

553

automatic filling unit



altecnic

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Introduction

The Altecnic automatic filling units are devices consisting of a pressure reducing valve with compensated seat, a isolating valve, a check valve and the 553040 & 553140 also include an in line strainer.

The unit is installed in the water inlet pipe of sealed heating systems and its main function is to maintain the pressure of system 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 553040 & 553140 has factory set pressure of 1.5 bar but this can be adjusted with the valve in service within the range of 0.3 to 4 bar.

In order to set the 553040 a pressure gauge should be fitted downstream of the valve (gauge not supplied).

The 553540 & 553640 has a pressure adjustment indicator which enables the required pressure to be selected.

Male union inlet connection.

Product Range

- 553040 Automatic filling unit with pressure gauge connection
- 553140 Automatic filling unit with pressure gauge
- 553540 Automatic filling unit with pressure gauge connection and pressure setting indicator
- 553640 Automatic filling unit with pressure gauge and pressure setting indicator

Materials

Component	Material	Grade
Body	Brass	BS EN 12165 CW617N
Cover	553040 Brass	BS EN 12165 CW614N
	553640 Nylon 66	PA66G30
Seals	Elastomer	NBR
Control stem	Brass	BS EN 12164 CW614N
Internal components	Brass	BS EN 12164 CW614N
Strainer	Stainless steel	

Technical Specification

Max.inlet pressure:	16 bar
Factory setting:	1.5 bar
Pressure gauge range:	0 to 4 bar

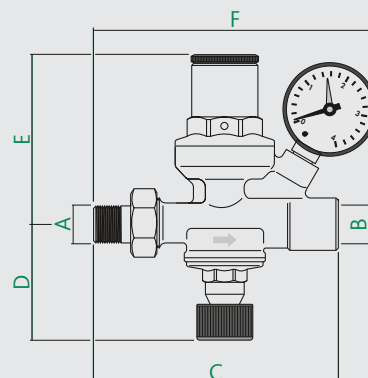
553040 & 553140

Setting range:	0.3 to 4 bar
Max. working temperature:	70°C

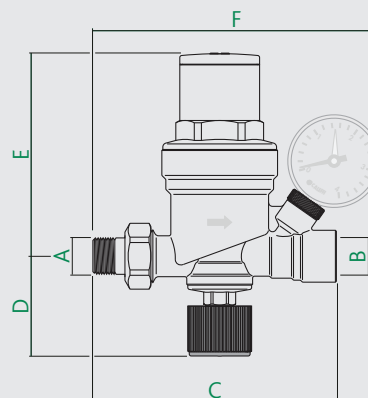
553540 & 553640

Setting range:	0.2 to 4 bar
Indicator accuracy:	±0.15 bar
Max. working temperature:	65°C
Filter mesh size Ø:	0.28mm

Dimensions



Code	A	B	C	D	E	F	kg
553040	G½B	G½	122	61	87	-	0.85
553140	G½B	G½	122	61	87	149	0.95



Code	A	B	C	D	E	F	kg
553540	G½B	G½	122	50	101.5	-	0.62
553640	G½B	G½	122	50	101.5	152	0.70

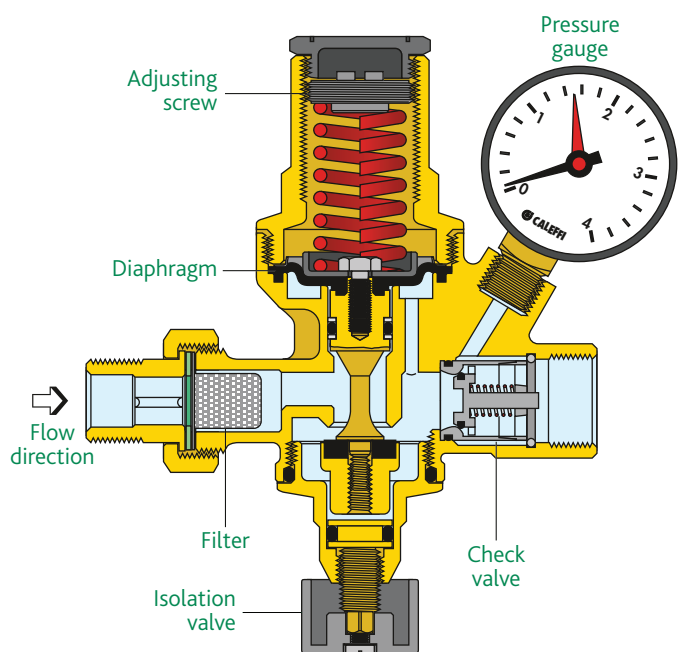
Isolation Valve

All the units have a manual isolating valve which can shut-off the incoming water supply to the system.

