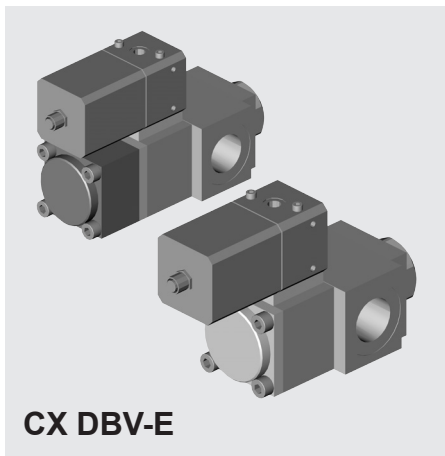
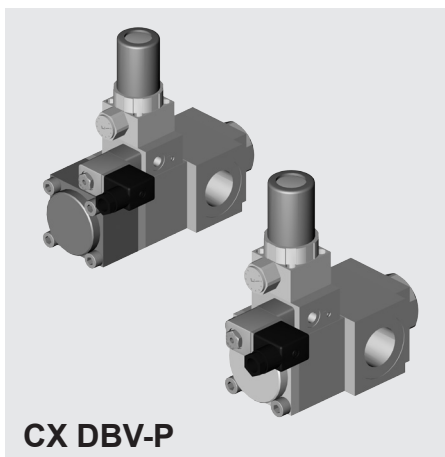


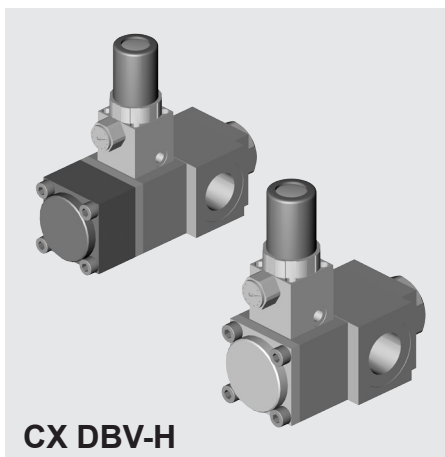
2/2-Way - Pressure Relief Valve CX DBV (Right-Angle Design)



CX DBV-E



CX DBV-P



CX DBV-H

Model code
(also example order)

CX DBV 12 120 G1 F P 24V

Type

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

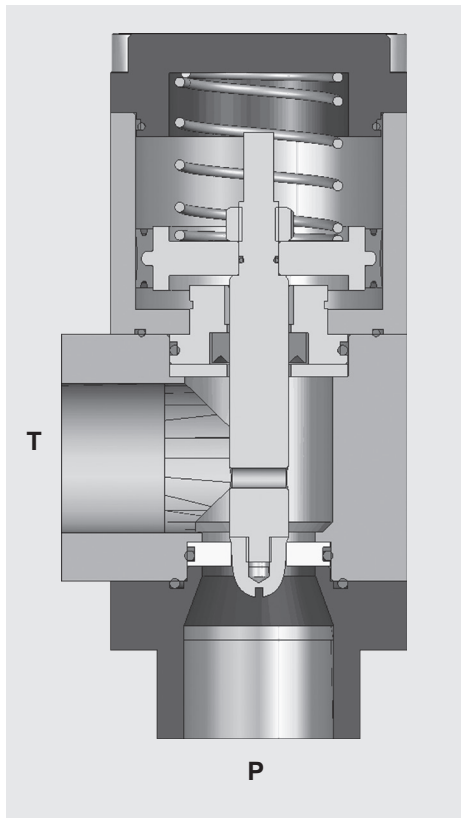
E = Electrical proportional control of pilot pressure reducing valve
P = Stepless, manually adjustable control via solenoid valve to limit system pressure
H = Stepless, manually adjustable control of pilot pressure reducing valve

Supply voltage

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

Version

EK = single piston
DK = double piston



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.

