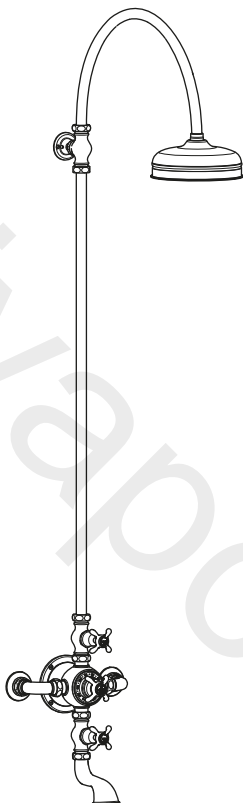


FR 8600 / FR 8610 / FR 8615 / FR 8620  
FR 8625 / FR 8630 / FR 8635

LA CHAPELLE THERMOSTATIC VALVE  
INSTALLATION GUIDE

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LEFROY BROOKS



## IMPORTANT INFORMATION

### Professional installation

We recommend that our products are fitted by a fully qualified professional plumber. They should be installed correctly and in accordance with all local water regulations. All products and connections should be accessible for routine servicing.

### Suits all systems

This Lefroy Brooks product is potentially suitable for every possible application, type of boiler and water supply pressure. However, for full 'power' shower performance it is advisable to fit a water pump if the supply pressure is below 1 bar. For systems with combination boilers, it is not advisable to fit pumps (refer to boiler manufacturer).

### Recommended supply temperatures

HOT = 55/60°C

COLD = 10/15°C

### Water quality

In hard water areas, a suitable water treatment system should be provided to prevent limescale deposits (calcium deposits) which may effect the long term performance of the thermostatic cartridge and ceramic cartridge. Exterior surfaces should be gently wiped with a dry soft cloth after use to minimise water stains and limescale deposits.

### Servicing

All serviceable parts are available to maintain your Lefroy Brooks product. We recommend periodic servicing to help maintain the best performance. See ('Servicing the thermostatic cartridge', 'Replacing the flow cartridge' & 'Replacing the non-return valve' sections). Time between servicing can vary as it is subject to usage and water quality.

### Access

It is important to leave suitable clearance and access to the valve and connections for future servicing.

### Flushing system

It is most important to flush out all pipework thoroughly before connecting the product. Failure to do so is the single most common cause of ceramic cartridge and thermostatic cartridge failure.

### Supply connections

The hot water supply must be connected to the left port and cold water to the right port as viewed from the front.

### Balancing flow

If there is a significant difference in water pressures between hot & cold supplies, we recommend an in-line flow suppressor/regulator (not supplied) be fitted. This should be fitted to whichever has the greater flow rate, in an accessible position close to the valve.

### Safety/Anti-scald

This thermostatic valve not only maintains a constant temperature to approximately plus or minus 1°C, but will automatically shut down completely on failure of hot or cold supplies.

### Fixing valve to wall

Secure the valve to the wall using suitable screws and wall plugs (supplied). All connections should be pressure tested before sealed behind the wall.

Due to the weight of the valve, it is important that a 'stud wall' be strengthened using wooden batons. The valve should be screwed to the batons to spread the load.

### Non-return valves

To protect your water system, non-return valves are fitted after the inlet elbows. These can be removed and cleaned if required.

### Testing

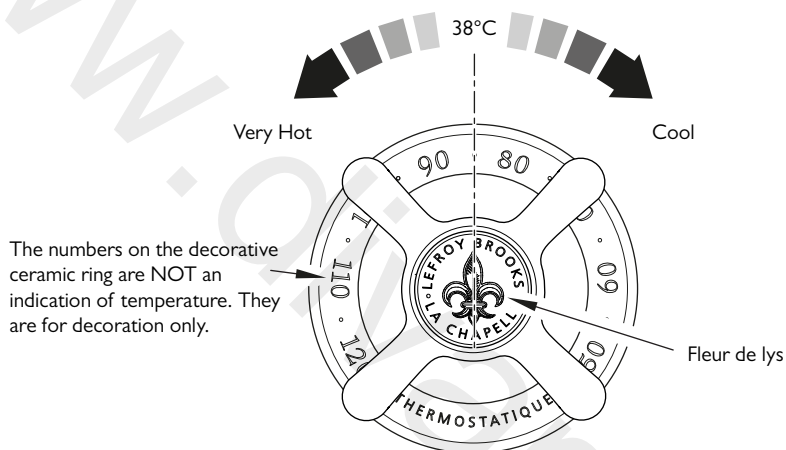
Before the pipework is sealed behind the finished wall surface it is important to pressure check all connections.

## DECORATIVE CERAMIC RING & TEMPERATURE OVERRIDE

The recommended safe temperature settings is 38°C.

For specific details please refer to local building regulations, current legislation, relevant standards and codes of practice.

This valve is supplied set at the required safe operating temperature, but is fitted with an override which allows the user to select higher temperatures if required. The override control is to be returned to the 'safe temperature' setting after use.



- 1 The thermostatic temperature control is supplied set to give a safe water temperature of approximately 38°C when the centre point of the 'fleur de lys' is set vertically.
- 2 The control handle can be rotated clockwise to reduce the temperature. When set to a cooler temperature it can be rotated counter clockwise to return to the 38°C setting.
- 3 If a warmer temperature is required the control handle must be gently pulled forward to rotate it counter clockwise. This will override the 38°C safe temperature setting. Care must be taken to ensure the water temperature does not become too hot.
- 4 The override control is to be returned to the 'safe temperature' setting after use. To do this, rotate the control handle clockwise until it moves backward. It should no longer be possible to rotate the control handle passed the 'safe temperature' setting.

