EXPANSION CONTROL VALVE, ECV

The Expansion Control Valve (ECV) is designed to relieve the increase in pressure caused by the water expansion during the normal heating cycle.

It is recommended that an ECV be fitted to the cold water supply line. This will relieve cold water, not hot water, during the heating cycle saving energy and increasing the life of the Pressure Temperature Relief valve (PTR).

Some local governments make it mandatory to install an ECV in the cold water line. PTR and ECV valves are safety valves and should be replaced every 4 years.

INLET PRESSURE CONTROL

High pressure may cause excessive discharge and possible premature failure of the operating relief valve (see table). The maximum water pressure usually occurs during the night, at the time of lowest water usage. In any mains pressure water heater installation if the water pressure exceeds 80% of the nominal set pressure of the operating relief valve, a Pressure Limiting Valve must be fitted to the cold inlet.

If a cold water expansion control valve is fitted it will have a lower set pressure than the PTR valve and therefore will be the main operating relief valve.

FEATURES

- Each valve is individually tested and calibrated to ensure that it meets the correct pressure specifications.
- Designed and manufactured to meet Australian Standard AS1357.1, under Licence No. 2639 and meets AS4020, Drinkable Water Standard.
- Manufactured under Quality Assurance ISO 9001 and ISO 9002 (UK).
- Suitable for either horizontal or vertical installations.
- The valve is designed to automatically reseat after each action.

INSULATION included in accordance with AS3500
ECV SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DN SIZE</th>
<th>COLOUR CODE</th>
<th>PRESSURE RATING</th>
<th>INLET</th>
<th>OUTLET</th>
<th>EXPANSION RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECV15/1400</td>
<td>15</td>
<td>ORANGE</td>
<td>1400kPa</td>
<td>1/2” male</td>
<td>1/2” female</td>
<td>20 KW</td>
</tr>
<tr>
<td>ECV15/1200</td>
<td>15</td>
<td>RED</td>
<td>1200kPa</td>
<td>1/2” male</td>
<td>1/2” female</td>
<td>20 KW</td>
</tr>
<tr>
<td>ECV15/850</td>
<td>15</td>
<td>GREEN</td>
<td>850kPa</td>
<td>1/2” male</td>
<td>1/2” female</td>
<td>20 KW</td>
</tr>
<tr>
<td>ECV15/700</td>
<td>15</td>
<td>BLUE</td>
<td>700kPa</td>
<td>1/2” male</td>
<td>1/2” female</td>
<td>20 KW</td>
</tr>
<tr>
<td>ECV20/1200</td>
<td>20</td>
<td>RED</td>
<td>1200kPa</td>
<td>3/4” male</td>
<td>3/4” female</td>
<td>46 KW</td>
</tr>
<tr>
<td>ECV20/800</td>
<td>20</td>
<td>GREEN</td>
<td>850kPa</td>
<td>3/4” male</td>
<td>3/4” female</td>
<td>46 KW</td>
</tr>
<tr>
<td>ECV20/700</td>
<td>20</td>
<td>BLACK</td>
<td>700kPa</td>
<td>3/4” male</td>
<td>3/4” female</td>
<td>46 KW</td>
</tr>
</tbody>
</table>

RATING PLATE COLOURS

The valve rating plates are colour coded to make selecting the correct valve easy. Simply match the ECV rating plate colour to a PTR with the same colour.

SET PRESSURES FOR WATER HEATER VALVES

<table>
<thead>
<tr>
<th>PTR Valve Setting kPa</th>
<th>PLV required if mains pressure exceeds:</th>
<th>PLV Setting kPa</th>
<th>ECV Setting kPa</th>
<th>PLV required if mains pressure exceeds:</th>
<th>PLV Setting kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>700</td>
<td>680</td>
<td>500</td>
<td>700</td>
<td>550</td>
<td>350</td>
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<tr>
<td>850</td>
<td>680</td>
<td>500</td>
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<td>350</td>
</tr>
<tr>
<td>1000</td>
<td>800</td>
<td>600</td>
<td>850</td>
<td>680</td>
<td>500</td>
</tr>
<tr>
<td>1400</td>
<td>1120</td>
<td>600</td>
<td>1200</td>
<td>960</td>
<td>600</td>
</tr>
</tbody>
</table>
**Expansion Control Valve**

**ECV15 DIMENSIONS**

- **ECV15**
  - 1400 15mm (1/2") BSP
  - 1200 15mm (1/2") BSP
  - 850 15mm (1/2") BSP
  - 700 15mm (1/2") BSP
  - 600 15mm (1/2") BSP

**ECV20 DIMENSIONS**

- **ECV20**
  - 1200 20mm (3/4") BSP
  - 850 20mm (3/4") BSP
  - 700 20mm (3/4") BSP

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[Diagram of ECV15 valve with dimensions]

[Diagram of ECV20 valve with dimensions]
Installation Instructions

**DISCLAIMER:** Every care has been taken in the preparation of these instructions, which have been issued as a guide only. Compliance with the requirements of local Authorities is required at all times. These requirements may change from time to time. Always be aware of the local requirements. Subject to any statutory obligations and manufacturers warranties no liability can be accepted for any loss, consequential or otherwise which may arise or be said to have arisen from relying upon the contents of this installation instruction as to the fitness of any particular product for any particular purpose, use or application. The Australian Valve Group Pty Ltd reserves the right to modify designs and specifications and to withdraw and introduce products at any time without notice.

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**TYPICAL CONTROLLED PRESSURE HOT WATER SYSTEM INSTALLATION**

Flush out your lines to remove any debris or dirt particles that may cause the valve to malfunction. If the valve probe is damaged in any way DO NOT install the valve. Return it to your valve supplier and obtain a replacement. Clean out any foreign matter from the threaded inlet water connection to the water heater.

In addition to these instructions, Expansion Control Valves must be installed in accordance with AS/NZS3500 National Plumbing and Drainage Code. All local government requirements must be met and the PTR must be installed in line with the water heater manufacturer’s instructions. The ECV to be fitted must have a set pressure lower than that of the PTR valve (see “Set Pressures for Water Heater Valves” table on previous page.)

1. Apply thread seal tape to the thread. Be sure not to use excessive amounts of thread seal that could hang over the thread, break off and lodge under the valve seat, causing it to leak.

2. Install the ECV between the Non-return Isolation Valve and the heater inlet. Do not use a wrench on the valve body, use the spanner flats provided.

3. No valve, taps, or other isolating valves are to be fitted between the ECV and the water heater.

4. If a drain line is fitted it must be of the same nominal pipe size as the valve, in accordance with AS/NZS3500.4. The drain line must have a continuous fall.

5. Test the manual relief by lifting the lever. Water should out of the relief valve. It is recommended that the manual relief be operated every 6 months, so as to flush out any deposits that may accumulate under the seal.

Caution: Water escaping from the drain line may be hot and could cause scalding. This valve is a Safety Valve. Excessive discharge from the drain line or operation of the small auxiliary relief valve opposite the drain can mean a malfunction within the system. Switch off the energy source and call a plumber or service person.

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WARRANTY: This valve is factory set and cannot be serviced or repaired in the field. The Australian Valve Group (AVG) will not honour any warranty claim where these instructions have not been followed, or where the valve has been tampered with or subjected to obvious abuse.