

Frese DPRV DN15-DN32 - adjustable differential pressure relief valve

Application

Frese DPRV can be installed in domestic and commercial heating and cooling systems.

The valve is an adjustable differential pressure relief valve (DPRV) that ensures the differential pressure across circuit is not exceeded, and a minimum flow through the circuit will be maintained when the control valves are closing down.

Benefits

- Tamper proof pre-setting
- Prevents rising differential pressure in the circuit
- Ensures a minimum flow through the circuit when the control valves are closing
- Differential pressure can be set and adjusted on site
- Pre-setting is simple using the graphs shown on page 4 - 6
- Reduces noise problems caused by high differential pressure



Features

- Pressure class PN25
- Size DN15-DN32
- Setting range 10 kPa - 60 kPa
- Thread ISO 228
- Differential pressure operating range up to 600 kPa
- Isolation up to 600 kPa

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Setting the valve

Before pre-setting the valve, the black cap needs to be removed.

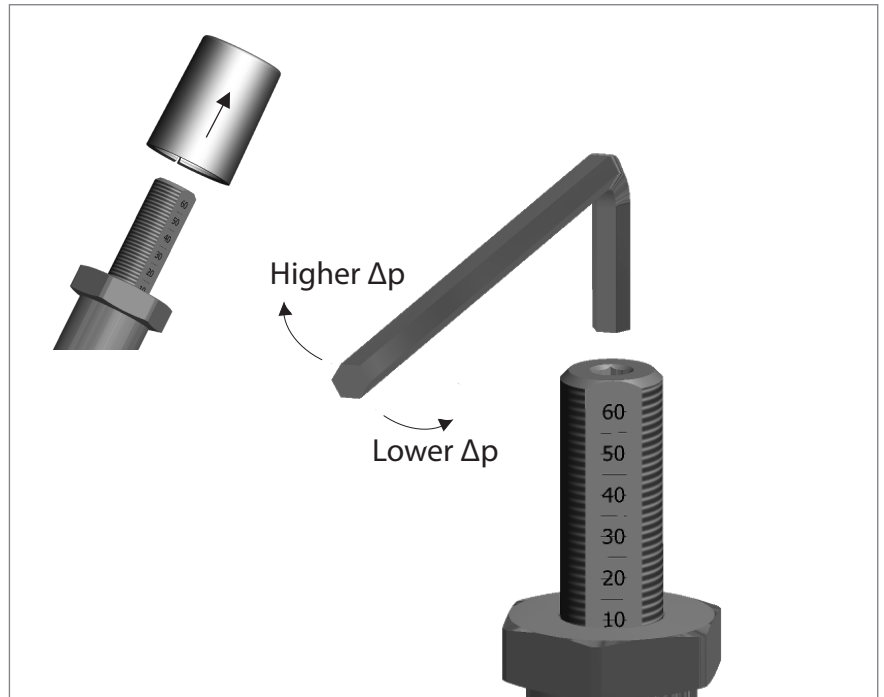
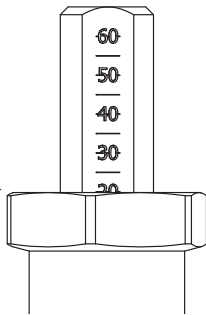
The valve is easily set by means of a 4mm hexagonal key.

By use of the scale, the pre-setting of the valve can be easily adjusted.

Replace the cap after pre-setting.

