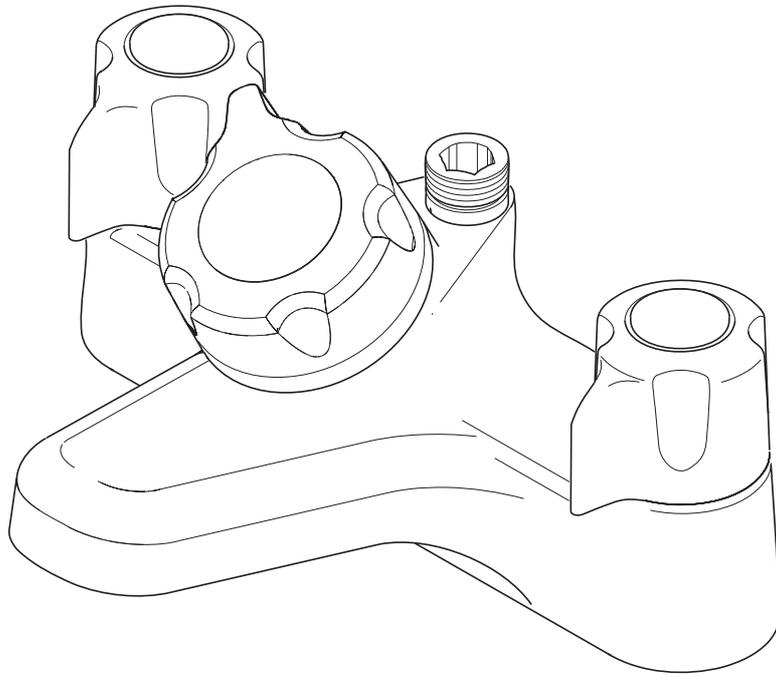




# Meynell



## **CD & Bonus BATH & THERMOSTATIC SHOWER MIXERS**

### **PRODUCT MANUAL**

#### **INSTALLER**

**Please leave manual with user for future reference to unit operation and maintenance.**

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If you experience any difficulty with the installation or operation of our new mixing valve, then please refer to the **Fault Diagnosis** section, before contacting your supplier.

# INTRODUCTION

## Description

The Bath Mixer and Thermostatic Shower provides accurate temperature control and flow rates to the shower. The shower control is via a central sequential control. The bath fill is conventional with independent hot and cold tap heads via centre outlet.

**Caution!** If the hot tap head is turned on then the bath fill outlet will deliver the temperature set on the hot water system.

## Safety: Warnings

This Bath Mixer and Thermostatic Shower is precision engineered and should give continued safe and controlled performance, provided:

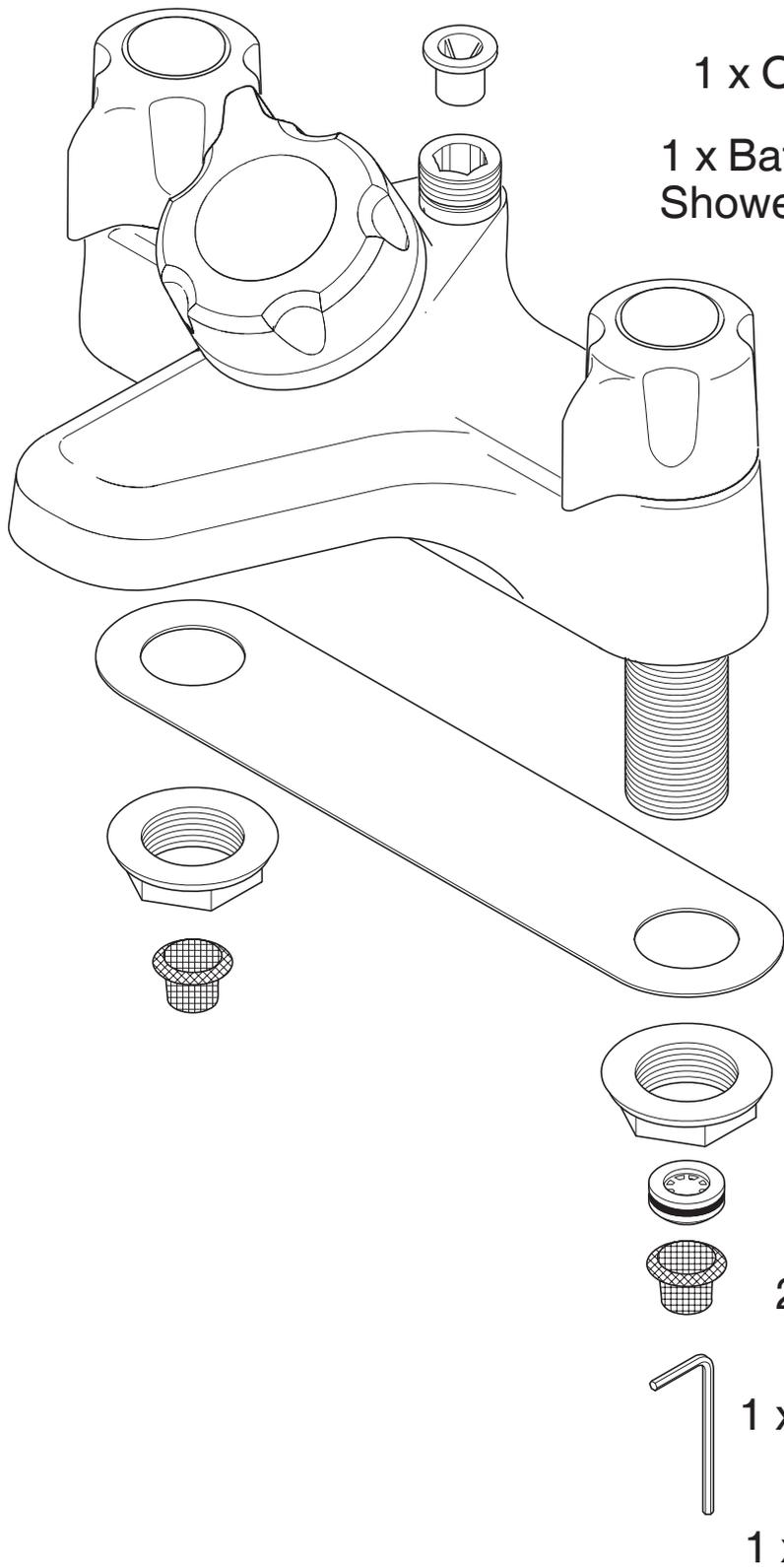
1. It is installed, commissioned, operated and maintained in accordance with manufacturers recommendations, and
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

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. Provided it is installed, commissioned, operated and maintained within manufacturers recommendations, the risk of failure, if not eliminated, is reduced to the minimum achievable.

