

## Customer/technical services

For any technical or installation queries please contact VADO on 01934 745163.

## Guarantee

This product is guaranteed against manufacturing defects from the date of purchase until the expiry of the relevant guarantee period shown below.

### The guarantee is only valid if:-

1. The product has been installed, used and maintained in accordance with Vado's instructions and subjected to normal use only.
2. The defect is not due to use of an unsuitable or inadequate water or power supply.
3. The defect is not due to accident, misuse, neglect or repair other than by Vado or Vado authorised agents or damage caused by foreign objects or substances.
4. We have received from you the completed Guarantee Registration Form. Vado accepts no responsibility for any forms lost in the post and returns by registered means is therefore recommended.

Under this guarantee (which is non-transferable) Vado will, at its option, repair or replace free of charge any product (or replacement part) found to be defective. The guarantee does not extend to any consequential loss or damage. After repair or replacement the relevant guarantee period will be calculated from the original date of purchase.

### The relevant guarantee periods are:-

1. Twelve years on chrome finish products.
2. Six years on Vado Identity products.
3. Three years on all other products with the exception of Stuart Turner Pumps which carry a 2 year Guarantee on Monsoon Range and 1 Year Guarantee on Showermate Range.

All claims under the guarantee must be submitted in writing to the person who supplied the product to you and must be received no later than the last day of the relevant guarantee period. All claims must be accompanied by proof of purchase (sales receipt or delivery note).

Vado operates a policy of continuous product development and therefore reserves the right to change the product, packaging and documentation specifications without notice.

This guarantee is in addition to and does not affect your statutory rights as a consumer.

### VADO

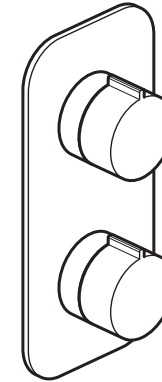
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tel 01934 744466 fax 01934 744345  
technical@vado.com  
www.vado.com

### GUARANTEE REGISTRATION

NAME				
ADDRESS				
	POSTCODE			
RETAILER				
ADDRESS				
	POSTCODE			
PURCHASE DATE	ARTICLE NUMBER	(SEE BOX)		
PRODUCT DESCRIPTION				
WHO INSTALLED THE PRODUCT?	RETAILER	PLUMBER	BUILDER	SELF
FOR VADO USE				



## Installation & maintenance instructions



## altitude

Concealed 2 handle - 2 way thermostatic shower valve  
with rectangular backplate, 3/4"

Please leave these instructions with the customer

## Important - please read

Please read these instructions carefully before starting installation and keep for future reference.

Remove all packaging and check the product for missing parts or damage before starting installation.

Any alterations made to this product and fittings may infringe water regulations and will invalidate the guarantee.

The installation must comply with all Local/National Water Supply Authority Regulations/Byelaws and Building and Plumbing (UK:BS6700) Regulations.

We strongly recommend that you use a qualified and registered plumber.

## General installation

### Thermostatic Valves

This mixer valve is suitable for any water system. Where instantaneous heaters are used, the flow of hot water sufficient to start and go on burning must reach the minimum flow required – as specified by the heater manufacturer.

These fittings are mixing devices and therefore water supplies must be reasonably balanced.

Depending on the installation arrangement, additional WRC approved single valves may be required on each of the hot and cold inlets. Please contact your local water authority for more information.

Before making any inlet pipe connections, all supply pipes MUST be thoroughly flushed to remove debris. Failure to do so could result in damage or low flow from the mixer unit. Water Supply (Water Fittings) Regulations 1999 Schedule 2 Section 13.

The fitting of isolating valves to the inlet feeds is advised for ease of maintenance.

The fitting of strainers is recommended as close as is practicable to the water supply inlets of the thermostatic mixing valve

Please take great care when installing this mixer not to damage its surface.

Operating pressures (on hot and cold line) should be kept as balanced as possible in order to assure optimum efficiency.

Note: When pressure is higher than 5 bar a pressure reducer is required to be fitted before the valve.

Please note if installing in an enclosed environment, access should be left for servicing and maintenance. No costs relating to inadequate access can be accepted.

