

Pressure relief valves

Type DV700

up to 700 bar

NG 6 up to 25 l/min

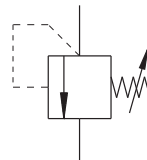
Features

- Direct operated valve
- High degree of pressure stability
- Safe operation
- Precise pressure adjustment
- Maximum pressure setting with lock nut



Applications

- as cartridge
- as modular valve with one or two cartridges



Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)	
Fluid temperature range	- 20 to 80 °C	
Ambient temperature range	- 30 to 50 °C	
Viscosity range	5 to 400 mm ² /s	
Porting	NG 6 according to DIN 24340/ISO 4401/CETOP RP 121 H	
Max. operating pressure connection HP	700 bar	
Max. operating pressure connection LP	350 bar	
Max. flow rate	25 l/min	
Filtration (recommantation)	according to NAS 1638, class 6 or ISO/DIN 4406 17/15/12	
Weight	see dimension drawings	
Material/ surface treatment	housing	steel, galvanized, chromated
	cartridge	steel corrosion resistant
	adjusting knob	plastic

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Ordering code

Exemple	<table border="1"> <tr> <td>DV</td> <td>700</td> <td>-</td> <td>6</td> <td>-</td> <td>P</td> <td>-</td> <td>350</td> <td>-</td> <td>D</td> <td>-</td> <td>V</td> <td>-</td> <td>A</td> <td></td> <td></td> <td>00</td> </tr> </table>										DV	700	-	6	-	P	-	350	-	D	-	V	-	A			00
DV	700	-	6	-	P	-	350	-	D	-	V	-	A			00											
Pressure relief valve											Special design 01 ... 99 (00 for standard)																
Type	BV700																										
Size	6																										
Pressure relief	E	Cartridge																									
	Modular subplate from – to:																										
	P	P – T																									
	A	A – T																									
	B	B – T																									
	AB	A – T and B – T																									
	PA	P – T and A – T																									
	G1/4VR	Connection size G1/4																									
	G3/8VR	Connection size G3/8																									
Max. setting pressure	350 bar 700 bar																										
Cartridge model	D (turning handle) P (sealing)																										
Seals	V (FPM) other seal materials on request																										
											Part index Please leave it blank (small letters a-z; different letters do not effect interchan-geability)																
											Design revision see dimension drawings (capital letters A-Z; identical letters equal same connecting dimensions)																

Function and design

The valve consists of a cartridge (1), seat (2), taper (3) with damping piston (4), spring (5), adjusting spindle (6) and lock nut (7).

The system pressure can be set to the required pressure via the adjusting spindle.

The spring pushes the taper onto the valve seat. The system pressure in the P-line acts on the taper.

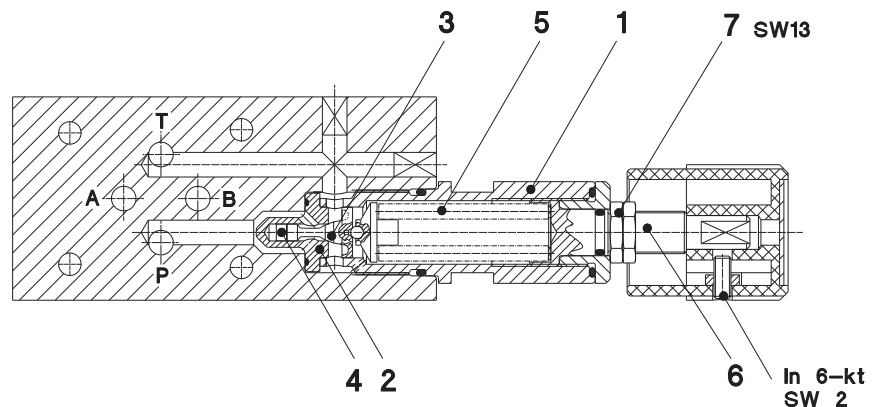
If the pressure rises above the set pressure via the spring the taper opens and the hydraulic medium flows from port P to tank.

If the pressure in Port P again falls below the preset value, the poppet closes again and separates the port P from port T.

Because the pressure limitation in a system is a dynamic event the taper is fitted with a damping piston.

This piston dampens the movement during opening and closing of the taper and therefore a stable pressure limitation is achieved.

