

533H Prescal

high performance
pressure reducing valve



installation guide



CERTIFICATION MARK

altecnic
CALEFFI group

533H high performance pressure reducing valve

These installation instructions are for the Altecnic 533H high performance pressure reducing valves with compression or female threaded ends.

Introduction

533H 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.

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

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

Ref No.	Size	Connections	Type
533641H	15mm	compression	Cu x Cu
533741H	15mm	compression	Cu x Cu with gauge port
533841H	15mm	compression	Cu x Cu with pressure gauge
533651H	22mm	compression	Cu x Cu
533751H	22mm	compression	Cu x Cu with gauge port
533851H	22mm	compression	Cu x Cu with pressure gauge
533441H	½"	screwed iron	F x F - with gauge port
533451H	¾"	screwed iron	F x F - with gauge port
533241H	½"	screwed iron	F x F - with pressure gauge
533251H	¾"	screwed iron	F x F - with pressure gauge

Warning



The following instructions must be read and understood before installing and maintaining the product.

CAUTION! Failure to follow these instructions could result in a safety hazard!

Construction Details

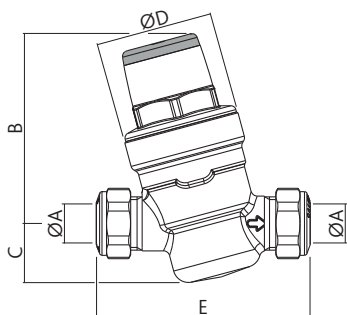
Component	Material	Grade
Body	DZR chrome plated	BS EN 12165 CW602N
Cover	Nylon	PA 66GF30
Control stem	Stainless steel	AISI 303
Cartridge	Polymer	PPSG40
Internal components	Polymer	PSU
Diaphragm	EPDM	
Seals	EPDM	
Strainer screen	Stainless steel	AISI 304

533H high performance pressure reducing valve

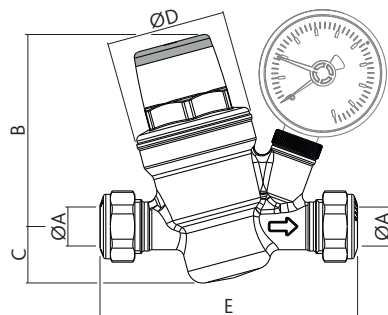
Technical Data

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:	G1/4
Certification:	BS EN 1567
WRAS approved product:	Yes

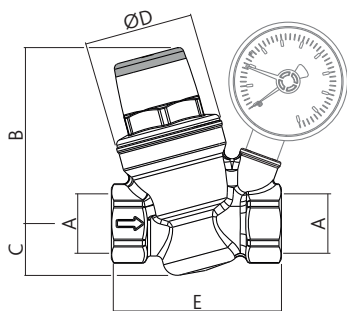
Dimensions



Prod Code	A	B	C	D	E	kg
533641H	Ø15	74.5	22	46	84	0.41
533651H	Ø22	74.5	22	46	94	0.45



Prod Code	A	B	C	D	E	kg
533741H	Ø15	74.5	22	46	100	0.41
533841H	Ø15	74.5	22	46	100	0.50
533751H	Ø22	74.5	22	46	109	0.45
533851H	Ø22	74.5	22	46	109	0.52



Prod Code	A	B	C	D	E	kg
533441H	G½	74.5	22	46	70	0.40
533241H	G½	74.5	22	46	70	0.46
533451H	G¾	74.5	22	46	72	0.41
533251H	G¾	74.5	22	46	72	0.47

533H high performance pressure reducing valve

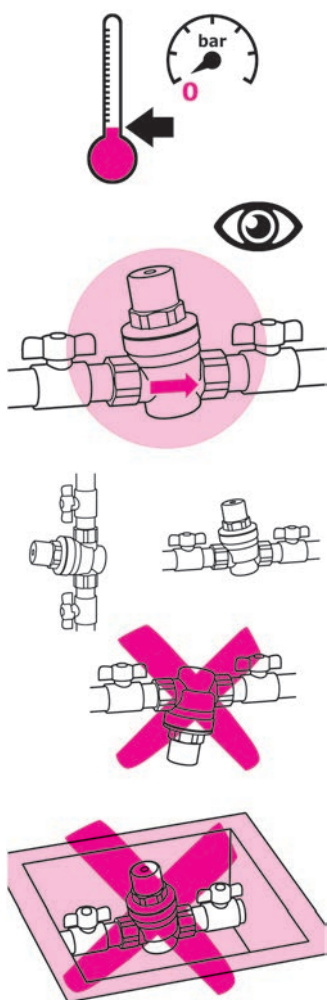
Recommended Flow Rates

For an average flow velocity of 2 m/s, the maximum flow rates for each valve size, according to BS EN1567 are;

Size	½" & Ø15	¾" & Ø22
l/m	21.16	37.83

Installation

Please read these instruction before commencing installation to ensure the correct fitting position is selected and sufficient space and access is available for adjustment and any future maintenance.



Assembly and disassembly should always be carried out while the system is cold and not under pressure.

The valve must be installed with the flow direction arrow on the body pointing in the same direction as the flow.

It is recommended that service valves should be installed upstream and downstream of the pressure reducing valve should maintenance be required in the future.

The valve can be installed in both horizontal and vertical pipes.

If installed in a horizontal pipe the nylon cover should be upper most as illustrated.

The pressure reducing valves should not be installed below ground, for the following reasons:

- The reducing valve may be damaged by frost.
- Inspection and maintenance operations may be difficult.

