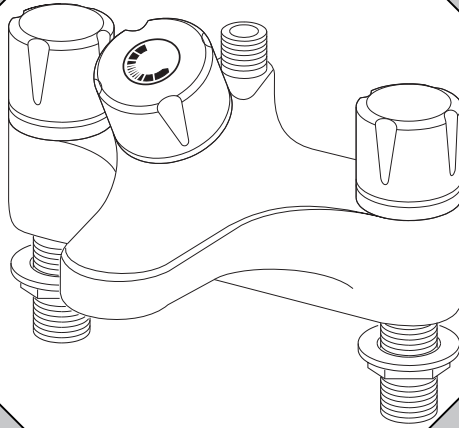


mira

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 Bye-laws, BS 6700, 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, Tel: 01708 472791.
 - 2.5.2. National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales, Tel: 01203 470626.
 - 2.5.3. Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland, Tel: 0131 225 2255.
- 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.

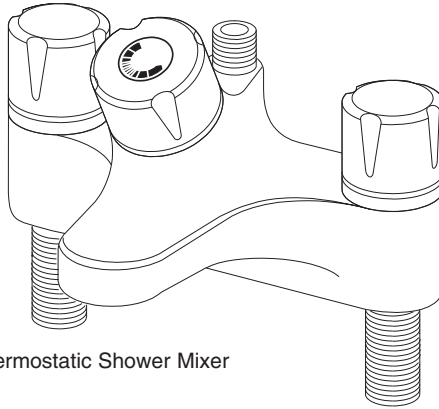
Product range

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

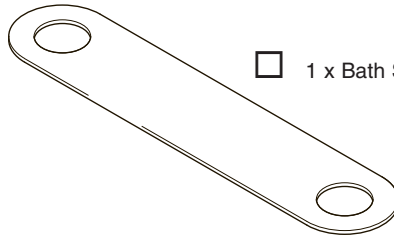
If you experience any difficulty with the installation or operation of your new shower control, then please refer to **Section 9 Maintenance: "1. Fault diagnosis"**, before contacting Caradon Mira Limited. Our telephone and fax numbers can be found on the back cover of this guide.

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

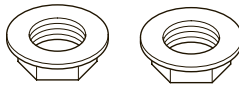
1. Mira Extra Bath & Thermostatic Shower Mixer



1 x Mira Bath and Thermostatic Shower Mixer



1 x Bath Sealing Gasket



2 x 3/4" Backnuts



1 x Inlet Flow Regulator (yellow)



2 x Filters



1 x Outlet Flow Regulator (white)

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 **12.0 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. Designed to comply with BS1415 Part 2 1986 for Thermostatic Mixing Valves, and to be used within systems designed to BS6700 (1987).
- 3.2. BS 6700 recommends that 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 (Bye-law 55).
- 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 Bye-laws.

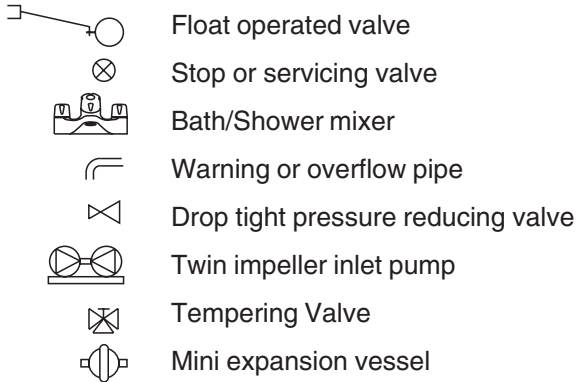
Bye-law 91 – If a Mira product is to be used with a mains fed secondary water heating device (e.g. jacketed heater) the system must have a means of accommodating the expansion of water.

Bye-law 17 – For further information please see, “The Mira Shower Guide to the new Model Water Bye-laws”. Publication number P2445.