# PACK CONTENTS

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

## CD Bath & Thermostatic Shower Mixer



1 x Outlet Regulator

1 x Bath and Thermostatic Shower Mixer

1 x Sealing Gasket

2 x 3/4 BSP Backnut

1 x Inlet Regulator

2 x Inlet Strainer

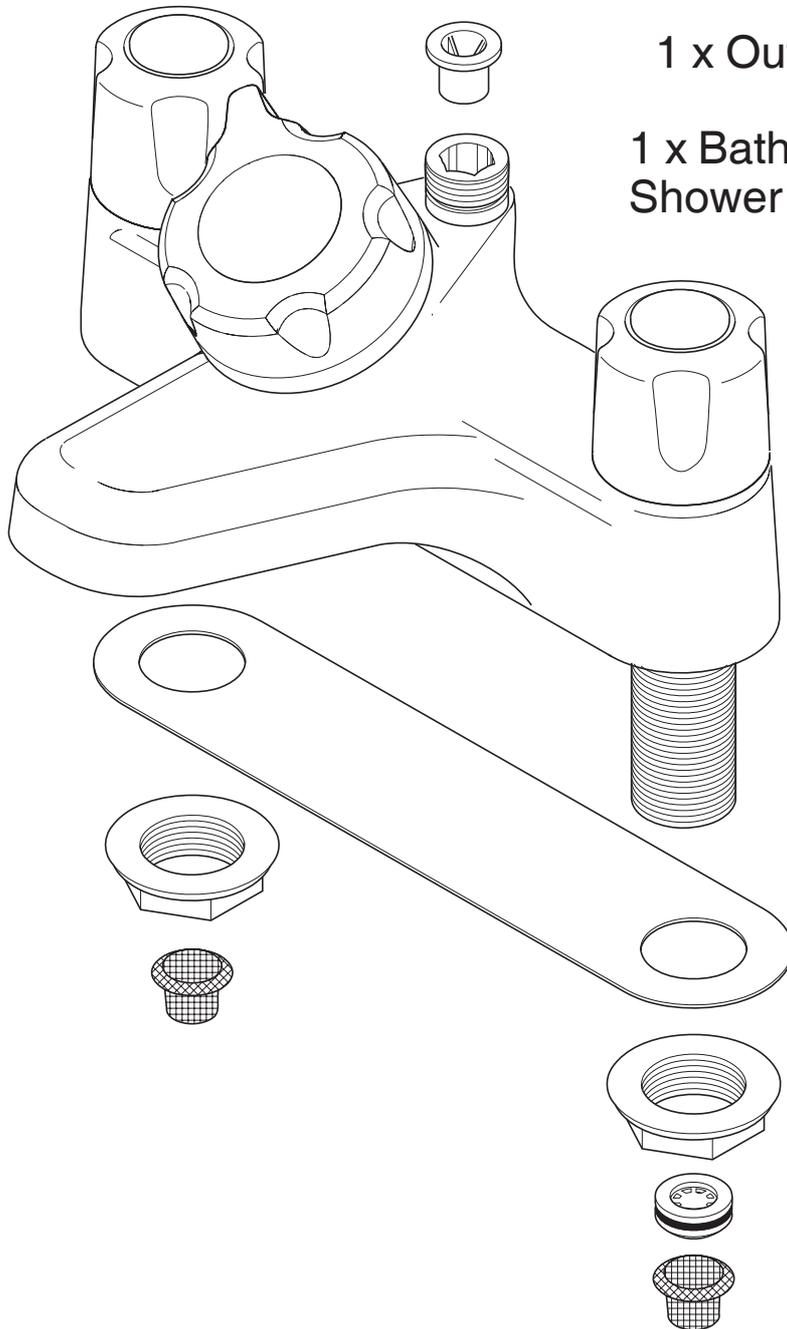
1 x Hexagon Key

1 x Product Manual



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

## Bonus Bath & Thermostatic Shower Mixer



1 x Outlet Regulator



1 x Bath and Thermostatic Shower Mixer



1 x Sealing Gasket



2 x Inlet Strainer



2 x 3/4 BSP Backnut



1 x Inlet Regulator



1 x Hexagon Key

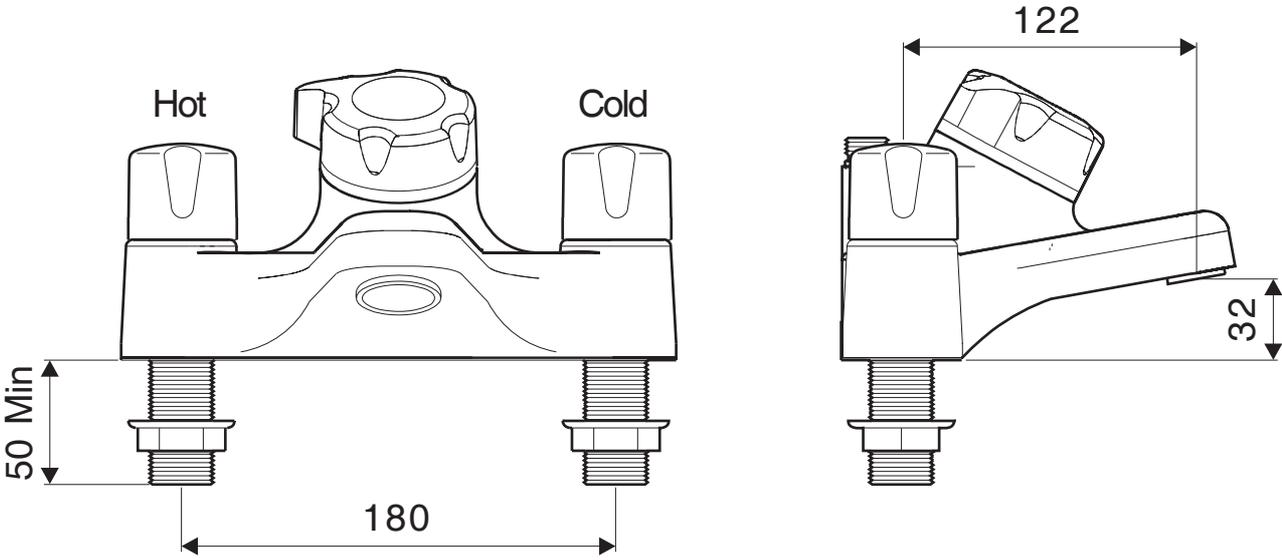


1 x Product Manual



# DIMENSIONS

## CD and Bonus Bath & Thermostatic Shower Mixer



Dimensions in millimetres

# SPECIFICATION

## Notes

1. The installation, commissioning and maintenance must be carried out in accordance with instructions supplied by the manufacturer, and be installed by qualified or competent persons.
2. The plumbing installation must comply with the requirements of UK Water Regulations/Byelaws (Scotland), Building Regulations or any particular regulations and practices, specified by the local water supplier. The installation should be carried out by a plumber or contractor who is registered, or is a member of, an association such as:
  - Institute of Plumbing (IOP), throughout the UK.
  - National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales.
  - Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland.
3. This product should give continued safe and controlled performance, provided:
  - Installation, commission, operation and maintenance specifications are according to recommendations.
  - Frequent attention is given, as necessary, to maintain the product in good functional order.

