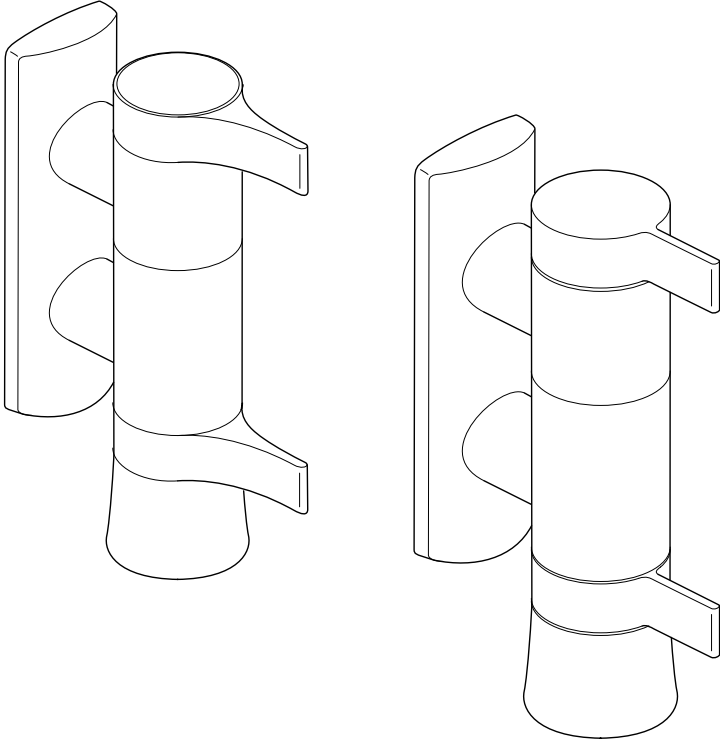


# ***mira***



## **SHOWERS**



MIRA INFUSE & MIRA MINIBELLE

THERMOSTATIC MIXERS

INSTALLATION & USER GUIDE

**These instructions must be left with the user.**

## CONTENTS

<b>Introduction</b>	<b>2</b>
Patents	2
<b>Safety Warnings</b>	<b>3</b>
<b>Pack Contents</b>	<b>3</b>
<b>Specifications</b>	<b>4</b>
Pressures	4
Temperatures	4
Thermostatic Shut-down	4
Connections	4
Dimensions	4
<b>Installation</b>	<b>5</b>
Suitable Plumbing Systems	5
General	5
Flow Regulator	5
Installing the Thermostatic Mixer	6
<b>Commissioning</b>	<b>9</b>
Maximum Temperature Setting	9
<b>Operation</b>	<b>9</b>
Temperature Control	9
Flow Control	9
<b>User Maintenance</b>	<b>10</b>
Fault Diagnosis	10
Lubricants	10
Cleaning	10
<b>Spare Parts</b>	<b>11</b>
<b>Customer Service</b>	<b>Back Page</b>

## 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 Infuse and Mira Minibelle are thermostatic mixers which have separate flow and temperature controls. They are supplied complete with Mira L98B Shower Fittings.

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.

### Patents

#### Patents:

GB: 2 340 210, 2 392 223, 2 392 224

#### Patent Applications

Euro: 1 672 257

US: 2006-0124758-A1

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

## SAFETY WARNINGS

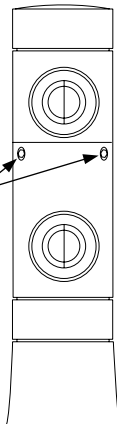
Mira thermostatic mixers are precision engineered and should give continued safe and controlled performance, provided:

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

### Caution!

1. Read all of these instructions.
2. Retain this guide for later use.
3. Pass on this guide in the event of change of ownership of the installation site.
4. Follow all warnings, cautions and instructions contained in this guide.
5. Anyone who may have difficulty understanding or operating the controls of any shower should be attended whilst showering. Particular consideration should be given to the young, the elderly, the infirm or anyone inexperienced in the correct operation of the controls.
6. Rapid/Excessive movement of the flow and/or temperature control levers may result in momentary unstable blend temperatures.
7. Care is required when adjusting flow or temperature, make sure that the temperature has stabilised.
8. Do not remove or tighten the body grubscrews.

