R153C

Description

The R153C model pressure reducing valve is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. Its reduced size, silent operation and internal self-cleaning seat render this valve ideal for use in small systems such as apartments and single-family households (according to EN 806-2 and EN 805) or as a safety device in boilers or automatic beverage distributors. The nickel-plated surface, besides giving it a pleasing appearance, protects against corrosion and calcareous incrustation. The valve I capable of an elevated flow capacity even with its reduced dimensions, so it can be used directly on main distribution networks, where the water pressure reaches up to 16 bar. 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 friction coefficient, 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 small water draw. 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
R153CX003	1/2"
R153CX004	3/4"

Accessories

R225Y012: radial connection manometer, connection Rp 1/4", Ø 52 mm, scale 0 to 10 bar.

Technical data

- Max. working pressure (PN): 16 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
- Compliant with Standard EN 1567
- Sound class I - Lap [dB (A)] < 20

Materials

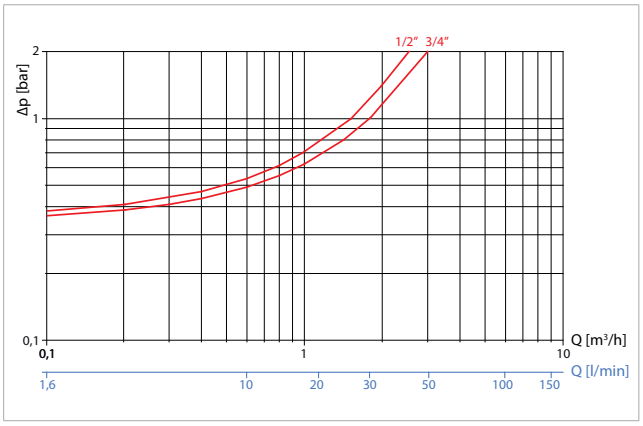
- Body: CW617N (UNI EN 12165) nickel plated brass
- Piston: technopolymer reinforced with glass fibre
- Gaskets: EPDM peroxide
- Spring: EN10270-1 SM zinc plated steel

Flow rate diagrams

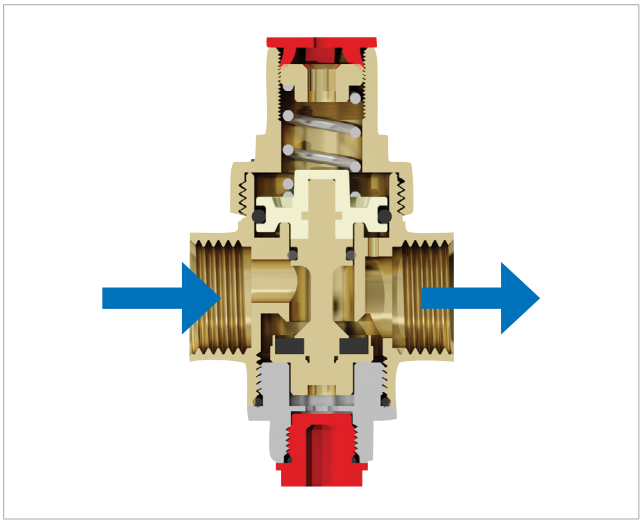
Rated water flow rate, relative to a speed of 2 m/s, for each diameter according to requirements of standard EN 1567.

Product code	Connections	Flow rate [m³/h]	Flow rate [l/min]
R153CX003	1/2"	1,27	21,16
R153CX004	3/4"	2,27	37,83

Losses of pressure



Operation

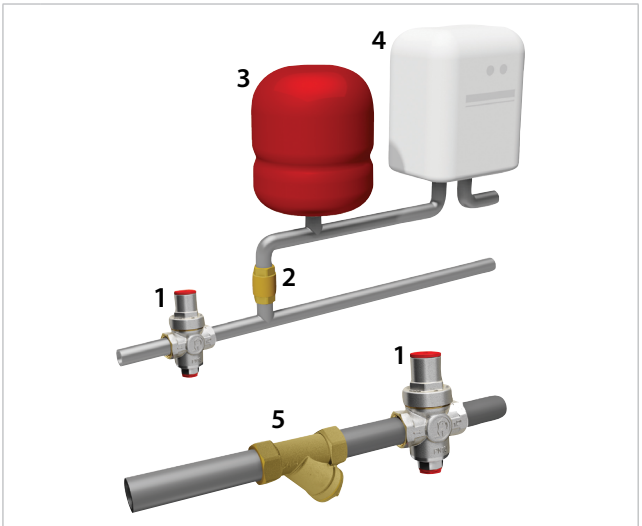


A piston actuates the shutter movement, as consequence from the two opposing forces: water pressure from the bottom in the pipe downstream from the reducer (which tends to close the valve), pushing from the top by an appropriately loaded spring in relation to the work pressure in play (tends to open 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.

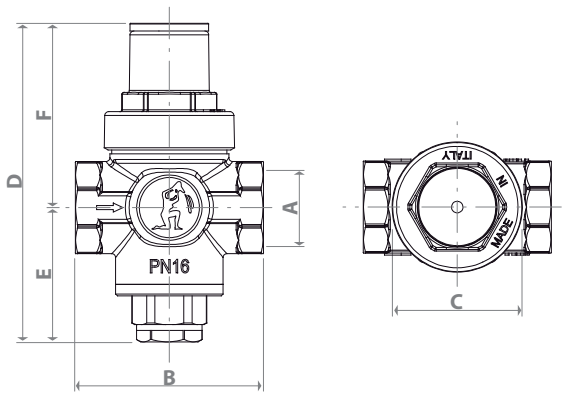
Installation

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 tank, a plumbing expansion tank must be fitted after the reducer even if a check valve is already installed.



Legend	
1	Pressure reducer, R153C
2	Disc check valve, R60
3	Expansion tank
4	Furnace / Boiler
5	Filter, R74A

Dimensions



Product code	Connec-tions A	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
R153CX003	1/2"	49	34	83	35	48
R153CX004	3/4"	50	34	88	36,5	51,5

Product specifications

R153C

Piston pressure reducer with compensated seat compliant to standard EN 1567. Female–Female 1/2" and 3/4" threaded connections (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. Max. working temperature 130 °C. Max. working pressure 16 bar. Outlet pressure regulation range from 1 to 5,5 bar: