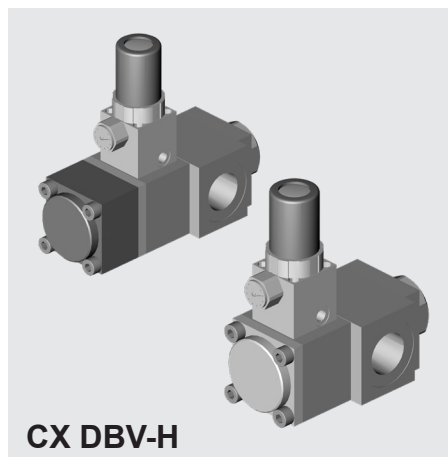
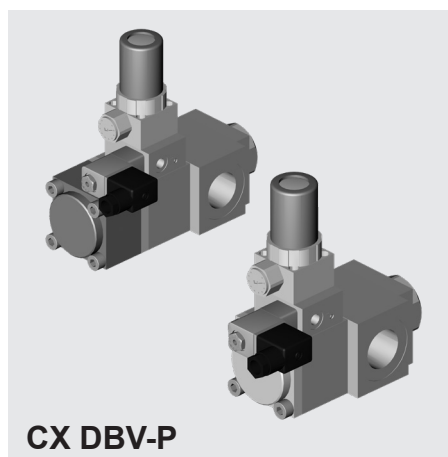
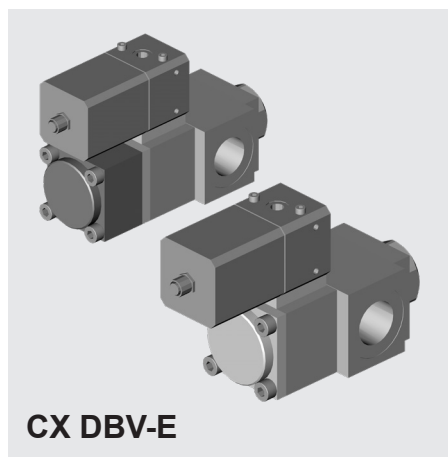


2/2-way pressure relief valve CX DBV (right-angle design)



Model code (also example order)

CX DBV 12 120 G1 F P 24V ...

Designation

CX DBV = pressure relief valve

Nominal size

10 = DN 10
12 = DN 12
15 = DN 15
20 = DN 20

Pressure range

040 = 3 - 40 bar
064 = 5 - 64 bar
080 = 3 - 80 bar
120 = 10 - 120 bar
140 = 5 - 140 bar
160 = 12 - 160 bar
200 = 10 - 200 bar

Connection

G1 = female threaded connection G1"

Seal

F = FKM (Viton)

Control

E = electrical proportional control of pilot pressure reducing valve
P = stepless, manually adjustable control via solenoid valve to limit system pressure
H = stepless, manually adjustable control of pilot pressure reducing valve

Supply voltage

24V = 24 V DC (not for CX DBV - H)

Version

EK = single piston
DK = double piston

! If order details or application data are inaccurate or incomplete, there is a risk that the technical configuration of the valves may not be correct for the desired use. This may result in the physical and/or chemical characteristics of the materials or seals used not being adequate for the intended use.

Design

Essentially this valve consists of a valve body with integrated valve seat, and a hardened and ground cone poppet. The pre-set force is produced by a spring and a pressurised piston.

Functional description

The compressed air with the spring exerts a force on the cone poppet and this is pressed onto the valve seat. The hydraulic force is applied to the opposing side of the cone poppet. If this is below the pre-set force, the valve will be closed. If the hydraulic force exceeds the pre-set force, then the cone poppet will be lifted away from the valve seat and operating fluid will flow from pressure port P to tank port T. This has the effect of limiting the pressure at port P. The hydraulic energy used is converted to heat and the operating fluid is drained to tank.

Piping

To prevent turbulence reaching the valve, straight pipe sections are required in the following minimum lengths:

Upstream of the valve (P side):

A length equivalent to 3 times the pipe diameter.

Downstream of the valve (T side):

A length equivalent to 5 times the pipe diameter.

At outlet T there must be no restriction, no pressure head and as little flow resistance as possible.