### **Duty of care**

Legislation dictates recommendations and guidelines on health and safety, including safe hot water temperatures. The emphasis is on regulatory and design criteria, with responsibility for meeting such guidelines being that of a suitably appointed responsible person.

### **How hot water temperatures affect the skin**

65°C – A partial thickness burn in about 2 seconds

60°C – A partial thickness burn in about 5 seconds

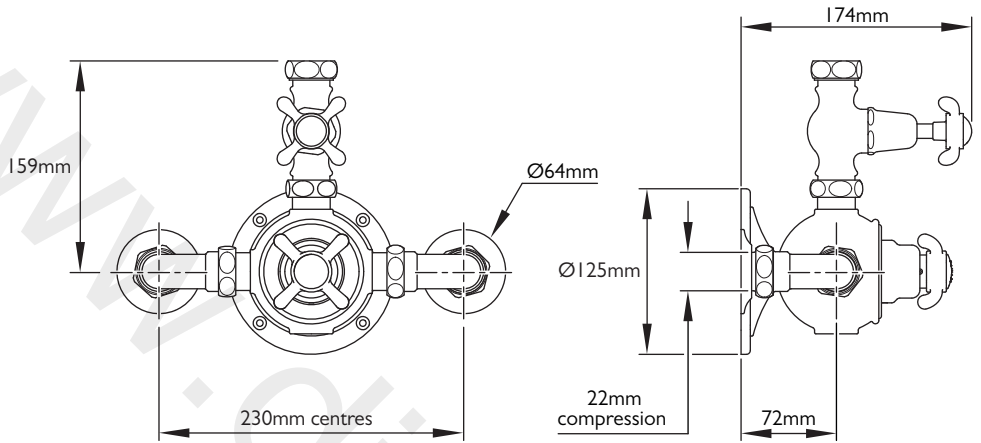
55°C – A partial thickness burn in about 15 seconds

50°C – A partial thickness burn in about 90 seconds

### **Safe temperature**

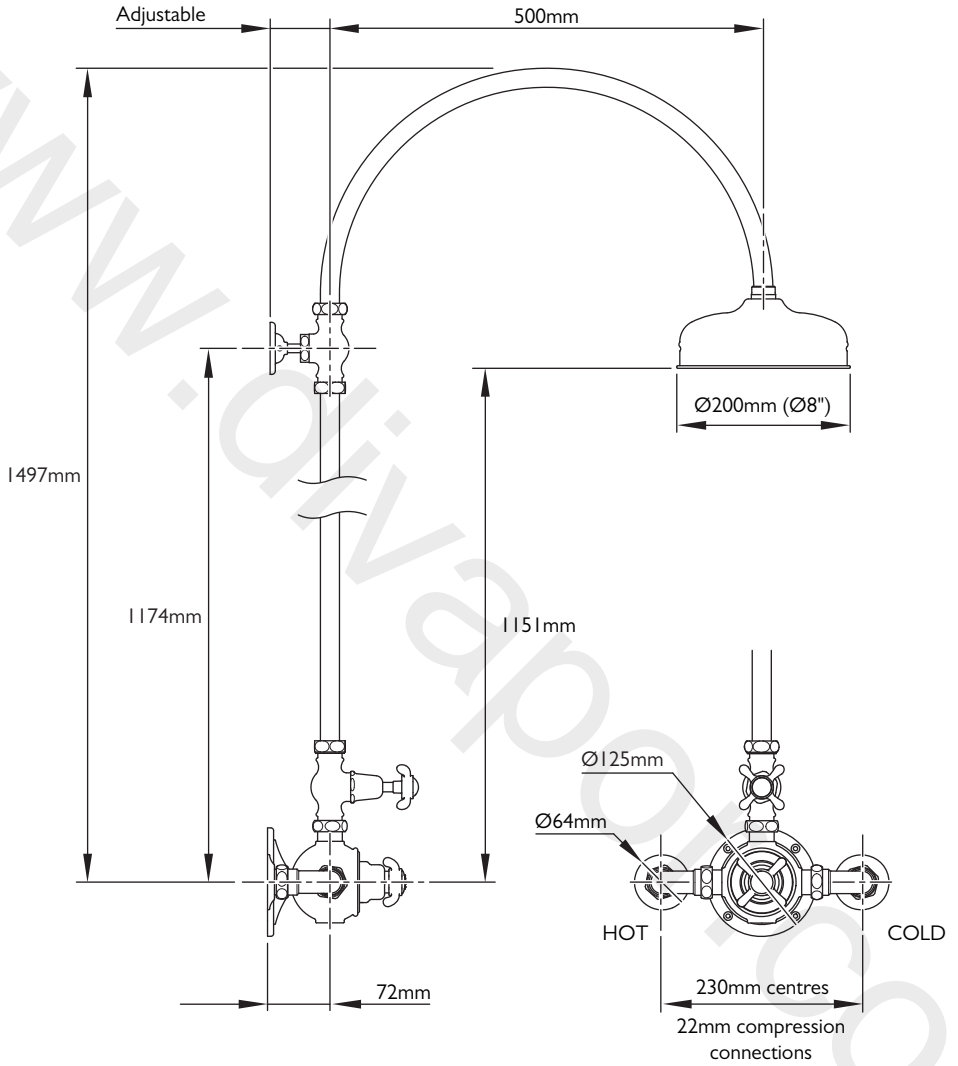
The age, mental and physical capabilities of persons occupying the property will effect the 'safe temperature' setting of the thermostatic valve. For specific details please refer to local building regulations, current legislation, relevant standards and codes of practice.