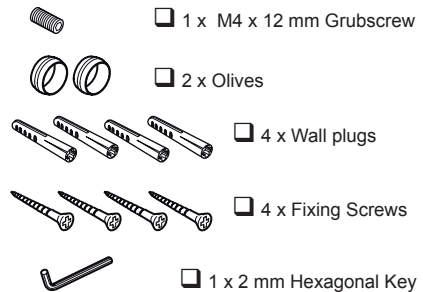
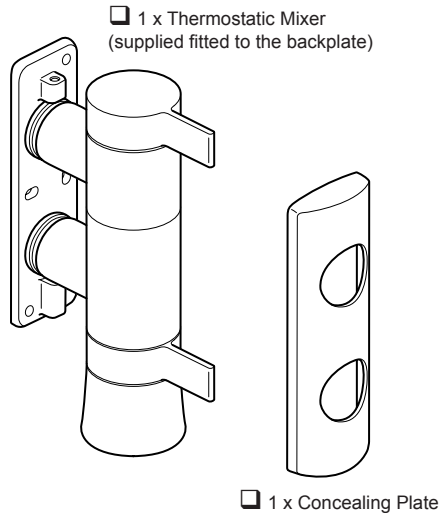
**Caution! Do not** remove or tighten these grubscrews.



9. When this product has reached the end of its serviceable life, it should be disposed of in a safe manner, in accordance with current local authority recycling, or waste disposal policy.

## PACK CONTENTS

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



### Documentation

- 1 x Guarantee Registration Document

# SPECIFICATIONS

## Pressures

- Max Static Pressure: **10 Bar**.
- Max Maintained Pressure: **5 Bar**.
- Min Maintained Pressure (Gravity System): **0.1 Bar**. (0.1 bar = 1 Metre head from cold tank base to shower handset outlet).

**Note!** For gravity fed / other low pressure systems (0.5 bar or below) remove the outlet flow regulator. Refer to section: '**Installation, Flow Regulator**'.

- For optimum performance supplies should be nominally equal.

## Temperatures

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

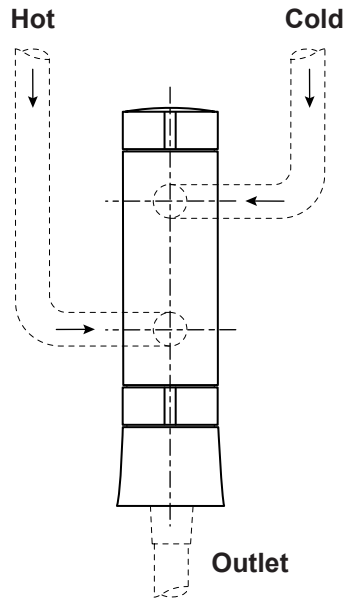
- For safety and comfort the thermostat will shut off the mixing valve **within 2 Seconds** if either supply fails. (achieved only if the blend temperature has a minimum differential of 12°C from either supply temperature).

## Connections

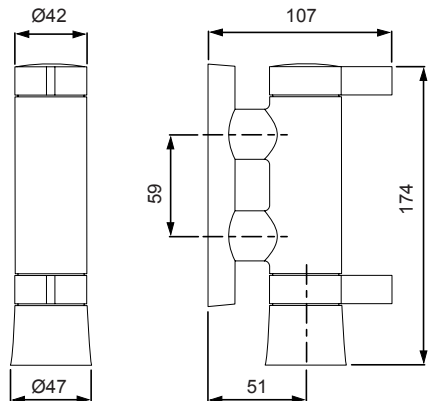
The thermostatic mixer can only be installed with rear supply inlets and the supply pipework must be connected as follows:

- Hot: Bottom (side nearest flow control), 15 mm compression.
- Cold: Top (side nearest temperature control), 15 mm compression.
- Outlet: ½" BSP Male to flexible hose.

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



## Dimensions



All dimensions in mm

# 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**).

### 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

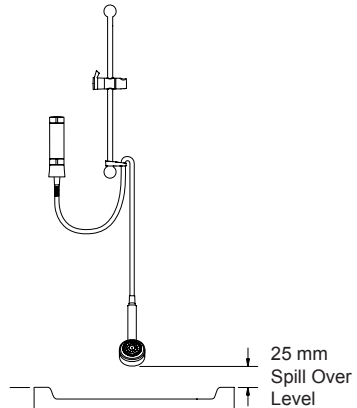
Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel. The installation must comply with the "Water Supply Regulations 1999 (Water Fittings)" or any particular regulations and practices, specified by the local water company or water undertakers.

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

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 handset (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.