533H high performance pressure reducing valve

Installation

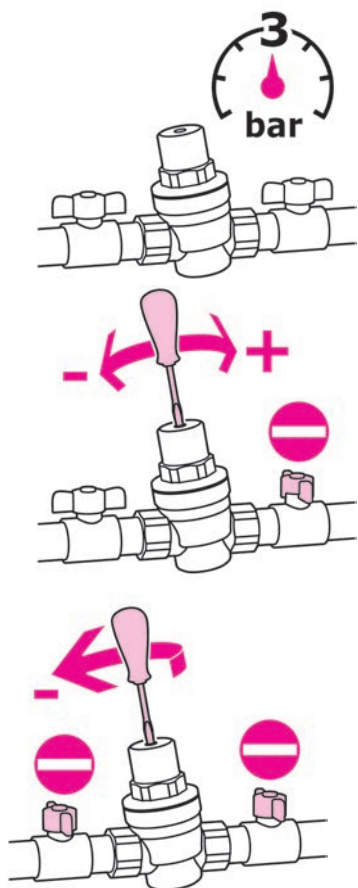
When installing valves with compression ends to BS EN 1254-2 the torques given below should be used to tighten the compression nuts and make a water tight joint.

Ensure the joint is clean and free from debris and burrs.

Seal paste or tape should not be required.

Size Ø	Torque
15mm	50 Nm
22mm	60 Nm
28mm	80 Nm

Setting



The 5334..H and 5337..H series reducing valves are factory set to 3 bar.

The setting can be changed using a suitably sized screw driver using the screw visible from the top of the nylon cover.

For valves fitted with a pressure gauge the outlet pressure can be measured on the pressure gauge, which can be used to continually measure the outlet pressure.

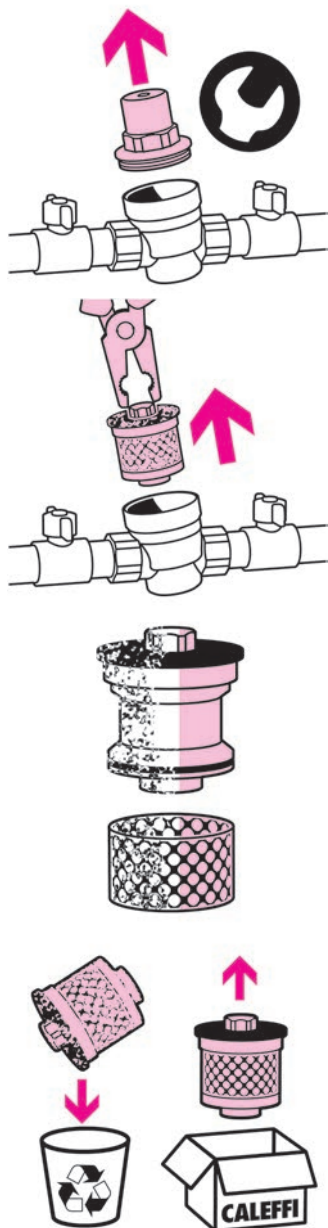
For valves with a gauge port, by using the 2 service valves the valve can be isolated, a pressure gauge can be fitted whilst the outlet pressure is being set and then removed to set another pressure reducing valve.

For valves without a gauge port a pressure gauge must be installed downstream of the valve in order to set the valve to a known setting.

Perform the setting by turning the screw on the top of the plastic casing, clockwise to increase the pressure setting and anticlockwise to decrease it.

533H high performance pressure reducing valve

Maintenance



It is recommended to carry out maintenance and cleaning of the removable cartridge on a regular basis and if the reducing valve does not maintain the set value.

Unscrew the setting screw anticlockwise to take tension off the internal spring.

Using a suitable sized spanner remove the nylon cover.

Using pliers or similar tool pull the cartridge out of the body.

Remove the strainer screen from the cartridge.

After inspection and cleaning, the entire cartridge can be refitted or if there are signs of damage replaced with a spare cartridge (code 533000H).

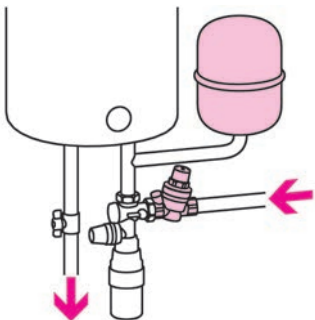
Refit the nylon cover, the minimum tightening torque is 20 ± 2 Nm.

Reset the valve to the required outlet pressure using the procedure detailed in 'Setting'.

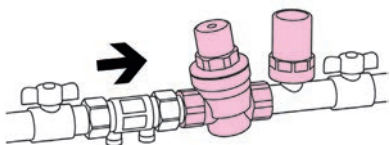
The damaged cartridge and/or strainer screen should be disposed of in a suitable manner.

533H high performance pressure reducing valve

Installation



Install an expansion vessel (between the pressure reducing valve and the water heater) to absorb the pressure increase downstream of the reducing valve (when this is closed), caused by the water heater exceeding the specified temperature.



When installed in a system at risk of water hammer, specific devices should be installed to prevent damage to the pressure reducing valve.

Please leave this Manual for the User

533H high performance pressure reducing valve

Notes:

© Patents & Design Altecnic 2021

Altecnic Ltd retains all rights (including patents, designs and copyrights, trademarks and any other intellectual property rights) in relation to all information provided on or via the website, brochures or any other documents, including all texts, graphics and logos, contained on the website, in brochures or in any other documents published in the name of or on behalf of Altecnic Ltd in any form, without prior written consent of Altecnic Ltd..

Altecnic Ltd Mustang Drive, Stafford, Staffordshire ST16 1GW

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

Registered in England No: 02095101

altecnic.co.uk

IOM 063 25-04-21

©Altecnic Limited. 2021

ALTECNIC™

altecnic
CALEFFI group