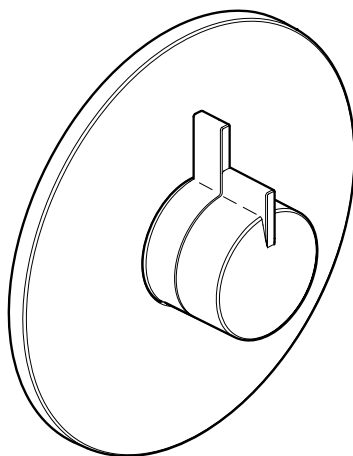
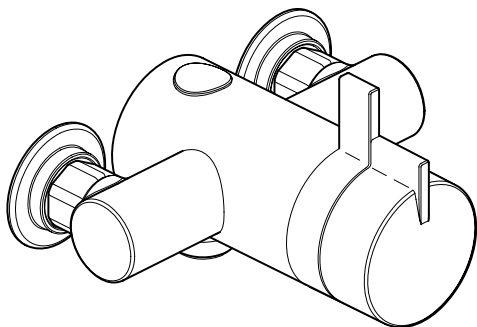


Mira Miniduo[†]

([†]including Eco Models)

Thermostatic Mixers



Installation and User Guide

Please leave these instructions with the user

Showering perfection

mira
SHOWERS

If you experience any difficulty with the installation or operation of your new shower, then please refer to the **Fault Diagnosis** section, before contacting **Kohler Mira Ltd.**

Our telephone and fax numbers can be found in the back of this guide.

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 Miniduo is a thermostatic mixer with separate on/off and temperature control.

The thermostatic mixers incorporate 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.

Type 2 Valves

These products have been certified as Type 2 valves under the BUILDCERT TMV2 scheme. They also comply with the Water Supply (water fittings) Regulations 1999.

For Type 2 Valves refer to the TMV2 Requirements Manual.

Application

The approved designations for Type 2 Valves are as follows:

Models	Designation
Miniduo	LP-S, HP-S

Important! The fitting of any flow regulator to Miniduo models will invalidate TMV2 compliance due to the minimum flow rate requirements. Do not fit flow regulators in TMV2 applications to these models.

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.

Recommended Usage

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

SAFETY WARNINGS

Warning! This product can deliver scalding temperatures if not operated, installed or maintained in accordance with the instructions, warnings and cautions contained in this guide.

The function of a thermostatic mixing valve is to deliver water consistently at a safe temperature. In keeping with every other mechanism, it cannot be considered as functionally infallible and as such, cannot totally replace a supervisor's vigilance where that is necessary.

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 the manufacturer's recommendations.
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

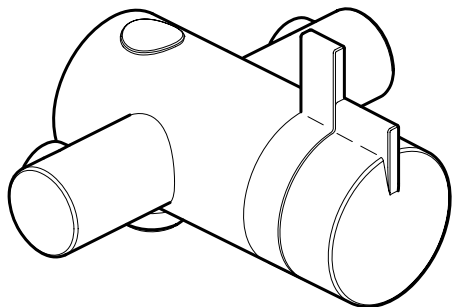
Caution!

1. Read all of these instructions and retain this guide for later use.
2. Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.
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. Make sure that you fully understand how to operate this shower before use, read all operating instructions and retain this guide for future reference.
6. This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the product by a person responsible for their safety.
7. Children should be supervised to ensure that they do not play with the product.
8. DO NOT perform any unspecified modifications to the shower or its accessories. When servicing only use genuine Kohler Mira replacement parts.
9. DO NOT fit any form of outlet flow control. Only Mira recommended outlet fittings should be used.
10. DO NOT operate the temperature control rapidly, allow 10 – 15 seconds for the temperature to stabilise before use.
11. Care is required when adjusting flow or temperature, make sure that the temperature has stabilised.
12. Care is required if the product is turned off and back on during showering as this may result in unstable temperature. Ensure temperature has stabilised before re-using product.
13. Sunburn or skin conditions can increase your sensitivity to hot water. Make sure that you set the shower to a cooler temperature.
14. The water supplies to this product must be isolated if the product is not to be used for a long period of time. If the product or pipework is at risk of freezing during this period they should also be drained of water.
15. 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

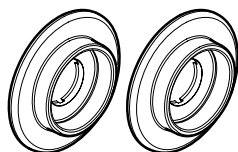
PACK CONTENTS

Exposed Thermostatic Mixers

❑ 1 x Thermostatic Mixing Valve



Component Pack



❑ 2 x Concealing Plates



❑ 2 x Compression Nuts



❑ 2 x Olives



❑ 2 x Wall Plugs



❑ 2 x Fixing Screws



❑ 1 x 2.5 mm Hexagonal Key



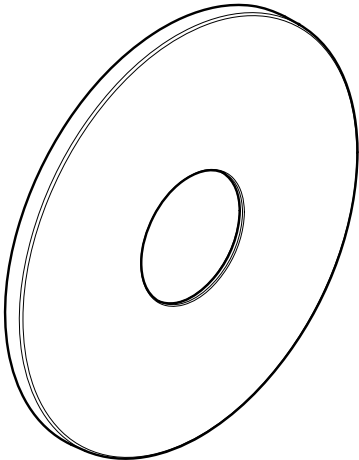
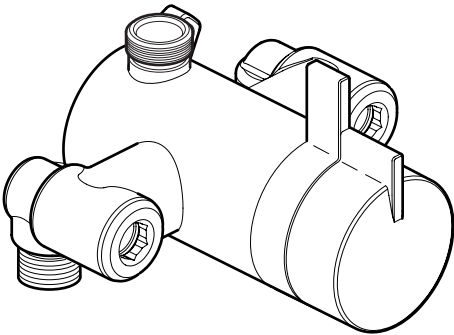
❑ 1 x Flow Regulator (refer to section: '**Flow Regulators**')



❑ 1 x 'O' Key

Built-in Thermostatic Mixers

1 x Thermostatic Mixing Valve



1 x Concealing Plate Assembly

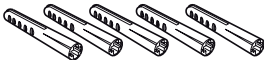
Component Pack



3 x Compression Nuts



3 x Olives



5 x Wall Plugs



5 x Fixing Screws



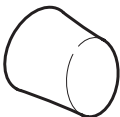
1 x 2.5 mm Hexagonal Key



1 x Flow Regulator (refer to section: 'Flow Regulators')



1 x 'O' Key



1 x RAC Assembly

Valve Combinations

These thermostatic mixers are available with various shower fittings and water saving features, refer to the table below to identify your mixer valve combination:

Mixer Valve	Shower Fittings	Flow Regulator		
		Flow Rate	Colour	Comments
Miniduo EV	L98D	12 L/Min	Red	Supplied in the component pack, designed to be fitted in the shower valve outlet
Miniduo BIV	L98D	12 L/Min	Natural	Supplied in the component pack, designed to be fitted between the shower hose and RAC assembly
Miniduo with Eco Showerhead EV	L98D with Eco Showerhead	7.3 L/Min	-	Optional fit for HP systems only
Miniduo with Eco Showerhead BIV	L98D with Eco Showerhead	7.3 L/Min	-	Optional fit for HP systems only
Miniduo with Eco Showerhead BIR	Eco BIR Showerhead	6.0 L/Min	-	Supplied fitted in the showerhead

The Mira Miniduo ECO BIR has a flow regulator supplied pre-fitted in the showerhead, on older combination boilers and for low pressure gravity fed systems the flow regulator may need to be removed to improve the flow rate.

