Function
Pressure reducing valves are installed in residential water systems to reduce and stabilise inlet pressure from the water mains supply which is generally too high and variable for domestic appliances to function properly. These valves can also be used to control inlet pressure to domestic hot water storage. The Caleffi 5335 series have been specifically designed and manufactured to meet the requirements of “AS1357.2:2005 Valves primarily for use in warm and hot water systems - P. 2: Control valves”.

Product range

**Series 5335**  Pressure reducing valve  
Sizes 15 mm (1/2”) and 20 mm (3/4”)  
Female connections (ISO 7/1)

**Code 533550**  3-way pressure reducing valve  
Size 20 mm (3/4”)  
Female connections (ISO 7/1)

Technical specifications

Materials:
- Body: dezincification resistant alloy EN 12165 CW602N
- Cover: PA 66 GF 30
- Control spindle: dezincification resistant alloy EN 12164 CW724R
- Cartridge: POM
- Components: dezincification resistant alloy EN 12164 CW724R
- Diaphragm: EPDM
- Seals: NBR-EPDM
- Strainer: stainless steel (AISI 304)
- Plug (3 way model): PPAG40

Performance:
- Pressure setting range: 100÷600 kPa; 100÷500 kPa (code 533550)
- Factory setting: 500 kPa
- Max. inlet pressure: 1600 kPa
- Max. working temperature: 40°C
- Medium: water
- Complies with: AS 1357.2
Dimensions

<table>
<thead>
<tr>
<th>Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>Mass (kg)</th>
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</thead>
<tbody>
<tr>
<td>533545</td>
<td>15 mm</td>
<td>72,5</td>
<td>22,5</td>
<td>Ø 46</td>
<td>79</td>
<td>0,45</td>
</tr>
<tr>
<td>533555</td>
<td>22 mm</td>
<td>72,5</td>
<td>22,5</td>
<td>Ø 46</td>
<td>84,5</td>
<td>0,46</td>
</tr>
</tbody>
</table>

Pressure drop diagram

Under following conditions:
Inlet pressure 600 kPa
Outlet set pressure: 400 kPa

Installation

The pressure reducing valve must be installed by a licensed plumber and in accordance with AS/NZS 3500, relevant local requirements and following these instructions.

Installation diagram
System without recirculation

**Straight outlet**

- **Inlet** → **Outlet**
- **Plug**

**Angle outlet**

- **Inlet** → **Outlet**
- **Plug**

Other components:
- **Pressure reducing valve**
- **Line strainer (where fitted)**
- **Isolating valve**
- **Mains supply**

**System without recirculation**

- **STORAGE HOT WATER HEATER**
- **Tempering valve**
Recommendations for installation

1. Installation below ground
   If installing the 5335 series valve underground, please ensure that steps are taken to protect the valve from becoming frozen in frost-prone areas. Please allow yourself sufficient space to remove the cartridge should maintenance be required. The reading of a gauge for setting purposes may be difficult and an alternate means of checking downstream pressure may be necessary.

2. Water hammering
   This is one of the main problems which may affect pressure reducing valves. It is best to fit special devices to absorb water hammering when fitting pressure reducing valves in systems at risk.

   **WARNING:**
   If it is **critical** to maintain the downstream pressure setting to protect equipment, as a safety measure, we recommend that a pressure, or safety, relief valve is installed downstream of the pressure reducing valve.

Trouble-shooting

1. Increased downstream pressure near a water heater
   This problem is due to the water being heated by the water heater. There is no relief of the pressure because the reducing valve is correctly closed. The solution is to install an expansion vessel (between the heater and the reducer) to “absorb” the pressure increase.

2. The pressure reducing valve does not maintain its set pressure
   In most cases this is the result of impurities that deposit on the valve seat causing leakage with a resulting increase in pressure downstream. The solution is to fit a filter upstream from the reducer and subsequently to maintain and clean the cartridge (see Maintenance).
Maintenance

The pressure reducing valve is a device that controls the hydraulic circuit and its functioning needs to be checked at least every 12 months.

Proceed as follows for periodic cleaning of the strainer and inspection of the cartridge:

1. Turn off upstream water supply to the pressure reducing valve and open an outlet downstream to relief pressure.
2. Unscrew (anticlockwise) the setting screw to decompress the spring inside.
3. Unscrew the cover.
4. Extract the cartridge with the aid of pincers to grip the head of the screw.
5. After inspection and cleaning, refit the cartridge or, alternatively, fit a replacement cartridge.
6. Reset the valve (see Installation).

Safety

If the pressure reducing valve is not installed, commissioned and maintained properly in accordance with the instructions contained in this manual, it may not operate correctly, and may cause damage to objects and/or persons.

Make sure that all the connections are water-tight.

When installing the pressure reducing valve, make sure not to over-tighten the connections to the valve as, over time, a failure can occur with subsequent water leakage causing damage.

In the case of highly aggressive water, arrangements must be made to treat the water before it enters the pressure reducing valve, in accordance with current legislation. Otherwise, the pressure reducing valve may be damaged and not function correctly.

Leave this operating manual with the user
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