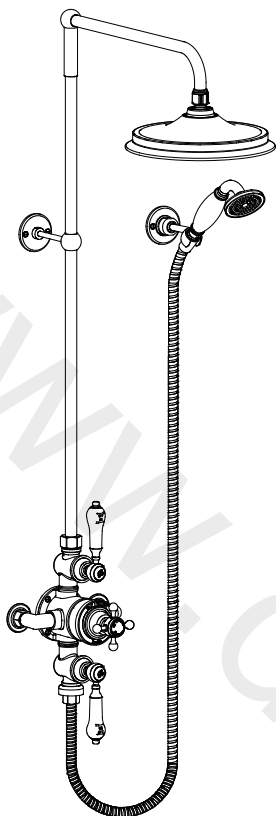
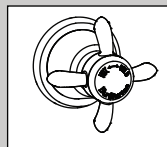


### Avon Thermostatic Exposed Shower Valve Two Outlet, Swivel Shower Arm, Handset & Holder with Hose - AF3S

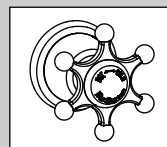


#### Options:

Burlington has 2 different style handles for your selection, when using these additional handles the indices will need to be utilised from the original handles.



Anglesey

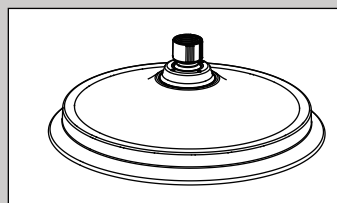


Birkenhead

NOT INCLUDED IN THE BOX

#### Options:

Burlington has a shower head of 3 different sizes for your selection.



NOT INCLUDED IN THE BOX

#### Riser:



NOT INCLUDED IN THE BOX

#### **Important**

- We recommend that this product is installed by a qualified professional contractor. Such as a plumber who is certified by NVQ (National Vocational Qualification) or SNVQ (Scottish National Vocational Qualification) Level 3
- Please check this product immediately to ensure that it has not been damaged and is complete. Before installation, please make sure this product is the correct model and you have all the parts required for installation and using.
- This valve is a mixing device and therefore requires the water supplies to be reasonably balanced, otherwise we recommend a pressure reducing valve to be fitted.
- Please flush the water system to ensure that no metal swarf, solder, and other impurities can enter the valves.
- Turn off water supply before commencing work, this should be done at the isolating valves of inlet feeds if fitted or main stopcock.
- Please read these instructions carefully and keep it for future reference.

#### **Conditions for the use of thermostatic mixing valve**

The thermostatic valve has been designed to be compliant with the relevant UK standards applicable to this type of product governed by Type 2 TMV and WRAS. The valve is tested against BS EN 1111.

The valve will operate under low pressure but it is recommended that the minimum operating pressure is 0.5 bar.

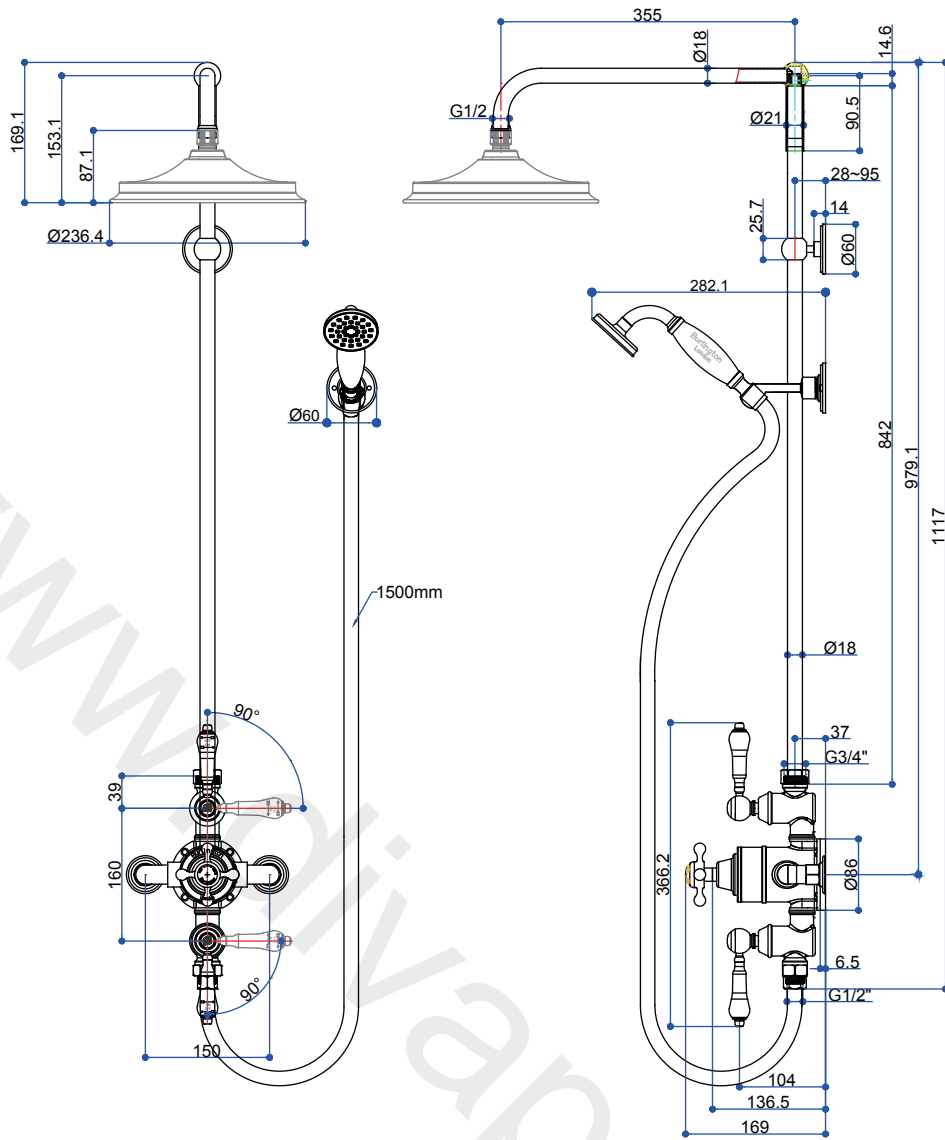
- This thermostatic valve is suitable for use with all water systems up to a maximum operating pressure of 5.0 bar, (beyond which we recommend pressure reducing valves to be fitted.)
- The valve is provided with two outlets, which are controlled by two flow control cartridges. Commonly used for a main shower head or a flexible shower kit.
- An independent, flexible hot and cold water supply pipe is recommended for use to easy maintenance.
- If installing a shower pump always install the pump before the shower valve.

