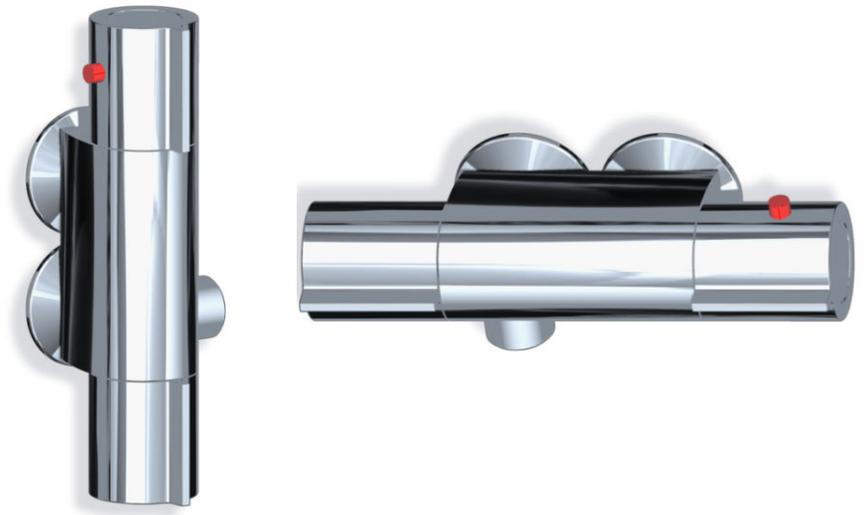
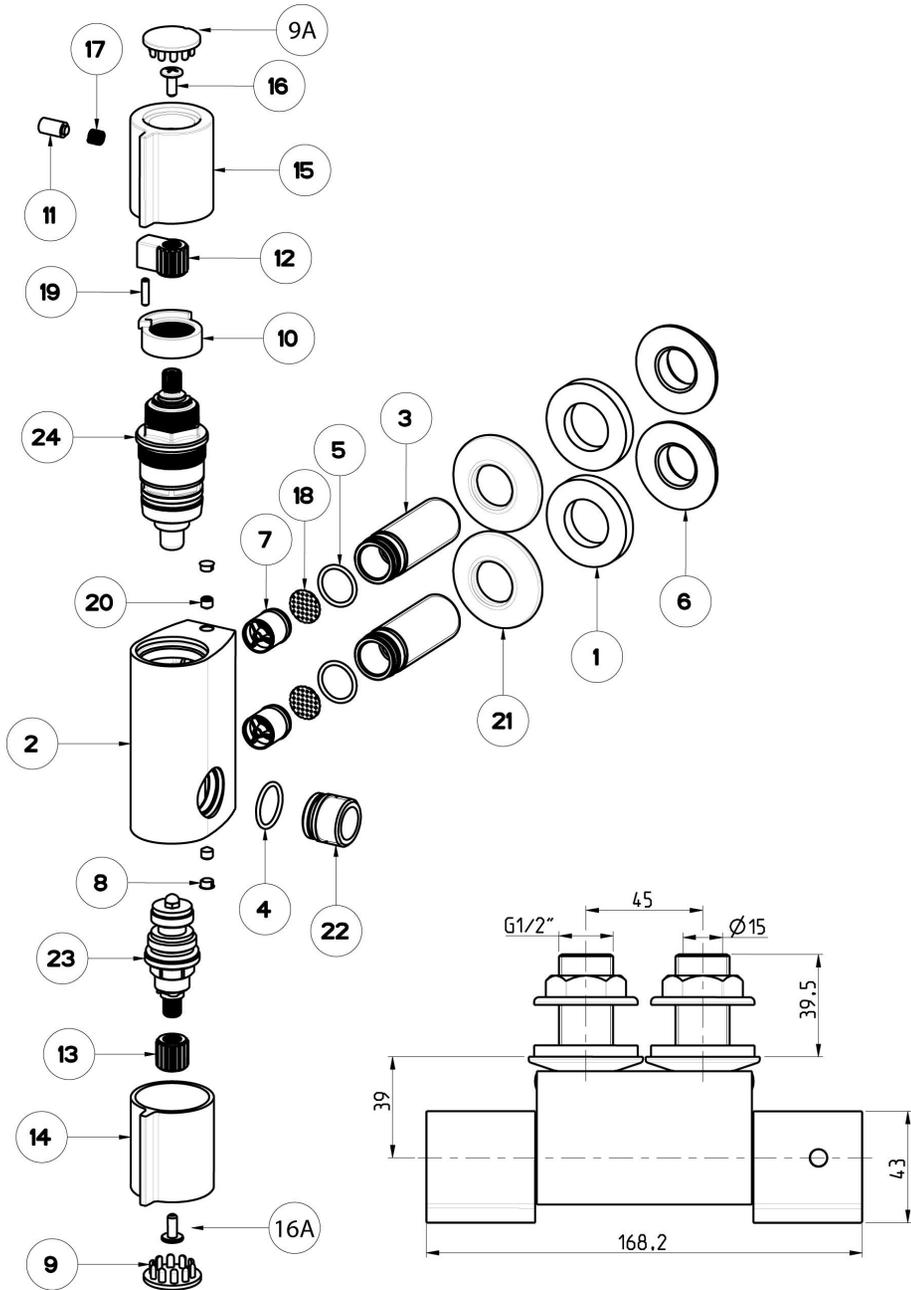