Flow regulators are for installation on high pressure systems (above 0.5 bar).

The Mira Miniduo ECO EV & BIV have a flow regulator supplied for installation on high pressure systems above 2 bar. Note! On some combination boiler systems in order to achieve the minimum flow rate req'd to ignite the boiler the flow regulator may not be req'd. For low pressure gravity fed systems do not fit the flow regulator.

Important! The fitting of any flow regulator to Miniduo models will invalidate TMV2 compliance due to the minimum flow rate requirements. Do not fit flow regulators in TMV2 applications to these models. For further information on how and where to fit the flow regulator, refer to section: '**Flow Regulators**'.

SPECIFICATIONS

For Type 2 Valves, the supply conditions specified in the TMV2 Requirements Manual take precedence over the operating parameters which follow.

Pressures

- Max Static Pressure: **10 Bar**.
- Max Maintained Pressure: **5 Bar**.
- Min Maintained Pressure (Gas Water Heater): **1 Bar**.
- Min Maintained Pressure (Gravity System): **0.1 Bar (0.5 Bar for models with Eco Showerhead)**. (0.1 bar = 1 Metre head from cold tank base to showerhead outlet). For optimum performance supplies should be nominally equal.

Temperatures

- Factory Pre-set (Blend) Shower: **41°C**.
- Optimum Thermostatic Control Range: **35°C to 43°C** (achieved with supplies of 15°C cold, 65°C hot and nominally equal pressures).
- Recommended Hot Supply: **60°C to 65°C Note!** The mixing valve can operate at higher temperatures for short periods without damage, however this could detrimentally affect thermostatic performance. For safety and performance reasons it is recommended that the maximum hot water temperature is limited to 65°C.
- Cold Water Range: up to **25°C**.
- Minimum Recommended Differential between Hot Supply and Outlet Temperature: **12°C**.

Thermostatic Shut-down

- For safety and comfort the thermostat will shut off the mixing valve **within 2 Seconds** if either supply fails (achieved only if the blend temperature has a minimum differential of 12°C from either supply temperature).

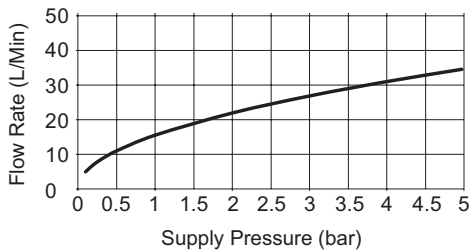
Connections

- Inlets: 15 mm Compression.
- Outlet: ½" BSP Flat Face / 15 mm Compression
- Standard connections are: **hot - left, cold - right, outlet - bottom (EV models), top (BIV and BIR models).**

Flow Rates

Typical Flow Rates

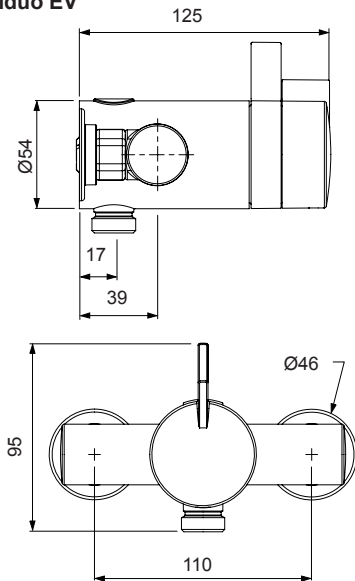
Mira Miniduo with Mira L98D Shower Fittings (Typical Flow Rate without regulators fitted)



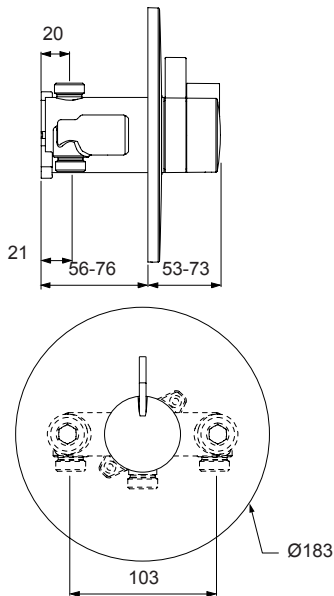
DIMENSIONS

(All dimension in millimetres)

Miniduo EV

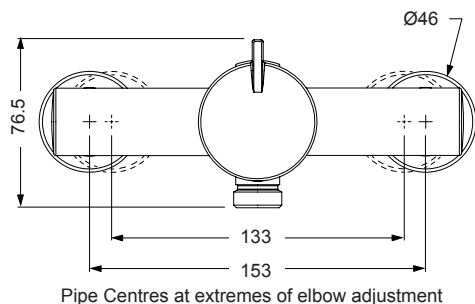


Miniduo BIV and Miniduo with Eco Showerhead
BIV / BIR



Note! If you are retro-fitting your mixing valve onto existing pipework, an **Adjustable Elbow Pack** is available if required, refer to section: ‘Accessories’.

Miniduo with Adjustable Elbows



INSTALLATION

Suitable Plumbing Systems

Gravity Fed:

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.

Mains Pressurised Instantaneous Hot Water System (Combination Boiler):

The thermostatic mixer can be installed with systems of this type with balanced pressures. (Recommended Minimum Maintained Pressure: **1.0 Bar**).

Note! On combination boiler systems we recommend that the thermostatic mixer is operated in the maximum flow position in order to achieve the minimum flow rate required to ignite and run the boiler.

Unvented Mains Pressure System:

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

Pumped System:

The thermostatic mixer can be installed with an inlet pump (twin impeller). The pump must be installed in a suitable location and in accordance with its instructions.

General

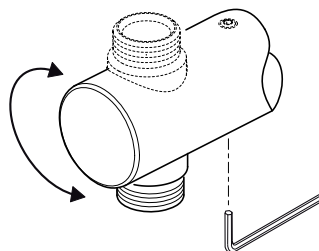
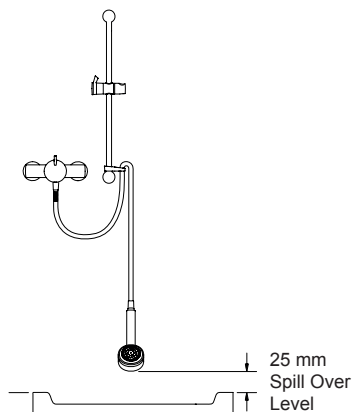
Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

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 the TMV2 Requirements Manual.

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.