To achieve a good pressure adjustment and p-Q characteristic over the entire operation range the pressure range was split into two. A flat p-Q curve is achieved by clever deflection of the flow, hence using the dynamic energy of the flow.



Type DV700

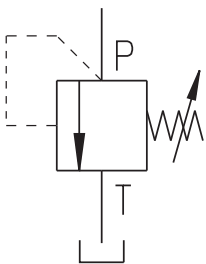
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Produktinformation

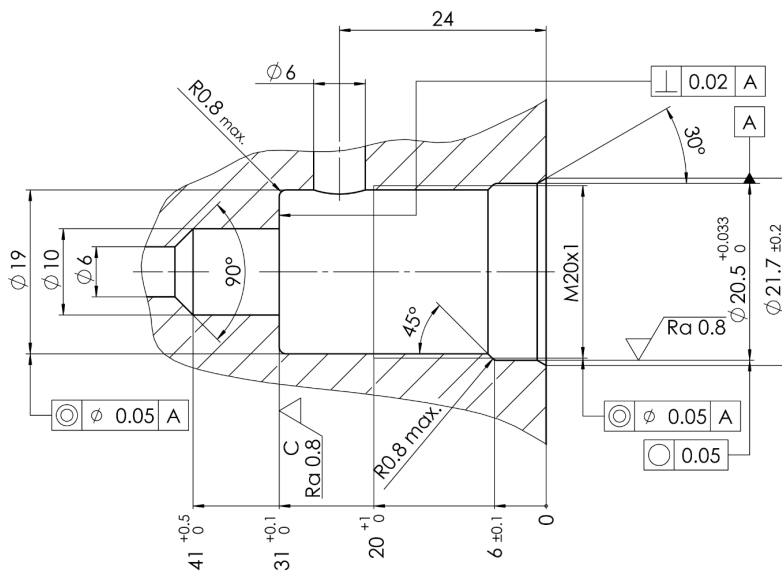
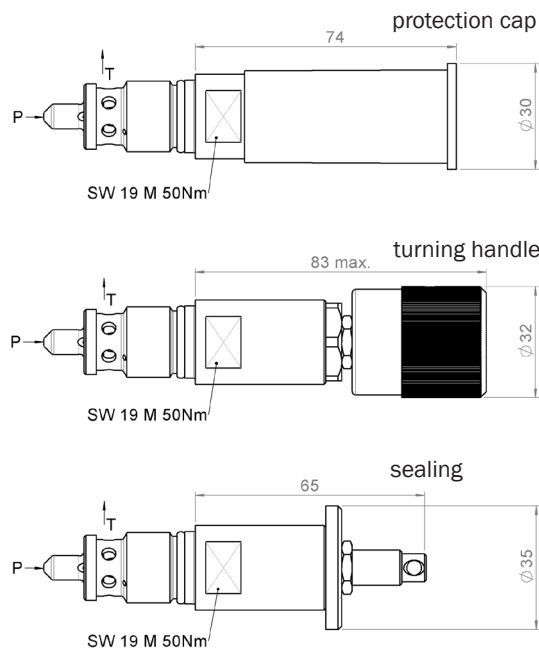
Screw-in cartridge; weight 0,2 kg

Type	Max. operating pressure	Seals	Part No.
DV700-6-E-350-D-V-A*00	350 bar	turning handle	3677793
DV700-6-E-700-D-V-A*00	700 bar	turning handle	3677794
DV700-6-E-350-P-V-A*00	350 bar	sealing	4001031
DV700-6-E-700-P-V-A*00	700 bar	sealing	3851977

