

# Pressure relief valves

## Type DV700

up to 700 bar

NG 4 up to 12 l/min

NG 6 up to 25 l/min

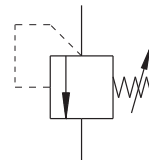
### Features

- 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 <sup>2</sup> /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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### 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.

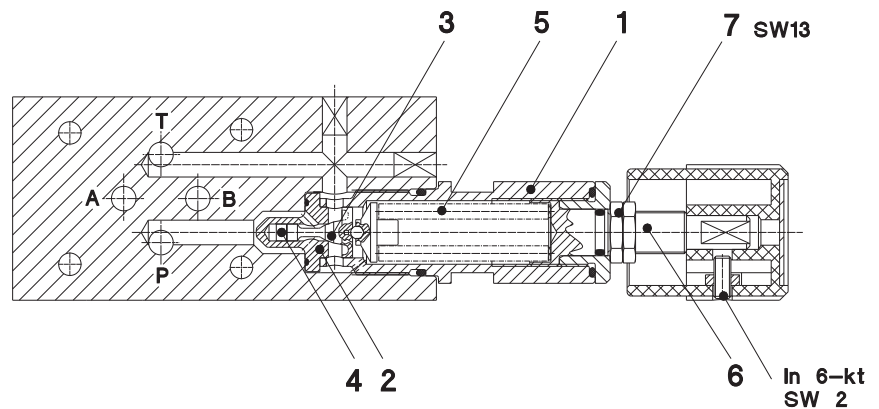
If the pressure rises above the set pressure via the spring the taper opens and the hydraulic medium flows from port P to tank.

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.



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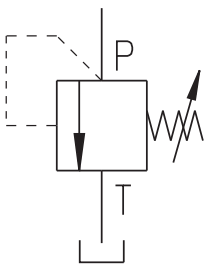
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## Produktinformation

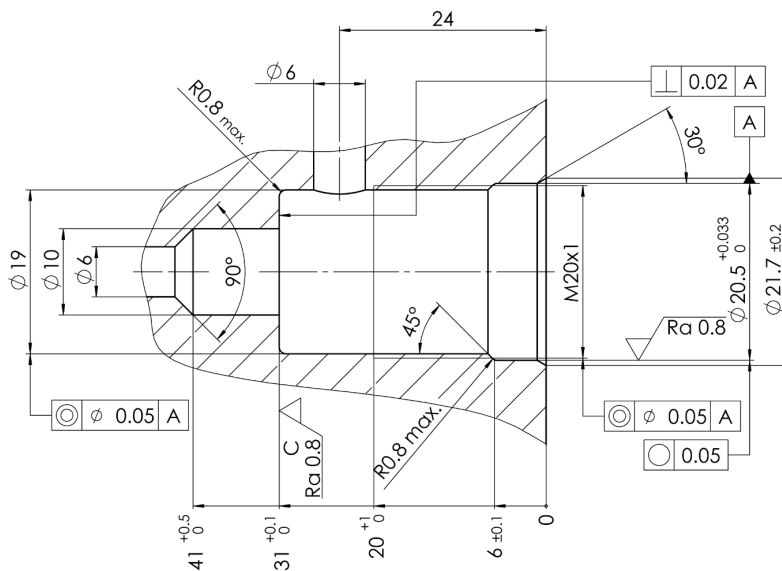
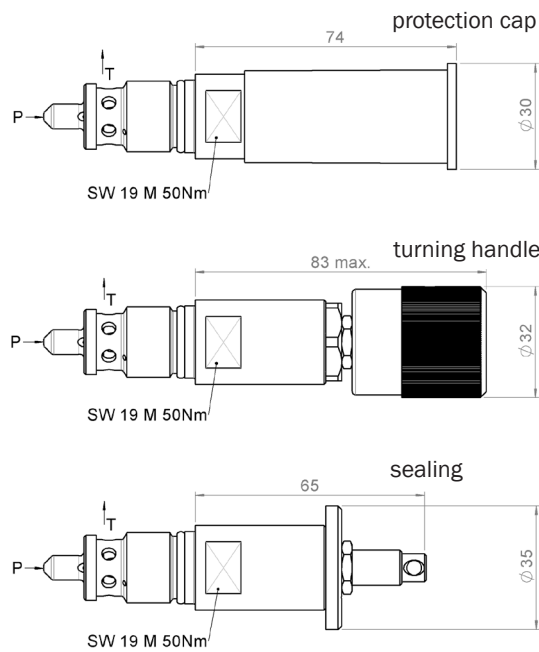
Screw-in cartridge; weight 0,2 kg

