

Industry Bulletin 149

Heated water delivery temperature requirements

The purpose of this bulletin is to clarify the circumstances, in which a maximum allowable delivery temperature of heated water must be provided to the outlets of fixtures used primarily for personal hygiene purposes in Western Australia.



Fixtures used for personal hygiene include but are not limited to showers, baths, basins and bidets. The regulations and standards referenced in this bulletin are the minimum requirements for heated water delivery temperature control.

The Plumbers Licensing and Plumbing Standards Regulations 2000 (the Plumbing Regulations), adopts the Plumbing Code of Australia (PCA), as the primary plumbing standards that apply in WA. The PCA contains deemed to satisfy (DTS) requirements for maximum delivery temperature, and approved temperature control devices under “Part B2 Heated water services”. The PCA also calls up “AS/NZS 3500.4: Heated water services” as DTS standards.

The PCA has been updated and the latest version, PCA 2022, takes effect on 1 May 2023. PCA 2022 expands the requirements to provide heated water delivery temperature control from only applying to “**new heated water installations**” to apply to “**all heated water installations**” – which includes when a water heater is replaced, relocated, or added to an “existing heated water installation”¹.

The Plumbing Regulations also “modify” certain plumbing standards to suit WA conditions.

1. An “existing heated water installation” is – an existing construction or network of pipework and fixtures including the water heater for the service and use of intentionally heated water.

REQUIREMENTS COMMENCING 1 MAY 2023

The Plumbing Regulations are amended to maintain the current requirements, which are the provision of heated water delivery temperature control for:

- “new heated water installations”² in accordance with AS/NZS 3500.4:2018 ; and
- “when an existing water heater is replaced with a solar water heater” in accordance with the modifications in the Plumbing Regulations to AS/NZS 3500.4:2018.

These existing provisions will be maintained until 1 May 2024, to provide the WA plumbing industry and product manufacturers with sufficient time to make any necessary adjustments in relation to the expanded PCA requirements.

See the detailed mandatory delivery temperature control requirements following.

Mandatory delivery temperature control in WA – 1 May 2023 to 1 May 2024

The current requirements to provide and maintain delivery temperature control in accordance with the Plumbing Regulations and plumbing standards are as follows:

- a “new heated water installation” (water heater, pipework and fixtures) installed in a newly constructed building (AS/NZS 3500.4:2018 Clause 1.11.2);
- a “new heated water installation” (additional water heater, pipework and fixtures) installed in an existing building (AS/NZS 3500.4:2018, Clause 1.11.2); and
- replacement of an existing water heater with a solar water heater (AS/NZS 3500.4:2018 Clause 1.11.2, Regulation 112).

2. A “new heated water installation” is - a new construction or network of pipework and fixtures including the water heater for the service and use of intentionally heated water.

REQUIREMENTS COMMENCING 1 MAY 2024

For existing heated water installations, the updated PCA requirement to apply heated water delivery temperature control to **“all heated water installations”** will apply when a water heater is replaced, relocated, or added.

Further, it is widely recognised that tap water scalding incidents mainly occur during bathing or showering, with scalding at basins being rare. To assist WA plumbers to meet the changed PCA requirements without reducing amenity (i.e. lower heated water temperature to kitchens and laundries) on 1 May 2024 the Plumbing Regulations will modify PCA 2022.

The modification excludes basins (other than in a class 3³ or class 9⁴ building) as a mandatory sanitary fixture that requires heated water delivery temperature control – when replacing, relocating or adding a water heater to an existing heated water installation.

Excluding basins as a mandatory sanitary fixture for existing heated water installations, enables licensed plumbers to install temperature controlled taps at the bath/shower point(s) of use, while maintaining hotter water to the other fixtures for cleaning and washing purposes, if that is what property owners/customers desire.

See the detailed mandatory delivery temperature control requirements following.

Mandatory delivery temperature control in WA – from 1 May 2024

Commencing 1 May 2024, the requirements to provide and maintain delivery temperature control in accordance with the Plumbing Regulations and plumbing standards are as follows:

- a “new heated water installation” (water heater, pipework and fixtures) installed in a newly constructed building (PCA 2022 B2D5);
- a “new heated water installation” (additional water heater, pipework and fixtures) installed in an existing building (PCA 2022 B2D5);
- replacement or relocation of an existing water heater, with the exception of a water heater that forms part of a multiple or banked water heater installation (Regulation 49(1), PCA 2022 B2D5);

3. A class 3 building is a residential building providing long-term accommodation and includes accommodation for the aged, children, or people with disability and residential care buildings.

4. A class 9 building is a building of a public nature including health care buildings, childcare centres and residential care buildings.

- in the case of an existing multiple or banked water heater installation – when all of the water heaters that form the bank of water heaters are replaced or relocated (Regulation 49(1), PCA 2022 B2D5);
- an additional water heater is added to an existing heated water installation (Regulation 49(1), PCA 2022 B2D5); and
- in the case of an existing water heater replacement or relocation, a basin (other than in a class 3 or class 9 building) may be excluded from the sanitary fixtures requiring delivery temperature control provisions (Regulation 49(1), PCA 2022 B2D5).

Further to the above current and future requirements please note the following:

1. when replacing an existing water heater or maintaining an existing heated water installation where delivery temperature control provisions are already in place, the provisions must be maintained (PCA 2019 B2.9, Regulation 49(1), PCA 2022 B2D5); and
2. when a thermosiphon or direct fired water heater with an uncontrolled heat source is installed or replaced, the delivery temperature control provisions apply to all fixtures including kitchen sinks and laundry troughs (AS/NZS 3500.4:2021, clause 7.2.1).

**Please find on the next page:
a chart to clarify when delivery temperature control to sanitary fixtures is mandatory.**

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To help clarify when delivery temperature control to sanitary fixtures is mandatory please refer to the following chart:

Water heater and heated water installation scenarios	Current	From 1 May 2024
1. A water heater and pipework serving fixtures for personal hygiene purposes, is installed as part of a new construction.	 Yes	 Yes
2. A new additional water heater and pipework serving new fixtures for personal hygiene purposes, is installed in an existing building (e.g. an additional bathroom with its own new water heater is installed).	 Yes	 Yes
3. Replacement or relocation of an existing water heater with a solar water heater.	 Yes	 Yes
4. Replacement or relocation of an existing water heater where temperature control is already in place (e.g. water heater to be replaced has a temperature control device fitted or is a temperature limited water heater).	 Yes	 Yes
5. Replacement or relocation of an existing water heater where temperature control is not already in place (e.g. water heater to be replaced was installed before temperature control requirements were in place).	 No	 Yes
6. Existing fixtures used for personal hygiene are disconnected from an existing water heater where temperature control is already in place, and connected to an additional new water heater.	 Yes	 Yes
7. Existing fixtures used for personal hygiene are disconnected from an existing water heater where temperature control is not already in place, and connected to an additional new water heater.	 No	 Yes
8. A water heater that forms part of an existing multiple or banked water heater installation is replaced.	 No	 No
9. All water heaters that form a multiple or banked water heater installation are replaced.	 No	 Yes
10. Additional fixtures used for personal hygiene are installed in an existing building and connected to an existing water heater where temperature control is not already in place.	 No	 No
11. Repair or replacement of taps, pipes, fittings (other than a water heater) or fixtures that are part of an existing heated water installation where temperature control is not already in place.	 No	 No

Disclaimer – The information contained in this fact sheet is provided as general information and a guide only. It should not be relied upon as legal advice or as an accurate statement of the relevant legislation provisions. If you are uncertain as to your legal obligations, you should obtain independent legal advice.

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