Symbol



Dimensional drawings



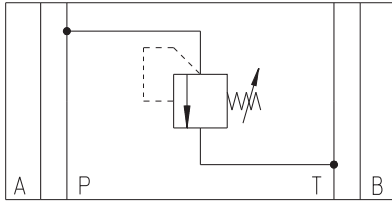
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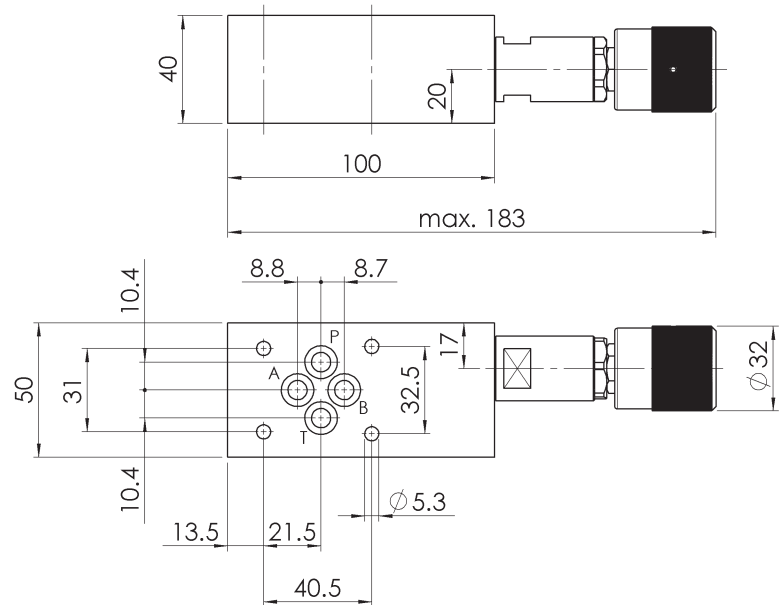
Intermediate plate valves from P to T; weight 1,6 kg

Type	Max. operating pressure	Seals	Part No.
DV700-6-P-350-D-V-A*00	350 bar	turning handle	3677796
DV700-6-P-700-D-V-A*00	700 bar	turning handle	3677797
DV700-6-P-350-P-V-A*00	350 bar	sealing	4054731
DV700-6-P-700-P-V-A*00	700 bar	sealing	4031721

Symbol



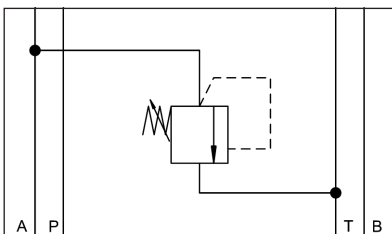
Dimensional drawing



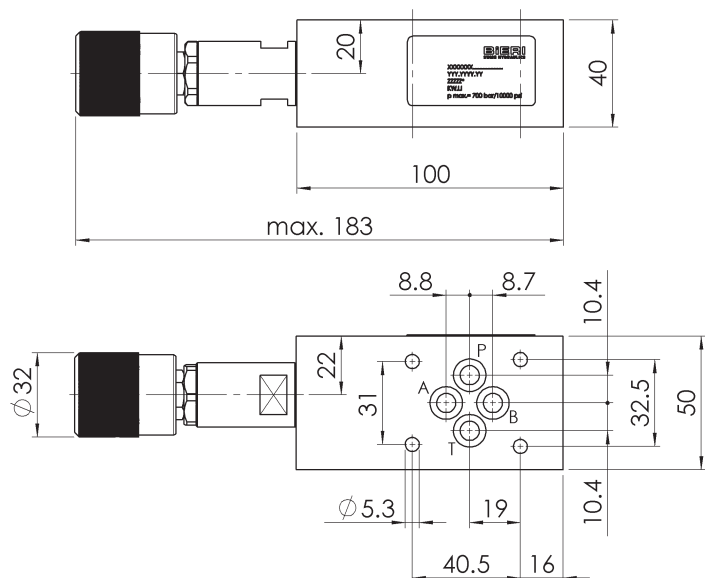
Intermediate plate valves from A to T; weight 1,6 kg

Type	Max. operating pressure	Seals	Part No.
DV700-6-A-350-D-V-A*00	350 bar	turning handle	3677780
DV700-6-A-700-D-V-A*00	700 bar	turning handle	3677783
DV700-6-A-350-P-V-A*00	350 bar	sealing	4054732
DV700-6-A-700-P-V-A*00	700 bar	sealing	4054733