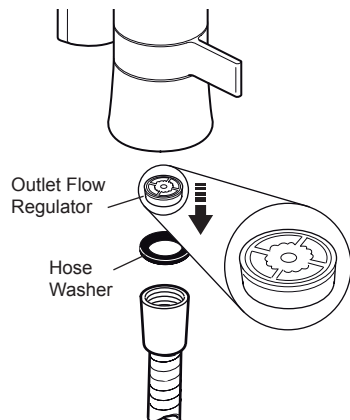
**Note!** Only use Shower Fittings recommended by the manufacturer or supplier.



## Flow Regulator

Site conditions will determine the flow regulator requirements.

For gravity fed / other low pressure systems (0.5 bar or below) remove the outlet flow regulator.



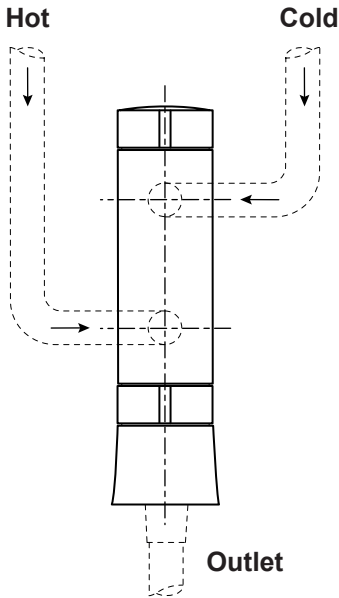
## Installing the Thermostatic Mixer

1. The thermostatic mixer must be fitted vertically as illustrated and can only be installed with rear supply inlets. The supply pipework **must** be connected as follows:

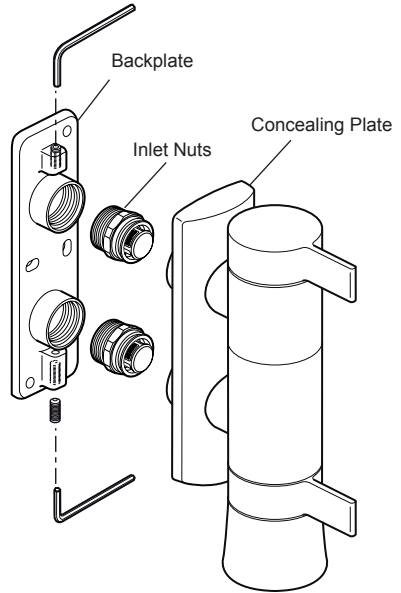
- Hot to Bottom Inlet
- Cold to Top Inlet
- Bottom Outlet.

**Important!** This product does not allow for reversed inlets.

2. Determine the route for the hot and cold supply pipework.

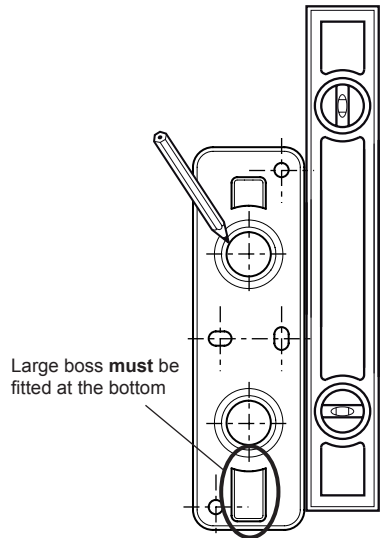


4. Loosen the 2 backplate grub screws with the 2 mm hexagon key (supplied) and pull the mixer and concealing plate from the backplate.
5. Unscrew the inlet nuts from the backplate.



6. Using the backplate as a guide, mark the positions of the fixing holes and the pipe centres.

**Note!** Make sure that the backplate is the correct way up (refer to illustration).



7. For solid walls drill the fixing 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. Drill the holes for the supply pipes and fit the supply pipework:

Hot to Bottom Inlet, Cold to Top Inlet

**Note!** The inlet pipework should extend between 12 and 18 mm from the finished wall surface.

**Caution!** Make sure that the pipework is not damaged otherwise the olives will not seal.

9. Fit the backplate over the inlet pipes and secure to the wall using the fixing screws (supplied).

**Note!** Make sure that the backplate is the correct way up (refer to illustration).

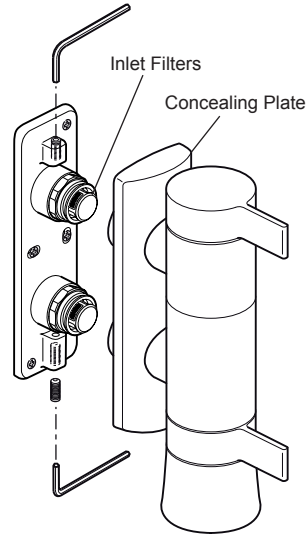
10. **Caution! It is essential at this point that the supply pipework is thoroughly flushed through before connection to the mixer.** Failure to do so may result in product malfunction and will not be covered under the guarantee.

