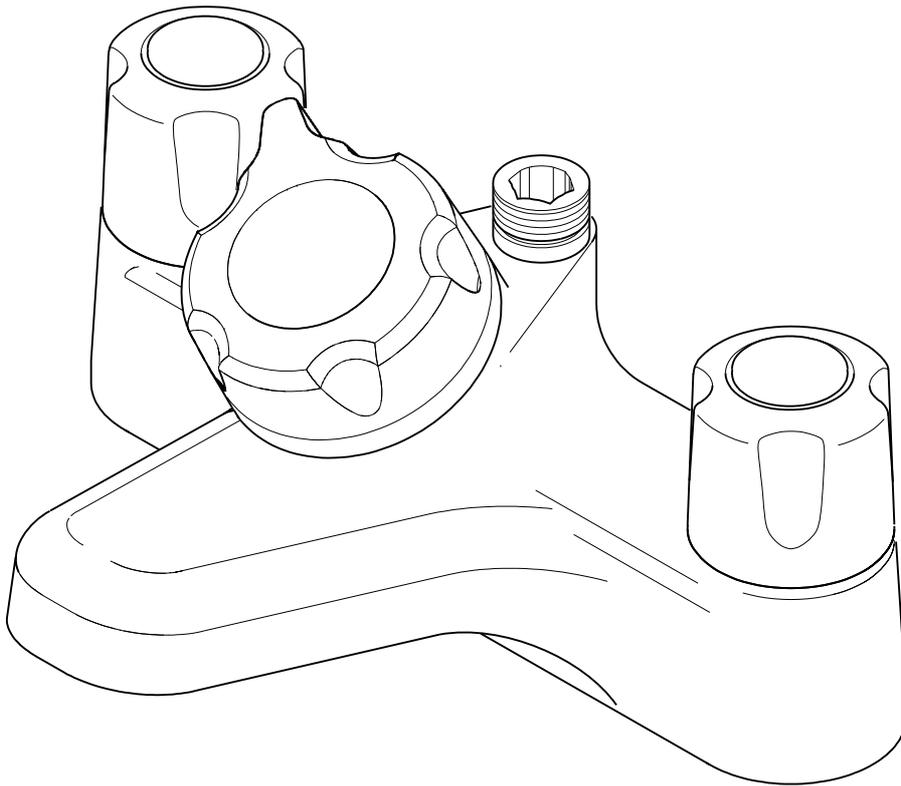


mira



EXTRA



BATH & THERMOSTATIC

SHOWER CONTROL

Installation

Operation &

Maintenance Guide

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

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1. WARNING!

- 1.1. Products manufactured by us are safe and without risk provided they are installed, used and maintained in good working order in accordance with our instructions and recommendations.

2. Caution!

- 2.1. Read all of these instructions.
- 2.2. Retain this guide for later use.
- 2.3. Pass on this guide in the event of change of ownership of the installation site.
- 2.4. Follow all warnings, cautions and instructions contained in this guide.
- 2.5. The plumbing installation must comply with Water Supply Regulations/Byelaws (Scotland), Building Regulations or any particular regulations and practices, specified by the local water company or water undertakers. The installation should be carried out by a plumber or contractor who is registered, or is a member of, an association such as:
 - 2.5.1. Institute of Plumbing (IOP), throughout the UK.
 - 2.5.2. National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales.
 - 2.5.3. Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland.
- 2.6. Many household cleaners contain abrasives and chemical substances, and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.
- 2.7. 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.

3. WARNING!

- 3.1. **If only the hot tap is turned on then the bath fill outlet will deliver the temperature of water stored in the hot water cylinder.**

Description

The Mira Extra Bath and Thermostatic Shower Mixer provides conventional manual bath fill through independent hot and cold tap heads and thermostatic shower control via a central sequential control knob. A unique wax capsule enables precise thermostatic shower control whilst the patented internal waterways remove the need for a diverter mechanism.

