

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.

SPECIFICATIONS

Pressures

- Max Static Pressure: **10 Bar**.
- Max Maintained Pressure: **5 Bar**.
- Min Maintained Pressure: (Gas Water Heater): **1.0 Bar** (for optimum performance supplies should be nominally equal).
- Min Maintained Pressure (Gravity System): **0.1 Bar** (0.1 bar = 1 Metre head from cold tank base to shower handset outlet).

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

- **Hot: Left** - 15 mm Compression to pipework, 3/4" BSP to valve.
- **Cold: Right** - 15 mm Compression to pipework, 3/4" BSP to valve.
- **Outlet: Bottom**, 1/2" BSP Male to flexible hose.

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

Temperatures

- Close temperature control is provided between **20°C and 50°C**.
- Optimum Thermostatic Control Range: **35°C to 45°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 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 Recommended Differential between Hot Supply and Outlet Temperature: **12°C at desired flow rates**.
- Minimum hot water supply temperature: **55°C**.

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.

Gas Heated System:

The thermostatic mixer can be installed with a combination boiler.

Unvented Mains Pressure System:

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

Mains Pressurised Instantaneous Hot Water System:

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

Pumped System:

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

General

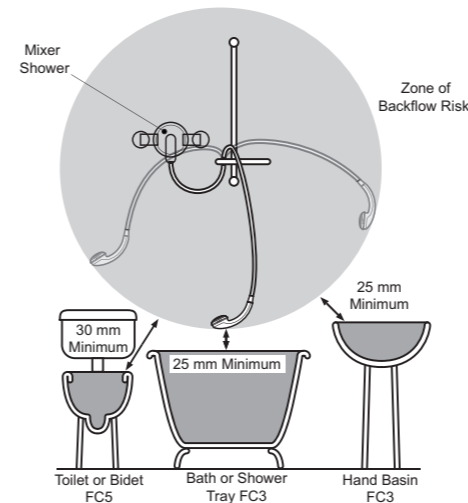
Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

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

Note! Make sure that all site requirements correspond to the information given in section: '**Specifications**'.

1. The product must not be installed in an area where it may freeze. Pipework to the product that could become frozen must be properly insulated.
2. Do not install the product in a position in which service access is restricted.
3. For stud partitions alternative fixings may be required.
4. Isolating valves must be installed close to the product for ease of maintenance.
5. Pipework must be rigidly supported and avoid any strain on the connections.
6. Pipework dead-legs should be kept to a minimum.
7. If pipework enters the product from the rear through a hole in the wall, provision must be made to prevent water ingress back into the wall structure.
8. The showerhead should be positioned so that it discharges down the centre line of the bath or across the opening of a shower cubicle.
9. Only use the inlet connections supplied with the product. **DO NOT** use any other type of fittings.
10. All pipework must be checked for leaks before the product installation is completed. The product should be pressurised & the inlet & outlet connections inspected.
11. **DO NOT** overtighten connections, screws or grubscrews as product damage may occur.
12. Upon completion of installation, or if the product is dismantled during installation or servicing, then the product must be inspected to ensure that there are no leaks.
13. Having completed the installation, make sure that the user is familiar with the operation of the product.

14. The position of the shower and shower fittings must provide a minimum gap of 25 mm between the showerhead and the spill over level of any bath, shower tray or basin and a minimum gap of 30 mm between the showerhead and the spill over level of any toilet, bidet or other appliance with a Fluid Category 5 backflow risk (see diagram).