11. Fit the olives onto the inlet pipework and tighten the inlet nuts using a suitable spanner.

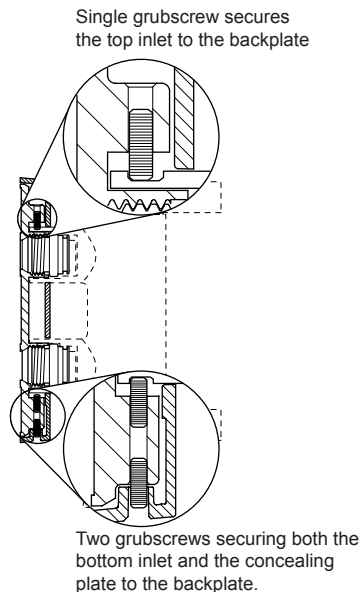
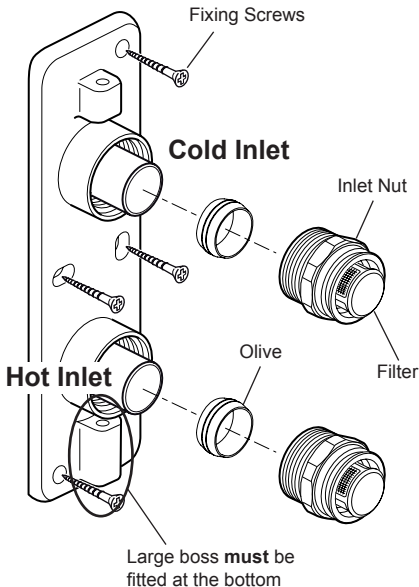
**Caution!** Do not overtighten.

**Important!** Make sure that the inlet filters are fitted in the inlet nuts as illustrated.

12. Make sure that the concealing plate (with the hole at the bottom) is loosely fitted over the mixing valve inlets and align the mixer with the inlet nuts. Push on fully and tighten the grub screws to secure the mixer to the backplate. Make sure that the grub screws are engaged fully in the valve body grooves.

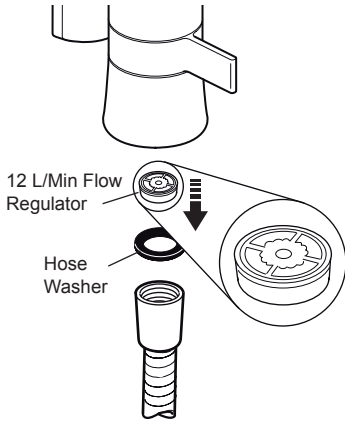


13. Push the concealing plate onto the backplate, secure with the M4 x 12 mm grub screw.



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

**Important!** A 12 litre/minute flow regulator is fitted inside the outlet nipple. This can be removed for gravity fed / other low pressure systems (0.5 bar or below).



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

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



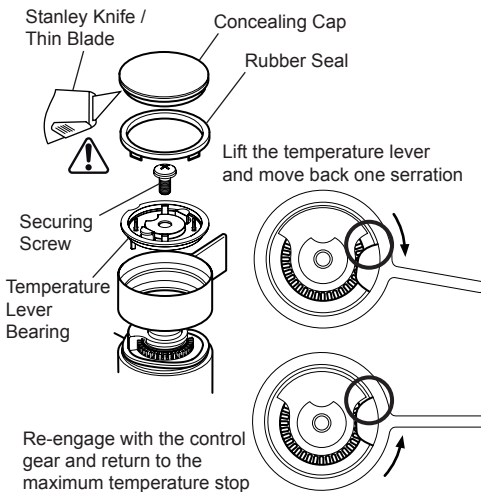
## COMMISSIONING

### Maximum Temperature Setting

Before using the shower the maximum temperature must be checked to make sure that it is at a safe level. It has been preset to approximately 43°C at the factory but due to variations in site conditions the maximum temperature may need adjustment.