The list below shows the recommended limits for correct operation;

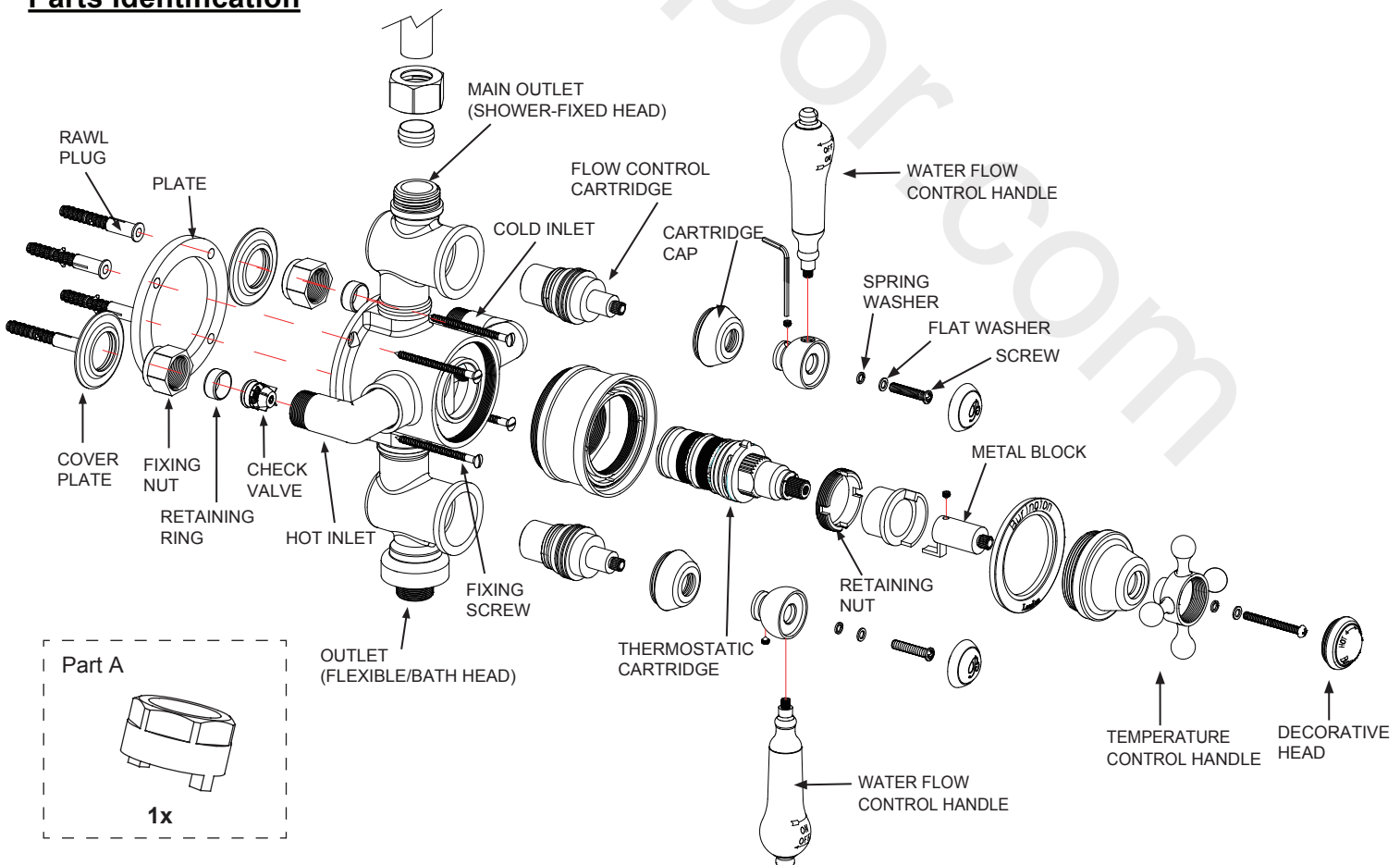
	High Pressure
Maximum Static Pressure – Bar	10
Flow Pressure, Hot & Cold - Bar	0.5 to 5
Hot Supply Temperature - °C	55 to 65
Cold Supply Temperature - °C	Equal to or less than 25°