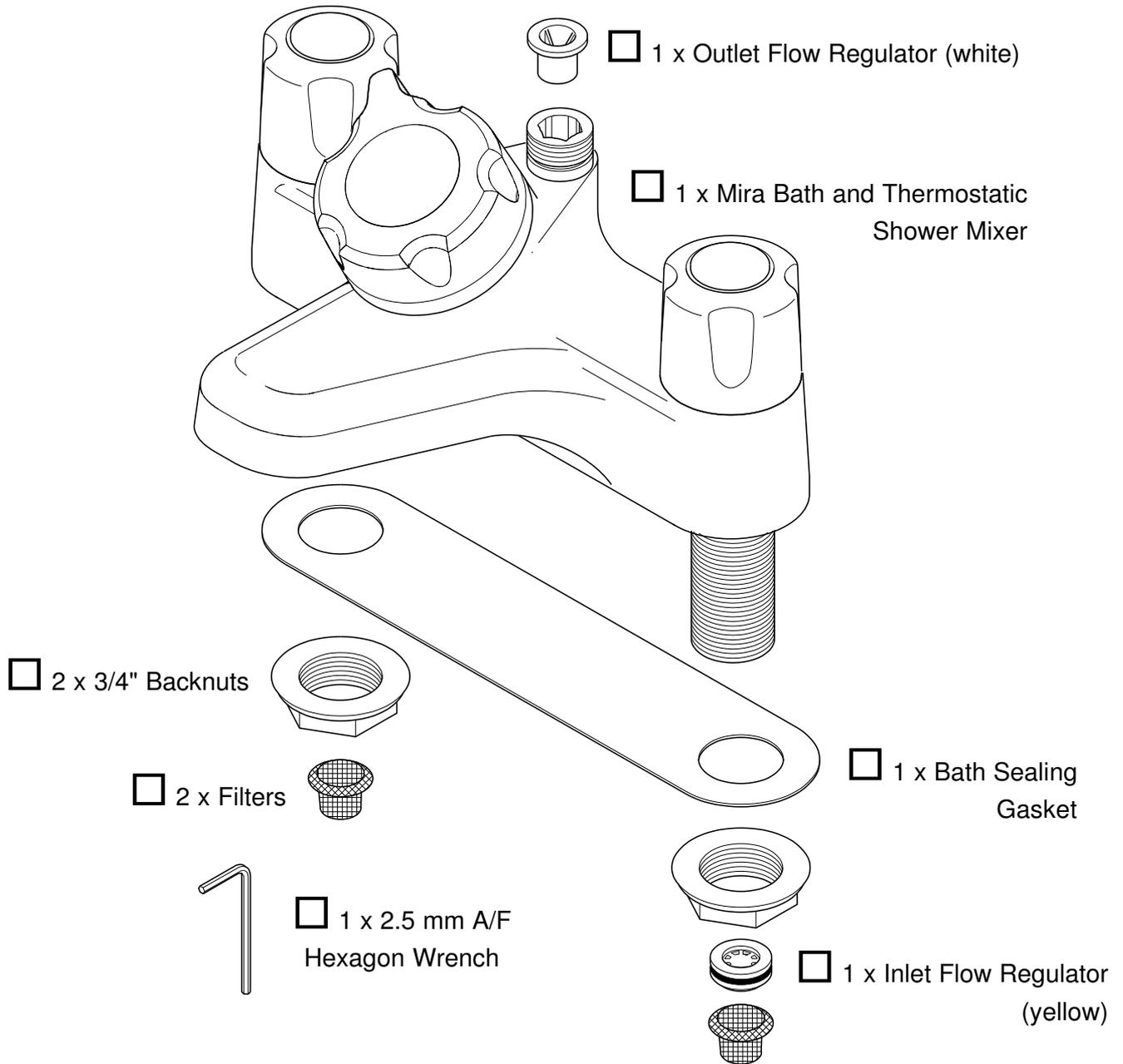
Product range

The Mira Extra Bath and Thermostatic Shower Mixer is available in chrome or light golden colour finish.

If you experience any difficulty with the installation or operation of your new shower control, then please refer to **Section 9 Maintenance: "1. Fault diagnosis"**, before contacting Kohler Mira Limited. Our telephone and fax numbers can be found on the back cover of this guide.

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

1. Mira Extra Bath & Thermostatic Shower Mixer



2. Documentation

- 1 x Installation, Operation and Maintenance Guide
- 1 x Customer Support Brochure

1. Pressure range

- 1.1. Minimum maintained pressure (gas water heater) **1.0 bar**
- 1.2. Minimum maintained pressure (gravity feed) **0.1 bar**
- 1.3. Maximum static pressure **10.0 bar**
- 1.4. Maximum pressure loss ratio **5:1**

2. Temperature selection

- 2.1. The bath taps will provide water at the hot and cold supply temperature from the bath fill outlet.
- 2.2. The single sequential central knob allows the shower temperatures selected to range from the cold water supply temperature through to a preset maximum.
- 2.3. The maximum blend temperature for the shower is factory set at **42°C**. This can be reset according to site requirements.
- 2.4. Maximum blend temperatures can be set using typical inlet supply temperatures:-
Cold 10 - 15°C.
Hot 60 - 65°C.
Maximum hot water inlet supply temperature **82°C**.

3. Standards and Approvals

- 3.1. The temperature of stored water should never exceed 65 °C. A stored water temperature of 60 °C is considered sufficient to meet all normal requirements and will minimise the deposition of scale in hard water areas.

1. General

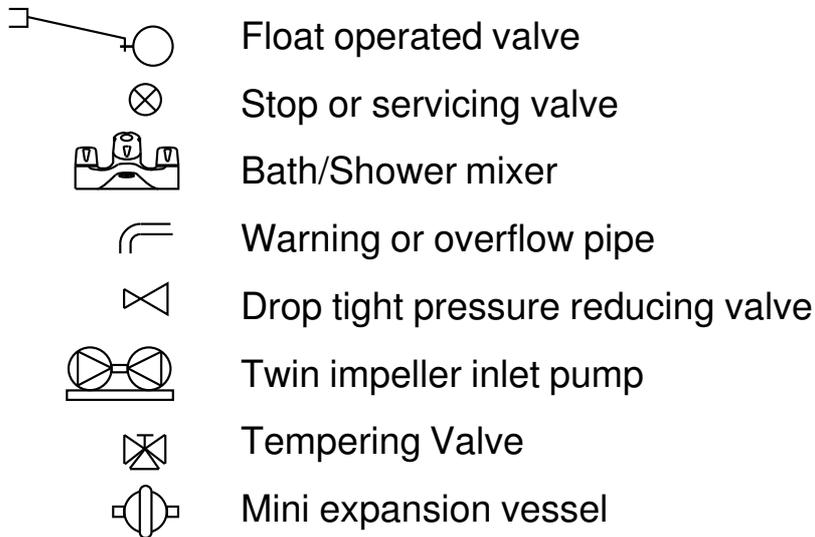
Read the section “**Important Safety Information**” first.

- 1.1. Products manufactured by us are safe and without risk provided they are installed, used and maintained in good working order in accordance with our instructions and recommendations.
- 1.2. Layout and sizing of pipework must be such that when other services are used, pressures at the Mira Bath and Thermostatic Shower Mixer do not fall below the recommended minimum.
- 1.3. **Do not** install the product in a position where it could become frozen.
- 1.4. Supply pipes **must** be flushed to clear debris before connecting the Mira Bath and Thermostatic Shower Mixer.
- 1.5. Conveniently situated isolating valves must be fitted for servicing purposes.
- 1.6. No form of outlet flow control should be fitted, only Mira shower fittings are recommended for use with this product.
- 1.7. Installations **must** comply with Local Water Company or Water Undertakers Regulations/Bye-laws.