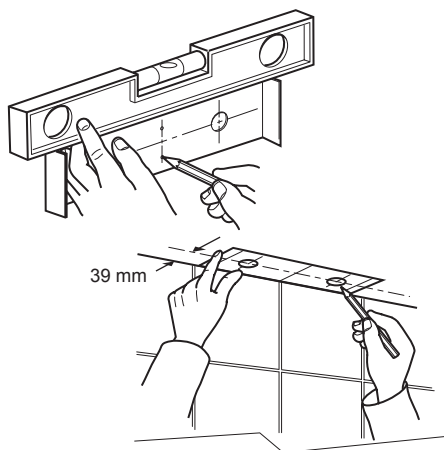
Note! Only use Shower Fittings recommended by the manufacturer or supplier.



2. Use the installation template to mark the positions of the holes for the backplate and the pipe centres.

For rising or falling supplies the pipe positions should be set 39 mm from the centre of pipe to the finished wall at 110 mm centres.

Note! If you are retro-fitting your mixing valve onto existing pipework, an **Adjustable Elbow Pack** is available if required, refer to section: 'Accessories'.

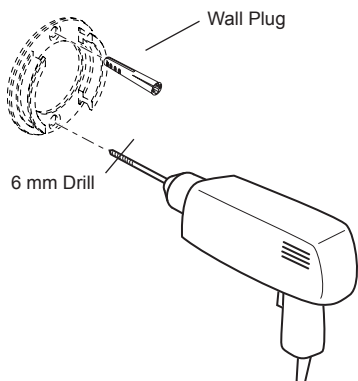


Exposed Thermostatic Mixers

For **Built-in** Thermostatic Mixers go to section: 'Installation, Built-in Thermostatic Mixers'.

1. The thermostatic mixer can be installed with rear, rising or falling supply inlets. Decide on the most appropriate method for your installation, and if necessary, loosen the grubscrews and rotate the inlet elbows to suit.
Important! Make sure that the elbows are pushed fully onto the mixer before tightening the grubscrews, **do not** overtighten.

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).



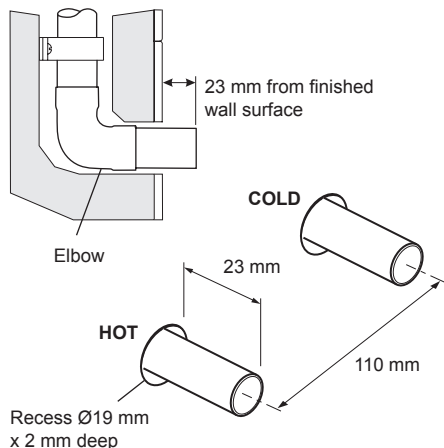
4. For Rear Entry Supplies Only:

- a) Drill the holes for the supply pipes at 110 mm centres.

Note! Recess the inlet holes $\varnothing 19$ mm x 2 mm deep to allow for the concealing plates.

5. Fit the supply pipework: **Hot - Left, Cold - Right.** The inlet pipework should extend 23 mm from the finished wall surface.

Note! If it is not possible to install the mixer with this pipework configuration follow instruction 6.



6. Reversed Inlet Supplies Only:

- a) Using a suitable tool, carefully remove the plug cap from the centre of sealing plug to reveal keyway.
- b) Remove the sealing plug using the 'O' key (supplied) or a 12 mm hexagonal key.
- c) Unscrew the outlet nipple using the 'O' key (supplied) or a 12 mm hexagonal key.

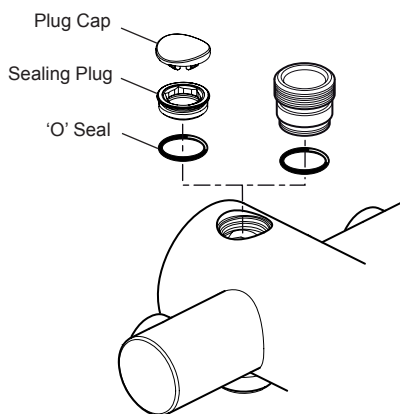
Note! On Mira Minilite Eco models carefully remove the flow regulator from the outlet nipple first.

- d) Refit the sealing plug and outlet nipple in the opposite outlets and tighten.

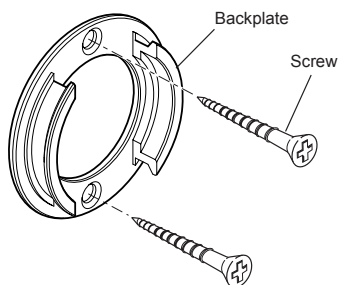
Note! Make sure that the 'O' seals are correctly fitted.

Note! On Mira Minilite Eco models refit the flow regulator.

- e) Rotate the mixer 180° .
- f) The control knob(s) will have to be realigned, this can be completed in section: '**Commissioning**'.



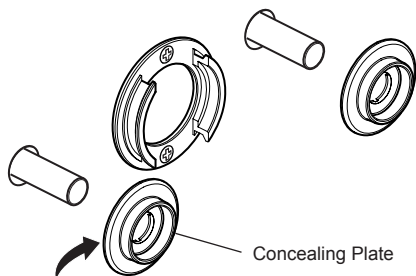
7. Remove the backplate from the mixer by loosening the grub screws with a 2.5 mm hexagonal key (supplied).
8. Secure the backplate to the wall using the screws (supplied).



9. For Rear Entry Supplies Only:

- a) Fit the concealing plates over the inlet pipes.

Note! Apply silicone sealant to the back face of the flange.



Apply Silicone Sealant

10. 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 and will not be covered under the guarantee.

11. Fit the compression nuts and olives onto the pipework.

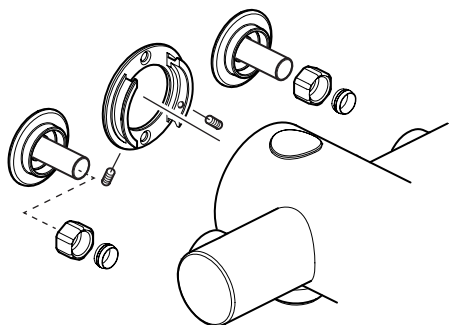
12. Align the mixer with the pipework and fit onto the backplate.

Important! Make sure that the hot and cold inlets on the mixer correspond with the hot and cold inlet supplies.

13. Tighten the compression nuts onto the mixer with a suitable wrench.

Caution! Take care not to damage the chrome surfaces.

14. Tighten the grubscrews to secure the mixer to the backplate.



15. Fit the shower fittings, refer to your shower fittings installation and user guide for instructions.

Important! For high pressure systems (above 0.5 bar) make sure that the flow regulator (supplied) is fitted, refer to section: '**Flow Regulators**'.

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

17. Before using the shower, refer to section: '**Commissioning**'.

Adjustable Elbow Installation

1. Unscrew the elbow grubscrews on the thermostatic mixer with a 2.5 mm hexagonal key (supplied with the thermostatic mixer), pull off the inlet elbows and discard.

2. Using the 'O' key (supplied with the thermostatic mixer) or a 12 mm hexagonal key, unscrew the inlet nipples and discard.

3. Fit the new adjustable elbow inlet nipples and tighten with the 'O' key.

4. Make sure that the 'O' seal is fitted and push the new elbow fully onto the inlet nipple. Tighten the grubscrew with a 2.5 mm hexagonal key.

