

Building and Plumbing Newsflash 547

Installation of expansion control valves on hot water storage systems

Purpose

To advise industry and the community about the benefits of installing an expansion control valve (ECV) on the cold water inlet of hot water storage systems.

Background

As hot water storage systems are required to heat cold water and store it at a higher temperature, pressure can build up inside the tank. This pressure needs to be released to avoid damage to the hot water storage system.

To address this issue, the Australian Standards/New Zealand Standards 3500.4:2003 Plumbing and drainage—Heated water services (AS/NZS 3500.4) requires a temperature pressure relief valve (TPRV) to be installed for all pressurised hot water storage systems.

TPRVs release hot water when activated by pressure as water is heated above a particular temperature. This may lead to the build-up of scale to the TPRVs, particularly if the water supply is hard or high in total dissolved solids (e.g. in areas where groundwater is the supply to the property). Build-up of scale over time can block the TPRV and may cause damage to the HWS.

ECVs, also known as cold water expansion valves, are designed to be activated at lower functioning pressure than a TPRV and release cold water instead of hot water when the hot water storage system becomes pressurised.

Benefits of expansion control valves

The Institute of Plumbing Inspectors Queensland and the Master Plumbers Association of Queensland have expressed support for the installation of ECVs on hot water storage systems as they:

- provide an additional safety measure to a TPRV
- may extend the life of the TPRV and pressurised hot water storage systems
- may save home owners money through reduced hot water bills.

Installation of expansion control valves

The installation of an ECV on a hot water storage system should be completed in accordance with AS/NZS 3500.4. and as per the manufacturer's recommendation to ensure the integrity of the system.

If plumbing licensees require more information about the installation of an ECV, they are advised to contact the relevant local government for further advice.

Contact for further information

Building Codes Queensland
Building Industry and Policy
Department of Housing and Public Works
Email: buildingcodes@qld.gov.au

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