

# Mira Verve Thermostatic Bath Shower Mixer Installation and User Guide

## MODEL NUMBERS

1591.006 - Wall Mounted, 1591.005 - Deck Mounted

**Important!** Please quote the above model number(s) when ordering spares

## IMPORTANT

**INSTALLER:** THIS MANUAL IS THE PROPERTY OF THE CUSTOMER AND MUST BE RETAINED WITH THE PRODUCT FOR MAINTENANCE AND OPERATIONAL PURPOSES.

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# INTRODUCTION

## General

Thank you for purchasing a quality Mira product. To enjoy the full potential of your new product, please take time to read this guide thoroughly, having done so, keep it handy for future reference.

The Mira Verve Thermostatic Bath Shower Mixer is designed either for wall mount or deck mounted installations. The mixer has separate controls for flow and temperature selection with a diverter to divert from bath to shower outlet.

The flow control is a 1/2 turn ceramic headwork. Both the shower and bath outlets are fully thermostatic controlled by a thermostatic cartridge incorporating a user adjustable maximum temperature stop.

This product has been certified as a Type 2 valves under the BUILDCERT TMV2 scheme. It also complies with the Water Supply (water fittings) Regulations 1999.

## Guarantee

For **domestic installations**, Mira Showers guarantee the products listed in this guide against any defect in materials or workmanship for a period of **five** years from the date of purchase (shower fittings for one year).

For **non-domestic installations**, Mira Showers guarantee the products listed in this guide against any defect in materials or workmanship for a period of **one** year from the date of purchase.

For terms and conditions refer to the back cover of this guide.

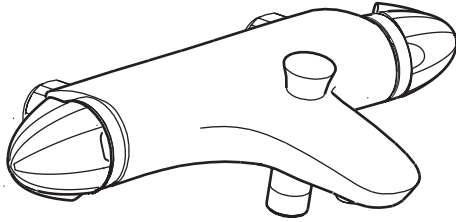
## Recommended Usage

Application	Mixer with Fittings
Domestic	✓
Light Commercial	✓
Heavy Commercial	✗
Healthcare	✗

# PACK CONTENTS

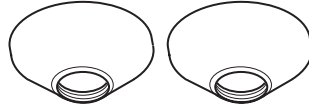
Tick the appropriate boxes to familiarise yourself with the part names and to confirm that the parts are included.

## Wall Mounted Bath Shower Mixer

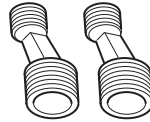


1 x Bath Shower Mixer

2 x Concealing Plates



2 x Washers / Filters

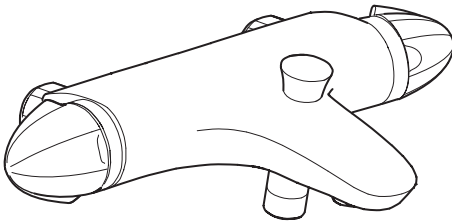


2 x Inlet Connectors



2 x Wall Mounting Brackets

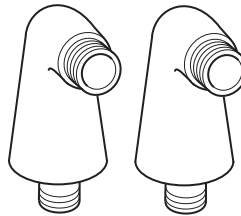
## Deck Mounted Bath Shower Mixer



1 x Bath Shower Mixer



2 x Washers / Filters



2 x Deck Mounts



2 x Foam Seals



2 x Washers



2 x Nuts

## Documentation

1 x Guarantee Registration Document

# SAFETY WARNINGS

Mira thermostatic mixers are precision engineered and should give continued safe and controlled performance, provided:

1. They are installed, commissioned, operated and maintained in accordance with manufacturer's recommendations.
2. Type 2 Valves are only used for applications covered by their approved designations, refer to section: '**Type 2 Valves**'.
3. Periodic attention is given, when necessary, to maintain the product in good functional order.

## **Caution!**

1. Read all of these instructions.
2. Retain this guide for later use.
3. Pass on this guide in the event of change of ownership of the installation site.
4. Follow all warnings, cautions and instructions contained in this guide.
5. Anyone who may have difficulty understanding or operating the controls of any shower should be attended whilst showering. Particular consideration should be given to the young, the elderly, the infirm or anyone inexperienced in the correct operation of the controls.
6. Rapid/Excessive movement of the flow and/or temperature control levers may result in momentary unstable blend temperatures.
7. Care is required when adjusting flow or temperature, make sure that the temperature has stabilised.
8. When this product has reached the end of its serviceable life, it should be disposed of in a safe manner, in accordance with current local authority recycling, or waste disposal policy.

# SPECIFICATION

For Type 2 Installations refer to the section "TYPE 2 VALVES".

## Pressures

For optimum performance supply pressures should be nominally equal.

Maximum maintained pressure: 5 bar

Minimum maintained pressure: 1 bar

**Note!** the mixer will operate down to 0.5 bar but with reduced flow rate.

Maximum static pressure: 10 bar

## Supply Temperatures

Hot Water: 55°C - 65°C

Cold Water: 5°C - 25°C

**Note!** The mixer can operate at hot water temperatures up to 85° C for short periods without damage. However for safety reasons it is recommended that the hot water temperature is limited to 65°C.

## Thermostatic Control

Temperature Selection Range: Full Cold - 50°C (Max Temp Factory Set to 46°C)

Thermostatic Control Range: 35°C - 50°C

Thermostatic Shutdown: for safety the mixer will shut off the hot water supply within 2 seconds if the cold supply fails, provided the hot water temperature is greater than 10°C above the set blend temperature.