Symbol



Dimensional drawings



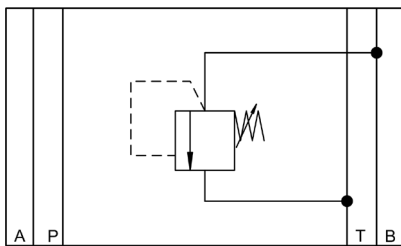
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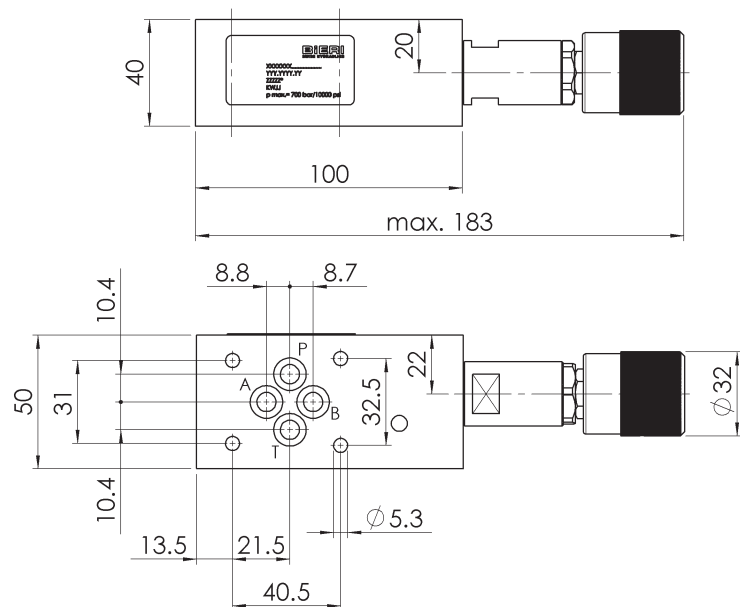
Intermediate plate valves from B to T; weight 1,6 kg

Type	Max. operating pressure	Seals	Part No.
DV700-6-B-350-D-V-A*00	350 bar	turning handle	3677789
DV700-6-B-700-D-V-A*00	700 bar	turning handle	3677791
DV700-6-B-350-P-V-A*00	350 bar	sealing	4054734
DV700-6-B-700-P-V-A*00	700 bar	sealing	4054735

Symbol



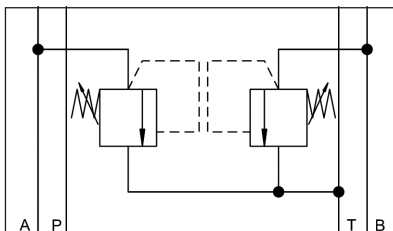
Dimensional drawings



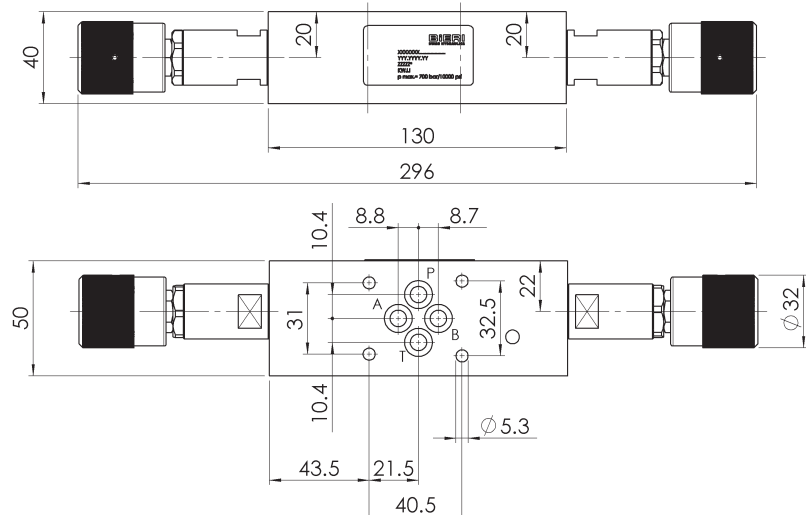
Intermediate plate valves from A to T and B to T; weight 2,0 kg

Type	Max. operating pressure	Seals	Part No.
DV700-6-AB-350-D-V-A*00	350 bar	turning handle	3677786
DV700-6-AB-700-D-V-A*00	700 bar	turning handle	3677787
DV700-6-AB-350-P-V-A*00	350 bar	sealing	4054736
DV700-6-AB-700-P-V-A*00	700 bar	sealing	4031925