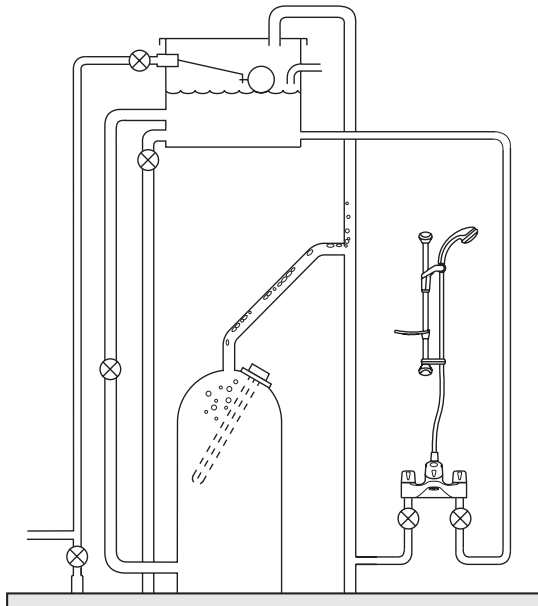
The following diagrams and text illustrate typical examples of suitable plumbing systems for the Mira Bath and Thermostatic Shower Mixer.

2. Typical suitable installations

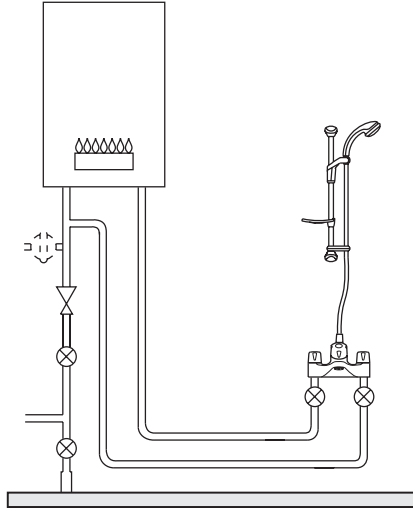
Key to symbols



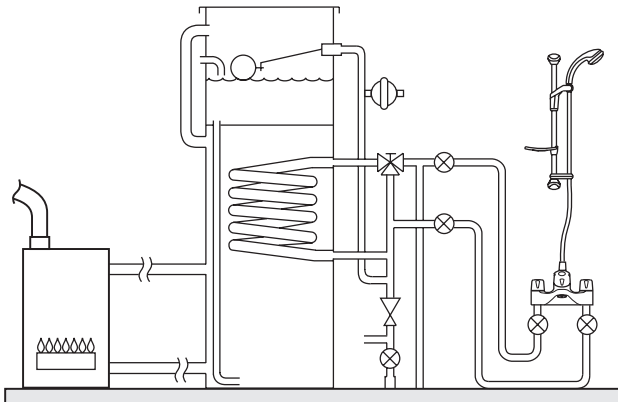
- 2.1. Gravity fed showers** - The Mira Bath and Thermostatic Shower Mixer **must** be fed from a **cold water storage cistern** and **hot water cylinder** providing nominally equal pressures.



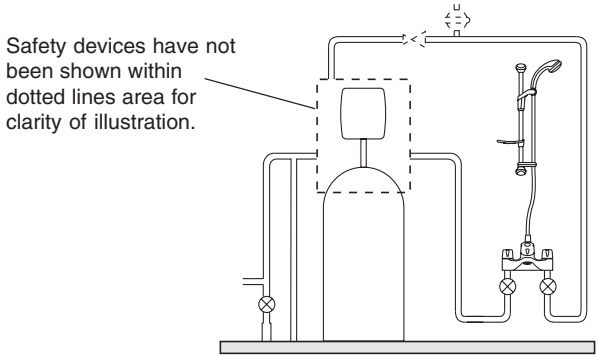
2.2. Gas heated showers - The Mira Bath and Thermostatic Shower Mixer **must** be installed with a multi-point gas water heater or combination boiler of a **modulating design**. A modulating multi-point gas water heater or combination boiler is one in which the water draw-off rate controls indirectly 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.

