Balanced spool pneumatic microvalves - K Series

Connections: 1/8"

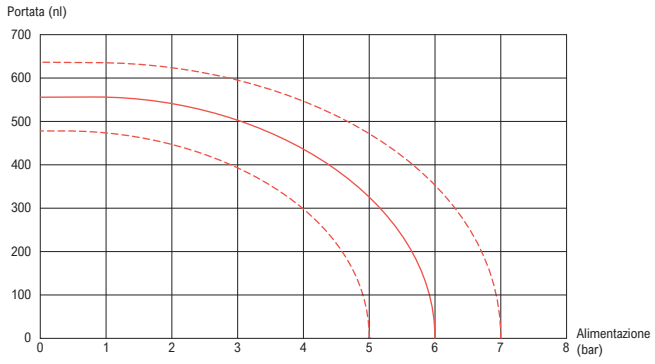
K SERIES

- Balanced spool valves with dynamic sealing
- Fast switching times
- Small footprint
- Anodised aluminium body and bases
- Pneumatically operated with external piloting
- Possibility of series assembly

TECHNICAL FEATURES		
Function		5/2
Operation		Pneumatic: External piloting - Monostable pneumatic spring return, bistable
Materials		Body, base and cover in anodised aluminium alloy - Internal components in steel - aluminium - brass NBR gaskets
Note on materials		Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections		1/8" Gas
Threads		Cylindrical gases (BSPP)
Operating temperature		0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)
Operating pressure		0 ÷ 7 bar
Pilot actuation pressure		1.5 bar
Air flow rate		1/8"
Nominal diameter		4mm
Supply pressure	5 bar	320 Nl/min
(with ΔP 1 bar)	6 bar	350 Nl/min
	7 bar	400 Nl/min
		See flow diagram page 3.1.05.1
Fluid		Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication		Not required (if required in the pneumatic circuit, it must be continuous)

FLOW DIAGRAMS - PNEUMATICALLY OPERATED VALVES

FLOW RATE DIAGRAM - 1/8" MICROVALVE



Balanced spool electro-pneumatic microvalves - K Series

Connections: 1/8"

K SERIES

- Balanced spool valves with dynamic sealing
- Fast switching times
- Small footprint
- Anodised aluminium body and bases
- Electro-pneumatically operated with internal piloting
- Possibility of series assembly

TECHNICAL FEATURES		
Function		5/2
Operation		Electropneumatic: Internal servopiloting - Monostable pneumatic, bistable spring return
Materials		Body, base and cover in anodised aluminium alloy - Internal components in steel - aluminium - brass NBR gaskets
Note on materials		Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections		1/8" Gas
Threads		Cylindrical gases (BSPP)
Operating temperature		0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)
Operating pressure		1.5 ÷ 7 bar
Pilot actuation pressure		1.5 bar
Air flow rate		1/8"
Nominal diameter		4mm
Supply pressure	5 bar	320 Nl/min
(with ΔP 1 bar)	6 bar	350 Nl/min
	7 bar	400 Nl/min
		See flow diagram page 3.1.05.6
Fluid		Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication		Not required (if required in the pneumatic circuit, it must be continuous)

COILS ELECTRICAL CHARACTERISTICS				
Coil type	"ES" Type		"F" Type	
Operating voltage	12, 24 Vdc	24, 48, 110, 220 Vac	24 Vdc	24, 110, 220 Vac
Power (max.)	2.5 W	3.6 VA	2.5 W	3.0 VA
Voltage tolerance	± 10%		± 10%	
Protection class	IP65		IP65	
Other features	See from p. 3.1.05.10		See from p. 3.1.05.10	

Balanced spool pneumatic valves - K83 Series

Connections: 1/8" - 1/4"

K SERIES

- Balanced spool valves with static sealing
- Fast switching times
- Small footprint
- Anodised aluminium body and bases
- Pneumatically operated with external piloting
- Possibility of series assembly
- ATEX 2014/34/EU certificates available