# Normal Operating Conditions

## Consider as:

- Inlet maintained pressures are nominally balanced
- Daily usage 1-6 hours
- Installation and usage environment not subject to extremes of temperature, unauthorised tampering or wilful abuse.

## Operating Parameters: Pressures And Flow Rates

For optimum performance, maintained supply pressures should be nominally **equal**.

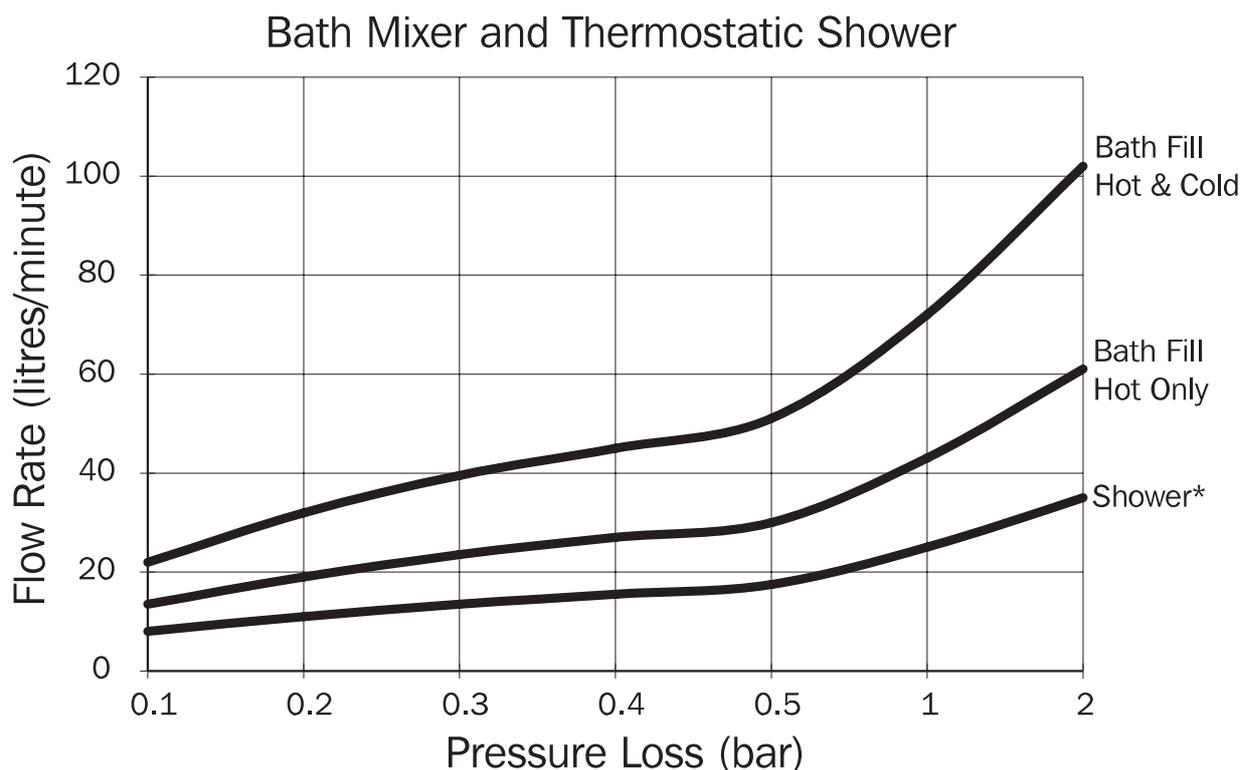
Maximum Pressure Loss Ratio: **5:1**

Minimum Maintained Pressure (gravity system): **0.1 bar**.

(0.1 bar = 1 metre from base of cold tank to outlet of shower fitting)

Minimum Maintained Pressure (gas water heater): **1.0 bar**.

Maximum Static Pressure: **10 bar**.



\* No Shower Kit attached

## Temperature Control

Minimum temperature differential between hot supply and outlet temperature: **10°C**

Optimum temperature control range of mixer: **35 - 45°C**

Maximum hot water temperature: **85°C** (for safety, a recommended hot water storage temperature maintained below 85°C and for ablutionary installations at between 60 to 65°C).

The performance specification outlined below is achieved with shower outlet blend temperature set between 35 - 45°C and supplies of 15°C cold and 65°C hot with nominally equal pressures.

- Outlet blend temperature is maintained within 2°C with a 10°C change in hot or cold supply.
- Thermostatic shut down to seepage within 2 seconds if hot supply fails. This is achieved only if the hot supply temperature is 10°C above the set outlet blend temperature.

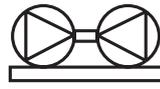
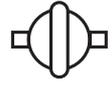
## Plumbing Connections

Inlet connectors are 3/4" BSP male using standard tap connection.  
Outlet connector is 1/2" BSP male

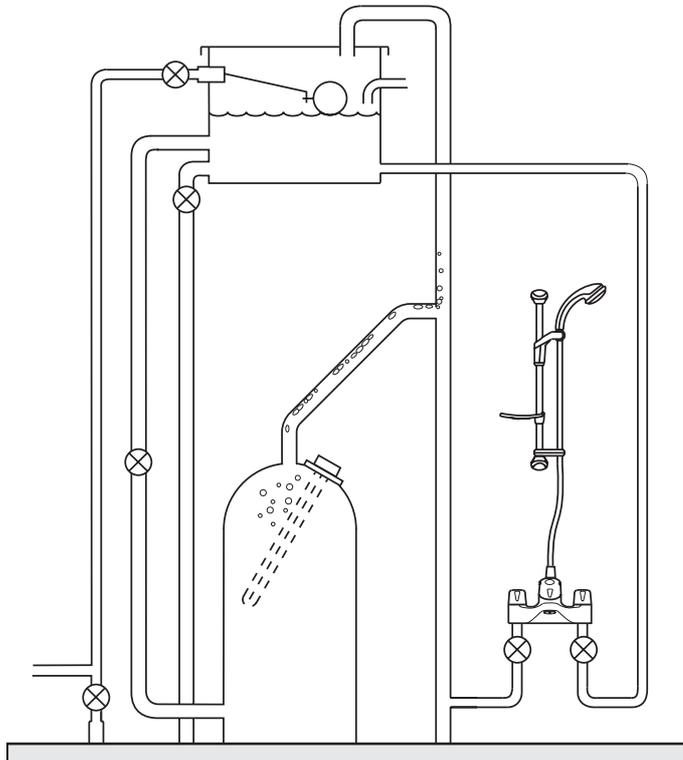
Hot (H) and Cold (C) inlets are clearly marked on body and must be connected this way.

