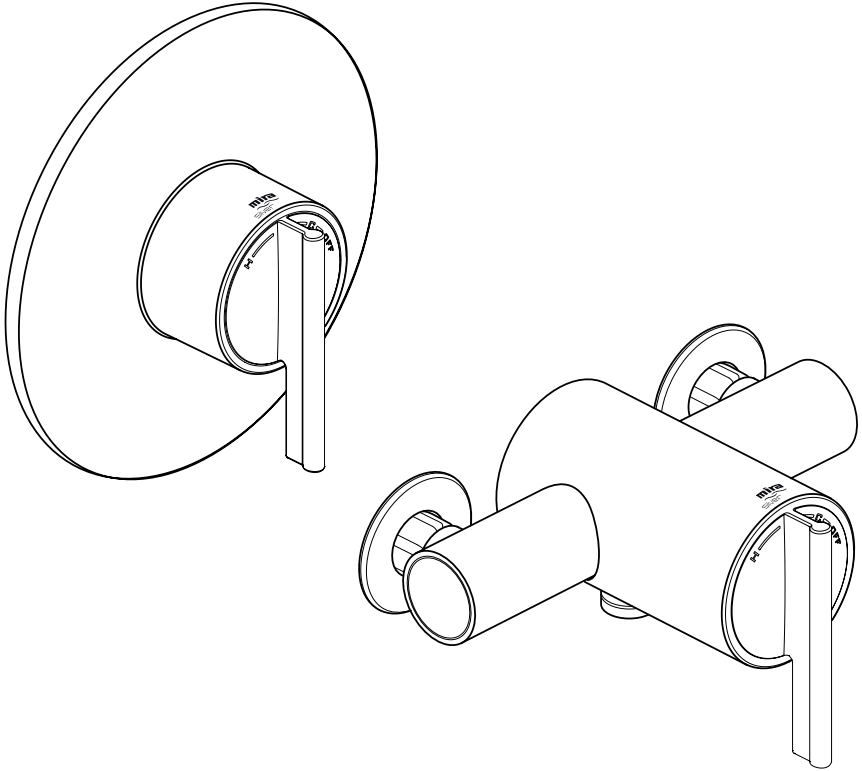


mira

Silver



MIRA SILVER

THERMOSTATIC MIXER

Installation and User Guide

These instructions must be left with the user.

CONTENTS

Introduction	3
Patents and Design Registration.....	3
Safety : Warnings	4
Pack Contents	5
Dimensions	7
Specifications	8
Operating Parameters.....	8
Installation Requirements	10
Installation	12
General.....	12
Installation Methods	13
Exposed Thermostatic Mixer	14
1. Rear Entry Supplies (rising or falling concealed pipework).....	14
2. Rising or Falling Supplies.....	16
Built-in Thermostatic Mixer	18
1. Solid Wall or Stud Partition (Using Securing Brackets - Mounting on Front Face of Wall)	18
2. Solid Wall or Stud Partition (Using Rear Fixing Points on the Thermostatic Mixer).....	21
3. Laminated Panel (Using Securing Brackets - Mounting on Rear Face of Wall).....	23
Control Assembly (Built-in Models)	25
Reversed Inlet Supplies	26
Commissioning	28
Maximum Temperature Setting	28
Operation	29
Fault Diagnosis	30
Maintenance	31
Spare Parts	34
Notes	38
Customer Service	Back Page

INTRODUCTION

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 Silver Thermostatic Mixer is a Thermostatic Shower Control with a single control lever for on/off and temperature control.

There is no adjustable flow control. A 12 L/Min flow regulator is supplied for high pressure systems to reduce excessive shower force.

The Thermostatic Mixer incorporates a wax capsule temperature sensing unit, which provides an almost immediate response to changes in pressures or temperature of the incoming water supplies to maintain the selected temperature. An adjustable maximum temperature stop is provided which limits the temperature to a safe level. Inlet Filters are fitted to protect the thermostatic cartridge.

Mira Silver Exposed: Thermostatic Mixer for connection to rising, falling or rear entry pipework, supplied with L10 EV Shower Fittings.

Mira Silver Built-in: Thermostatic Mixer for connection to concealed pipework, supplied with L10 BIV or BIR Shower Fittings.

Patents and Design Registration

Design Registration:	000555768-008, 000555768-009	
Patents:	GB:	2 291 693, 2 392 225, 2 421 297
	Germany:	695 13 455.8
	France:	0 694 721 (E)
Patent Applications:	Euro:	1 672 257, 03254070.0
	USA:	2006-0124758-A1, 10/607 025

If you experience any difficulty with the installation or operation of your new Thermostatic Mixer, please refer to '**Fault Diagnosis**', before contacting Kohler Mira Ltd. Our telephone and fax numbers can be found on the back cover of this guide.

SAFETY : WARNINGS

This Mira Silver Thermostatic Mixer is precision engineered and should give continued safe and controlled performance, provided:

1. It is installed, commissioned, operated and maintained in accordance with manufacturers recommendations.
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

Caution!

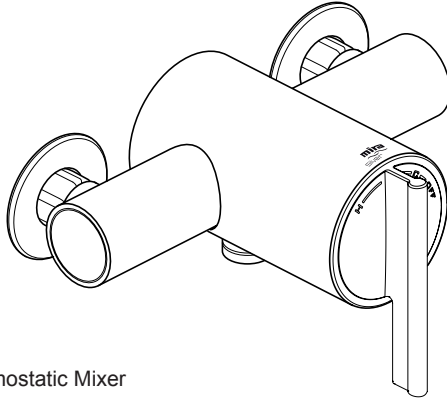
1. Read all of these instructions.
2. Retain this guide for later use.
3. Pass on this guide in the event of change of ownership of the installation site.
4. Follow all warnings, cautions and instructions contained in this guide.
5. Anyone who may have difficulty understanding or operating the controls 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. 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.

PACK CONTENTS

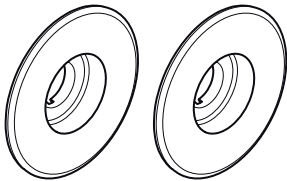


Tick the appropriate boxes to familiarize yourself with the part names and to confirm that the parts are included.

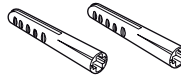
Exposed Silver Thermostatic Mixer



1 x Mira Silver Thermostatic Mixer



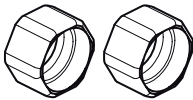
2 x Concealing Plates



2 x Wall Plugs



2 x No. 8 x 1 1/4" Screws



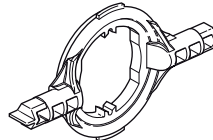
2 x Compression Nuts



1 x 2.5 mm Hexagon Key



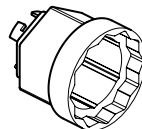
2 x Olives



1 x 'O' Key



1 x 12 L/Min Flow Regulator

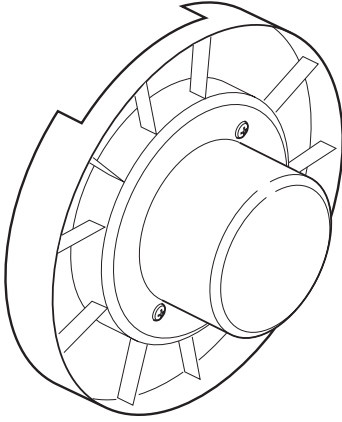


1 x Cartridge Removal Socket

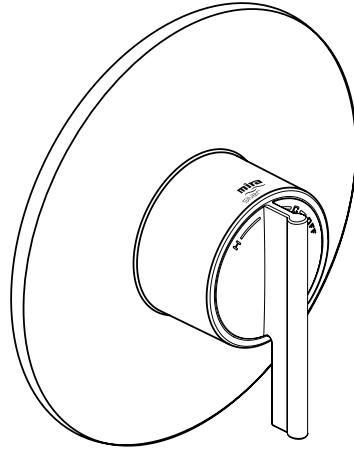
Documentation

- 1 x Customer Support Brochure
- 1 x Installation Template

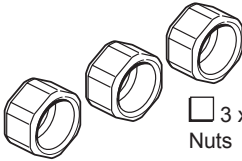
Built-in Silver Thermostatic Mixer



1 x Mira Silver Thermostatic Mixer
(attached to the Building-in Shroud)



1 x Control Assembly



3 x Compression Nuts



3 x Olives



1 x 12 L/Min Flow Regulator



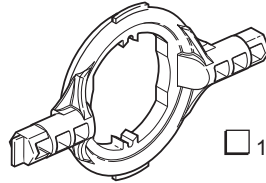
1 x 2.5 mm Hexagon Key



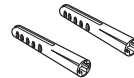
2 x Securing Brackets



2 x Bracket Securing Screws



1 x 'O' Key



2 x Wall Plugs



2 x No. 8 x 1 1/4" Screws



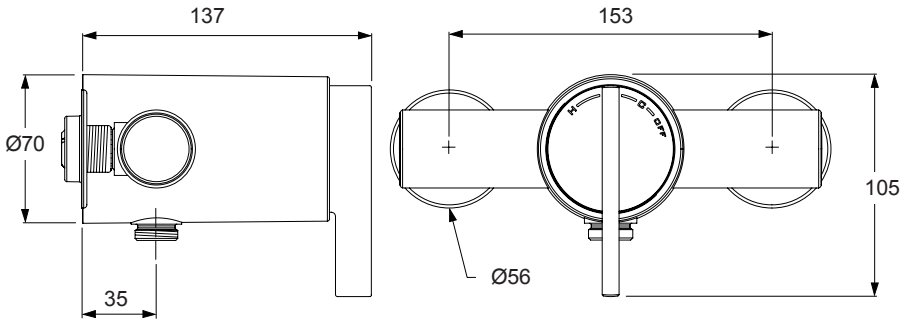
2 x M5 x 40 mm Screws

Documentation

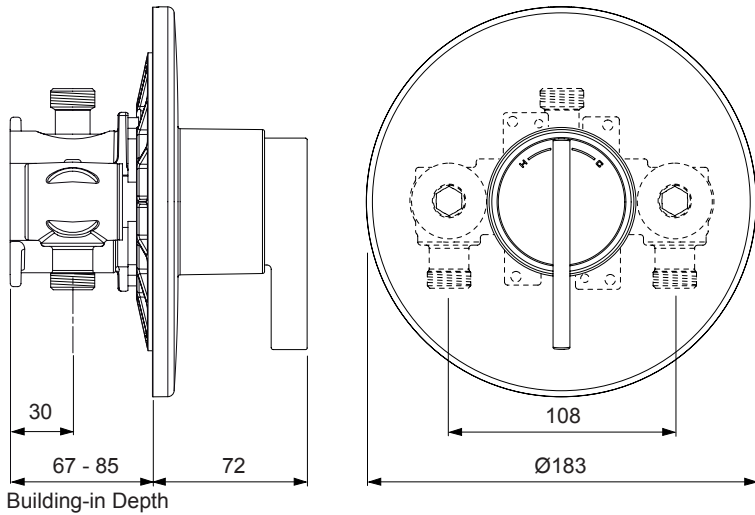
1 x Customer Support Brochure

DIMENSIONS

Exposed Silver Thermostatic Mixer



Built-in Silver Thermostatic Mixer



All dimensions in mm.

SPECIFICATIONS

Operating Parameters

Pressures

Maximum Static Pressure: **10 Bar**.

Maximum Maintained Pressure: **5 Bar**.

Minimum Maintained Pressure (Gas Water Heater): **1.0 Bar**.

(for optimum performance supplies should be nominally equal).

Minimum Maintained Pressure (Gravity System): **0.1 Bar**.

(0.1 bar = 1 Metre head from base of cold tank to the outlet of the shower handset).

Temperatures

Factory Pre-set (Blend) Shower: **43°C**.

Optimum Thermostatic Control Range: **35°C - 45°C**.

(Achieved with supplies of 15°C cold, 65°C hot and nominally equal pressures).

Recommended Hot Supply: **60°C - 65°C**.

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

Minimum Differential between Hot Supply and Outlet Temperature: **10°C**.

Cold Water Range: **5°C - 25°C**.

Thermostatic Shut-down

For safety the Thermostat will shut off the Hot Supply **Within 2 Seconds** if the Cold Supply Fails.

(Achieved only if the hot supply temperature is greater than 10°C above the set blend temperature).

Connections

Exposed Mixer:

Inlets: 15 mm Compression, **Hot - Left, Cold - Right**.

Outlet: ½" BSP Flat Face, **Bottom - Outlet**.

Built-in Mixer:

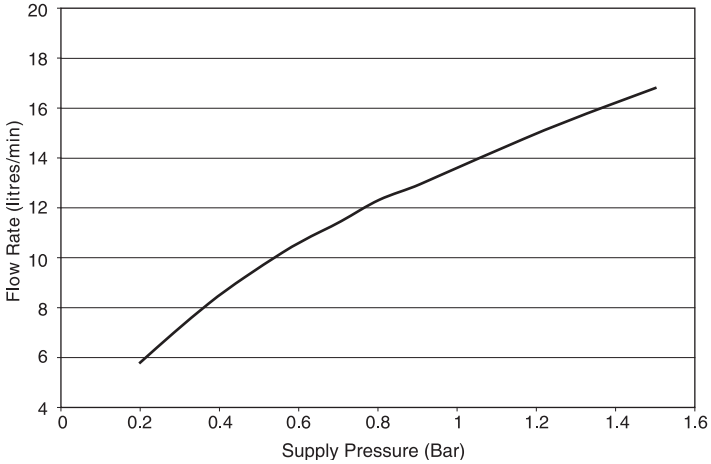
Inlets: 15 mm Compression, **Hot - Left, Cold - Right**.

Outlet: 15 mm Compression, **Top - Outlet**.

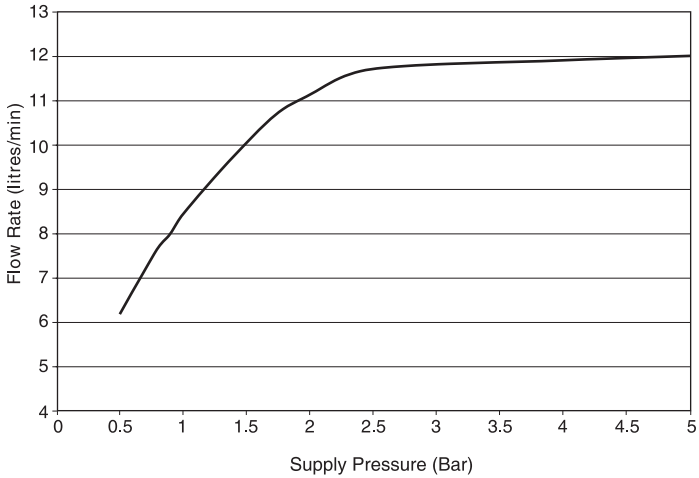
If reversed inlets are required refer to section: '**Reversed Inlet Supplies**'.

Flow Rates

Typical Flow Rates on Low Pressure Systems (0.1 Bar to 1 Bar) - Mira Silver with L10 Adjustable Fittings or Rigid Head:

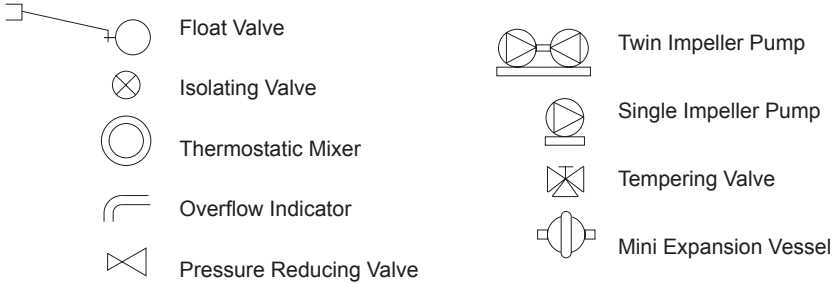


Typical Flow Rates on High Pressure Systems (1 Bar to 5 Bar, with 12 Litre/Min Flow Regulator fitted in shower control outlet) - Mira Silver with L10 Adjustable Fittings or Rigid Head:



INSTALLATION REQUIREMENTS

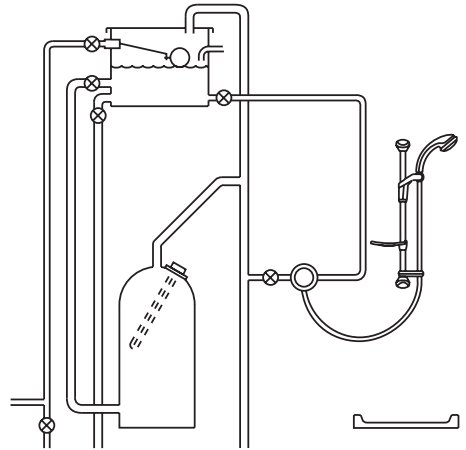
Key to Symbols



The Mira Silver Thermostatic Mixer is compatible with the following systems:

Gravity fed system

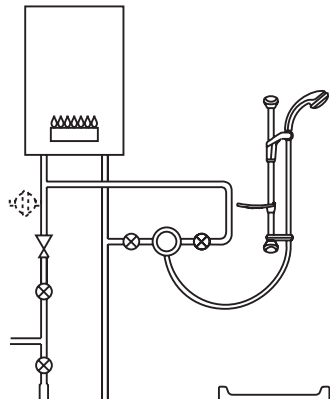
The Thermostatic Mixer **MUST** be fed from a cold water cistern and hot water cylinder providing nominally equal pressure.



Gas heated system

The Thermostatic Mixer **MUST** be installed with a gas water heater or combination boiler of a fully modulating design.

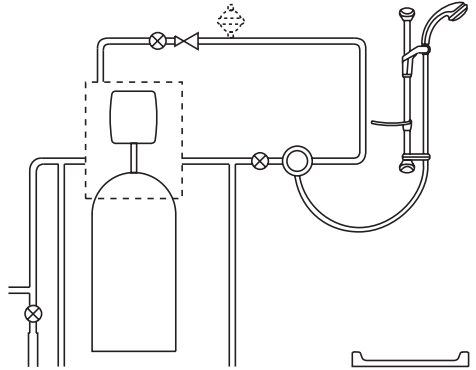
Note! We recommend the use of a 12 L/Min Outlet Flow Regulator (supplied). However, it is possible following the installation of the Flow Regulator that the flow rate is reduced too much for the boiler to ignite. If this is the case remove the flow regulator.



Unvented mains pressure system

The Thermostatic Mixer can be installed with a unvented, stored hot water cylinder.

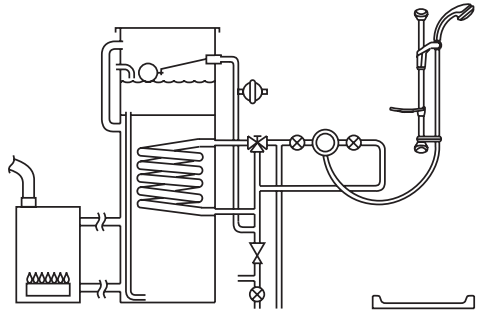
Note! We recommend the use of a 12 L/Min Outlet Flow Regulator (supplied).



Mains pressurised instantaneous hot water system (thermal store)

The Thermostatic Mixer can be installed with systems of this type with balanced pressures.

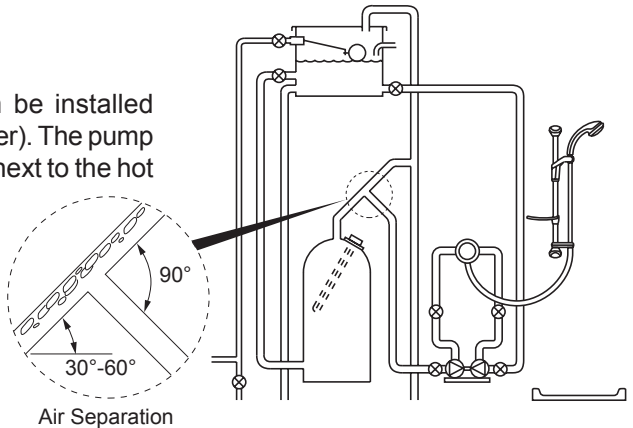
Note! We recommend the use of a 12 L/Min Outlet Flow Regulator (supplied).



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.

Note! We recommend the use of a 12 L/Min Outlet Flow Regulator (supplied).



INSTALLATION

General

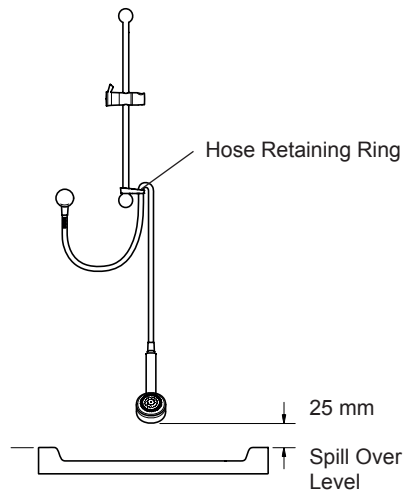
Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

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**’.