Example

Pre-set 20 kPa →

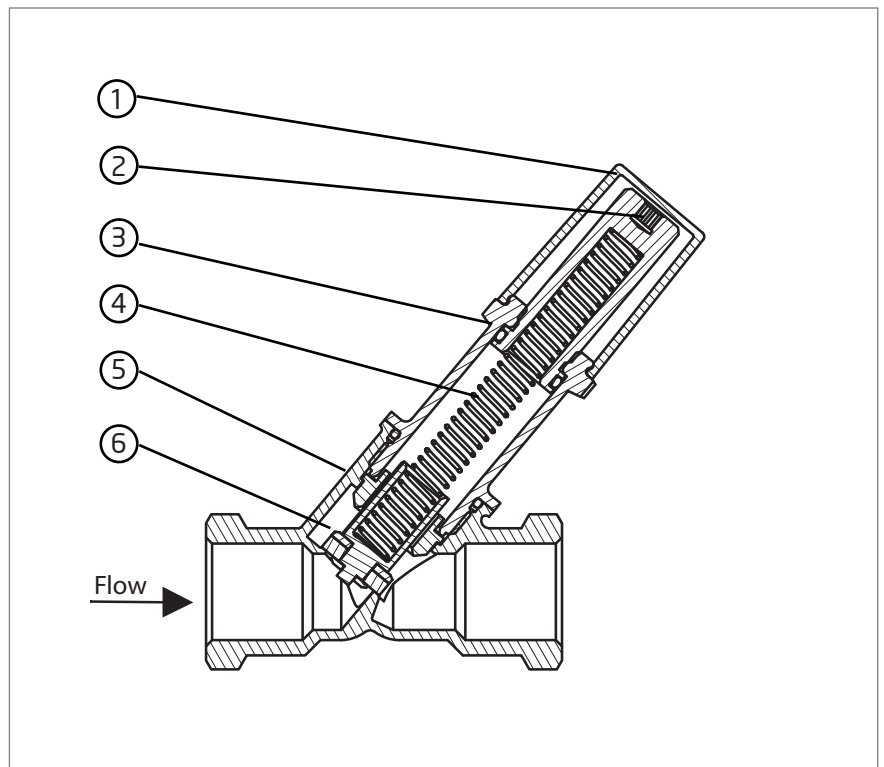


Design

Frese DPRV consists of an adjustable spring where the opening differential pressure can be pre-set.

Frese DPRV must be installed between the supply and return line.

- ① Cap
- ② Adjustment nut
- ③ Spring cover
- ④ Spring
- ⑤ Housing
- ⑥ Stem

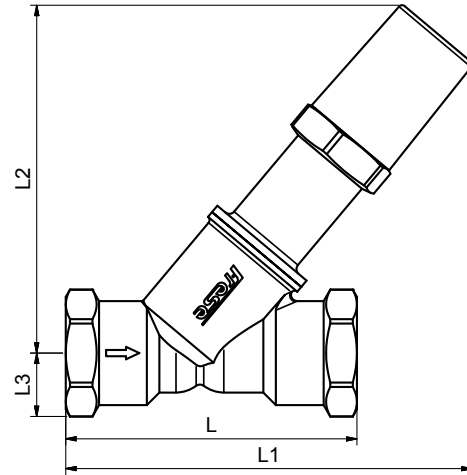


Frese DPRV cross section drawing

Frese DPRV DN15-DN32 - adjustable differential pressure relief valve

Technical data

Housing:	DZR Brass
Spring:	Stainless steel
O-rings and seat:	EPDM
Cap:	ABS
Guide:	PTFE
Pressure class:	PN25
Max. differential pressure:	600 kPa
Temperature range:	-20°C to +120°C

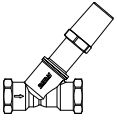


The pipe system shall be properly ventilated to avoid risk of air pockets. Glycolic mixtures up to 50% are applicable (both ethylene and propylene).
Recommendation: Water treatment to VDI 2035.