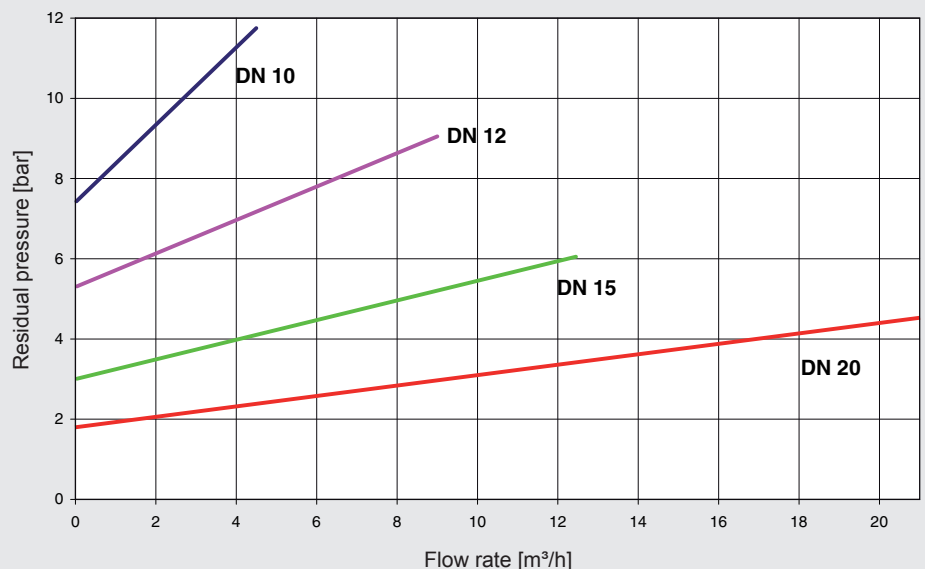
Technical data

Design	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	Contaminated fluids (50µm)
Nominal size	DN 10, DN 12, DN 15, DN 20
Pressure range	up to max. 200 bar
Flow rate	See table
Housing material	1.4305
Seal material	FKM
Temperature of medium	0 to +60 °C
Ambient temperature	0 to +50 °C
Ports	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 Watt P: 230 V 50 Hz: 9.2 VA 24 V DC: 6 W
Duty cycle	E / P: 100 %
IP class	E / P: IP 65 when connector is fitted
Installation position	E: M12 connection preferably on top H / P: pressure gauge preferably on top
Control air	40 µ filtered, max. 8 bar

NOTE: Further options and accessories available on request.

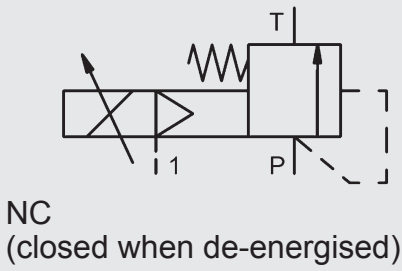
DN [mm]	Version	Pressure control range [bar]	Connection	Max. flow rate [m³/h]
10	SP	12 – 160	G 1	3.0
12	SP	10 – 120	G 1	6.0
15	SP	5 – 64	G 1	8.3
20	SP	3 – 40	G 1	14.1
12	DP	10 – 200	G 1	6.0
15	DP	5 – 140	G 1	8.3
20	DP	3 – 80	G 1	14.1

Pressure minimization

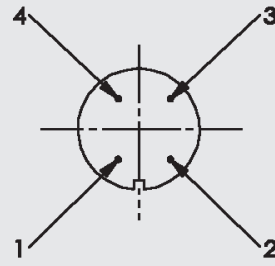


Series CX DBV-E

Switching function

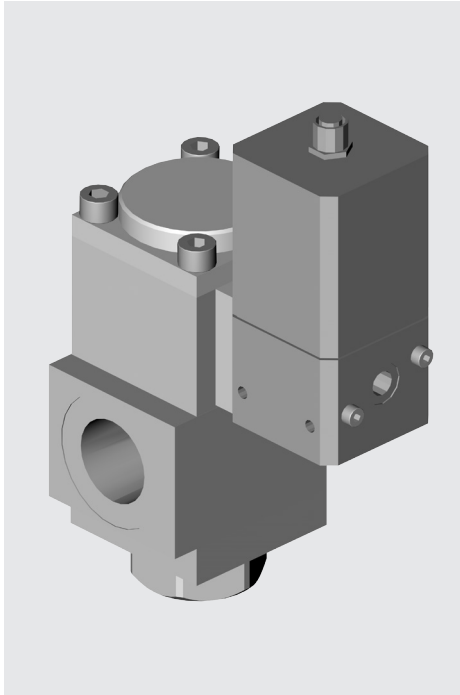


Electrical connection (M12x1)