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 of 43°C.

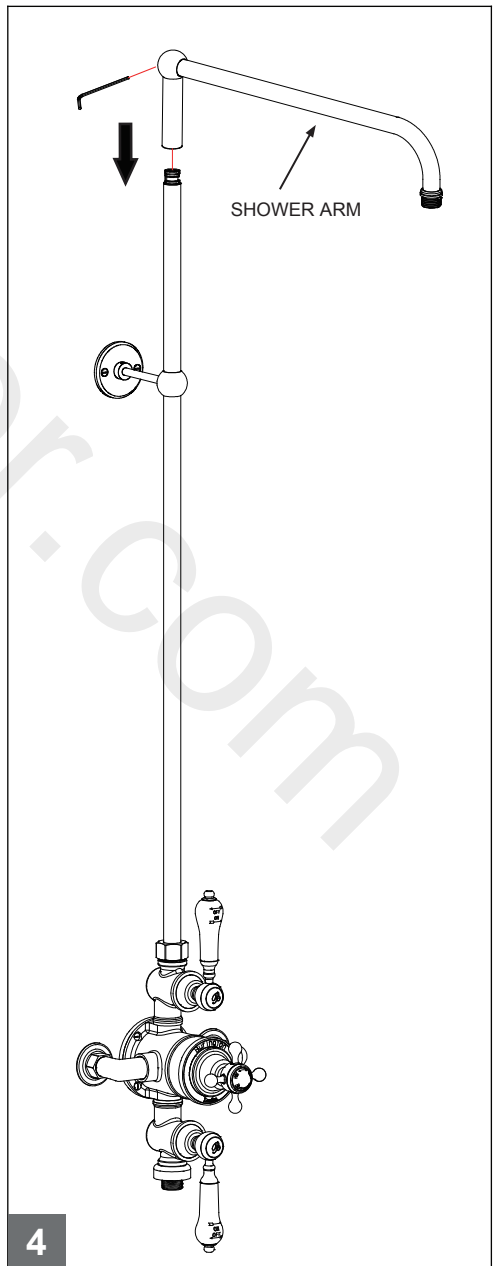