# DIMENSIONS FOR FR 8600 MODEL



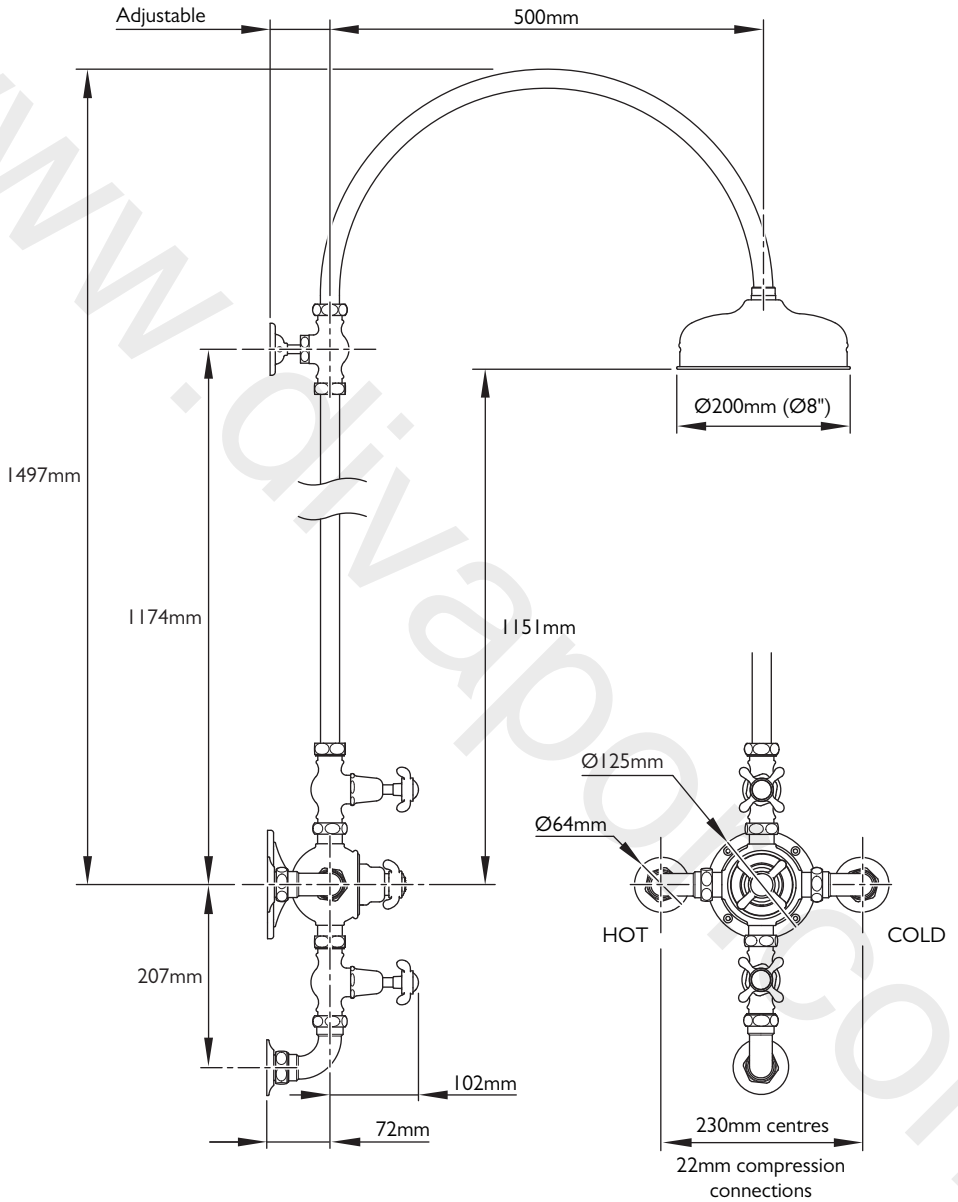
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# DIMENSIONS FOR FR 8610 MODEL



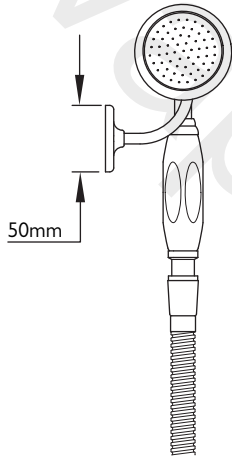
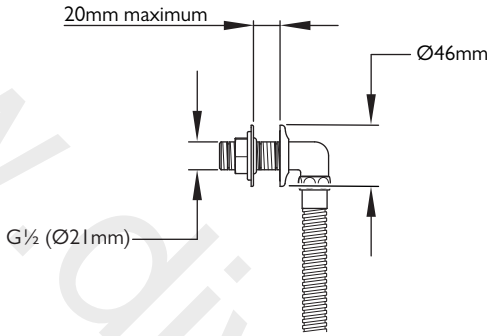
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# DIMENSIONS FOR FR 8615 MODEL



