

# ***mira***

## *Realm*

### 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 installation must be carried out by a competent installer.
- 2.6. The plumbing installation must comply with the requirements of UK Water Regulations/Bye-laws (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:
  - 2.6.1. Institute of Plumbing (IOP), throughout the UK.
  - 2.6.2. National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales.
  - 2.6.3. Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland.
- 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.

Thank you for purchasing a quality Mira product. To exploit the full potential of your new shower, please take time to read this guide thoroughly, having done so, keep it handy for future reference.

The Mira Realm is a single point 1/2" thermostatic shower mixer incorporating a wax capsule thermostat to ensure constant showering temperatures. The single sequential control eliminates the possibility of hot water being delivered when initially turning on the shower control.

The Mira Realm Thermostatic 1/2" Shower Control comes complete with integral flow regulators which increase the capability of the shower control to cope with pressure imbalances when used in conjunction with combination boilers and multi-point gas water heaters of the modulating type.

The Mira Realm Thermostatic 1/2" Shower Control is guaranteed against any defect of materials or workmanship for one year from the date of purchase.

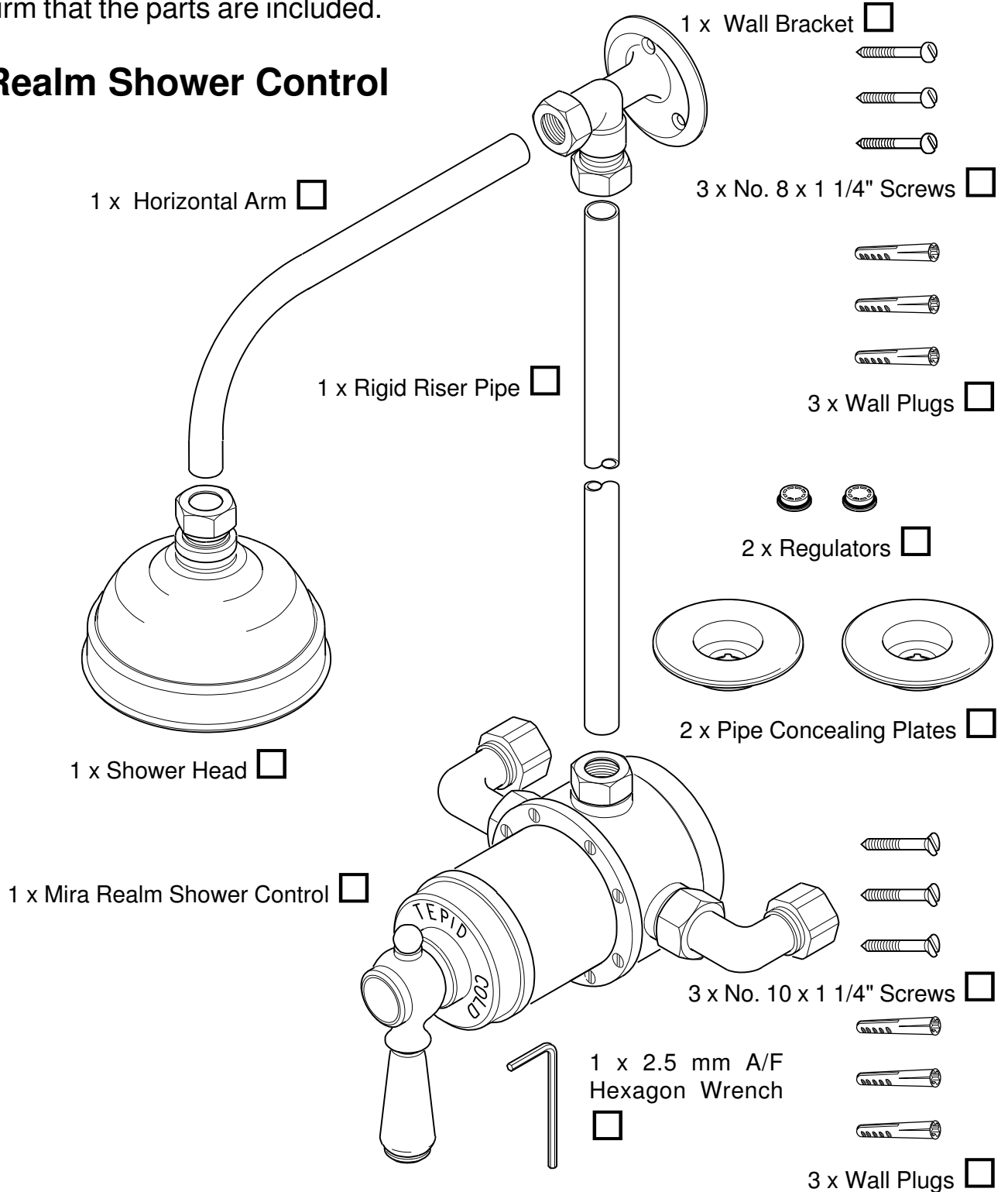
**Mira Realm** Surface mounted shower control for connection to exposed pipework. A rigid riser pipe, shower head and wall brackets are supplied. Chrome and light golden models are available.

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 Mira Showers. Our telephone and fax numbers can be found on the back cover of this guide.

# Pack Contents Checklist

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

## 1. Realm Shower Control



## 2. Documentation

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

## 1. Pressure range

- 1.1. Minimum operating pressure (Gas Water Heater) **1.0 bar**.
- 1.2. Minimum operating pressure (Gravity Feed) **0.1 bar**.
- 1.3. Maximum maintained pressure **3.0 bar**.
- 1.4. Maximum static pressure **10.0 bar**.
- 1.5. Maximum pressure loss ratio **5:1**.

## 2. Temperature control

- 2.1. Single sequential lever allows the temperature selected to range from the cold water supply temperature through to a pre-set maximum.
- 2.2. The maximum blend temperature is factory set at **42 °C**. This can be reset according to site requirements.
- 2.3. Accurate maximum blend temperatures can be set using typical inlet supply temperatures:- Cold **10 - 15 °C**, Hot **60 - 65 °C**.
- 2.4. The inlet water temperature should be at least **10 °C** above the required blend temperature to ensure correct shower performance.
- 2.5. Maximum hot water inlet supply temperature **82 °C**.