5. Remove the backplate from the mixer by removing the grubscrew with a 2.5 mm hexagonal key.

6. Draw a centre line between the inlet pipework and, using the adjustable backplate as a template, mark the position of the adjustable backplate fixing holes.

7. 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).

8. Secure the backplate to the wall using the screws (supplied).

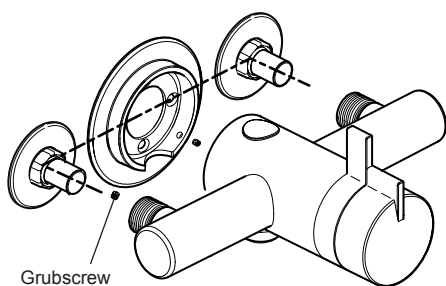
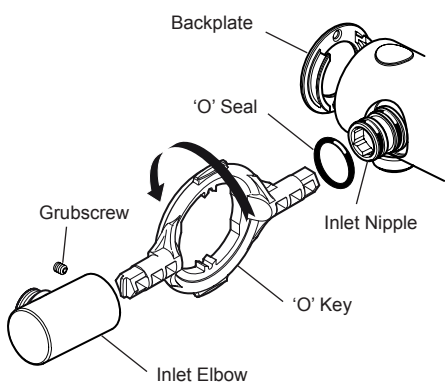
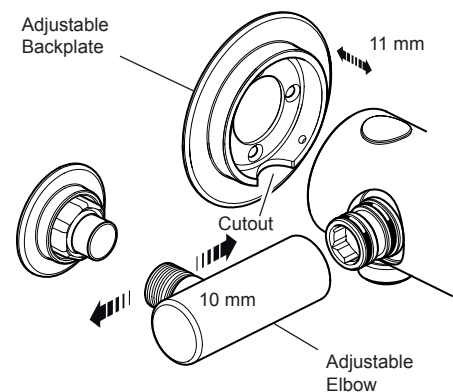
9. Align the mixer with the pipework and fit onto the backplate.

Note! Make sure that the pipes are pushed fully into the inlet connectors.

10. Tighten the compression nuts onto the mixer with a suitable wrench.

Caution! Take care not to damage the chrome surfaces.

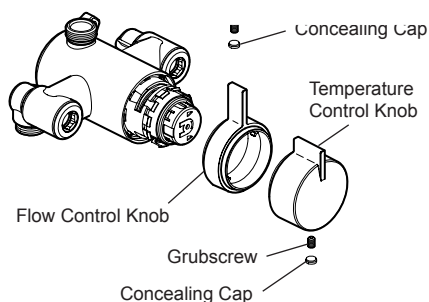
11. Tighten the adjustable backplate grubscrews with a 2 mm hexagonal key (supplied) to secure the mixer to the backplate.



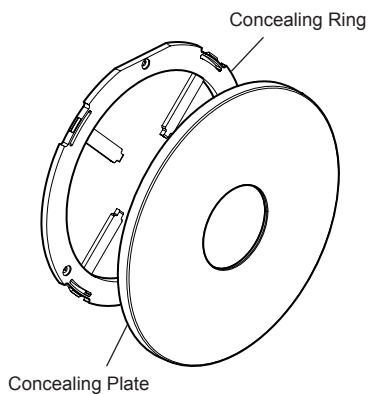
Built-in Thermostatic Mixers

1. Carefully remove the concealing cap from the control knob.
2. Unscrew the grubscrew using a 2.5 mm hexagonal key (supplied) and pull off the control knob(s).

Note! The flow control knob must be in the off position in order to remove it.

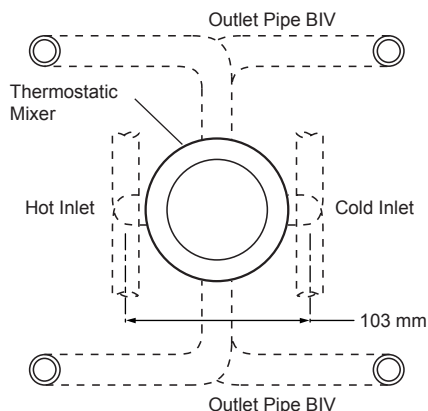


3. Carefully remove the concealing ring from the concealing plate.



4. 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 to one side of the mixer. This is to prevent the flexible hose from obstructing the shower controls (refer to illustration).

Alternative Pipe layouts



5. Mark the routes for the hot and cold supply pipework at 103 mm centres (**Hot - Left, Cold - Right**).

Note! If it is not possible to install the mixer with this pipework configuration follow instruction 6.

Falling Supplies: For falling supplies loosen the grubscrew on each elbow using the 2.5 mm hexagonal key (supplied). Remove the elbows and install on opposite sides.

Important! Make sure that the elbows are pushed fully onto the mixer before tightening the grubscrews, **do not** overtighten.

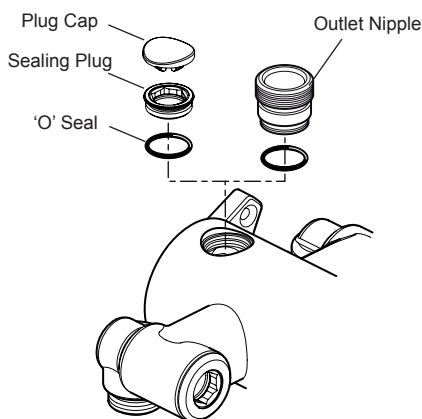
6. Reversed Inlet Supplies Only:

- a) Remove the sealing plug using the 'O' key (supplied) or a 12 mm hexagonal key.
- b) Remove the outlet nipple using the 'O' key (supplied) or a 12 mm hexagonal key.
- c) Refit the sealing plug and outlet nipple in the opposite outlets and tighten.
Note! Make sure that the 'O' seals are correctly fitted.
- d) Rotate the mixer 180°.
- e) If necessary, use the 2.5 mm hexagonal key (supplied) to loosen the grubscrew in each elbow.

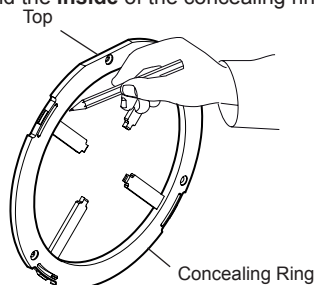
Note! It is important to retract the grubscrews sufficiently to clear the 'O' seals and the inlet flange to avoid causing damage to the seals.

- f) Remove the elbows and install on opposite sides. Make sure that the elbows are pushed fully onto the inlet stubs then retighten the grubscrews using the 2.5 mm hexagonal key.

Caution! Do not overtighten.

