

553340

micro pressure reducing valve
with check valve



altecnic
CALEFFI group

553340 micro pressure reducing valve with check valve



Application

The Altecnic 553340 consisting of a micro pressure reducing valve with filter and a check valve.

The valve is installed in the water inlet pipe of hot drink vending machines or similar equipment, its main function being to maintain the pressure within the vending machine at a set value, automatically topping up with water as required.

During system filling or during topping-up the feed will stop when the set pressure has been reached.

Design

The Altecnic 553340 micro pressure reducing valve benefits from being adjustable allowing the outlet pressure to be set to the desired value.

After installation the outlet pressure will automatically adjust itself to the selected value.

In order to set the 553340 a pressure gauge should be fitted downstream of the valve (gauge not supplied).

The control stem housing of the cartridge is made from a plastic material with a low co-efficient of adhesion, which reduces the probability of scale deposits forming, the main cause of pressure reducing valve malfunction.

The cartridge and strainer screen are easily removed for periodic cleaning and maintenance.

The 553340 pressure reducing valve complies with the requirements of BS EN 1567 for operating with inlet water temperatures up to 80°C.

The single check valve complies with BS EN 13959 'Anti-pollution check valves' family EB - non-verifiable single check valve.

The single check valve provides fluid category 2 protection for both backflow and back siphonage as specified in the Water Supply (Water Fittings) Regulations 1999.

Supplied with threaded female ends complying with BS EN ISO 228-1.

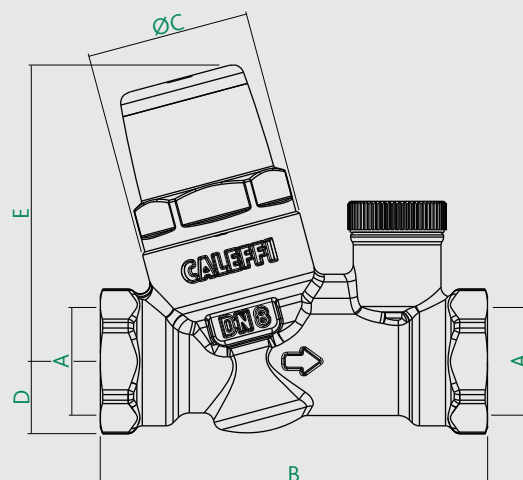
Connection for pressure gauge 1/4" female to BS EN ISO 228-1.

Product Code	Size	Connection	Thread Size
553340	DN8	female screwed	1/2"

Materials of Construction

Component	Material	Grade
Body	DZR	BS EN 12165 CW724R
Cover	Nylon	PA 6G30
Control stem	DZR	BS EN 12165 CW724R
Spring	Steel	BE EN 10270-1
Cartridge	Polymer	PPSG40
Diaphragm	EPDM	
Seals	EPDM	
Strainer screen	Stainless steel	AISI 304L

Dimensions

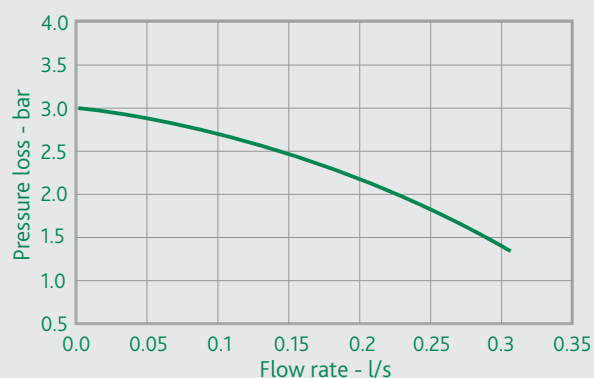


Prod Code	A	B	C	D	E	kg
553340	G1 1/2	75	32	14	57.5	0.23

Technical Data

Max inlet pressure:	16 bar
Outlet pressure setting range:	0.8 to 4 bar
Factory setting:	1.5 bar
Max working temperature:	80°C
Pressure gauge connection:	G1/4
Strainer mesh size:	0.2 mm
Medium:	potable water
Performance to:	BS EN 1567
WRAS approved product:	Yes

Hydraulic Characteristics:



Reference conditions: upstream pressure = 8 bar
downstream pressure = 3 bar
Recommended filling flowrate: 0.28 l/s @ Δp 1.5 bar

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Construction Details

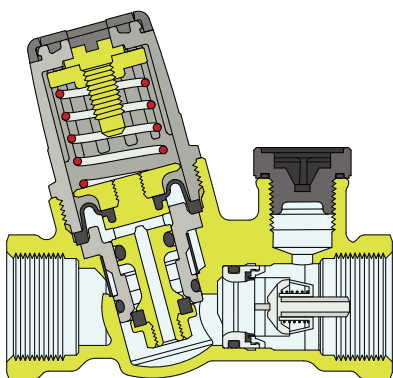
Contoured membrane

The membrane is designed with a special shape to assure more accurate pressure regulation in accordance with downstream pressure fluctuations.