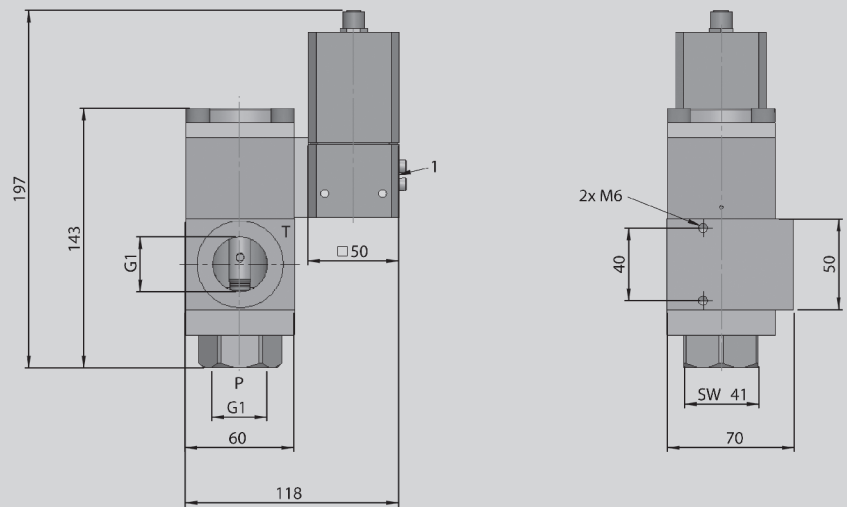


1	Supply
2	Setpoint (-)
3	GND (-)
4	Setpoint (+) 0-10V

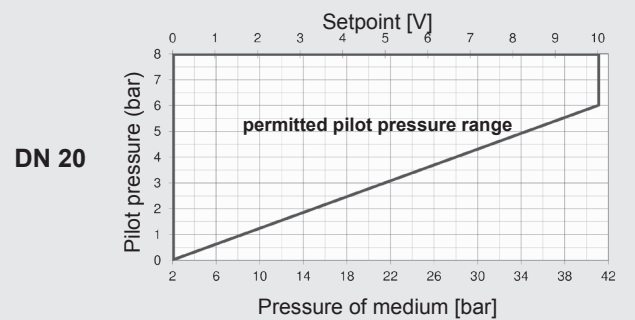
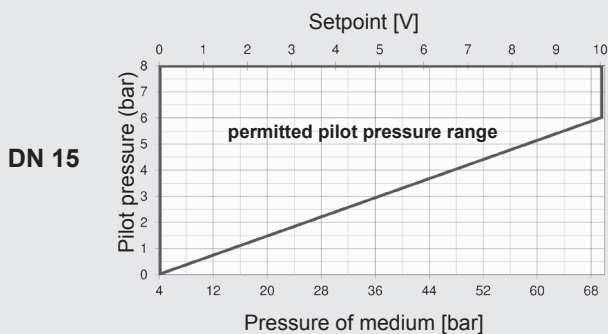
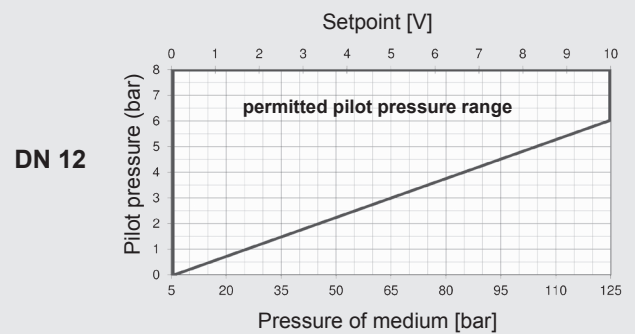
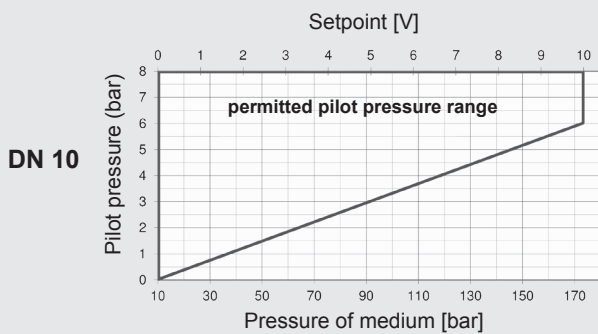
Single piston version (EK)