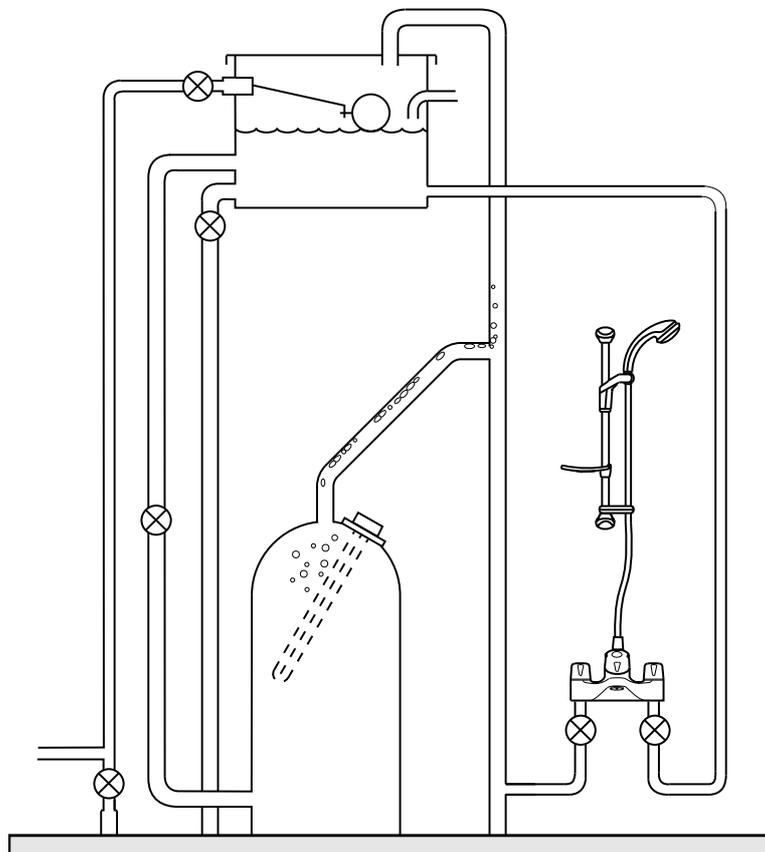
The following diagrams and text illustrate typical examples of suitable plumbing systems for the Mira Bath and Thermostatic Shower Mixer.

2. Typical suitable installations

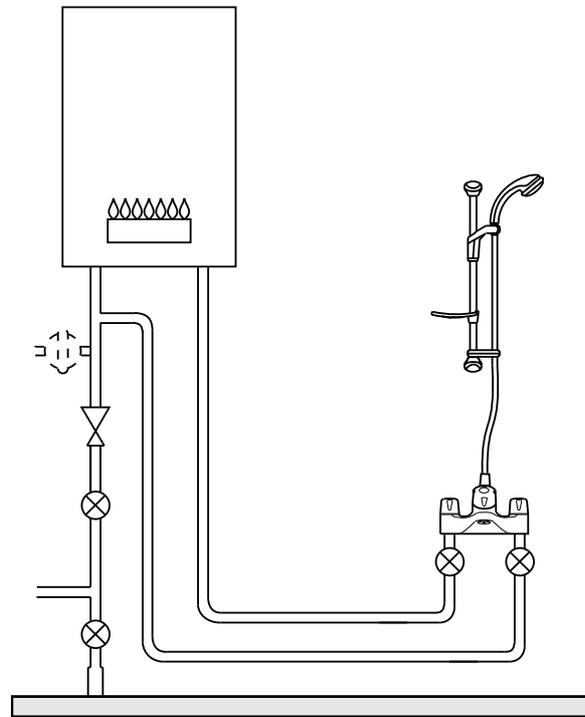
Key to symbols



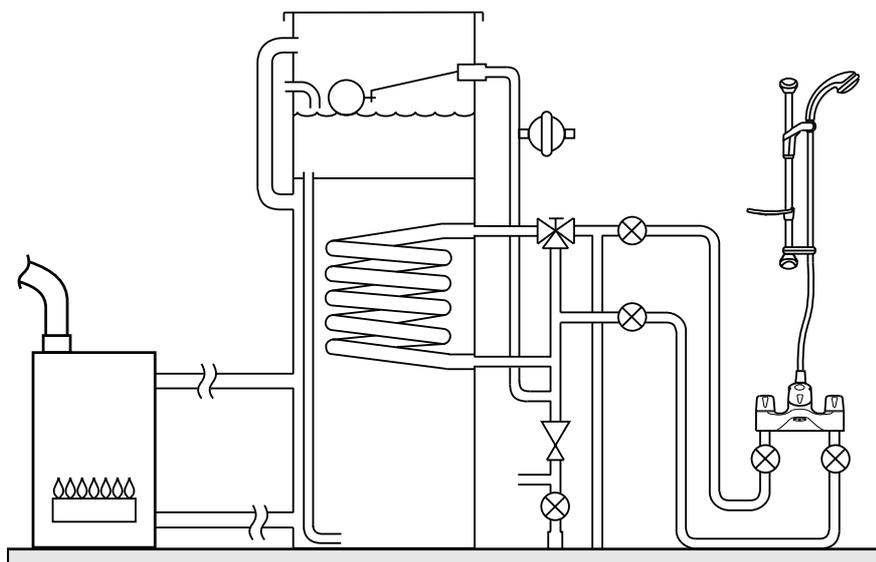
2.1. Gravity fed showers - The Mira Bath and Thermostatic Shower Mixer **must** be fed from a **cold water storage cistern** and **hot water cylinder** providing nominally equal pressures.



