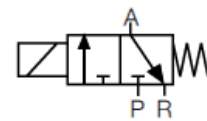


1 Functional description

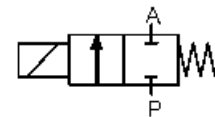
The micro valve MV30 is an electromagnetic, directly activated 3/2 or 2/2 directional valve with spring return. It consists of the parts valve cartridge, valve base and cover, which can be combined by application. The working connection is in resting position separated from the supply pressure P. Without current the working connection A at the 3/2 directional valve will be vented over exit R.



The standard version of the micro valve is a 3/2 directional valve.

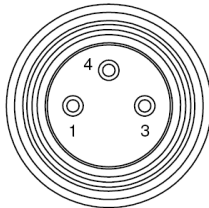


The micro valve is in the version with fixed cover also available as a 2/2 directional valve or in the version with rotatable cover the micro valve can be closed with a plug at the exit R.



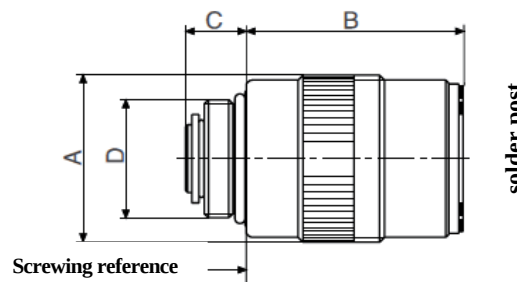
2 Technical Data

General Data		
material	valve cartridge	nickel-plated steel
	swivel screw-fitting	nickel-plated brass
	valve base	anodised aluminium
Electrical Data		
Operating voltage	12 V DC $\pm$ 5%	24 V DC $\pm$ 5%
Coil resistance R20	24 Ω $\pm$ 7%	108 Ω $\pm$ 7%
Power consumption	6,0 W	5,4 W
Electrical connection valve cartridge	Soldering terminals, contact areas	
Electrical connection rotatable cover, fixed cover	Multi-wire cable red black 0,14 mm ² jacket PUR 11Y not flame-resistant outer diameter 3,1 $\pm$ 0,15 mm bending radius inoperative 31 mm bending radius in motion 46 mm	
Connection polarity with stranded wire cable	red = positive terminal, black = negative terminal	

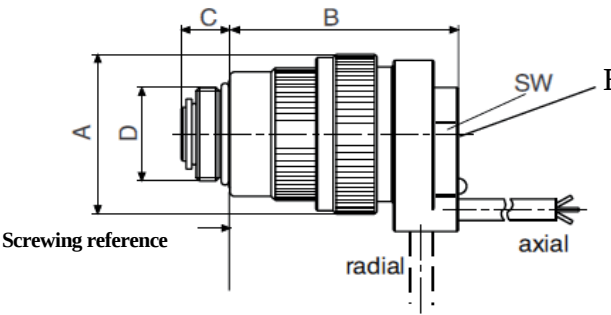
Pin configuration M8-connecetor	 View to connection side Pin 4 positive terminal Pin 3 negative terminal		
Operating temperature range valve cartridge	-15°C – 95°C valve coil temperature -15°C – 80°C surface temperature		
Storage temperature range valve cartridge	-15°C – 80°C		
Operating temperature range solid lid	-15°C – 80°C surface temperature		
Operating temperature range rotary lid	-15°C – 50°C surface temperature		
Storage temp. range rotatable cover	-15°C – 50°C		
Free-wheeling diode	integrated in the fixed cover and rotatable cover		
Status display	LED in rotatable cover		
IP code according EN 60529 for 3/2 valves without exhaust air	IP 40		
Type of protection according EN 60529 at 2/2 valves or 3/2 with conducted exhaust air	IP 65		
Pneumatic Data			
Nominal width	3,0 mm		
Medium	Filtered compressed air, dry or oiled compressed air purity classes ISO 8573-1 7 4 4		
Sealing material	Viton Warning: incompatibility with hot water, steam, amines, organic acid and polar-solvent		
Nominal flow P – A according ISO 6358	175 NI/min at P = 6 bar and A = 5 bar		
Nominal flow A – R according ISO 6358	175 NI/min at A = 6 bar and R = 5 bar		
Pressure ranges	Pressure range V -1 bar to 1 bar	Pressure range LP 0 bar to 5 bar	Pressure range P 3 bar to 8 bar
Turn on time between applying the voltage and the end of the piston movement	17 ± 3 ms at P = -0,8 bar, A = 0 bar	14 ± 3 ms at P = 3 bar, A = 0 bar	15 ± 3 ms at P = 6 bar, A = 0 bar
Turn off time between voltage switch-off and the end of the piston movement using a free-wheeling diode	21 ± 3 ms at P = -0,8 bar, A = 0 bar	20 ± 3 ms at P = 3 bar, A = 0 bar	16 ± 3 ms at P = 6 bar, A = 0 bar
Complete leakage of sealing surface P and valve housing	<8 mNI/min at P = 1 bar	<8 mNI/min at P = 5 bar	<8 mNI/min at P = 8 bar
	Special tightness requirements by request		