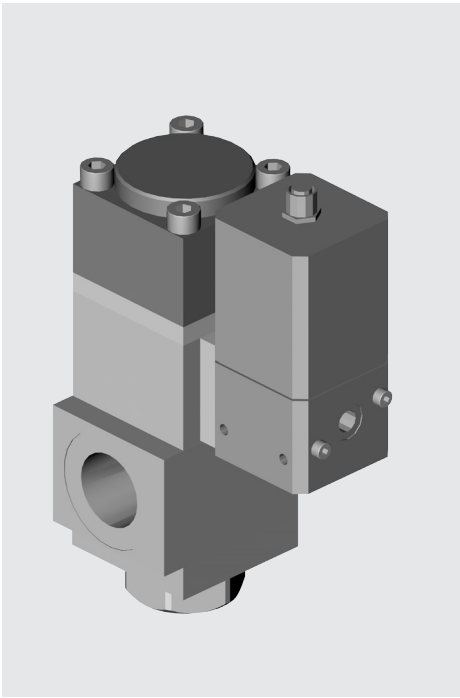
Dimensions



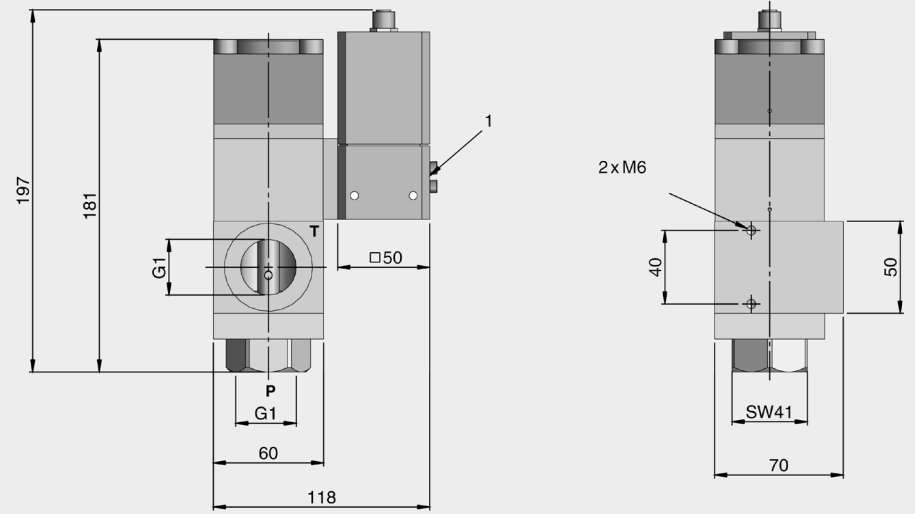
Control pressure graphs



Double piston version (DK)



