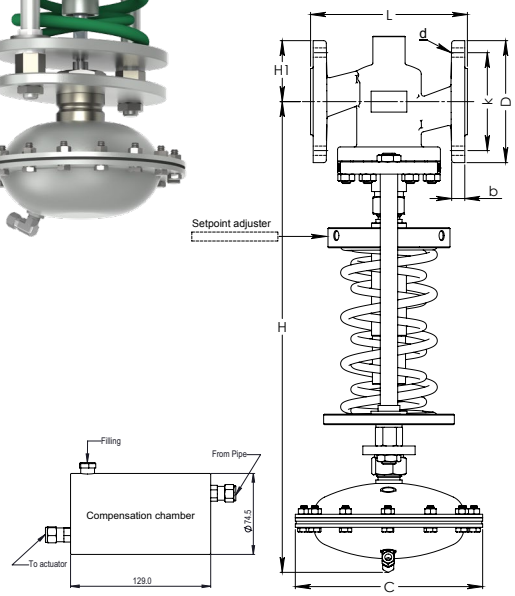
Pressure Reducing Valves type G1PR (PN 25) and H1PR (PN 40), DN 15 – 80 mm



TECHNICAL DATA

Materials:	
▪ H1PR valve body	Cast steel GP240GH (GS-C25)
▪ G1PR valve body	Nodular cast iron EN-GJS-400-15
▪ Cone, Seat	Stainless steel
▪ O-ring	A70H FEPM
▪ Bolts, nuts	24 CrMo 4/A4
▪ Stag bolt, Set point adjuster	St. 42, 1.0503 Electroplated
▪ Spindle housing	St. 42, 1.0503 Electroplated
▪ Spring	W. Nr. 1.4568 powder coated
▪ Diaphragm housing	Steel 1.0122
▪ Diaphragm	NBR / EPDM
Nominal pressure	PN 25 - G1PR PN 40 - H1PR
Seating	Single-seated
Valve characteristic	Quadratic
Leakage rate	≤ 0.05% of k_{VS}
Temperature range	See pressure/ temperature diagram
Flanges drilled according to:	
▪ H1PR	EN 1092-1 PN 40
▪ G1PR	EN 1092-2 PN 25
Counter flanges	DIN 2634
Colour (valve body, cover):	
▪ H1PR	Green
▪ G1PR	Blue

SPECIFICATIONS

Type	L	H1	H	C	b	D (dia.)	k (dia.)	d mm dia.	Flange connection	k_{VS}-value	Lifting height	Weight
	mm	mm	mm	mm	mm	mm	mm	(number)	DN in mm	m^3/h	mm	kg
15 G/H1PR	130	60	582	220	14	95	65	14 x (4)	15	4	7.5	21
20 G/H1PR	150	65	595	220	16	105	75	14 x (4)	20	6.3	7.5	23
25 G/H1PR	160	70	601	220	16	115	85	14 x (4)	25	10	9	24
32 G/H1PR	180	75	618	220	18	140	100	19 x (4)	32	16	10	27
40 G/H1PR	200	85	630	220	19	150	110	19 x (4)	40	25	11	29
50 G/H1PR	230	95	660	220	19	165	125	19 x (4)	50	35	11.5	33
65 G/H1PR	290	110	685	220	20	185	145	19 x (8)	65	58	14.5	38
80 G/H1PR	310	155	708	220	20	200	160	19 x (8)	80	80	16	55

SET POINT	bar	0.4 - 1.2	1 - 2.5	2 - 5	4 - 10	8 - 16

Maximum allowable differential pressure is 25 bar.

Pressure Reducing Valves type G1PR (PN 25) and H1PR (PN 40), DN 15 – 80 mm

CHARACTERISTICS

- Exact regulating
- Nominal pressure PN 25 / PN 40
- Self-acting
- Easy to install and use

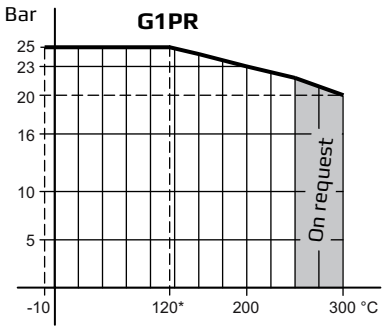
APPLICATIONS

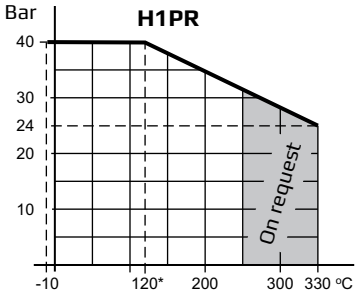
This unit is designed for maintaining the pressure downstream of the valve to an adjusted set point value.

DESIGN

The pressure reducing valve is a self-acting unit consisting of a valve, springs, an actuator and one capillary tube connected on the upper side of the actuator. The valve body is made of nodular cast iron or cast steel. The seat and cone are made of stainless steel. The diaphragm is made of EPDM or NBR rubber, depending on the medium to be controlled.

PRESSURE/TEMPERATURE DIAGRAM





* For temperature above 100°C a compensation chamber is needed.

QUALITY ASSURANCE

All valves are manufactured under an ISO 9001 certification and are pressure and leakage tested before shipment. For marine applications the valves can be supplied with relevant test certificates from recognized classification societies.

FUNCTION

The medium flows through the free area between the seat and cone in the direction indicated by the arrow on the body.
The position of the valve cone determines the flow rate and consequently the pressure ratio across the valve.
The downstream pressure is transmitted through the compensation chamber and the capillary to the diaphragm, where it is converted into a positioning force. This positioning force is adjusting the cone with dependence on the force of the operating springs. The spring force can be adjusted by using the setpoint adjuster. The valve cone is pressure balanced.
The pressure acts onto the bottom and top surface of the cone at the same time. In this way, the forces produced by the media are compensated.

INSTALLATION

The pressure reducing valve must be installed in a horizontal pipe with the actuator directed downwards.
The flow through the valve must coincide with the arrow on the valve body.

STRAINER

It is recommended to use a strainer in front of the control valve if the liquid contains suspended particles.

COMPENSATION CHAMBER

For steam applications and media temperature above 100°C a compensation chamber is needed.

DEFINITION OF K_{VS}-VALUE

The k_{vs}-value is identical to the IEC flow coefficient k_v and defined as the water flow rate in m^3/h through the fully open valve by a constant differential pressure, Δp_v, of 1 bar.

Subject to changes without notice.