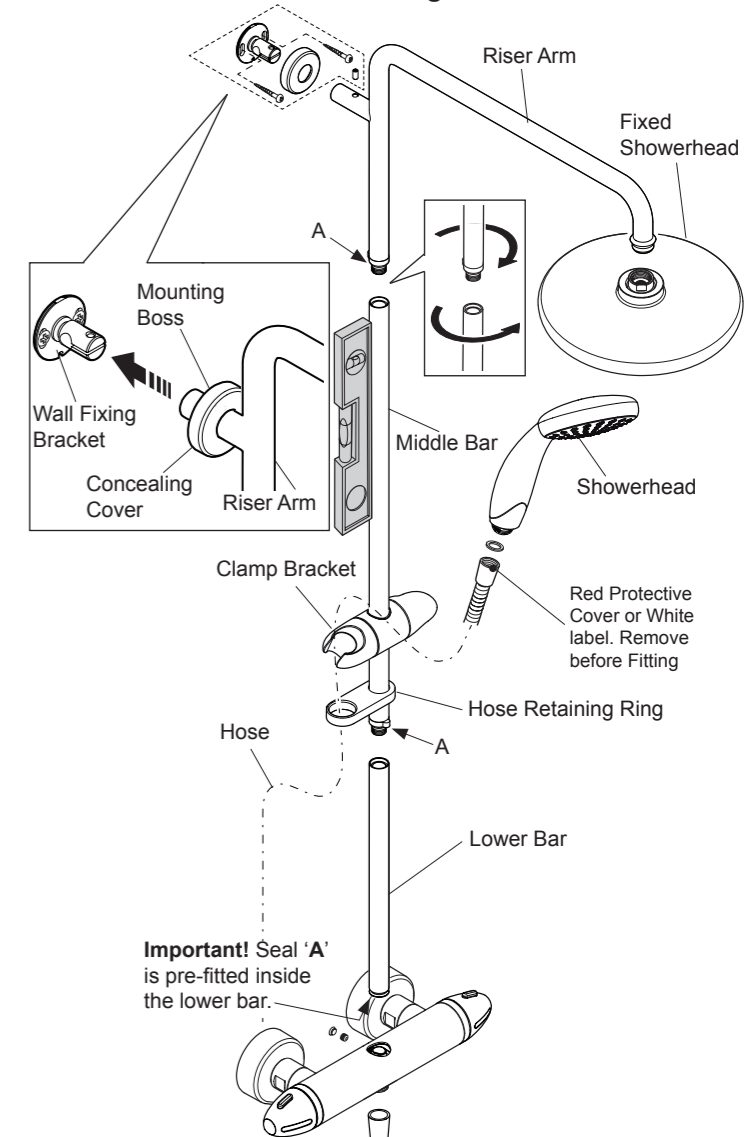
Note! There will be occasions when the hose retaining ring will not provide a suitable solution for Fluid Category 3 installations, in these instances an outlet double checkvalve must be fitted, this will increase the required supply pressure typically by 10kPa (0.1 bar). Double checkvalves fitted in the inlet supply to the appliance cause a pressure build up, which affect the maximum static inlet pressure for the appliance and must not be fitted. For Fluid category 5 double checkvalves are not suitable.

Installation of the Bar Valve

Before installing the pipework, please ensure that there is a minimum of 1065mm height clearance to allow for the rigid riser and overhead to be installed above. If installing in a restricted height area, a shorter riser rail can be ordered as a spare part.

1. Fit the plastic pipe guide over the inlet pipes. Level the pipe guide and secure to the wall to hold in position. **Leave the guide in place and finish the wall.**
2. Drill the fixing holes.
3. Install the wall plugs.
4. Install the fixing screws.
5. Install the olives and the connectors. Tighten finger tight and then 1/4 to 1/2 turn.
6. Turn on the water supply and flush the pipework.
7. Install the concealing plates.
8. Assemble the bar valve with a sealing washer / filter in each inlet and attach to the wall bracket. **Note!** Connections are: **Hot-Left, Cold-Right**.
9. Install the shower fittings and check for leaks.

Installation of the Shower Fittings



1. Slide the hose retaining ring and the clamp bracket onto the middle bar, and then screw the middle and lower bar sections together.
2. Screw the riser arm to the middle and lower bar section.
3. Push the riser bar into the top of the bar valve. **Note!** The riser bar must be located correctly, push down firmly to seat it.
4. Insert the wall fixing bracket into the riser arm mounting boss, then swivel the bar if necessary to reposition the wall fixing bracket against the wall. **Note!** The grubscrew mounting hole must be positioned at the top.
5. Mark the holes for the wall fixing bracket. **Note!** Use a spirit level to ensure the bar is vertical.
6. Remove the wall fixing bracket from the mounting boss then remove the riser bar from the bar valve.
7. Drill two holes to suit the wall fixings, ensuring that the bar valve is protected from debris. Fix the bracket to the wall.
8. Refit the riser bar into the bar valve and then put the concealing cover onto the riser arm mounting boss.
9. Push the riser arm mounting boss onto the wall fixing bracket.
10. Fit and tighten the grubscrew (2.5 mm hexagonal key) into the hole on top of the mounting boss then push the concealing cover over the wall fixing bracket.
11. Tighten the grubscrew at the valve end and fit the grubscrew cover.
12. Screw the fixed shower head onto the riser rail.
13. Fit the shower hose onto the bottom outlet of the bar valve. **Note!** The shower hose has slightly different sized conical connections at each end (the smaller diameter / longer length conical is identified with a **Red** protective cover or a **White** label). The end with the red cover or white label connects to the showerhead, the clear end connects to the valve.
14. Push the shower hose through the retaining ring and screw it to the showerhead.
15. Place the showerhead into the clamp bracket, adjusting the angle and height to the users preference.