**Note!** The shower control can accept temporary temperature excursions above **82 °C** without damage, however operation at such elevated supply temperatures is not recommended. For reasons of general safety, hot water storage temperatures should ideally be maintained at between **60-65 °C** where serving ablutionary applications.

## 3. Plumbing Connections

The shower control connections are all 15mm compression (nuts and olives are provided).

Hot and Cold inlets are clearly marked for the shower control and **must** be connected as described in the **Installation** section.

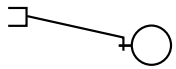
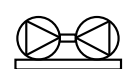


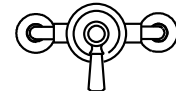





## 1. General

Read the section "**Important Safety Information**" first.

- 1.1. Supply pipework **MUST** be flushed to clear debris before connecting the shower control.
- 1.2. **Do not** fit any form of flow control in the outlet pipework.
- 1.3. **Do not** install the product in a position where it could become frozen.
- 1.4. Layout and sizing of pipework must be such that when other services are used, pressures at the shower control do not fall below the recommended minimum, or outside the **5:1** pressure loss ratio.
- 1.5. Conveniently situated isolating valves **MUST** be fitted for servicing purposes.
- 1.6. If the shower control is to be used with a multipoint water heater, combination boiler, thermal store or unvented system an expansion vessel must be fitted to accommodate the expansion of water in the domestic hot water supply (this may already be part of the system, check with the appliance manufacturer).
- 1.7. **Do not** use excessive force when making connections.
- 1.8. **Do not** install the shower control in a position that restricts service access.

## 2. Typical suitable installations

### Key to symbols

	Float operated valve		Twin impeller inlet pump
	Stop or servicing valve		Single impeller outlet pump
	Shower control		Tempering valve
	Warning or overflow pipe		Mini expansion vessel
	Drop tight pressure reducing valve (PRV)		Non-return Valve

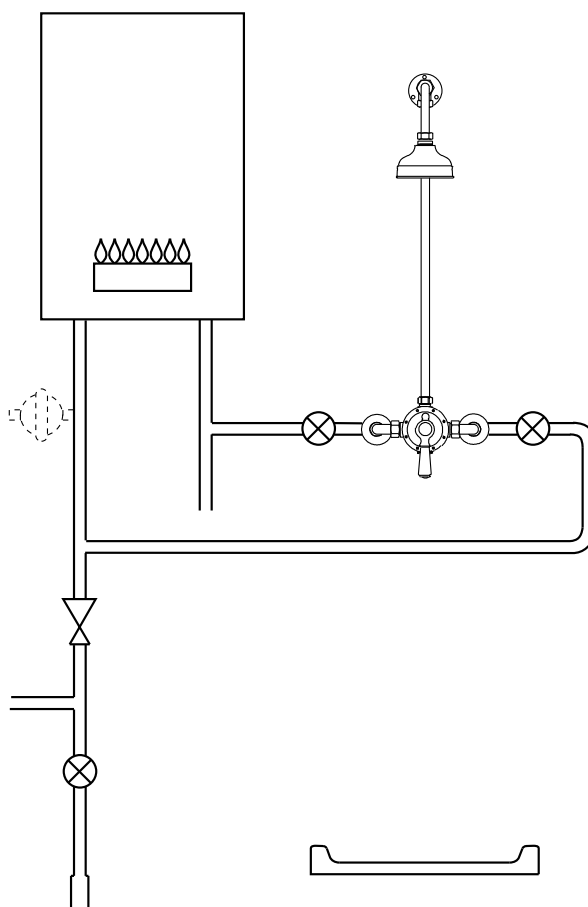
**2.1. Instantaneous gas-heated showers (e.g. combination boilers) -** The shower **MUST** be installed with a multipoint gas water heater or combination boiler of a **fully modulating design** (i.e. where the water draw-off rate indirectly controls the gas flow rate to the burner).

A drop tight pressure reducing valve (PRV) **MUST** be fitted if the supply pressures exceed 3 bar maintained.

An expansion vessel **MUST** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve, PRV. This will ensure that excess expansion or pulse pressures do not damage the product or the plumbing system. The expansion vessel may already be fitted within the boiler (check with the manufacturer) and is in addition to the normally larger central heating expansion vessel.

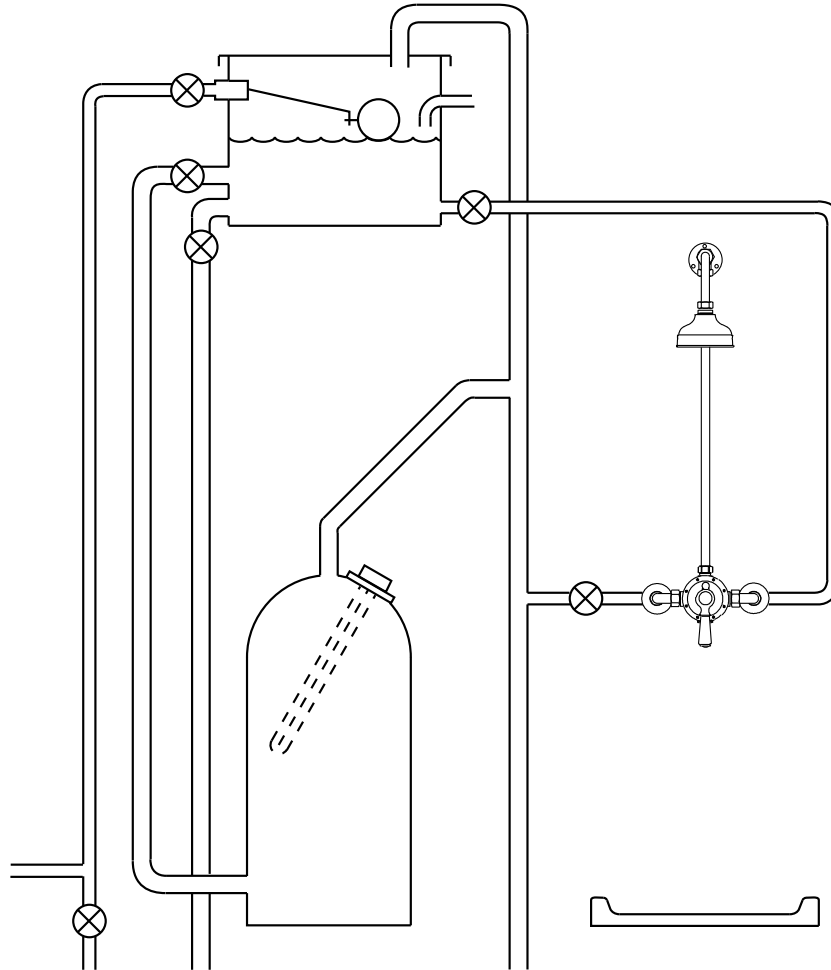
The layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved **AND** the effects of other draw-offs are minimized.