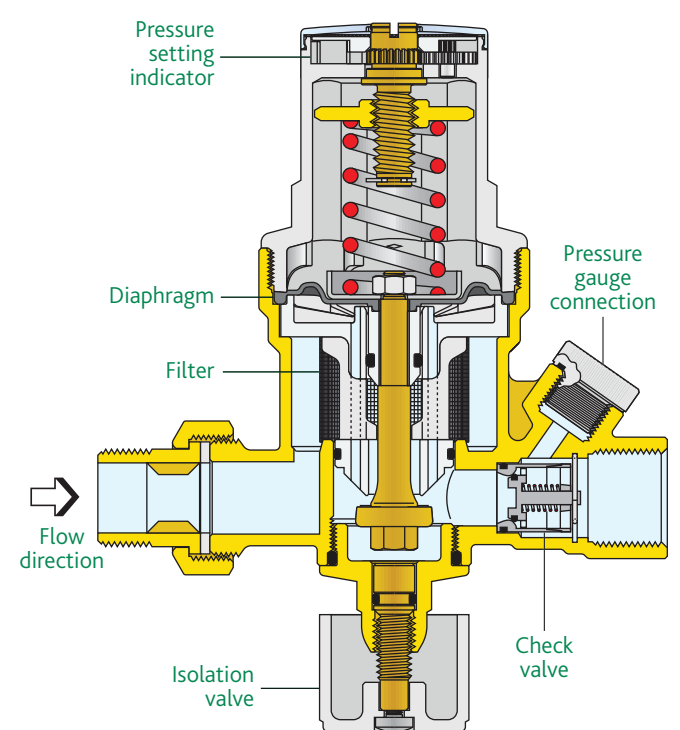
Once the valve is re-opened the units returns to its automatic function and the pressure within the system returns to its set pressure.

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Construction - 553040 & 553140



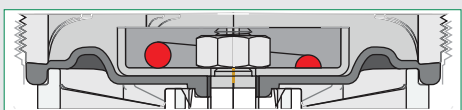
Construction - 553540 & 553640



Product Codes 553540 and 553640 patent pending

Construction

Diaphragm / Seat

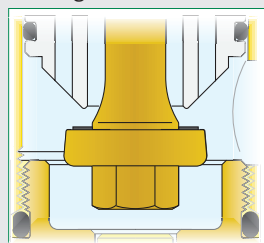


The useful working surface of the diaphragm is particularly large, in order to guarantee greater precision and sensitivity when working with minimum pressure differences.

This feature is also useful for giving greater force to piston movement and overcoming friction.

Considering the low flow rates involved, the filling unit seat has been designed with the smallest possible diameter.

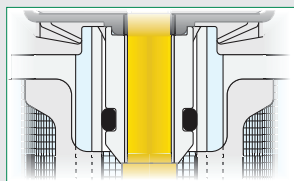
This factor, combined with the extended surface of the diaphragm, creates an optimum dimensional ratio for a piece of equipment which must maintain its operating characteristics over time.



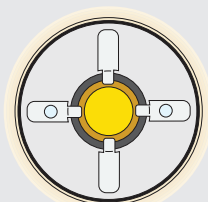
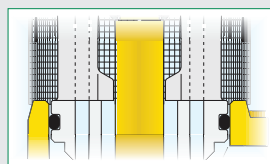
Low Friction Materials

The central support containing moving parts and the internal sliding compensation piston is made using plastic with a low adhesion coefficient.

This solution minimises the chance of scale forming, the major cause of malfunctions.



Obturator Guides



In order to reduce the frictional surfaces, the obturator stem guide has been positioned in the upper part of the device.