Technical specifications

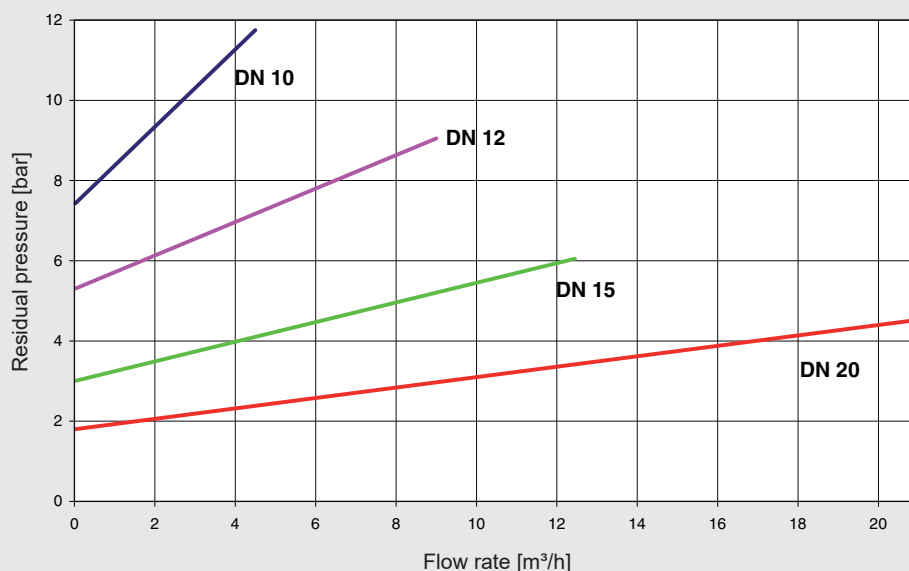
Model	E: Stepless closed loop pressure control via electrical setpoints 0 - 10 V P: Stepless, manually adjustable control via solenoid valve which limits system pressure H: Stepless, manually adjustable control of pressure
Media	fluid – contaminated (50µ)
Nominal size	DN 10, DN 12, DN 15, DN 20
Pressure range	up to max. 200 bar
Flow rate	See table
Body material	1.4305
Seal material	FKM
Temperature of fluid	0 to +60 °C
Ambient temperature	0 to +50 °C
Connection	Female threaded connection G1"
Electrical connection	E: male connection M12 x 1 P: Female connector to industry standard Form B, for AC operation with integrated rectifier
Supply voltage	E: 24 V DC (max. residual ripple 10 %) P: 24 V DC, 230 V AC, special voltages
Voltage tolerance	E / P: ± 10 % to VDE 0580
Power consumption	E: 2.5 watts P: 230 V 50 Hz: 9.2 VA 24 V DC: 6 W
Duty cycle	E / P: 100 %
Protection class	E / P: IP 65 when fitted with connector
Mounting position	E: M12 connection preferably uppermost H / P: pressure gauge preferably on top
Control air	40 µ filtered, max. 8 bar

NOTICE: Further options and accessories available on request.

⚠ The material specifications refer exclusively to the valve connection parts in contact with the medium.

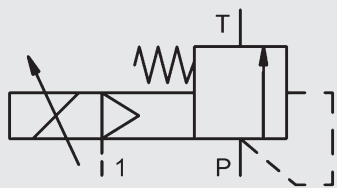
DN [mm]	Version	Pressure control range [bar]	Connection	Max. flow rate [m³/h]
10	EK	12 – 160	G 1	3.0
12	EK	10 – 120	G 1	6.0
15	EK	5 – 64	G 1	8.3
20	EK	3 – 40	G 1	14.1
12	DK	10 – 200	G 1	6.0
15	DK	5 – 140	G 1	8.3
20	DK	3 – 80	G 1	14.1

Pressure minimization

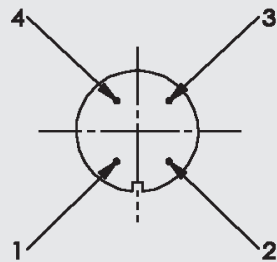


Model CX DBV-E

Switching function

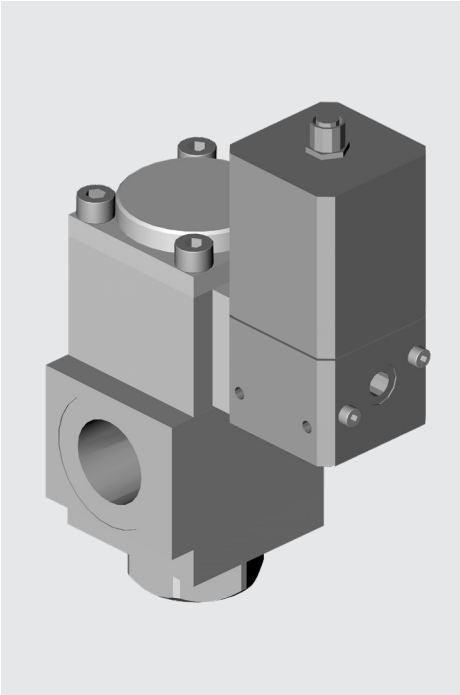


Electrical connection (M12x1)