The hot supply temperature **MUST** be at least **10 °C** hotter than the required blend temperature for optimum performance.





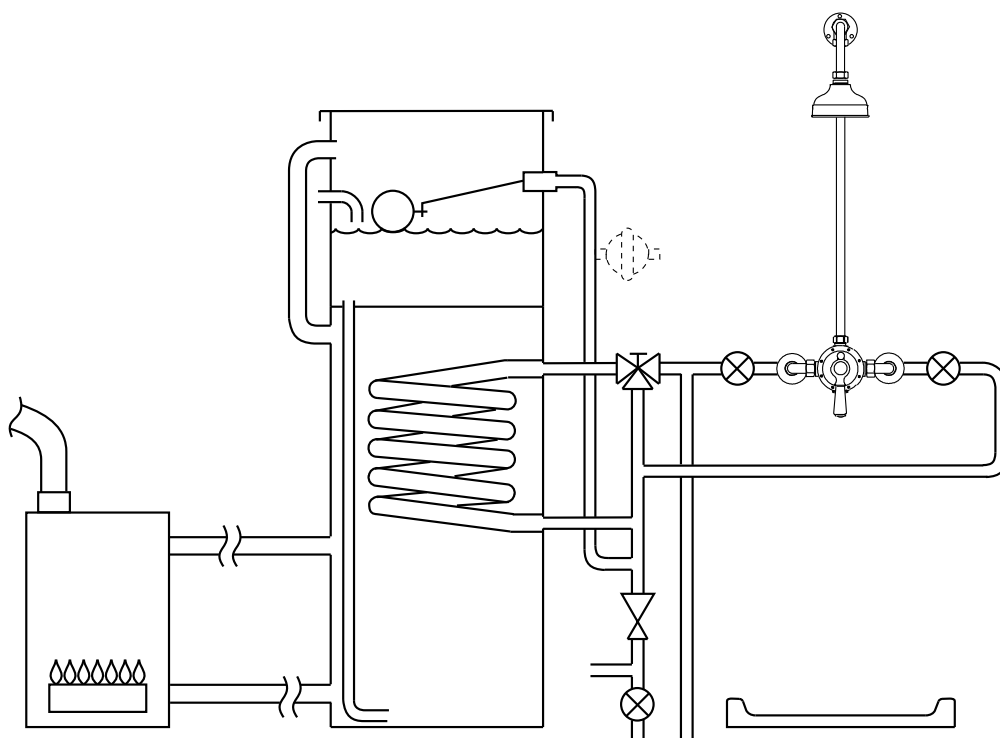
2.2. **Gravity fed showers** - The shower control **MUST** be fed from a **cold water storage cistern** and **hot water cylinder** providing nominally equal pressure.



**2.3. Mains pressurised instantaneous hot water shower, heated from a thermal store** - Packages of this type, fitted with a tempering valve can be used with the Mira Realm. A drop tight pressure reducing valve **MUST** be fitted if the supply pressures exceed 3 bar maintained.

An expansion vessel **MUST** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve, PRV. This will ensure that excess expansion or pulse pressures do not damage the product or the plumbing system. The expansion vessel may already be fitted externally or internally within the thermal store (check with thermal store manufacturer).

The layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved **AND** the effects of other draw-offs are minimized.