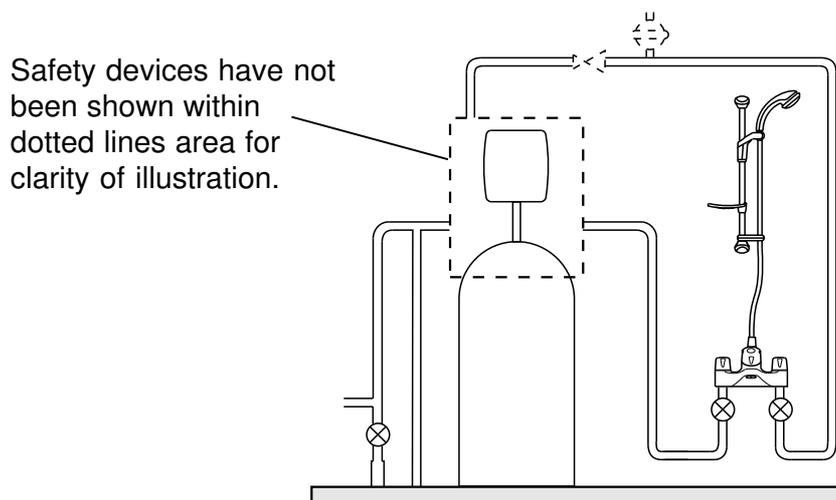
2.2. Gas heated showers - The Mira Bath and Thermostatic Shower Mixer **must** be installed with a multi-point gas water heater or combination boiler of a **modulating design**. A modulating multi-point gas water heater or combination boiler is one in which the water draw-off rate controls indirectly the gas flow rate to the burner. The concept is to produce relatively constant hot water output temperatures within the operating limits of the heating appliance. A pressure reducing valve will be required to ensure that cold water pressures do not exceed 5 bar maintained.



2.3. Mains pressurised instantaneous hot water, heated from thermal store, showers - Packages of this type, fitted with a tempering valve can be used with the Mira Bath and Thermostatic Shower Mixer. The tempering valve provides a relatively constant hot water temperature and the Mira Bath and Thermostatic Shower Mixer compensates for any system temperature variations should they occur. The Mira Bath and Thermostatic Shower Mixer supply pressure range is 1 bar to 5 bar maintained. For pressures above 5 bar maintained a pressure reducing valve will be required.



2.4. Unvented mains pressure showers - The Mira Bath and Thermostatic Shower Mixer can be installed with an unvented, stored hot water cylinder. Only a “competent person” as defined by “Part G” of “Schedule 1” to the “Building Regulations”, may fit this type of system. For packages with no cold water take off after the appliance pressure reducing valve it will be necessary to fit an additional pressure reducing valve, set at the same value as the unvented package. This does not apply to packages with a cold take off after the pressure reducing valve. The supply pressures should be between 1 bar and 5 bar maintained to the Mira Bath and Thermostatic Shower Mixer.

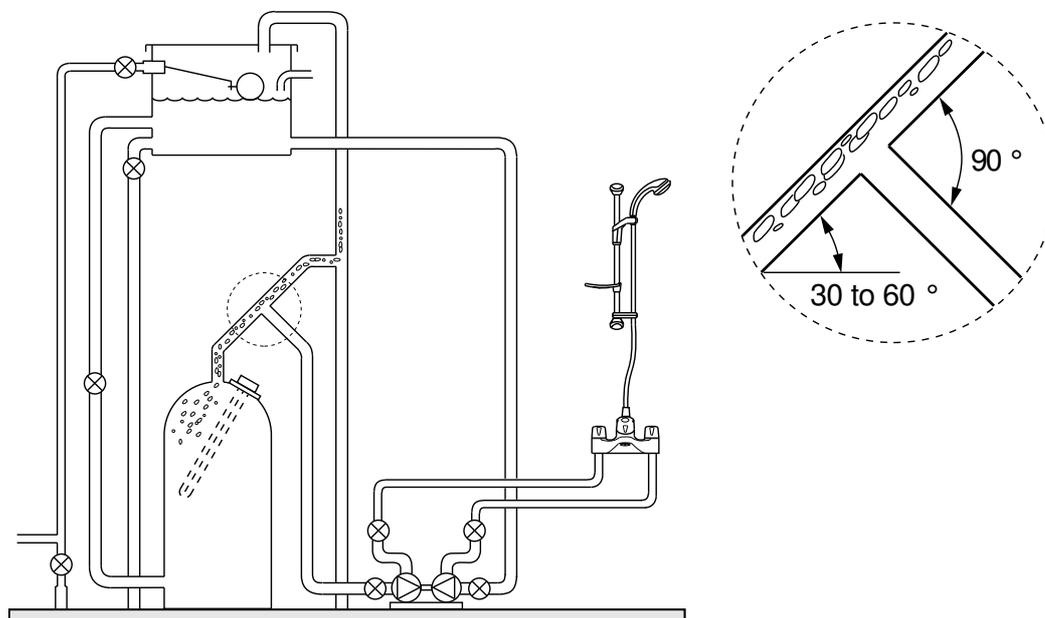


2.5. Pumped Showers

Details on pumped shower systems can be obtained from the Mira Installation, Operation & Maintenance Guide supplied with each Mira Pump and Mira publication, a guide to domestic pumped shower systems.