Symbol



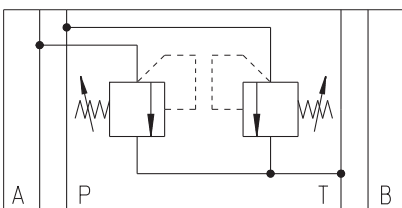
Dimensional drawings



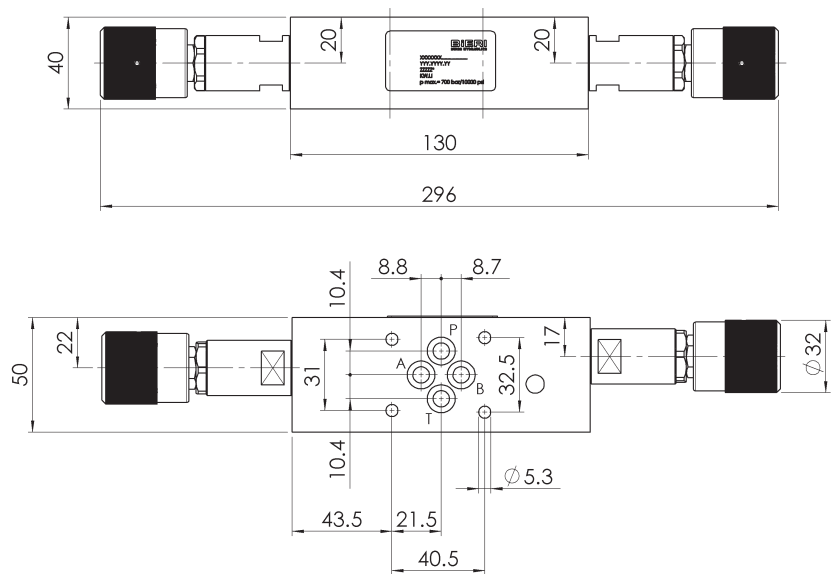
Intermediate plate valves from P to T and A to T; weight 2,0 kg

Type	Max. operating pressure	Seals	Part No.
DV700-6-PA-350-D-V-A*00	350 bar	turning handle	3677799
DV700-6-PA-700-D-V-A*00	700 bar	turning handle	3677802
DV700-6-PA-350-P-V-A*00	350 bar	sealing	4054737
DV700-6-PA-700-P-V-A*00	700 bar	sealing	4054738

Hydraulic schematic



Dimensional drawing



Accessories

For each valve the following is included:
4 pieces O-Rings 9,25 x 1,78 mm
90° ShA

Tie bolts/ fixation screws and subplates
see technical data sheet AP700 / RP700 / EP700!

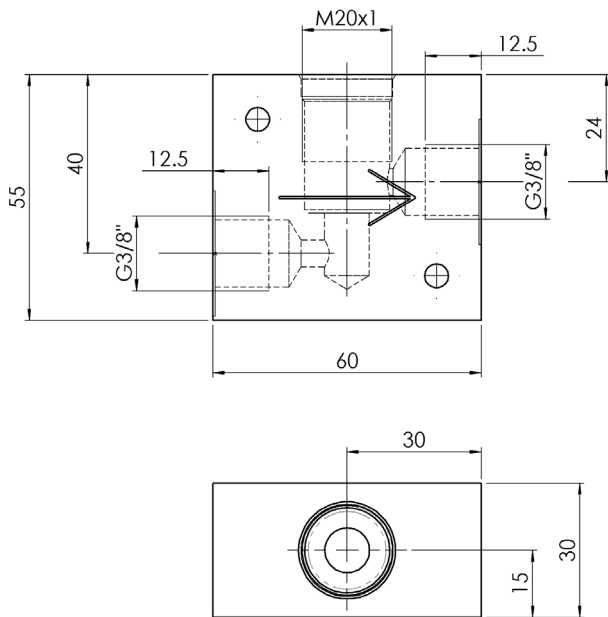
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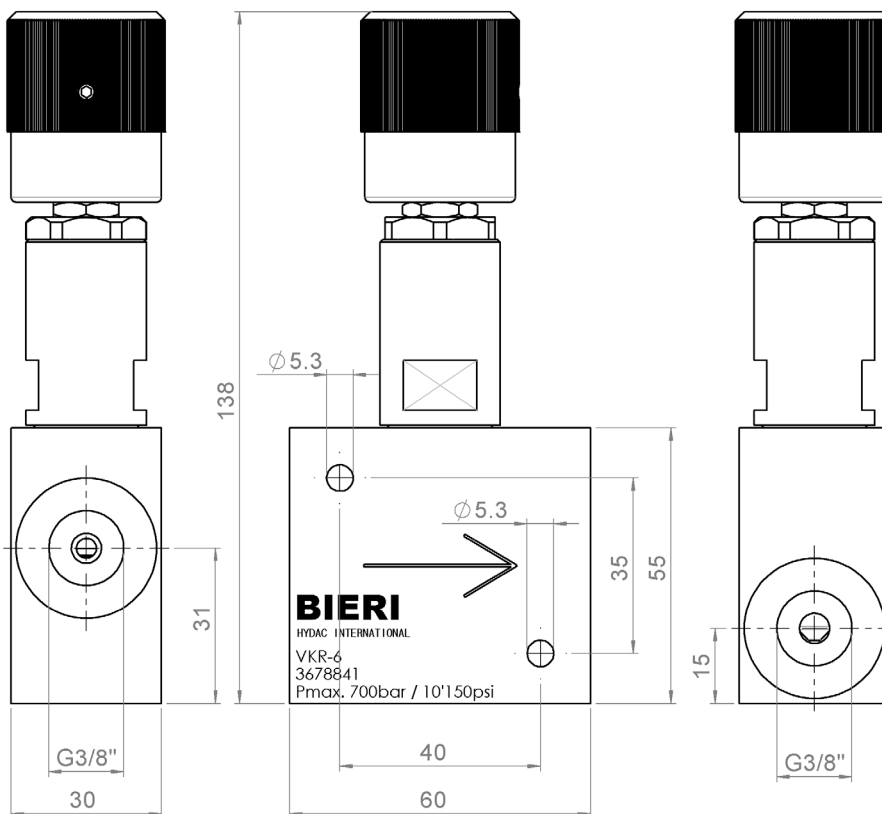
Valve block for in-line mounting