## Operating Specifications

### Hot Water Supply Temperature:

Maximum: 80° C

Minimum: 10° C higher than the maximum required mixed temperature (advise 65° C)

### Operating Pressure

Maximum: 5 bar

Minimum: 0.2 bar (1 bar if used as a bath fill)

## Maintenance

We advise that the below is carried out annually as failure to do so may result in invalidation of warranty.

**Shut off the water supply to both hot and cold inlets, before commencing any maintenance work below.**

### IMPORTANT:

**Please see the below procedure for isolating concealed thermostatic valves.**

1. Remove handles/faceplate and trim parts allowing access to the isolation points on the valve.
2. Screw down the isolation screws clockwise until you feel a resistance (taking care not to over tighten).
3. Turn shower on to check isolation, please ensure that your body/hands are not under the flow of water as there is a potential for delivery of hot water.
4. Remove temperature stop ring (essential).
5. With shower in the on position, replace temperature handle on thermostatic valve (ensure temperature stop ring has been removed).
6. Turn temp handle fully anti clockwise until stop point is reached and can be turned no further, please ensure that your body/hands are not under the flow of water as there is potential for delivery of hot water if isolation has been unsuccessful.
7. Turn temperature handle fully clockwise until you feel a click.
8. If there is no flow of water coming from the outlet during both points 6 and 7 isolation has been successful, you may now remove and maintain the cartridge.
9. If at any of the above points water continues to flow please isolate at an alternative point within the system for both hot and cold and repeat points 3-9.

## Care of the mixer

Our products are finished to the highest standard and due care needs to be taken to ensure their looks are retained.

We recommend cleaning all products with a soft damp cloth ONLY and advise strongly against the use of ALL cleaning products i.e. powders and liquids.

If the above instructions are not followed this will invalidate your guarantee in the event of a problem occurring.

## Temperature resetting

The valve has been factory set under balance pressures and hot water supply at 65° C. When your specific operating conditions are significantly different from the above, the temperature of the water may vary from the setting.

When the difference is too great, you can adjust the calibration of the valve to suit individual requirements of the installation:

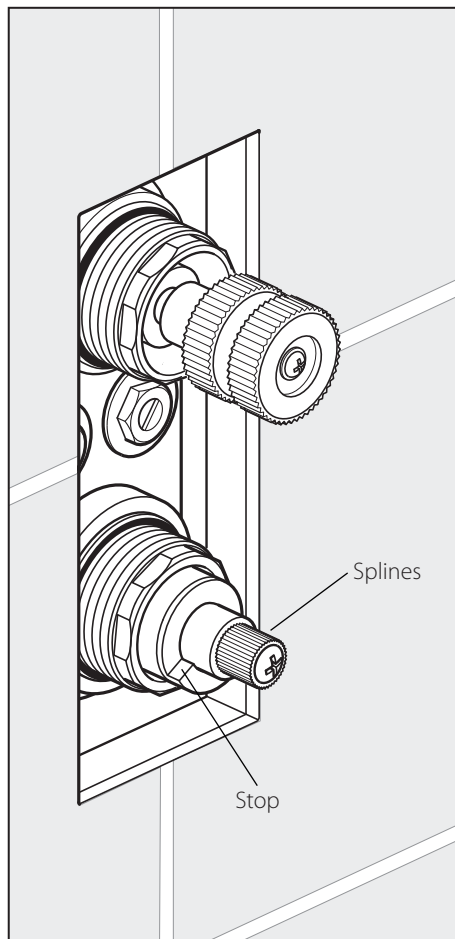
1. Check the temperature of the water being delivered to the outlet with a thermometer.
2. If the temperature is not 38° proceed to reset the calibration as follows:

Do not remove the plastic stop ring. Turn the spline of the valve clockwise to decrease the temperature and anti-clockwise to increase the temperature until 38° is achieved at outlet.

3. Ensure that the stop on the stop ring is at 8 o'clock.

When the handle is attached (see page 7) ensure the temperature does not exceed 46° when turned entirely anti-clockwise.

Your valve setting is now calibrated.



## Operating specifications

### Conditions of use for Type 2 valves

	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

**Note:** Valves operating outside these conditions cannot be guaranteed by the Scheme to operate as Type 2 valves.

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.

### Approvals & Application

#### BuildCert Approval Number BC1823

This thermostatic mixing valve has been independently tested by NSF and certified as meeting the requirements of the BS EN1111 specification under the TMV2 scheme as being suitable for use on the following designations: HP.