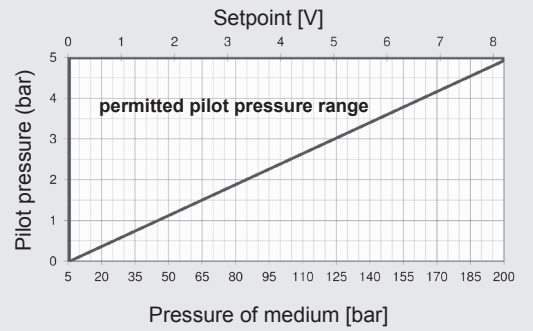
Dimensions



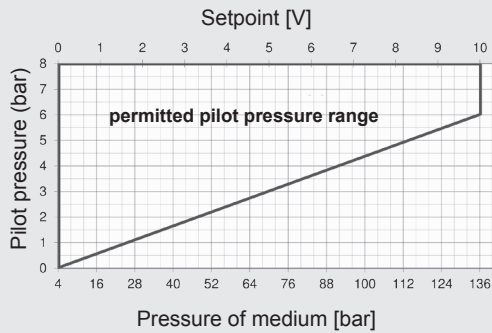
Control pressure graphs

DN 10 not available in double piston version DK

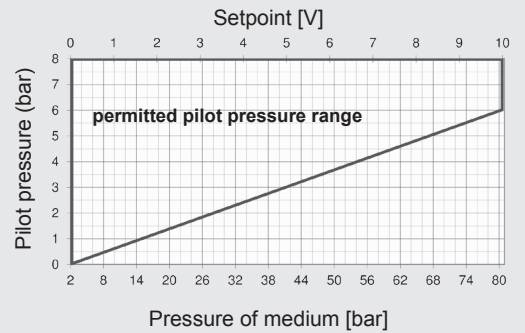
DN 12



DN 15

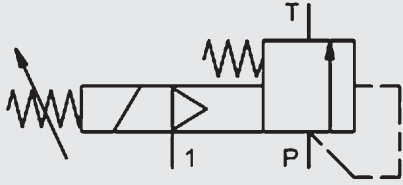


DN 20



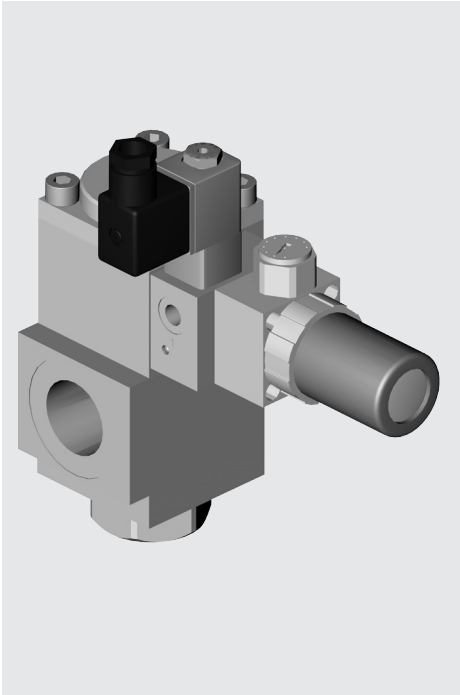
Series CX DBV-P

Switching function

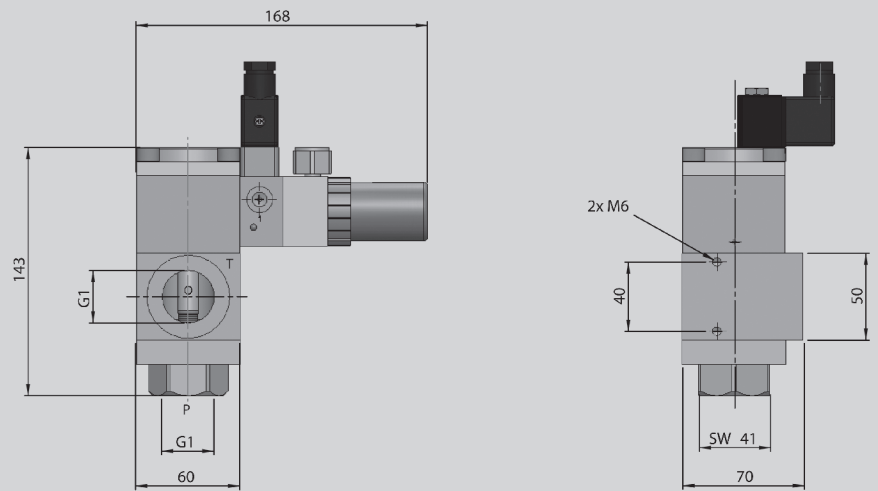


NC
(closed when de-energised)

Single piston version (EK)