Type	Max. operating pressure	Part No.
VKR-6	700 bar	3678841

Dimensional drawing



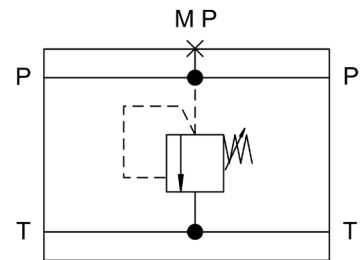
Dimensional drawing with pressure relief cartridge (Cartridge not included in delivery)



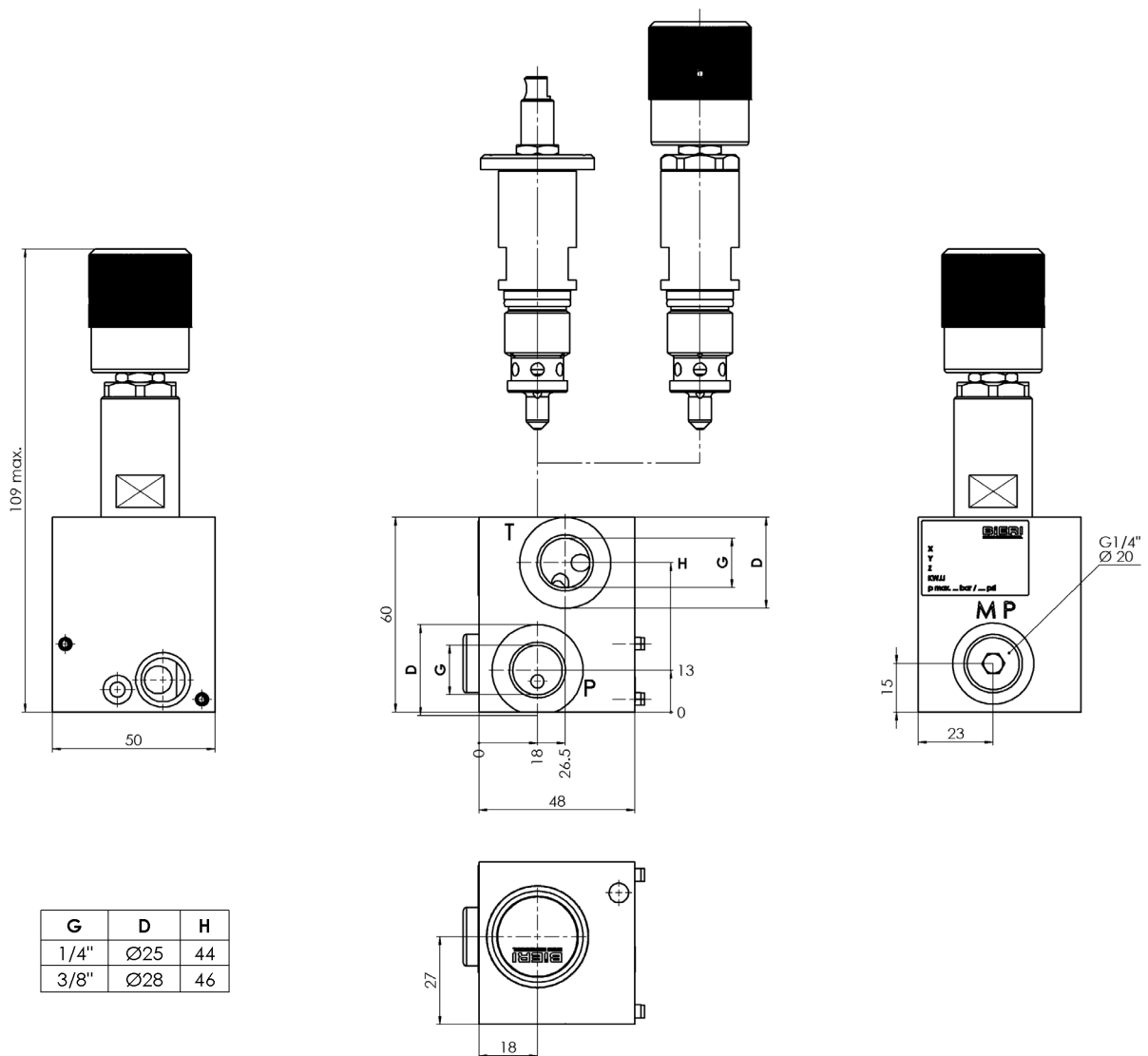
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Valve block for in-line mounting

