



Plastic pipes to solar water heaters

This technical note provides information on the regulated limitations for the use of plastic pipes in solar water heater installations. There are restrictions on the use of plastic water pipes in heated water services due to the nature of the material and the temperature of the water from solar water heaters.

Limitations of plastic pipes

Regulated limitations for plastic pipes used to connect solar water heaters to the cold water supply are designed to reduce the risk of major damage to buildings as well as inconvenience for property owners.

AS/NZS 3500.4:2025, clause 2.5.2(b) does not allow plastic pipes and fittings to be used between the isolation valve and the inlet to a water heater, this includes solar water heaters.

Plastic pipes are not approved for use within 1 metre of the outlet of a water heater except where a water heater is fitted with a temperature control valve in which case plastic pipes and fittings may be used immediately downstream of the temperature control device.

Clause 5.9.4(a) requires the isolation valve to be positioned in a readily accessible position from the finished surface level, 1.8 metres above the finished surface level is usually classified as readily accessible.

Plastic pipes and fittings shall not be used for the drain lines from temperature/pressure-relief valves.

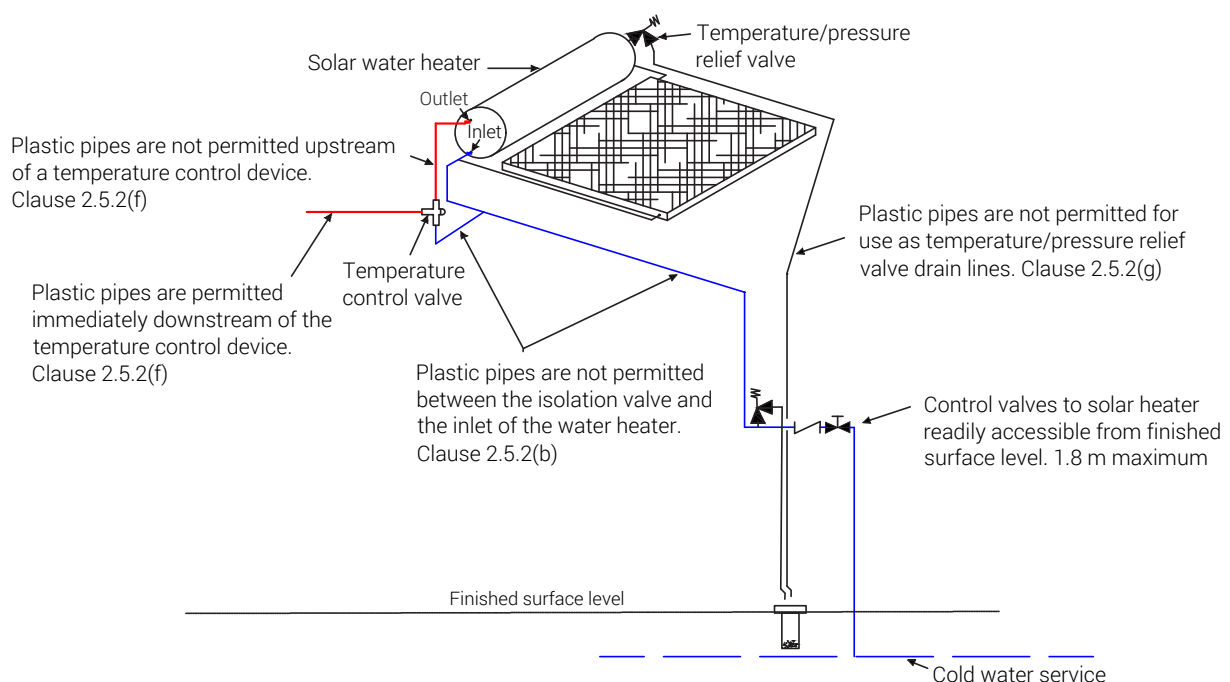


Diagram 1: Solar water heater cold water inlets and heated water outlets

Clause 2.5.2(e) does not allow plastic pipes and fittings to be used between a solar collector and a heated water container, unless supplied by the manufacturer as an integral component of the solar water heater system flow and return lines, see diagram 2 below.

