Introduction

The Pressure Equalising Valve is designed to supply both hot and cold water at equal pressures, regardless of any differential in supply pressures.

The valve equalises the pressure by automatically adjusting the higher pressure (hot or cold) to that of the lower pressure, resulting in a constant temperature.

Application

• Shower valve
• Single lever mixer
• Bidet mixer
• Bath - shower mixer
• Extra fine control of thermostatic mixer
• All processes requiring a constant water temperature

Operating Conditions

The valve is suitable to equalise the water pressure on the following pressure systems:

• Low
• Gravity
• Combi boiler and multipoint
• Min. water pressure for satisfactory operation:
  - Hot and cold: 0.2 bar = 20 kPa
  - Max water pressure: 10 bar
  - Max hot water temperature: 80°C

Installation

The valve must be installed in accordance with the Water Bylaws.

The pipe work must be flushed prior to installation.

To protect the Pressure Equalising Valve, ‘Y’ strainers or similar and isolation valves must be installed in both supply pipes to the valve.

The pressure equalising valve must NOT be fitted to an UNEQUAL pressure shower mixing valve.

The valve can be installed vertically or horizontally and at any distance before the mixer (or pair of taps) provided it supplies only ONE mixer and there are no additional draw off taps between the valve and the mixer.

The hot and cold supplies can be connected to either inlet of the valve. The direction of flow through the valve must be as indicated by the arrow on the body.

The valve must be positioned where it is accessible.

To maintain a constant temperature at the shower outlet when pressures change, the water heating system must be able to deliver hot water at a constant temperature, irrespective of demand elsewhere.

When the valve is used with a modulating multipoint or combination type gas water heater, the mains water pressure and hence the flow through the heater, must be sufficient to keep the burner ignited.

Please refer to the boiler manufacturer’s installation manual.

Note: If the mixer or shower is unsatisfactory due to too low pressure or an incorrect spray rose the pressure equalising valve will not cure these problems.
Servicing and Trouble Shooting

1. Leakage on the hot side will show as a discharge from the hot water vent, expansion pipe or relief valve.

   To check if the discharge is from the pressure equalising valve, turn off the water heating and shut off the water to the hot water cylinder.
   
   • On a vent pipe system, a continuing discharge means the valve needs servicing.
   
   • On a relief valve system, the relief valve will also need to be checked.

2. Particles carried in the water and embedded in the inlet non return valve ‘O’ ring, is the most likely cause of leakage or noise from the valve.

To service the inlet non return valves, remove the pressure equalising valve from the pipework and unscrew the inlet connection using a 10mm Allen Key. The non-return valve can be removed and checked for debris and correct closing.