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.

WATERWARE

COMBOPU20C

Mains Pressure HWC Set

Adjustable Tempering Valve

Ball Valve Male/Male

Ball Valve Male/Male

Y-STRAINER (BFY)

Pack Includes:

1 x BFY20	Y strainer female/female
1 x BV15M or 20M	Ball Valve male/male
1 x Group Valve	Mains pressure HWC input valve (7 bar relief)
1 x TV5213 Series	Adjustable Tempering Valve (30-55oC)

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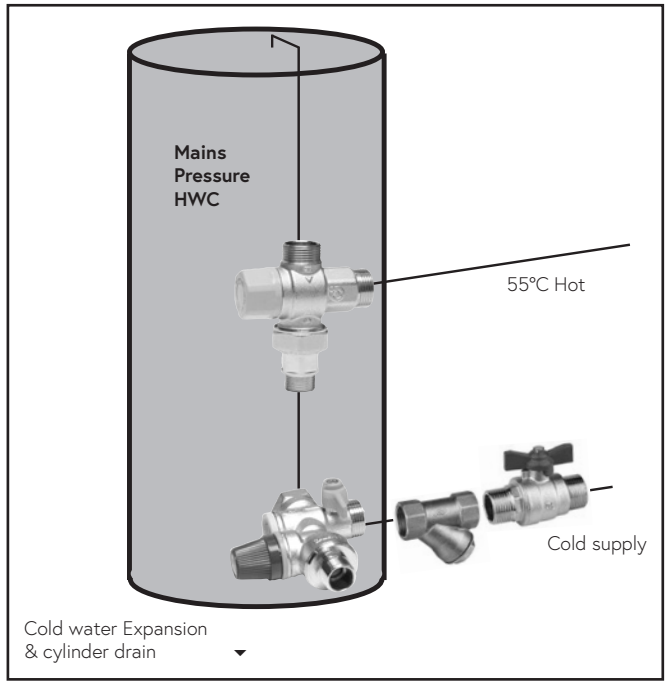
COMBOPU20C Caleffi Combo Set

Installation Instructions

Installations should firstly conform to any relevant NZ and or Australian Standards and local plumbing codes.

Important tips;

- The isolating valves provided can be located as desired for ease of maintenance. We show one option in our sketch.
- The Group Valve is flow directional as indicated by an arrow.



1. Y Strainer

20mm female/female
Stainless steel mesh filter
Mainly used in: civil and industrial systems with non corrosive fluids, compressed air and water.

2. Tempering Valve

- Valve should be placed at supply source to prevent untempered hot water bursts from being delivered to the outlet.
- Valve can be installed in vertical or horizontal position (any orientation).
- Standard valves include a check valve in the cold union for domestic HWC installations.
- 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.
- 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 (descaling) 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.

3. HWC Group Valve.

The input is not designed for a compression joint fitting, but rather for a thread brass connection such as a wingback or a T. If a direct copper pipe compression connection is required use a compression adaptor on the input. The drain connection from the cold water expansion valve is 1/2"bsp. No airbreak is required unless the drain is over 10m in length.

TV5213 Series Tempering Valve

IMPORTANT NOTE:

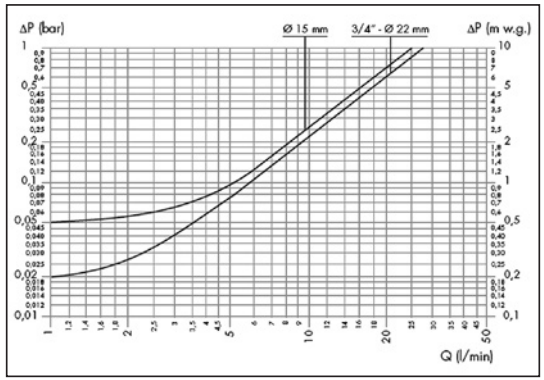
-Valve is rated for continuous hot water up to a maximum of 85°C. Systems operating beyond this temperature will cause irreparable damage not covered by the conditions of warranty.

- The check valve installed on the cold water union to the TV provides a non-return check valve to prevent unwanted recirculation.

Specifications

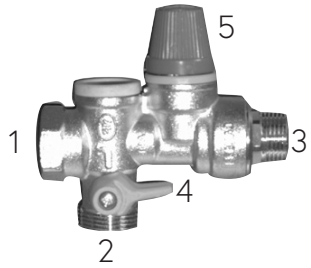
Approv.	NHSD.O.8(BS7942:2)
Quality Assured	ISO9001
Temp Adjustment Range	30 - 55 °C
Temp Control	+/- 2 °C
Max Op. Temp.	85 °C
Operating Press. Range	20 - 500 kpa
Max. Press. Differential @ low press (20 - 100kPa)	40kPa
Max. Press. Differential @ high press (100 - 500kPa)	200kPa
Max Test Press.	1000 kPa
Flow Rates	see graph
Min. flow rate	4 L/min
Material	DR Brass
Sizes available	15, 20mm

Min. Operating Failsafe Temp. Differential 10 °C
* The failsafe feature of this valve conforms to BS7942-2000 as tested at 300 kPa, valve shut off bypass will occur at higher pressures.



HWCM Inlet Group Valve

Factory set 700kpa
Maximum opening pressure + 20%
Minimum reseating pressure -20%
Maximum Temperature 110 deg. C
Maximum capacity 50 kW



1. 3/4" female thread for direct connection to cylinder
2. 3/4" male cold inlet
3. 1/2" cold water expansion drain outlet
4. HWC input isolating valve
5. Safety valve knob for manual HWC draining and cold water expansion valve operation.

The HWCM provides an isolator, non return, cold water expansion and cylinder drain. To drain the hot water cylinder, turn the safety valve knob, #5 having previously closed the cold supply #4. Also open a hot water tap allow air into the system.

The safety valve (factory set) will start to vent and then discharge at a pressure greater than 7 bar inside the cylinder. As the cylinder heats and its contents expand, the volume of discharged water could reach 3% of the cylinders total capacity during the process. For example a 180 litre cylinder could vent 5.4 litres when heated from cold.