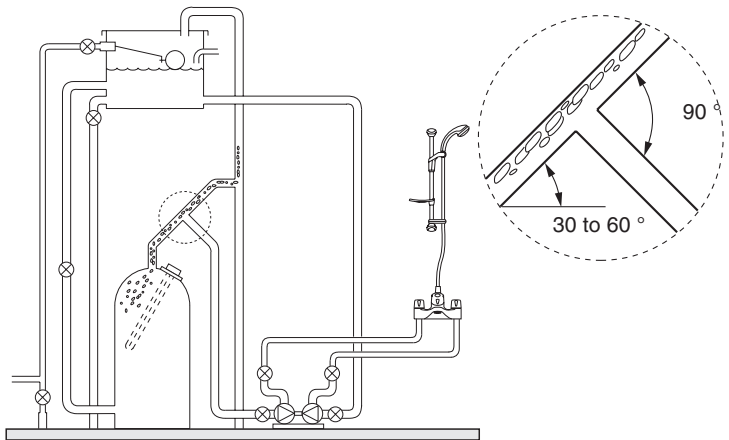


2.5. Pumped Showers

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.

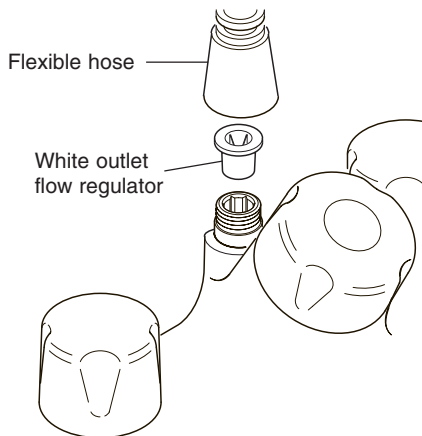


Fig. 6 Outlet Flow Regulator

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 (Bye-law 55).

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).

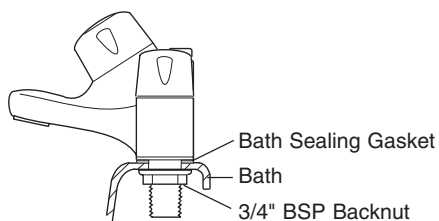
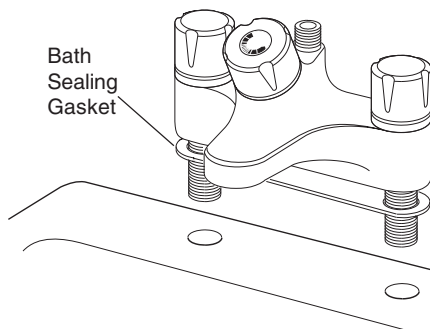
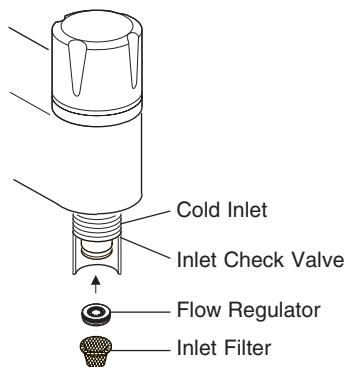
1.5. Fit the bath sealing gasket to the Mira Extra and fit the assembly to the bath (refer to diagram).

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**.