Type	Max. operating pressure	Part No.
DV700-4B-G1/4-VR-700-D-V-A-*00	700 bar	4034777
DV700-4B-G1/4-VR-700-P-V-A-*00	700 bar	4034781
DV700-4B-G3/8-VR-700-D-V-A-*00	700 bar	4034778
DV700-4B-G3/8-VR-700-P-V-A-*00	700 bar	4034782



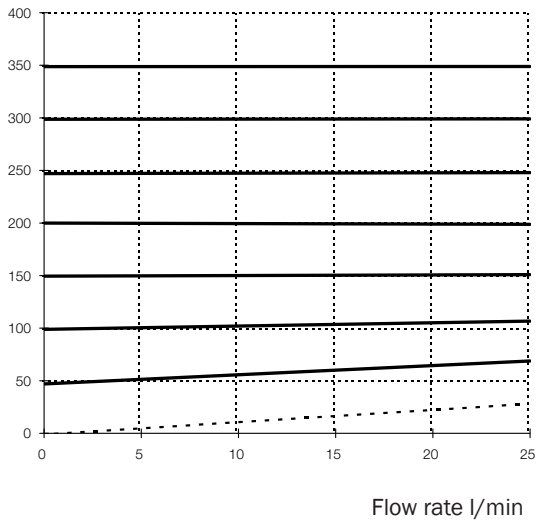
Dimensional drawing



Characteristics of modular valves

measured at $v = 32 \text{ mm}^2/\text{s}$, $T = 40^\circ\text{C}$

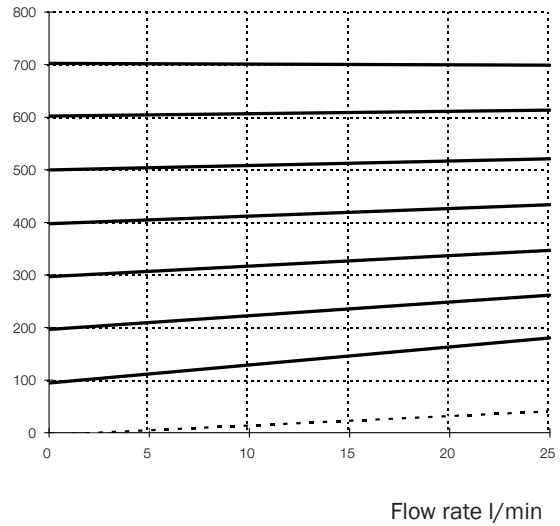
Setting pressure



Key

- Min. setting pressure
- Max. setting pressure 350 bar

Setting pressure



Key

- Min. setting pressure
- Max. setting pressure 700 bar