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. Supply pipework layout should be arranged to minimise the effect of other outlet usage upon the dynamic pressures at the Mixer inlets.
7. Inlet and outlet threaded joint connections should be made with PTFE tape or liquid sealant. Do not use oil-based, non-setting joint compounds.
8. To eliminate pipe debris it is essential that supply pipes are thoroughly flushed through before final connection.
9. 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 handset. 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.



Installation Methods

Exposed Silver Thermostatic Mixer

The **Exposed Silver Mixer** can be installed with rear, rising or falling supply inlets.

For rear entry supplies, go to section: **‘Exposed Thermostatic Mixer, 1. Rear Entry Supplies’**.

For rising or falling supplies, go to section: **‘Exposed Thermostatic Mixer, 2. Rising or Falling Supplies’**.

Built-in Silver Thermostatic Mixer

The **Built-in Silver Mixer** can be installed with rising or falling supply inlets (rising inlets are illustrated).

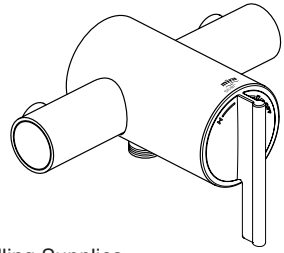
The Mixer can be installed using Rear Fixing Points on the Body, or by using the Securing Brackets (supplied) on the Front Face of a Solid Wall or Stud Partition, or on the Rear Face of a Laminated Panel.

For installation into a Solid Wall or Stud Partition using the Securing Brackets, go to section: **‘Built-in Thermostatic Mixer, 1. Solid Wall or Stud Partition (Using Securing Brackets - Mounting on Front Face of Wall)’**.

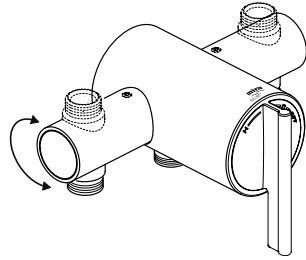
For installation into a Solid Wall or Stud Partition using the Rear Fixing Points, go to section: **‘Built-in Thermostatic Mixer, 2. Solid Wall or Stud Partition (Using Rear Fixing Points on Thermostatic Mixer)’**.

For installation behind a Laminated Panel using the Securing Brackets, go to section: **‘Built-in Thermostatic Mixer, 3. Laminated Panel (Using Securing Brackets - Mounting on Rear Face of Wall)’**.

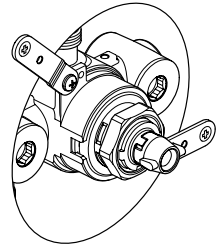
Rear Entry Supplies



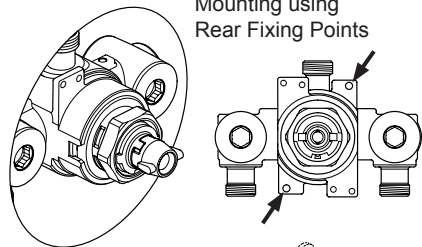
Rising or Falling Supplies



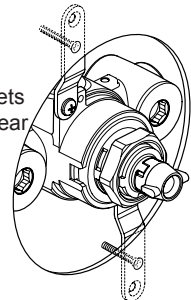
Securing Brackets
(Mounting on Front
Face of Wall)



Mounting using
Rear Fixing Points



Securing Brackets
(Mounting on Rear
Face of Wall)

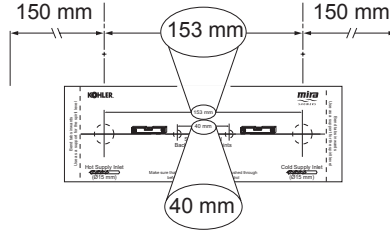
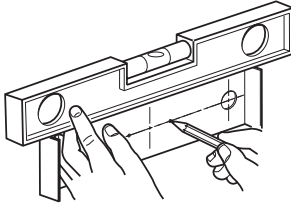


Exposed Thermostatic Mixer

1. Rear Entry Supplies (rising or falling concealed pipework)

1.1 Use the Installation Template to mark the positions of the holes for the Backplate and the pipe centres.

Note! Allow a minimum of 150 mm either side of the Mixer, to allow access to the hot and cold Inlet Filters for servicing.



1.2 For solid walls drill the holes for the Backplate with a 6 mm drill and insert the Wall Plugs (supplied). For other types of wall structure alternative fixings may be required (not supplied).

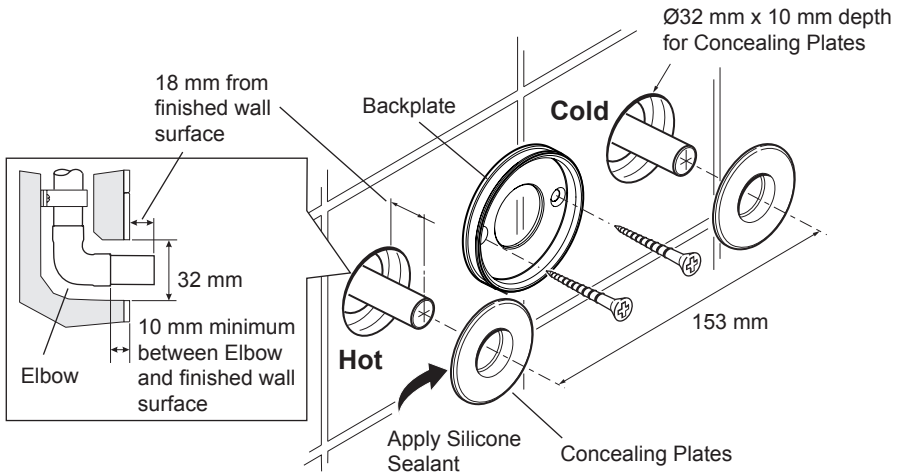
1.3 Drill the holes for the supply pipes at 153 mm centres.

1.4 Recess the wall to allow for the Concealing Plates, Ø 32 mm x 10 mm deep.

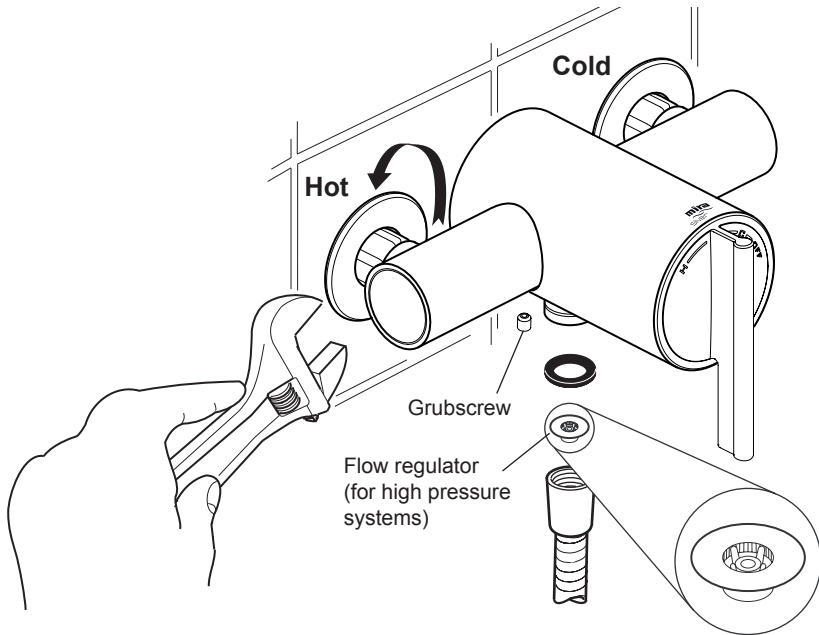
Note! Depth must be sufficient to prevent the Concealing Plates fouling on the plumbing Elbows.

1.5 Fit the supply pipework (**Hot - Left, Cold - Right**). The pipework must project 18 mm from the finished wall surface at 153 mm centres (use the Installation Template as a guide).

Note! If the connections are reversed, complete the installation then refer to section: '**Reversed Inlet Supplies**' before commissioning.



- 1.6 Loosen the Grubscrew with the 2.5 mm Hexagon Key (supplied) and remove the Backplate from the Mixer.
 - 1.7 Secure the Backplate to the wall using the Screws (supplied).
 - 1.8 Fit the Concealing Plates.
- Note!** Apply silicone sealant to the back face of the flange.
- Caution!** It is essential at this point that the supply pipework is thoroughly flushed through before connection to the Mixer. Failure to do so may result in product malfunction.
- 1.9 Fit the Compression Nuts and Olives onto the pipework.
 - 1.10 Align the Mixer with the pipework and fit onto the Backplate.
 - 1.11 Tighten the Compression Nuts onto the Mixer with a suitable Spanner.
- Caution!** Take care not to damage the chrome surfaces.



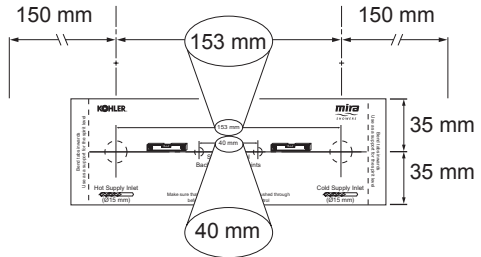
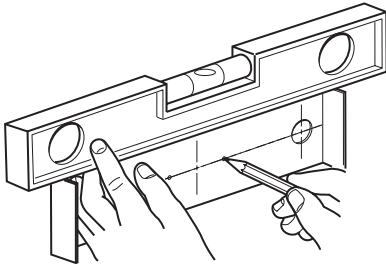
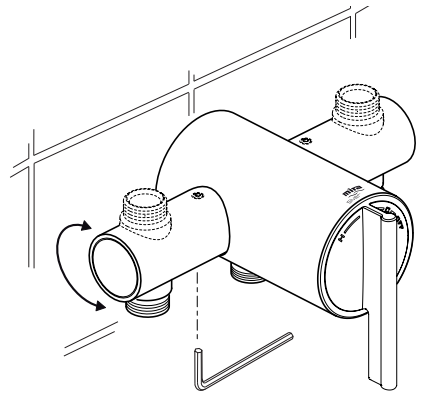
- 1.12 Tighten the Grubscrew to secure the Mixer to the Backplate.
 - 1.13 Fit the **Shower Fittings**, refer to your Shower Fittings Installation and User Guide for Instructions.
- Note!** For high pressure systems, a 12 litre/minute Flow Regulator (supplied) can be fitted under the Hose Washer (refer to illustration).
- 1.14 Turn on the hot and cold water supplies and check for leaks.
 - 1.15 Before using the Shower, refer to section: '**Commissioning**'.