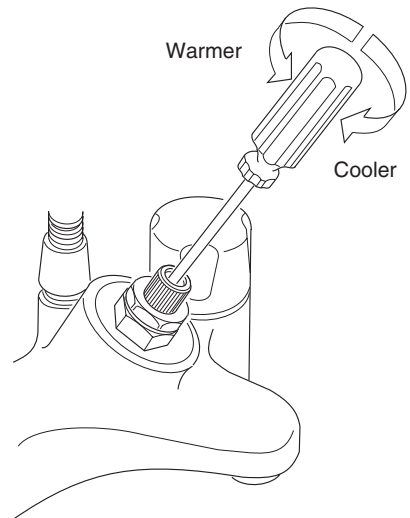
Maximum temperature setting

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. Pull off the central control knob. It is held in place by a circular spring clip inside the knob. Rocking the knob from side to side, as you pull will make removal easier.
4. Use a suitable screwdriver and locate it in the slotted recessed screw. Adjust as follows, refer to diagram:
Warmer - Turn anticlockwise
Cooler - Turn clockwise
5. Turn the shower control off and refit the knob aligning the nameplate.
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

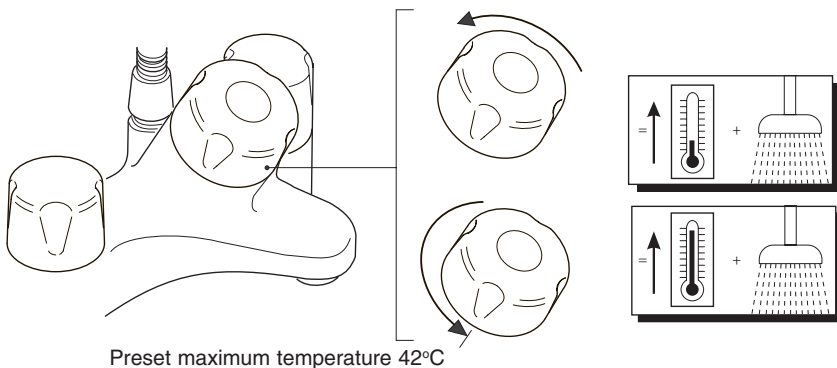
When the central inclined knob is turned on, anticlockwise, the sequence is:-

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. 	<p>Check temperature setting of hot water (60°C - 65°C). Refer to installation selection chart and check shower control.</p>
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. 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. 	<p>Fit new seals. Refer to the section Parts List.</p> <p style="text-align: right;">Continued</p>

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.

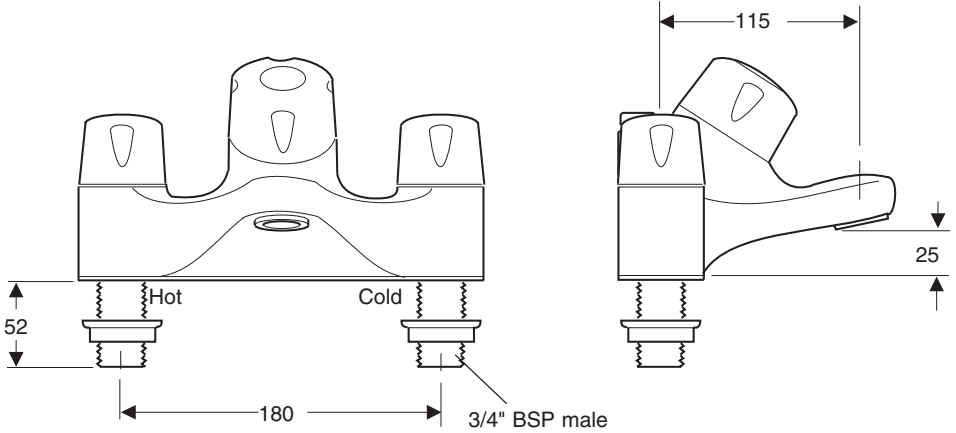
The exploded view and parts list illustrates the assembly of the product.

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.

