


R153P

Description

The piston-type pressure reducing valve R153P is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if connectable to apparatus and equipment that function exclusively at lower levels of pressure. The piston-type pressure reducing valve is designed for use in either internal or external water distribution systems, where the water main pressure values do not surpass 25 bar. The thermoplastic material of the internal piston structure guarantees rigidity, strength and an enhanced regulation precision thanks to the compensated seat. The O-rings, in EPDM peroxide elastomer with a low coefficient of friction, are durable and require only limited maintenance interventions. The internal finish of the body and the broader dimensions of the passage allow an elevated flow even with a minimal water draw. The R153P piston-type pressure reducing valve (PN 25) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, fire suppression piping (it should be borne in mind that local government standards for fire protection must always be observed), and sanitary installations for water supply in buildings (according to EN 806-2 and EN 805). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.



Note.
The manometer installed on the pressure reducer indicates the outlet fluid reduced pressure.

Versions and product codes

Product code	Connections
R153PX003	1/2"
R153PX004	3/4"
R153PX005	1"
R153PX006	1 1/4"
R153PX007	1 1/2"
R153PX008	2"

Accessories

R225Y002: rear connection manometer, connection Rp 1/4", Ø 52 mm, scale 0 to 10 bar.

Technical data

- Max. working pressure (PN): 25 bar
- Outlet pressure regulation range: from 1 to 5,5 bar
- Outlet pressure factory set: 3 bar
- Working temperature range: 0 °C (no freezing) to 130 °C
- Compatible fluids: water, glycol solutions (with 50 % max. concentration of glycol), compressed air (except 2")
- Compliant with Standard EN 1567
- Sound class II - Lap [dB (A)] < 30

Materials

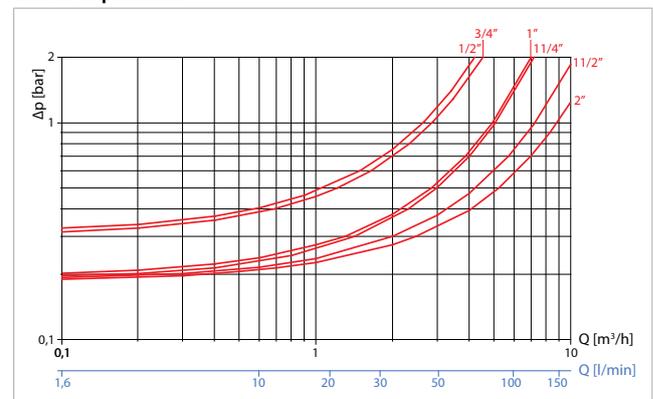
- Body: CW617N (UNI EN 12165) nickel plated brass
- Piston: technopolymer reinforced with glass fibre
- Gaskets: EPDM peroxide
- Seat: EN 10088 - 1.4305 stainless steel (AISI 303)
- Spring: EN10270-1 SM zinc plated steel

Flow rate diagrams

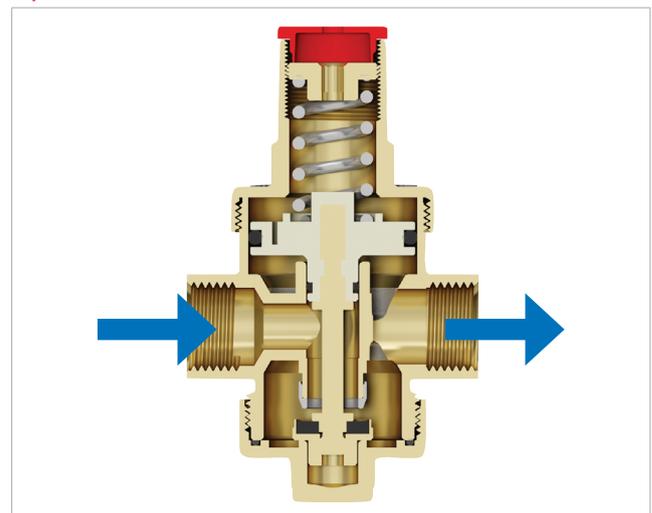
Rated water flow rate, relative to a speed of 2 m/s, for each diameter according to requirements of standard EN 1567.