CARAFLO V200

Thermostatic Mixer



Installation and Maintenance Instructions
Issue 1 April 2012
Please leave these instructions with the user

BuildCert Ltd Approval Certificate No TBA
 WRAS Certificate No TBA

SPECIFICATION

Conditions of use for Type 2 Valves

Table 1: Conditions for normal use

	High Pressure
Maximum Static Pressure – Bar	10
Flow Pressure, Hot & Cold - Bar	0.5 to 5
Hot Supply Temperature - °C	55 to 65
Cold Supply Temperature - °C	≤ 25

Table 2: Mixed Water Temperature

Application	Mixed water temperature (At point of discharge °C)
Shower	41 max

NOTE: Valves operating outside these conditions cannot be guaranteed by the Scheme to operate as Type 2 valves. Being the V100 designated for use as a high pressure valve, it is tested against BS EN 1111.

If a water supply is fed by gravity then the supply pressure should be verified to ensure the conditions of use are appropriate for the valve.

ATTENTION: in order to assure the maximum efficiency of the mixer, the operating pressures (on hot and cold line) should be kept as balanced as possible and the inlet hot water must be at least 10°C above the required blend temperature.

When pressure is higher than 5 bar a pressure reducer is required, to be fitted before the mixer.

This mixer is suitable for use with the following systems:

- Gravity Fed Hot & Cold (Equal Pressure)
- Unvented Systems
- Gas Combination Boiler
- Pumped System

The thermostatic mixing valve will be installed in such a position that maintenance of the TMV and its valves and the commissioning and testing of the TMV can be undertaken.

PROTECTING YOUR THERMOSTATIC MIXING VALVE

In addition to draining down the TMV in periods of cold and freezing conditions, to offer maximum protection it is highly recommended that the TMV is further guarded by following the method outlined below:

- First complete the drain down procedure ensuring the hot and cold feeds are isolated and fully drained.
- Using the allen key supplied Remove the mixer body from the tails by releasing the grub screws (20) taking care not to misplace these.
- The unit can then be completely drained, dried and wrapped in a soft cloth for storage until required.

When required the TMV can then be reattached as follows;

- Re-fit body to the tails and tighten the grub screws (20), take care not to over tighten.
- Re-connect to the water supplies and check seals.

IN-SERVICE TESTING

It is a requirement that all TMV2 approved valves shall be tested against the original set temperature results once a year.

Any work carried out on this unit should only be by a suitably qualified competent person

When testing is due the following performance checks shall be carried out.

1. Measure the mixed water temperature at the outlet.
2. Carry out the cold fail-safe shut off test by isolating the cold water supply to the TMV, wait for five seconds if water is still flowing check that the temperature is below 46°C.
3. If there is no significant change to the set outlet temperature ($\pm 2^\circ\text{C}$ or less change from the original settings) and the fail-safe shut off is functioning, then the valve is working correctly and no further service work is required.