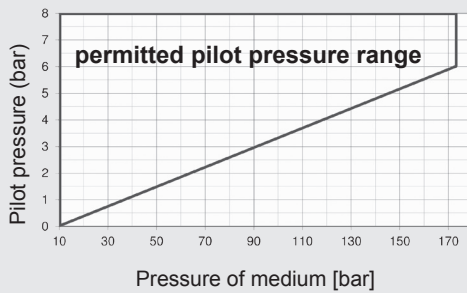


Dimensions

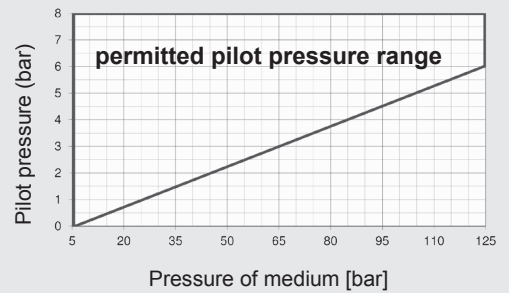


Control pressure graphs

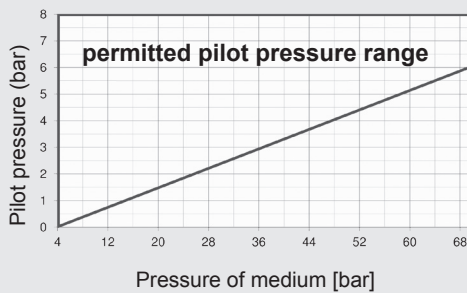
DN 10



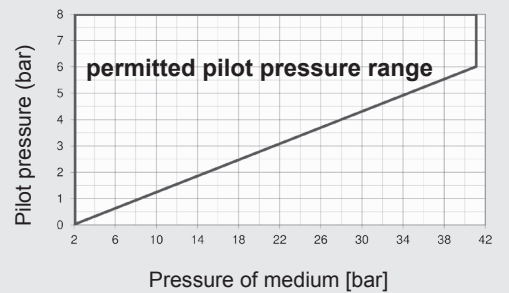
DN 12



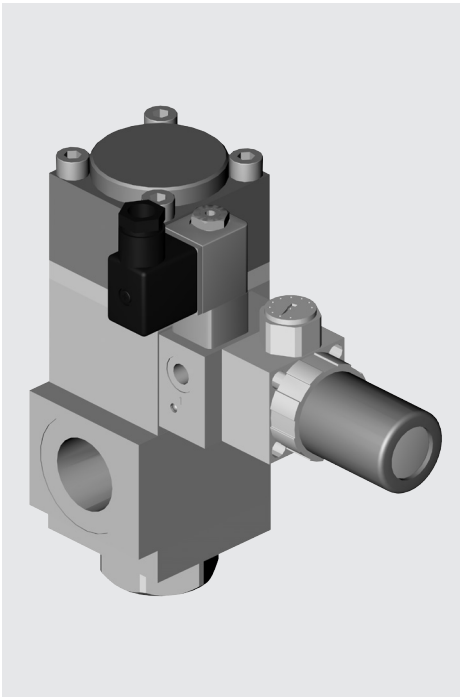
DN 15



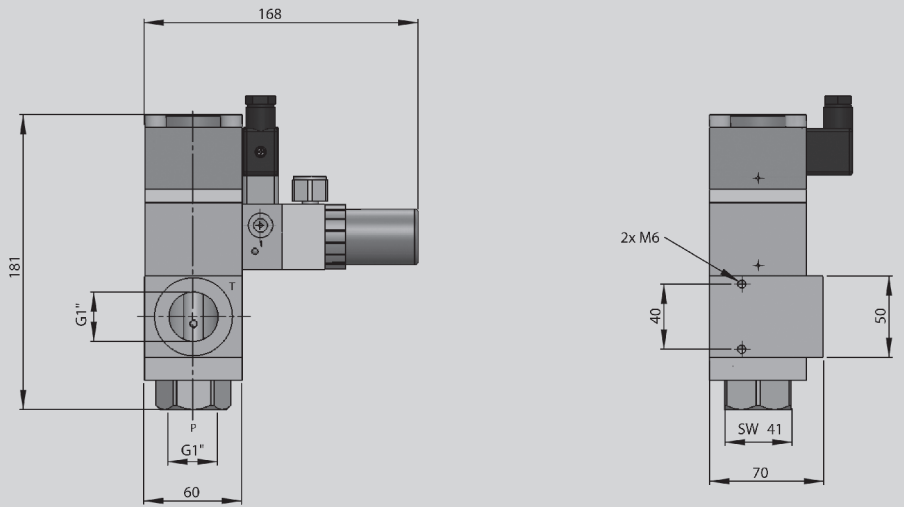
DN 20



Double piston version (DK)



