

533H

inclined micro
pressure reducing valve



altecnic
Caleffi group

533H inclined micro pressure reducing valve



Application

Pressure reducing valves are installed in residential water systems to reduce and stabilise inlet pressures from mains water supplies or boosted water systems, which generally are too high and variable for domestic appliances to function correctly.

The 533H micro is specially designed for hot and cold services in houses or apartments to equalise the hot or cold water supplies or both and prevent excessive pressure at outlets requiring low flow rates.

Design

533H 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.

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 533H micro pressure reducing valve complies with the requirements of BS EN 1567 for operating with inlet water temperatures up to 80°C.

Typical applications for the 533H micro pressure reducing valve are vending machines dispensing tea and coffee and other low flow water outlets,

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

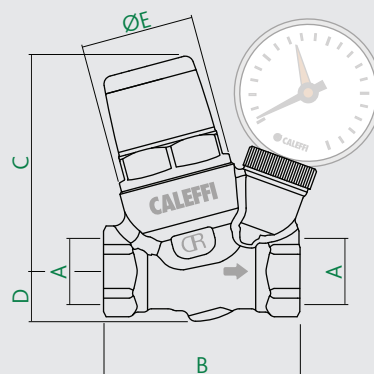
Connection for pressure gauge 1/4" female to BS EN ISO 228-1.

Product Code	Size	Connection	Type
533430H	3/8"	female screwed	with gauge port
533230H	3/8"	female screwed	with pressure gauge

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
533430H	G ³ / ₈	52	57.5	14	32	0.19
533230H	G ³ / ₈	52	57.5	14	32	0.24

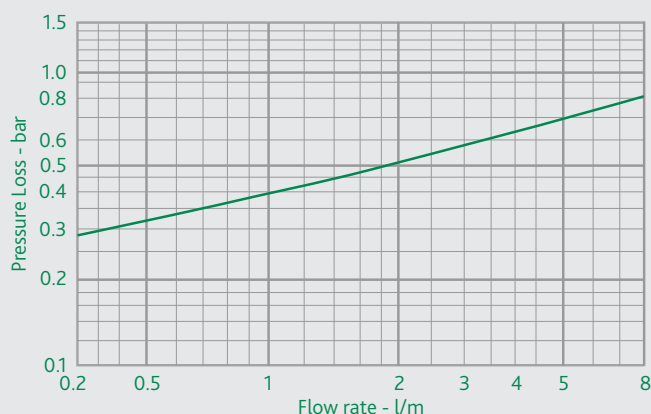
Technical Data

Max inlet pressure:	16 bar	
Outlet pressure setting range:		0.8 to 4 bar
Factory setting:	3 bar	
Max working temperature:		80°C
Pressure gauge scale:	0 to 10 bar	
Pressure gauge connection:		G1/4
Strainer mesh size:		0.2 mm
Medium:		potable water
Performance to:		BS EN 1567
WRAS approved product:		Yes

Recommended Flow Rates

For an average flow velocity of 2 m/s the recommended flow rate is 6 l/m = 0.36 m³/h.

Hydraulic Characteristics:



Reference conditions: upstream pressure = 8 bar
downstream pressure = 3 bar

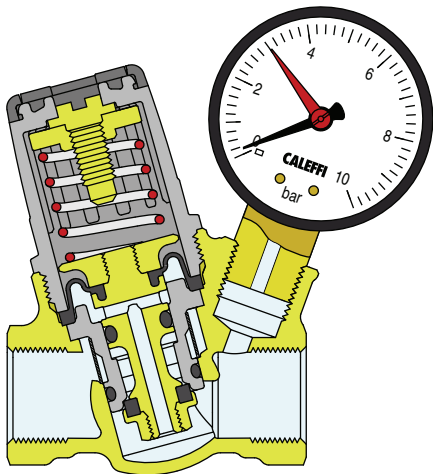
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Construction Details

Contoured membrane

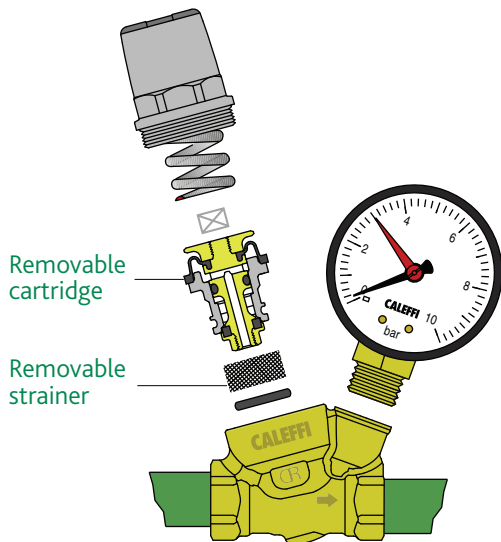
The membrane is designed with a special shape to assure more accurate pressure regulation in accordance with downstream pressure fluctuations.

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



Removable cartridge

The internal cartridges in the Altecnic 533H micro pressure reducing valves can be removed for periodic cleaning and maintenance.



Strainer element

The 533H micro pressure reducing valves are equipped with a removable strainer. In this way it is possible to perform inspections and maintenance.

Pressure gauge

The 533H micro pressure reducing valves are available 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.

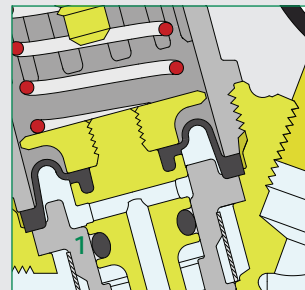
Compact dimensions

The "inclined" configuration makes for more compact dimensions of the 533H micro pressure reducing valves 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.



Dezincification resistant material (DZR) with very low lead content - Low Lead

The material used to make the pressure reducing valve body is in-line with new requirements concerning contact with potable water.

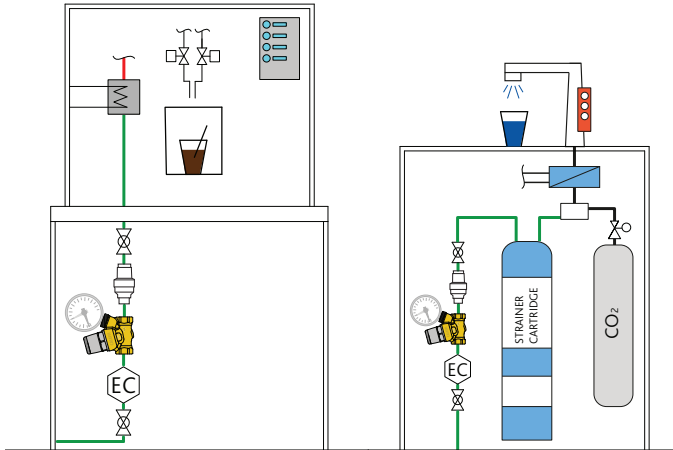
This is an innovative alloy with very low lead contents and dezincification resistant properties.

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Typical Applications

The 533H micro pressure reducing valves are particularly suitable for installations on coffee machines or on appliances for dispensing water and beverages.

In these appliances it is necessary to work with very low flow rates and to regulate the pressure precisely.



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