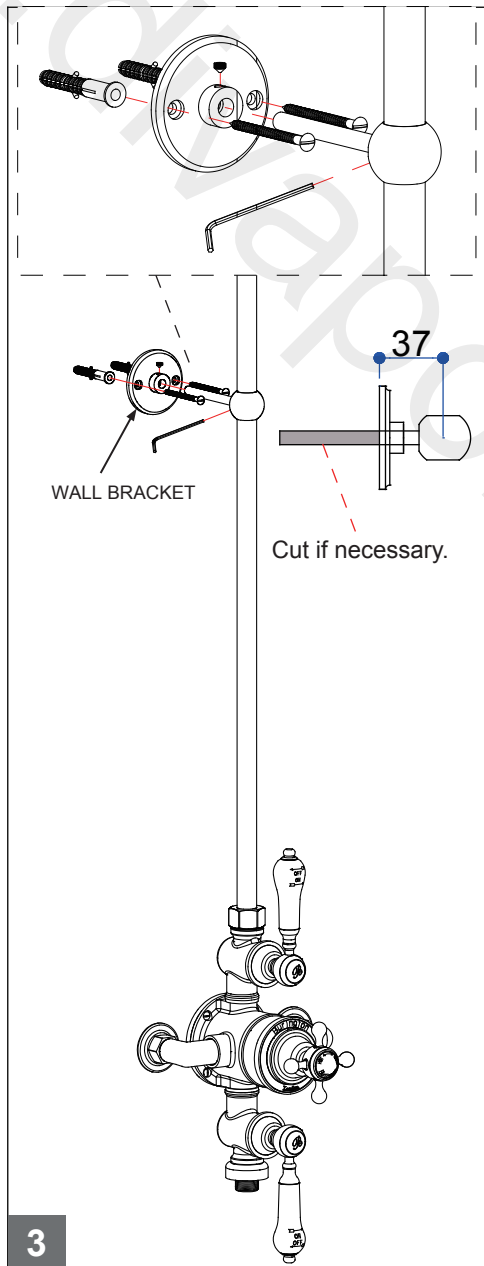
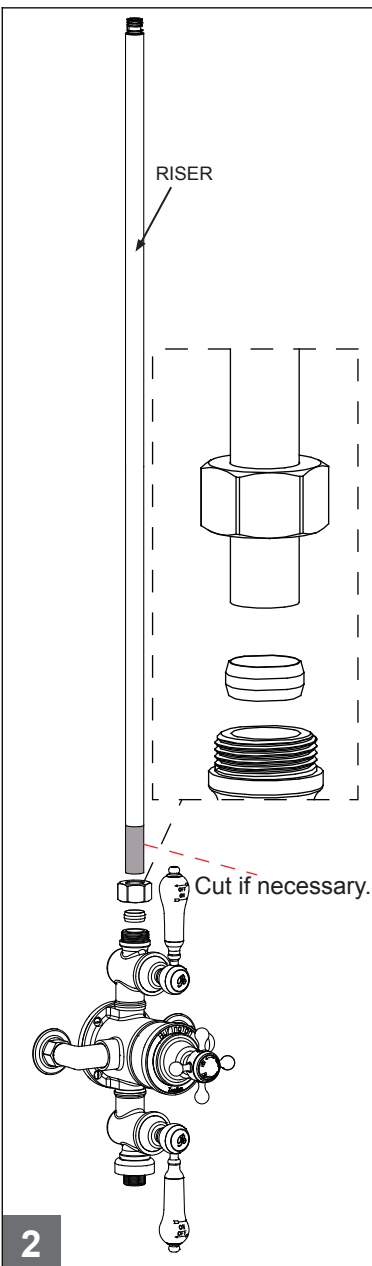
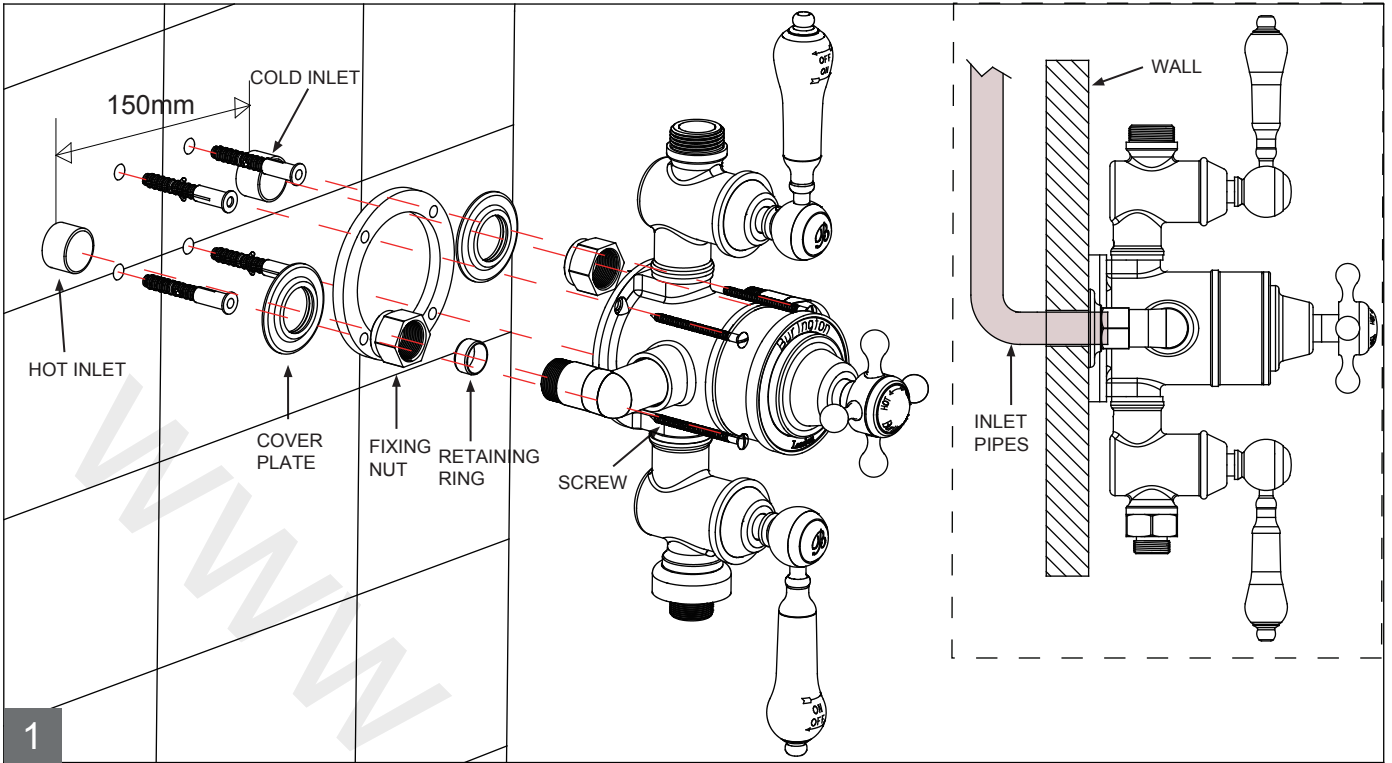
## Dimension