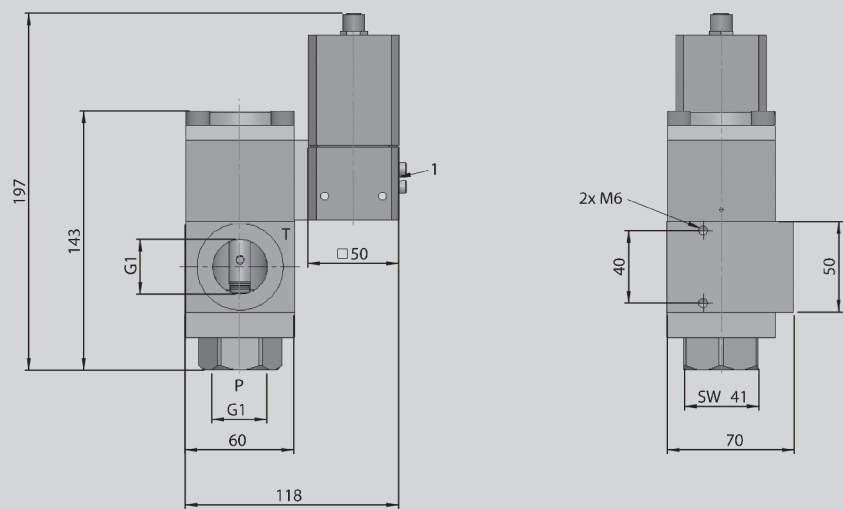


1	Supply
2	Setpoint (-)
3	GND (-)
4	Setpoint (+) 0-10V

Single piston version (EK)

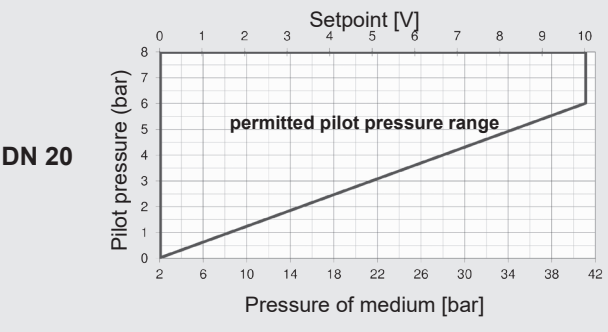
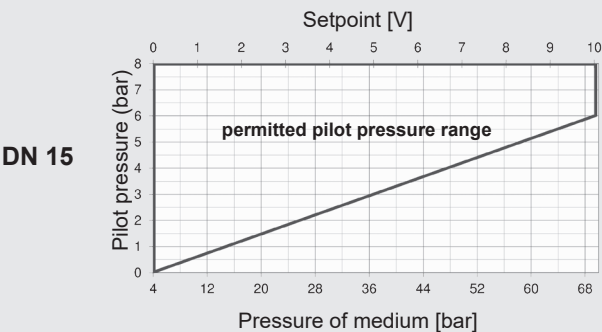
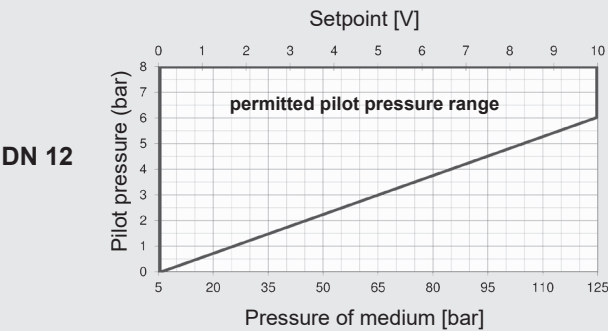
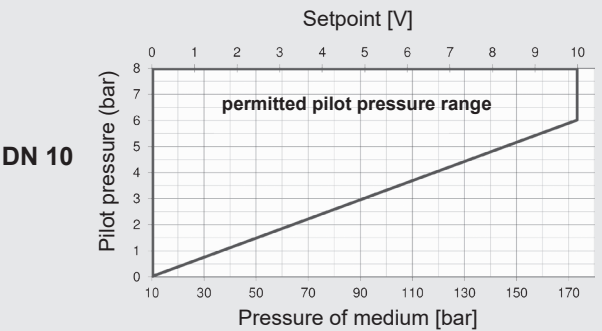