3 Dimensions

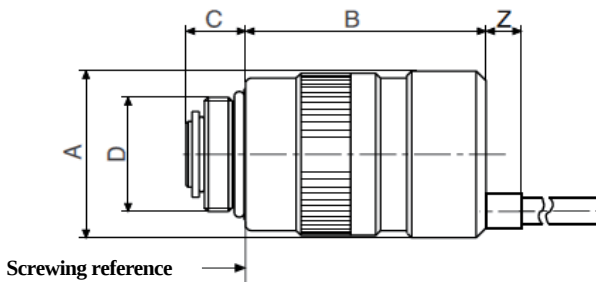
3/2 micro valve cartridge

	[mm]	
	A Ø	21,2
	B	28
	C	7
	D	M14 x 0,75
	mass [g]	54

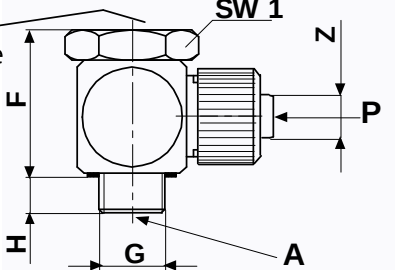
3/2 micro valve cartridge with rotatable cover

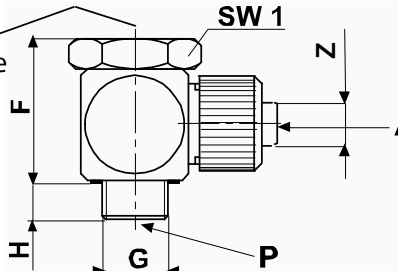
	[mm]	
	A Ø	25,4
	B	40
	C	7
	D	M14 x 0,75
	E	G 1/8
	SW	14
	mass [g]	97

3/2 and 2/2 directional valve cartridge with fixed cover

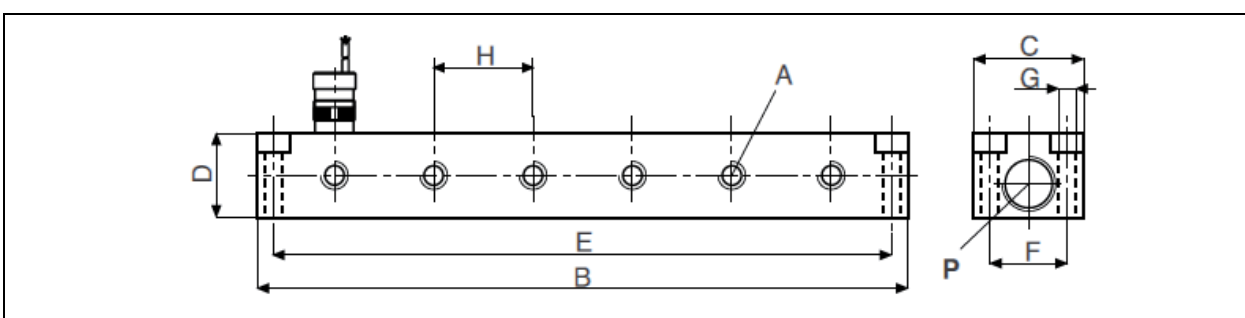
	[mm]	
	A Ø	22
	B	33,2
	C	7
	D	M14 x 0,75
	Z	5
	mass [g]	70