## Connections

**Hot: Left** (side nearest flow control), ½" BSP Male (wall mount)

¾" BSP Male (deck mount)

**Cold: Right** (side nearest temperature control), ½" BSP Male (wall mount)

¾" BSP Male (deck mount)

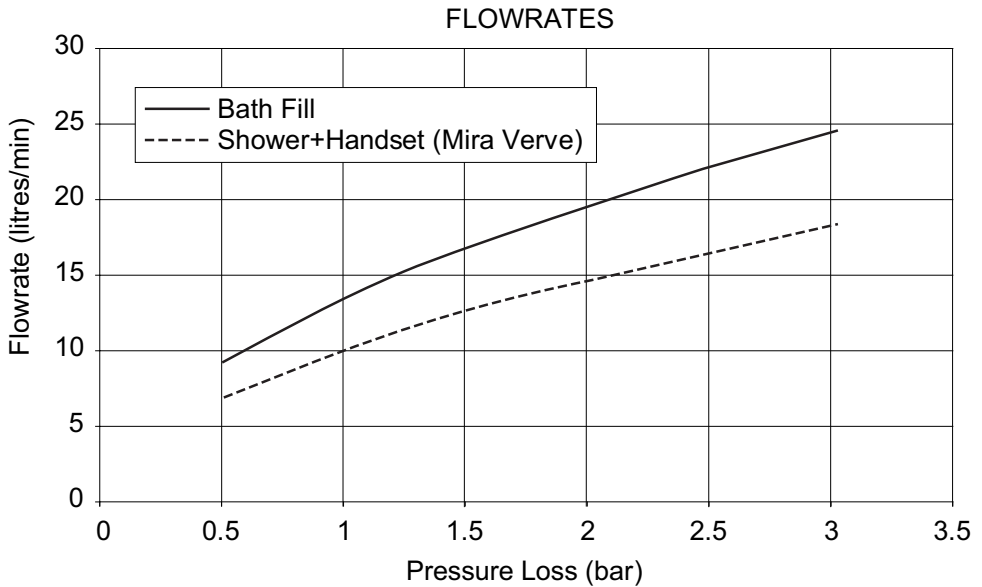
**Outlet: Bottom**, ½" BSP Male to flexible hose.

**Note!** This product does not allow for reversed inlets and will deliver unstable temperatures if fitted incorrectly.

Offset connector (inlet centres are 150 mm ± 15 mm).

## Flow Graph

Typical flow rate with Mira Verve BSM Handset



# INSTALLATION

## Suitable Plumbing Systems

### Gravity Fed: (Minimum head 0.5 bar - 5 metres)

The thermostatic mixer must be fed from a cold water cistern (usually fitted in the loft space) and a hot water cylinder (usually fitted in the airing cupboard) providing nominally equal pressures.

### Gas Heated System:

The thermostatic mixer can be installed with a combination boiler.

### Unvented Mains Pressure System:

The thermostatic mixer can be installed with an unvented, stored hot water system.

### Mains Pressurised Instantaneous Hot Water System:

The thermostatic mixer can be installed with systems of this type with balanced pressures.

### Pumped System:

The thermostatic mixer can be installed with an inlet pump (twin impeller). The pump must be installed on the floor next to the hot water cylinder.



## General

Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

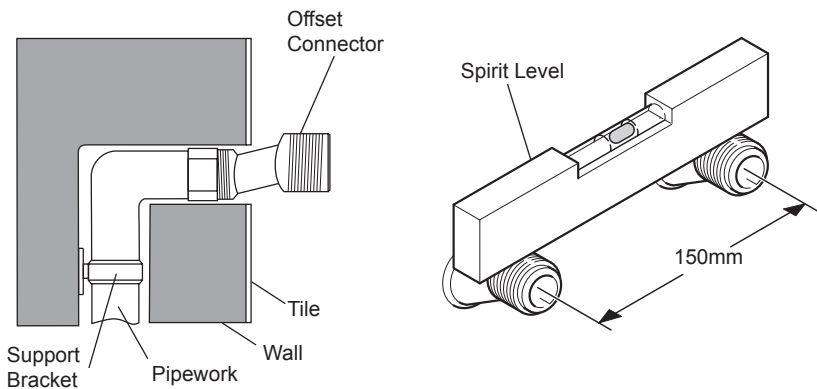
The installation must comply with the “Water Supply Regulations 1999 (Water Fittings)” or any particular regulations and practices, specified by the local water company or water undertakers.

**Note!** Make sure that all site requirements correspond to the information given in section: ‘**Specifications**’. For Type 2 Valves see also supply conditions in section: ‘**Type 2 Valves**’.

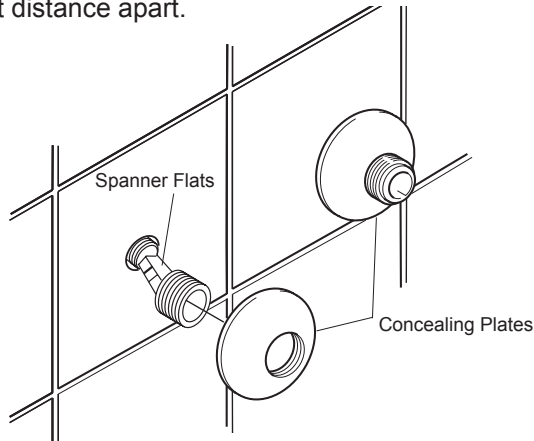
1. The Mixer must not be installed in an area where it may freeze.
2. For stud partitions alternative fixings may be required.
3. Isolating valves **must** be installed close to the Mixer for ease of maintenance.
4. Pipework must be rigidly supported and avoid any strain on the connections.
5. Pipework dead-legs should be kept to a minimum.
6. Decide on a suitable position for the Mixer. The position of the Mixer and the Shower Fittings must provide a minimum gap of 25 mm between the spill-over level of the shower tray/bath and the showerhead (refer to illustration). This is to prevent back-siphonage. For further information on the installation of your **Shower Fittings**, refer to the Fittings Installation and User Guide.  
**Note!** Only use Shower Fittings recommended by the manufacturer or supplier.
7. Flush the pipework before fitting the mixer

## Solid Wall Installation (Wall Mounted Mixer)

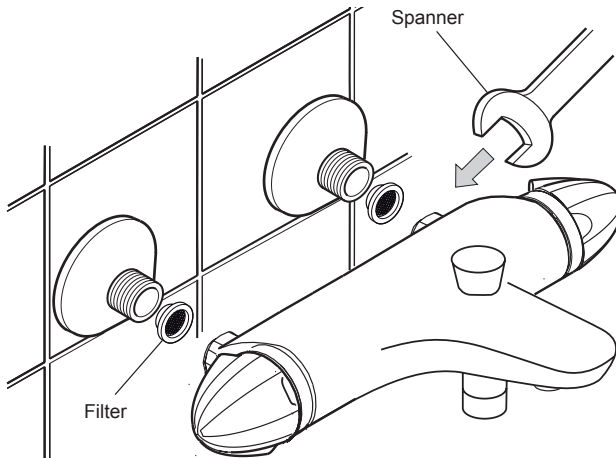
For installation onto a stud partition, laminated wall panel or unfixed rear-entry pipework, refer to the section **Stud Partition, Laminated Panel, or Unfixed Rear-entry Pipework Installation**.



