INSTALLATION INSTRUCTIONS

RMC Temperature and Pressure Relief Valve
For Storage Water Heaters

INSTALLATION REQUIREMENTS

Australian/New Zealand Standards AS/NZS 60335.2.21 Household and similar electrical appliances-Safety & AS/NZS 5263.1 Gas appliances require that a Temperature and Pressure relief (T&PR) valve shall be fitted to closed/unvented appliances.

The water heater will be clearly marked with the Temperature and Pressure Relief Valve pressure setting in kPa, and power rating in kilowatts (kW).

The Temperature and Pressure Relief Valve must have a set pressure not greater than the maximum working pressure of the water heater in kPa, and will start to open on temperature prior to the water temperature exceeding 99ºC and will allow the contained water to be discharged.

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: 700, 850, 1000, 1400kPa	Standard pressure settings: 500, 600, 700, 850, 1000, 1400kPa
Opening temperature not exceeding 99ºC	Opening temperature not exceeding 99ºC
Valve rated 10 kW	Valve rated 46 kW

VALVE INSTALLATION

RMC Valves must be installed by a licensed plumber.

Should the temperature probe protruding from inside the inlet thread be damaged or bent, do not install, and obtain a replacement valve. 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 the heater socket. Do not use a wrench on the valve body. Use the hexagonal spanner flats provided. If the valve is horizontal, the drain outlet must face vertically downwards.

No valves, taps, or other isolating devices are to be fitted between the Temperature and Pressure Relief 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 must be of weather-resistant type or surrounded by a weather resistant enclosure that adheres to point 1.
4. Must be attached to the valve securely so that it will not be readily removed due to environmental conditions.

TEMPERATURE AND PRESSURE RELIEF VALVE OPERATING RELIEF VALVE DESCRIPTION

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.

Should the heater continue to over-heat the water, the temperature probe will be activated and open the Relief Valve, discharging hot water.

The fitting of an Expansion Control Valve to the cold water supply line is recommended as it will relieve cold water during the heating cycle expansion, not hot, thereby saving energy.

Expansion Control Valves are fitted to allow cold water to be relieved during the heating expansion cycle. This protects the Temperature and Pressure Relief Valve from dissolved solids residue. Deposits will remain in suspension in cold water and pass through the strainer and Expansion Relief Valve. These deposits, when hot water is relieved through the Temperature and Pressure Relief Valve, come out of solution and may remain on the valve seat. It is these deposits which shorten the life of a Temperature and Pressure Relief Valve.

Local regulations may make it mandatory to install an Expansion Control Valve in the cold water supply line.

VALVE SELECTION CHART

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

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 the 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.

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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