2. Rising or Falling Supplies

2.1 Loosen the Grubscrew on each Elbow using the 2.5 mm Hexagon Key (supplied) and rotate the Elbow 90° as required. Retighten the Grubscrews.

2.2 Use the Installation Template to mark the positions of the fixing holes for the Backplate.

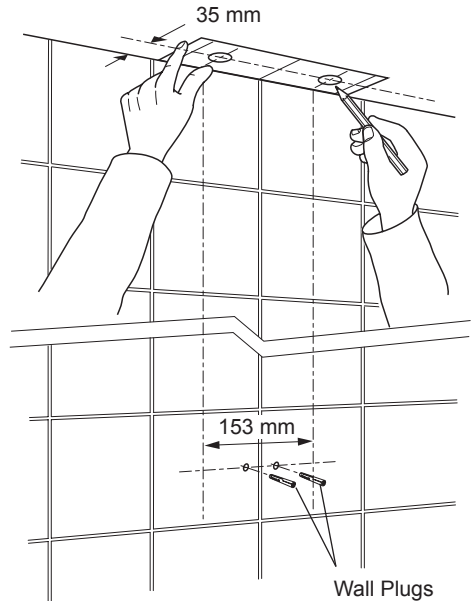
Note! Allow a minimum of 150 mm either side of the Mixer, to allow access to the hot and cold Inlet Filters for servicing.



2.3 For solid walls drill the holes for the Backplate with a 6 mm drill and insert the Wall Plugs (supplied). For other types of wall structure alternative fixings may be required (not supplied).

2.4 For Falling Supplies: Using the Installation Template as a guide, mark the pipe positions on the ceiling and set the 35 mm centres from the finished wall (refer to illustration).

For Rising Supplies: Using the Installation Template as a guide, mark the pipe positions and set the 35 mm centres from the finished wall.



2.5 Fit the supply pipework (**Hot - Left, Cold - Right**).

Note! If the connections are reversed, complete the installation then refer to section: '**Reversed Inlet Supplies**' before commissioning.

2.6 Loosen the Grubscrew with the 2.5 mm Hexagon Key (supplied) and remove the Backplate from the Mixer.

2.7 Secure the Backplate to the wall using the Screws (supplied).

Caution! It is essential at this point that the supply pipework is thoroughly flushed through before connection to the Mixer. Failure to do so may result in product malfunction.

2.8 Fit the Compression Nuts and Olives onto the pipework.

2.9 Align the Mixer with the pipework and fit onto the Backplate.

2.10 Tighten the Compression Nuts onto the Mixer with a suitable Spanner.

Caution! Take care not to damage the chrome surfaces.

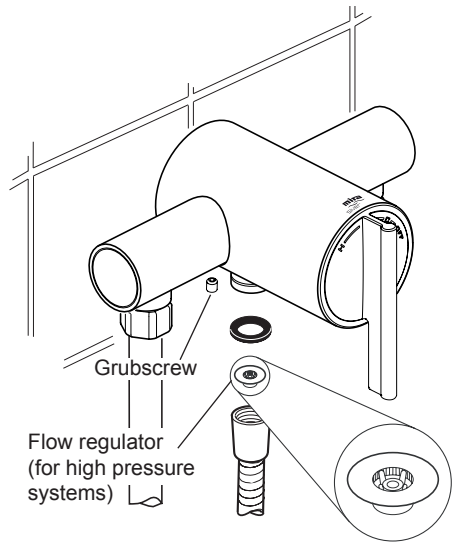
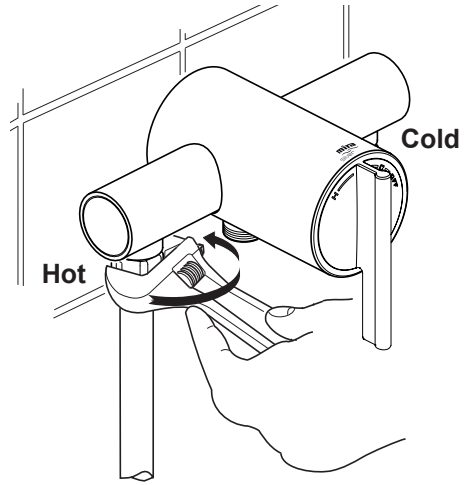
2.11 Tighten the Grubscrew to secure the Mixer to the Backplate.

2.12 Fit the **Shower Fittings**, refer to your Shower Fittings Installation and User Guide for Instructions.

Note! For high pressure systems, a 12 litre/minute Flow Regulator (supplied) can be fitted under the Hose Washer (refer to illustration).

2.13 Turn on the hot and cold water supplies and check for leaks.

2.14 Before using the Shower, refer to section: '**Commissioning**'.

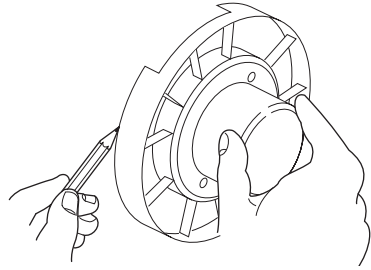


Built-in Thermostatic Mixer

1. Solid Wall or Stud Partition

(Using Securing Brackets - Mounting on Front Face of Wall)

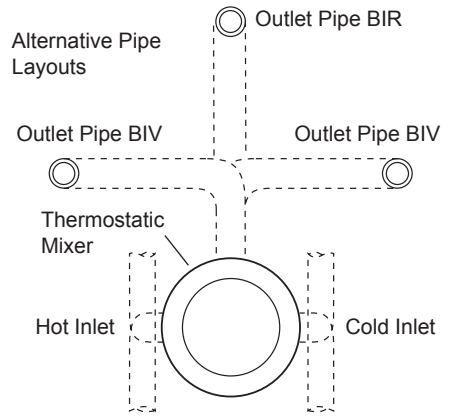
1.1 Determine the route for the hot and cold supply pipework and for the outlet pipework. When connecting to the BIV Shower Fittings it is recommended that the outlet be positioned above and to one side of the Mixer. This is to prevent the Flexible Hose from obstructing the Shower Controls.



1.2 Remove the two Shroud Screws (retain for later use) and remove the Mixer from the Building-in Shroud.

1.3 Determine the position of the Mixer and draw around the Building-in Shroud.

1.4 Mark the routes for the hot and cold supply pipework at 108 mm centres (**Hot - Left, Cold - Right**).



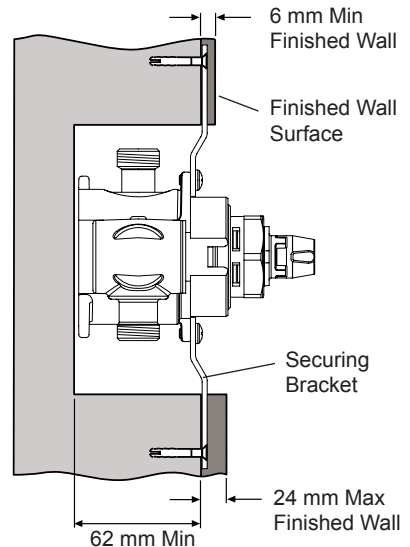
Falling Supplies: For falling supplies loosen the Grubscrew on each Elbow using the 2.5 mm Hexagon Key (supplied). Remove the Elbows and install on opposite sides. Retighten the Grubscrews.

Note! Make sure that the 'O' Seals are correctly fitted and that the Filter Plugs are positioned to the front (i.e. Hexagonal Key facing forward).

1.5 Mark the route for the outlet pipework.

Note! The Outlet Elbow should be sited above the Mixer and on the right or left, as site dictates.

1.6 Remove the plasterboard and/or brick work to a minimum depth of 62 mm.



1.7 Fit the Securing Brackets to the Mixer with the Bracket Securing Screws.

Important! Make sure that the correct holes are used, otherwise the Backplate cannot be fitted.

Note! The Securing Brackets can be rotated for suitable fixing points.

1.8 Make sure that the Mixer is level and mark the positions for the countersunk fixing holes on the wall.

1.9 For solid walls drill two 6 mm holes for the Wall Plugs.

Caution! Do not drill into pipes in the wall.

1.10 Fit the Wall Plugs (supplied) and fix the Mixer to the wall with the Screws provided.

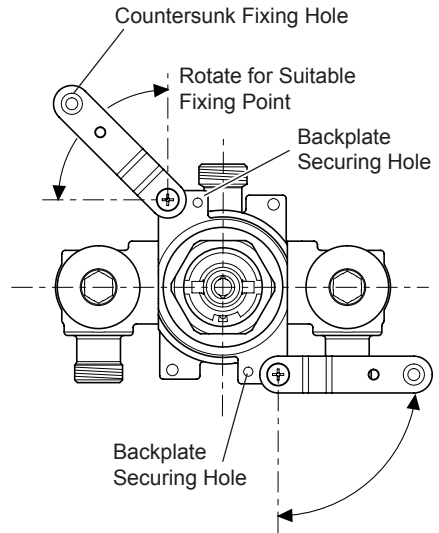
Note! For stud partition installations alternative fixings may be required (not supplied).

1.11 Connect the hot and cold supply pipes and tighten the Compression Nuts.

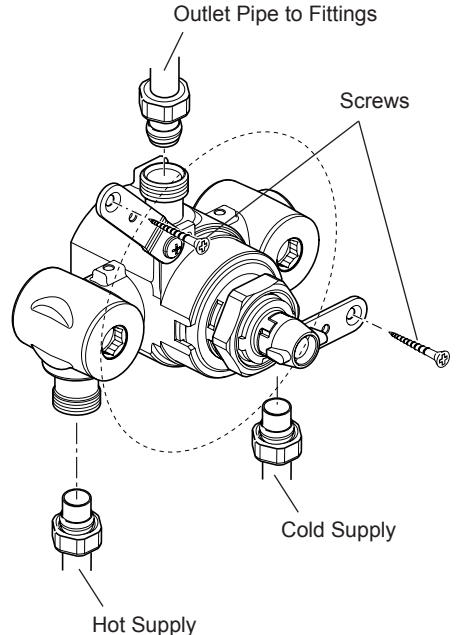
Caution! Make sure that the Olives are fitted and all pipework is flushed through before connecting to the Mixer.

1.12 Connect the outlet pipework, leaving enough pipe through the wall to temporarily cap off (refer to your Shower Fittings Installation and User Guide).

1.13 Turn on the water supplies and check for leaks.



Note! Securing Brackets shown in preferred position to allow the Compression Nuts to be tightened.