Swivel screw-fitting with valve seat

Type SP		
	[mm]	
	F	25
	G	G1/4
	H	6,5
	P Ø	6
	SW	19
	Z	6
	mass [g]	55

Type SA		
	[mm]	
	F	25
	G	G1/4
	H	6,5
	A Ø	6
	SW	19
	Z	6
	mass [g]	55

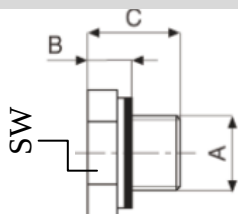
Valve base with valve seat



Number of valves	mass (g)	A	B (mm)	C	D	E	F	G	H	P
1	50	G 1/8	34	30	22	26	22	4,3	28	G 1/4
2	98		66			58				
3	141		94			86				
4	186		122			114				

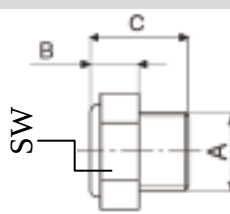
4 Accessory for micro valve MV 15

Plug for 2/2 directional valve version



[mm]	
A	G 1/8
B	7
C	12,5
SW	13

Sound absorber



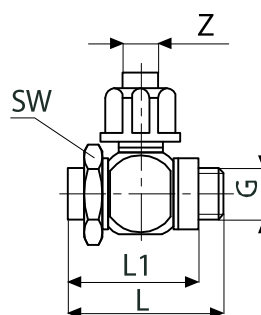
[mm]	
A	G 1/8
B	7
C	13
SW	13

Flow control with sound absorber



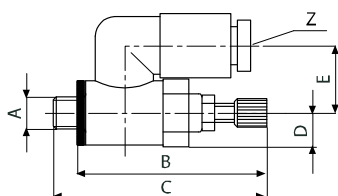
[mm]	
A	G1/8
B Ø	16
C	16
D max	24,5
E	7

One-way flow control with exhaust air radial



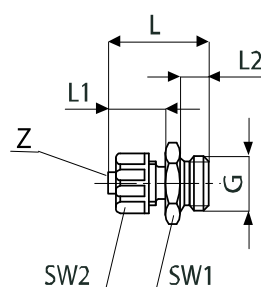
[mm]	
G	G 1/8
L	31,5
L1	24,5
SW	14
Z (inside)	3

Throttle check valve with exhaust air axial



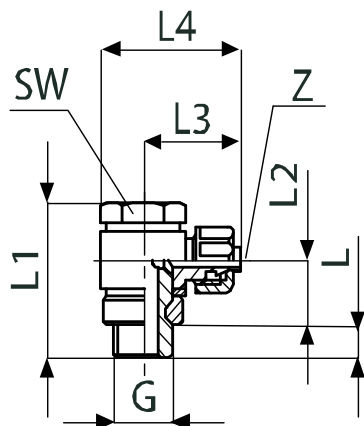
[mm]	
A	G 1/8
B	34
C	39
D max	5
E	12
Z (outside)	4

Male end fitting



[mm]	
G	G 1/8
L	24
L 1	13
L 2	6,5
SW 1	14
SW 2	14
Z (inside)	4
Z (outside)	6

Swivel screw-fitting without valve seat



[mm]	
G	G 1/8
L	6,5
L 1	30,5
L 2	11,8
L 3	21,5
L 4	14,5
SW	13
Z (inside)	4
Z (outside)	6

By request

- ➔ Pressure range for valves
- ➔ Customized base
- ➔ Special valve versions