1. Make sure that the pipework is set at the correct distance apart and solidly fixed as this supports the valve.
2. Apply a suitable thread sealant (not supplied) and attach the offset connectors to the pipework in the wall. Make sure that the connectors are level and set at the correct distance apart.



3. Tighten the offset connectors using a spanner on the spanner flats.
4. Screw the concealing plates onto the offset connectors until they come into contact with the wall. Seal with a suitable sealant.

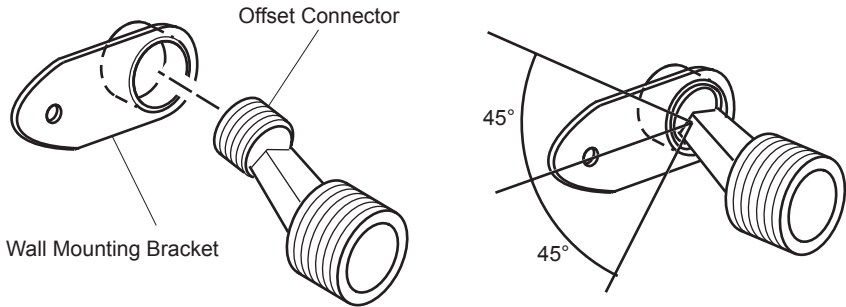


5. Fit the filters into the offset connectors.

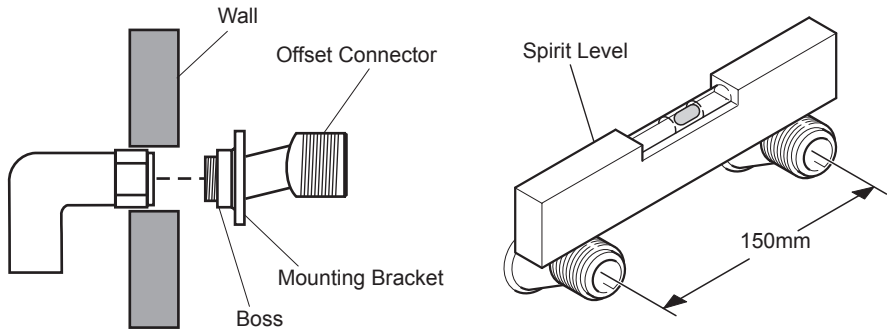
**Caution!** make sure that you protect the chrome plated surfaces when you tighten the nuts.

6. Align the mixer and connections and tighten the nuts using a suitable spanner.
7. Refer to the section **Finish the Installation**.

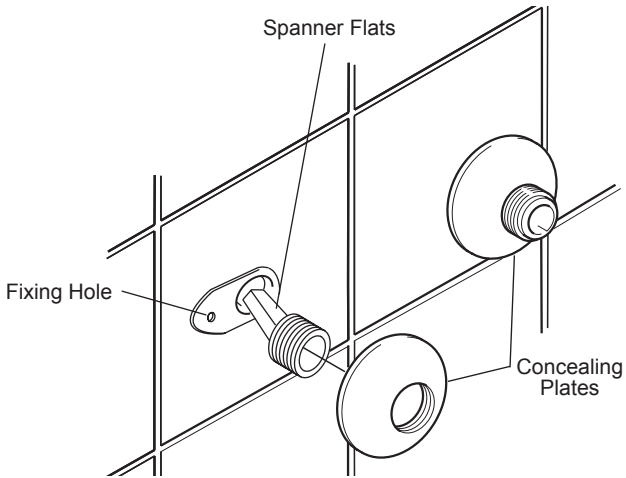
## Stud Partition, Laminated Panel, or Unfixed Rear-entry Pipework Installation



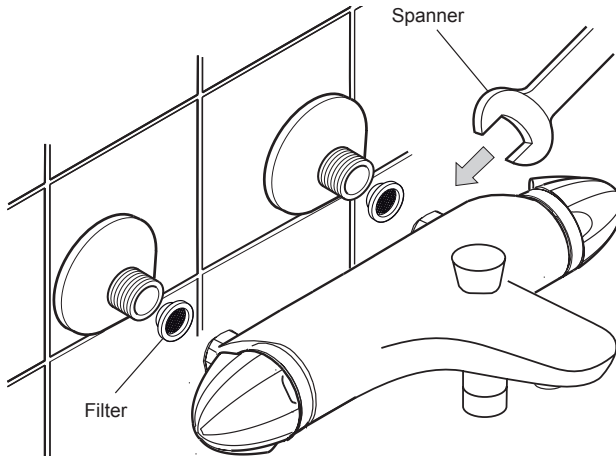
1. Screw the mounting bracket onto the offset connectors.
2. The mounting bracket must extend in the same direction as the offset of the offset connector. The angle between the offset connector and the mounting bracket must be less than 45°. Otherwise, the mounting bracket will not fit under the concealing plate.



3. The mounting bracket boss should protrude to the rear, facing the wall.
4. Apply suitable thread sealant (not supplied) and attach the offset connectors to the pipework in the wall. Make sure that the connectors are level and set at the correct distance apart.



5. Tighten the offset connectors using a spanner on the spanner flats.
6. Fix the mounting bracket to the wall through the small hole, using the appropriate wall fixings for the type of wall (not supplied).
7. Screw the concealing plates onto the offset connectors until they come into contact with the wall. Seal with an suitable sealant.

