Cold Water Expansion valve (High pressure)
BPIR Declaration

Version: 20/11/23

Designated building product: Class 1

Declaration

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

Product/system

Name	Cold Water Expansion valve (High pressure)
Identifier	EVT500 EVT700

Description

The High-Pressure Cold-Water Expansion Valve (EVT) is used high (main) pressure hot water systems to safely release excess pressure and avoid over pressurizing. Apex's EVT valves are forged from high quality, corrosion resistant DR brass and are machined, assembled and 100% tested in NZ.

Specifications:

- Inlet/ Outlet/ take-off: 20mm, 3/4" BSP (male) - Drain: 15mm, 1/2" BSP (male)
- Lengths: EVT Low Pressure = 62mm EVT High Pressure= 70mm
- Maximum temperature: 99°C
- Kilowatt rating: 20kW

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.
- Can be installed in any orientation provided the drain continuously falls to outlet and is the shortest possible length.
- Pressure limiting valve with appropriate pressure setting must be installed upstream of the expansion valve.
- Expansion control valves shall have a pressure rating of no less than that of the water supply pressure to the storage water heater, but less than the pressure rating of the relief valve.

Conditions of use

- Refer to valve installation instructions available from https://www.wattsnz.co.nz/products , the relevant clauses from G12 and local regulations.
- Flush all pipes before installing the valve.
- Install the valve in a position where reasonable access is provided for maintenance and/or replacement.
- Can be installed in any orientation provided the drain continuously falls to outlet and is the shortest possible length.
- 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.
- Install a pressure limiting valve with appropriate pressure setting upstream of the expansion valve.
- Seal threaded connections with PTFE tape, hemp thread, sealant approved for use with potable water or similar appropriate method.
- Pressure tests 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.
- If 1.0 metre min head can't be achieved between EVT and RV use the EVT under bench model

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 expansion valve is commonly used as a relief valve to discharge water that expands during heating in a storage water heater in accordance with G12/AS1 clause 6.6. The expansion valve discharges cold water instead of hot water to minimise energy lost in the heating process, in accordance with H1.3.4(a)
- B2.3.1(c): The EVT 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.
- G12.3.7(a) and (b) and (c) G12.3.8(a): EVT complies with G12/AS1 clause 6.6 and NZS 4608:1992, including flow rate of >32 L/min, dezincification resistant brass with <100 µm dezincification depth and 100% pressure and leak tested in production. Expansion mechanism can be removed from the valve body for maintenance or replacement.
- H1.3.4(a): EVT 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 clause 3.4.1 as it discharges cold water during expansion when installed according to installation instructions.

Contact details

Manufacture location	New Zealand
Legal and trading name of manufacturer	Apex Valves Limited
Manufacturer address for service	367 Rosebank Road Auckland 1026
Manufacturer website	www.wattsnz.co.nz/our-story/brands/apex
Manufacturer email	orders@apexvalves.co.nz
Manufacturer phone number	0800500484
Manufacturer NZBN	9429035030607

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 Cold Water Expansion valve (High pressure) is not subject to a warning on ban under s26 of the Building Act.

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

Jeremy White
Marketing Manager
November 2023

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.