



# Poppet valves - A series

Ports: 1/8" - 1/4" - 1/2" - 3/4" - 1"

## A SERIES



- High flow rate valves
- Fast switching times
- Not effected by fluid impurities
- High mechanical strength
- Body and top cover in anodized aluminium or stainless steel AISI 316
- Available with ports Gas or NPT
- 2/2 NO/NC - 3/2 NO/NC - 5/2 pilot-spring
- Version for low temperature
- Version for high temperature
- Version for vacuum
- Possibility of manifold mounting
- Available certificated ATEX 2014/34/EU
- Available certificated up to SIL 3

### TECHNICAL FEATURES

<b>Function</b>	2/2 NO - 2/2 NC - 3/2 NO - 3/2 NC - 5/2 pilot-spring										
<b>Operation</b>	Electropneumatic: with solenoid size 22 and 30 mm, internal or external servopiloting and return by mechanical spring Pneumatic: with external piloting (single or double) and return by mechanical spring.										
<b>Materials</b>	Standard: Body and covers in aluminium alloy anodized, internal components in carbon steel - aluminium - brass Seals NBR/FKM/PUR Version X: Body and covers in stainless steel AISI 316, internal components in carbon steel - aluminium - brass Seals NBR/FKM/PUR Version XX: Body and covers in stainless steel AISI 316, internal components in stainless steel AISI 316 Seals NBR/FKM/PUR										
<b>Note about the materials</b>	According to Directive REACH (1907/2006/CE and s.a.s.)										
<b>Ports</b>	1/8", 1/4", 1/2", 3/4", 1"										
<b>Threads</b>	BSPP (Gas parallel thread), NPT										
<b>Operating temperature range</b>	Standard: 0°C + +80°C (-20°C cwith dry air to avoid ice formation) High temperature (-VT): -10°C + +150°C Low temperature (-BT): -50°C + +110°C										
<b>Operating pressure range</b>	Electropneumatic, internal servopiloting (/E): 1,5 + 10 bar Electropneumatic, external servopiloting single or double piloting (/PS/E - /PS/D - DP/PS/E - DP/PS/D): 0 + 10 bar Electropneumatic, external servopiloting double pilot for high pressure (DP-HP/PS/E - DP-HP/PS/D): 0 + 16 bar Pneumatic, external piloting, single or double piloting (DP): 0 + 10 bar Pneumatic, external double piloting for high pressure (DP-HP): 0 + 16 bar										
<b>External pilot pressure</b>	1/8"	1/4"		1/2"		3/4"		1"			
Piloting	Single	Double	Single	Double	Single	Double	Single	Double	Single	Double	
Inlet pressure	5 bar	2,2 bar	1,6 bar	2,3 bar	1,7 bar	2,4 bar	1,9 bar	2,5 bar	1,9 bar	2,5 bar	2,1 bar
	6 bar	2,4 bar	1,9 bar	2,6 bar	2,0 bar	2,8 bar	2,3 bar	2,9 bar	2,3 bar	2,9 bar	2,5 bar
	7 bar	2,7 bar	2,2 bar	2,9 bar	2,3 bar	3,1 bar	2,6 bar	3,2 bar	2,6 bar	3,3 bar	2,9 bar
	See piloting diagrams (page 3.4.05.3)										
<b>Flow rate</b>	1/8"	1/4"		1/2"		3/4"		1"			
Nominal orifice	6 mm	9 mm		12 mm		19 mm		23 mm			
Inlet pressure	5 bar	650 NI/min		1500 NI/min		2800 NI/min		6100 NI/min		11000 NI/min	
(with ΔP 1 bar)	6 bar	700 NI/min		1600 NI/min		3000 NI/min		6500 NI/min		12000 NI/min	
	7 bar	800 NI/min		1800 NI/min		3400 NI/min		7300 NI/min		13500 NI/min	
	See flow rate diagrams (page 3.4.05.3)										
<b>Shifting time</b>	1/8"	1/4"		1/2"		3/4"		1"			
According to ISO 12238:2001	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	
	3/2 NC	5 ms	16 ms	6 ms	16 ms	7 ms	20 ms	16 ms	44 ms	12 ms	47 ms
	3/2 NA	7 ms	17 ms	6 ms	20 ms	11 ms	56 ms	20 ms	87 ms	17 ms	100 ms
	5/2	10 ms	45 ms	11 ms	53 ms	14 ms	72 ms	28 ms	135 ms	26 ms	215 ms
<b>Fluid</b>	Filtered air, without lubrication, according to ISO 8573-1:2010 [7:4:4]										
<b>Lubrication</b>	Not required (if required on the pneumatic circuit, must be continus)										

**ELECTRICAL FEATURES OF THE COILS**

Coil type	Type "E" (22mm)		Type "D" (30mm)		Type "C" (30 mm) ATEX	
Operating voltage	12, 24 VDC	24, 48, 110, 220 VAC	12, 24 VDC	24, 48, 110, 220 VAC	24 VDC	24, 48, 110, 220 VAC
Power consumption (max.)	5,5 W	6,5 VA	10 W	13 VA	5,3 W	5,3 W (raddrizzata)
Voltage tolerance	± 10%		± 10%		± 10%	
Protection class	IP54 / IP65		IP54 / IP65		IP65	
Other features	See page 3.4.05.17		See page 3.4.05.17		See page 3.4.05.18	

**ATEX CERTIFICATION**

Valve marking (coil excluded)	C <sup>Ⓢ</sup> II 2G Ex h IIC T6 Gb (Zone 1 and Zone 2) C <sup>Ⓢ</sup> II 2D Ex h IIIC 85°C Db (Zone 21 and Zone 22)
Operating pressure in ATEX environment	0,5 ÷ 10 bar
Temperature in ATEX environment	-20°C ≤ Ta ≤ +60°C
CE marking	According to Directive 2014/34/EU (see declaration of conformity)


**SIL CERTIFICATION (Pneumatic valve with external piloting)**

Type	Type A - Low demand mode
Systematic capability	Route 1H - 2H
Architectural constraints	Up to SIL 2 for single channel configuration without external diagnostic tests (HFT 0)
	Up to SIL 3 for single channel configuration with external diagnostic tests (HFT 0)
In accordance with	Up to SIL 3 redundant double channel configuration (HFT 1)
	EN 61508:2010 part 1,2,3,4,5,6,7 - EN 61511 part 1,2,3