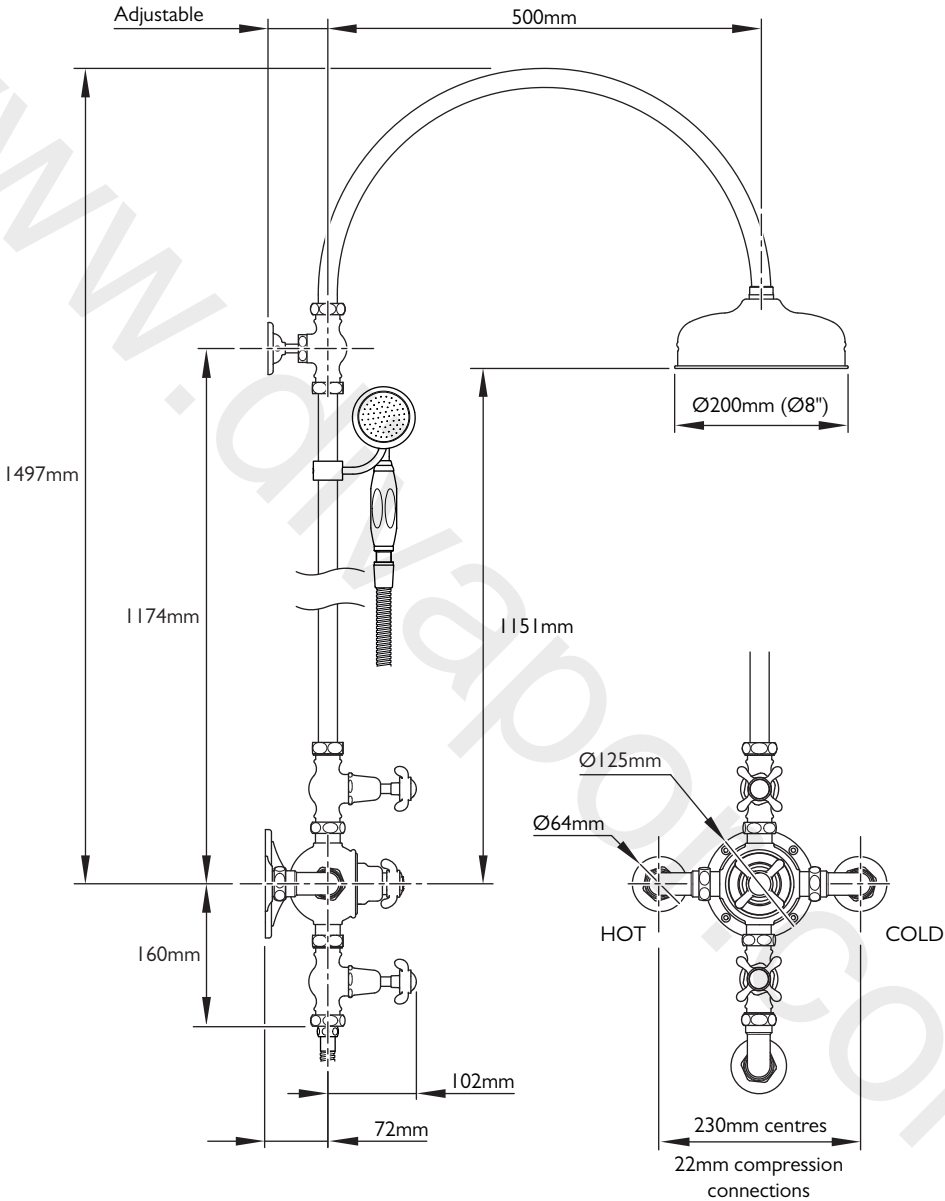
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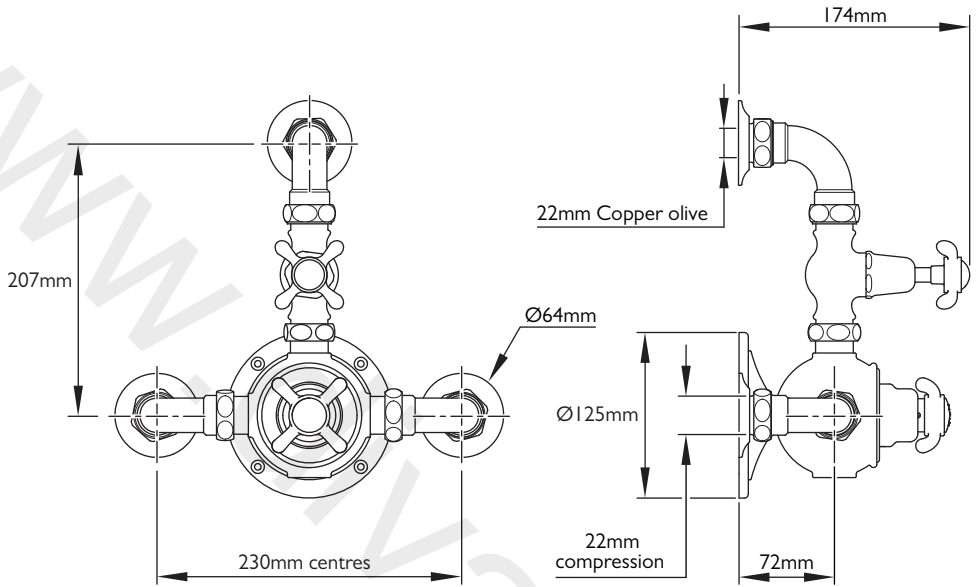
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# DIMENSIONS FOR FR 8620 MODEL