# INSTALLATION

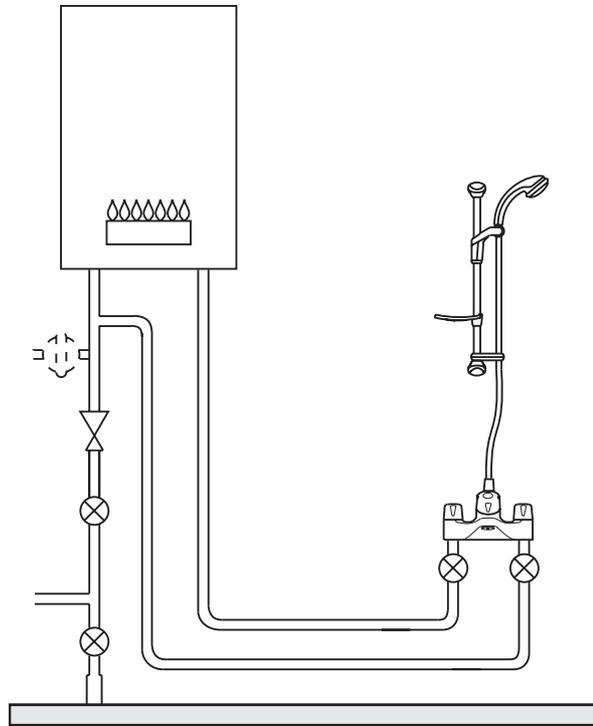
## Key to Symbols

	Isolating valve
	Mixing Valve
	Overflow Indicator
	Pressure Reducing Valve
	Twin Impeller Pump
	Tempering Valve
	Mini Expansion Vessel

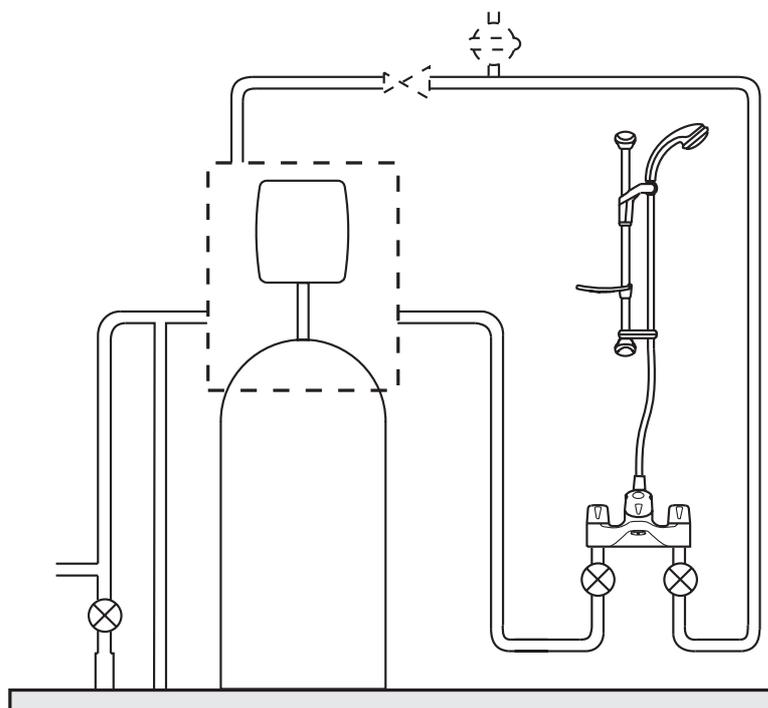
**Gravity Fed System** - The mixer **MUST** be fed from a cold water cistern and hot water cylinder providing nominally equal pressure.



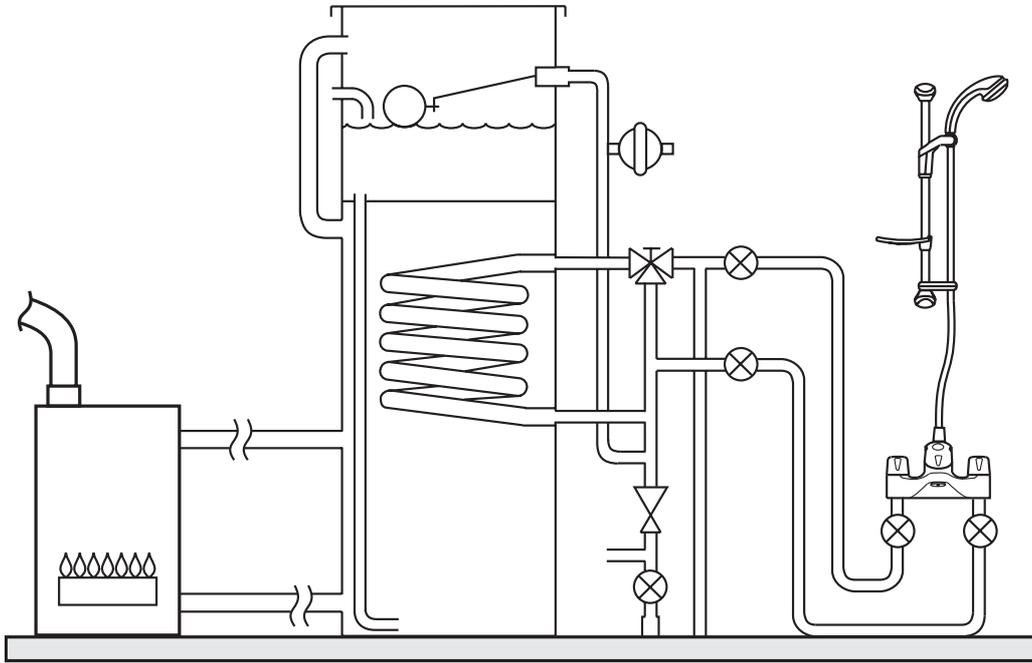
**Gas Heated System** - The mixer **MUST** be installed with a gas water heater or combination boiler of a **fully modulating** design. A fully modulating boiler is one where the draw off rate is indirectly controlling the gas flow to the boiler, producing a relatively constant hot water temperature.