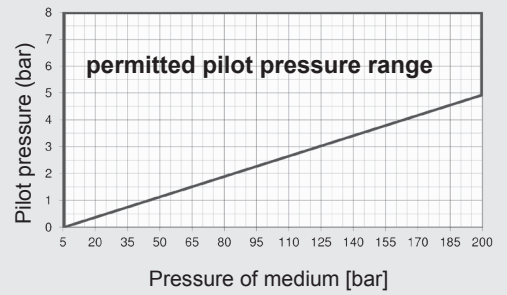
Dimensions



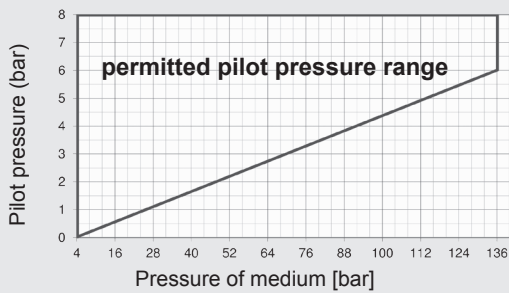
Control pressure graphs

DN 10 not available in double piston version DK

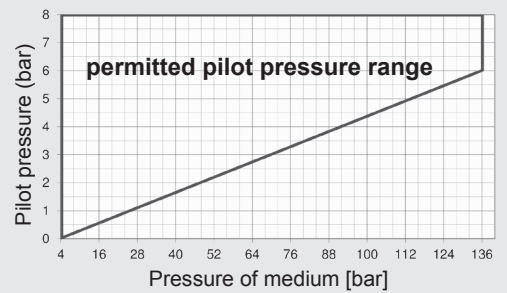
DN 12



DN 15

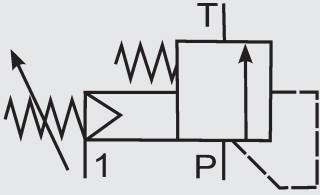


DN 20



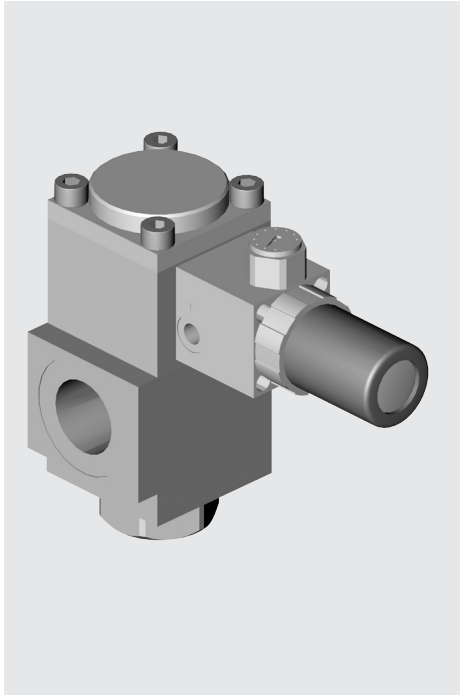
Series CX DBV-H

Switching function

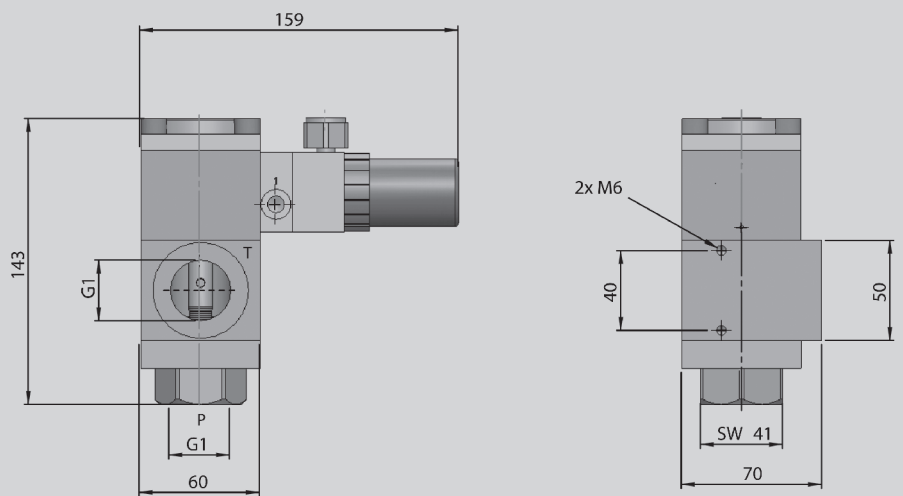


NC
(closed when de-energised)

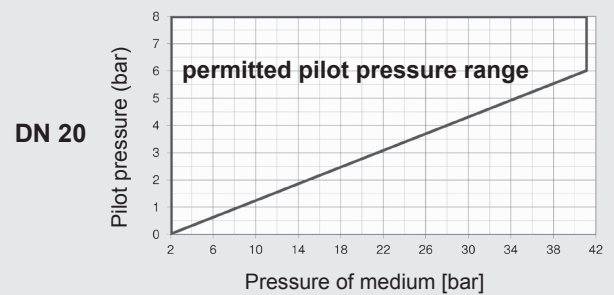
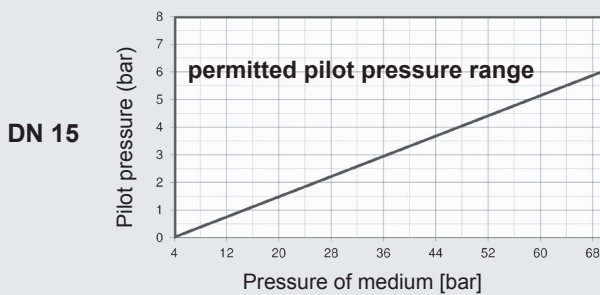
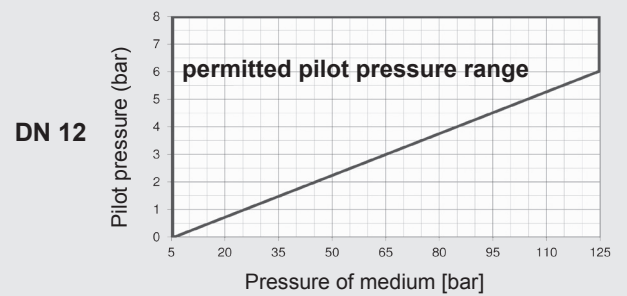
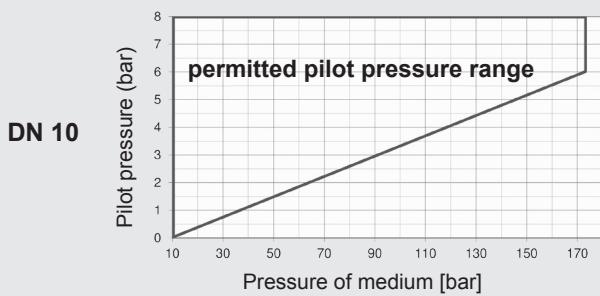
Single piston version (EK)