It consists of four spokes directly stamped on the plastic central support.

Pre-adjustment

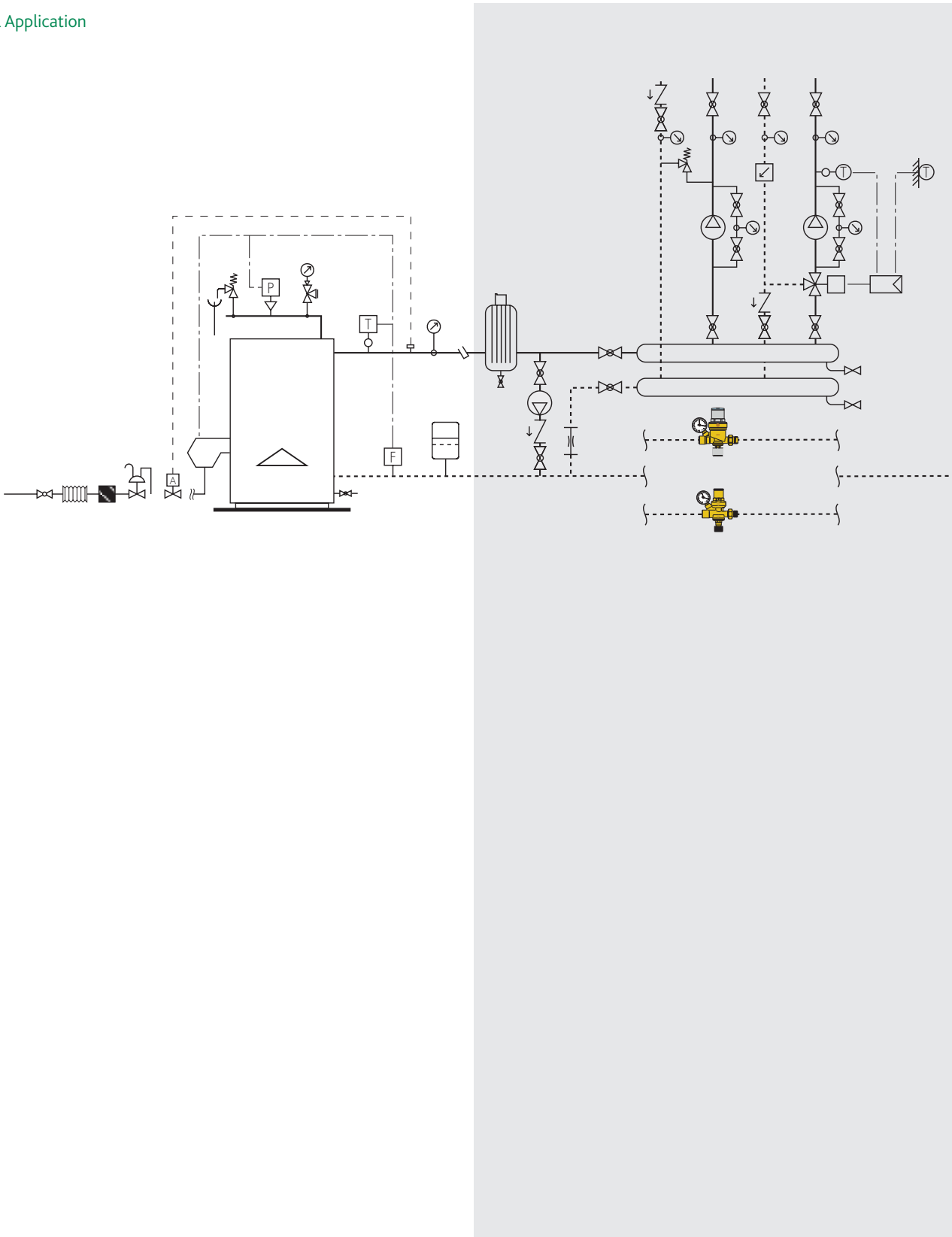
The pressure adjustment indicator facilitates the setting operation.

The system filling pressure may be set by turning the regulating screw, this can be preset before filling commences.



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Typical Application



E & O.E

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