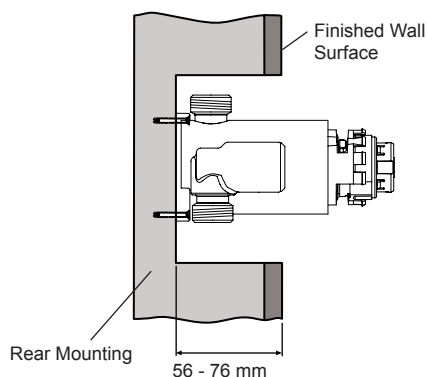


7. Determine the position of the mixer and draw around the **inside** of the concealing ring.

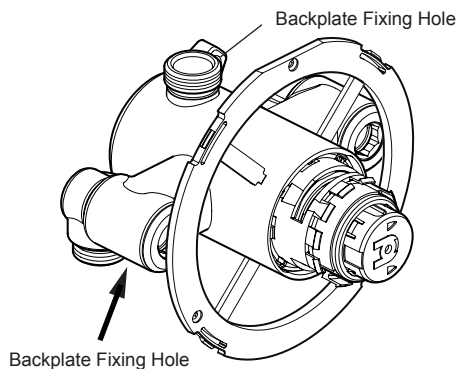


8. Carefully cut away the plasterboard and/or brick work to a depth of between 56 and 76 mm from the **finished wall surface**.

Important! Take care to stay within the marked out diameter otherwise the concealing ring will not seal.



9. Fit the concealing ring over the mixer body, then, holding the mixer level, central and square in the hole, mark the positions of the two backplate fixing holes on the wall.



10. For solid walls drill two 6 mm holes for the wall plugs. For other types of wall structure alternative fixings may be required (not supplied).

11. **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 and will not be covered under the guarantee.

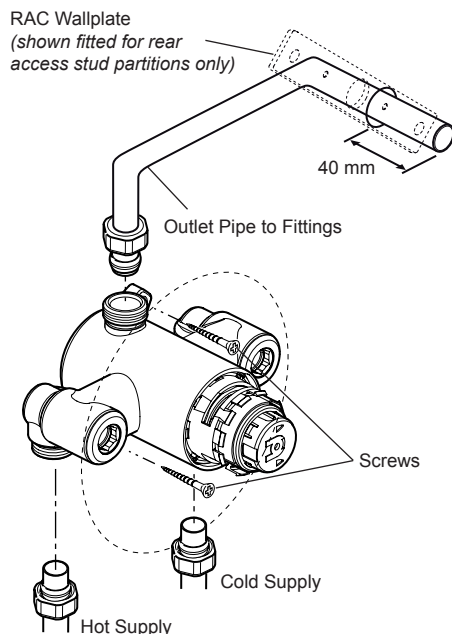
12. Insert the wall plugs (supplied) and attach the mixer to the wall or to the timber noggin with the screws provided.

13. Fit the compression nuts and olives onto the pipework, connect the pipes and tighten the compression nuts.

Important! Make sure that the outlet pipework protrudes through a Ø25 mm hole in the wall or stud partition by approximately 40 mm and temporarily cap off.

Note! For stud partition installations where access to the rear of the partition is possible, fit the RAC wallplate over the outlet pipework on the inside of the partition.

For stud partition installations where access to the rear of the wall is not possible, follow instructions for solid wall installations, making sure that suitable wall fixings (not supplied) are used to secure the wallplate to the outside of the stud partition.

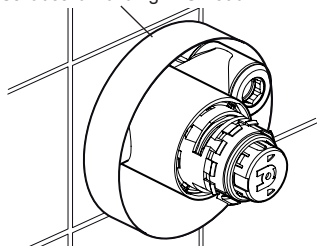


14. Turn on the water supplies and check for leaks.

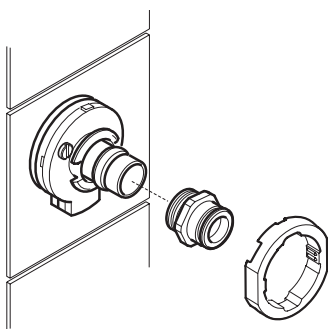
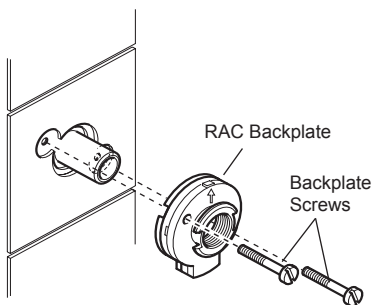
15. Determine the finished wall position (e.g. tile thickness). Turn off the water supply, carefully uncap the outlet pipe and cut to length, the outlet pipe must protrude through the **finished wall surface** by 21–23 mm.

Note! Remove any burrs from the pipes before proceeding.

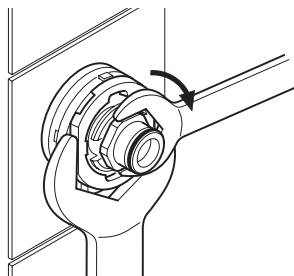
Cardboard Building-in Shroud



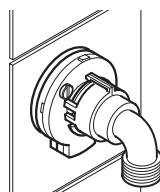
29. Place the backplate over the outlet pipe with the arrow pointing vertically up and tighten the two backplate screws. Make sure that the foam seal abuts the finished wall surface.



30. Check that the blue 'O' seal is fitted inside the backplate nut. Fit the olive and the backplate nut over the outlet pipe and loosely tighten the nut.
31. To prevent the backplate from turning while tightening the nut, fit the retaining ring over the backplate nut making sure the slots engage with the screws on the backplate, hold the retaining ring with a wrench while tightening the backplate nut. Remove the retaining ring after use.



32. Check that the second 'O' seal (black) is fitted to the outside of the backplate nut. Press the elbow onto the backplate, make sure that the clips on the elbow engage with the backplate.



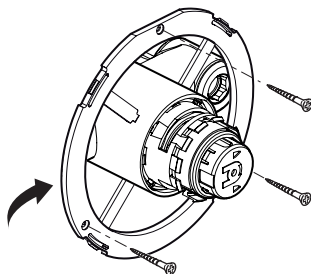
33. Slide the retaining ring over the elbow and engage with the elbow clips. **Note!** The retaining ring must be engaged correctly to lock the elbow to the backplate, rotate the retaining ring to the position illustrated.

34. Press the shroud over the elbow, make sure that it engages with the lugs on the backplate.

35. Fit the concealing ring over the mixer and mark the positions of the three fixing holes.

36. For solid walls drill three 6 mm holes for the wall plugs. For other types of wall structure alternative fixings may be required (not supplied).

Caution! Make sure that you do not drill into pipework in the wall.



37. Insert the wall plugs (supplied) and attach the concealing ring to the wall with the screws provided.

- Important!** Apply silicone sealant to the groove on the rear face of the concealing ring
- 38.** Fit the concealing plate to the concealing ring.
- 39.** Refit the control knobs.

- 40** Fit the shower fittings, refer to your shower fittings installation and user guide for instructions.

Important! For high pressure systems (above 0.5 bar) make sure that the flow regulator (supplied) is fitted, refer to section: '**Flow Regulators**'.

- 41.** Turn on the hot and cold water supplies and check for leaks.
- 42.** Before using the shower, refer to section: '**Commissioning**'.