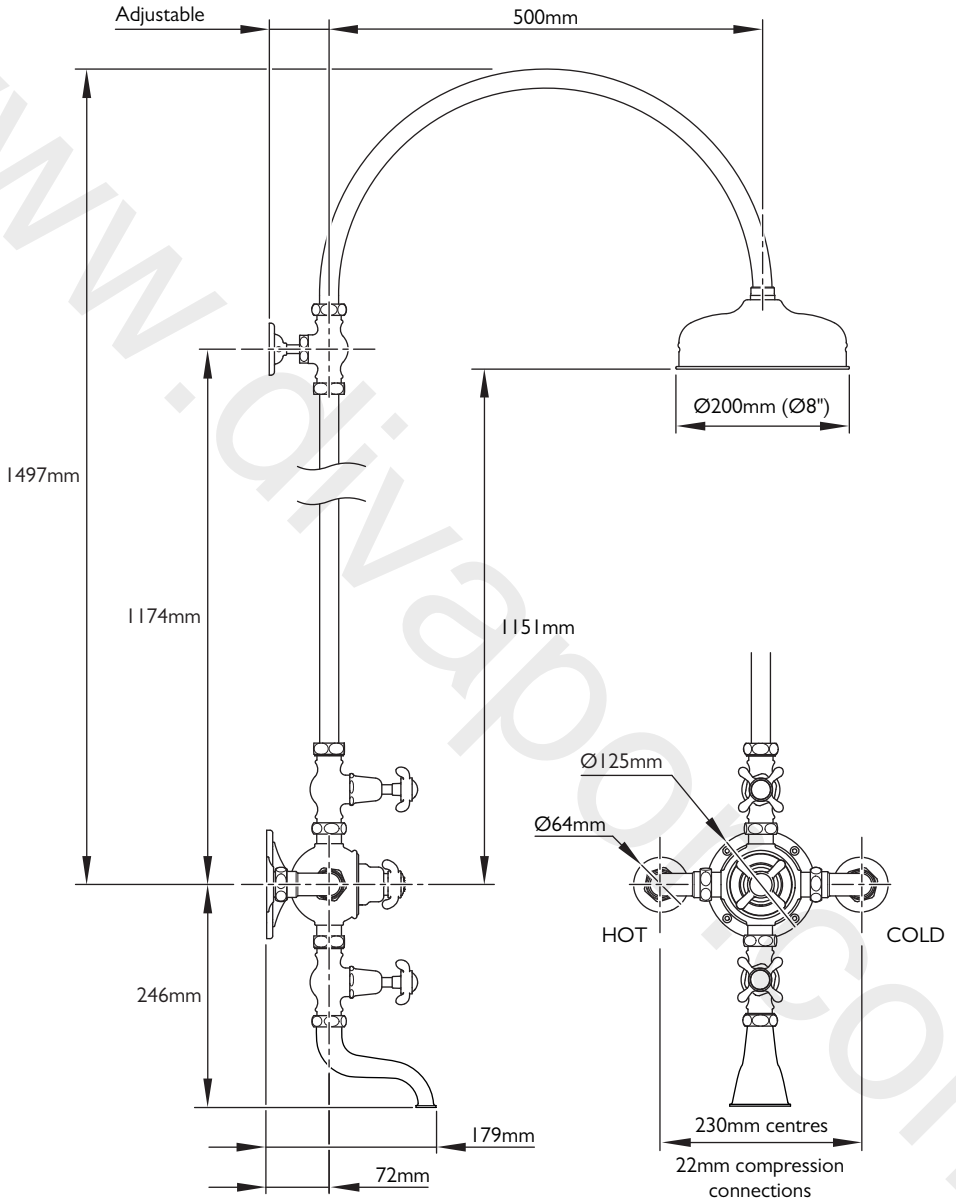
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# DIMENSIONS FOR FR 8625 MODEL



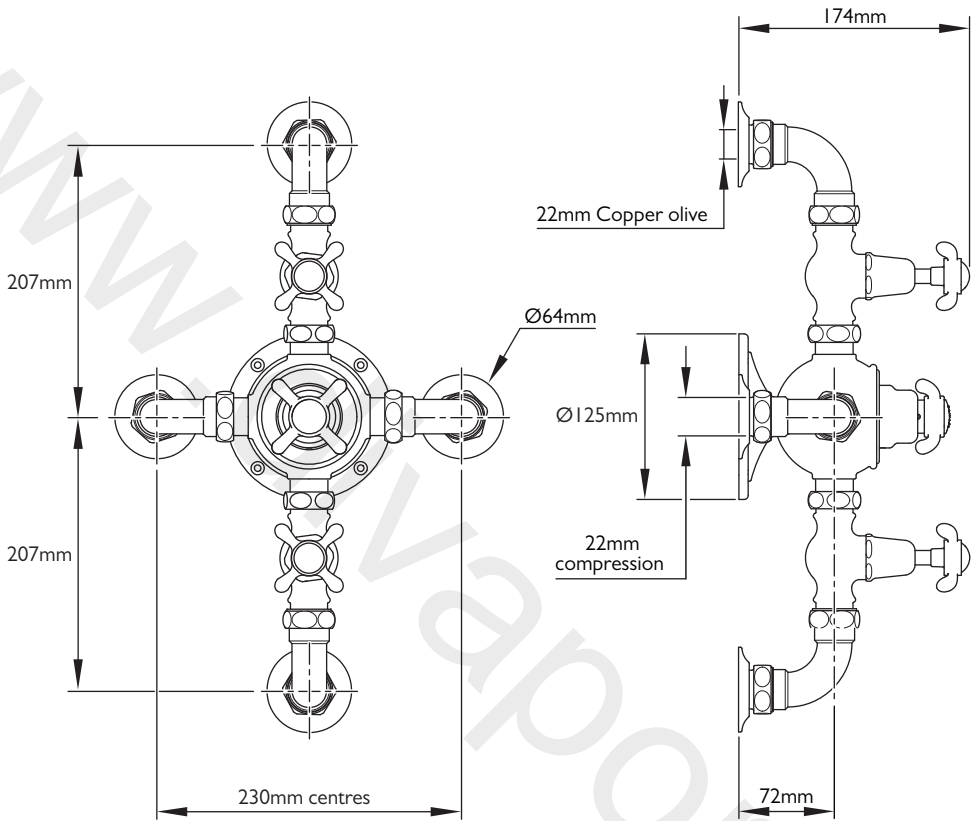
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# DIMENSIONS FOR FR 8630 MODEL



