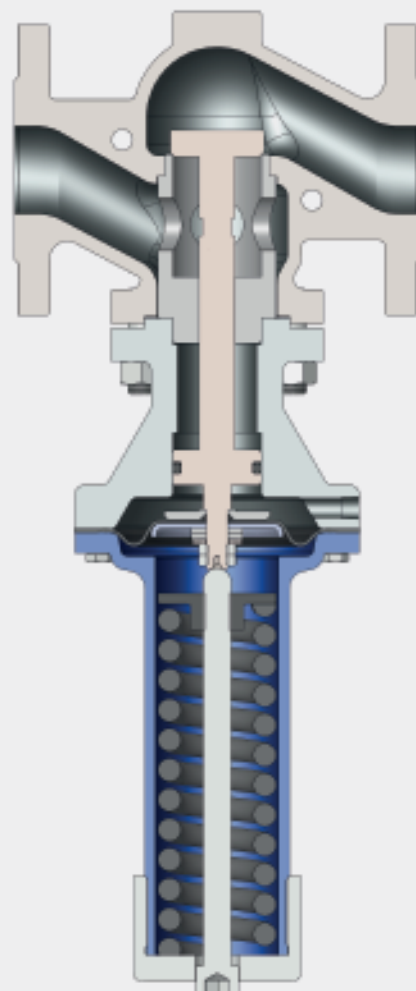


NEW



BVALVE®

Pressure reducing valve HP
Steam, liquids & gas



Universal Pressure Reducing Valve PRV50065 HP for steam, liquids and gas

BVALVE launches its self-acting **balanced** pressure reducing valve which offers an accurate regulating control while displaying an easy installation and maintenance. These are used to maintain an accurate pressure downstream without requiring the use of any pneumatic or electrical control elements.

PRV50065 HP is a diaphragm operated, spring loaded and proportionally balanced valve for high flow rate applications. Moreover, valve body is made out of carbon steel, internal parts are manufactured in stainless steel and valve plug is fitted with a metallic seal or soft seal.

When the outlet pressure taken from the sensing line (to be installed on site) rises above the setting point, the plug moves against the seat in order to create more pressure drop by reducing the flowrate. When the pressure drop under the setting point, the plug moves away from the seat, reduce the pressure drop and increase the flowrate.

The set point is adjustable with a device which compresses a spring more or less, according to the desired set point value. Leakage class for metal sealing Class V or 0,0005% of Kvs value. Leakage class for soft sealing bubble tight or RATE A acc. to EN12266-1

It is imperative to install the pressure reducing valve, on horizontal piping, the actuator (in blue) vertically downwards to protect the diaphragm and O-rings against too high temperatures. For gases and liquids, it can be installed vertically upwards. PRV50065 HP requires a sense line to be installed on site.