2.6. Inlet Pumps

The Mira Bath and Thermostatic Shower Mixer can be installed with an inlet pump (twin impeller). The pump ideally should be located on the floor next to the hot water cylinder and cylinder/vent arranged as shown to achieve air separation.



Important

Two flow regulators are supplied with the product. There is a white regulator that can be fitted in the outlet on top of the Mira Bath and Thermostatic Shower Mixer to limit the maximum flow rate to the shower fitting (see Fig. 6). There is a yellow regulator that can be fitted in the cold inlet for high pressure systems (refer to diagram on page 12). The selection table indicates when and where these can be fitted.

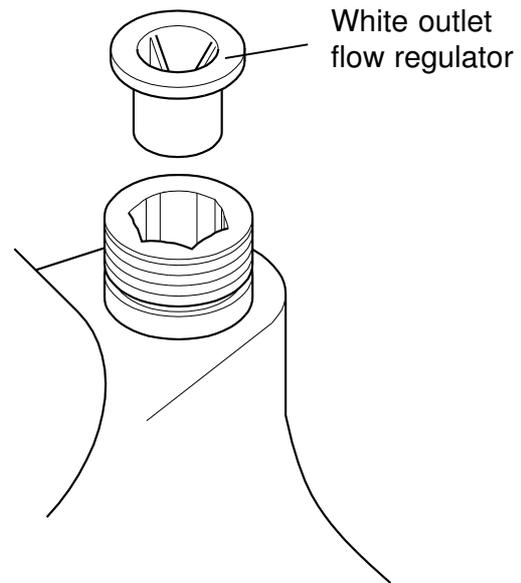


Fig. 6 Outlet Flow Regulator

System	Figure Reference	Flow Regulators	
		Outlet	Cold Inlet
Unvented mains pressure showers.	4	† ✓	* ✓
Mains pressurised instantaneous hot water, heated from thermal store, showers.	3	† ✓	* ✓
Gas heated showers.	2		✓
Gravity fed showers.	1		
Pumped showers.	5	†	

Notes

† There is no separate flow control for the shower fitting and the fitting of the white outlet flow regulator will reduce the force of the shower spray. Alternatively, if shower fittings with two different spray plates are used, the high capacity spray plate (larger holes) can be fitted to reduce the spray force of the shower.

* If the cold pressure is not under the control of the pressure reducing valve fitted to these unvented systems and the maintained mains pressures are above three bar then the yellow regulator should be fitted.

1.1. The hot water service must always be connected to the hot inlet. This is stamped on the bottom of the casting. Reversed connections may damage the product and will be dangerous to the person using the shower. The connections, when viewed from the front, are:

Hot – left Cold – right

1.2. Thoroughly flush the incoming hot and cold water supplies before final connection of the Mira Extra.

1.3. If necessary, fit the cold inlet regulator.

1.4. Insert the two inlet filters, largest diameter first, and push in until located against the factory fitted inlet check valves or flow regulator, if fitted (refer to diagram).

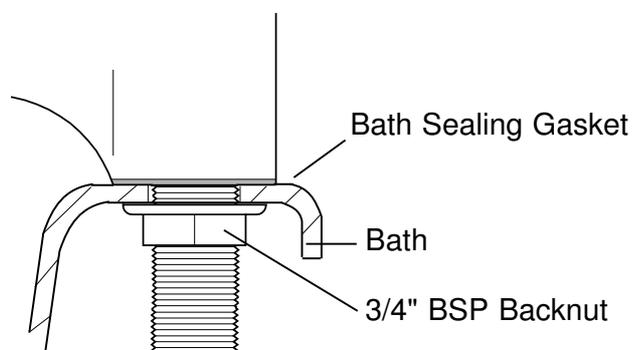
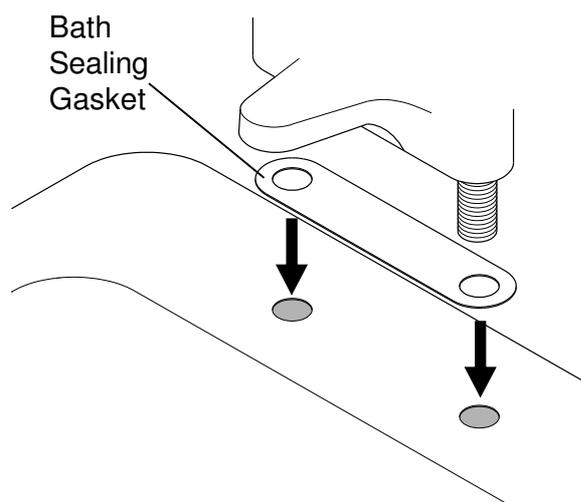
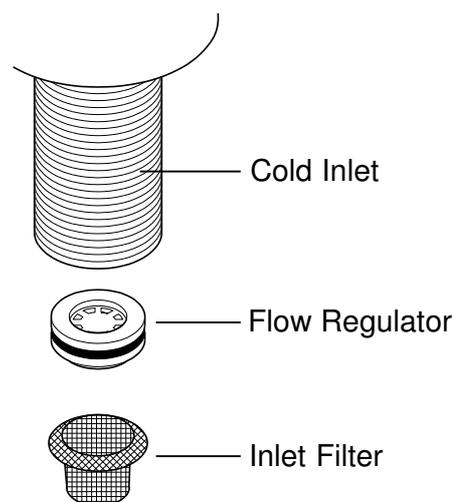
1.5. Fit the bath sealing gasket to the Mira Extra and fit the assembly to the bath (refer to diagram).

1.6. Fit the two 3/4" BSP backnuts and tighten. Trim the bath sealing gasket if necessary. Take care to prevent damage to the bath.