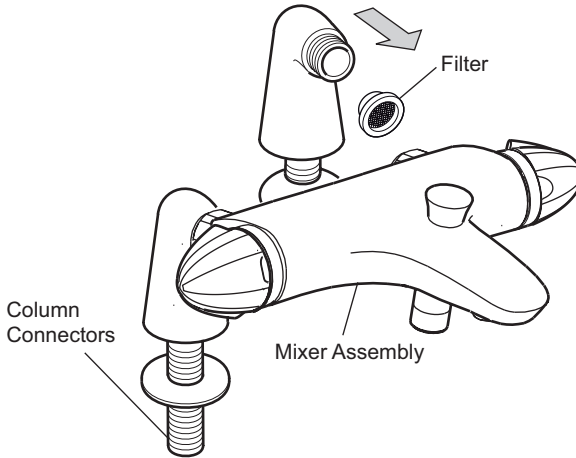


8. Fit the filters into the offset connectors.

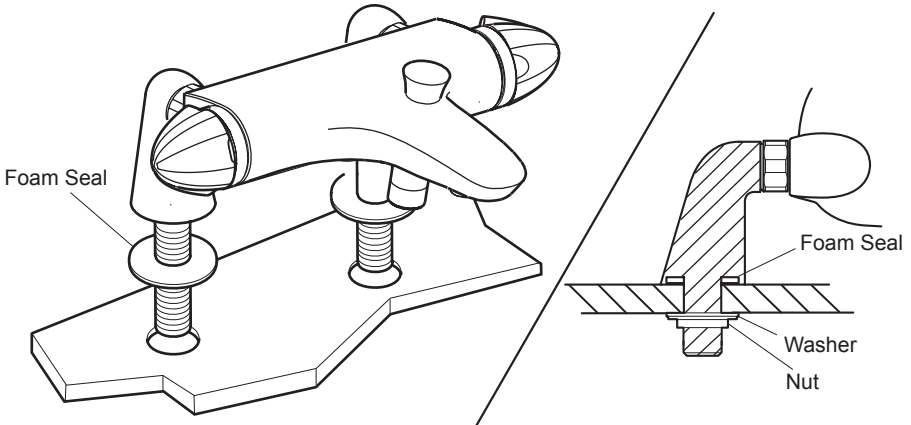
**Caution!** make sure that you protect the chrome plated surfaces when you tighten the nuts.

9. Align the mixer and connections and tighten the nuts using a suitable spanner.
10. Refer to the section **Finish the Installation**.

## Deck Mounted Installation



1. Screw the two deck mount connectors to the mixer with the filters fitted and hand tighten.



2. Fit the foam seal over the threaded section of the deck mount connectors.
3. Fit the mixer on the top of the bath.
4. Install the washers and the locknuts. Use a tap spanner to tighten the nuts.  
**Note!** Make sure that you protect the chrome plated surfaces when tightening the nuts.
5. Fully tighten the two nuts connecting the mixer to the inlet connectors.
6. Refer to section **Finish the Installation**.

## Finish the Installation

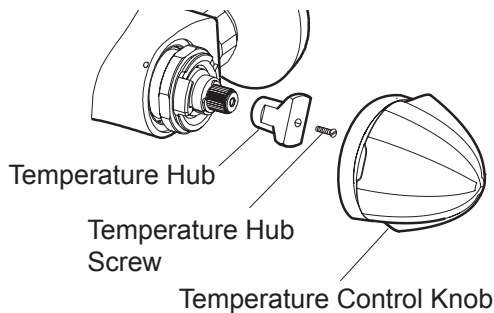
1. Make sure that the mixer is turned off.
2. Turn on the hot and cold water supply and check for leaks from all connections. Take special care to check for any leaks from the connections in the wall.
3. After flushing the pipework, check the inlet filters are clean. Remove and flush with clean water if necessary.
4. Install the shower hose to the outlet.

# COMMISSIONING

## Maximum Temperature Setting

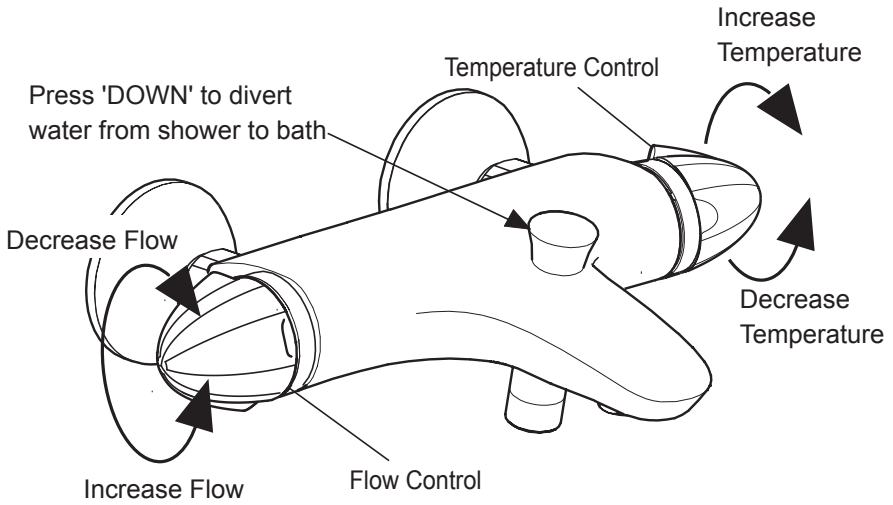
Before using the shower the maximum temperature must be checked to make sure that it is at a safe level. It has been preset to approximately 46°C at the factory but due to variations in site conditions the maximum temperature may need adjustment.

**Note!** Make sure that there is a sufficient supply of hot water and the temperature is at least 55°C. For Type 2 installations the maximum blend temperature must not exceed 46°C.



1. Turn on the bath.
2. Turn the temperature knob to full hot and test the temperature of the water from the outlet. If the water is not at the required temperature, proceed with the following procedure.
3. Turn off the mixer.  
**Note!** Force will be required to pull the temperature control knob from the Mixer.
4. Carefully remove the temperature control knob.
5. Unscrew the hub retaining screw.
6. Remove the temperature hub and replace it one spline clockwise to increase the temperature, or one spline anti-clockwise to decrease the temperature.
7. Tighten the hub retaining screw.
8. Refit the temperature knob. Make sure the stop feature inside the knob is towards the top.
9. Turn on the mixer and check the maximum temperature setting. If further adjustment is required repeat the above procedure.