Dimensions

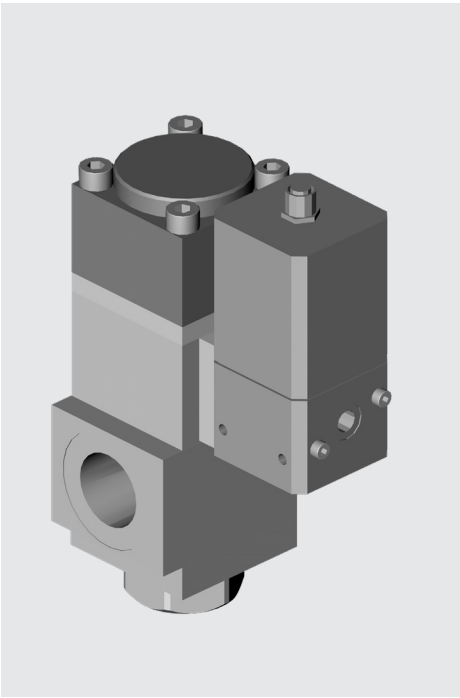


1: 1/8" pneumatic connection

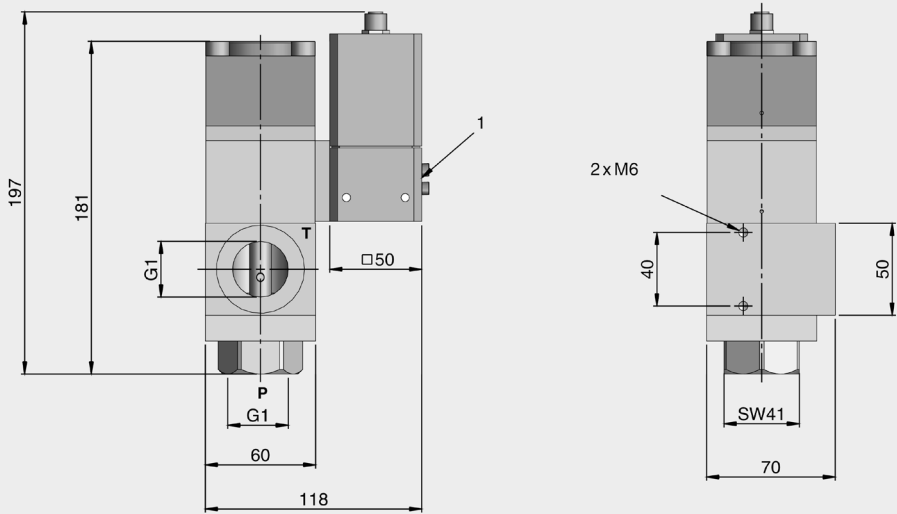
Control pressure graphs



Double piston version (DK)