Frese DPRV

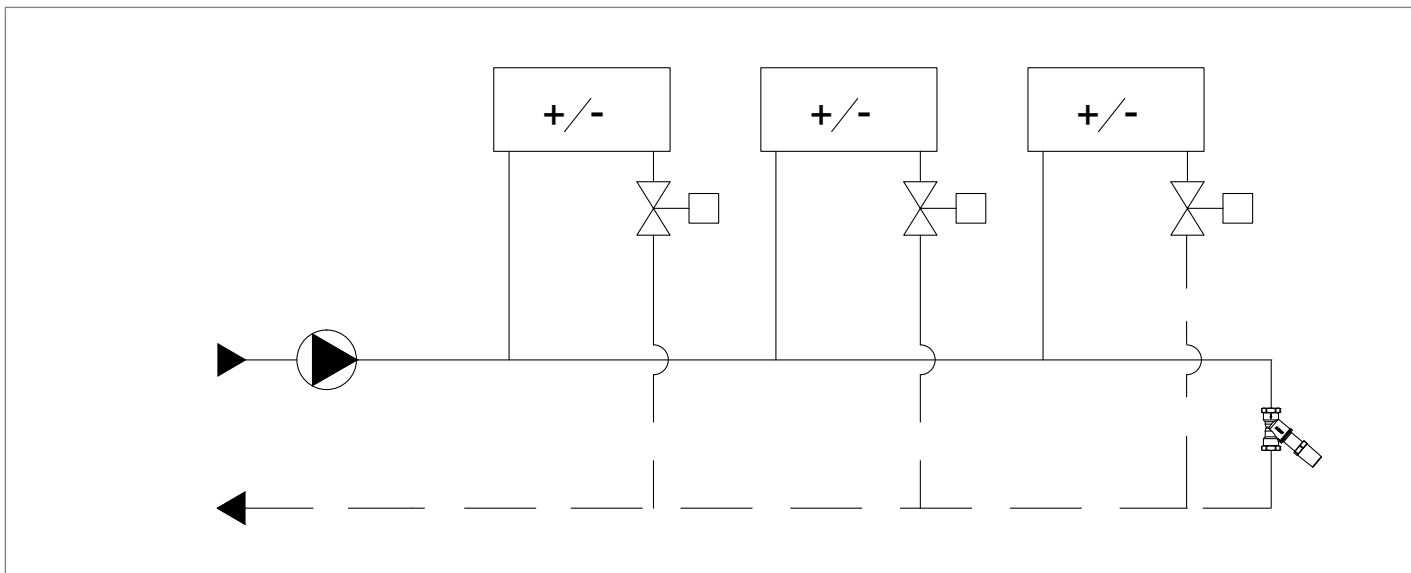
Dimension		DN15	DN20	DN25	DN32
Control range	kPa	10 - 60	10 - 60	10 - 60	10 - 60
Flow rate	l/s	0.014-0.278	0.014-0.417	0.014-1.11	0.014-2.22
	l/h	50-1000	50-1500	50-4000	50-8000
	gpm	0.220-4.40	0.220-6.60	0.220-17.6	0.220-35.2
Kvs	m ³ /h	3.50	3.70	8.30	10.5
Dim. mm	L	70	78	87	103
	L1	98	103	109	118
	L2	84	86	94	96
	L3	15	18	23	28
Weight	kg	0.24	0.35	0.51	0.73