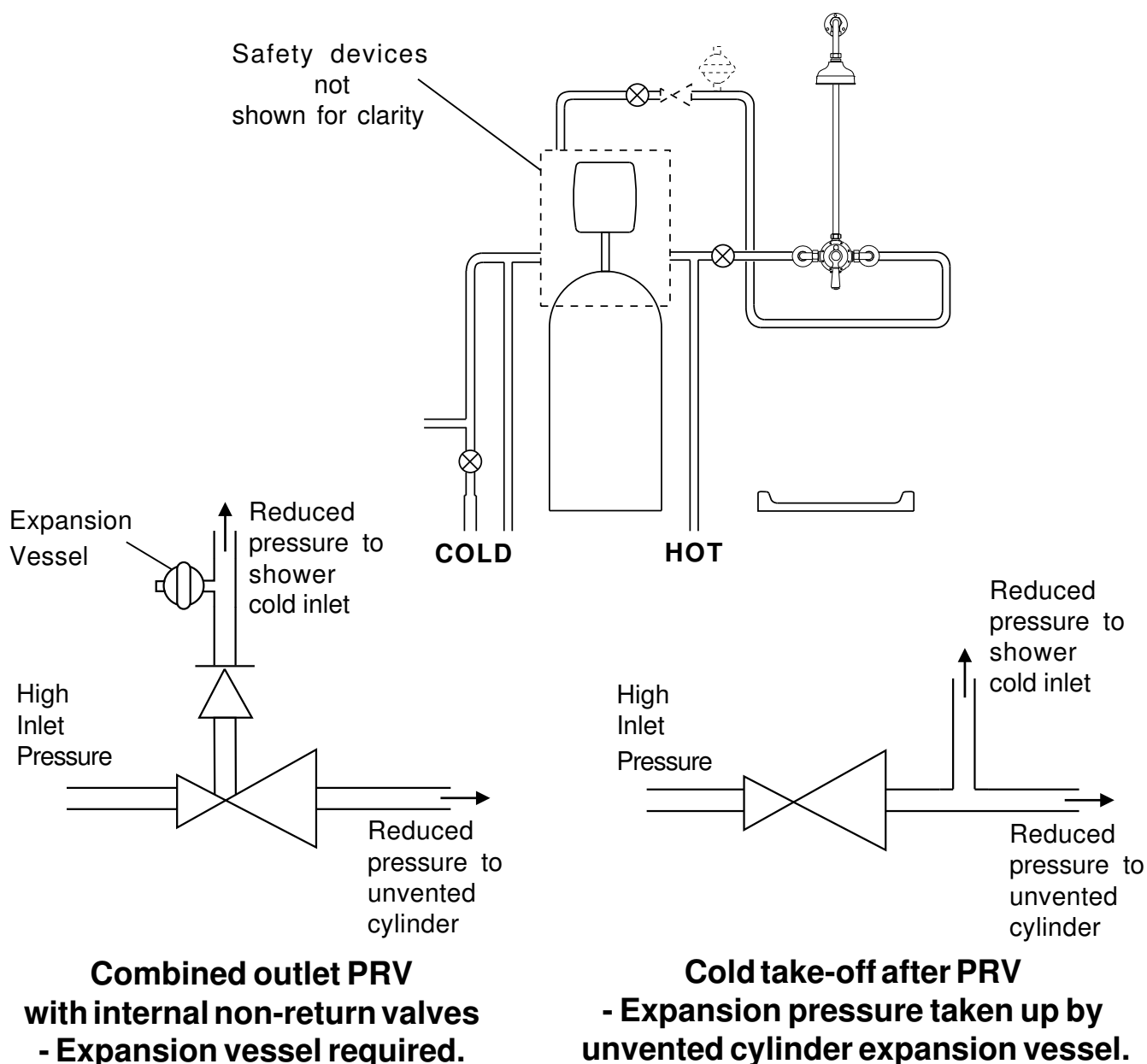


**2.4. Unvented mains pressure showers** - The shower can be installed with an unvented, stored hot water cylinder. Only a "competent person" as defined by the Building Regulations may fit this type of system.

For packages with no cold water take off after the appliance reducing valve, it will be necessary to fit an additional drop tight pressure reducing valve when the mains pressure is over 3 bar. The drop tight pressure reducing valve must be set at the same value as the unvented package pressure reducing valve.

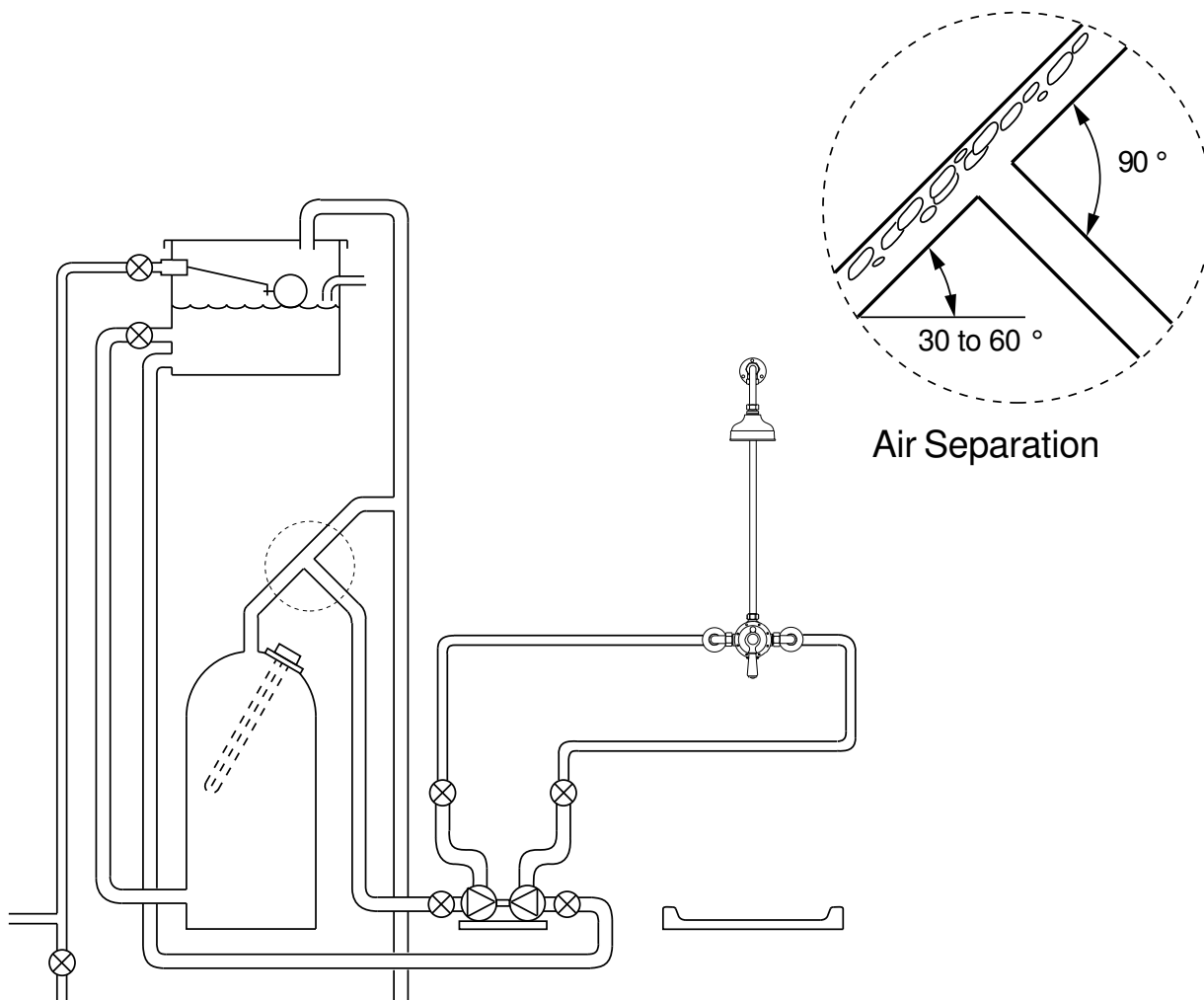
**Note!** An expansion vessel **MUST** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve, PRV. This will ensure that excess expansion or pulse pressures do not damage the product or the plumbing system.

The layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved **AND** the effects of other draw-offs are minimized.



**2.5. Pumped showers (inlet pumps)** - The shower can be installed with an inlet pump (twin impeller). The pump **MUST** be located on the floor next the hot water cylinder. The hot water cylinder/vent pipes must be arranged as shown to achieve air separation.

The layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved **AND** the effects of other draw-offs are minimized.

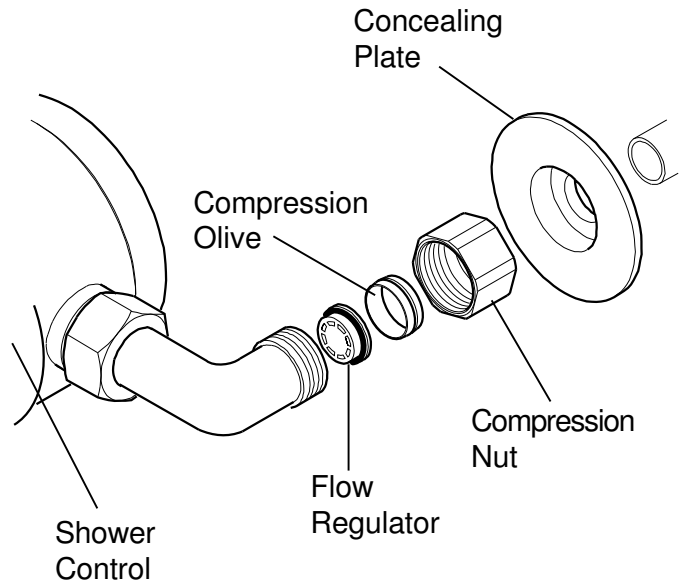


## 1. General

Read the section **Installation Requirements** first.

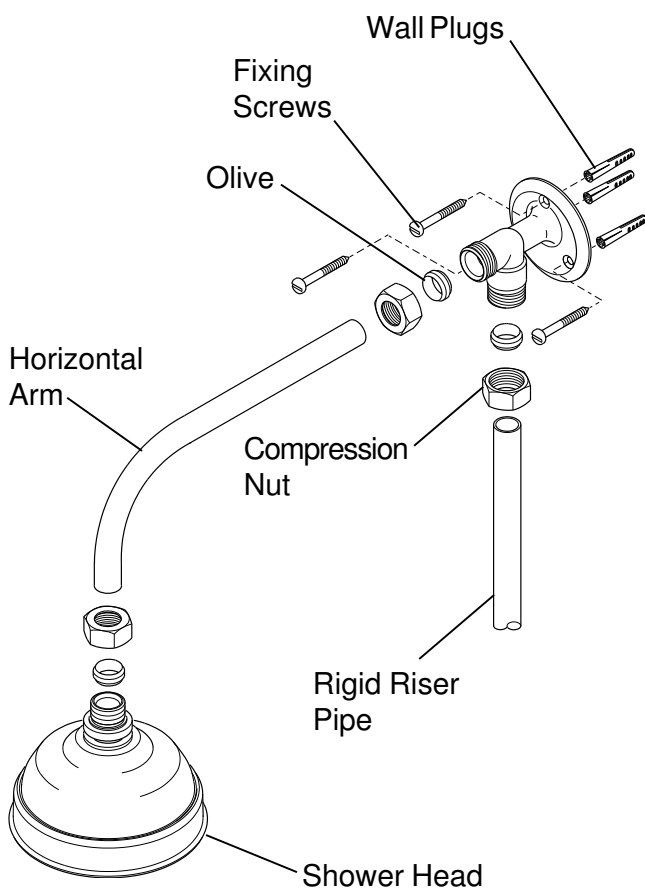
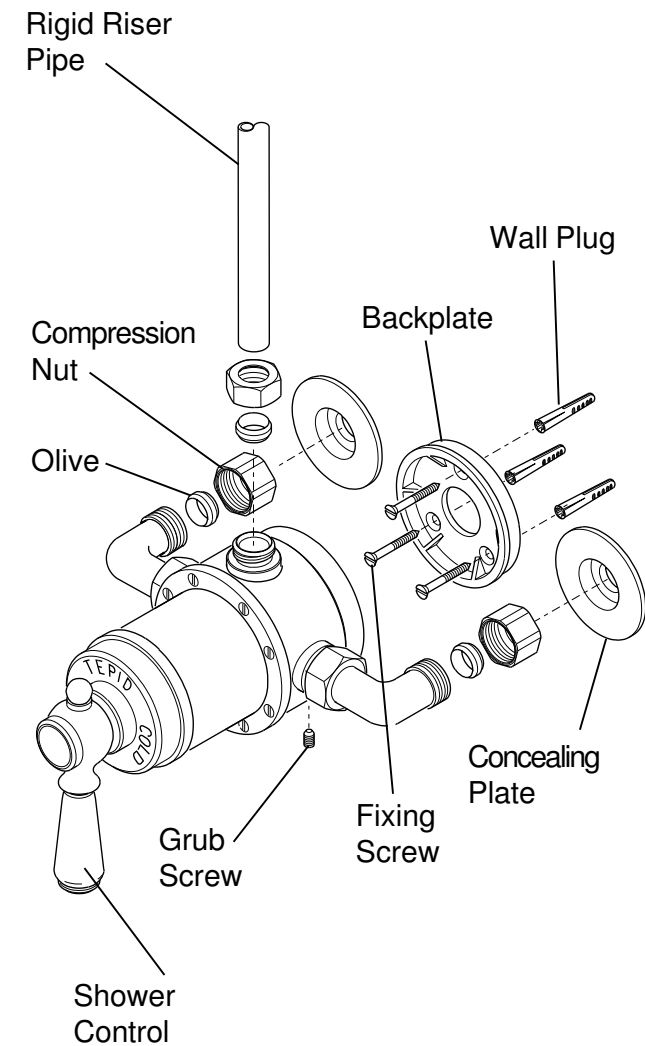
**Important!** Two flow regulators (grey housing with black insert) are supplied with this product. By fitting these in the inlet elbows of the shower control (see diagram) this product can be used with high pressure systems. The regulator is fitted into the inlet elbow of the shower control. Put the smaller diameter in first and push until the flange locates up against the internal shoulder.

**Important!** If they are to be retro-fitted the inlet pipe will need to be shortened by the thickness of the regulator flange to prevent damage.