FLOW REGULATORS

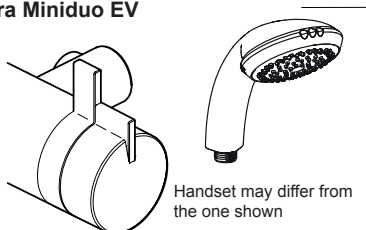
These thermostatic mixers are available with various shower fittings and water saving features, therefore the position and type of flow regulator will vary by model, the flow regulators should be fitted in High Pressure (above 0.5 bar) systems to either;

1. Reduce Excessive Force & Flow Rate
2. Reduce Noise through the mixer due to high or unequal pressures
3. Stabilise incoming supply temperatures

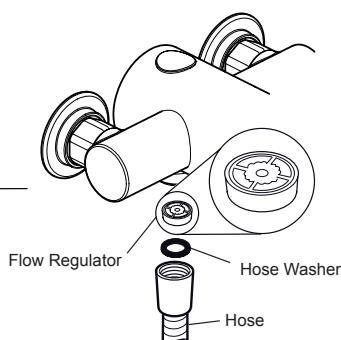
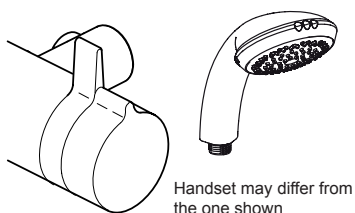
Identify your model and install the flow regulator as illustrated (where appropriate). For gravity fed or other low pressure systems do not fit the flow regulator.

Important! The fitting of any flow regulator to Miniduo models will invalidate TMV2 compliance due to the minimum flow rate requirements. Do not fit flow regulators in TMV2 applications to these models.

Mira Miniduo EV



Mira Miniduo with Adjustable Elbows

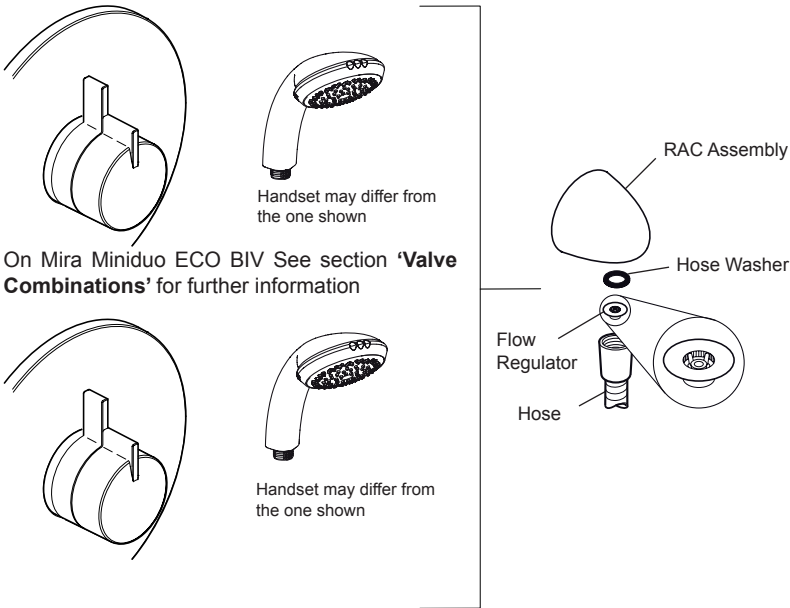


Note! A 12 L/Min flow regulator (red) is supplied separately in the component pack, designed to be fitted in the shower valve outlet.

On Mira Miniduo ECO EV See section '**Valve Combinations**' for further information

Mira Miniduo BIV

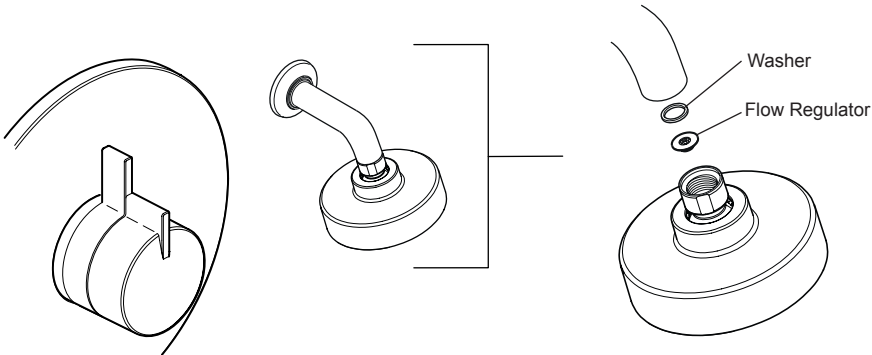
A12 L/Min flow regulator (natural) is supplied separately in the component pack, designed to be fitted between the shower hose and RAC assembly.



On Mira Miniduo ECO BIV See section 'Valve Combinations' for further information

Mira Miniduo with Eco Showerhead BIR

A 6.0 l/min flow reg is pre fitted in the Miniduo ECO BIR. See section 'Valve Combinations' for further information



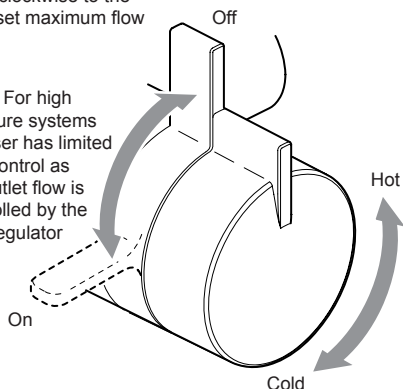
OPERATION

Mira Miniduo and Mira Miniduo with Eco Showerhead thermostatic mixers have separate control levers for on/off and temperature.

The control levers operate as shown below:

Turn the Flow Lever anticlockwise to the preset maximum flow

Note! For high pressure systems the user has limited flow control as the outlet flow is controlled by the flow regulator



Turn the Temperature Control Handle clockwise to decrease the temperature and anticlockwise to the preset maximum temperature

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 41°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. For Type 2 installations the maximum blend temperature is determined by the application, refer to the TMV2 Requirements Manual.

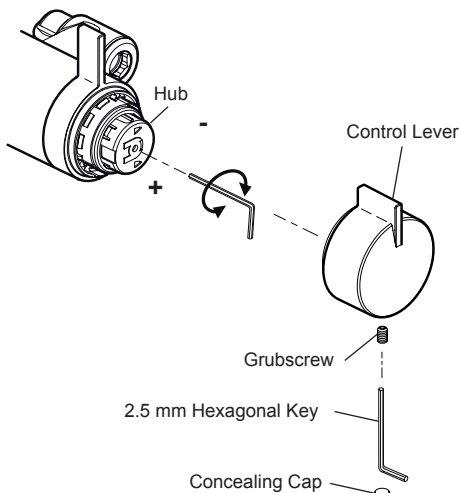
1. Turn on the mixer to the maximum temperature and maximum flow (i.e. fully anticlockwise) and allow the temperature to stabilise.

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

2. Carefully remove the concealing cap from the control knob.
3. Loosen the control lever grubscrew with the 2.5 mm hexagonal key (supplied) and pull off the control lever.

4. If applicable unscrew the hub retaining screw with a 2.5 mm hexagonal key.

Note! Do not remove the hub.



5. Insert the 2.5 mm hexagonal key into the centre of the spindle and engage with the recessed temperature adjusting screw.
6. Rotate the hexagonal 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).
7. Once the desired maximum blend temperature has been achieved turn off the mixer by rotating either the hub or flow control lever (depending on model) fully clockwise.