Dimensions

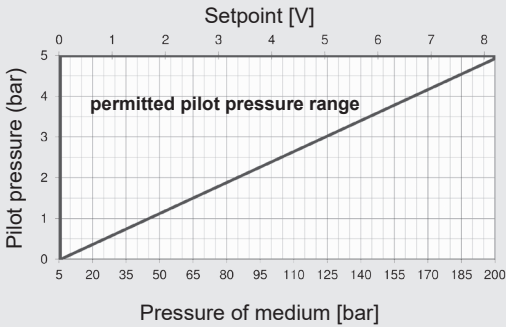


1: 1/8" pneumatic connection

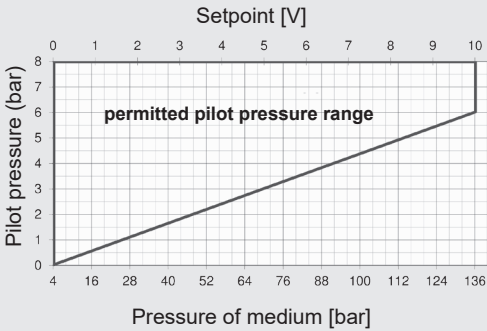
Control pressure graphs

DN 10 not available in double piston version DK

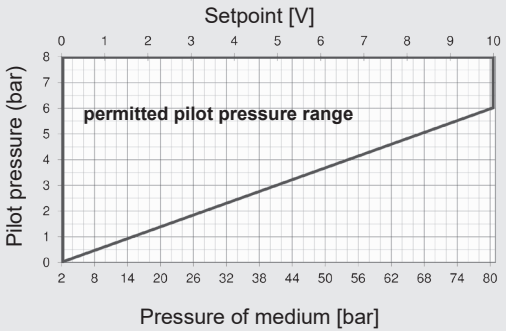
DN 12



DN 15

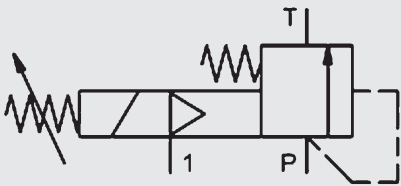


DN 20

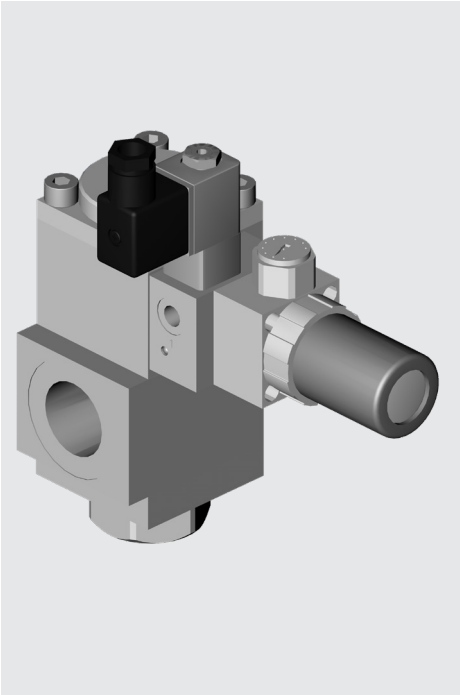


Model CX DBV-P

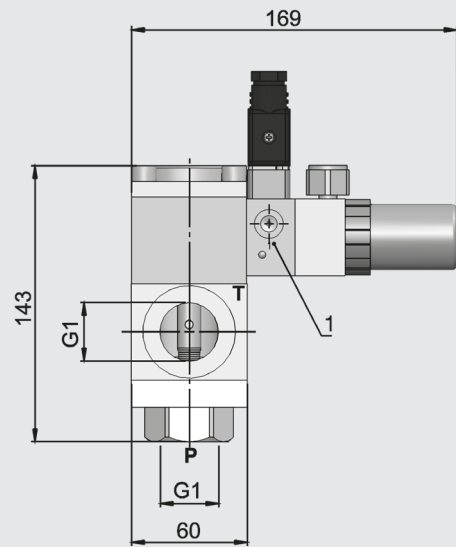
Switching function



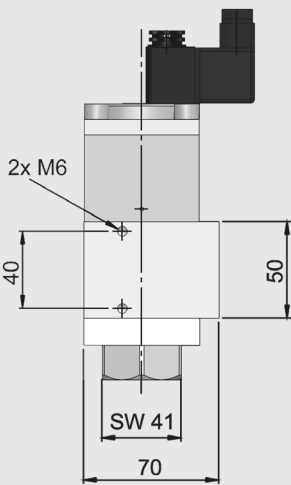
Single piston version (EK)