### Recommended outlet temperatures

The BuildCert TMV scheme recommends the following mixed water outlet temperature 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 temperature.

### Note:

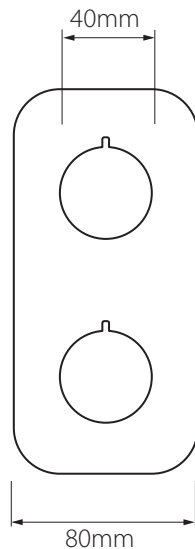
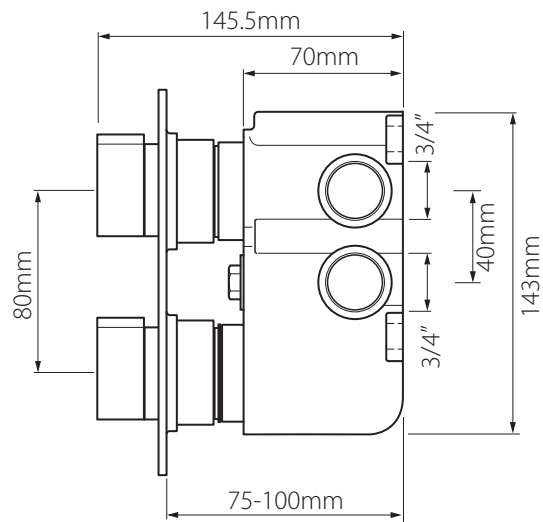
46° C is the maximum mixed water temperature from the bath tap. The maximum temperature takes account of the allowable temperature tolerances inherent in thermostatic mixing valves and temperature losses in metal baths.

### 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.

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.

## Dimensions



## Commissioning notes for Thermostatic Mixing Valves

Please check the following:

1. The designation of the thermostatic mixing valve matches the application.
2. The supply pressures are within the valves operating range.
3. The supply temperatures are within the valves operating range.
4. 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.

**Note: mix water temperature at terminal fitting should never exceed 46° C.**

It is a requirement that all TMV2 approved valves shall be verified against the original set temperature results once a year. When commissioning/testing is due the following performance checks shall be carried out.

Measure the mixed water temperature at the outlet.

Carry out the cold water supply isolation test by isolating the cold water supply to the TMV2, wait for five seconds if water is still flowing check that the temperature is below 46° C.

If there is no significant change to the set temperature ( $\pm 2^{\circ}\text{C}$  or less 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.

### 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.

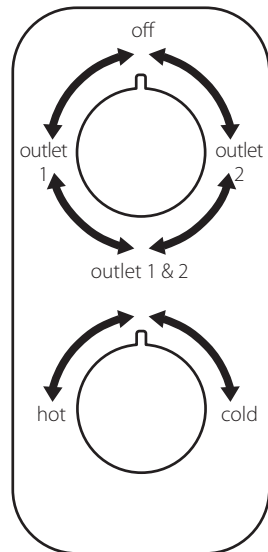
The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.

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

The installation of thermostatic mixing valves must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

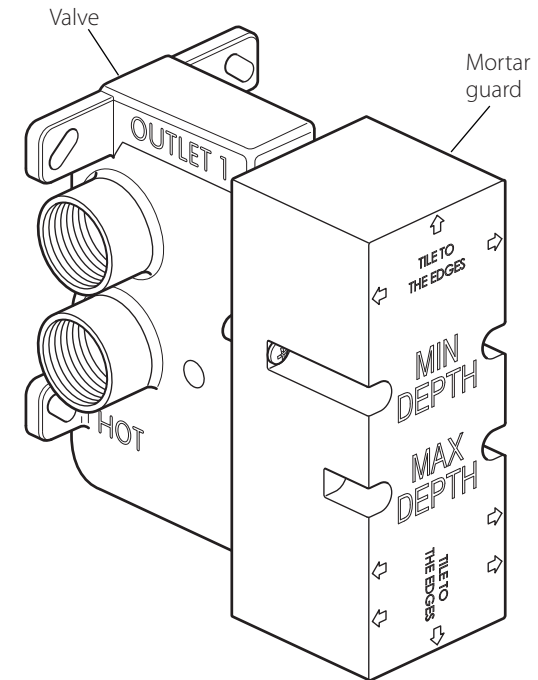
## Operation

Turning the top handle controls the flow of water to the top outlet.