Product code	Connections	Flow rate [m³/h]	Flow rate [l/min]
R153PX003	1/2"	1,27	21,16
R153PX004	3/4"	2,27	37,83
R153PX005	1"	3,6	60
R153PX006	1 1/4"	5,8	96,66
R153PX007	1 1/2"	9,1	151,66
R153PX008	2"	14	233,33

Losses of pressure



Operation





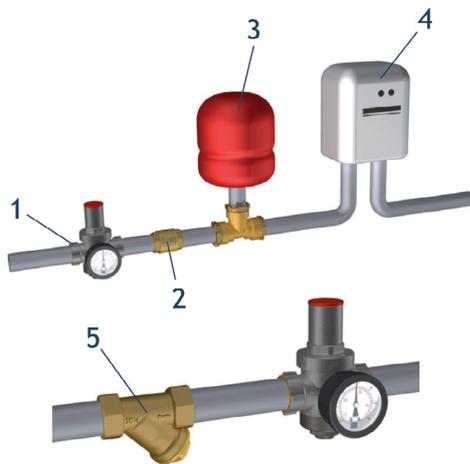
A piston actuates the shutter movement, as consequence from the two opposing forces: water pressure from the bottom in the pipe downstream from the reducer (which tends to close the valve), pushing from the top by an appropriately loaded spring in relation to the work pressure in play (tends to open the valve). The valve opens when, following flow rate request, pressure beneath the piston decreases or spring pushing action prevails; valve opening is proportional to the instantaneous flow that crosses it.

Once the flow is shut, as soon as the water contained in the pipe downstream reaches a pressure able to overcome the pushing action of the return spring, the shutter rises to close the valve. The regulation pressure is obtained by screwing the regulator that applies more or less compression to the spring.

The compensated seat that the Giacomini pressure reducers are equipped with, makes possible to keep set value steady even with strong inlet pressure variations: the upstream pressure pushes the shutter in the open position, but also pushes the compensation chamber pin in the opposite direction, obtaining a substantial balance. The inserted seal seat, in stainless steel, guarantees long-term reliability and accuracy of the pressure reducer, even in the most extreme working conditions.

Installation

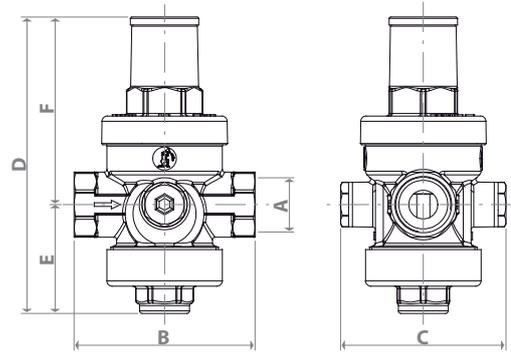
We recommend to install a filter before the reducer to eliminate all impurities in the water that may deposit onto the reducer seat and cause malfunctions. When installing the pressure reducer at the inlet of boilers, hot water heaters, furnaces or hot water tanks, a plumbing expansion tank must be fitted after the reducer even if a check valve is already installed.



Legend

1	Pressure reducer, R153P
2	Disc check valve, R60
3	Expansion tank
4	Furnace / Boiler
5	Filter, R74A

Dimensions



Product code	Connections A	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
R153PX003	1/2"	69	63	113,8	41,8	72
R153PX004	3/4"	82	63	113,8	41,8	72
R153PX005	1"	96	73	145,5	52,5	93
R153PX006	1 1/4"	100	73	151,5	56,5	95
R153PX007	1 1/2"	91	77	148	48	100
R153PX008	2"	97	81	150	48	102

Product specifications

R153P

Piston pressure reducer with compensated seat in stainless steel compliant with standard EN 1567. Female-Female 1/2"±2" threaded connection (ISO 228/1). Manometer connection Rp 1/4" (ISO 7/1). Body in nickel-plated brass, technopolymer piston, EPDM gaskets. Compatible fluids: water, glycol solutions (with 50 % max. concentration of glycol), compressed air (except 2"). Max. working temperature 130 °C. Max. working pressure 25 bar. Outlet pressure regulation range from 1 to 5,5 bar.

Additional information

For additional information please check the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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