Dimensions

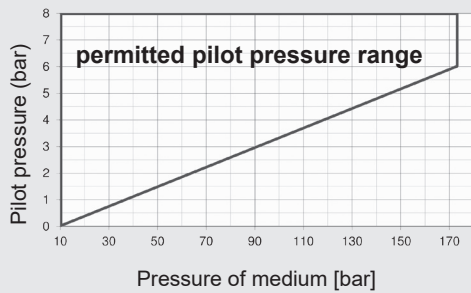


1: 1/8" pneumatic connection

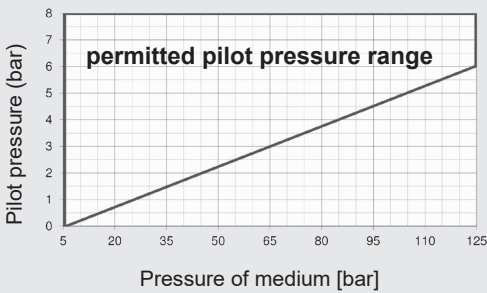


Control pressure graphs

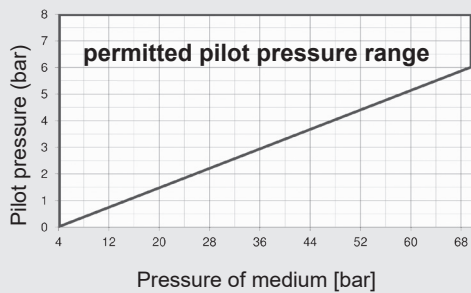
DN 10



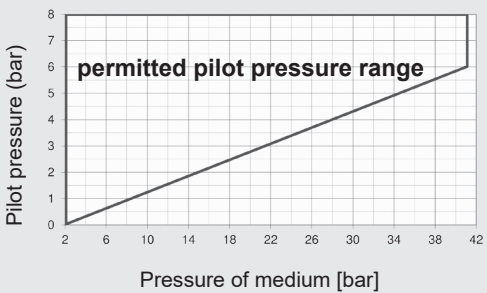
DN 12



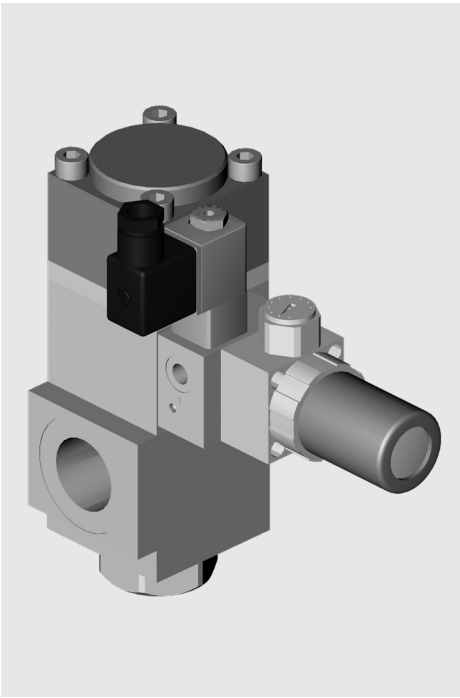
DN 15



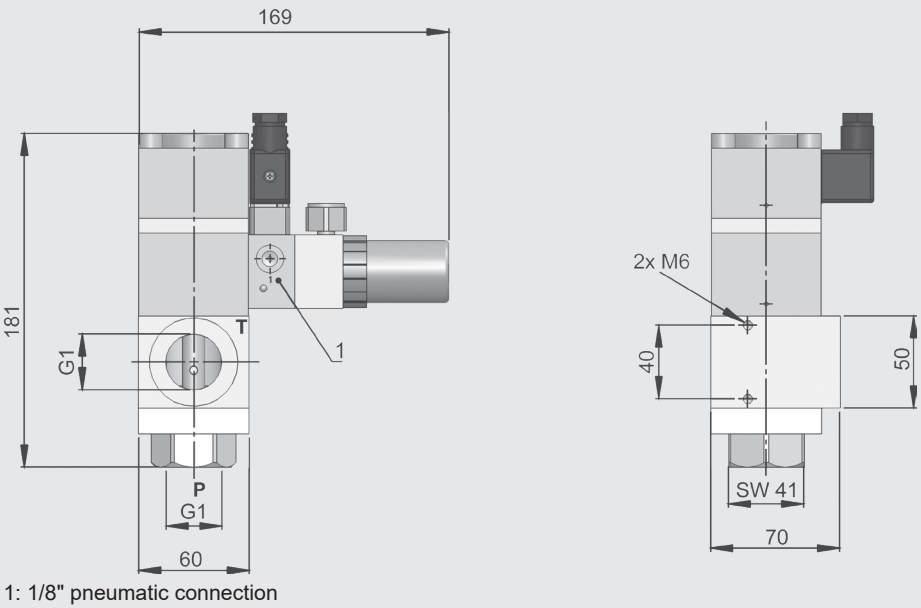
DN 20



Double piston version (DK)