# OPERATION



# TYPE 2 VALVES

## Application

The approved designations for Type 2 Valves are as follows:

Designation	Operating Pressure Range	Application
HP-S	High Pressure	Shower
HP-T	High Pressure	Bath

**Important!** For TMV2 installations the mixed water temperature at the discharge point should never exceed 46°C.

In order to achieve the safe water temperatures expected of a Type 2 Valve it is essential that the valve is used only for the applications covered by its approved designations, with the appropriate water supply pressures and temperatures, and it is commissioned, maintained and serviced in accordance with the recommendations contained in this guide (refer to the section **In Service Test Program** for in service test frequency that must be used as a minimum guide in Type 2 installations).

**Important! The fitting of any flow regulator will invalidate TMV2 compliance.**

## Supply Conditions

For applications where a Type 2 Valve is required, the supply conditions must comply with the values extracted from the TMV2 standard (EN1287 & EN1111), shown in the Table below. Note that both hot and cold supply pressures must lie within the same pressure range.

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.

Maximum Static Pressure (bar)	10
Maintained Pressure, Hot and Cold (bar)	1 to 5
Hot Supply Temperature (°C)	55 to 65
Cold Supply Temperature (°C)	≤25

Valves operating outside these conditions cannot be guaranteed to operate as Type 2 Valves.

## 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.

**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.

### **In Service Test Program**

Follow the procedure detailed in the flow diagram “In-service Test Procedure”, every 12 months.

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.

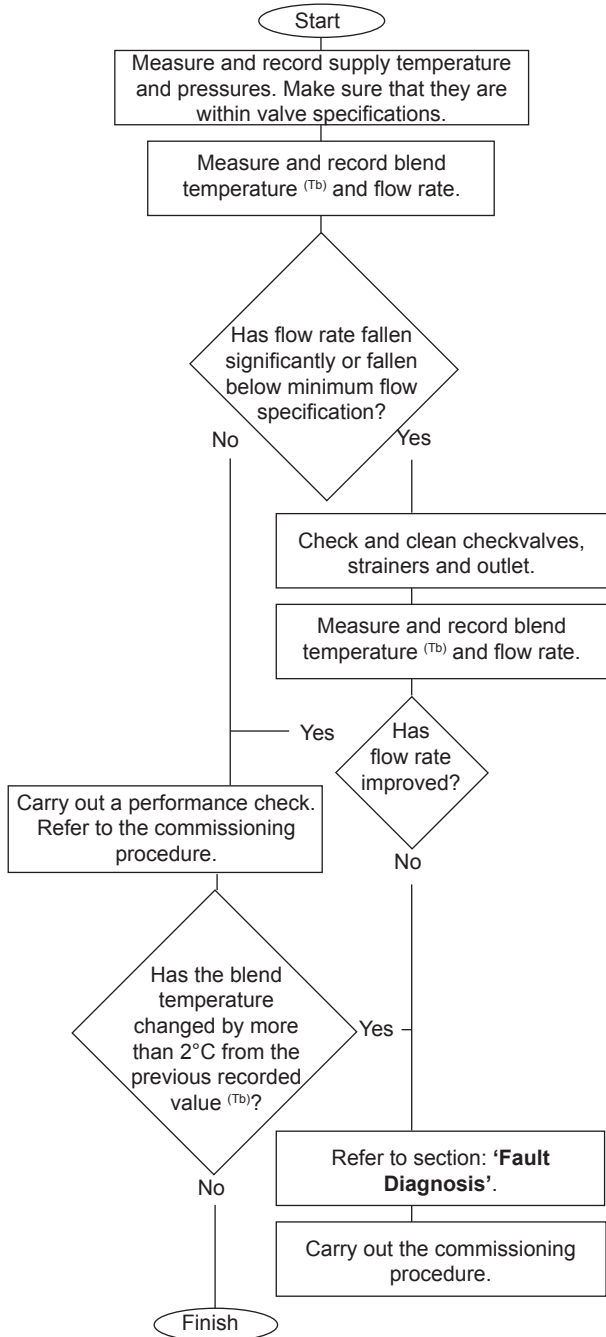
- (a) Measure the mixed water temperature at the outlet.
- (b) Carry out the cold water supply isolation test by isolating the cold water supply to the TMV, wait for five seconds if water is still flowing check that the temperature is below 46°C.
- (d) If there is no significant change to the set outlet temperature (2°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.

### **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.

## Flow Diagram, In-service Test Program



**Note!** All measurements and results should be recorded in the Log Book.

# FAULT DIAGNOSIS

If you require a Mira trained service engineer or agent, refer to section: '**Customer Services**'.

## Fault Diagnosis

### Symptom:

- *Only hot or cold water from the mixer outlet.*
- *Outlet temperature too hot / too cold.*

### Cause / Rectification:

- *Inlets reversed (hot supply to cold supply). Rework inlet pipework.*
  - *No hot or cold water reaching the mixer.*
  - *Check the filters for any blockage.*
  - *Installation conditions outside operating parameters, refer to sections: 'Specifications' and 'Commissioning'.*
- 

### Symptom:

- *Fluctuating or reduced flow rate.*

### Cause / Rectification:

- *Check the showerhead, hose and filters for any blockage.*
  - *Make sure that the maintained inlet pressures are nominally balanced and sufficient, refer to section: 'Specifications'.*
  - *Make sure that the inlet temperature differentials are sufficient, refer to section: 'Specifications'.*
  - *Flow regulator fitted incorrectly (if fitted).*
  - *Air lock or partial blockage in the pipework.*
- 

### Symptom:

- *Water leaking from showerhead.*

### Cause / Rectification:

- *Normal for a short period after shut off.*
- *Check that the pressures are not in excess of the specifications for the product.*
- *Renew the flow cartridge assembly.*

# USER MAINTENANCE

## Lubricants

Silicone based lubricants must only be used on the rubber seals.