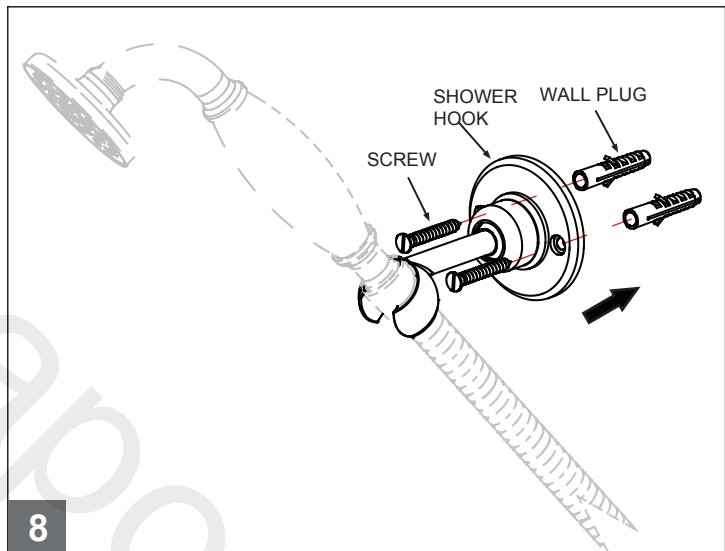
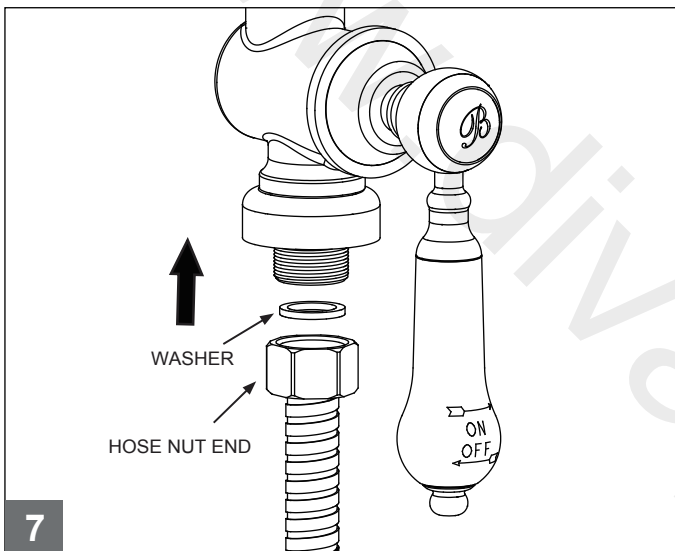
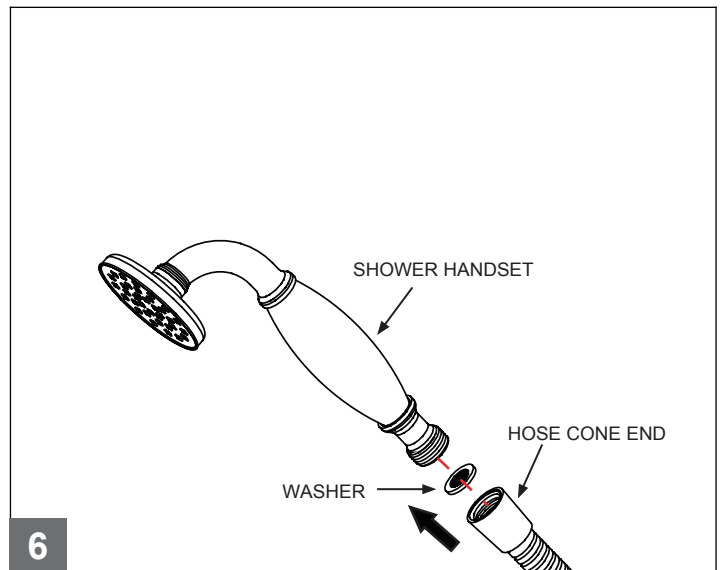
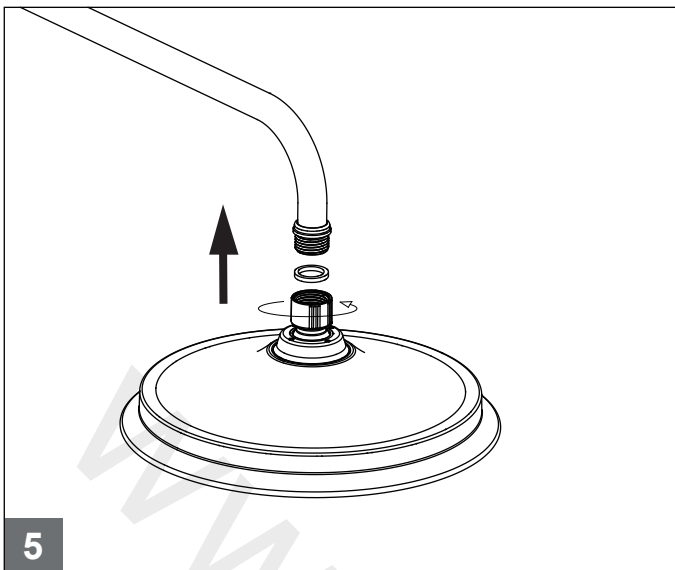