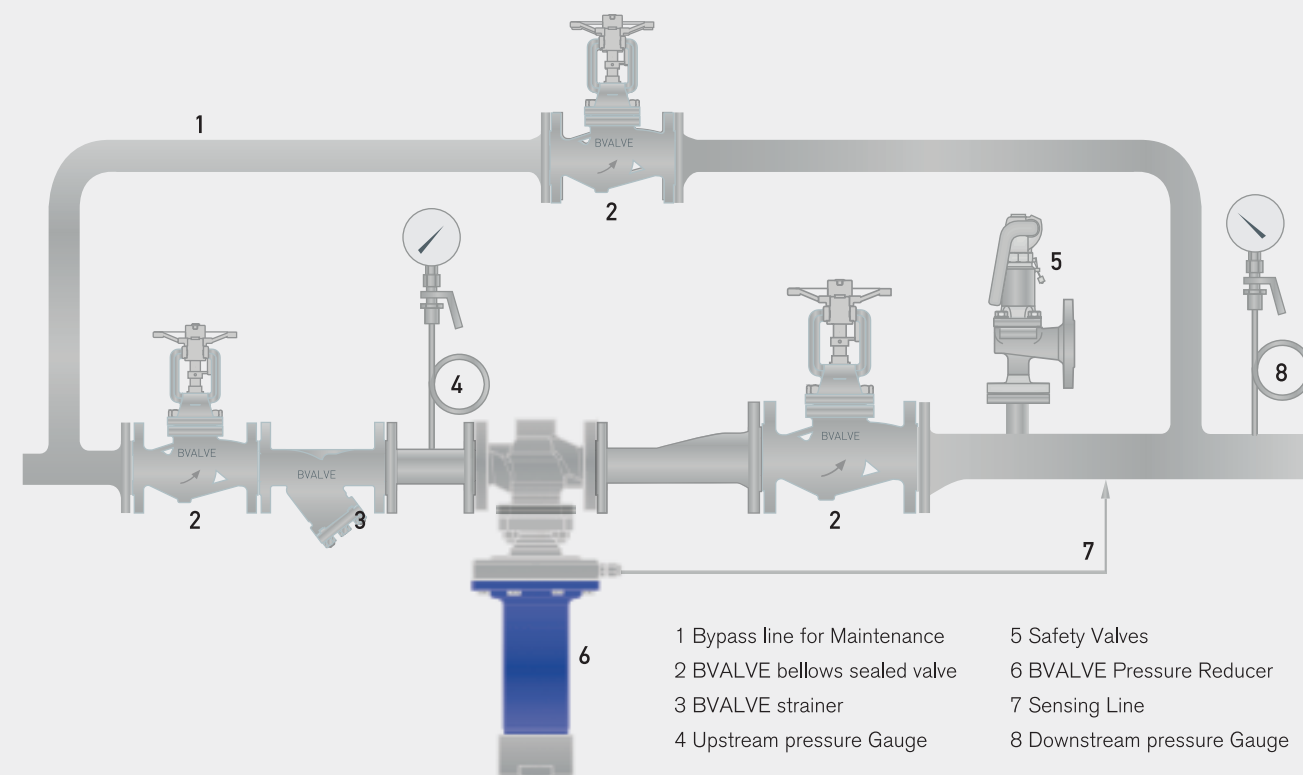


Features

- » Compact construction
- » Closed spring cap
- » Does not require compensating chamber for steam application
- » Medium-wetted internal parts made of stainless steel AISI 316
- » High regulating accuracy due to the balance plug
- » Robust design
- » Leakage class for metal sealing Class V or 0,0005% of Kvs value
- » Leakage class for soft sealing bubble tight or RATE A acc. to EN12266-1
- » Body made of 1.0619/A216WCB/WCC or stainless steel 1.4408/A351CF8M
- » FKM special elastomeres
- » Quick change of internal trims: seat, cone/plug, and spring

Typical Applications

- » Steam, water, condensate cycle system
- » Industrial air
- » Technical gases
- » Conventional heat exchangers
- » Conventional fuel supply and residues disposal



- 1 Bypass line for Maintenance
- 2 BVALVE bellows sealed valve
- 3 BVALVE strainer
- 4 Upstream pressure Gauge
- 5 Safety Valves
- 6 BVALVE Pressure Reducer
- 7 Sensing Line
- 8 Downstream pressure Gauge

Advantages of the product

One product for all fluid: STEAM, GAS & LIQUIDS

Body material:

Available in Carbon Steel and optional SST

PTFE diaphragm film protection for aggressive fluid

Wide range of Kvs:

0,08 to 108 m³/h

Max Operating pressure:

40barg

Max Operating temperature:

-19°C (-30°C with stainless steel body) to 250°C (150°C for soft seal plug)

Available with hardened perforated plug / soft sealing

For high differential pressure and noise reduction, Soft seal for gases and liquid, plugs easily interchangeable

Easy maintenance

Ready to change the spring without replacing any gasket

Special FKM Diaphragm

For a wide range of temperature, including steam services

Resistant construction

Enables precise and reliable control

Spindle in one part for a better reliability

Bonnet especially designed in one piece

To ensure a perfect alignment of seat/plug and for cooling down steam in order to protect the balance device gasket. Higher life time of the balance device and better accuracy.

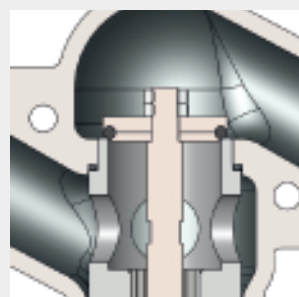
Leakage of the seat with graphite gaskets

More effective for a long time compare to a standard o'ring. Equipped with quick opening seat.