This feature extends the valve life, as the diaphragm is more resistant to sudden pressure fluctuations and to normal wear.

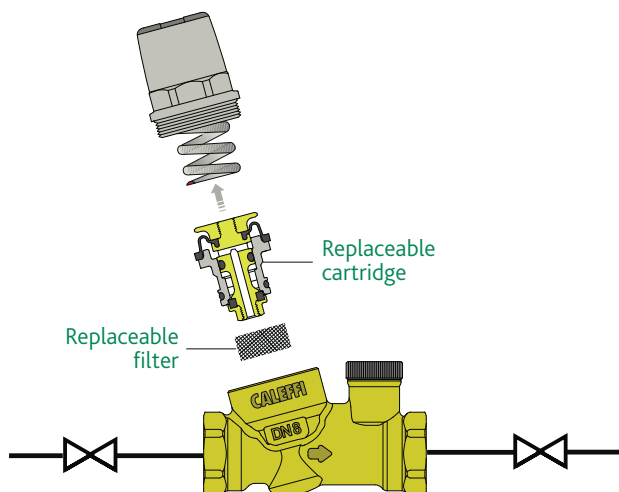
Check valve cartridge

The check valve prevents backflow and back siphonage eliminating the need to install a single check valve therefore saving space and elimination pipe joints.



Removable cartridge

The internal cartridge in the Altecnic 553340 micro pressure reducing valve can be removed for periodic cleaning and maintenance.



Strainer element

The 553340 pressure reducing valve is equipped with a removable strainer. In this way it is possible to perform inspections and maintenance.

Pressure gauge

The 553340 pressure reducing valve can be fitted with a pressure gauge (533230H) in order to have an immediate display of the downstream regulated pressure value.

Performance

The Altecnic micro pressure reducing valves have performance complying with standard EN 1567.

Fluid dynamics

Thanks to the large chamber at the outlet of the pressure reducing valve, there is a low speed area; this feature allows the optimisation of the hydraulic characteristics linked to the passage of fluid during pressure reduction.

For the best result, a pressure reduction **ratio of less than 3:1** between inlet and outlet is recommended.

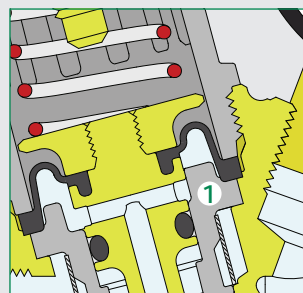
Compact dimensions

The "inclined" configuration makes for more compact dimensions of the 553340 micro pressure reducing valve with consequent easy installation.

Non-sticking materials

The central support (1) containing moving parts, is made using polymers with a low adhesion coefficient.

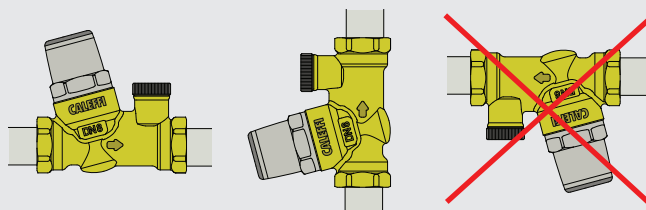
This solution minimises the chance of lime scale formation, the main cause of malfunctions.



Installation

The valve can be installed in horizontal pipework with the protective cover of the pressure reducing valves uppermost or in vertical pipework. The valve should not be installed in horizontal pipework with the protective cover of the pressure reducing valve below the pipe.

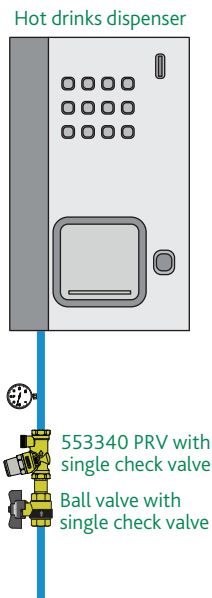
The flow through the valve must be in the same direction as indicated by the integral arrow on the valve body.



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Typical applications

The 553340 micro pressure reducing valve is designed for filling hot drink vending or similar equipment.



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Altecnic Ltd Mustang Drive, Stafford, Staffordshire ST16 1GW

T: +44 (0)1785 218200 E: sales@altecnic.co.uk

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altecnic.co.uk

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