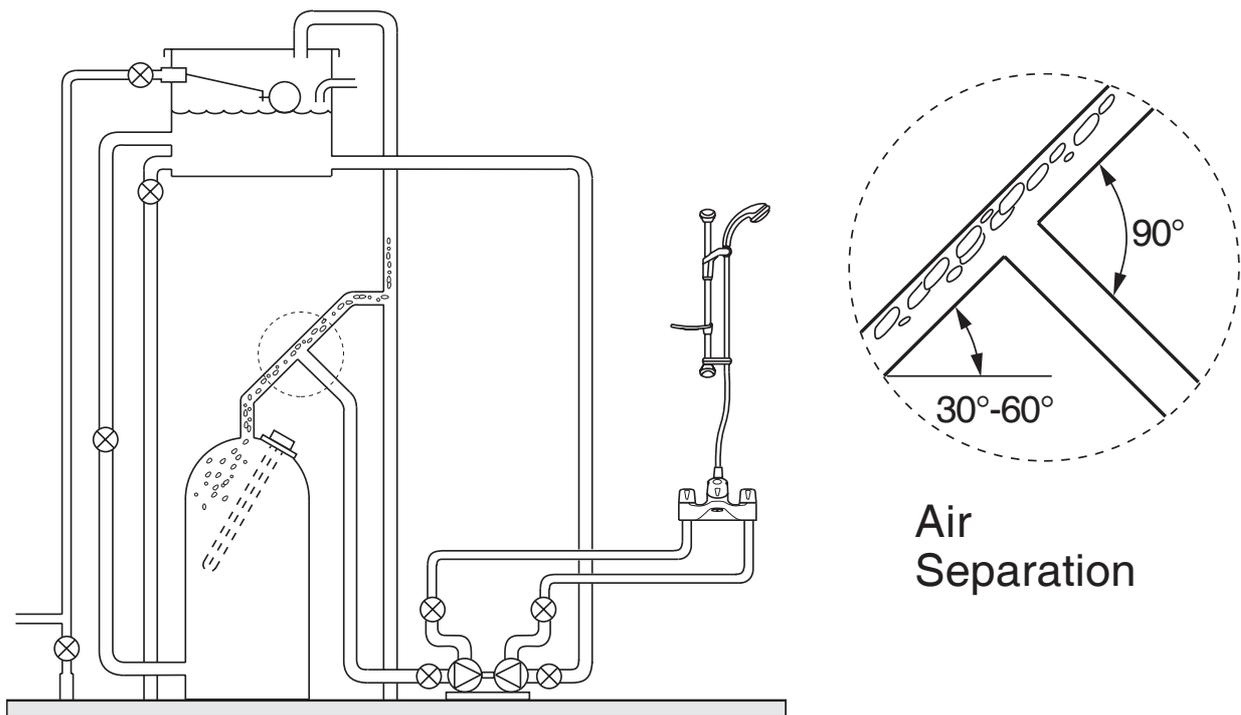
**Unvented Mains Pressure System** - The mixer can be installed with a unvented, stored hot water cylinder. Only “a competent person” as defined by the Building Regulations may fit this type of system.



**Mains Pressurised Instantaneous Hot Water System** - The mixer installed with systems of this type is supplied hot water via a tempering valve, this provides relatively constant hot water and the shower will compensate for temperature changes should they occur.



**Pumped System** - The mixer can be installed with an inlet pump (twin impeller). The pump must be installed on the floor next to the hot water cylinder. Ensure hot cylinder vent pipe is arranged as shown to enable air separation.



# INSTALLATION

## General

1. Installation must be carried out in accordance with these instructions supplied, and must be conducted by a qualified and competent person.
2. Before starting installation, ensure that all site requirements correspond to information given in the **SPECIFICATION** section.
3. **Do not** install product in a position where it could become frozen.
4. Install in a position for easy access for maintenance.
5. Accessible isolating valves **must** be provided for maintenance.
6. The supply pipework **must** be thoroughly flushed to remove any debris before connection.
7. The plumbing installation must comply with the requirements of UK Water Regulations/Bylaws (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:
  - Institute of Plumbing (IOP), throughout the UK.
  - National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales.
  - Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland.
8. No form of outlet flow control should be fitted, only use shower fittings recommended by manufacturer/supplier.

# Regulators

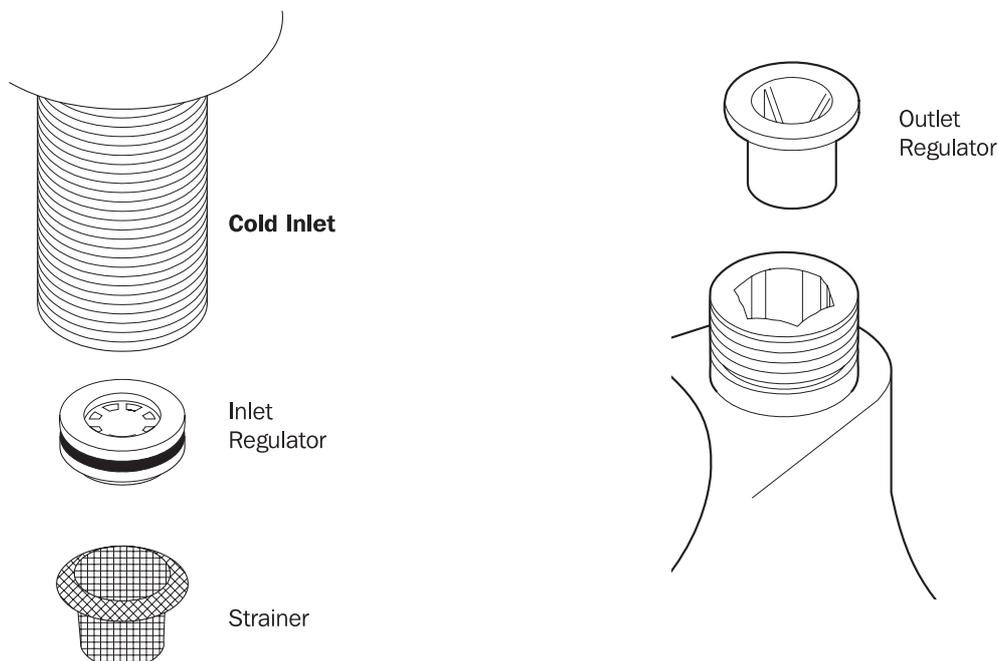
Two flow regulators are supplied with the product. There is a yellow regulator which fits into the cold inlet tail for high pressure systems. There is a white regulator which fits into the shower outlet to limit the maximum flow rate to the shower fitting.