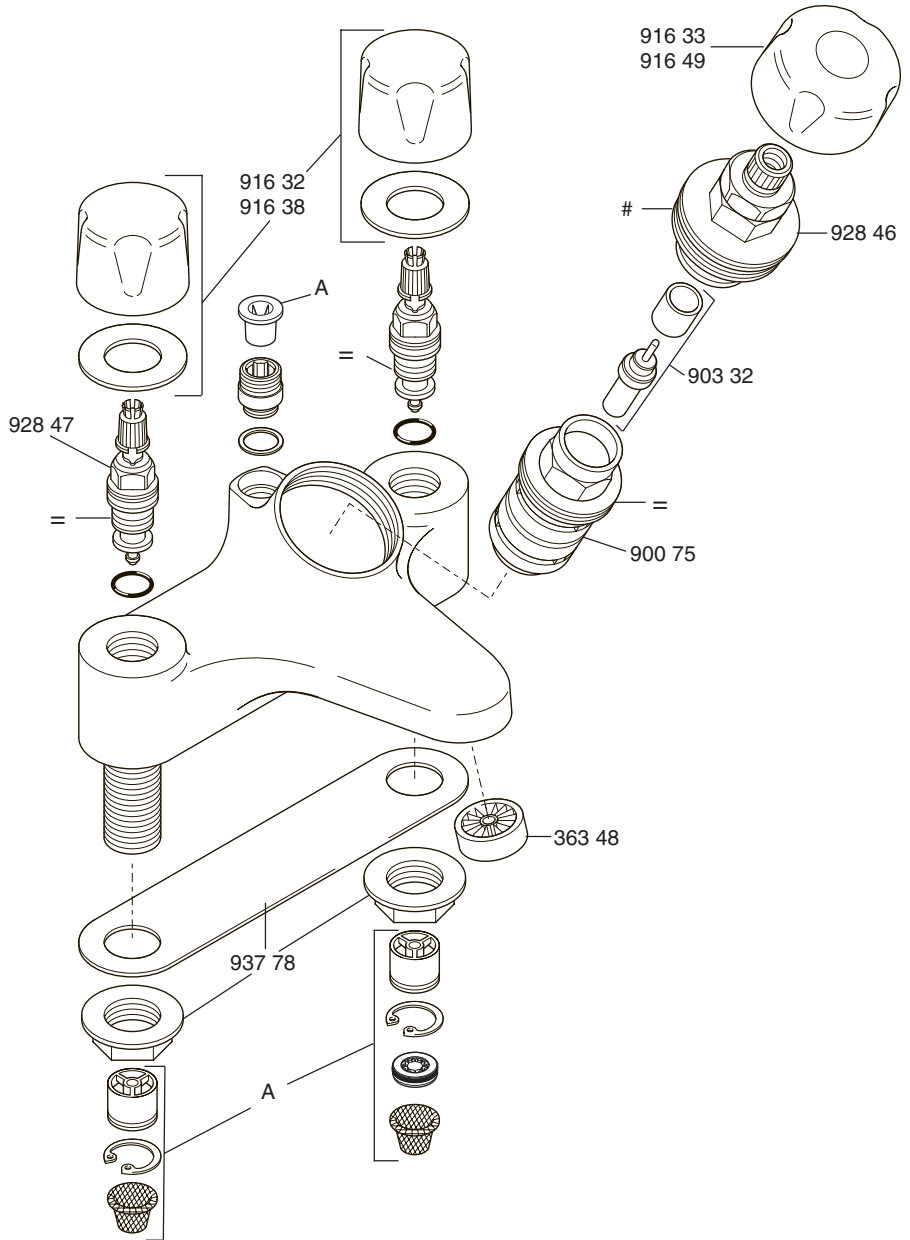


All dimensions are nominal and in millimetres.

1. Mira Extra spare parts list

147 53	Regulators, Inlet Filters and Check Valve Kit - components identified 'A'
363 48	Water Separator
900 75	Sleeve Assembly
903 32	Element and Spacer
916 32	Tap Knob Kit - light golden
916 33	Centre Control Knob - light golden
916 38	Tap Knob Kit - chrome
916 49	Centre Control Knob - chrome
928 46	Head Work Assembly
928 47	Tap Head Set
937 78	Fixing Nuts and Gasket

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**.