1.7. Connect the inlet supplies via tap connectors (not supplied).

1.8. This completes the installation of the **Mira Extra**.

1.9. To install the shower fittings, refer to the appropriate section in the **shower fitting Installation, Operation and Maintenance Guide**.



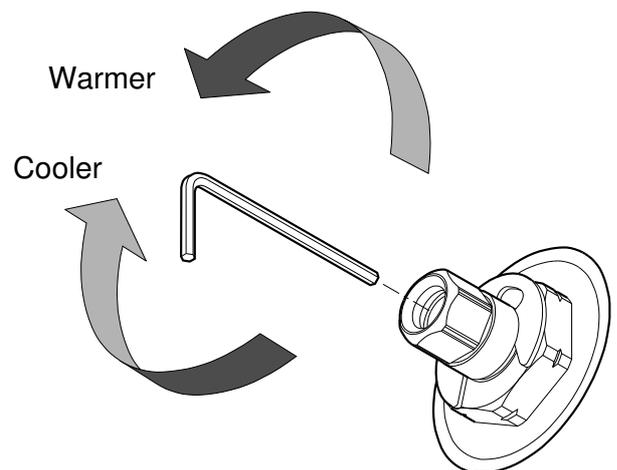
Maximum temperature setting

The Mira Extra has been fully performance tested and the maximum temperature has been preset to approximately 42°C under ideal installation conditions at the factory. Site conditions and personal preference may dictate that the maximum temperature has to be reset.

To reset the maximum temperature ensure that an adequate supply of hot water is available at a temperature at least 10°C in excess of that required from the shower control. Turn the knob fully anticlockwise then check the temperature at the discharge point (allowing sufficient time for hot water to reach the hot inlet of the Mira Extra). If the temperature is correct, turn the shower control fully clockwise to the off position as no further adjustment is necessary.

If the maximum temperature achieved at the discharged point is unsatisfactory then adjust the maximum temperature as follows:-

1. Before making any adjustments make sure that the correct flow regulators have been fitted. Refer to "**Installation**".
2. Turn the central knob fully anticlockwise.
3. Using hexagon wrench supplied, loosen screw on side of central knob and remove.
4. Use same hexagon wrench to locate screw in centre spindle. Adjust as follows, refer to diagram:
Warmer - Turn anticlockwise
Cooler - Turn clockwise
5. Turn the shower control off and refit the knob aligning the brand and re-tighten screw on side of central knob.
6. This completes the procedure for **Maximum temperature setting**.



The Mira Extra is fitted with three knobs which operate as follows:-

1. Bath Fill

The outside two vertical knobs controls the flow of water to the central bath fill outlet. Red and blue indicator trims relate to the hot and cold taps. Anticlockwise movement turns the water flow on.

WARNING! If only the hot tap is turned fully on then the bath fill outlet will deliver the temperature of water stored in the hot water cylinder.

Note! An amount of water may be retained in the bath spout after the taps have been turned off. This will drain over a short period of time.

2. Shower

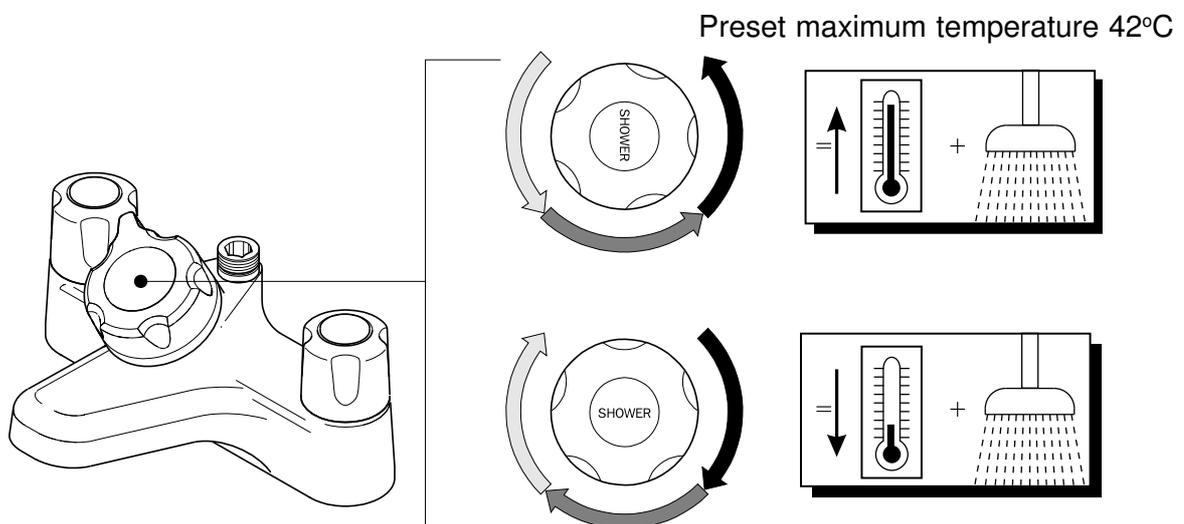
When the central inclined knob is turned on, anticlockwise, the sequence is:-

Cold water - Warm water - Preset maximum temperature.

A full description is as follows:-

Initial anticlockwise movement turns the water on at full flow of cold water, further anticlockwise movement increases the temperature. The flow rate is determined by the supply pressures at the inlets of the shower control, or by the effective output power of the gas heater appliance. Flow rates for gas water heaters and combination boilers can vary typically between 8 l/min (winter) and 15 l/min (summer).

Note! The shower performance will be degraded if the hot or cold bath fill tap is operated whilst the shower is in use.