System	Diagram Reference Section 5	Regulators	
		Hot	Cold
Unvented mains pressure showers.	2.4.	* ✓	✓
Mains pressurised instantaneous hot water, heated from thermal store, showers.	2.3.	* ✓	✓
Gas heated showers up to 30kW output.	2.2.		✓
Gas heated showers above 30kW output.	2.2.	* ✓	✓
Gravity fed showers	2.1.		
Pumped showers	2.5.	Optional	

**Note!** \* As there is no separate flow control, the regulators provide the most satisfactory performance. The fitting of the hot regulator is optional and will determine the strength of the spray from the shower head.



- 1.1. The hot water service must always be connected to the inlet marked "HOT" in the base of the shower control body.
- 1.2. The inlet elbows can be swivelled to accept rising, falling or back entry supplies, or any combination of two.
- 1.3. In choosing the position for the shower control ensure that the fixed shower head will be at a suitable height for the application, and that there is sufficient vertical distance between the fixed shower head and the base of the cold cistern to produce an acceptable shower.
- 1.4. Flush the incoming hot and cold water supplies before connection of the shower control .
- 1.5. Use the 2.5 mm A/F hexagon wrench (supplied) to loosen the grub screw and separate the backplate from the shower control.
- 1.6. Fix the backplate to the wall with the supplied fittings if appropriate.
- 1.7. Fit the shower control to the backplate, align the shower control body as necessary and tighten grub screw.
- 1.8. Connect the hot and cold water supplies to the shower control 15mm compression fittings.

**Note!** Care must be taken when tightening compression nuts so that you do not damage the plated surfaces.

- 1.9.** Temporarily fit the rigid riser pipe and horizontal arm and wall bracket to the shower control outlet and mark the position of the wall bracket. Use a spirit level to ensure the pipe is vertical.

Note that the horizontal arm can be shortened if required. De-burr the pipe ends before making the final connection.

- 1.10.** Fix the wall bracket, rigid riser pipe and hand-tighten the three compression fittings on the shower control outlet and horizontal arm. Apply a further  $\frac{3}{4}$  to  $1 \frac{1}{4}$  turns to each compression nut, with a spanner, to effect a seal.

**Note!** Care must be taken when tightening compression nuts so that you do not damage the plated surfaces.

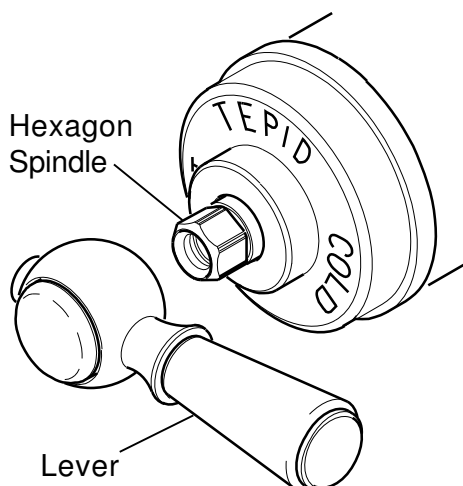
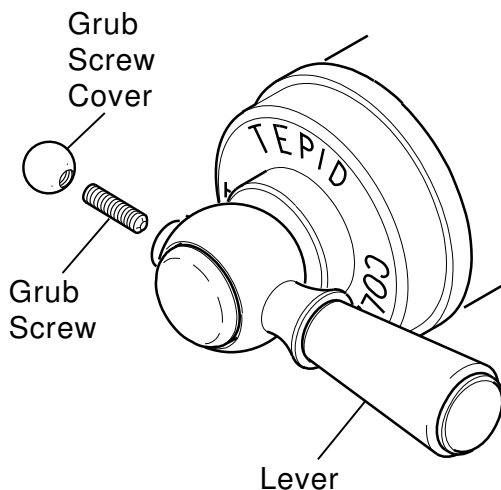
- 1.11.** Thoroughly flush the outlet pipework before connecting the shower head. Slide the compression nut over the horizontal arm and make the connection to the shower head.

## 1. Maximum temperature setting

This thermostatic shower control has been fully performance tested and the maximum temperature has been pre-set 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.

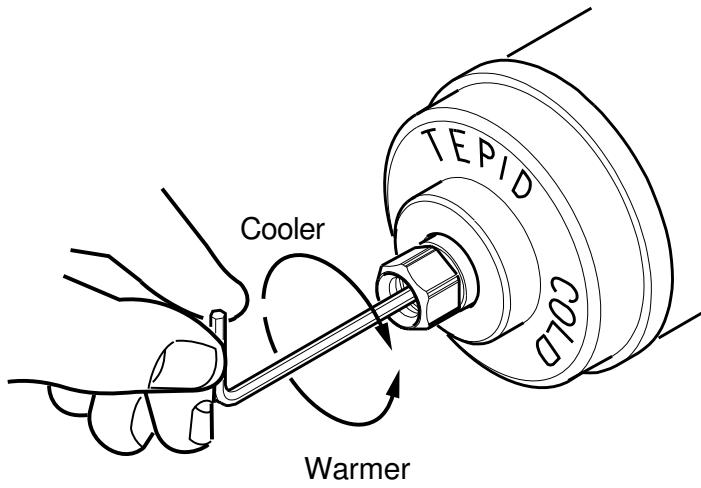
To reset the maximum temperature ensure that an adequate supply of hot water is available at a temperature at least **10°C** in excess of that required from the shower control. Turn the lever fully anti-clockwise then check the temperature at the discharge point, (allowing sufficient time for hot water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

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



- 1.1.** Before making any adjustments ensure that upon installation the correct flow regulators have been fitted. Refer to the section **Installation**.
- 1.2.** Turn the lever fully anti-clockwise to the hot position.
- 1.3.** Carefully unscrew the grub screw cover and remove.
- 1.4.** Use the 2.5 mm A/F hexagon wrench (supplied) to loosen the grubscrew.
- 1.5.** Remove the lever housing from the hexagon spindle.