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



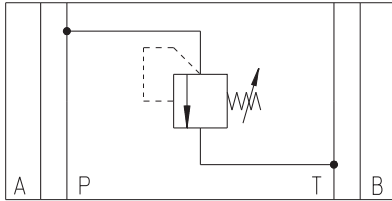
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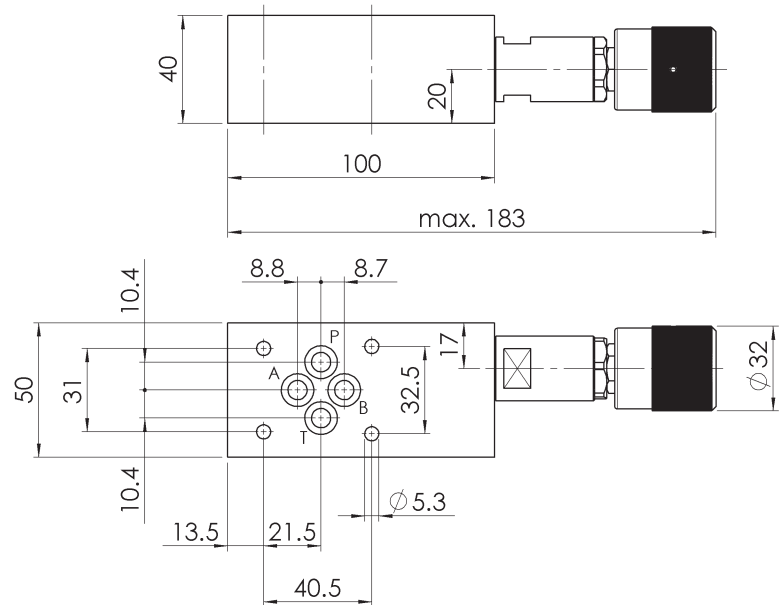
### Intermediate plate valves from P to T; weight 1,6 kg

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



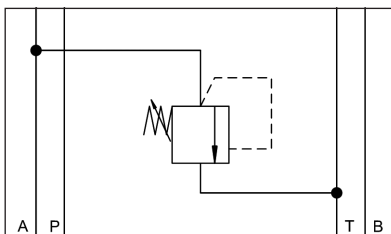
#### Dimensional drawing



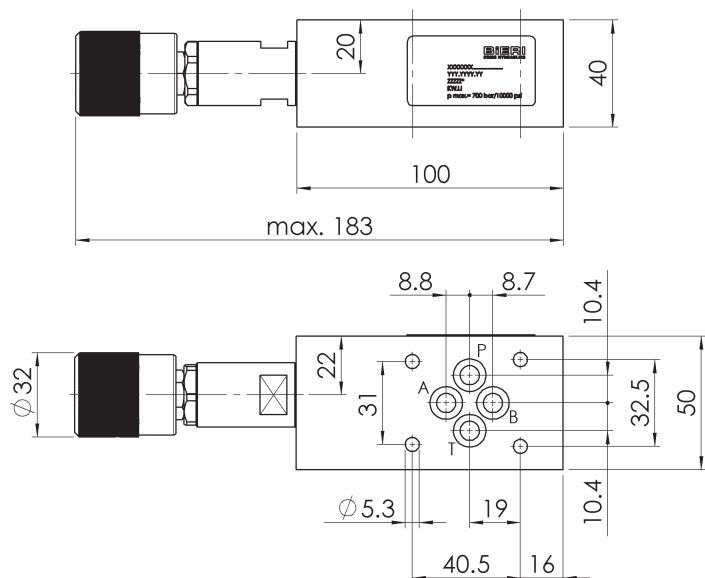
### Intermediate plate valves from A to T; weight 1,6 kg