Note! Do not remove the hub.

8. If applicable refit the hub retaining screw.
9. Refit the control lever with the lever at the top and retighten the grubscrew.
10. Check that the shower temperature is correct.

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). Refer to section: '**Reversed Inlet Supplies**'.
- No hot water reaching mixer.
- Check the filters for any blockage refer to section '**User Maintenance**'.
- Installation conditions outside operating parameters, refer to sections: '**Specifications**' and '**Commissioning**'.
- If the temperature is too cold and you have a combination type boiler it may not be producing sufficiently hot water at desired flow rate (refer to '**Specifications**'). Fit flow regulator (supplied) to shower valve outlet. For more information contact Mira Showers or visit the website.

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**'.
- Air lock or partial blockage in the pipework.
- Flow regulator fitted incorrectly. Operate at preset maximum flow.
- Mira Miniduo Eco models only - flow regulator causing combination boiler to cycle. Remove 6 L/Min flow regulator.

Symptom:

- Water leaking from the 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 thermostatic cartridge.

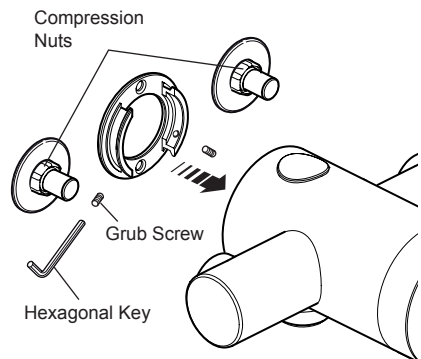
USER MAINTENANCE

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

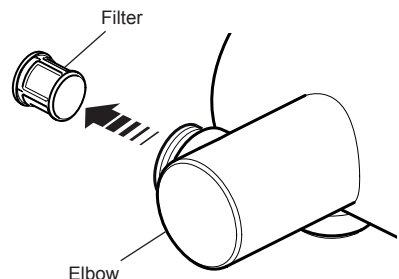
Filter Replacement

Exposed Models

1. Isolate the water supplies.
2. Turn on the flow control knob to relieve water pressure and to drain any residual water.
3. Unscrew the shower hose or rigid riser from the mixer outlet.
4. Using a suitably sized wrench loosen both compression nuts.
5. Using a 2.5 mm hexagonal key (supplied) unscrew the grubscrews securing the mixer to the backplate.



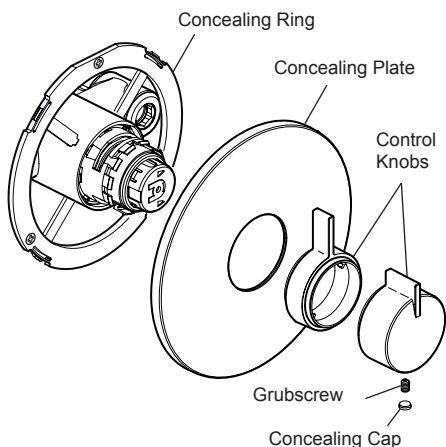
6. Remove the mixer.
7. The filters are retained in the elbow inlet, remove them and inspect for debris blockage. Clean each of the filters under a jet of water to remove any lodged particles.



8. Refit or replace the filters and reassemble in reverse order.
9. Restore the water supplies and check for leaks.

Built in Models

1. Isolate the hot and cold water supplies.
2. Turn on the flow control knob to relieve water pressure and to drain any residual water.
3. Return the flow control knob to the off position and carefully remove the concealing cap.

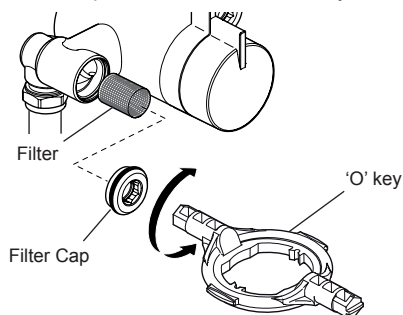


4. Unscrew the grubscrew using a 2.5 mm hexagonal key (supplied) and pull off the control knob(s).
5. Carefully unclip and remove the concealing plate from the backplate.

Note! Use a screwdriver in the cutout to assist separation.

6. Unscrew the filter caps with the 'O' key (supplied) or a 12 mm hexagonal wrench and remove the filters.

Note! Use pliers to assist if necessary.



7. Clean each of the filters under a jet of water to remove any lodged particles.
 8. Refit or replace the filters and tighten the filter caps.
- Note!** Make sure that the seal is fitted correctly and not damaged.
9. Turn on the hot and cold water supplies and check for leaks.
 10. Reassemble all other parts in reverse order.

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

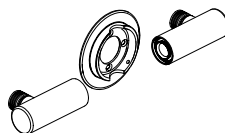
The principal means for determining the continuing satisfactory performance of the mixing valve is the in-service test, refer to the TMV2 Requirements Manual.

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

Check for correct blend setting every 6 months.

ACCESSORIES

Genuine Mira accessories can be purchased direct from Mira Customer Services (our contact details can be found on the back cover of this guide) or from approved stockists or merchants.



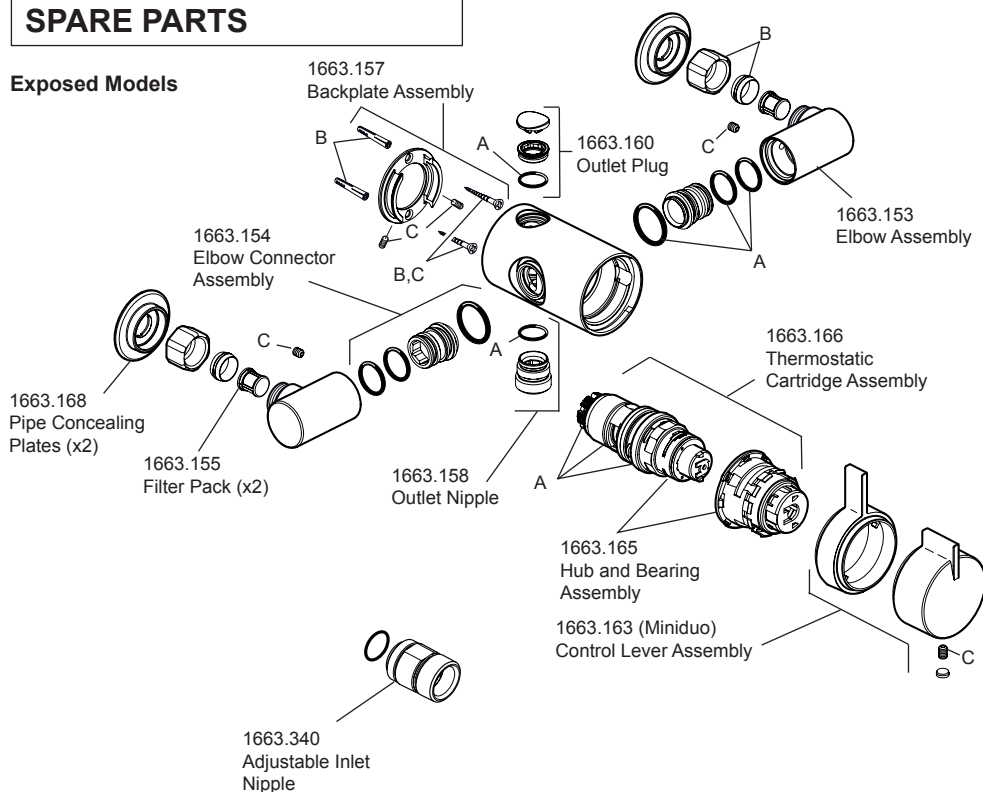
Adjustable Elbow Pack

Chrome - 1.1663.012

The Mira Adjustable Elbow Pack allows the Mira 'mini valves' to be retro-fitted in place of an existing shower - no need to re-plumb or re-tile.

