

Technical Solution Sheet 6.02

6: Hot Water Plumbing

Cold Water Shut-Off Valve

AIM

The aim of this technical solution is to provide information relating to water heater installations where the safe tray waste may be omitted.

PLUMBING REGULATIONS 2008

The *Plumbing Code of Australia* (PCA) is adopted by and forms part of *Plumbing Regulations 2008*. Part B2 of the PCA specifies the objectives and performance requirements related to the installation of heated water services. [AS/NZS 3500.4: Plumbing and drainage Part 4: Heated water services](#), is a “deemed to satisfy” document listed in Part B2 of the PCA and contains a section on “Protection against damage from leaking water”.

BACKGROUND

Concealed heated water storage requires protection from leaking water for storage water heaters that are installed in roof spaces, cupboards or other concealed locations according to [AS/NZS 3500.4](#). In these situations a safe tray with a safe tray waste must be installed.

Unconcealed water storage tanks

[AS/NZS 3500.4](#) allows for unconcealed storage water heaters installed on or above an impervious floor to be installed without a safe tray, provided the floor is drained to a floor waste gully. All other unconcealed storage water heaters must be installed on a safe tray with a safe tray waste.

Approved cold water shut-off device

Where a safe tray and safe tray waste is required, it is permitted to install a mains pressure water heater on a safe tray without a safe tray waste, provided that an approved shut off device is fitted.

This device provides a solution for new and changeover water heater installations where it is difficult or impossible to provide a safe tray waste (see Figure 1).

HOW IT WORKS

The cold water shut off device is spring loaded in the open position and is designed to be installed (in the cold water line) in the safe tray (see Figures 1 and 2). When leaking water is detected in the safe tray, float switches activate the spring mechanism, closing the cold water inlet. The user is then alerted to the problem as no hot water is available at the heated water taps.

INSTALLATION

- The device must be an approved plumbing product i.e. WaterMark approved.
- The device is generally only suitable for internal installation.
- The device must be fitted adjacent to the cold water inlet.
- The device must be fitted upstream of any expansion control valve.
- The base of the shut off device must sit in the base of the tray

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CAUTION

Before commencing work, ensure that the particular approved shut off device is suitable to the application.

FIGURE 1 - EXAMPLE OF A COLD WATER SHUT OFF DEVICE



The manufacturer may specify that the device is not suitable for circulating/multiple storage systems, or roof space installations.

FIGURE 2 - EXAMPLE OF A COLD WATER SHUT OFF DEVICE IN AN UNDRAINED SAFE TRAY