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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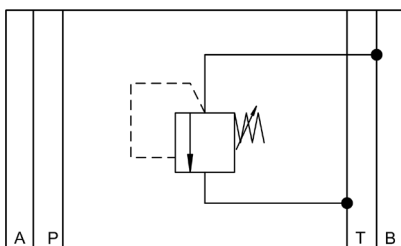
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NG 6 up to 25 l/min

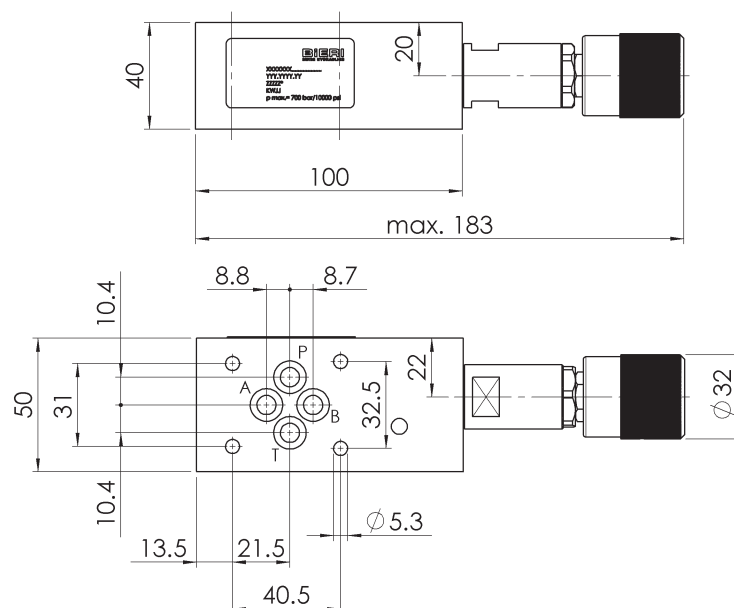
### Intermediate plate valves from B to T; weight 1,6 kg

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



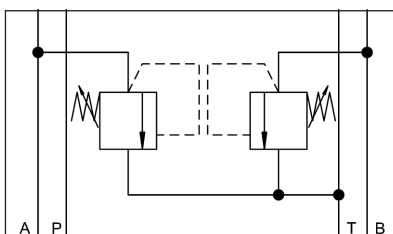
#### Dimensional drawings



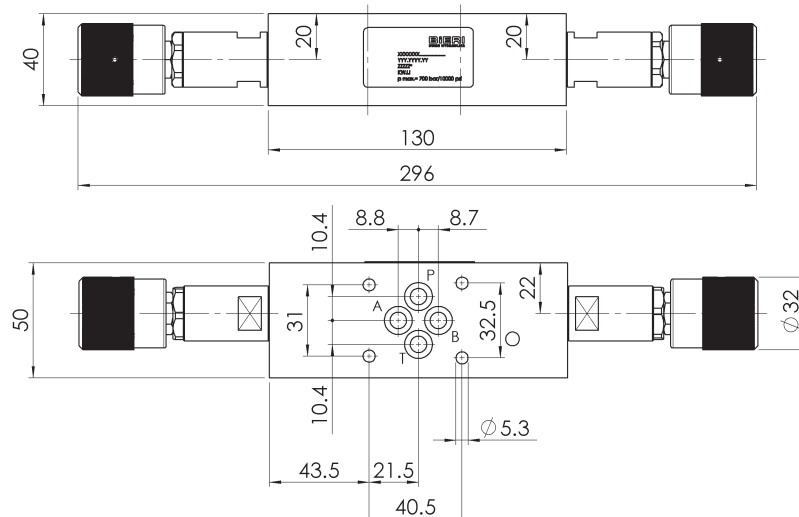
### Intermediate plate valves from A to T and B to T; weight 2,0 kg

