

Plumbing Solutions – edition 9

Temperature Control for Hot Water Delivery

This Plumbing Solution sets out the requirements to enable plumbing installers to provide protection to consumers from the risk of scalding from excessive water temperatures as specified in AS/NZS 3500.4: 2003 Heated Water services and the South Australian Variations.

National Plumbing and Drainage Standard AS/NZS 3500.4: 2003 states:

All new heated water installations shall, at the outlet of all sanitary fixtures used primarily for personal hygiene purposes, deliver heated water not exceeding –

- (a) 45°C for early childhood centres, primary and secondary schools and nursing homes or similar facilities for young, aged, sick or people with disabilities; and
- (b) 50°C in all other buildings

Acceptable Solutions for Control of Delivery Temperature

The following shall apply:

- (a) The installation is deemed to comply if all sanitary fixtures used primarily for personal hygiene purposes are supplied from a thermostatic mixing valve or a tempering valve adjusted to the appropriate temperature.
- (b) Water heaters factory set at 50°C must have any adjustment mechanisms permanently disabled and must have the following additional warning, clear, permanent, readily accessible and easy to read:
THIS APPLIANCE DELIVERS WATER NOT EXCEEDING 50°C IN ACCORDANCE WITH AS 3498.

South Australian Variations to AS/NZS3500

Delivery Temperature – alterations or extensions to existing buildings:

Where an existing building is altered or extended in such a way that sanitary fixtures used primarily for hygiene purposes are installed in a location where, before the alteration or extension, no such fixture existed, the delivery temperature at the fixture shall not exceed:

- (a) 45°C for early childhood centres, primary and secondary schools and nursing homes or similar facilities for young, aged, sick or people with disabilities; and
- (b) 50°C in all other buildings.

Advisory Note: *A duty of care should be exercised by installers to explain to clients the merits of temperature control for hot water delivered to existing sanitary fixtures used primarily for hygiene purposes.*

Existing temperature limitation devices:

Existing devices, inline or end of line, for limiting the water delivery temperature at any fixture shall not be removed, or otherwise rendered inoperative or ineffectual, when an existing water heater, of any type, that serves a building, is repositioned or replaced.

Replacement water heaters of servicing of existing water heaters:

Where a water heater is replaced, there is no mandatory requirement to install a temperature limitation device to control the temperature of water delivered to sanitary fixtures used primarily for hygiene purposes unless the replacement water heater is of a solar type, the heating source is uncontrolled or such a device was in place prior to the installation of the replacement water heater.

Tempering Valves Commissioning

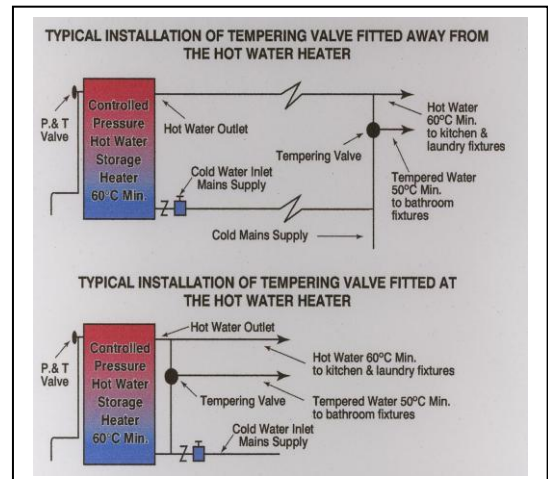
- Tempering valves must be commissioned according to the manufacturer's instructions.
- Ensure that the water heater is on and delivering water greater than 60°C
- Run the tempered water tap nearest the water heater or tempering valve for at least one minute to allow temperature to stabilize.
- Temperature must be checked with a thermometer and the tempering valve adjusted and set accordingly to the manufacturer's instructions.

Maintenance

- The tempering valve must be accessible for service and maintenance.
- The tempering valve should be checked at least annually and more frequently if water quality is poor.
- The temperature check should be carried out on the tempered water tap nearest the water heater.
- Strainers should be thoroughly cleaned.
- If the valve fails it must be replaced.

If you have any questions about Temperature Control for Hot Water Delivery or the AS/NZS 3500 Plumbing and Drainage Standards or alternatively, if you would like copies of this or various editions of Plumbing Solutions, please contact Plumbooking on (08) 7424 1360 or email plumbooking@sawater.com.au

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Note: It is optional to supply tempered water to kitchen and laundry outlets. Most consumers prefer at least 60°C water at these fixtures.