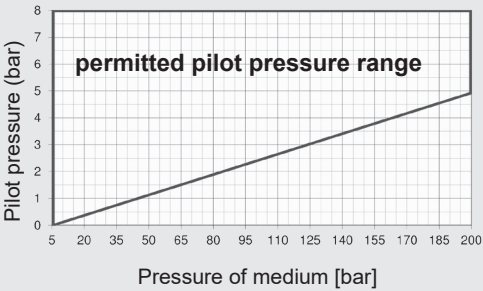
Dimensions



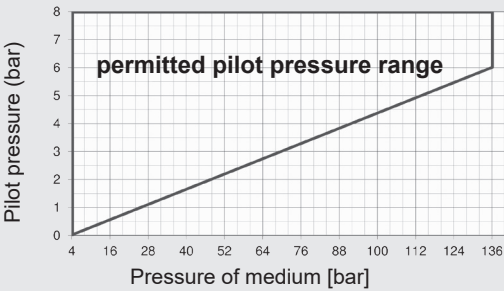
Control pressure graphs

DN 10 not available in double piston version DK

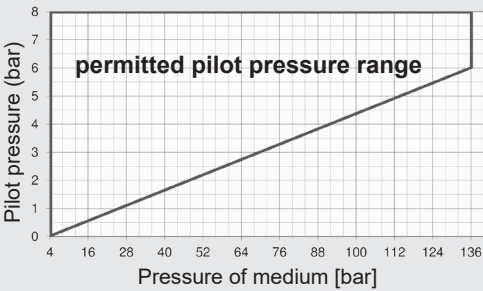
DN 12



DN 15

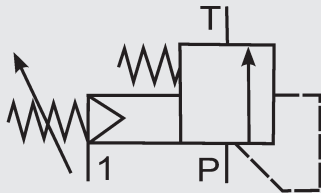


DN 20

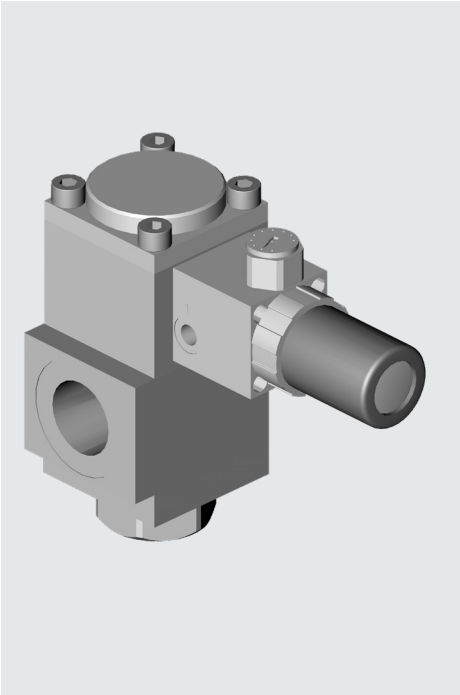


Model CX DBV-H

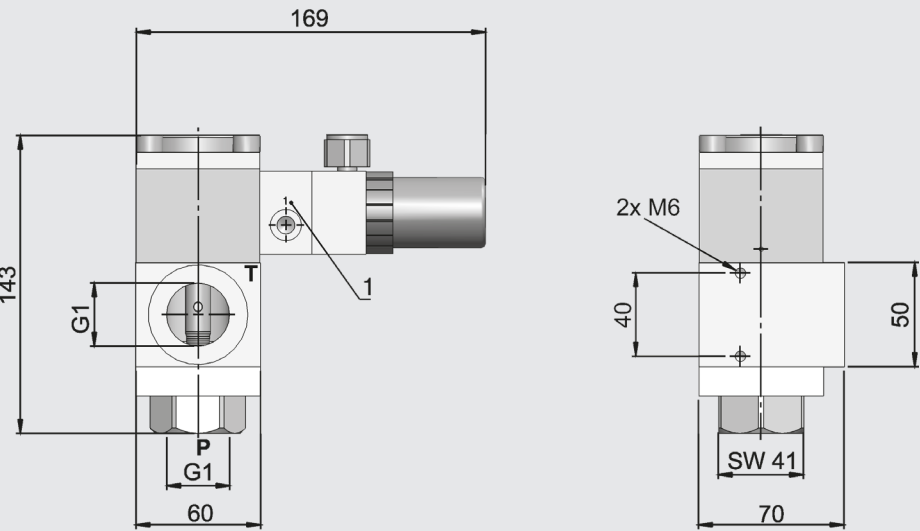
Switching function



Single piston version (EK)

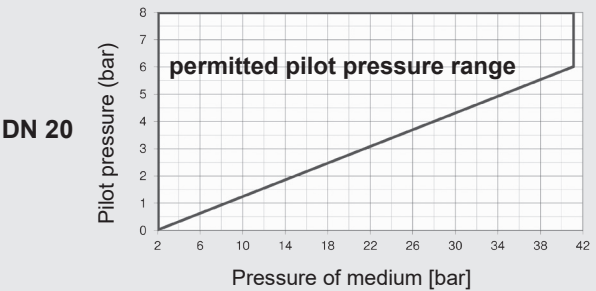
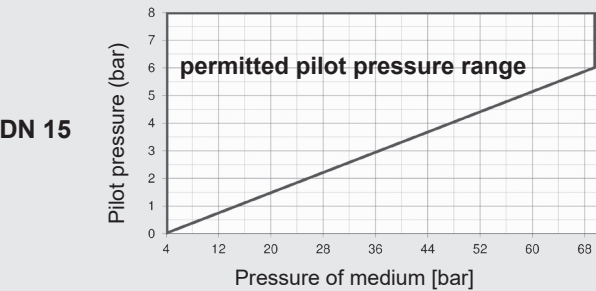
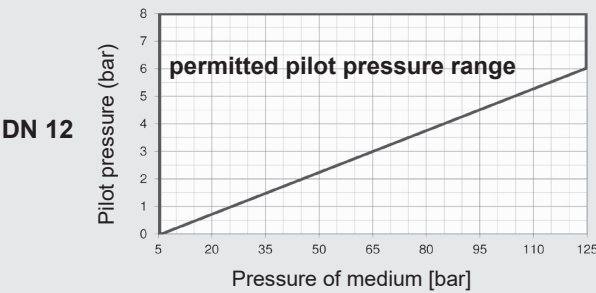
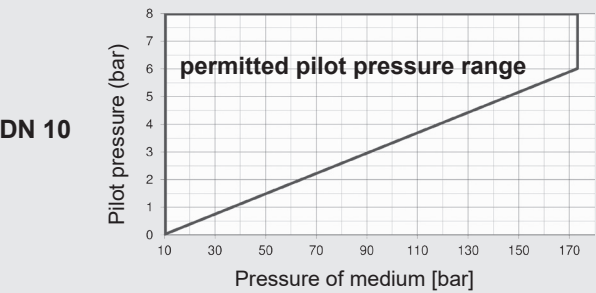