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

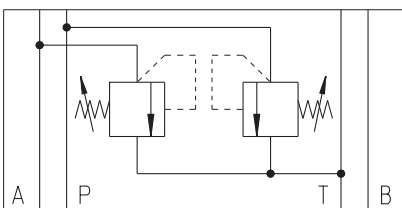
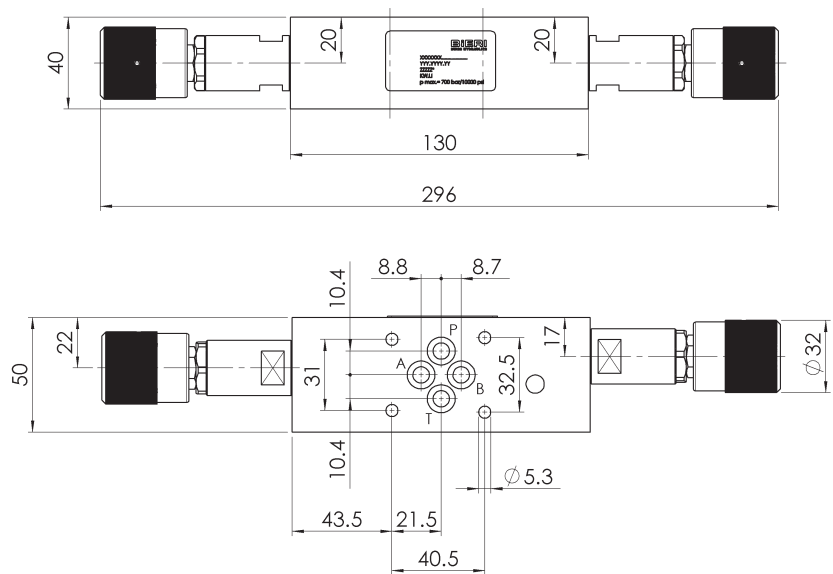


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**Intermediate plate valves from P to T and A to T; weight 2,0 kg**

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!