1. Fault diagnosis

Malfunction	Cause	Remedy
Incorrect temperature at outlet.	<ul style="list-style-type: none"> a) Insufficient hot water. b) Flow regulators fitted incorrectly. 	Check temperature setting of hot water (60°C - 65°C). Refer to installation selection chart and check shower control.
Flow of water too fast.	Flow regulators fitted incorrectly or not fitted	Refer to installation selection chart and check shower control.
Very low flow of water.	<ul style="list-style-type: none"> a) Flow regulators fitted incorrectly. b) Isolating valves not fully open. c) Airlock or partially blocked pipework. d) Blocked shower head. 	<p>Refer to installation selection chart and check shower control.</p> <p>Check temperature setting of hot water (60°C - 65°C). Flush system and if appropriate fit float type automatic air vent.</p> <p>Remove and clean.</p>
Outlet temperature too warm or too cool.	<ul style="list-style-type: none"> a) Maximum temperature incorrectly set. b) If it is not possible to set maximum temperature, flow regulators may be incorrectly fitted. 	<p>Refer to Commissioning: Maximum temperature setting and action.</p> <p>Refer to installation selection chart and check shower control.</p>
Outlet temperature either too hot or too cold when turned fully on.	Hot and cold supplies have been connected in reverse.	Check that the supply pipework is connected correctly Hot - left, Cold - right.
Shower control cannot be shut off.	Pipework not flushed before connecting the shower control.	Fit new seals. Refer to the section Parts List.
Bath spout drips continuously when taps have been turned off.	<ul style="list-style-type: none"> a) Pipework not flushed before connecting the bath/shower mixer. b) Tap washers worn out. 	Fit new seals. Refer to the section Parts List.

Continued

Malfunction	Cause	Remedy
Continued	c) A small amount of water may be retained in the bath spout. This will drain over a short period of time.	This is normal.

2. General

The Mira Extra Bath and Thermostatic Shower Mixer is precision engineered to provide satisfactory performance provided it is installed and operated in accordance with our recommendations contained in this guide.

Bath/shower mixers are mechanical devices and should be serviced annually depending on the water conditions. Areas of the country that are affected by hard water should consider shorter service intervals.

When installed in very hard water areas (above 200 p.p.m. temporary hardness) your installer may advise the installation of a water treatment device to reduce the effects of limescale formation.

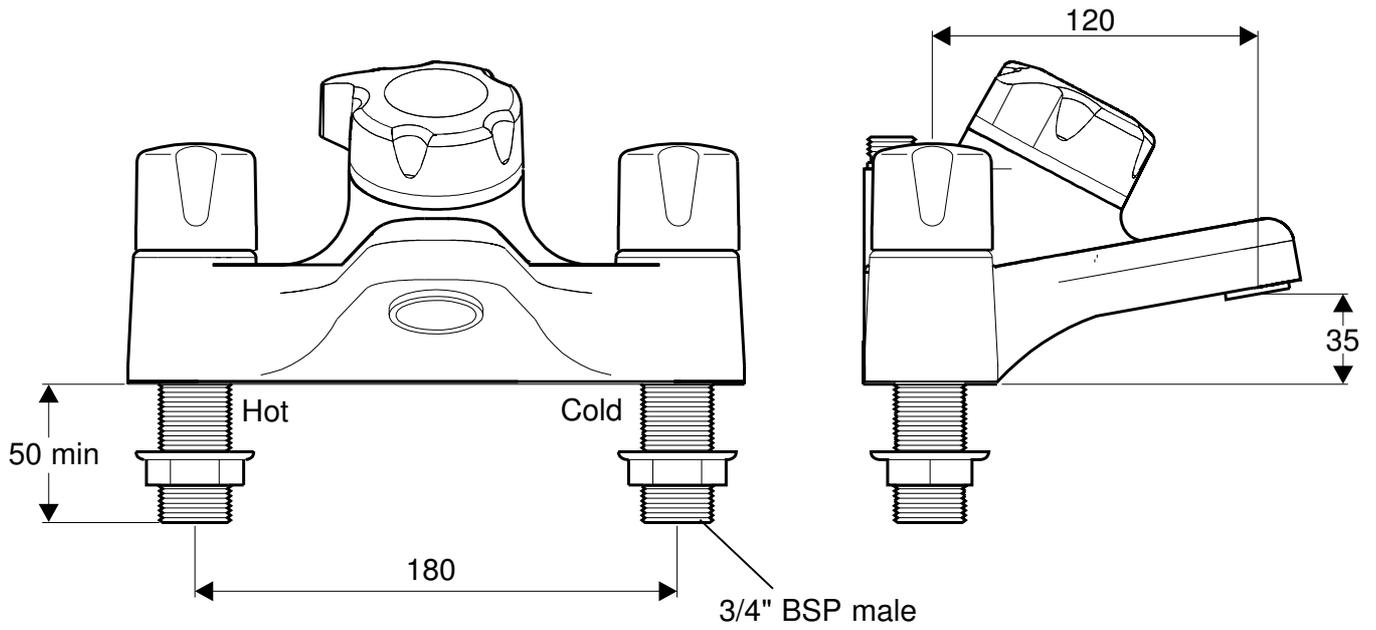
The exploded view and parts list illustrates the assembly of the product.

You may, if you wish, choose to engage the services of a Mira Service Engineer or Agent the terms of which are outlined on the back page of this guide.

3. Cleaning

WARNING! Many household cleaners contain abrasives and chemical substances, and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.

Spray pattern deterioration can be caused by either debris trapped in the spray head or a limescale build up in the holes. The spray head can be removed and cleaned. Refer to the Installation, Operation and Maintenance Guide for the shower fittings.