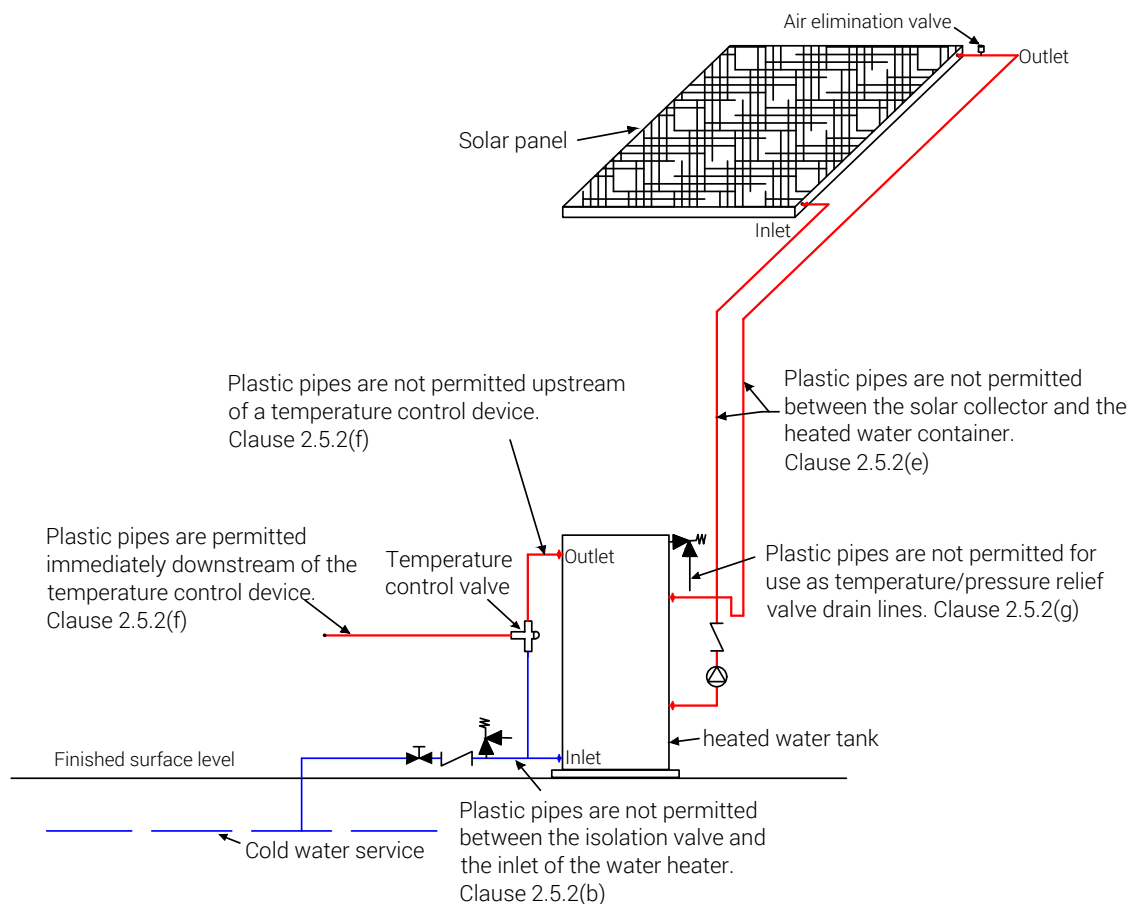


Diagram 2: Solar water heater collectors and heated water containers

Additional limitations in AS/NZS 3500.4:2025, clause 2.5.2

- ▶ When installed, plastic pipes and fittings shall be protected from direct sunlight.
- ▶ Plastic pipes shall not be used to support isolation valves, non-return valves and equipment used to connect water heaters.
- ▶ Plastic pipes and fittings shall not be used between an uncontrolled heat source and a heated water tank.

Notes:

1. Limitations on the use of pipes and fittings should take into consideration the manufacturer's installation specifications, provided they do not contradict the requirements of the Plumbing Code of Australia or AS/NZS 3500.4:2025.
2. Plastic pipes must be as specified in AS/NZS 3500.4:2025, clause 2.5.1.
3. AS/NZS 3500.4:2025, clause 2.5.2, limitations on plastic pipes and fittings, apply to pipe work associated with all water heater types and installations.