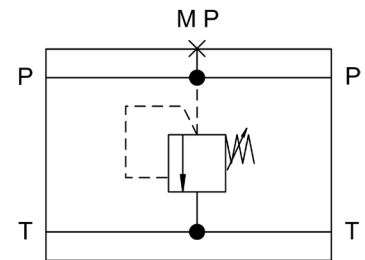


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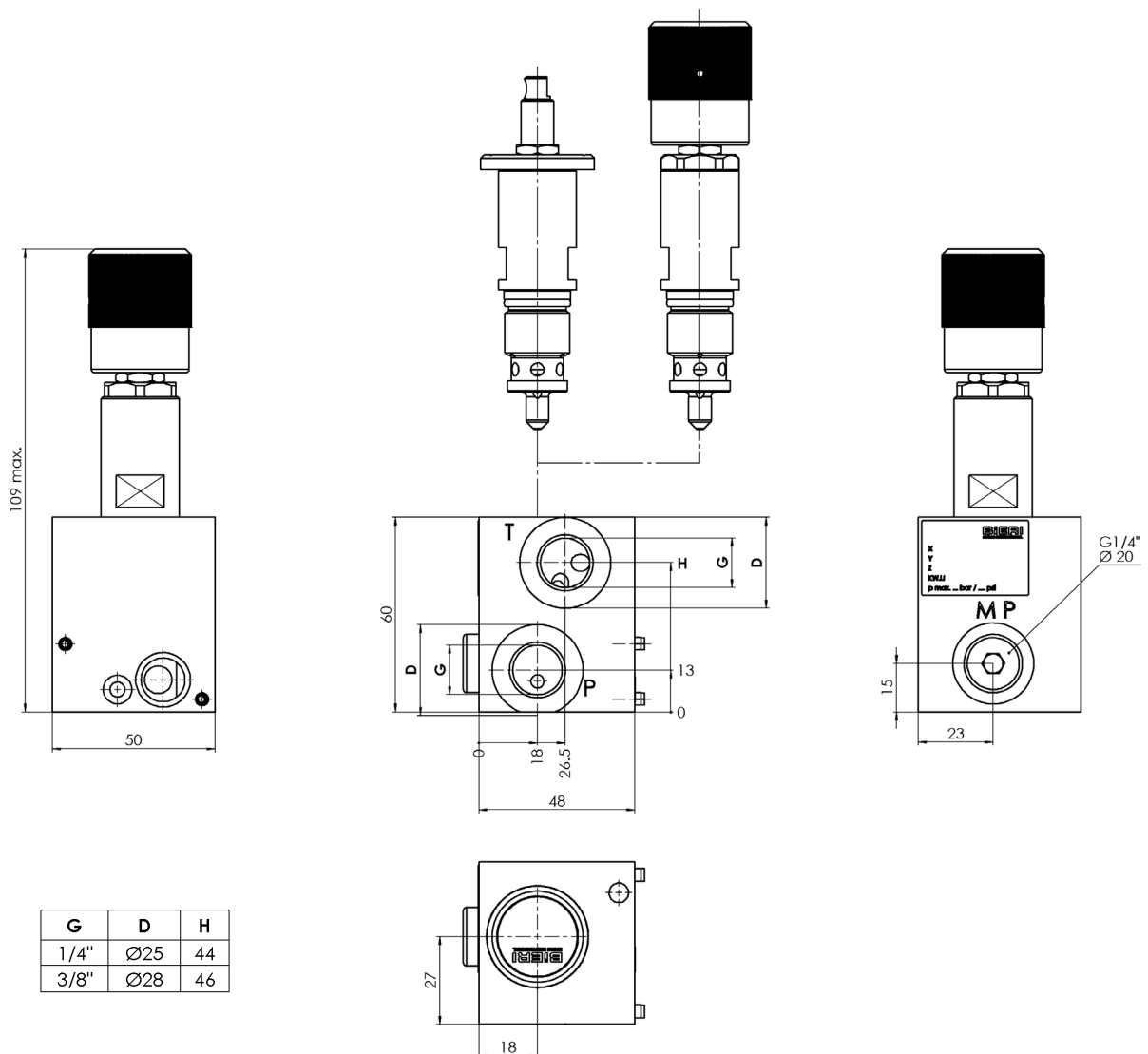
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### Valve block for in-line mounting NG 4

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



## Type DV700

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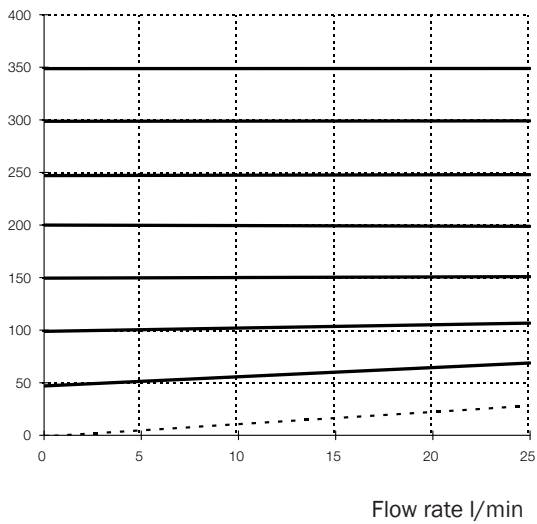
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NG 6 up to 25 l/min

## Characteristics of modular valves

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

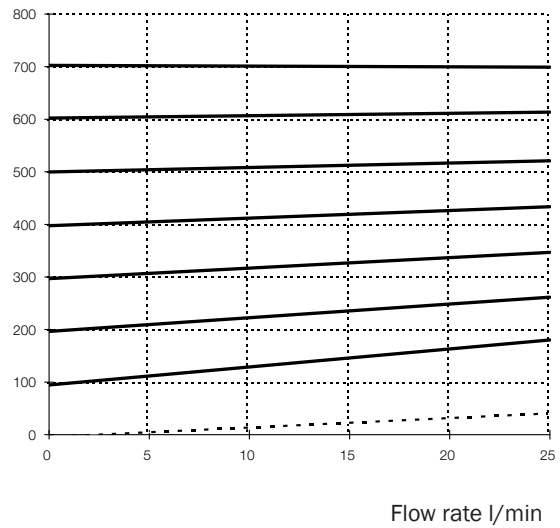
Setting pressure



### Key

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

Setting pressure



### Key

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

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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.

Subject to technical modifications.