The selection table indicates when and where these can be fitted.

System	Cold Inlet	Outlet
Gravity Fed System	No	No
Gas Water Heated System	Yes	Yes**
Mains Pressurised Instantaneous System	Yes*	Yes**
Unvented Mains Pressure System	Yes*	Yes**
Pumped System	Optional	Optional

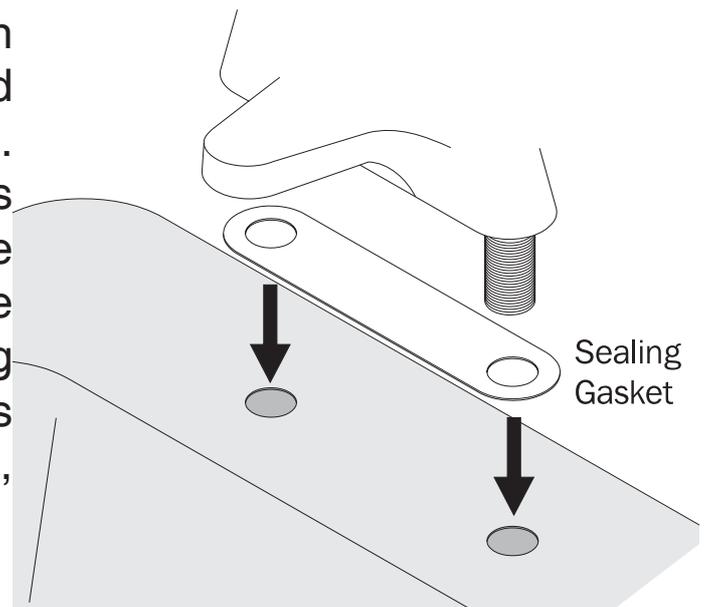
\* Fit only if the cold pressure is **not** under control of a pressure reducing valve and mains cold pressure is above 3 bar.

\*\* Fit only if the force and flow from the shower fitting is too great.



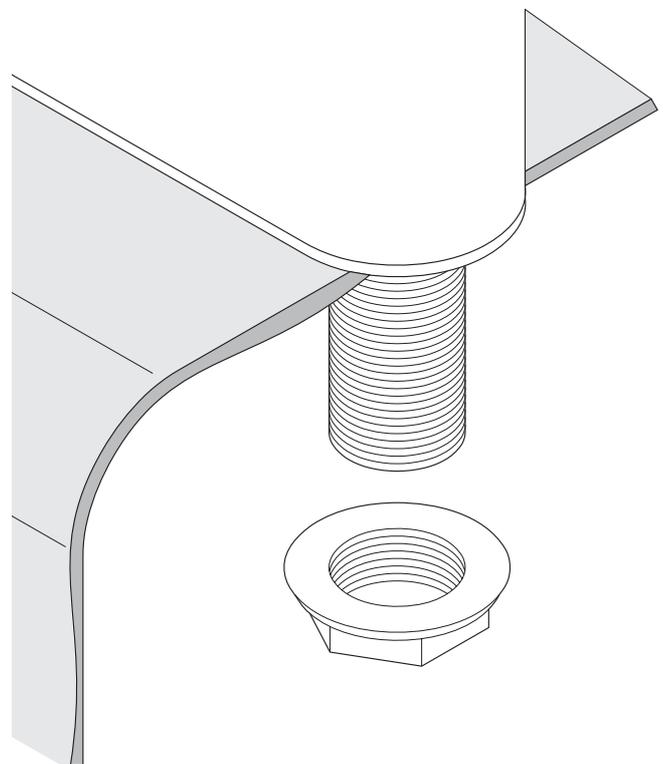
## Fitting To Bath

1. The hot water must always be connected to the hot inlet on the mixer. This is clearly marked on the base of the mixer. Reversing the connections may cause damage to the product and could be dangerous to persons using the shower. The connections when viewed from the front, are:



**Hot - Left      Cold - Right**

2. Thoroughly flush the incoming supplies before making any connections to the mixer.
3. If required fit the cold inlet regulator (see **Regulators**).
4. Insert the two inlet strainers, larger diameter first, and push in until located against the inlet check valves or flow regulator.
5. Fit the sealing gasket to the inlet tail pipes of the mixer and fit to bath.
6. Screw on 3/4" BSP backnuts and tighten.
7. Connect the inlet supplies via 3/4" BSP tap connectors (not supplied).



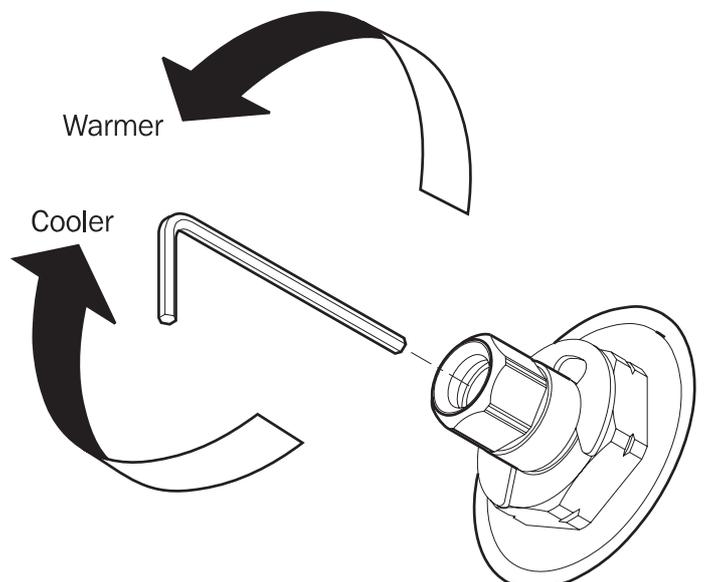
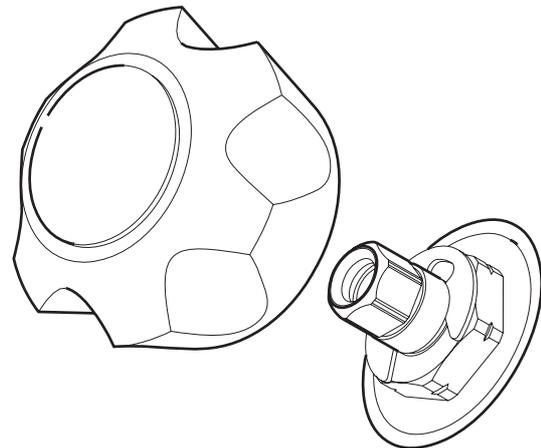
# COMMISSIONING

## Maximum Temperature Setting

The Thermostatic Shower has been preset at approximately 42°C at the factory. Site conditions and personal preference may dictate that the maximum temperature be reset.