**Caution!** Oil based or other lubricant types may cause rapid deterioration of seals.

## Cleaning

The chrome plated parts should be cleaned using a mild washing up detergent or soap solution, rinsed and then wiped dry with a soft cloth.

**Warning!** Many household cleaners contain abrasive and chemical substances, and should not be used for cleaning plated or plastic fittings.

**Do not** use descalents on this product.

## In-service Tests

The principal means for determining the continuing satisfactory performance of the mixing valve is the in-service test.

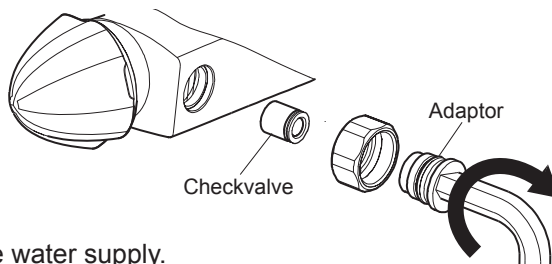
Follow the procedure detailed in the flow diagram “In-service Test Procedure”.

### Frequency of In-service Tests - Commercial (non-domestic installations)

Check for correct blend setting every 6 months.

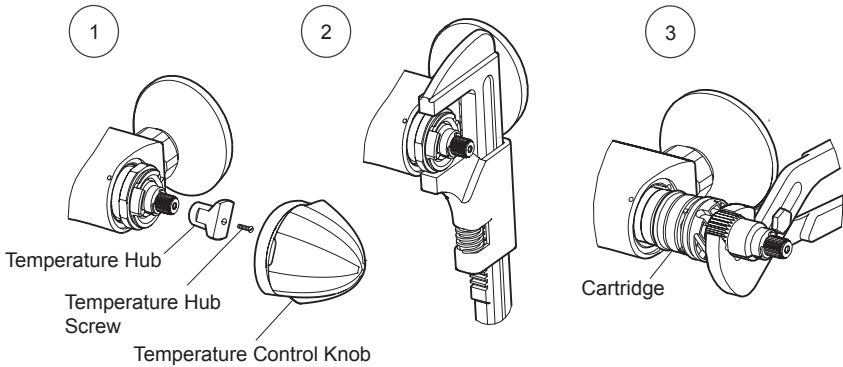
Follow the procedure detailed in the flow diagram “In-service Test Program”, every 12 months.

## Cleaning the Inlet Filters and Non-return Valve Assemblies



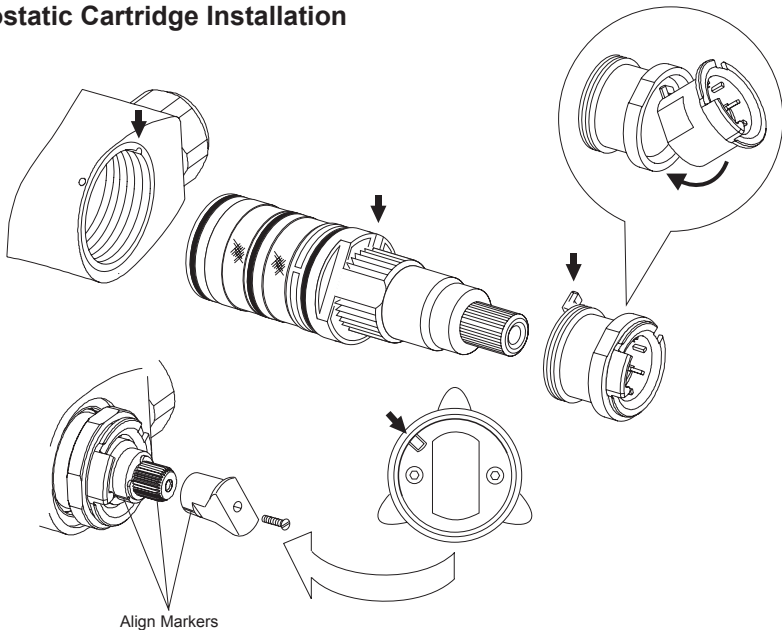
1. Turn off the water supply.
2. Open the flow control to relieve any trapped hot or cold pressure.  
**Caution!** Make sure you protect the chrome plated surfaces when you untighten the nuts.
3. Use a suitable spanner to remove the valve from the wall.
4. Remove the filters.
5. Using a 12 mm hexagonal wrench rotate the adaptor clockwise to remove.
6. Remove the non-return valve.
7. Clean the filter and non-return valve by washing them under clean water or if damaged, replace them.
8. Reassemble the parts in reverse order.

## Thermostatic Cartridge Removal



1. Turn off the water supply.
2. Open the flow side of the valve to relieve any hot or cold pressure.  
**Note!** Force will be required to pull the temperature control knob from the Mixer.
3. Carefully remove the temperature control knob.
4. Unscrew the hub retaining screw and remove the temperature hub.
5. Use a suitable wrench or spanner to unscrew and remove the cartridge securing nut and stop block.  
**Caution!** Make sure you protect the chrome plated surfaces when you remove the temperature cartridge.
6. Use a pair of grips to remove the temperature cartridge.