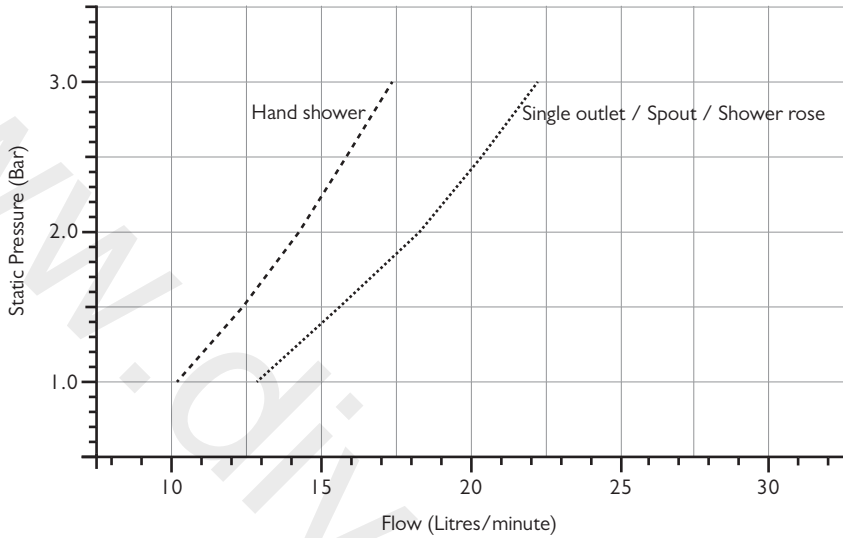
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# DIMENSIONS FOR FR 8635 MODEL



Not to scale

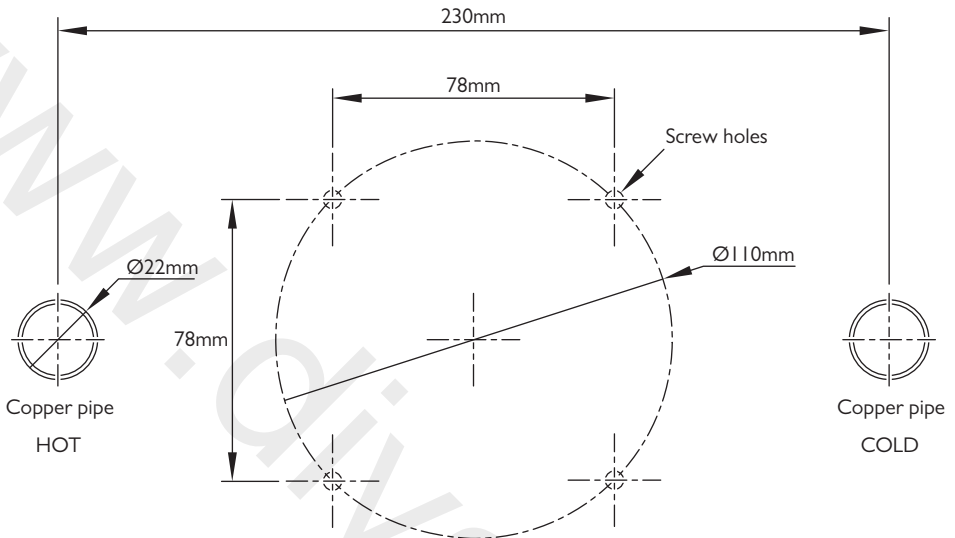
## TYPICAL FLOW RATES



Note: Balanced pressures shown are applied directly to the hot and cold inlets; flow rates indicated are free flowing and may vary subject to restrictions created by installation, pipework, layout or application. The outlet temperature during testing was 38°C.

## PREPARATION

Wall positions for supply pipes & wall plate.



For dimensions of outlets for specific models please refer to the appropriate 'dimensions' section.

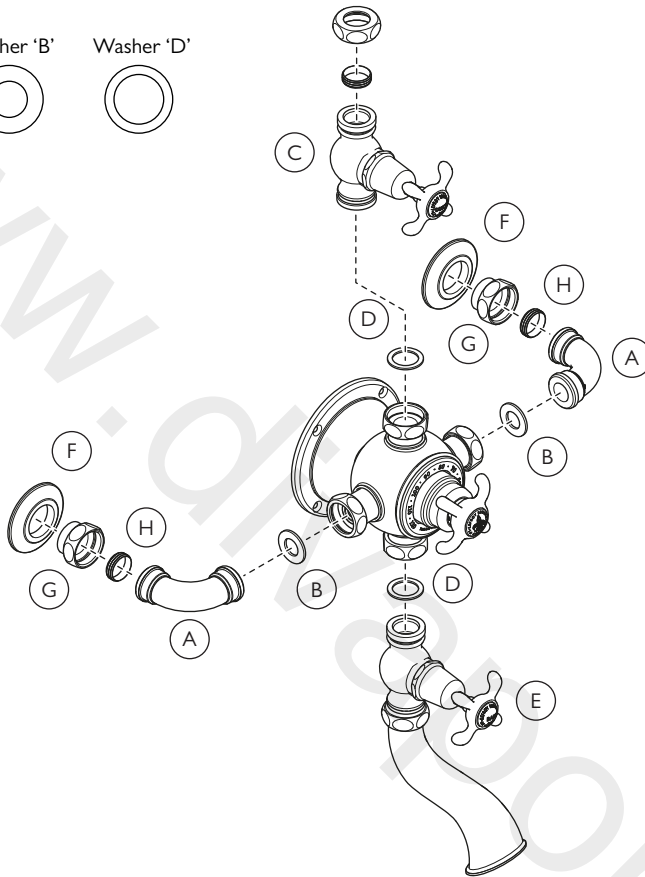
- 1 Mark the positions for the supply pipes and mounting bracket on to the mounting surface.
- 2 The  $\text{\O}22\text{mm}$  supply pipes should be secured at 230mm centres and protrude at least 50mm. Allow for tile thickness and cut to length (approximately 30mm) later.
- 3 Once the pipes are installed they should be flushed to remove debris.
- 4 Mark the wall plate screw holes on the wall. The wall plate can be removed from the rear of the thermostatic valve if required. To do this, unscrew and remove the securing nut using a 24mm A/F spanner/socket. Replace the wall plate in the reverse order when marking is complete.
- 5 Drill suitable sized holes in the mounting surface for the chosen wall plugs/fixings. Always ensure that pipework is not present behind the area to be drilled.
- 6 Where applicable there may be outlet pipes required. For dimensions of outlets for specific models please refer to the appropriate 'dimensions' section.

