



## Braided flexible hoses

The purpose of this technical note is to assist the plumbing industry to comply with the prescribed plumbing standards and manufacturer's installation instructions when installing braided flexible hoses.

### Connection of water heaters

The Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations), regulation 52 states that licensed plumbing contractors must ensure that materials and products shall be installed according to the manufacturer's installation specifications.

The majority of manufacturers of braided flexible hoses do not allow them to connect directly to storage water heaters. Particularly those with flexible rubber cones rather than flat fibre washers.

Restricted plumbing permit holders are reminded that under a change to the Regulations they are now permitted to replace approved braided flexible hoses when replacing like for like water heaters.

### WaterMark certification

Whether or not they are suitable for connecting to water heaters, braided flexible hoses are required to be WaterMarked in accordance with AS 3499:2020 Water supply-flexible hose assemblies.

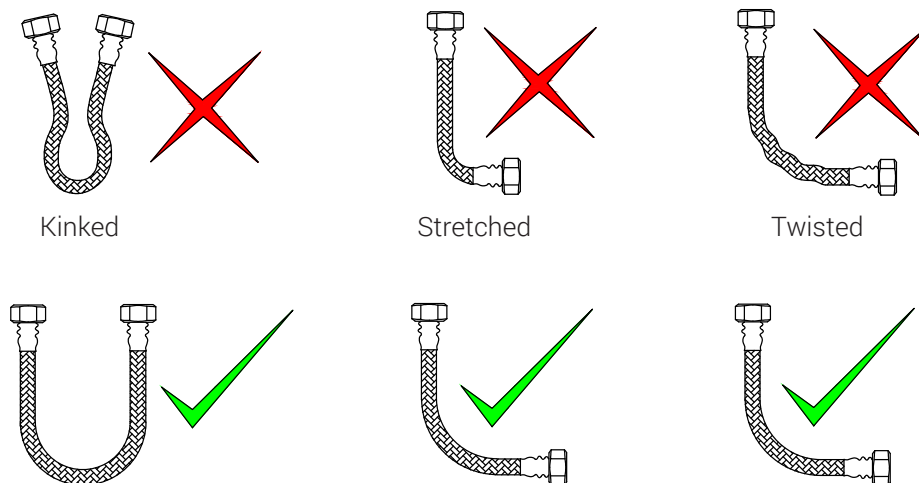
This standard requires each hose to be marked with 'H' or 'C' or have durable red or green indicators marking hoses for their suitability with heated and/or cold water supply.

### Manufacturer's instructions

To avoid failure of braided hoses, it is essential that the manufacturer's instructions are followed during installation. Most manufacturers stipulate that the hoses should not be put under stress by being stretched, kinked or twisted. It should not be necessary to apply excessive force to the end fittings in order to obtain a water tight seal. Hoses should not be subject to contact with corrosive agents.

### Hydraulic considerations

Braided flexible hoses may be adversely affected by high, fluctuating or transient pressures. Care should be taken to check these conditions before commissioning water supply systems that include braided flexible hoses.



**Diagram 1:** Typical examples of manufacturer's installation requirements



**Photo 1:** Shows correctly WaterMarked and labeled braided flexible hose.



**Photo 2:** Shows requirements on label for correct installation of braided flexible hose. Note the WaterMark logo, applicable standard and licence number marked on the product.

## Notes

The technical note series is issued by the Plumbers Licensing Board 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) and the deemed to satisfy provisions of AS/NZS 3500:2021, parts 0,1, 2 and 4 but modified in certain matters to suit the State's building approach and other local conditions.

## Feedback

The Plumbers Licensing Board welcomes your feedback. If you have any questions on this technical note or any suggestions on any areas of plumbing work that the technical notes should cover, please contact the Board's Senior Technical Officer on (08) 6251 1377.

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