

### SECTION 3 CROSS-CONNECTION AND BACKFLOW PREVENTION AND THERMOSTATIC MIXING VALVES

#### 3.1 SCOPE OF SECTION

This Section sets out the requirements for the installation of backflow prevention devices and thermostatic mixing valves.

#### 3.2 CROSS-CONNECTION CONTROL AND BACKFLOW PREVENTION

Cross-connection controls and backflow prevention devices shall be installed in accordance with AS/NZS 3500.1.

#### 3.3 THERMOSTATIC MIXING VALVES

Each thermostatic mixing valve shall be installed in accordance with the manufacturer's instructions and the relevant requirements of this Standard and the following:

- (a) The manufacturer's installation instructions (see AS 4032.1).
- (b) Each thermostatic mixing valve shall have an isolating stop tap/valve, line strainer and cross-flow prevention device (non-return) valve fitted to the heated and cold water supply lines as shown in Figure 3.1.  
NOTE: These devices may be fitted separately from the thermostatic mixing valve or as an integral part of the valve.
- (c) Independent ancillary items, e.g., isolating assemblies, shall comply with the relevant Australian Standard. Integral stop tap/valves and cross-flow valves shall comply with AS 4032.1.
- (d) Any dead legs in heated water services shall be as short as practicable.
- (e) There shall be no branch line off-take between a non-integral isolating valve and the inlet to the thermostatic mixing valve except in multiple installations (see Item (g)).
- (f) Thermostatic mixing valves shall be adequately supported, independent of all piping.
- (g) Where multiple installations of thermostatic mixing valves are located in the same area, then a stop/tap valve, line strainer and non-return valve may control each of the hot and cold water supplies to more than one thermostatic mixing valve, provided each of the individual thermostatic mixing valves are controlled by an isolating stop tap/valve and installed with a cross-flow non-return valve.
- (h) Each thermostatic mixing valve and each associated valve, pressure control or temperature control shall be readily accessible.
- (i) The nominal size of the connecting piping and associated valves shall be not less than the nominal size of the thermostatic mixing valve. For sizing of pipes, see AS/NZS 3500.1.
- (j) The flushing specified in Clause 11.2 shall be undertaken—
  - (i) prior to the installation of the thermostatic mixing valve(s); or
  - (ii) after the installation of the thermostatic mixing valve(s), provided each line-strainer integral and non-integral isolating valve and each thermostatic element/sensor is removed and cleaned and replaced after the flushing operation is completed.

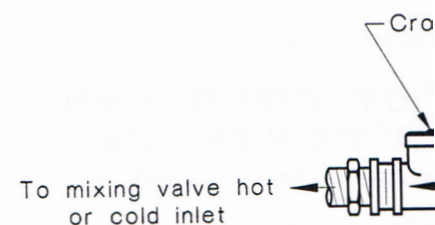


FIGURE 3.1 TYPICAL I:  
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