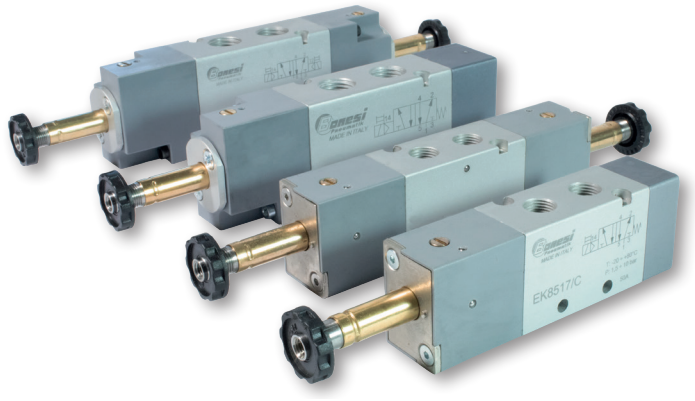
TECHNICAL FEATURES			
Function		5/2 - 5/3	
Operation		Pneumatic: External piloting - Monostable mechanical and pneumatic, bistable spring return,three positions	
Materials		Body, base and cover in anodised aluminium alloy - Internal components in steel - aluminium - brass NBR gaskets	
Note on materials		Compliant with REACH (1907/2006/EC and subsequent amendments)	
Connections		1/8" - 1/4" Gas	
Threads		Cylindrical gases (BSPP)	
Operating temperature		0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)	
Operating pressure		0 ÷ 10 bar	
Pilot actuation pressure		2 bar	
Air flow rate		1/8"	1/4"
Nominal diameter		5mm	7.5mm
Supply pressure	5 bar	500 Nl/min	1000 Nl/min
(with ΔP 1 bar)	6 bar	550 Nl/min	1100 Nl/min
	7 bar	600 Nl/min	1200 Nl/min
		See flow diagram page 3.1.05.13	
Fluid		Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]	
Lubrication		Not required (if required in the pneumatic circuit, it must be continuous)	

ATEX CERTIFICATION	
Valve marking	CE Ⓔx II 2G Ex h IIC T6 Gb (Zone 1 and Zone 2) CE Ⓔx II 2D Ex h IIIC 85°C Db (Zone 21 and Zone 22)
Operating pressure in ATEX environment	0.5 ÷ 10 bar
ATEX ambient temperature	-20°C ≤ Ta ≤ +60°C
CE marking	In compliance with Directive 2014/34/EU (see declaration of conformity)

Balanced spool electropneumatic valves - K83 Series

Connections: 1/8" - 1/4"

K SERIES



- Balanced spool valves with static sealing
- Fast switching times
- Small footprint
- Anodised aluminium body and bases
- Electro-pneumatically operated
  Internal servo-pilot
- Possibility of series assembly
- ATEX 2014/34/EU certificates available

TECHNICAL FEATURES			
Function		5/2 - 5/3	
Operation		Electropneumatic: Internal servo-pilot - Monostable mechanical and pneumatic, bistable spring return, three positions	
Materials		Body, base and cover in anodised aluminium alloy - Internal components in steel - aluminium - brass NBR gaskets	
Note on materials		Compliant with REACH (1907/2006/EC and subsequent amendments)	
Connections		1/8" - 1/4" Gas	
Threads		Cylindrical gases (BSPP)	
Operating temperature		0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)	
Operating pressure		2 ÷ 10 bar	
Pilot actuation pressure		2 bar	
Air flow rate		1/8"	1/4"
Nominal diameter		5mm	7.5mm
Supply pressure	5 bar	500 Nl/min	1000 Nl/min
(with ΔP 1 bar)	6 bar	550 Nl/min	1100 Nl/min
	7 bar	600 Nl/min	1200 Nl/min
		See flow diagram page 3.1.05.21	
Fluid		Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]	
Lubrication		Not required (if required in the pneumatic circuit, it must be continuous)	

COILS ELECTRICAL CHARACTERISTICS		
Coil type	Type "C" (22mm)	
Operating voltage	24 VDC	24, 110, 220 VAC
Power (max.)	4.8 W	5.5 VA
Tolerance	± 10%	
Protection class	IP54 / IP65	
Other features	See from p. 3.3.05.10	

ATEX CERTIFICATION	
Valve marking	CE ⟨Ex⟩ II 2G Ex h IIC T6 Gb (Zone 1 and Zone 2) CE ⟨Ex⟩ II 2D Ex h IIIC 85°C Db (Zone 21 and Zone 22)
Operating pressure in ATEX environment	0.5 ÷ 10 bar
ATEX ambient temperature	-20°C ≤ Ta ≤ +60°C
CE marking	In compliance with Directive 2014/34/EU (see declaration of conformity)