1.14 Attach the Building-in Shroud to the Mixer using the two Shroud Screws removed earlier.

1.15 Using the 'Finished Wall Indicator' on the Building-in Shroud as a guide, finish the wall, e.g. tiles.

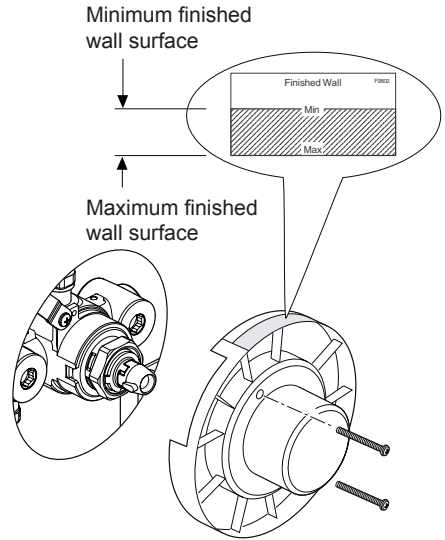
Caution! Make sure that the finished wall is within the maximum and minimum limits and to an even depth (no greater than 2 mm variation) or the control components will not fit correctly.

1.16 Remove the two Shroud Screws (retain for later use) and remove the Building-in Shroud.

1.17 Fit the **Shower Fittings**, refer to your Shower Fittings Installation and User Guide for Instructions.

Note! For high pressure systems, a 12 litre/minute flow regulator (supplied) can be fitted under the hose washer.

1.18 Fit the Concealing Plate and Control Assembly, refer to section: '**Control Assembly**'.



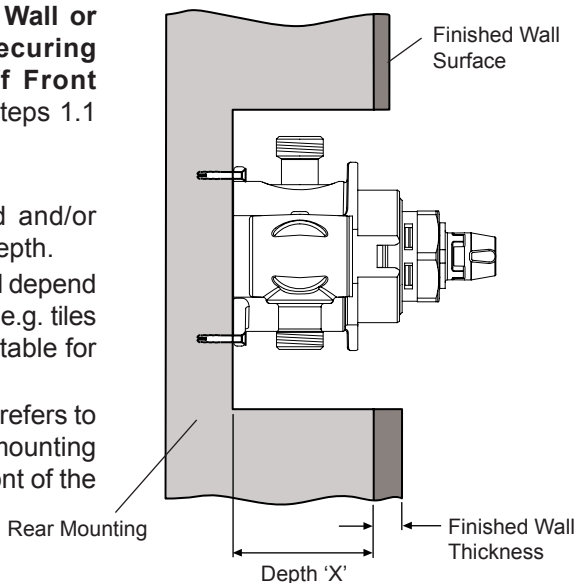
2. Solid Wall or Stud Partition (Using Rear Fixing Points on the Thermostatic Mixer)

2.1 Refer to section: '1. Solid Wall or Stud Partition (Using Securing Brackets - Mounting off Front Face of Wall)' and follow steps 1.1 to 1.4.

2.2 Cut away the plasterboard and/or brick work to the required depth.

Important! This depth 'X' will depend on the finished wall thickness e.g. tiles or facia board. Refer to the table for this measurement.

For stud partitions depth 'X' refers to the distance from the rear mounting e.g. timber noggin, to the front of the wall (before tiling).



Finished Wall Thickness (e.g. tile and adhesive)	Wall Cutout Depth 'X'
4 mm	81 - 63 mm
6 mm	79 - 61 mm
8 mm	77 - 59 mm
10 mm	75 - 57 mm
12 mm	73 - 55 mm
14 mm	71 - 55 mm
16 mm	69 - 55 mm
18 mm	67 - 55 mm
20 mm	65 - 55 mm
22 mm	63 - 55 mm
24 mm	61 - 55 mm

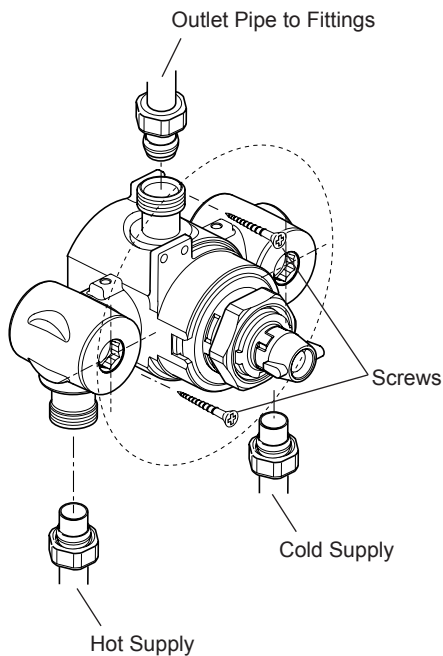
2.3 Make sure that the Mixer is level and central in the hole, and square to the finished wall surface (or the control components will not fit correctly), then mark the positions of the Fixing Screw holes on the wall.

2.4 For solid walls drill two 6 mm holes for the Wall Plugs.

2.5 Insert the Wall Plugs (supplied) and attach the Mixer to the wall with the Screws provided.

Note! For stud partition installations alternative fixings may be required (not supplied) to fix the Mixer to the rear face of the wall cavity or to a timber noggin.

2.6 Refer to section: '**1. Solid Wall or Stud Partition (Using Securing Brackets - Mounting off Front Face of Wall)**' and follow steps 1.10 to 1.18.



3. Laminated Panel (Using Securing Brackets - Mounting on Rear Face of Wall)

Note! For laminated panels the Mixer must be positioned from the rear of the panel.

Panel thickness must be between 4 and 12 mm (if a thicker panel is used, it will be necessary to recess the Securing Brackets into the rear of the panel).

Important! Make sure that there is a minimum clearance of 64 mm behind the laminated panel to house the Mixer.

3.1 Remove the two Shroud Screws (retain for later use) and remove the Mixer from the Building-in Shroud.

3.2 Mark the position of the Mixer using the Building-in Shroud as a guide.

3.3 Carefully cut out the laminated panel.

3.4 Fit the Securing Brackets to the Mixer.

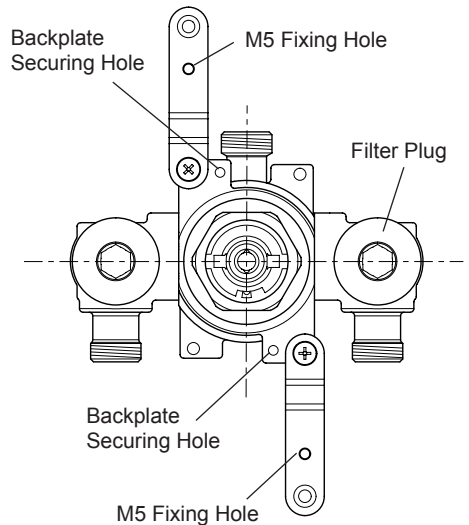
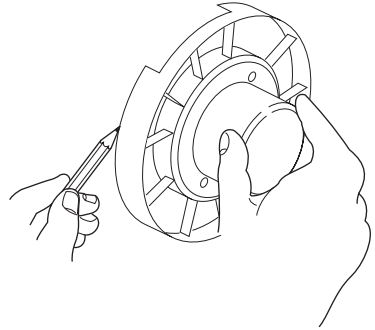
Important! The Securing Brackets must be fixed vertically, as illustrated.

Important! Make sure that the correct holes are used, otherwise the Backplate cannot be fitted.

3.5 Position the Mixer on the front of the panel, make sure that it is level and central in the hole, then mark the position of the M5 fixing holes.

Important! Make sure that the correct holes are used (refer to illustration).

Note! Make sure that the Filter Plugs are positioned so that they can be removed for servicing.



3.6 Drill the two 5.5 mm holes for the fixing positions (countersink the holes at the front).

3.7 Secure the Mixer with the M5 x 40 screws as shown.

3.8 Fit the hot and cold supply pipes (**hot - left, cold - right**) and tighten the compression nuts.

Caution! Make sure that the olives are fitted and all pipework is flushed through before connecting to the Mixer.

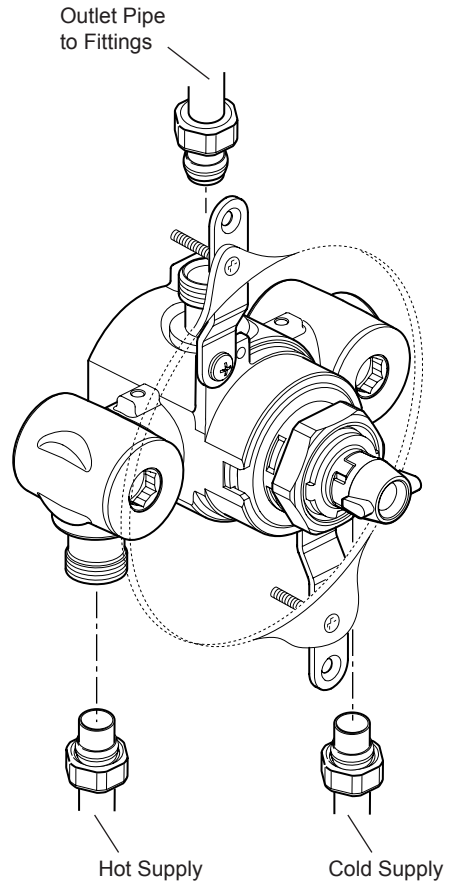
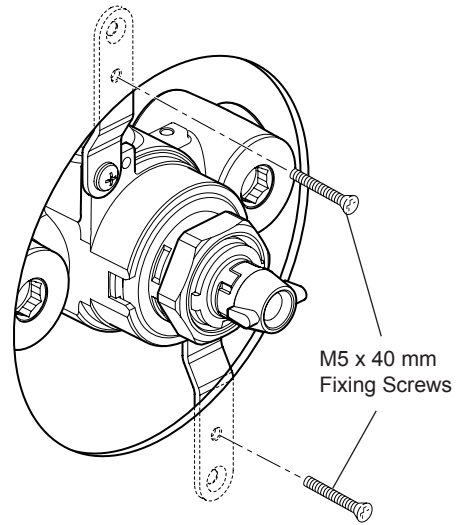
3.9 Fit the outlet pipework, leaving enough pipe through the wall to temporarily cap off (refer to your Shower Fittings Installation and User Guide).