Before commencing ensure that the hot water temperature is at least 10°C above the required maximum showering temperature. If adjustment is required, set the maximum temperature as follows:-

1. Turn shower control anticlockwise to maximum temperature setting, let the temperature stabilise.
2. Remove shower control completely.
3. Insert 2.5 mm hexagon key into the centre of valve head.
4. Turn key **anticlockwise** to **increase** the temperature, or **clockwise** to **decrease** temperature.
5. Refit shower control and turn off mixer, remove and refit shower control with brand horizontal.



# OPERATION

## Bath Fill

The two outermost controls operate the central bath fill outlet. The red and blue indicator trim relate to the hot and cold taps, or when viewed from front hot - left cold - right.

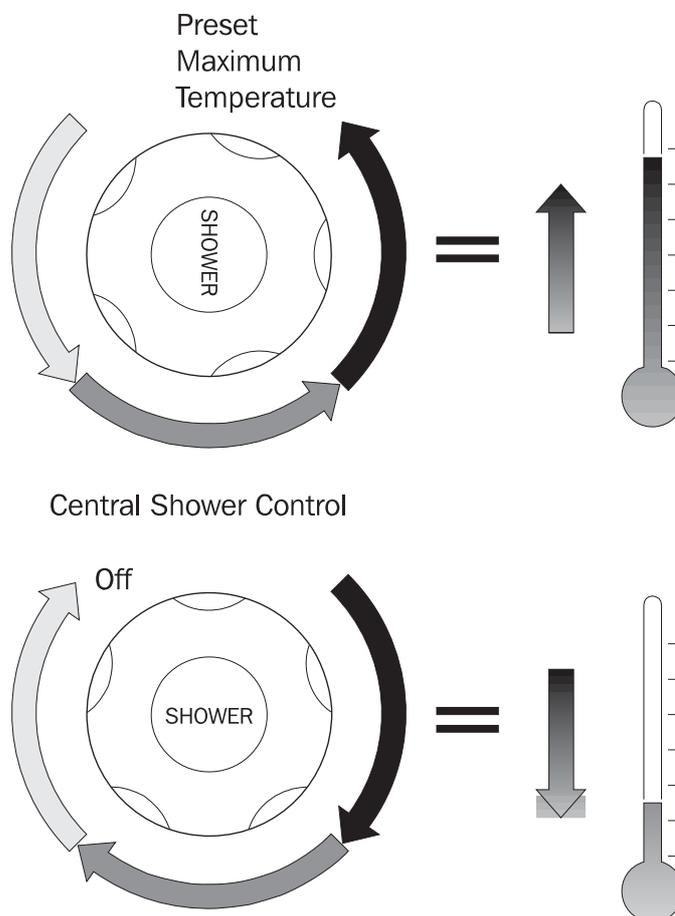
**WARNING!** If the hot tap head is turned on then the bath fill outlet will deliver the temperature set on the hot water system.

## Shower

The central inclined knob operates the shower. Turning on shower control anticlockwise the sequence is:-

**Off → Cold → Warm → Preset maximum temperature**

**Note!** The shower performance may be degraded if other water appliances are operated whilst the shower is in use.



# FAULT FINDING

<b>Symptom</b>	<b>Cause/Rectification</b>
1. Only hot or cold water from mixer outlet.	<ul style="list-style-type: none"> <li>a. Inlet supplies reversed (hot supply to cold supply).</li> <li>b. No hot water reaching mixer.</li> <li>c. Check strainers and inlet/outlet fittings for blockage.</li> <li>d. Installation conditions continuously outside operating parameters: refer to <b>SPECIFICATION</b>, and <b>2.e.</b> below.</li> </ul>
2. Fluctuating or reduced flow rate.	<p>Normal function of the thermostatic control when operating conditions are unsatisfactory;</p> <ul style="list-style-type: none"> <li>a. Check strainers and inlet/outlet fittings for blockage.</li> <li>b. Make sure minimum flow rate is sufficient for supply conditions.</li> <li>c. Make sure the maintained inlet pressures are nominally balanced and sufficient.</li> <li>d. Make sure the inlet temperatures differentials are sufficient.</li> <li>e. (Subsequent to rectification of supply conditions) Check thermostatic performance.</li> <li>f. Flow regulators fitted incorrectly.</li> <li>g. Airlock or partial blockage in pipework.</li> </ul>
3. No flow rate from mixer outlet.	<ul style="list-style-type: none"> <li>a. Check strainers and inlet/outlet fittings for blockage.</li> <li>b. Hot or cold supply failure.</li> </ul>
4. Blend temperature drift.	<p>Indicates operating conditions changed.</p> <ul style="list-style-type: none"> <li>a. Refer to symptom <b>2.</b> above.</li> <li>b. Hot supply temperature fluctuation.</li> <li>c. Supply pressures fluctuating.</li> <li>d. Seal damage or wear. Renew seals.</li> </ul>
5. Maximum blend temperature setting too hot or too cold.	<ul style="list-style-type: none"> <li>a. Indicates incorrect maximum temperature setting; refer to <b>COMMISSIONING</b> section.</li> <li>b. As symptom <b>4.</b> above.</li> </ul>

<b>Symptom</b>	<b>Cause/Rectification</b>
<p><b>6.</b> Water leaking from mixer or shower.</p>	<p>Seal wear or damage.</p> <ul style="list-style-type: none"> <li>a. Obtain Seal Kit, renew all seals.</li> <li>b. Renew shut off head assembly.</li> </ul>
<p><b>7.</b> Flow rate too low or too high.</p>	<ul style="list-style-type: none"> <li>a. (Too low) Refer to symptom <b>2.a-e.</b> above.</li> <li>b. (Too low) Insufficient supply pressures.</li> <li>c. (Too high) Supply pressure too high.</li> <li>d. (Too high) Refer to symptom <b>2.a-e.</b> above.</li> </ul>

# MAINTENANCE

## General

This Product is precision engineered and should give continued safe and controlled performance, provided:

1. It is installed, commissioned, operated and maintained in accordance with manufacturers recommendations, and
2. Annual/biannual attention is given, when necessary, to maintain the product in good functional order.