Recommended outlet temperatures

The BuildCert TMV scheme recommends the following set maximum mixed water outlet temperatures for use in all premises:

44°C for bath fill but see notes below;
41°C for showers;
41°C for washbasins;
38°C for bidets.

The mixed water temperatures must never exceed 46°C.

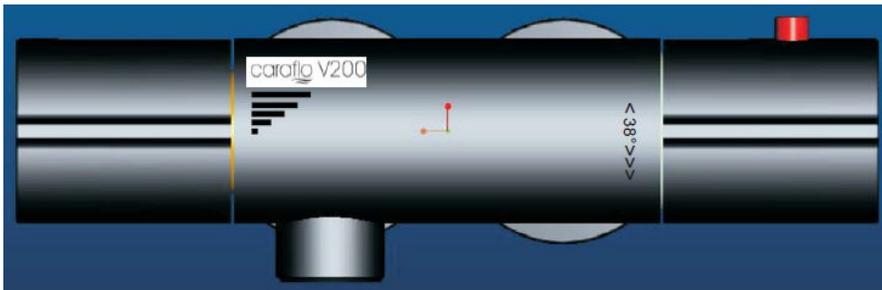
The maximum mixed water temperature can be 2°C above the recommended maximum set outlet temperatures.

DRAIN DOWN PROCEDURE

1. Close hot and cold mains feed taps.
2. To drain Thermostatic mixer:
 - Remove the shower hose from the mixer or lay the shower head and hose in the shower tray to drain off any trapped water.
 - Turn bottom tap valve fully open
 - Turn the top thermostat valve fully clockwise to drain cold water, until water stops flowing.
 - Push in the red temperature set button on the top thermostat valve and turn fully anticlockwise to drain the hot water side until the water stops flowing.

Note

If after the drain down procedure the Thermostatic Mixer Tap is to be left for long periods in cold or freezing conditions, leave the tap open and line up the ridge on the thermostat hand wheel with the dot etched on the tap body (see picture below). This will leave the hot and cold sides of the tap partially open to help prevent frost damage.



GUARANTEE

This product is guaranteed in line with the individual Holiday Home manufacturers warranty period. Providing that the product has been installed, maintained and protected in accordance with our instructions, the guarantee covers any defect in manufacture and finish. As gold and special effect finishes are softer than chromium plate, special care must be taken when cleaning.

The guarantee does not cover:

- Direct or indirect damage caused by the mixer.
- Damage caused by faulty installation, maintenance or protection.
- Damage caused by improper use of the mixer
- Damage caused by improper cleaning products

INSTALLATION (see diagram):

Pipework must be flushed and Mixing valves installed in accordance with Water Supply (Water fittings regulations) 1999.

IMPORTANT : make sure that pipeworks are as parallel as possible with a 45mms. centre to centre distance.

Rinse pipework carefully for a long while prior to fitting the mixer.

After having rinsed pipework, to install the mixer as a standard exposed fitting, either vertically with the water outlet facing to the right or horizontally with the water outlet facing downwards.

ATTENTION: connect hot supply to inlet of the mixer marked with red dot and connect cold supply to inlet of the mixer marked with a blue dot

Apply covering rosettes (21) on the threaded tails (3).

Fix the mixer to the panel/wall using the supplied backnuts (6).

The fitting of isolation valves is required as close as is practicable to the water supply inlets of the thermostatic mixing valve.

OPERATION & SETTING

Turn on water supply and check all seals.

To control the flow, turn the handle (14). On the body (2) is indicated the direction for hot and cold flow: turn anti-clockwise for hot and clockwise for cold.

The temperature is factory set at 38°C (see numbered dial on the body). If in operation an increase in temperature above the factory set temperature is required, simply depress the red button (11) on the temperature handle when it reaches the stop and continue to turn the handle anti-clockwise until the desired temperature is found. The valve is set to reach 43°C MAX (**....or 41°C???**)

This can however be adjusted for site conditions or personal preference by removing the cover (9A) and unscrewing the valve screw (16). Remove the temperature control handle (15) and turn the control spindle on the temperature valve (1) in the required direction to increase (anti-clockwise) or decrease (clockwise) the temperature

In any case, the mixed water temperature at terminal fitting should never exceed 46°C.