## Parts Identification



# Installation





The valve should be installed in accordance with the water bye-laws. For further details refer to the latest copy of Water Bye-laws guide or your local water authority.

Note: Please check for any hidden pipes and cables before drilling holes in the wall.

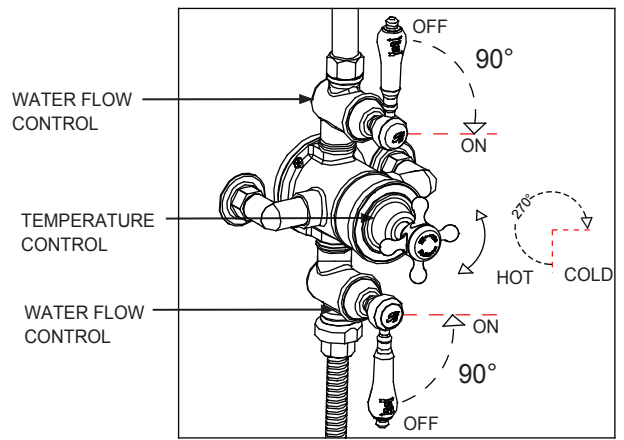
The fitting of isolation valves is required as close as is practicable to both hot and cold water supply inlets.

1. a: Determine the final installation position and installation height as per the dimension drawing on page 2.
- b: Prepare the water supply pipes (hot on the left and cold on the right) at the identified height with a width of 150mm centers. Make the ends of pipes 20-25mm out from the face of wall.
- c: Put the shower valve against the wall, mark the position of the 4 fixing holes following the plate.
- d: Drill 4X8mm holes on the wall to a depth of 45mm and insert wall plugs.
- e: Push the shower valve over each pipe. Slide the cover plates against the wall, join inlet elbows to hot/cold pipe from the wall.
- f: Finally mount the shower valve onto the wall by screwing into the 4 screws.
2. Install the riser into the shower valve (see Fig 2).
3. Install the wall bracket onto the wall to hold the riser (see Fig 3).
4. Insert the shower arm into the riser (see Fig 4).
5. Put the shower head onto the shower arm (see Fig 5).
6. Connect the hose cone end to the shower handset (see Fig 6).
7. Connect the hose nut end to the bottom of shower valve (see Fig 7).
8. Make sure the shower hook at a suitable position, fix it onto the wall (see Fig 8).
9. Check that if all is tight. If that is, then test and begin to use.

## Operation

1. Turn the water flow control handle to increase/decrease the water flow and turn on/off.
2. Turn the temperature control handle to increase/decrease the water temperature.
3. The temperature control knob is pre-set the auto stop at 42°C to avoid scalding.

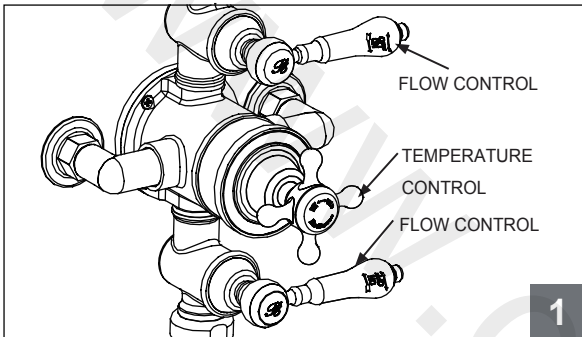
However, if for any reason the setting is removed it is important to follow "Temperature Setting" procedure to reset.