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

1. Turn on the mixer to the maximum temperature (i.e. fully anticlockwise) and allow the temperature to stabilise.
2. Test that the temperature of the water from the shower outlet is hot enough.  
If the temperature is too hot or too cold adjust as follows:
3. Carefully remove the concealing cap using a suitable tool (i.e. stanley knife / thin blade).
4. Unscrew the securing screw and remove the temperature lever bearing.
5. Lift the temperature lever and move it back one serration on the temperature control gear.
6. Return the lever to the maximum temperature stop and check the temperature, if it is still not hot enough repeat the procedure.



7. Once the maximum temperature is satisfactory, refit the temperature control bearing and fit and tighten the securing screw.
8. Refit the concealing cap, make sure that the rubber seal is correctly fitted.

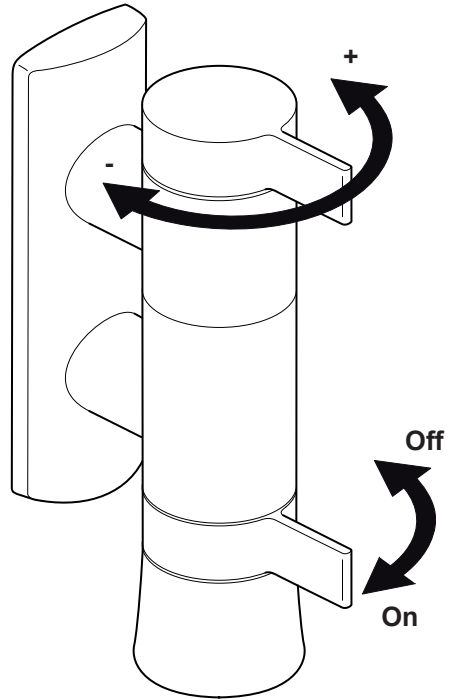
## OPERATION

**Caution!** Care is required when adjusting flow or adjusting temperature. Make sure that the temperature has stabilised.

The thermostatic mixers have separate control levers for temperature and flow.

### Temperature Control

Turn the temperature control lever clockwise to decrease the temperature and anticlockwise to the preset maximum temperature



### Flow Control

Turn the flow lever clockwise to the maximum flow.

## USER MAINTENANCE

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

### 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). Rework inlet pipework.*
  - *No hot water reaching mixer.*
  - *Check the filters for any blockage.*
  - *Installation conditions outside operating parameters, refer to sections: '**Specifications**' and '**Commissioning**'.*
- 

#### Symptom:

- *Fluctuating or reduced flow rate.*

#### Cause Rectification:

- *Check the shower handset, 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**'.*
  - *Flow regulator fitted incorrectly.*
  - *Air lock or partial blockage in the pipework.*
- 

