WARRANTY

If any material defect arising from the manufacturing process is found in a new tap or valve Waterware Services Ltd. will undertake to repair or replace it (at its option). This undertaking will not apply if:

- 1. The defect is brought to Waterware's attention later than 5 years from the date of manufacture.
- 2. Failure by any person to follow installation instructions or installation in an environment outside the recommended limitations or relevant NZ and or Australian Standards and local plumbing codes. No installation should proceed without installation instructions and claims instructions were missing are not accepted as a means of avoiding this condition.
- 3. Evidence cannot be produced which confirms that the relevant tap 'or valve was purchased from a known customer of Waterware Services Ltd.
- 4. Repair work is undertaken without prior arrangement with Waterware Services Ltd.
- 5. Normal maintenance requirements, refer to specific product maintenance guides.

Waterware Services Ltd. shall in no way be liable for any loss, damage (direct, indirect or consequential), cost or expense suffered or incurred by the purchaser. Obligations accepted by Waterware Products Ltd. are.....

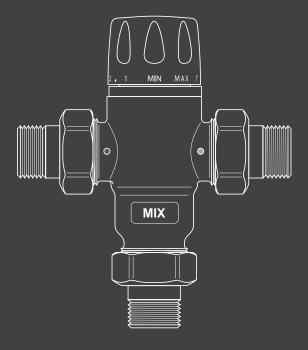
- in addition to all other rights and remedies had by the Purchaser in law in respect of the valve and does not limit the right the Consumer may have under the Consumers Guarantee Act 1993.
- subject to the exceptions and conditions previously listed. All expressed or implied conditions, statements or warranties as to the quality or fitness on any purpose of a tap or valve or otherwise are hereby expressly excluded to the fullest extent permitted by law except under conditions and warrants which cannot be legally excluded by law and which are intended in the contract for the supply of the valve by the Trade Practises and any other Act of Law.



PH 09 273 9191 | info@waterware.co.nz PO Box 58 776 Botany, Manukau **water**ware.co.nz

WATERWARE

Caleffi TV15/20/25 Model 5216 Tempering Valve



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Technical data

Approval BS 1415 Part 2/100

Quality Assured ISO9001 Temp Range 30 - 65 oC +/- 2 oC Temp Control Max Op. Temp. 85 oC Max Op. Press. 1400 kPa Flow Rates see graph Material DR Brass Sizes available 15, 20, 25 mm



check valves available in 'C' versions

Min Operating. Fail-safe *15°C Temp. differential @20kPa conforms to BS1415

Valve shut off bypass will occur at higher pressures.

IMPORTANT NOTE

Valve is not for use at the delivery output. For applications requiring tempering at delivery outlets use N.H.S model - code TV521312 (15mm) & TV521319 (20mm).

LOW PRESSURE APPLICATIONS

A minimum 1.0m head is required for correct valve function not considering any system losses in pipework etc. If system losses are presumed to be a minimum of 1.0 head of pressure, a minimum 2.0m head should be applied to the inlet of the tempering valve.

INSTALLATION NOTES

- Installations should firstly conform to any relevant NZ and or Australian Standards and local plumbing codes. The following notes will help to ensure a trouble-free and effective installation.
- Valve should be placed at supply source to prevent untempered hot water bursts from being delivered to the outlet. Consult Waterware Sales for advise on ring main or point of use installations.
- Valve can be installed in vertical or horizontal position (any orientation).
- Inlet pressure variations should be kept to a minimum (preferably balanced) for optimum temperature stability.
- Standard valves include a check valve in the cold union for domestic HWC installations. An optional 'C' model valve includes dual hot and cold check valves for special applications.
- The desired temperature should be set after the hot water cylinder has been commissioned and heated. Once set, remove the handle and reposition with the lock tab engaged to prevent tampering.
- · Never install a tempering valve in an open vent pipe.
- All supply lines should be protected by a y strainer or similar.





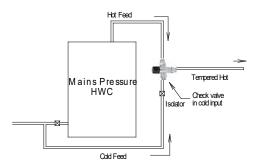
- The valve must not be subjected to extreme temperatures either during installation or in use. In particular, avoid brazing or soldering near the valve.
- · Before final installation and commissioning the system must be thoroughly flushed out to ensure removal of all debris (See above on Y-Strainers). On older systems, it may be necessary to consider chemical cleaning (de-scaling) of the system. In known hard water areas, the use of a water softener in the system should be considered to promote ongoing trouble-free operation.

Maintenance & Testing

- · Varying degrees of water quality will effect the rate at which scaling or ingression of foreign matter can disable the proper operation of the valve. The valve is designed to inspected and serviced on site if need be. Ensure all surfaces of both the body and control assembly are clean and o-rings lightly lubricated with 'Greasil 4000' or similar. Heat damage is noticeable by deformation of the o-ring profiles and rubber sock over the control element. A maintenance kit including all o-rings and a replacement control element is available if necessary (code: TV522SE).
- TV15 / TV20 / TV25 FLOW RATE BY PRESSURE DROP $Kv = 2.6 (m^3/h)$
- To check performance first ensure HWC storage temperature is not less than 60°C by testing water drained from the TPR valve. Use a bathroom tap to measure with a thermometer the temperature range while cycling the tempering valve control knob from minimum (30°C) to maximum (up to 65°C). Reset the valve to a safe temperature as required by law - Domestic 55°C Commercial 45°C.

Typical Installations:

High Pressure



I ow Pressure

