INSTALLATION INSTRUCTIONS

RMC Expansion Control Valve For Storage Water Heaters

INSTALLATION REQUIREMENTS

National Plumbing and Drainage Code AS/NZS 3500.4, hot water supply systems. Pressure expansion of water heaters – specific requirements of local water authorities.

VALVE SPECIFICATIONS

DN15 VALVE	DN20 VALVE
Designed and manufactured to AS 1357.1	Designed and manufactured to AS 1357.1
Inlet ½" BSPT male	Inlet ¾" BSPT male
Drain ½" BSP female	Drain ¾" BSP female
Standard pressure settings: 550, 700, 850, 1200kPa	Standard pressure settings: 550, 700, 850, 1000, 1200kPa
Operating temperature not exceeding 99°C	Operating temperature not exceeding 99°C
Valve rated 20 kW	Valve rated 60 kW

VALVE INSTALLATION

RMC Valves must be installed by a licensed plumber.

Clean out all deposits from the valve housing before fitting a replacement valve, otherwise the new valve risks contamination and premature failure.

Apply PTFE thread tape to the male taper thread, making sure that the tape does not hang over the outer end of the thread, as this can lead to premature valve failure. Screw the valve into a 'T' piece fitted between the Non-Return Valve and the heater inlet. Do not use a wrench on the valve body. Use the hexagonal spanner flats provided. No valves, taps, or other isolating devices are to be fitted between the expansion control valve and the water heater.

Install the drain line to match the nominal size of the valve (as indicated under Valve Specifications).

DRAIN LINE

National Plumbing and Drainage Code AS/NZS 3500.4, hot water supply systems.

Relief and Expansion Valve drain line: The installation of drain lines must comply with these requirements, and in addition, with any specific requirements of local water authorities.

The valve drain outlet pipe must not be sealed or blocked. If blockage occurs, the auxiliary pressure relief device opposite the drain line will discharge water.

INSULATION

To ensure conformance with AS 1357.1, any insulation used on this valve must conform to the following:

1. Cover the maximum surface area of the valve without impeding the operation of the easing gear, connection to the valve inlet or outlet or obstruct the operation of or discharge from the auxiliary pressure relief device.
2. Have an R-value not less than 0.2 (NOTE: As required by AS/NZS 3500.4, Table 8.2.1). Typically, this may be achieved using 9mm of closed cell polymer foam.
3. In exposed areas, insulation shall be of weather-resistant type or surrounded by a weather resistant enclosure that adheres to point 1.
4. Must be attached to the valve such that it will not be readily removed due to environmental conditions.

EXPANSION CONTROL VALVE OPERATION

The valve is designed to relieve excess pressure which may develop during the normal heating cycle. The valve will drip to relieve pressure. This is caused by the cold water expanding during the heating cycle.

VALVE SELECTION CHART

TEMP. AND PRESSURE RELIEF VALVE Fitted in the top and hot side of the hot water system	EXPANSION CONTROL VALVE Fitted to the cold water inlet to the hot water system	PRESSURE LIMITING VALVE Fitted to the cold water inlet to the hot water system
1400kPa 1000kPa 850kPa 700kPa	1200kPa 850kPa 700kPa 550kPa	As required. See following inlet pressure control chart.

INLET PRESSURE CONTROL

- High pressure may cause excessive discharge and possible premature failure of the relief valve.
- The maximum water pressure relates to the period of lowest water usage, this usually occurs during the night. In any mains pressure water heater installation, the maximum inlet water pressure must not exceed 80% of the nominal set pressure of the operating relief valve. A cold water expansion control valve, when fitted, will have a lower set pressure than the Temperature and Pressure Relief Valve and consequently would be classed as the "Operating" Relief Valve.
- The following table shows correct choice of preset pressure inlet control valve for a variety of excess mains supply pressures:

MAX INLET WATER PRESSURE WITHOUT INLET CONTROL	RMC SET PRESSURE OF RELIEF VALVE	RMC SET PRESSURE PRESSURE LIMITING VALVE
1120kPa	1400kPa	500 or 600kPa
960kPa	1200kPa	500 or 600kPa
800kPa	1000kPa	500 or 600kPa
680kPa	850kPa	350 or 500kPa
560kPa	700kPa	350kPa
440kPa	550kPa	350kPa

SERVICING

THIS VALVE IS FACTORY SET AND CANNOT BE SERVICED OR DISMANTLED IN THE FIELD.

FOR ANY ADDITIONAL INFORMATION, PLEASE VISIT www.rmc.com.au

WARRANTY

Reliance Worldwide Corporation reserves the right to modify designs and specifications and to withdraw and introduce products at any time without notice.

Installation is subject to the requirements of the applicable regulatory authority, the National Construction Code Volume Three – Plumbing Code of Australia, associated reference standards as applicable at the time and AS/NZS 3500. This product is compliant to the Lead Free requirements of the National Construction Code Volume Three. For further Scope of Use, please visit www.rmc.com.au/resources.

Reliance Worldwide Corporation (Aust.) Pty. Ltd. (RWC) will either replace or repair any defective goods where the defect arose as a result of manufacture for two (2) years (see website for more details). You may contact RWC at the phone number, address or e-mail shown and will be required to return the goods for evaluation. Should the defect be found to be one of our manufacture we will send you a replacement product to your stated address at our expense. Our goods come with guarantees that cannot be excluded under Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

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