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

You may, if you wish, choose to engage a service engineer or agent, the terms are outlined on the back page.

## Lubricants

**Important:** Use silicone-only based lubricants. **Do not** use oil based or other lubricant types as rapid deterioration of seals may occur.

Standard silicone-only based lubricants may be used on static seals (e.g. ROCOL MX22™) and threads (e.g. ROCOL MX66™) to assist refitting.

## Cleaning

**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 using a mild washing up detergent or soap solution, rinsed and then wiped dry with a soft cloth.

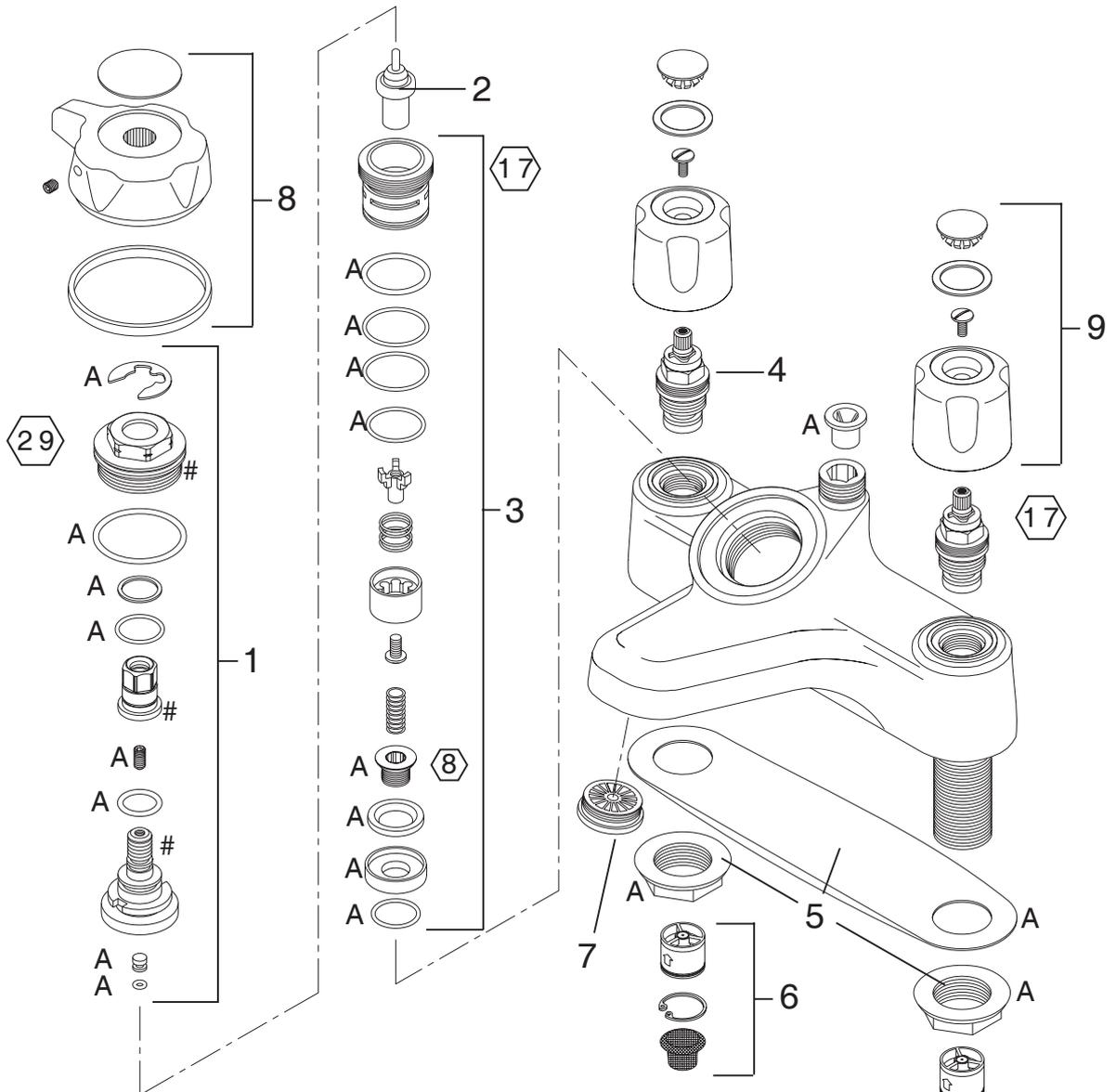
# NOTES



# SPARE PARTS

## Bonus Bath & Thermostatic Shower Mixer

1	122 66	Head Assembly
2	122 70	Element
3	122 67	Sleeve Assembly
4	423 05	Tap Headwork (pair)
5	423 02	Backnuts and Gasket
6	423 04	Checkvalve and Strainer (pair)
7	423 03	Water Separator
8	423 14	Shower Knob
9	423 07	Tap Handle (Pair)
A	423 01	Seal Kit



# Denotes **Left Hand Thread** - Turn **clockwise** to remove

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

# CUSTOMER SERVICE

## Guarantee

This product is guaranteed against both faulty materials and manufacturing process for a period of one year from date of purchase, provided that the product has been installed correctly and used in accordance with the instructions in this manual.

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.

Routine cleaning and maintenance should be carried out in accordance with instructions supplied.

The product should not be modified or dismantled except by a person authorised by Kohler Mira Ltd. Your statutory rights are not affected by this guarantee.

## Customer Service Policy

If within the guarantee period the product does not function correctly, first check the fault finding analysis in the manual to see if the difficulty can be resolved.

Failing this, please contact your installer to check that the product has been installed and commissioned in accordance with this manual.

If the fault can not be resolved, please contact the Customer Service Department who will try to assist, or will arrange a local Service Engineer or Agent to call and arrange a visit.

Within the guarantee period there will be no charge for parts or labour if the fault concerned is due to the product. However, the guarantee does not cover difficulties due to incorrect installation or misuse.

During the service visit yourself or a responsible person should be present at all times. If the Service Engineer or Agent can not gain access at the prearranged time a callout charge may be made.

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

## Spare Parts

Functional spare parts are available for your products maintenance. Items can be identified from spares drawing inside manual, please contact Customer Service to confirm spare and details of a spares stockist for your area. Your product serial number or date mark (if available) may be useful to identify parts .

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