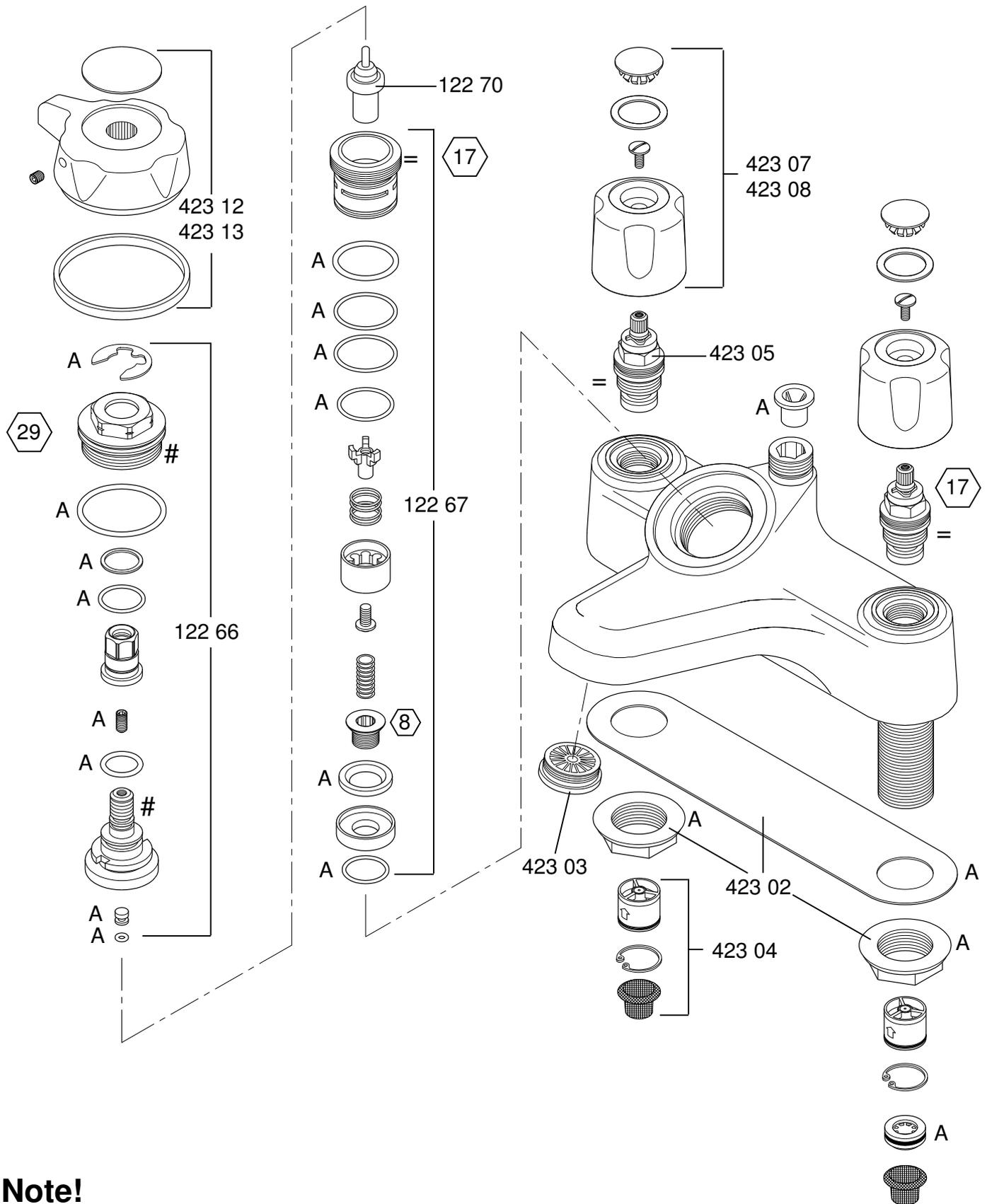


All dimensions are nominal and in millimetres.

1. Mira Extra spare parts list

122 66	Headwork Assembly
122 67	Sleeve Assembly
122 70	Element
423 01	Seal kit - items marked 'A'
423 02	Backnuts and Gasket
423 04	Checkvalve and Strainer (pair)
423 03	Water Separator
423 05	Tap Head (pair)
423 07	Tap Handle - chrome (pair)
423 08	Tap Handle - light golden (pair)
423 12	Shower Knob - chrome
423 13	Shower Knob - light golden

2. Mira Extra spare parts diagram



Note!

= Denotes a **Right Hand Thread** – Undo by turning **anticlockwise**.

Denotes a **Left Hand Thread** – Undo by turning **clockwise**.

29 Denotes spanner size in mm A/F required to remove component.

Customer Service

Mira Showers guarantee products against any defect of materials or workmanship for one year from the date of purchase (2 years for Mira Select and 3 years for Mira Excel ranges).

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
8.30am to 5pm Working days (4.30pm Fri)
8.30 am to 12.30pm Saturday
E-mail: Mira_technical@mirashowers.com
Fax: 01242 282595
By Post: Cromwell Road
Cheltenham
Gloucester GL52 5EP

For Customers in Northern Ireland

Wm H Leech & Son Ltd

Telephone: 028 9044 9257 – Mon to Fri 9 am-5pm
Fax: 028 9044 9234 – 24 hours
Post: Maryland Industrial Estate
Ballygowan Road
Moneyreagh, Co Down
BT23 6BL

For Customers in Republic of Ireland

Modern Plant Ltd

Telephone: Dublin 01 4591344 - Mon to Fri 9am to 5pm
Fax: Dublin 01 4592329 – 24 hours
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Naas Road
Clondalkin
Dublin 22

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Mira is a registered trade mark.
The company reserves the right to alter product specifications without notice.

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