553
automatic filling unit
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Introduction

The Altecnic automatic filling units are devices consisting of a pressure reducing valve with compensated seat, an isolating valve, a check valve and the 533040 & 533140 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 & 533140 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 533040 a pressure gauge should be fitted downstream of the valve (gauge not supplied).

The 533540 & 533640 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

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Body</td>
<td>Brass</td>
<td>BS EN 12165 CW617N</td>
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<tr>
<td>Cover 553040</td>
<td>Brass</td>
<td>BS EN 12165 CW614N</td>
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<tr>
<td>553640</td>
<td>Nylon 66</td>
<td>PA66G30</td>
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<tr>
<td>Seals</td>
<td>Elastomer</td>
<td>NBR</td>
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<tr>
<td>Control stem</td>
<td>Brass</td>
<td>BS EN 12164 CW614N</td>
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<tr>
<td>Internal components</td>
<td>Brass</td>
<td>BS EN 12164 CW614N</td>
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<tr>
<td>Strainer</td>
<td>Stainless steel</td>
<td></td>
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</tbody>
</table>

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

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.
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.
Typical Application