#### Symptom:

- *Water leaking from shower handset.*

#### 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 mixer valve assembly.*

### 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.

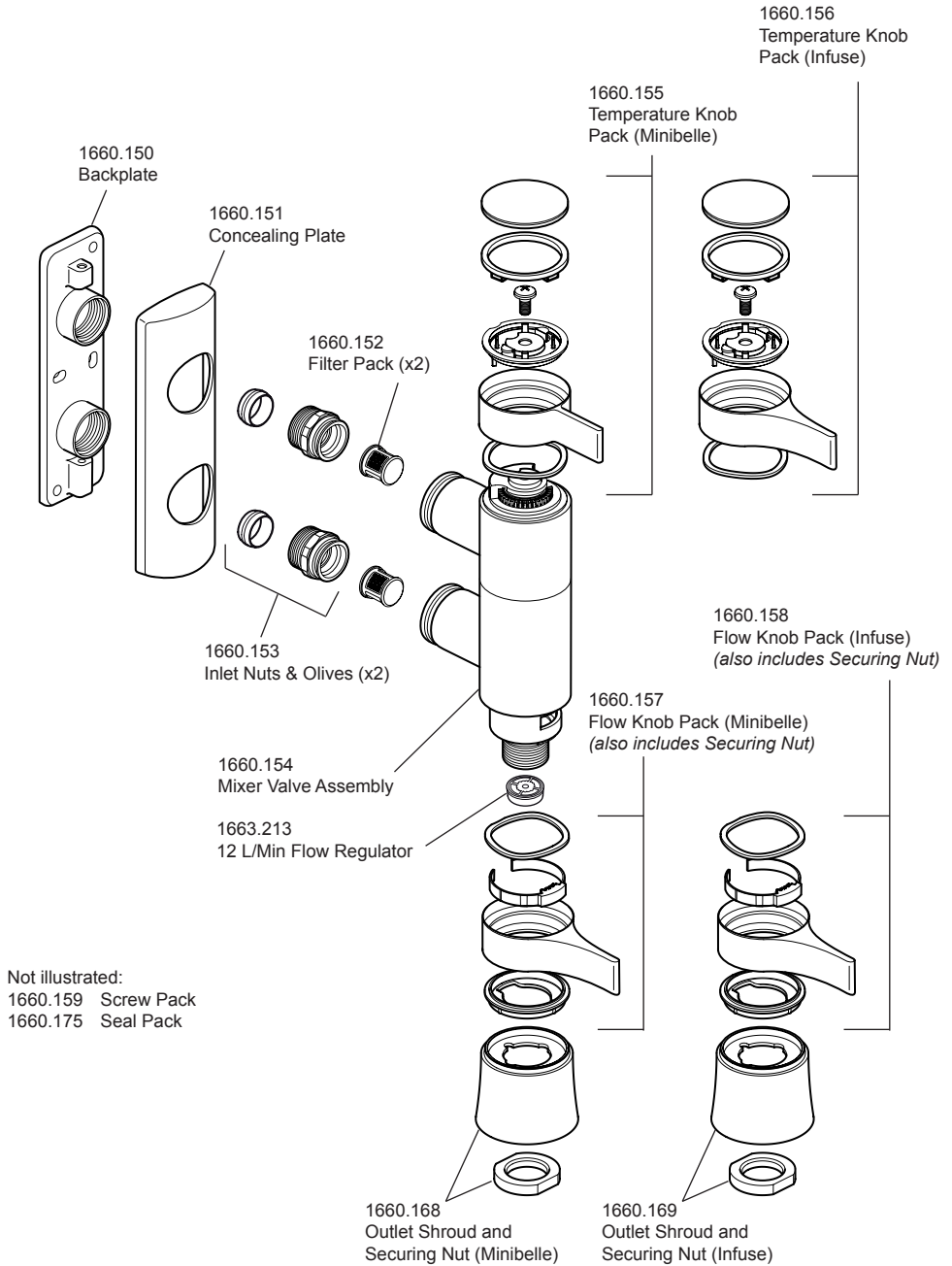
**Warning!** Many household cleaners contain abrasive and chemical substances, and should not be used for cleaning plated or plastic fittings.

These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.

Use your thumb or a soft cloth to wipe any limescale from the soft nozzles and the front surface of the handset spray plate.

**Do not** use descalents on this product.

# SPARE PARTS



## CUSTOMER SERVICE

### Guarantee of Quality

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

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

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

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

To be free of charge, service work must only be undertaken by Mira Showers or our approved agents.

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 persons not authorised by Mira Showers or our approved agents.

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

### 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 Team who will give every assistance and, if necessary, arrange for our service engineer to visit. If the performance of your shower declines, consult this manual to see whether simple home maintenance is required. Please call our Customer Services Team to talk the difficulty through, request a 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 provide support throughout the product's expected life.

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.

All spares are guaranteed for 12 months from date of purchase. Spares that have been supplied directly from us can be returned within one month from date of purchase, providing that they are in good order and the packaging is unopened.

**Note!** Returned spares will be subject to a 15% restocking charge and authorisation must be obtained before return. Please contact our Customer Services Team.

**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 spare parts and a 12 month guarantee on the repair.

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

### To Contact Us

**England, Scotland, Wales and Northern Ireland**

#### **Mira Showers Customer Services**

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

E-mail: [technical@mirashowers.com](mailto:technical@mirashowers.com)

Fax: 01242 282595

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

#### **Eire**

#### **Modern Plant Ltd (Dublin)**

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

E-mail: [sales@modernplant.ie](mailto:sales@modernplant.ie)

Fax: Dublin 01 459 2329

Post: Otter House, Naas Road,  
Clondalkin, Dublin 22

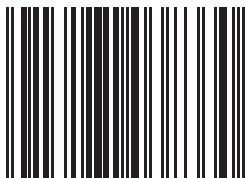
#### **Modern Plant (Cork)**

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

E-mail: [cork@modernplant.ie](mailto:cork@modernplant.ie)

Fax: 021 496 8607

Post: Tramore Road, Cork



5 013181 038330 >

Mira is a registered trade mark of  
Kohler Mira Limited.

The company reserves the right to alter  
product specifications without notice.

[www.mirashowers.com](http://www.mirashowers.com)

**mira**  
SHOWERS



FM 14648