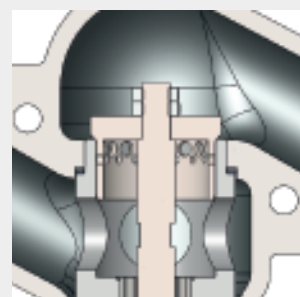
Lock system

Plug locked on the spindle with nut / lock nut system, not only one single nut

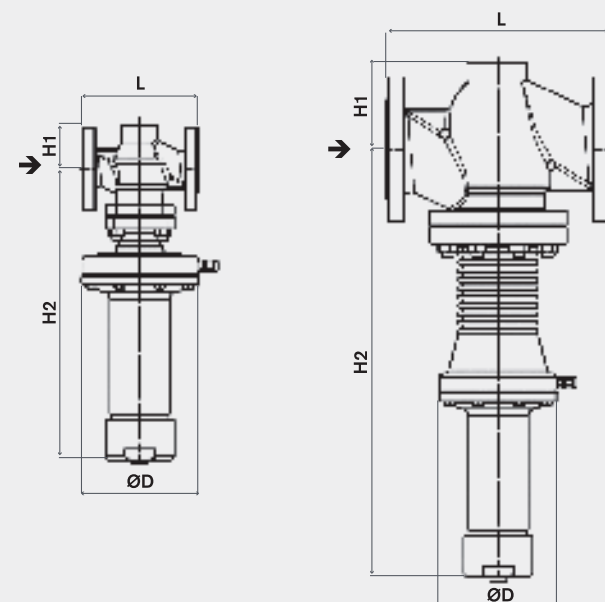
No need of additional condensation chamber for steam application



Soft sealing detail



Hardened Perforated Plug detail



Technical Information

Technical Data

Connection DN	15 - 100*
Nominal Pressure PN	40
Inlet Pressure	up to 40 barg**
Outlet Pressure	0.14 - 15 barg
K _v s Value	0.08 - 108 m ³ /h
Temperature	-19°C (-30°C with stainless steel body) to 250°C (150°C for soft seal plug)
Medium	Steam, liquids, gases

* DN65 and DN100 available with PN16
DN125 and D N150 under request

** Steam up to 25bar

Materials

Body	1.0619/A216WCB/WCC or Stainless steel 1.4408/A351CF8M
Diaphragm Housing	Cast iron – Stainless steel
Medium wetted Internal Parts	Stainless steel 1.4408 / AISI 316
Valve Seal	Stainless steel 1.4408 / AISI 316
Diaphragm	FKM special
O-ring	FKM special

Turndown

DN	Standard plug		Perforated plug	
	Kvs	Rangeability	Kvs	Rangeability
15	4,9	23,3	2	25,0
20	4,9	23,3	2	25,0
25	8	20,0	6	22,2
32	15	29,4	11	33,3
40	25	29,4	19	33,3
50	36	34,0	27	37,5
65	60	43,8	42	43,8
80	81	47,9	57	47,9
100	108	51,4	71	51,4

Dimensions [mm]

DN	L	H1	H2	D	Weights [kg]
15	130	45	435	162	16
20	150	50	435	162	17
25	160	60	435	162	19
32	180	70	440	162	21
40	200	85	475	162	29
50	230	90	470	162	31
65	290	100	490	162	39
80	310	120	490	162	51
100	350	140	515	162	71

Working conditions

T	-10 °C	130 °C	150 °C	200 °C	250 °C
barg	40	38	36	33	30

Spring range (barg)

Available ranges according to DN									
DN	15	20	25	32	40	50	65	80	100
N° spring range	1	0.2...1.5		0.3...1.4				0.3...1.4	
	2	0.3...2.4		0.5...2.3				0.6...2.3	
	3	0.4...4.3		0.9...4.0				1.1...4.0	
	4	0.8...6.8		1.6...6.3				2.0...6.2	
	5	1.5...9.6		3.0...8.5				3.6...8.5	
	6	2.9...15.8		5.7...14.3				6.9...13.8	

Reduction Ratio (max. p1/p2)

Inlet Pressure (barg) * PN	5**	10	15	20	25	30	35	40
Liquids								
Outlet Pressure Minimum (barg) Standard plug	1,5	3	4,5	7	10	13	15	16
Outlet Pressure Minimum (barg) Hardened Perforated Plug	0,5	1	2	3	4	6	8	10
Steam & gases								
Outlet Pressure Minimum (barg) Standard plug	0,5	1	2	2,5	3	3,4	3,8	4
Outlet Pressure Minimum (barg) Hardened Perforated Plug	0	0	0,1	0,2	0,4	0,6	0,8	1

* If the inlet pressure is 25 barg, outlet pressure can be reduced up to 10 barg with standar plug and up to 4 barg with hardened perforated plug. For more diferential pressure please contact BVALVE

** Less than inlet pressure of 5 barg, outlet pressure can be reduced:
- DN15 and DN20 up to 0,2 barg
- DN25, DN32, DN40 and DN 50 up to 0,3 barg
- DN65, DN80 and DN100 up to 0,3 barg

Information in table is calculated for sizes from DN15 to DN100

K_vs Values [m³/h]

DN	15	20	25	32	40	50	65	80	100
Low Kvs plug	0,08								
	0,15								
	0,38								
	0,8								
Std plug / Soft seal plug	4,9	8	15	25	36	60	81	108	
Hardened Perforated plug	2	6	11	19	27	42	57	71	



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