3.10 Turn on the water supplies and check for leaks.

3.11 Fit the **Shower Fittings**, refer to your Shower Fittings Installation and User Guide for Instructions.

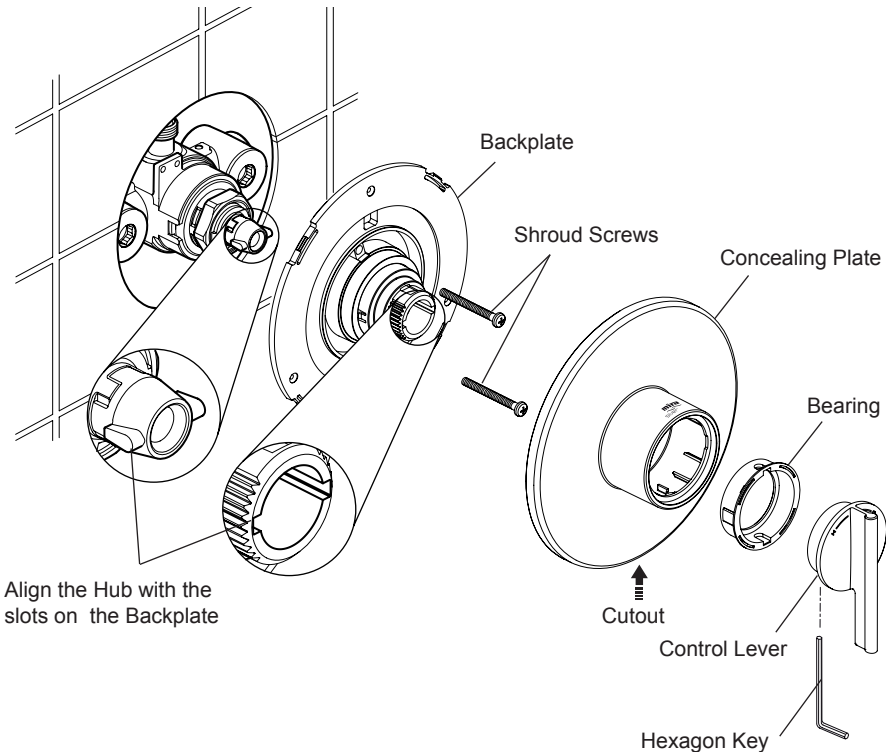
Note! For high pressure systems, a 12 litre/minute flow regulator (supplied) can be fitted under the hose washer.

3.12 Fit the Concealing Plate and Control Assembly, refer to section: '**Control Assembly**'.



Control Assembly (Built-in Models)

1. Loosen the Control Lever Grubscrew (by approximately 4 turns) with the 2.5 mm Hexagon Key (supplied) and pull off the Control Lever and Bearing.
2. Carefully unclip the Concealing Plate from the Backplate.
Note! Use a screwdriver in the cutout to assist separation.
3. Align the slots in the Backplate with the lugs on the Hub (refer to illustration), and fit the Backplate to the Mixer.
4. Align the holes in the Backplate with the threaded holes on the Mixer and secure with the two Shroud Screws (removed earlier).
Note! Make sure that the Foam Seal is fully compressed. Do not overtighten.
5. With the cutout at the bottom, locate the Concealing Plate over the Mixer, engage the crosses in the Concealing Plate with the square recesses in the Backplate, and push firmly until the Concealing Plate clicks into position.
6. Align the lugs on the Bearing with the slots in the Concealing Plate and fit in position.
7. Make sure that the Hub is positioned fully clockwise and refit the Control Lever with the Lever at the bottom, retighten the Grubscrew.
8. Before using the Shower, refer to section: '**Commissioning**'.

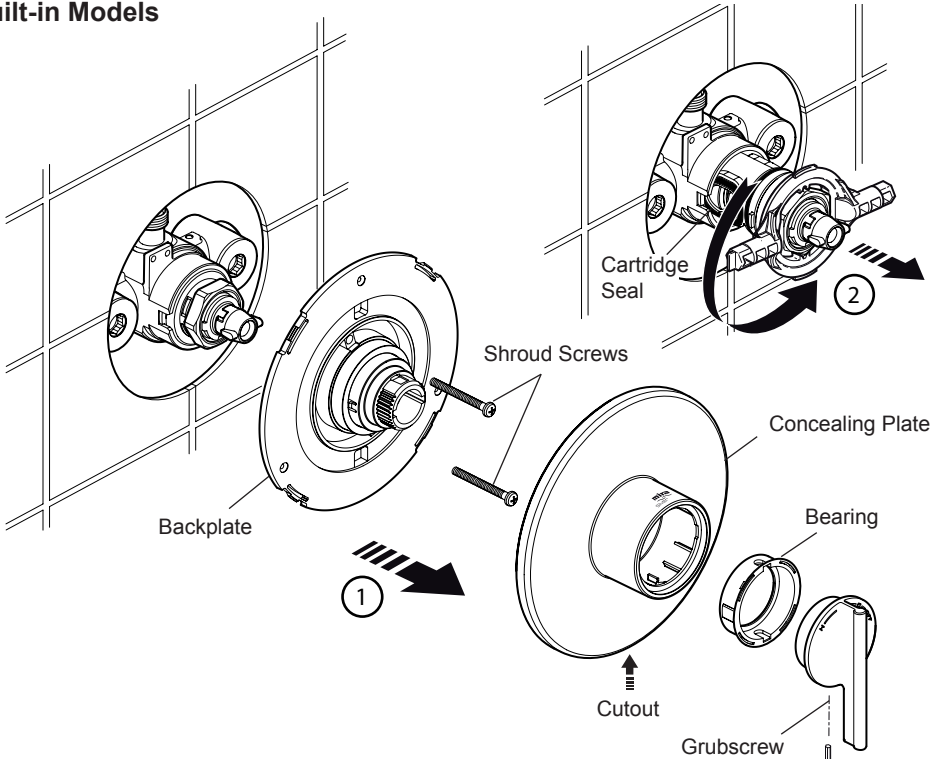


REVERSED INLET SUPPLIES

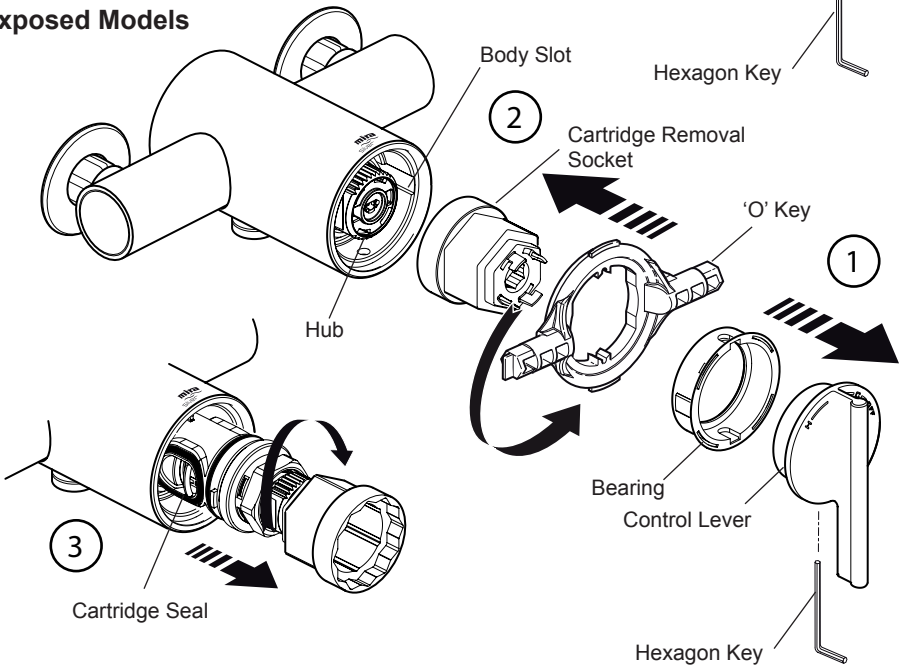
The Mira Silver Thermostatic Mixer is supplied with inlet connections **Hot - Left, Cold - Right** and **Bottom - Outlet** as standard. If the hot and cold water supply pipes have been reversed during installation the Thermostatic Cartridge must be removed and rotated 180°.

1. Isolate the hot and cold water supplies.
2. Loosen the Control Lever Grubscrew (by approximately 4 turns) with the 2.5 mm Hexagon Key (supplied) and pull off the Control Lever and Bearing.
3. **Built-in Models Only:**
 - 3.1 Carefully unclip the Concealing Plate from the Backplate.
Note! Use a screwdriver in the cutout to assist separation.
 - 3.2 Unscrew the two Shroud Screws and remove the Backplate from the Mixer.
 - 3.3 Fit the 'O' Key (supplied) onto the Cartridge Nut and turn anticlockwise. Unscrew fully and pull the Cartridge from the Mixer Body.
4. **Exposed Models Only:**
 - 4.1 Fit the Cartridge Removal Socket (supplied) onto the Cartridge Nut.
 - 4.2 Fit the 'O' Key (supplied) onto the Cartridge Removal Socket, turn anticlockwise and unscrew fully.
 - 4.3 Invert the Cartridge Removal Socket and align the lugs with the slots in the Hub. Rotate the Cartridge Removal Socket clockwise to lock the lugs into the Hub and pull the Cartridge from the Mixer Body.
5. Rotate the Cartridge 180°.
6. Check that the two Cartridge Inlet Seals are fitted and carefully push into the Body, aligning the Cartridge Lugs into the Body Slots.
Note! Make sure that the Cartridge Lug stamped 'H' is aligned with the hot inlet supply.
Important! Take care when fitting the Cartridge as damage to the Cartridge Inlet Seals may result in dripping from the Shower Head.
7. Tighten the Nut by turning the 'O' Key clockwise.
Note! For Exposed Models use the Cartridge Removal Socket and 'O' Key together.
8. **Built-in Models Only:** Refer to section: '**Control Assembly (Built-in Models)**' and follow instructions 3 to 8.
9. Align the lugs on the Bearing with the slots in the Concealing Plate and fit in position.
10. Make sure that the Hub is positioned fully clockwise and refit the Control Lever with the Lever at the bottom, retighten the Grubscrew.
11. Before using the Shower, refer to section: '**Commissioning**'.

Built-in Models



Exposed Models



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 43°C at the factory but due to variations in site conditions the maximum temperature may need adjustment.

Note! Make sure that the hot water temperature is at least 55°C and that there is sufficient supply.

