch one pc. (needed two)	650152
	Ancillary monitoring system with manual reset, box enclosed version	S.55002
Mounting kits For interchanging with MEP valves	Interchanging plate 314 MEP/MEP-A	205220
	Interchanging plate 316 MEP/MEP-A	205320
	Kit for proximity switches installation	205221
For presses with separate clutch brake system	Kit for clutch valve adjustment	205321
	Kit for brake valve adjustment	205322

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