## ASSEMBLY & INSTALLATION

Washer 'B'



Washer 'D'



All joints should be 'hand tight only' until assembly and installation is finalised.

- 1 Assemble the inlet elbows (A) to the body of the thermostatic valve. Ensure that the washers (B) are in place.
- 2 Where applicable, assemble the upper flow control (C) to the top of the thermostatic valve. Ensure that the washer (D) is in place. There is an arrow on the rear of the body that indicates the direction of water flow.
- 3 Where applicable assemble the lower flow control/spout/shower hose (E) to the bottom of the thermostatic valve. Ensure that the washer (D) is in place. There is an arrow on the rear of the body that indicates the direction of water flow.
- 4 Apply a small amount of silicon to the rear of the crack cover plates (F). Locate these onto the protruding inlet/outlet pipes.



- 5 Locate the compression nuts (G) and olives (H) onto the protruding inlet/outlet pipes.
  - 6 Locate the thermostatic valve and secure to wall using screws.
  - 7 Where applicable continue with the installation to install the riser/hand shower/shower rose.
  - 8 Using the nut protector supplied, tighten all joints fully to provide a water tight seal. The nut protector will prevent damage to the surface finish.
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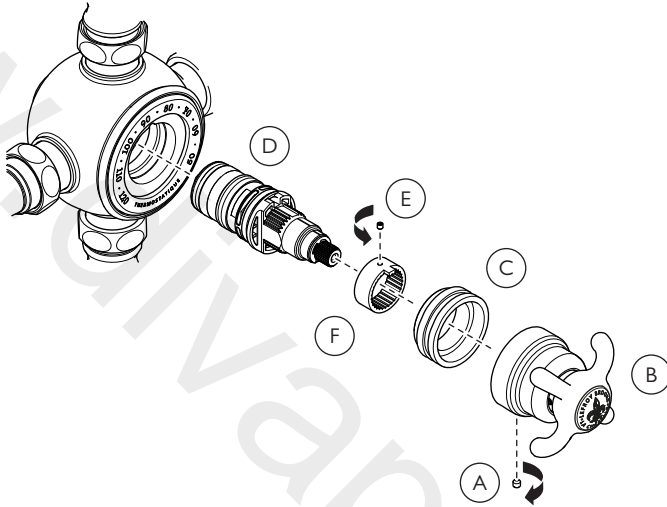
## TESTING FOR LEAKS

### Testing:

- Turn on the hot & cold mains supplies.
- Where applicable, lift the hand shower from the cradle and aim into bath.
- Turn the flow controls to the 'on' position (fully counter clockwise). Check for leaks and tighten joints as required.
- Turn the flow controls to the 'off' position (fully clockwise). This will pressure test all joints except the upper nut(s) above the upper flow control. Check for leaks and tighten joints as required.
- Turn the flow controls to the 'off' position (fully clockwise).

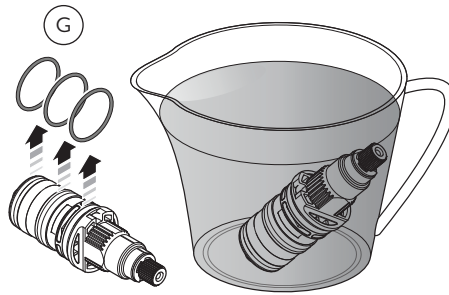
## SERVICING THE THERMOSTATIC CARTRIDGE

If after a period of time you experience temperature problems with your thermostatic valve, particularly if you are in a hard water area, it is quite common for limescale deposits to have formed in the thermostatic cartridge. We recommend you remove the cartridge and soak it in a descaling fluid which normally resolves the problem. It is difficult to set a regular servicing time scale as it is subject to water conditions and usage.



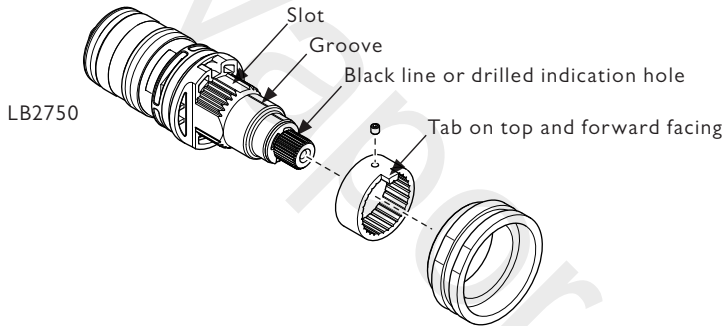
1 To remove the thermostatic cartridge, unscrew and remove the set screw (A) from the handle assembly (B) using the hexagonal key supplied. Gently pull the handle assembly to remove.

