

Commercial Tempering Valve

BPIR Declaration

Version: 20/11/23

Designated building product: Class 1

Declaration

Apex Valves has provided this declaration to satisfy the provisions of Schedule 1(d) of the Building (Building Product Information Requirements) Regulations 2022.

Product/system

Name	Commercial Tempering Valve
Identifier	TV20C

Description

The Commercial Tempering Valve 20mm (TV20C) used in high pressure hot water supply systems to mix hot and cold water to a controlled outlet temperature, reducing the risk of exposure to excessively hot water.

Specifications:

- Nominal size 20mm
- Minimum static supply pressure 1400 kPa
- Maximum dynamic supply pressure 500 kPa
- Factory set at 53°C, can be adjusted between 35°C and 60°C
- Connections 20mm male, 3/4" BSP
- Hot and cold check valves for ring main installations

Scope of use

- Valves must be installed by a licensed plumber.
- Valve cannot be installed in the ground or where it can be submerged.
- Valves cannot be operated outside of the specified operating limits.
- Valve cannot be installed directly on the outlet of cylinder.
- TV must have minimum 1m copper pipe length from the cylinder to the valve in accordance with G12/AS1 clause 6.14.2(a)
- Set temperature must be adjusted to no more than 45°C for early childhood centres, schools, old people's homes, institutions for people with psychiatric or physical disabilities, or hospitals, in accordance with G12/AS1 clause 6.14.1.
- Maximum hot and cold inlet pressure imbalance is 5:1.
- Storage water temperature must be at least 60°C (G12/AS1 clause 6.14.1) and at least 10°C above the tempering valve setting.

Conditions of use

Refer to valve installation instructions available from [https://www.wattsnz.co.nz/products](https://www.watts.nz.co.nz/products) , the relevant clauses from G12 and local regulations.

- Flush all pipes before installing the valve.
- Valve must be protected by an in-line strainer upstream.
- Install the valve in a position where reasonable access is provided for maintenance and/or replacement.
- Connections are marked H (hot inlet), C (cold inlet) and OUT (mixed temperature outlet).
- Maximum hot and cold inlet pressure imbalance is 5:1.
- Storage water temperature must be at least 60°C (G12/AS1 clause 6.14.1) and at least 10°C above the tempering valve setting.
- Valve cannot be installed directly on the outlet of cylinder. TV must have minimum 1m copper pipe length from the cylinder to the valve.
- Recommended to provide a 250mm vertical heat trap above the tempering valve.
- TV can be installed in any orientation.
- Where possible, install in a location where damage from flooding is minimised if a leak were to occur, e.g., outdoors or over a safe tray.
- Cold and hot water pressures must be balanced.
- Seal threaded connections with PTFE tape, hemp thread, sealant approved for use with potable water or similar appropriate method.
- Pressure test the water system for leaks after installation.
- Do not apply heat near the valve during installation.
- Do not apply paint or similar to the outside of the valve.

Relevant building code clauses

B2 Durability - B2.3.1 (c)

F2 Hazardous building materials - F2.3.1

G12 Water Supplies - G12.3.5, G12.3.6

H1 Energy efficiency - H1.3.4

Contributions to compliance

- The TV is commonly used as a mixing device to limit hot water temperature delivered from a storage water heater to sanitary fixtures, in accordance with G12/AS1 clause 6.14.2(a)
- B2.3.1(c): The TV has a durability of at least 5 years when installed according to instruction by a licensed plumber and maintained according to instruction.
- F2.3.1: Materials used are suitable for use in contact with drinking water, according to AS/NZS 4020:2018.
- G12.3.2(c): Materials used are suitable for use in contact with drinking water, according to AS/NZS 4020:2018.
- G12.3.6: The TV is preset during assembly to 53±2°C to keep the outlet temperature at or below 55°C in compliance with G12/AS1 clause 6.14.1(a). The TV is compliant with NZS 4617, in accordance with G12/AS1 clause 6.14.2(b)
- G12.3.7(a) and (b): TV complies with G12/AS1 clause 6.14.2 and NZS 4617:1989, including flow rate of >20 L/min, reverse flow prevention, dezincification resistant brass with <100 µm dezincification depth, and 100% temperature and leak tested in production.

- H1.3.4(a) and (b): TV minimises heat loss from a storage water heater, complies with H1/AS1 clause 3.1.1.1 and H1/AS2 clause 3.1.1.1 and NZS4305:1996. The TV includes a non-return on the hot and cold inlet, to prevent uncontrolled reverse circulation in accordance with NZS4305:1996 clause 2.4.1.

Contact details

Manufacture location	Overseas
Legal and trading name of manufacturer	Watts Water Technology Ningbo
Legal and trading name of importer	Apex Valves
Importer address for service	367 Rosebank Road Auckland 1026
Importer website	https://www.wattsnz.co.nz/our-story/brands/apex
Importer NZBN	9429035030607
Importer email	orders@apexvalves.co.nz
Importer phone number	0800500484

Responsible person

As the responsible person as set out in Regulation 3, I confirm that the information supplied in this declaration is based on information supplied to the company as well as the company's own processes and is therefore to the best of my knowledge, correct.

I can also confirm that Commercial Tempering Valve is not subject to a warning or ban under [s26 of the Building Act](#).

Signed for and on behalf of **Apex Valves**:



Jeremy White
Marketing Manager
November 2023

APEX VALVES

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Appendix

Building code performance clauses

B2 Durability

B2.3.1

Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the *specified intended life* of the *building*, if stated, or:

- (c) 5 years if: the building elements (including services, linings, renewable protective coatings, and fixtures) are easy to access and replace, and failure of those building elements to comply with the building code would be easily detected during normal use of the building.

F2 Hazardous building materials

F2.3.1

The quantities of gas, liquid, radiation, or solid particles emitted by materials used in the *construction* of *buildings*, shall not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space.

G12 Water Supplies

G12.3.5

Sanitary fixtures and *sanitary appliances* must be provided with hot water when intended to be used for

- a. utensil washing; and
- b. personal washing, showering, or bathing.

G12.3.6

If hot water is provided to *sanitary fixtures* and *sanitary appliances* used for personal hygiene, it must be delivered at a temperature that avoids the likelihood of scalding.

H1 Energy efficiency

H1.3.4

Systems for the heating, storage, or distribution of hot water to and from *sanitary fixtures* or *sanitary appliances* must, having regard to the energy source used,

- a. limit the energy lost in the heating process; and
- b. be constructed to limit heat losses from storage vessels and from distribution systems; and
- c. be constructed to facilitate the efficient use of hot water.