Turning the bottom handle anti-clockwise will increase the water temperature.

## Installation - preparation



Rinse pipe work thoroughly before fitting the valve: do not allow dirt, metal particles or shavings to block the filters fitted on inlets.

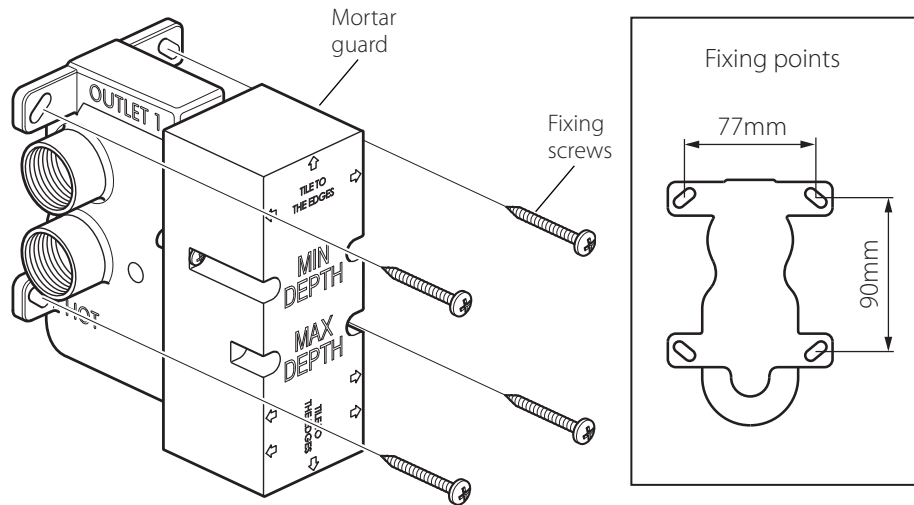
**Warning!** Please check for any hidden cables and pipes before drilling holes in the wall.

The valve must be set into the wall between (75mm minimum – 100mm maximum) If you are fitting the valve to a partition wall or a wall of particularly soft substrate you will need specialist fixings.

### Mortar guard

During and after installation protect the outer parts by leaving the mortar guard on the valve to avoid damage to plated surfaces.

## Installation



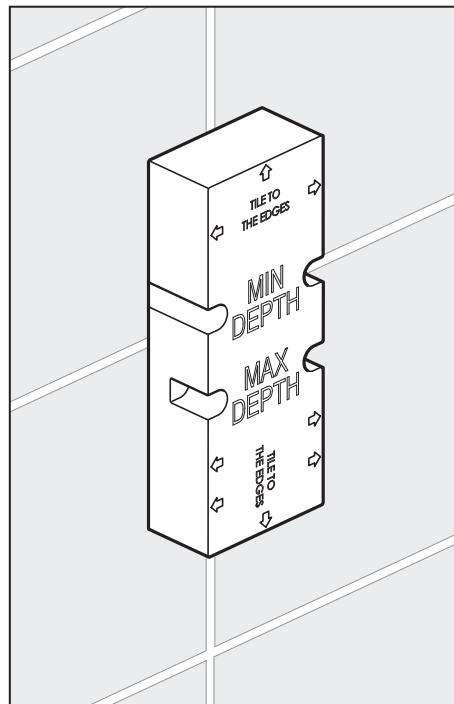
Select the position for the shower valve and offer the shower valve to the wall, make sure the valve is vertical with a level and mark the 4 fixing points with a suitable pencil, see above right for dimensions. Remove the shower valve from the wall, drill the holes to a suitable depth for the wall plugs and secure with suitable screws.

Connect hot supply to the lower left inlet of the valve and cold supply to the lower right inlet.

Connect the outlets to the desired channels e.g. outlet 1 to the shower and outlet 2 to the handset.

Finish the wall by tiling up to the mortar guard, keep the final finished wall surface between the min and max marks.

Unscrew the 2 mortar guard screws and remove from the wall.



## Installation - cover plates

### Altitude

Screw the shrouds to the valve. Slide the back plate over the valve being careful not to dislodge or damage the seal. Push the back plate up to the wall, apply a thin bead of silicone around the outside to seal against the tiled surface.

Place the handles on the splines and secure with the grub screws.