**1.6.** Locate the 2.5 mm A/F hexagon wrench (supplied) in the grub screw.

**1.7.** Adjust as follows:  
Warmer - Turn anti-clockwise  
Cooler - Turn clockwise.

**1.8.** Refit the lever assembly in reverse order and turn the shower control off.

## 1. Realm

This thermostatic shower control has a single sequential lever. The shower control is turned **on** by turning the control lever **anti-clockwise**. The shower control is turned **off** by turning the control lever **clockwise**. When the control lever is turned on (anti-clockwise) the sequence is:

**Cold water → Warm water → Pre-set maximum temperature.**

A fuller description is as follows:-

Initial anti-clockwise movement turns the water on at full flow of cold water, further anti-clockwise 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 heater appliance. Flow rates for gas water heaters and combination boilers can vary typically between 8 L/min (winter) and 15 L/min (summer).

### **WARNING!**

For safety reasons this product incorporates a maximum temperature setting. This setting must be checked and adjusted as necessary to suit both site conditions and user's comfort. Refer to the section **Commissioning:" Maximum temperature setting"** for further details.

## 1. Fault diagnosis

Read the section "**Important Safety Information**" first.

Providing the shower control has been correctly installed and is operated in accordance with the instructions contained in this guide, difficulties should not arise. If any maintenance is required then it must be carried out by a competent tradesperson for whom the fault diagnosis chart and maintenance instructions are provided. Before replacing any parts ensure that the underlying cause of the malfunction has been resolved.

Shower controls are mechanical devices and should be serviced annually depending on the water conditions. Areas of the country which 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.

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.

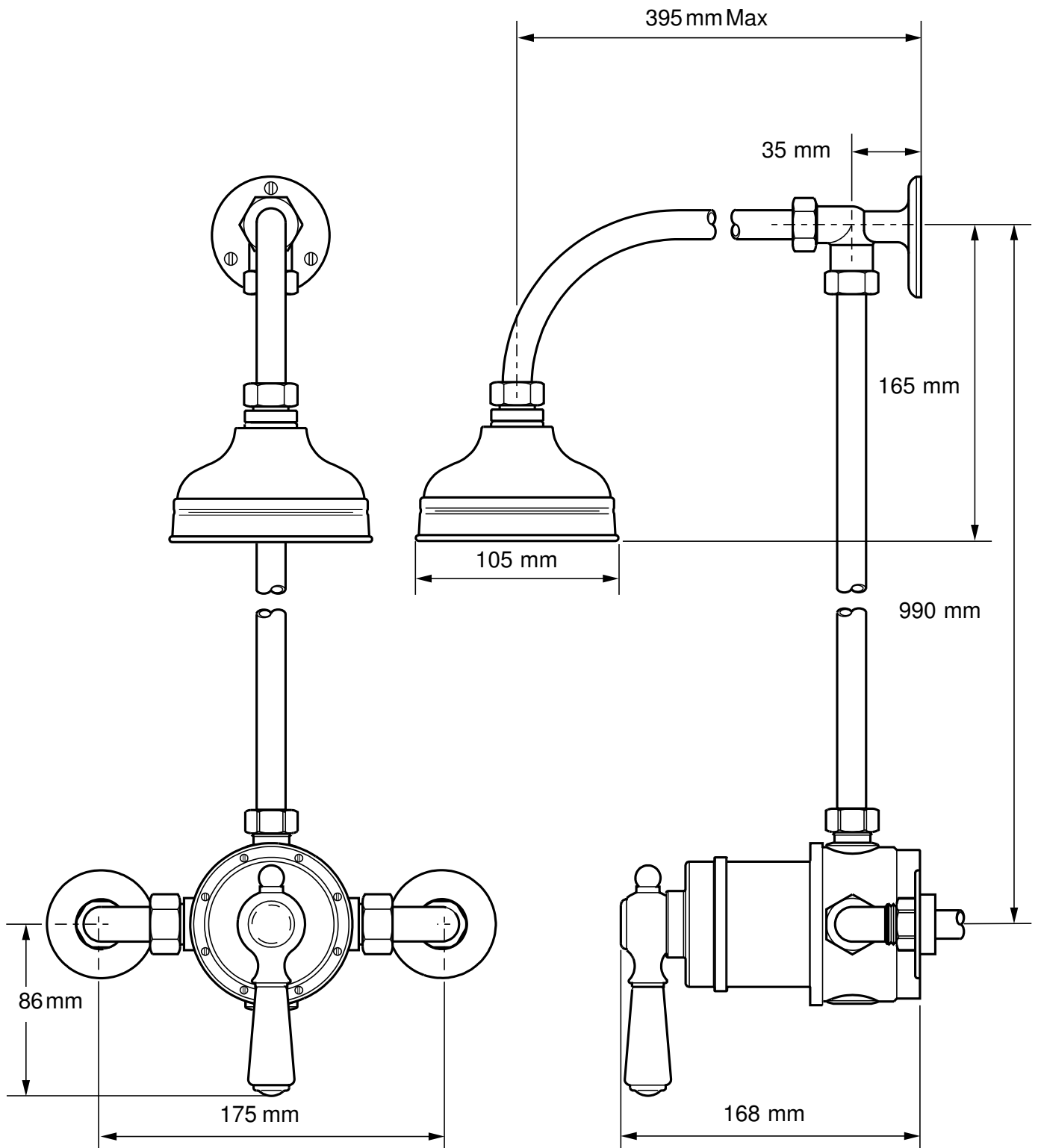
Malfunction	Cause	Remedy
Incorrect temperature at outlet.	<p>Insufficient hot water.</p> <p>Flow regulators fitted incorrectly.</p> <p>Maximum temperature incorrectly set.</p> <p>If it is not possible to set maximum temperature, flow regulators may be incorrectly fitted.</p>	<p>Check temperature setting of hot water system shower control. (60 °C - 65 °C)</p> <p>Refer to <b>installation selection chart</b> and check shower control.</p> <p>Refer to <b>Commissioning: "Maximum temperature setting"</b> and action.</p> <p>Refer to installation selection chart and check shower control.</p>

<b>Malfunction</b>	<b>Cause</b>	<b>Remedy</b>
Flow of water too fast.	Flow regulators fitted incorrectly or not fitted.	Refer to <b>installation selection chart</b> and check shower control.
Very low flow of water.	Flow regulators fitted when not required.  Isolating valves not fully open.  Airlock or partially blocked pipework.  Blocked shower head.	Refer to installation selection chart and check shower control.  Open isolating valves.  Flush system and if appropriate fit float type automatic air vent. Remove and clean.
Outlet temperature either too hot or all cold when turned fully on.  Shower control cannot be shut off.  Blend temperature unstable.	Hot and cold supplies have been connected in reverse.  Pipework not flushed before connecting the shower control.  Spray plate in shower head blocked.	Check connections and if necessary remove shower control and turn over and change outlet fitting and blanking plug.  Clean shower control and if if necessary fit new seals. Refer to the section <b>Spare Parts</b> .  Descale.
	Flow regulators fitted incorrectly.  Isolating valve partially closed.	Refer to <b>installation selection chart</b> and check shower control.  Open fully.