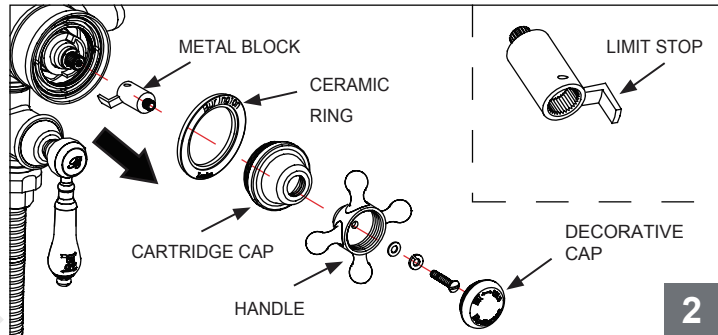
## Temperature Setting

The temperature control handles on this product are factory set and should require no adjustment.

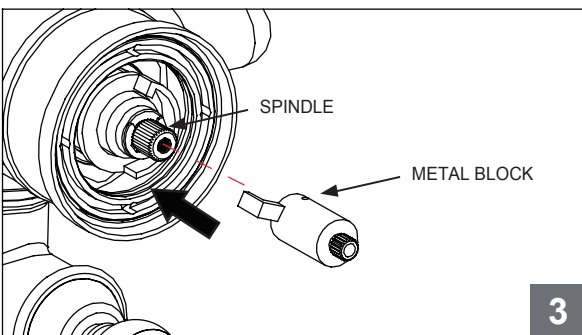
However, if for any reason the handles and/or the cartridge is removed it is important the following procedure is followed.



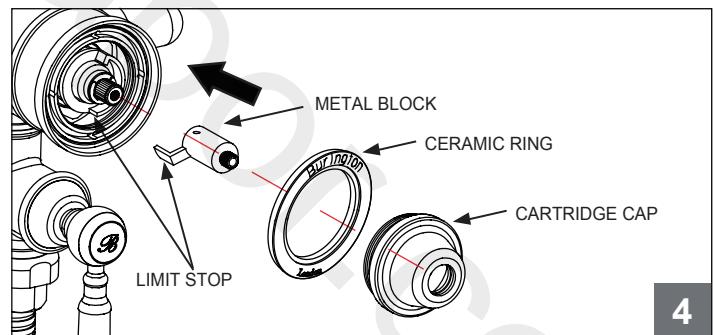
- A) Turn flow control handle to maximum flow position, and temperature control handle anti-clockwise until it contacts the internal limit stop.
- B) Allow the water temperature to stabilize around 3 minutes and check the temperature by thermometer.
- C) Proceed if temperature is not 42°C.



- A) Turn off the water
- B) Unscrew the decorative cap on the temperature control handle.
- C) Unscrew and remove the handle.
- D) Unscrew and remove the cartridge cap.
- E) Pull off the metal block with limit stop on the backside.



- A) Temporarily refit the metal block until it just engages on the splines of the spindle.
- B) Turn on the water.
- C) Slowly turn the metal block in the required direction until the discharge temperature is achieved.
- D) Remove the metal block when finished.



- A) Without rotating the temperature spindle, replace the metal block so that limit stop inside metal block up to the right hand side of the limit stop on the plastic block.
- B) Refit and tighten the cartridge cap and screw. Refit and tighten the decorative cap.