Clause 2.5.2(f): plastic pipes and fittings shall not be used between an uncontrolled heat source and a heated water tank including auxiliary water heaters, see diagram 3 below.

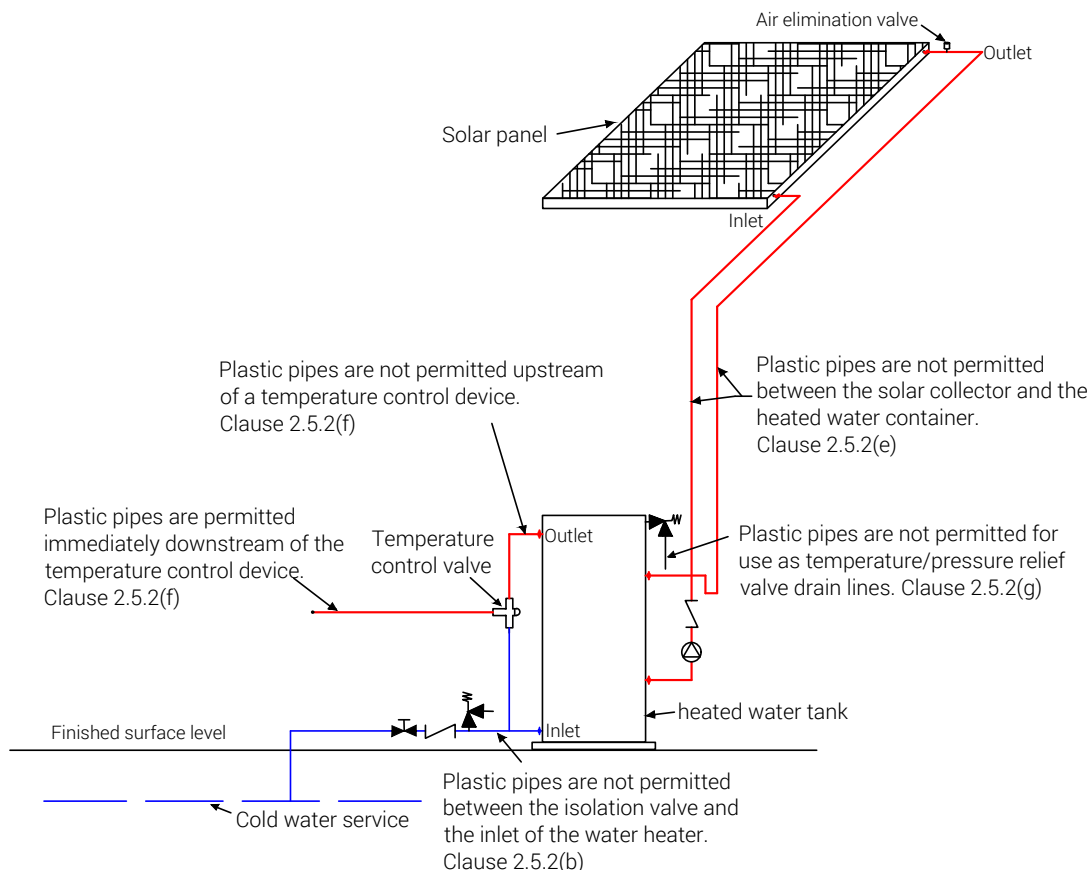


Diagram 3: Solar pre-heaters and auxiliary water heaters

Notes

The technical note series is issued by Building and Energy to assist the plumbing industry to comply with the Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations) applicable to plumbing work in Western Australia.

Each technical note is to be read in conjunction with Part 6 of the Regulations that currently adopt the Plumbing Code of Australia (PCA) as the standards that apply to the carrying out of plumbing work in WA. The PCA contains specific deemed to satisfy provisions and applies AS/NZS 3500:2025, parts 1, 2 and 4 to plumbing work. PCA, schedule 11 applies variations to certain matters to suit the state's building approach and other local conditions.

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