SPARE PARTS

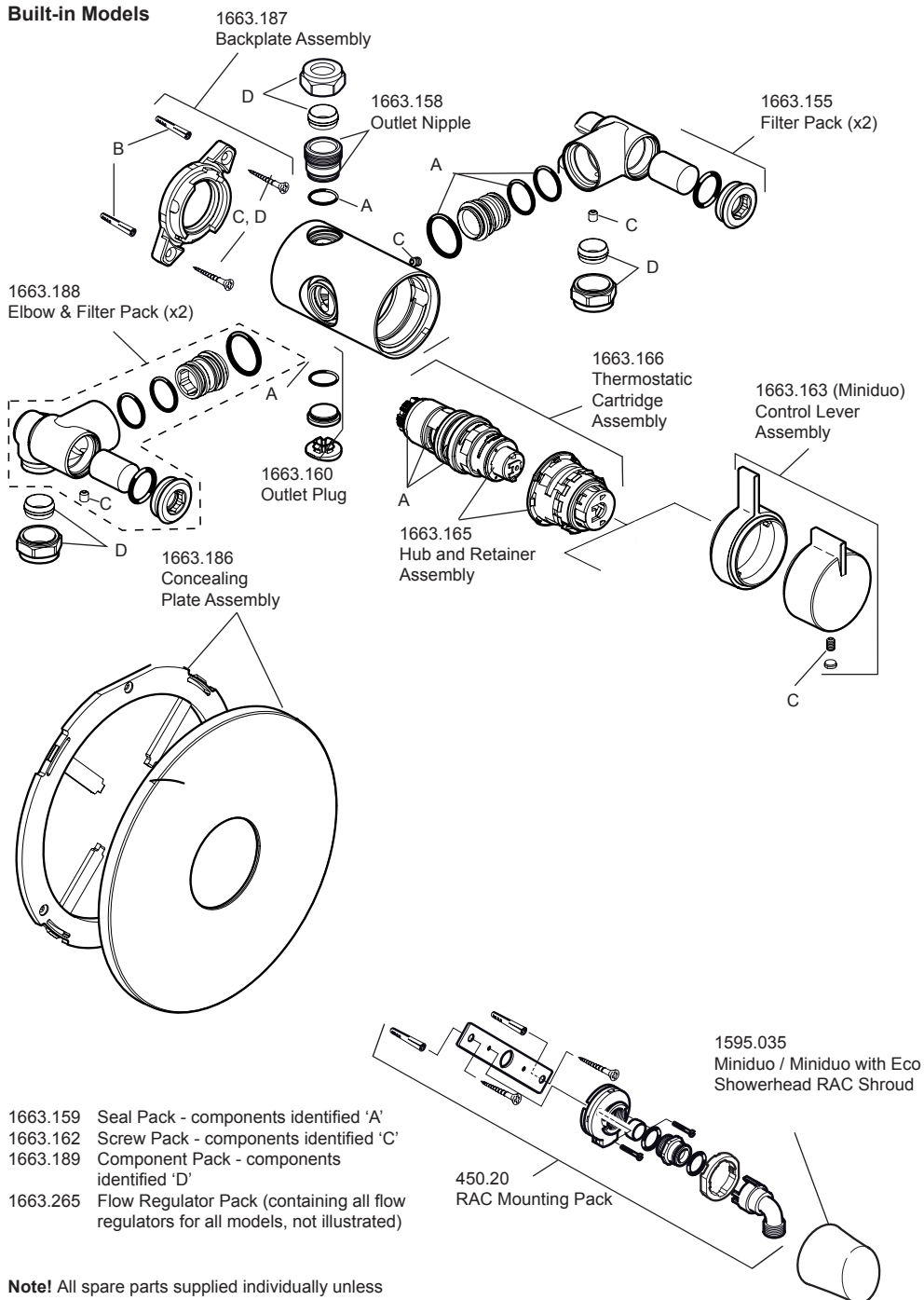
Exposed Models



- 1663.159 Seal Pack - components identified 'A'
- 1663.161 Component Pack - components identified 'B'
- 1663.162 Screw Pack - components identified 'C'
- 1663.265 Flow Regulator Pack (containing all flow regulators for all models, not illustrated)

Note! All spare parts supplied individually unless stated otherwise.

Built-in Models



CUSTOMER SERVICE

Guarantee

Your product has the benefit of our manufacturer's guarantee which starts from date of purchase. This guarantee only applies in the United Kingdom and Republic of Ireland. To activate this guarantee, please return your completed registration card, visit our website or free phone 0800 5978551 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 guarantee applies solely to the original installation under normal use and to the original purchaser only. The product must be installed and maintained in accordance with the instructions given in this 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, inappropriate cleaning, lack of maintenance, build up of limescale, frost damage, chemical attack, 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 or indirect 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 repaired or modified by persons not authorised by comply with the requirements of the TMV2 or repaired or modified by persons not authorised by TMV3 healthcare schemes
- Accidental or wilful damage.
- Products purchased ex-showroom display.

What to do if something goes wrong

If your product does not work correctly refer to this manual for fault diagnosis and check that it is installed and commissioned in accordance with our instructions. If this does not resolve the issue, contact us for help and advice.



Helpdesk Service

Contact our Customer Services Team for product advice, to purchase spare parts or accessories or to set up service visit. You can contact us via phone or e-mail - contact details below.

Please provide your model name, power rating (if applicable) and date of purchase.



Mira Showers Website

(www.mirashowers.co.uk)

Visit our website to register your guarantee, download user guides, diagnose faults, purchase our full range of accessories and popular spares, or request a service visit.



Spares and Accessories

We hold the largest stocks of genuine Mira spares and accessories. Contact us for a price or visit our website to purchase items from our accessory range and popular spares. (Only available in the United Kingdom)



Service/Repairs

No one knows our products better than our nationwide team of Service Technicians. We can carry out service or repair work to your product both during and after the guarantee period. (Only available in the United Kingdom and Republic of Ireland) Ask about our fixed price service repairs.

To Contact Us: UK

0844 571 5000



Calls cost 7p per minute plus your phone company's access charge

Fax: 01242 282595



Email – Visit

www.mirashowers.co.uk/contactus



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

To Contact Us: Eire Only

01 531 9337



E-mail:

CustomerServiceEire@mirashowers.com

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