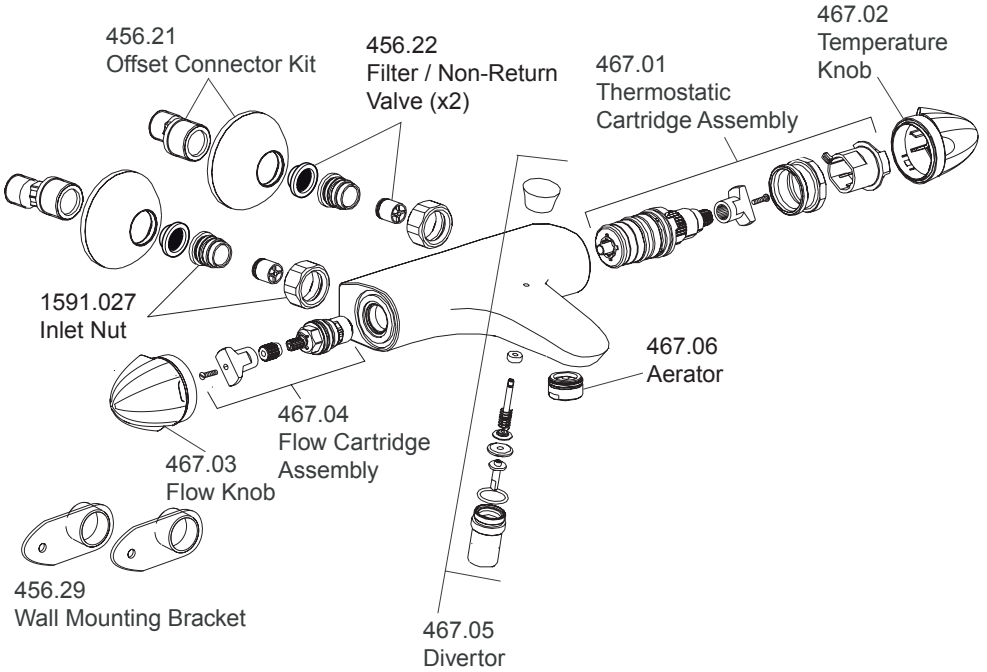
## Thermostatic Cartridge Installation



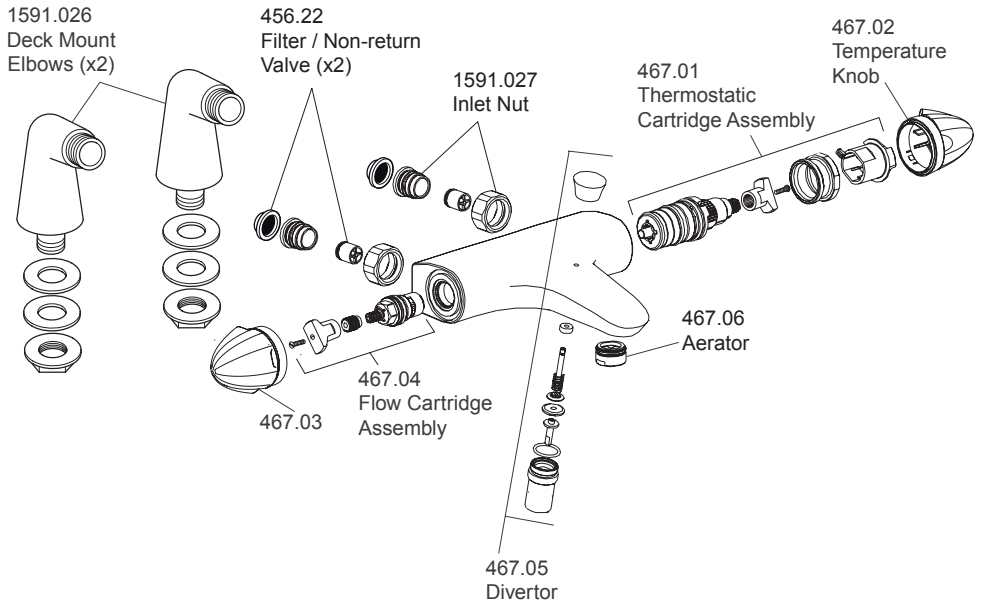
1. Install the stop ring into the nut.
2. Install the stop assembly on the thermostatic cartridge, adjusting the stop ring in the notch.  
**Note!** Use only silicone based grease.
3. Install the thermostatic cartridge in the body, adjusting the stop pin in the notch.
4. Loosely tighten the nut.
5. Make sure that the thin black line aligns correctly with the slot.
6. Fit the temperature hub. Make sure that the slot on the hub aligns correctly with the thin black line and the slot on the thermostatic cartridge.
7. Install the temperature knob. Make sure the stop feature inside the knob is towards the top.
8. Turn on the water supply and check for leaks.
9. Reset the maximum temperature - refer to “**Commissioning**”.