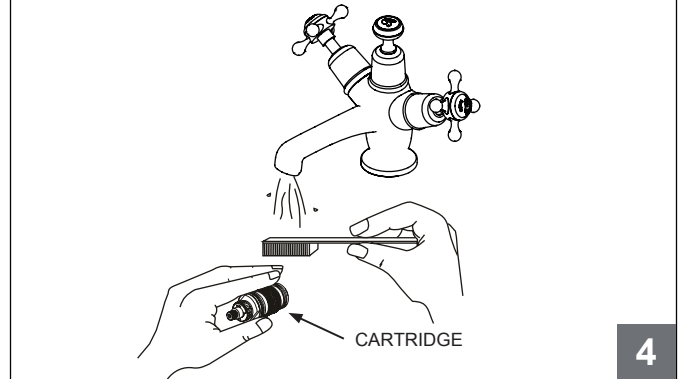
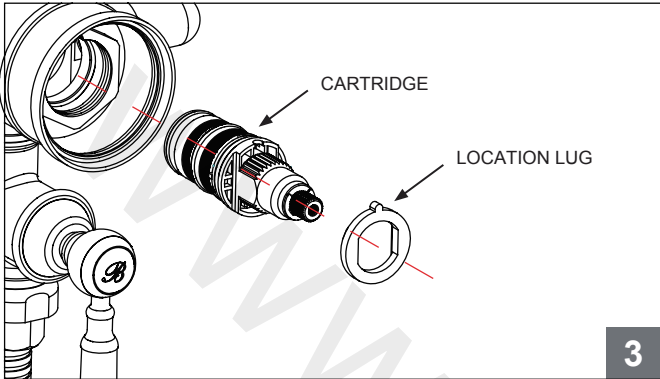
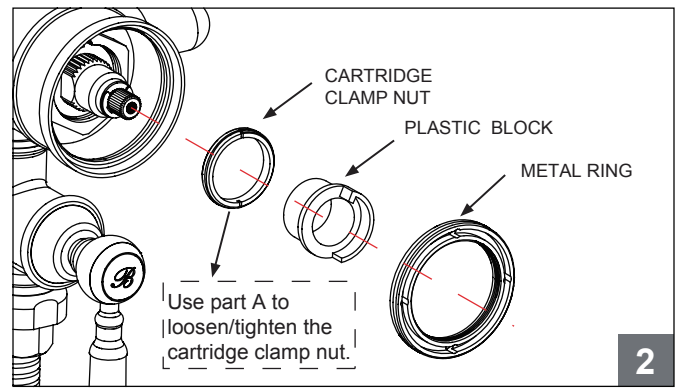
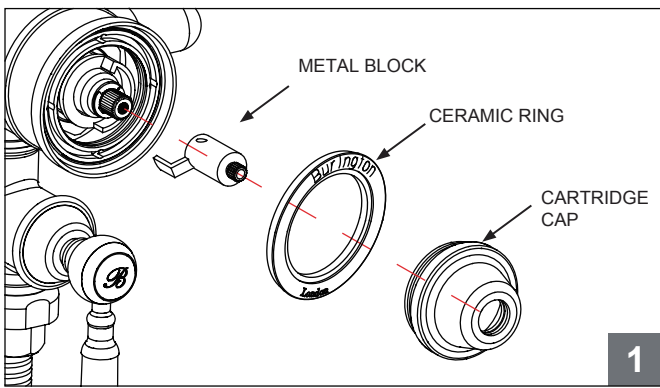
## Maintenance (Thermostatic Cartridge)

\* After a long time usage of thermostatic valve, there will be some waste debris from the water pipe on and around the thermostatic cartridge, which will affect the flow and sensitivity of automatical temperature adjustment. Please take out the thermostatic cartridge, and clean the cartridge strainer

\* To avoid damage, please remove all finished parts before any maintenance takes place.

- A) Remove the cartridge cap, ceramic ring and metal block (see Fig. 1).
- B) Remove the metal ring, plastic block and cartridge clamp nut (see Fig. 2).
- C) Pull out the cartridge together with location lug (see Fig. 3).
- D) Wash the cartridge with clean running water, dry and lightly grease the seals (only use silicone grease) (see Fig. 4).
- E) Replace the cartridge and make sure it back to the primary position.

\* Cartridge Type: " SP32 " is the spare part number of thermostatic cartridge.



## **Commissioning & Annual Test**

The installation of thermostatic mixing valves must comply with the requirement of the Water Supply (Water Fittings) Regulations 1999. Type 2 valve must be tested once a year, to check if it is out of the original maximum temperature set.

1. Prepare a calibrated thermometer.
2. Adjust to maximum water temperature.
3. Allow water running 5 seconds for stability, measure the mixed water temperature at the outlet.
  - The mixed water temperature at the outlet should never exceed 42°C for showers.
  - The mixed water temperature at the outlet should never exceed 46°C for bath filler.

**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.

IF NOT, then the adjustment of the temperature is necessary following the "Temperature Setting"

4. Close the isolating valve at the Cold water supply. While the flowing is residual, and the water temperature has no any change obviously from the initial maximum temperature set.
5. Reopen the Cold supply, retest the water temperature. if also having no change obviously. Then the valve is working correctly, no further service work is required.

## **Trouble Shooting**

1. Output water temperature does not correspond with temperature set

Cause: Thermostat has not been adjusted base on the existing home water system

Remedy: Adjust the thermostat, refer to "Temperature Setting" procedure.

Cause: Hot Water temperature too low.

Remedy: Adjuster the water heater, increase hot water temperature to 65°C

2. Crossflow, cold water being forced into hot water pipe, or vice versa, when valve is closed

Cause: check valves dirty or leaking

Remedy: Clean the check valves or exchange if necessary

3. Very low flow or no flow

Cause: Supply pressure inadequate

Remedy: Check hot and cold feeds. If a pump has been installed, please check to see if the pump is working.  
(the valve will shut down if either the cold or hot water supply fails)

4. Water will not run hot enough when first installed

Cause: Wrong maximum temperature setting

Remedy: Adjust the maximum temperature, refer to "Temperature Setting" procedure.

## **Cleaning**

We do NOT recommend you use any household cleaners to clean the product. Because these cleaners change substance or formula too frequently. So product should be always cleaned only with soapy water and rinsing with clean water and drying with soft cloth.