## 2. Cleaning

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

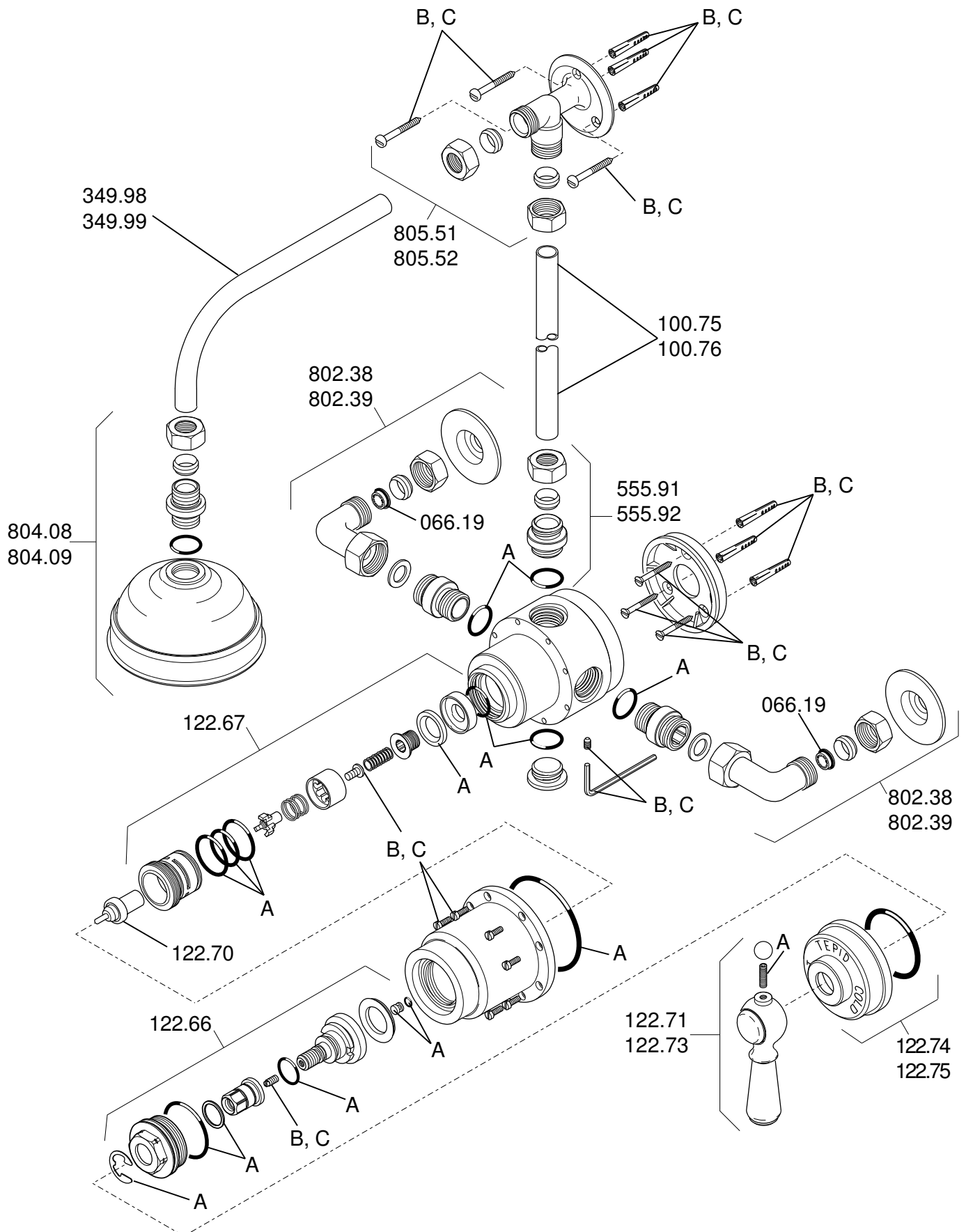
## 1. Realm



## 1. Realm spare parts list

066.19	Regulator Set
100.75	Rigid Riser Set - chrome
100.76	Rigid Riser Set - light golden
122.66	Head Assembly
122.67	Sleeve Assembly
122.68	Seal Pack - components identified 'A'
122.69	Component Pack - light golden - components identified 'B'
122.70	Thermostat
122.71	Lever Assembly - chrome
122.72	Component Pack - chrome - components identified 'C'
122.73	Lever Assembly - light golden
122.74	Indicator Trim - chrome
122.75	Indicator Trim - light golden
349.98	Shower Arm Set - chrome
349.99	Shower Arm Set - light golden
555.91	Outlet Connector Set - chrome
555.92	Outlet Connector Set - light golden
802.38	Elbow Set - chrome
802.39	Elbow Set - light golden
804.08	Rose Set - chrome
804.09	Rose Set - light golden
805.51	Bracket Set, Shower Arm - chrome
805.52	Bracket Set, Shower Arm - light golden

## 2. Realm spare parts diagram



# Customer Service

## Guarantee of Quality

Mira Showers guarantee products against any defect of materials or workmanship for one year from the date of purchase.

**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**

## After Sales Service

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 Access 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, Access or a cheque supported by a banker's card.

### To contact us:

England, Scotland & Wales

#### Mira Showers Customer Services

Telephone: 01242 262888

8.30am to 5pm Working days (4.30pm Fri)

8.30 am to 12.30pm Saturday

E-mail: [Mira\\_technical@mirashowers.com](mailto: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

Post: Otter House

Naas Road

Clondalkin

Dublin 22

## Mira Showers

Kohler Mira Ltd  
Cromwell Road,  
Cheltenham GL52 5EP.

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

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



BS EN ISO 9001 : 1994  
Reg. No. FM 14648

**mira**  
SHOWERS