1. Turn on the Mixer to the maximum temperature (i.e. fully anticlockwise) and allow the temperature to stabilise.

If the temperature is too hot or too cold adjust as follows:

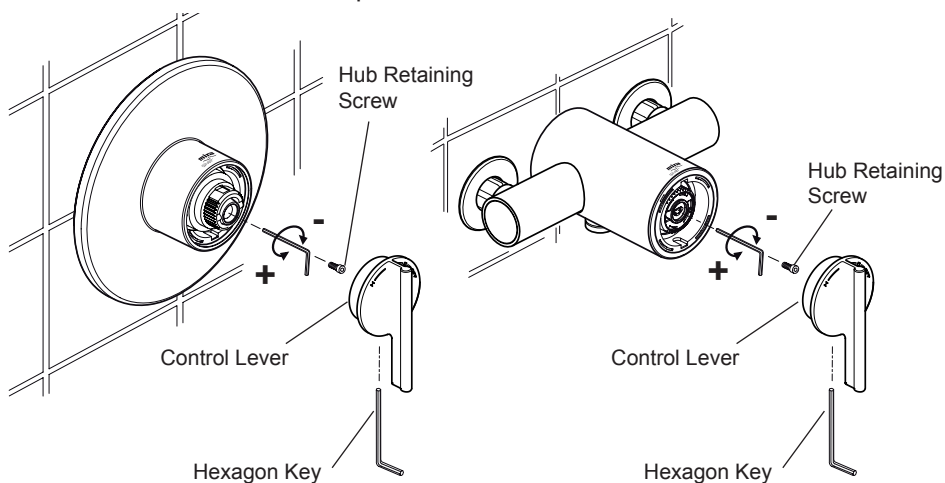
2. Loosen the Control Lever Grubscrew (by approximately 4 turns) with the 2.5 mm Hexagon Key (supplied) and pull off the Control Lever and Bearing.
3. Unscrew the Hub Retaining Screw with a 2.5 mm Hexagon Key.

Note! Do not remove the Hub.

4. Insert the 2.5 mm Hexagon Key into the centre of the Spindle and engage with the recessed Temperature Adjusting Screw.
5. Rotate the Hexagon Key until the required maximum temperature is obtained at the Shower. Anticlockwise to increase the temperature, or clockwise to decrease the temperature ($\frac{1}{4}$ turn = approximately 1°C).
6. Once the desired maximum blend temperature has been achieved turn off the Mixer by rotating the Hub fully clockwise.

Note! Do not remove the Hub.

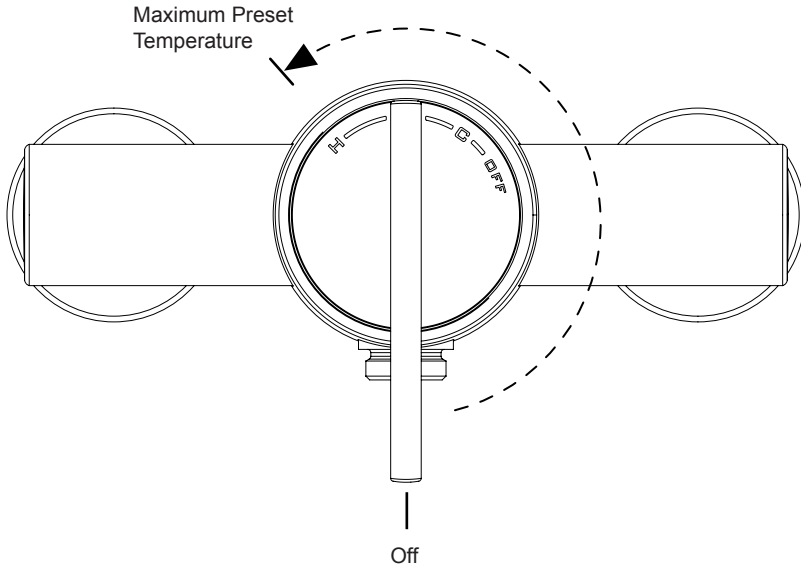
7. Refit the Hub Retaining Screw.
8. Refit the Control Lever with the Lever at the bottom and retighten the Grubscrew.
9. Check that the Shower temperature is correct.



OPERATION

The Mira Silver Thermostatic Mixer is a Thermostatic Shower Control with a Single Sequential Control Lever for on/off and temperature control.

The Control Lever operates anti-clockwise in the following sequence:



Off ➡ On ➡ Cold ➡ Warm ➡ Maximum Preset Temperature

FAULT DIAGNOSIS

Symptom	Cause / Rectification
1. Only hot or cold water from the Mixer outlet.	<ul style="list-style-type: none"> a. Inlets reversed (hot supply to cold supply). Refer to section: 'Reversed Supplies'. b. No hot water reaching the Mixer. c. Check the Filters for any blockage. d. Installation conditions outside operating parameters: refer to sections: 'Specifications' and 'Commissioning'.
2. Fluctuating or reduced flow rate.	<ul style="list-style-type: none"> a. Check the Showerhead, Hose and Filters for any blockage. b. Make sure the maintained inlet pressures are nominally balanced and sufficient, refer to section: 'Specifications'. c. Make sure the inlet temperature differentials are sufficient, refer to section: 'Specifications'. d. Flow Regulator fitted incorrectly. e. Airlock or partial blockage in pipework.
3. No flow from the Mixer outlet.	<ul style="list-style-type: none"> a. Check the Showerhead, Hose and Filters for any blockage. b. Hot or cold supply failure.
4. Blend temperature drift.	<ul style="list-style-type: none"> a. Refer to symptom 2. above. b. Significant supply temperature fluctuation. c. Significant supply pressure fluctuation. d. Faulty Thermostatic Cartridge, renew.
5. Maximum blend temperature setting too hot or too cold.	<ul style="list-style-type: none"> a. Indicates incorrect maximum temperature setting; refer to section: 'Commissioning'. b. Refer to symptom 4. above.
6. Water leaking from the Showerhead.	<ul style="list-style-type: none"> a. Normal for a short period after shut off. b. Check that the pressures are not in excess of the specifications for product. c. Cartridge Inlet Seals damaged, renew. d. Renew the Thermostatic Cartridge.
7. Flow rate too low or too high.	<ul style="list-style-type: none"> a. (low) Insufficient supply pressures. b. (high) Supply pressure too high. Install Flow Reg. c. Refer to symptom 2. above.

MAINTENANCE

General

This Product is precision engineered and should give continued safe and controlled performance, provided:

1. It is installed, commissioned, operated and maintained in accordance with manufacturers recommendations.
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

The Mira Silver Thermostatic Mixer is designed for the minimum of maintenance in normal use. The only serviceable parts are the inlet filters which should be checked and cleaned every 12 months. If a malfunction occurs with the Thermostatic Cartridge then this will necessitate a complete cartridge replacement.

Note! The cartridge contains no internally serviceable parts.

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

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.

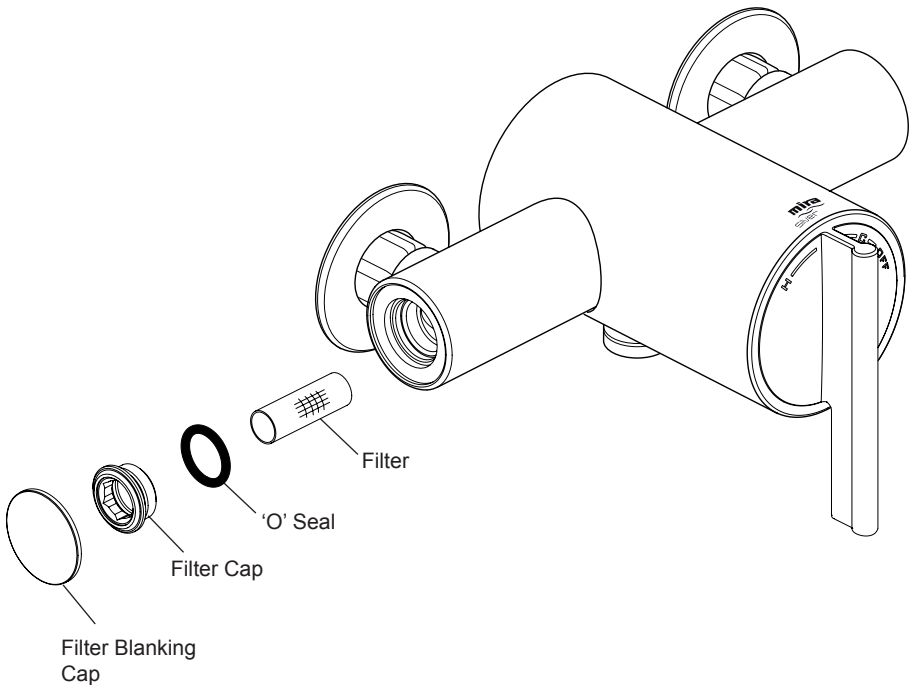
Inlet Filters

The Inlet Filters should be checked and cleaned as necessary every 12 months.

Note! The Inlet Filters must not be removed except for cleaning. If the Thermostatic Mixer is operated without the Inlet Filters fitted the Warranty on the product will be void.

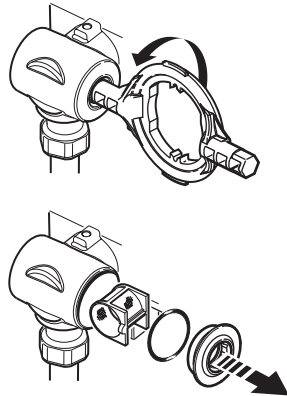
Exposed Models

1. Isolate the hot and cold water supplies and operate the Control Lever to drain any residual water.
 2. Carefully remove the Filter Blanking Caps and unscrew the Filter Caps with the 'O Key' (supplied) or a 12 mm hexagonal wrench and remove the Filters.
 3. Clean the filters under a jet of water to remove any lodged particles.
 4. Refit the Filters and tighten the Filter Caps.
- Note!** Make sure that the 'O' seal is fitted correctly and not damaged.
5. Turn on the hot and cold water supplies and check for leaks.
 6. Refit the Filter Blanking Caps.