Customer Care Policy

If within a short time of installation the product does not function correctly, first check with the Installation, Operation and Maintenance Guide to see if the difficulty can be overcome by simple home maintenance.

Failing this, contact your installer to ensure that the product has been installed and commissioned in full accord with our detailed installation instructions. Our Customer Support Department is available, on the number shown below, to advise you or your installer.

If this does not resolve the difficulty, contact our Customer Support Department who will give every assistance and, if appropriate, arrange for our local Service Engineer or Agent to call on a mutually agreeable date.

If, through circumstances beyond our control, we are unable to provide this cover we will, with prior agreement, authorise a competent local installer to attend.

Within the Guarantee period there will be no charge for the parts or labour insofar as a fault with our product is concerned. However, it is important to appreciate that our Guarantee extends to our product only and that it does not cover difficulties arising from incorrect installation or misuse.

During a Service visit a responsible person – familiar with the purpose of the visit – should be present. Should our Service Engineer or Agent be unable to gain access at the prearranged time a callout charge may be made.

Payment for Service visits, if applicable, should be made directly to the Service Engineer or Agent, using either Visa, Access or a cheque supported by a banker's card.

To contact us:- For England, Wales and Scotland

**Telephone 01242 262888 (12 Direct Lines)
and ask for Mira Customer Support**

- For advice on product maintenance
- To order spare parts
- To arrange a service visit
- For product advice and problem solving
- To order Installation, Operation and Maintenance Guides
- For your feedback on our products or services

By Fax: 01242 282595

By Post: Caradon Mira Limited, Cromwell Road
Cheltenham, Gloucestershire, GL52 5EP.

For Northern Ireland

By Phone: 01232 401909 – Monday to Friday 9am–5pm

By Fax: 01232 401235 – 24 Hours

By Post: Wm. H. Leech & Son Ltd, Unit 3,
34, Montgomery Road, Belfast, BT6 9HL.

For Eire

By Phone: Dublin 01 4591344 – Monday to Friday 9am–5pm

By Fax: Dublin 01 4592329 – 24 Hours

By Post: Modern Plant Ltd, Otter House, Naas Road,
Clondalkin, Dublin 22, Eire.

Guarantee

Caradon Mira Limited guarantee this product against any defect of materials or workmanship for one year (three years for the Mira Excel thermostatic range) from the date of purchase, provided that the product has been installed correctly and used and maintained in accordance with the instructions supplied.

Any part found to be defective during the guarantee period will be replaced or repaired – at our option – without charge, provided that the product has been properly used and maintained.

The product should not be taken apart, modified or repaired except by a person authorised by Caradon Mira Limited.

Your statutory rights are in no way affected by this guarantee.

After Sales Service – how we can help you

Caradon Mira Limited have a team of expert staff ready to provide assistance, should you experience any difficulty with your Mira shower.

The Caradon Mira Customer Support Department is available to give you advice on any problem encountered. Should the problem be unable to be resolved by advice, we will offer either a replacement part to be sent to you, or for one of our Service Engineers or Agents to call.

Spare Parts

At Caradon Mira Limited we keep a stock of all functional parts of our products for up to ten years from the date of final manufacture of the product.

If during that period, our stock of a particular part is exhausted we will, as an alternative, provide an equivalent new product or part at a price equating to the cost of repair to the old, bearing in mind the age of the product.

Caradon Mira Limited will normally despatch spare parts within two working days and by 1st class post. In the interests of customer safety, spares that require exposure to areas of mains voltage can only be sent to a competent person.

Payment for such parts – if applicable – can be made by Visa or Access over the phone at the time of ordering. Should payment by cheque be preferred a pro forma invoice will be sent.

Mira Showers
Caradon Mira Limited
Cromwell Road,
Cheltenham GL52 5EP.

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

A Caradon Company

www.mira-showers.co.uk



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Reg. No. FM 14648