Product programme

Dimension		DN15	DN20	DN25	DN32
Frese no.		48-0075	48-0076	48-0077	48-0078

Frese DPRV DN15-DN32 - adjustable differential pressure relief valve

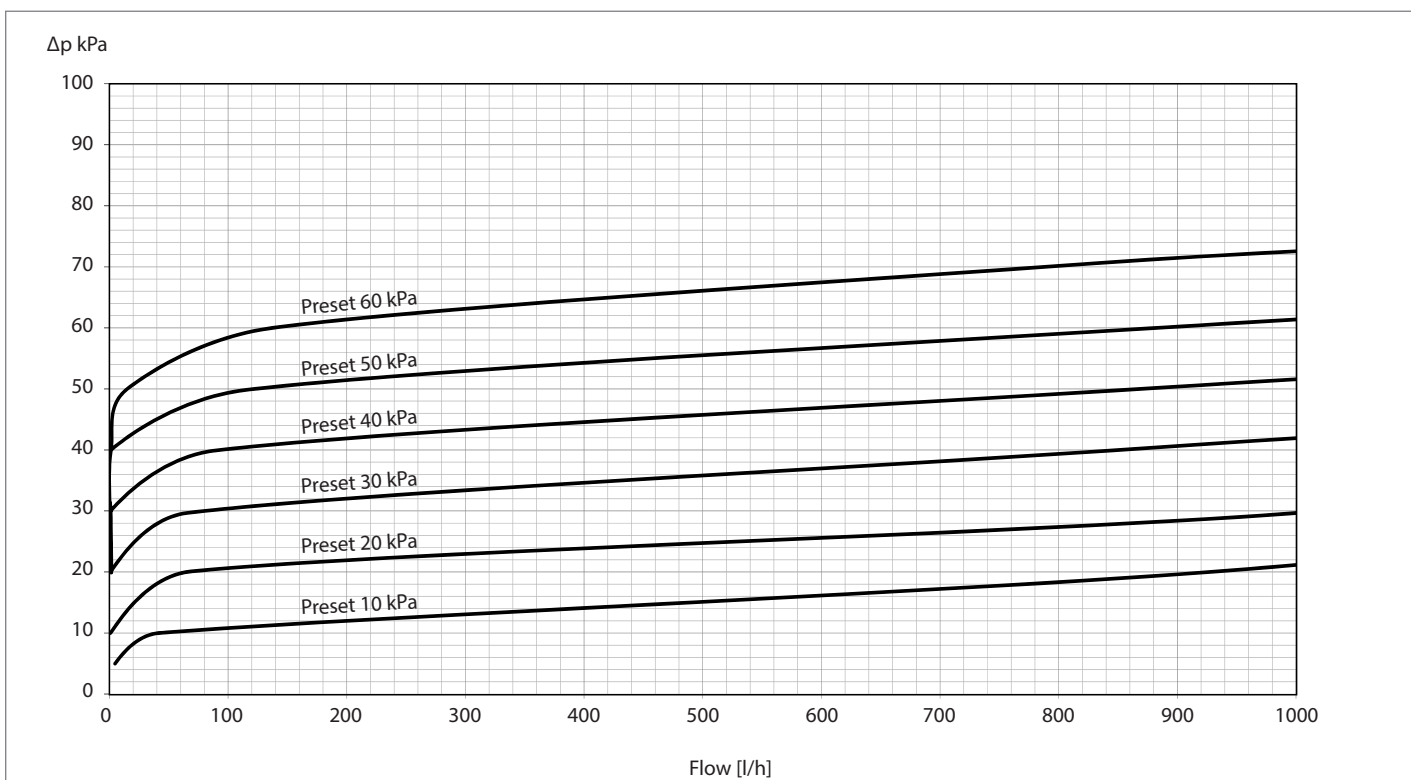
Application Diagram



The Frese DPRV (Differential Pressure Relief Valve) will open up and bypass the water, when the differential pressure between the supply and the return line exceeds the pre-set value, and will secure a minimum flow through the circuit.

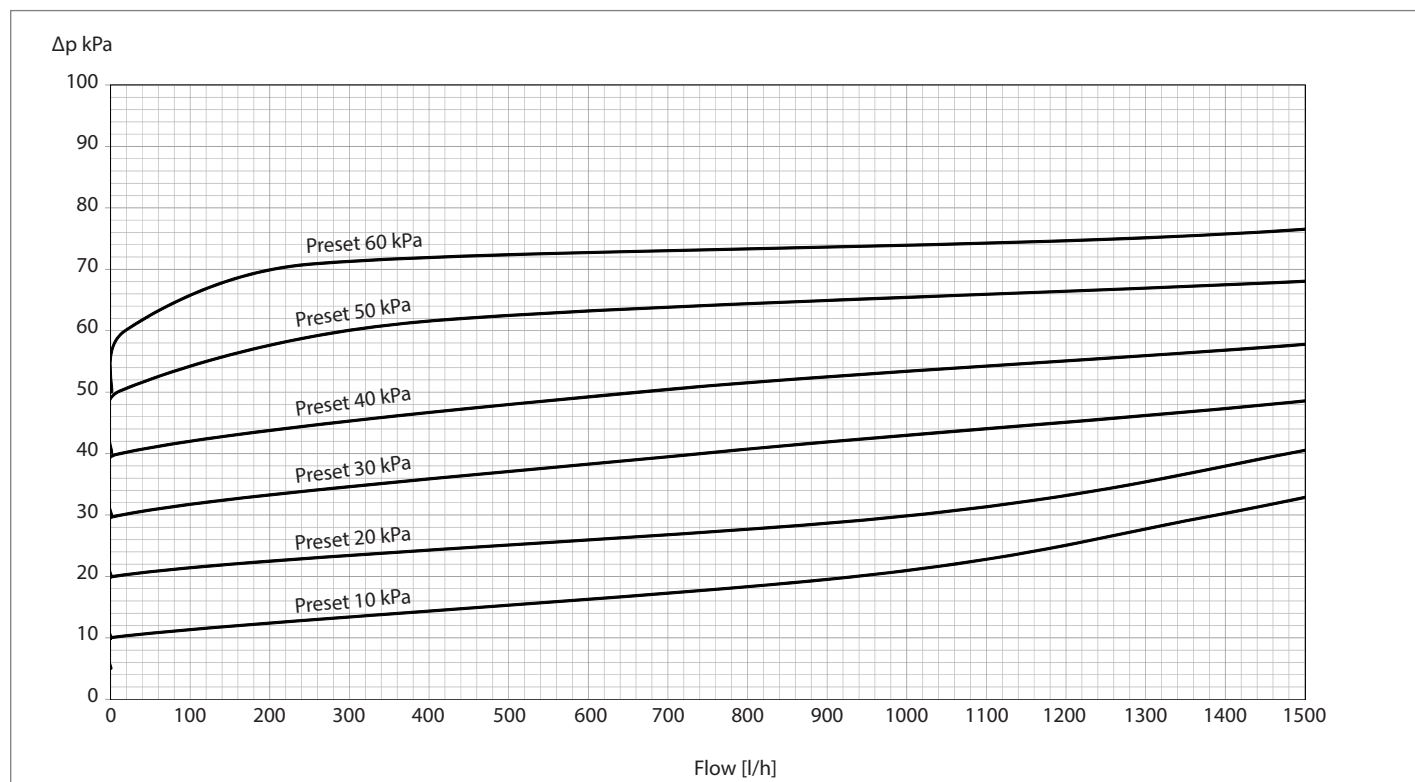
The pre-set value is generally set 5-10 kPa higher than the differential pressure at design flow. When the control valves close down and the differential pressure increases because of lower pressure losses in pipes, the Frese DPRV will open up.