Built-in Models

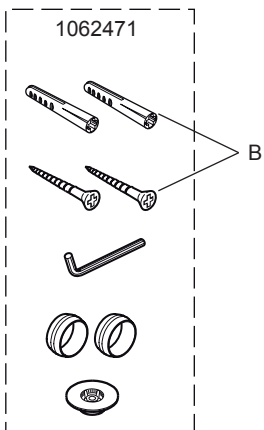
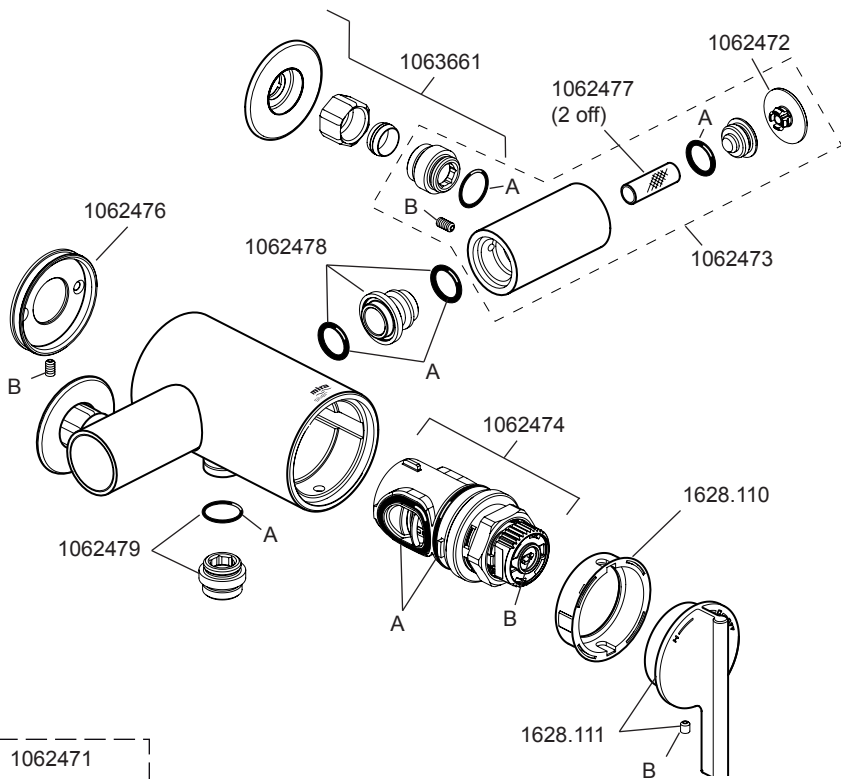
1. Isolate the hot and cold water supplies and operate the Control Lever to drain any residual water.
2. Loosen the Control Lever Grubscrew (by approximately 4 turns) with the 2.5 mm Hexagon Key (supplied) and pull off the Control Lever and Bearing.
3. Carefully unclip the Concealing Plate from the Backplate.
Note! Use a screwdriver in the cutout to assist separation.
4. Unscrew the two Shroud Screws and remove the Backplate from the Mixer.
5. Unscrew the Filter Caps with the 'O Key' (supplied) or a 12 mm hexagonal wrench and remove the Filters.
Note! Use pliers to carefully remove the filters.
6. Clean each the filters under a jet of water to remove any lodged particles.
7. Refit the Filters and tighten the Filter Caps.
Note! Make sure that the seal is fitted correctly and not damaged.
8. Turn on the hot and cold water supplies and check for leaks.
9. Refer to section: '**Control Assembly (Built-in Models)**' and follow instructions 3 to 8.



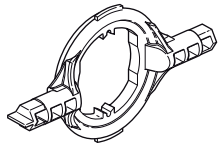
SPARE PARTS

Exposed Silver Thermostatic Mixer

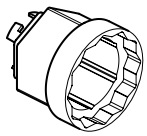
1062470	Seal Pack (identified 'A')
1062471	Component Pack
1062472	Elbow Cap
1062473	Elbow Assembly
1062474	Cartridge Assembly
1062476	Backplate
1062477	Filter Pack (x 2)
1062478	Elbow Connector Pack
1062479	Outlet Connector Pack
1063660	Screw Pack (identified 'B')
1063661	Inlet Connector Pack
1063671	'O' Key
1628.110	Bearing
1628.111	Control Lever
1628.115	Cartridge Removal Socket (*also included with 1062474)



1063671

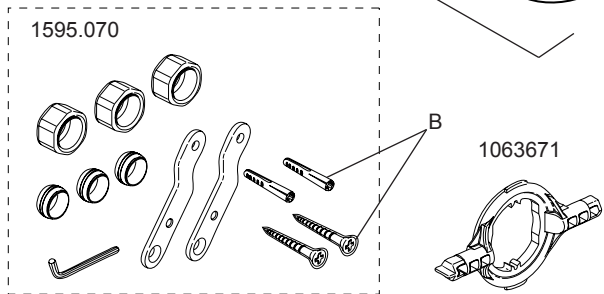
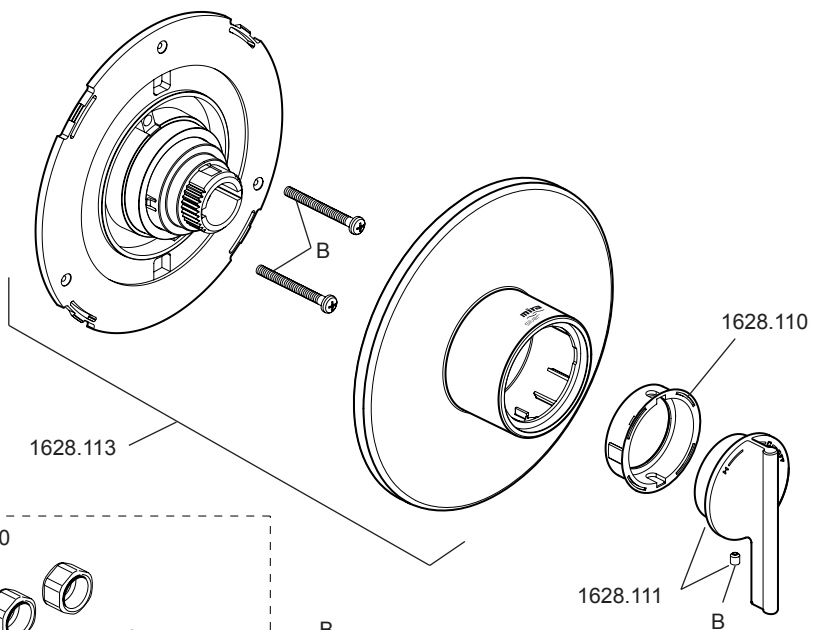
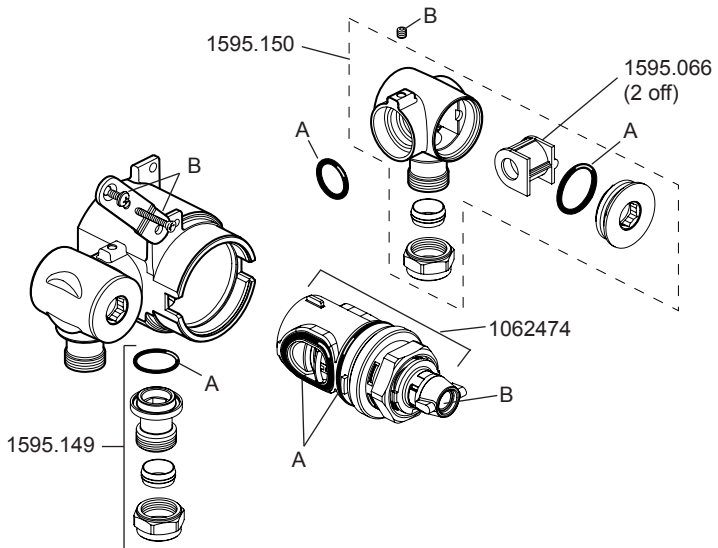


1628.115*



Built-in Silver Thermostatic Mixer

1062474	Cartridge Assembly
1063671	'O' Key
1595.046	Seal Pack (identified 'A')
1595.066	Filter Pack (x 2)
1595.067	Screw Pack (identified 'B')
1595.149	Outlet Connector Pack
1595.150	Elbow Assembly
1595.070	Component Pack
1628.110	Bearing
1628.111	Control Lever
1628.113	Concealing Plate Assembly



NOTES

NOTES

CUSTOMER SERVICE

Guarantee of Quality

Mira Showers guarantee your product against any defect in materials or workmanship for the period shown in the Guarantee Registration Document included with your shower.

Alternatively, to confirm the applicable guarantee period please contact Customer Services.

To validate the guarantee, please return your completed registration card.

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

To be free of charge, service work must only be undertaken by Mira Showers or our approved agents in Northern Ireland and Republic of Ireland.

Service under this guarantee does not affect the expiry date. The guarantee on any exchanged parts or product ends when the normal product guarantee period expires.

Not covered by this guarantee:

Damage or defects arising from incorrect installation, improper use or lack of maintenance, including build-up of limescale.

Damage or defects if the product is taken apart, repaired or modified by any person not authorised by Mira Showers or our approved agents.

This guarantee is in addition to your statutory and other legal rights.

Before using your shower

Please take the time to read and understand the operating and safety instructions detailed in this manual.

What to do if something goes wrong

If when you first use your shower it doesn't function correctly, first contact your installer to check that installation and commissioning are satisfactory and in accordance with the instructions in this manual. We are on hand to offer you or your installer any advice you may need.

Should this not resolve the difficulty, simply contact our Customer Services who will give every assistance, and if necessary arrange for our service engineer to visit.

If later the performance of your shower declines, consult this manual to see whether simple home maintenance is required. Please call our Customer Services to talk the difficulty through, request service under guarantee if applicable, or take advantage of our comprehensive After-Sales service.

As part of our quality and training programme calls may be recorded or monitored.

Our Customer Services Team is comprehensively trained to provide every assistance you may need: help and advice, spare parts or a service visit.

Spare Parts

We maintain an extensive stock of spares, and aim to have functional parts available for ten years from the date of final manufacture of the product.

Spares can be purchased from approved stockists or merchants (locations on request) or direct from Customer Services.

Spares direct will normally be despatched within two working days. Payment can be made by Visa or MasterCard at the time of ordering. Should payment by cheque be preferred a pro-forma invoice will be sent.

Note! In the interests of safety, spares requiring exposure to mains voltages can only be sent to competent persons.

Service

Our Service Force is available to provide a quality service at a reasonable cost. You will have the assurance of a Mira trained engineer/agent, genuine Mira spares, and a 12 month guarantee on the repair.

Payment should be made directly to the Service Engineer/Agent, using Visa, MasterCard or a cheque supported by a banker's card.

To Contact us

England, Scotland & Wales

Mira Showers Customer Services

Telephone: 0870 241 0888 - Mon to Fri 8:00 am - 5:30 pm
Sat 8:30 am - 3:30 pm

E-mail: technical@mirashowers.com

Fax: 01242 282595

By Post: Cromwell Road, Cheltenham
Gloucestershire, GL52 5EP

Northern Ireland

Wm H Leech & Son Ltd

Telephone: 028 9044 9257 - Mon to Fri 9:00 am - 5:00 pm

E-mail: leech@dnet.co.uk

Fax: 028 9044 9234

Post: Maryland Industrial Estate
Ballygowan Road, Moneyreagh
Co Down, BT23 6BL

Republic of Ireland

Modern Plant Ltd (Dublin)

Telephone: 01 459 1344 - Mon to Fri 9:00 am - 5:00 pm

E-mail: sales@modernplant.ie

Fax: Dublin 01 459 2329

Post: Otter House, Naas Road
Clondalkin, Dublin 22

Modern Plant Ltd (Cork)

Telephone: 021 496 8755 - Mon to Fri 9:00 am - 5:00 pm

E-mail: cork@modernplant.ie

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