- 2 Unscrew and remove the locking nut (C).
- 3 Pull out thermostatic cartridge (D).
- 4 Unscrew and remove set screw (E) from the index ring (F). Slide index ring (F) from the thermostatic cartridge.



5 Check the 'O' rings (G) for damage (ie. cuts or tears). A set of three replacement 'O' rings are available (PTS027). Remove the 'O' rings before soaking the cartridge in descaling fluid. Soak the cartridge according to the instructions on the descaling fluid packaging. Rinse under cold water.

6 Fit/replace the 'O' rings (G).



**Important note:**

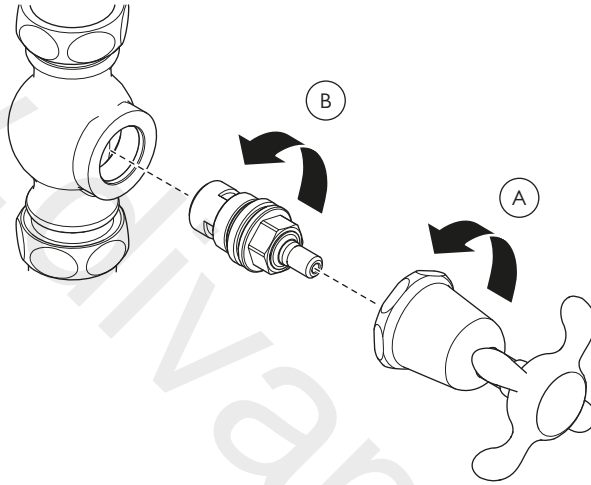
For an approximately 38 °C setting, align the 'key setting points' shown. Once assembled, check the water temperature with a thermometer. Gently rotate the splines at the end of the cartridge by hand to make final adjustments. Do this before fitting the handle assembly.

- 7 Once the 'key setting points' have been aligned and 'O' rings (G) fitted, apply a smear of silicon grease to the 'O' rings and firmly push the thermostatic cartridge (LB2750) into the valve body with the groove pointing upwards. Secure using the set screw removed previously.
- 8 Fit the index ring ensuring that the protruding tab is on top and forward facing.
- 9 Fit the locking nut.
- 10 Fit the handle assembly ensuring that indice graphics are correctly orientated. Secure using the set screw removed previously.

## SERVICING – FLOW CARTRIDGE REPLACEMENT

If after a period of time you experience problems with your spout/shower/hand shower developing a regular and constant drip after use, it is normally an indication that the flow cartridge that supplies water to them requires replacement.

Applies to all flow cartridges.

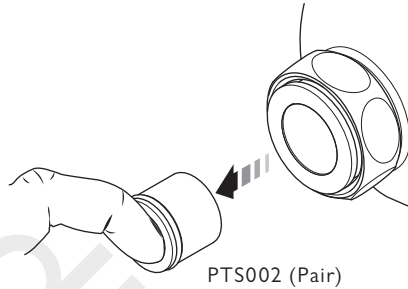


Before continuing please ensure that the water supplies have been isolated and drained where necessary.

- 1 To remove, support the body of the housing, grasp the handle shroud(s) and unscrew to remove (A).
- 2 Using a 17mm a/f spanner or socket unscrew the cartridge(s) and remove (B).
- 3 Check inside the housing for any debris or limescale. Wipe clean as required.
- 4 Screw in new ceramic cartridge(s) and tighten using a 17mm spanner or socket.
- 5 Open the water supply/supplies.
- 6 Check for leaks.
- 7 Replace the handle(s) ensuring that any indice(s) graphics are correctly orientated.
- 8 Check operation of the cartridge(s).

## SERVICING – NON-RETURN VALVES REPLACEMENT

If after a period of time you experience problems with reduced water flow from your spout/shower/hand shower, this could be due to blockage in the non-return valves.



- 1 Isolate the hot and cold water supplies before the valve.
- 2 Remove the thermostatic valve from the wall.
- 3 Unscrew and remove the elbows from the sides of the thermostatic valve. Use a nut protector or ensure that the jaws of the spanner are wrapped in tape to prevent damage to the surface finish of the nuts.
- 4 Place a finger into the end of the non-return valve and pull the non-return valve out of the valve body.
- 5 Before installing the replacement non-return valve(s) apply a small amount of silicone grease to the rubber 'O' ring. Assemble in reverse order.

## DOs

- Check all joints and connections.
- Ensure that the 'safe temperature' has been set.
- Ensure that the thermostatic valve, connected controls and outlets work satisfactory.
- Instruct the customer how to override the 'safe temperature' setting. Also ensure the customer knows the dangers of overriding the setting and understands that the override control is to be returned to the 'safe temperature' setting after use.
- Hand these instructions along with the cleaning leaflet to the customer.
- Ensure that the valve is suitably protected from damage and decorating materials during installation.

## DON'Ts

- Do not use excessive force when turning the thermostatic cartridge spindle. This will damage the cartridge. To avoid damage, when setting the 'safe temperature' the thermostatic cartridge spindle must be turned by hand only. The spindle will require only minor adjustment. **Turning the spindle to the end of its travel and forcing it beyond this point will cause internal damage to the thermostatic cartridge.**





CONTRACT ENQUIRIES

+44 (0)1992 708 316

[info@lestroybrooks.co.uk](mailto:info@lestroybrooks.co.uk)

CUSTOMER SERVICE, SPARES & TECHNICAL ENQUIRIES

+44 (0)1902 390 894

[technical@lestroybrooks.co.uk](mailto:technical@lestroybrooks.co.uk)

LEFROYBROOKS.CO.UK

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