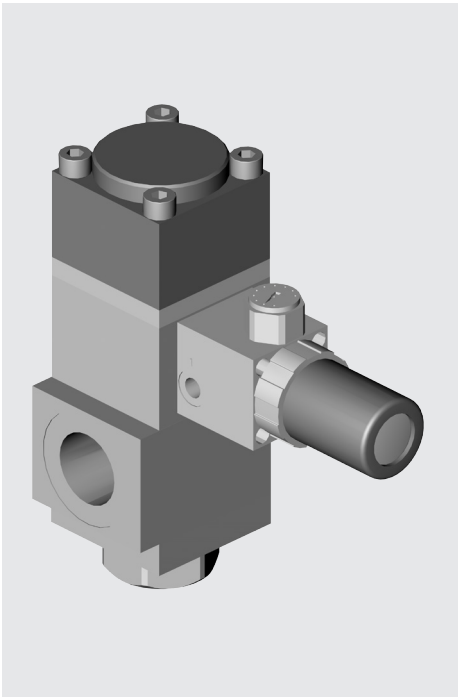
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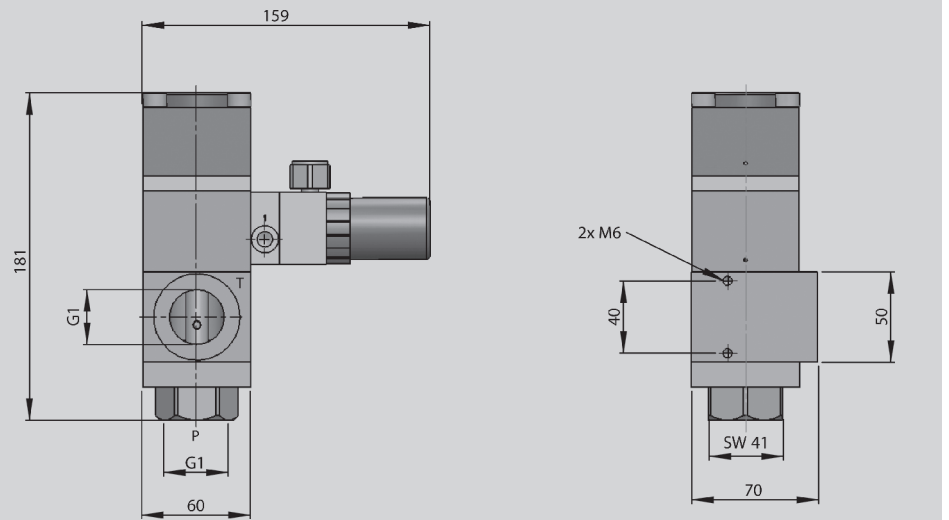
Control pressure graphs



Double piston version (DK)



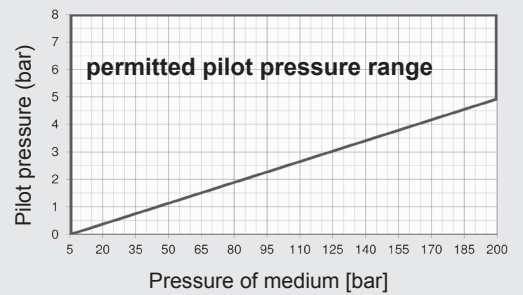
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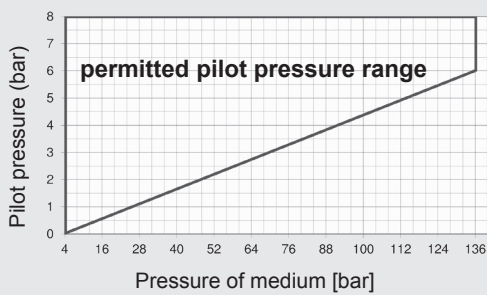
Control pressure graphs

DN 10 not available in double piston version DK

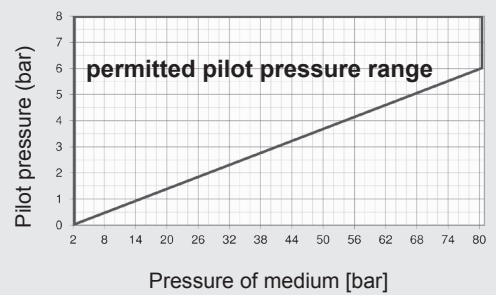
DN 12



DN 15



DN 20



NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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