Frese DPRV DN15 pre-set graph

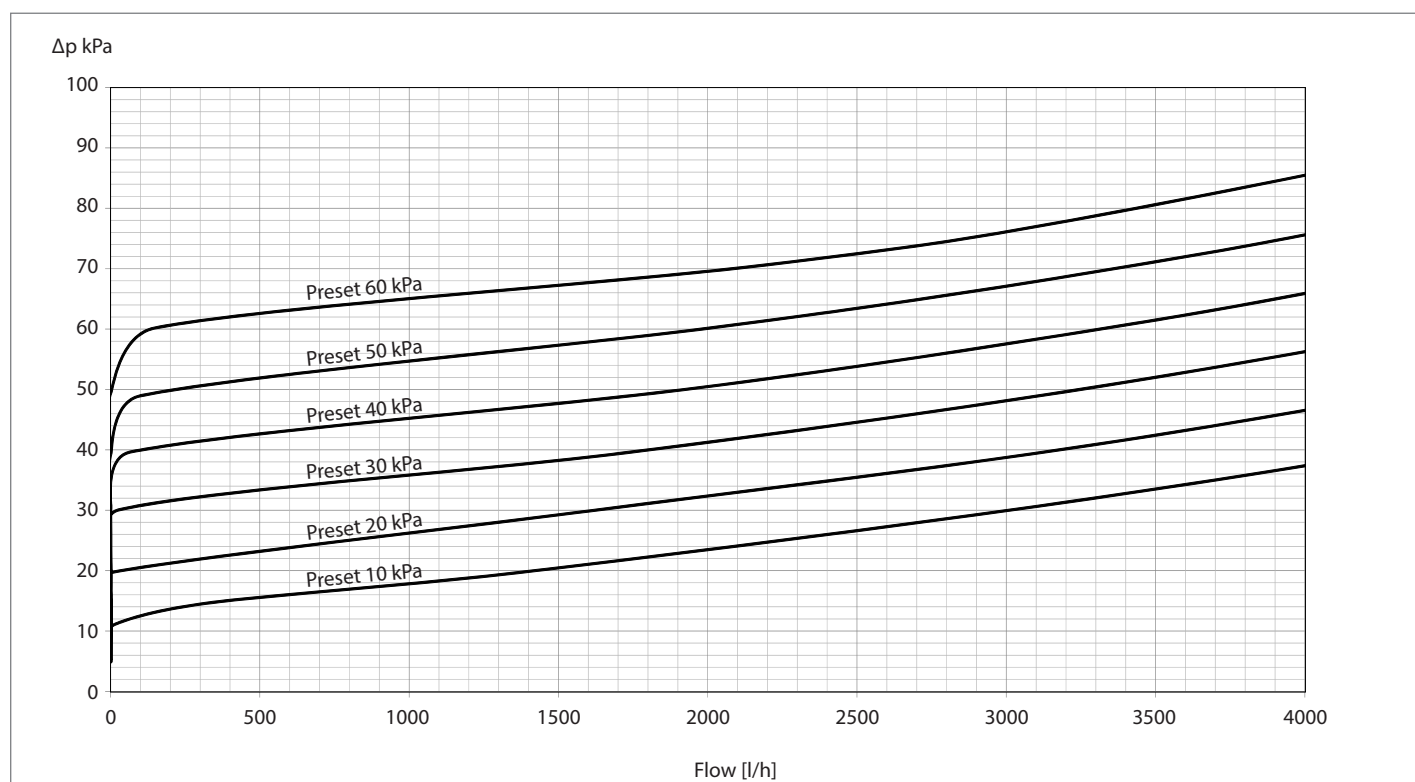


Frese DPRV DN15-DN32 - adjustable differential pressure relief valve

Frese DPRV DN20 pre-set graph

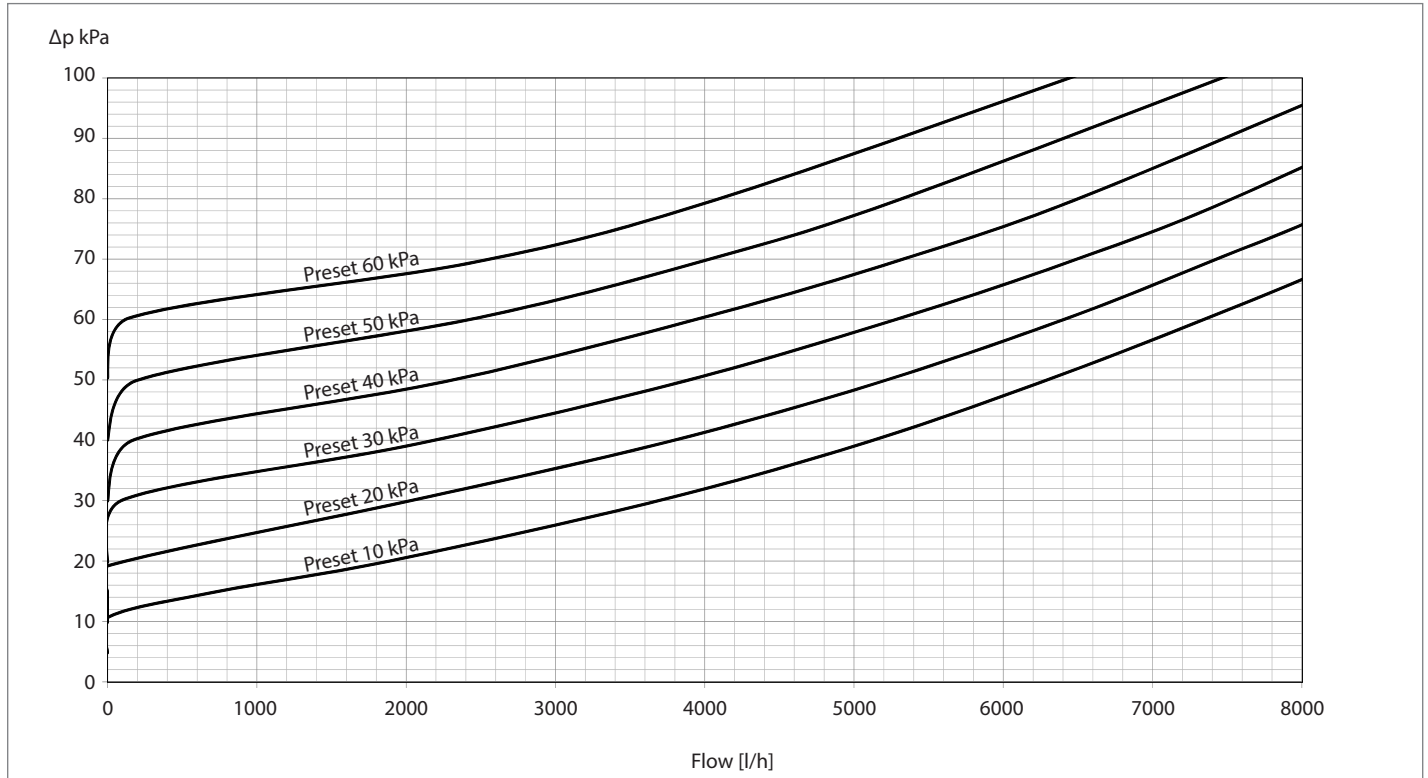


Frese DPRV DN25 pre-set graph



Frese DPRV DN15-DN32 - adjustable differential pressure relief valve

Frese DPRV DN32 pre-set graph



Text for technical specifications

The valve shall be an adjustable differential pressure relief valve where the opening differential pressure can be pre-set on site without suspension of operation.

The valve shall prevent rising differential pressure in the circuit.

The valve scale shall only be adjustable by means of a hexagonal key, and have a protective cap installed over the adjustment nut.

The valve shall be permanently marked with an indicator for flow direction.

The valve shall be pressure rated PN25.

The valve body shall be made of DZR brass, the spring should be made of stainless steel and, the O-rings should be made of EPDM.

The valve shall have a control range of 10-60 kPa.

The valve shall have a maximum operating differential pressure of 600 kPa (6 Bar).