# SPARE PARTS

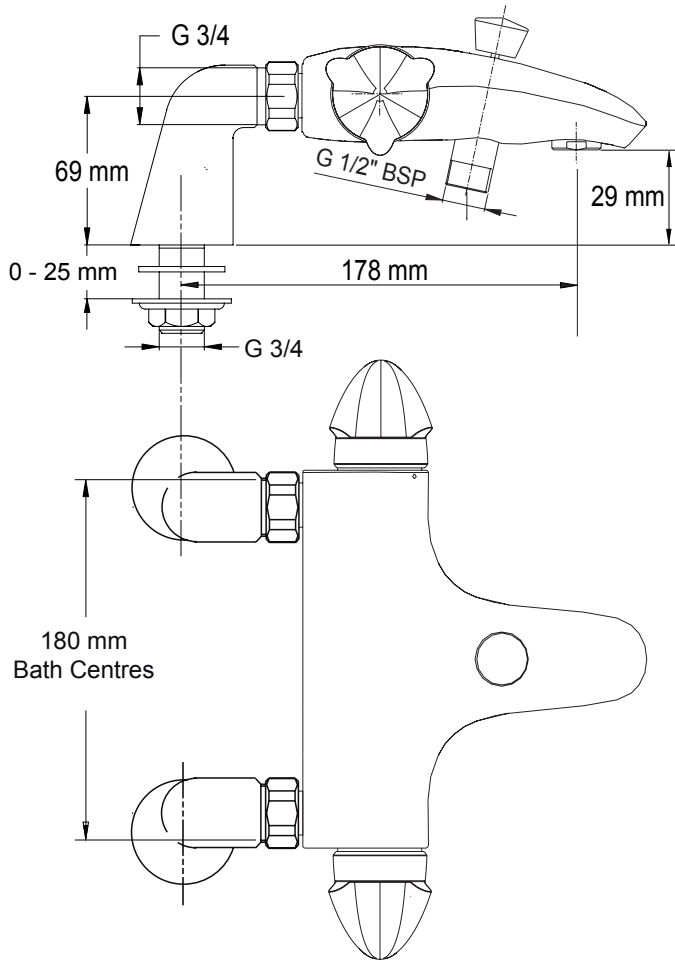
## Wall Mounted Bath Shower Mixer



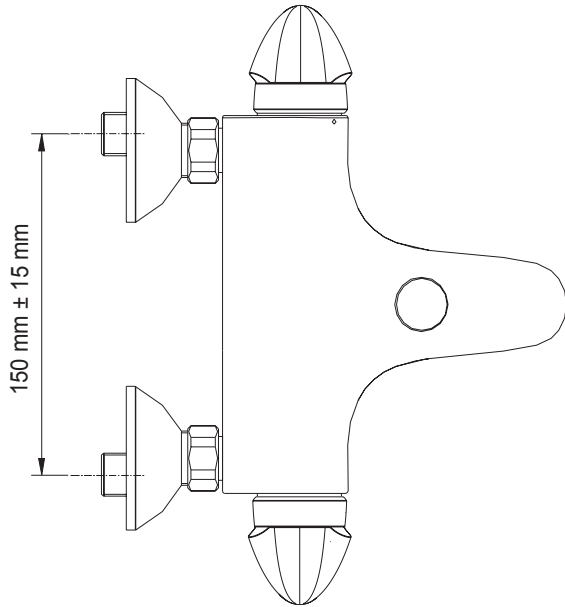
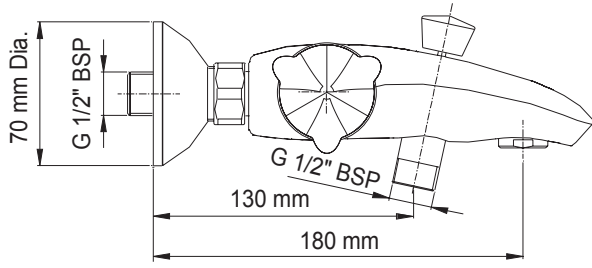
## Deck Mounted Bath Shower Mixer



# DIMENSIONS







# NOTES

# NOTES

# CUSTOMER CARE

## Guarantee

Your product has the benefit of our manufacturer's guarantee which starts from the date of purchase.

To activate this guarantee, please return your completed registration card, visit our website or free phone 0800 0731248 within 30 days of purchase (UK only).

Within the guarantee period we will resolve defects in materials or workmanship, free of charge, by repairing or replacing parts or product as we may choose.

**This guarantee is in addition to your statutory rights and is subject to the following conditions:**

- The product must be installed and maintained in accordance with the instructions given in this user guide.
- Servicing must only be undertaken by us or our appointed representative. **Note!** if a service visit is required the product must be fully installed and connected to services.
- Repair under this guarantee does not extend the original expiry date. The guarantee on any replacement parts or product ends at the original expiry date.
- For shower fittings or consumable items we reserve the right to supply replacement parts only.

**The guarantee does not cover:**

- Call out charges for non product faults (such as damage or performance issues arising from incorrect installation, improper use, lack of maintenance, build up of limescale, frost damage, corrosion, system debris or blocked filters) or where no fault has been found with the product.
- Water or electrical supply, waste and isolation issues.
- Compensation for loss of use of the product or consequential loss of any kind.
- Damage or defects caused if the product is repaired or modified by persons not authorised by us or our appointed representative.
- Routine maintenance or replacement parts to comply with the requirements of the TMV 2 or TMV 3 healthcare schemes.

## What to do if something goes wrong

If your product does not function correctly when you first use it, contact your installer to check that it is installed and commissioned in accordance with the instructions in this manual.

Should this not resolve the issue, contact our Customer Services Team who will offer you or your installer advice and if applicable arrange for a Service Technician to call.

If the performance of your product declines, check in this manual to see if simple home maintenance is required. If you require further assistance call our Customer Services Team.

## Extended Guarantees

A selection of protection plans are available that enable you to cover repair bills for the life of your policy (excludes Eire). Ring 01922 471763 for more details.

## Helpdesk Service

Our dedicated Customer Services Team is comprehensively trained and can offer help and advice, spare parts, accessories or a service visit. We will need you to have your model name or number, power rating (if applicable) and date of purchase. As part of our quality and training programme calls may be recorded or monitored.

## Mira Showers Website ([www.mirashowers.co.uk](http://www.mirashowers.co.uk))

From our website you can register your guarantee, download additional user guides, diagnose faults, purchase our full range of accessories and popular spares, refer to our FAQ's and request a service visit.

## Spares and Accessories

We maintain extensive stocks of genuine spares and accessories and aim to provide support throughout the product's expected life. Payment can be made by phone at time of order using most major Credit or Debit cards and we aim to despatch orders within two working days. Items purchased from us are guaranteed for 12 months from date of purchase. For safety reasons spares exposed to mains voltages should only be fitted by competent persons.

**Returns** – items can be returned within one month of date of purchase, providing that they are in good condition and the packaging is unopened. Please obtain authorisation from our Customer Services Team before return. We reserve the right to apply a 15% restocking charge.

## Service / Repairs

We have a nationwide team of Service Technicians who can carry out all service or repair work to your product within the guarantee period and beyond. You have the assurance of a fully trained Mira Technician, genuine Mira spare parts and a 12 month guarantee on any chargeable work done.

Payment should be made directly to the Service Technician who will accept most major Credit or Debit cards.

## To Contact Us

### UK

**Telephone: 0844 571 5000**

Mon to Fri 8:00 am - 5:30 pm, Sat 8:30 am - 3:30 pm

E-mail: [technical@mirashowers.com](mailto:technical@mirashowers.com)

Fax: 01242 282595

By Post: Mira Customer Services Dept, Cromwell Road, Cheltenham, Gloucestershire, GL52 5EP

### Eire

**Telephone: 01 459 1344**

Mon to Fri 9:00 am - 5:00 pm

E-mail: [sales@modernplant.ie](mailto:sales@modernplant.ie)

Fax: Dublin 01 459 2329

By Post: Modern Plant Ltd (Dublin), Otter House, Naas Road, Clondalkin, Dublin 22

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