Dimensions

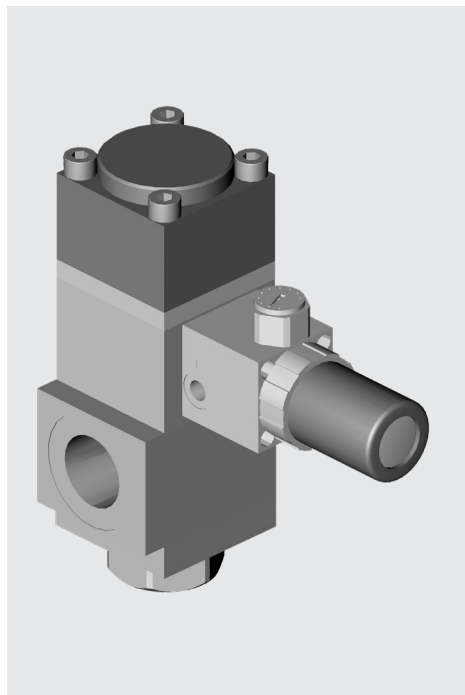


1: 1/8" pneumatic connection

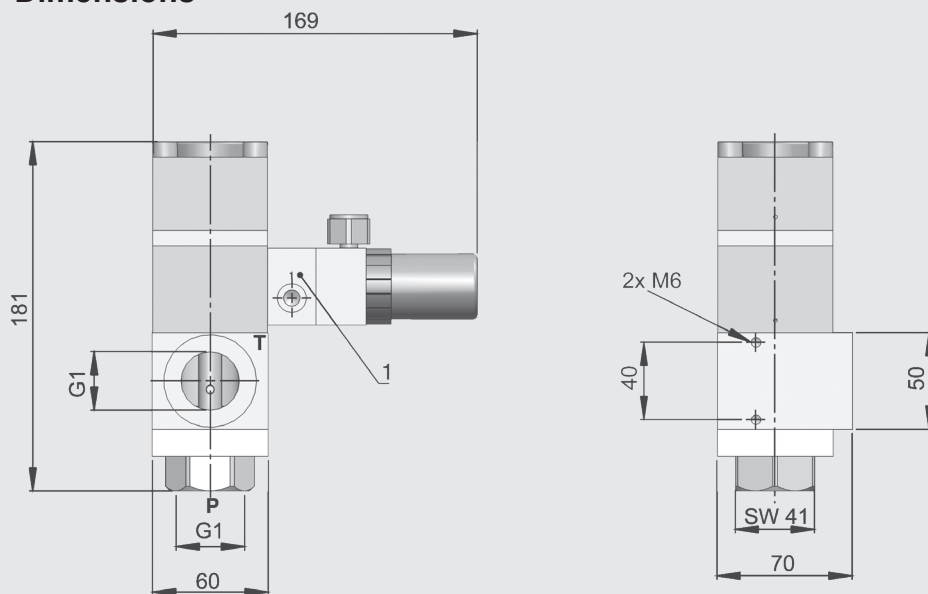
Control pressure graphs



Double piston version (DK)



Dimensions

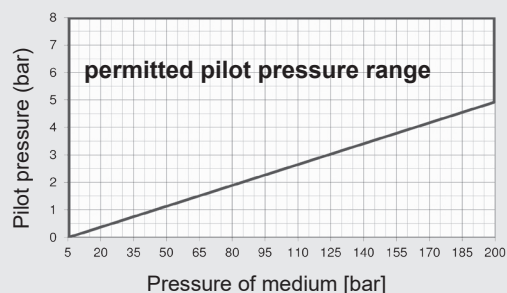


1: 1/8" pneumatic connection

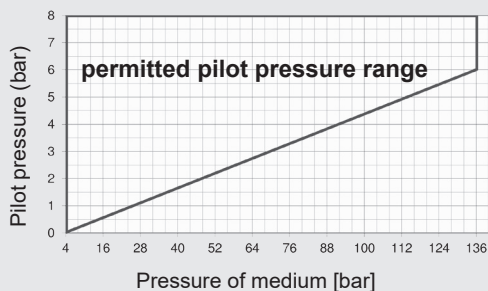
Control pressure graphs

DN 10 not available in double piston version DK

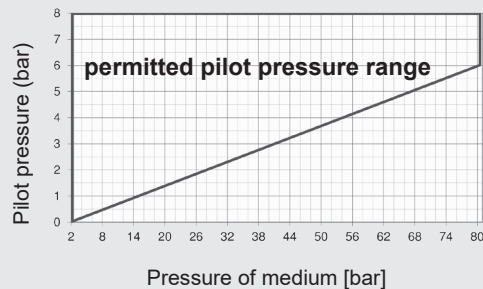
DN 12



DN 15



DN 20



! The valves are technically configured for specific media and applications. This may result in deviations from the general information given in the data sheet in terms of the design, sealing materials and specifications.

NOTE

The information in this brochure relates to the operating conditions and applications described. For applications and operating conditions not described, please contact the relevant technical department.

The operator is always responsible for determining the product suitability for the specific application. Quantified values for product characteristics are average values for a new product that undergo a time deterioration process. Subject to technical modifications and errors.

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