IMPORTANT: during this operation, pay attention not to damage the broaching of the temperature valve.

Replace the handle (15) so that the stop is in the maximum position and make sure, by using a thermometer, that the water flow from the valve is at the required temperature; Screw the handle (15) back onto the valve by using the valve screw (16) and replace the cover (9A).

ATTENTION: CHANGING THE SETTING OF THE TEMPERATURE MAY CAUSE A RISE OR A DROP OF THE MAXIMUM HOT WATER.

EVERY CHANGE IS MADE AT YOUR OWN RISK.

Note:

46°C is the maximum mixed water temperature from the bath tap. The maximum temperature takes account of the allowable temperature tolerances inherent in thermostatic mixing valves and temperature losses in metal baths.

It is not a safe bathing temperature for adults or children.

The British Burns Association recommends 37 to 37.5°C as a comfortable bathing temperature for children. In premises covered by the Care Standards Act 2000, the maximum mixed water outlet temperature is 43°C.

Commissioning notes for Thermostatic Mixing Valves.

The first step in commissioning a thermostatic mixing valve is to check the following:

The designation of the thermostatic mixing valve matches the application.

The supply pressures are within the valves operating range.

The supply temperatures are within the valves operating range.

Isolating valves (and strainers preferred) are provided.

If all these conditions are met, proceed to set the temperature as stipulated in the manufacturer installation instructions.

CLEANING

Your fitting has a high quality finish and should be treated with care to preserve the visible surfaces. All surface finishes will wear if not cleaned correctly. The only safe way to clean your mixer is using soap water and a cloth. To dry only use a dry soft cloth. Stains can be removed using washing up liquid. All bath cleaning powders and liquids will damage the surface of your fitting even the non-scratch cleaners.

MAINTENANCE**Isolation valves must be installed on both the hot and cold connectors.**

Should you need to clean the filters (18) or the non return valves (7) the valve needs to be dismantled. The procedure is:

- Turn off the water supplies.
- Follow drain down procedure.
- Remove the mixer body from the tails by removing the cover caps (8) and releasing grub screws (20) using an allen key.
- Pull the non return valves (7) out of the tails (3). Replace them if necessary.
- Remove filters (18) from their seats.
- Clean the filters (18) with water.
- Re-fit the filters (18) in their seats inside the tails (3).
- Re-fit body to the tails and tighten the grub screws (20).
- Re-connect to the water supplies and check seals.

To replace the thermostatic cartridge (24), please follow this procedure:

- Turn off the water supplies.
- Remove the cover (9A).
- Unscrew the valve screw (16).
- Remove the temperature handle (15), insert (12) and the stop ring (10).
- Remove the cartridge (24).
- Replace the cartridge after having cleaned the inside of the valve body (2) making sure that the 38°C mark is in line with the reference 38° on the mixer body and reassemble the valve components
- Check, by using a thermometer, that the water flow temperature is set to 38°C; if it is not the case, you can re-set the cartridge (see paragraph "OPERATION AND SETTING").
- Turn on water supplies and check seals.

To replace the on/off valve:

- Turn off the water supplies
- Remove the cover (9)
- Unscrew and remove the valve screw (16A)
- Remove the handle (14)
- Remove the valve (23)
- Reassemble the valve after having cleaned the inside of the valve body (2).
- Screw the handle (14) back onto the valve by using the valve screw (10) and replace the cover (9).
- Turn on water supplies and check seals.

Notes

If there is a residual flow during the commissioning or the annual verification (cold water supply isolation test), then this is acceptable providing the temperature of the water seeping from the valve is no more than 2°C above the designated maximum mixed water outlet temperature setting of the valve.

Temperature readings should be taken at the normal flow rate after allowing for the system to stabilise.

The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.

Any TMV that has been adjusted or serviced must be re-commissioned and re-tested in accordance with the manufacturers' instructions.