Core values, quality products

High Temperature Pressure Reducing Valve Data Sheet

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 CORE 533 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 such as taps and showers.

DESIGN

CORE 533 pressure reducing valves have a specially shaped diaphragm to give accurate pressure regulation in response to changes in downstream pressure.

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.

Supplied complete with pressure gauge.

The CORE 533 series of pressure reducing valve is certified according to BS EN 1567 for operating with inlet water temperatures up to 80˚C.

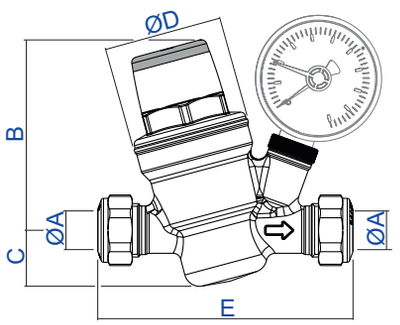
The CORE 533 is specifically designed for higher flow rates with a low noise level when operating.

Supplied with compression ends, complying with BS EN 1254-2 for use with R250 (half hard) copper tube.

CONSTRUCTION DETAILS

Component	Material	Grade
Body	DZR chrome plated	BS EN 12165 CW602N
Cover	Nylon	PA66GF30
Control stem	Stainless steel	AISI 303
Cartridge	Polymer	PPSG40
Internal components	Polymer	PSU
Diaphragm	EPDM	
Seals	EPDM	
Strainer screen	Stainless steel	AISI 304

DIMENSIONS



Prod Code	ØA	B	C	D	E	kg
COREPRV015	15	74.5	22	46	100	0.50
COREPRV022	22	74.5	22	46	109	0.55

TECHNICAL SPECIFICATION

Max inlet pressure:	16 bar
Outlet pressure setting range:	1 to 5.5 bar
Factory setting:	3 bar
Max working temperature:	80˚C
Medium:	Potable water
Pressure gauge connection:	G¼
Certification:	BS EN 1567
WRAS approved product	

RECOMMENDED FLOW RATES

For an average flow velocity of 2 m/s, the maximum flow rates for each valve size, according to BS EN 1567 are;

Prod Code	l/m maximum
COREPRV15	21.16
COREPRV22	37.83

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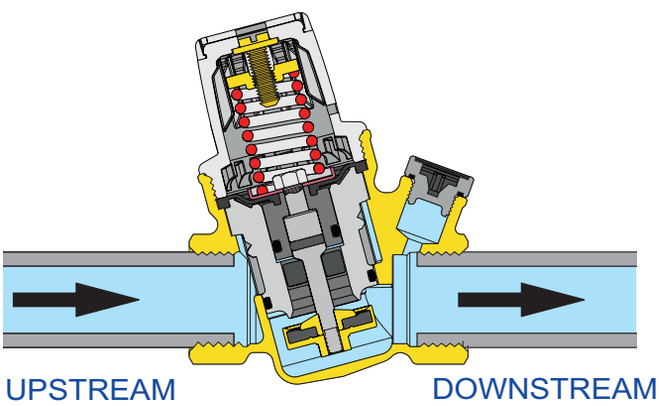
OPERATING PRINCIPLES

The operation of the pressure reducing valve is based on the balance between two opposing forces:

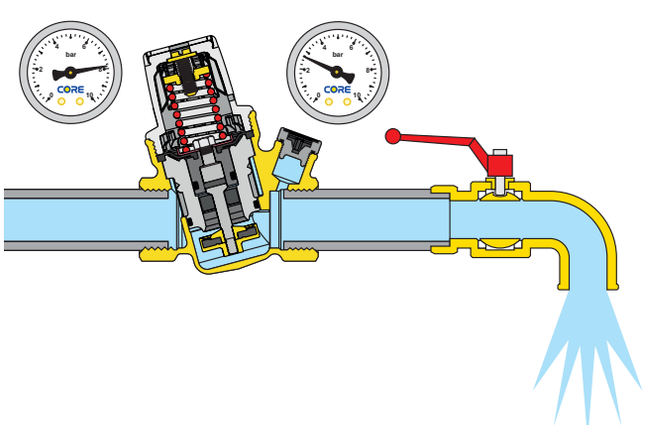
1. The thrust of the spring to open the flow passage by moving the obturator away from its seat.
2. The thrust of the diaphragm to close the flow passage to reseat the obturator.



OPERATION WITH WATER FLOW

When a draw-off outlet is opened, the force of the spring prevails over that of the diaphragm; the obturator moves downwards, thereby opening the valve to the flow of water.

The greater the demand for water the lower the pressure under the diaphragm, resulting in a greater flow of water through the passage cross section.

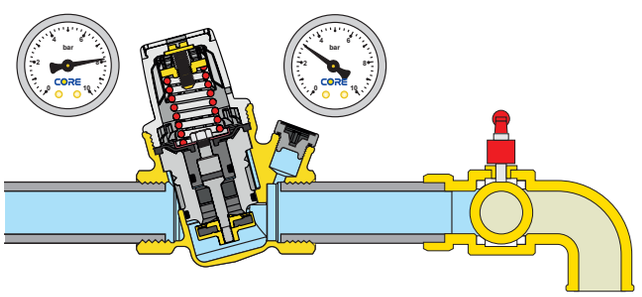


OPERATION WITHOUT WATER FLOW

When the draw-off outlet is closed, the downstream pressure rises and pushes the diaphragm upwards.

As a result, the obturator closes the passage cross section to the flow of water and keeps the pressure constant at the setting value.

The slightest difference in favour of the force exercised by the diaphragm over that of the spring causes the device to close.



WRAS APPROVED PRODUCT

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