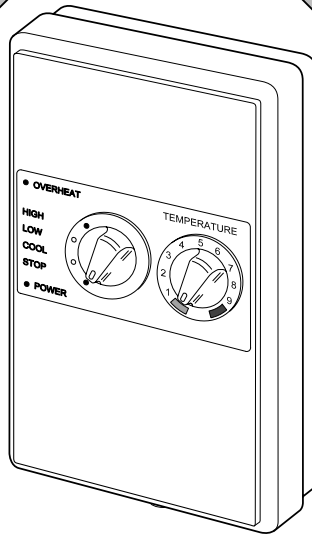


mira
elite



PUMPED ELECTRIC

SHOWER

Installation

Operation &

Maintenance Guide

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

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 Back cover

1. Caution!

- 1.1. Read all of these instructions.
- 1.2. Retain this guide for later use.
- 1.3. Pass on this guide in the event of change of ownership of the installation site.
- 1.4. Follow all warnings, cautions and instructions contained in this guide.
- 1.5. Follow all warnings, cautions and instructions contained on or inside the appliance.
- 1.6. The electrical installation must comply with BS 7671 "Requirements for Electrical Installations" commonly referred to as the IEE Wiring Regulations, or any particular regulations and practices, specified by the local electricity supply company. The installation should be carried out by an electrician or contractor who is registered, or is a member of, an association such as:
 - 1.6.1. National Inspection Council for Electrical Installation and Contracting (NICEIC), throughout the UK, Tel: 0171 582 7746.
 - 1.6.2. The Electrical Contractors Association (ECA), England and Wales, Tel: 0171 229 1266.
 - 1.6.3. The Electrical Contractors Association of Scotland (ECAS), Tel: 0131 445 5577.
- 1.7. The plumbing installation must comply with Water Supply By-laws, 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:
 - 1.7.1. Institute of Plumbing (IOP), throughout the UK, Tel: 01708 472791.
 - 1.7.2. National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales, Tel: 01203 470626.
 - 1.7.3. Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland, Tel: 0131 225 2255.
- 1.8. 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.
- 1.9. When this appliance 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.

2. WARNING!

- 2.1. 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.
- 2.2. THIS APPLIANCE **MUST** BE EARTHED.
- 2.3. In accordance with 'The Plugs and Sockets etc. (Safety) Regulations 1994', this appliance is intended to be permanently connected to the fixed electrical wiring of the mains system.
- 2.4. **DO NOT** connect this appliance to a mains-fed water supply. Such a connection will damage the appliance, and is not covered under the manufacturer's guarantee.
- 2.5. **DO NOT** connect a **230 Volt** version to a **240 Volt** supply.
- 2.6. **DO NOT** twist the individual cable cores of the live and neutral conductors, as this will prevent them from entering the terminal block.
- 2.7. Make sure that any pipework that could become frozen is properly insulated (Bye-law 49).
- 2.8. **DO NOT** operate this appliance if it is frozen. Allow the appliance to thaw. If water is emitted from either of the pressure relief valves, maintenance will be required before the appliance can be safely used.
- 2.9. **DO NOT** allow the appliance to be run dry.
- 2.10. **DO NOT** fit any form of outlet flow control as the outlet acts as a vent for the heater tank. Only Mira recommended outlet fittings should be used.
- 2.11. There are no user serviceable components beneath the cover of the appliance. Only a competent tradesperson should remove the cover.
- 2.12. If any of the following conditions occur, isolate the electricity and water supplies and refer to "**How to contact us**", on the back page of this guide.
 - 2.12.1. If the cover is not correctly fitted and water has entered the appliance's case.
 - 2.12.2. If the case is damaged.
 - 2.12.3. If the appliance begins to make an odd noise, smell or smoke.
 - 2.12.4. If the appliance shows signs of a distinct change in performance, indicating a need for maintenance.
 - 2.12.5. If the appliance is frozen.
- 2.13. Isolate the electrical and water supply before removing the cover.
- 2.14. Mains connections are exposed when the cover is removed.

- 2.15.** Moving parts are exposed when the cover is removed.
- 2.16.** Refer to the wiring diagram before making any electrical connections.
- 2.17.** Ensure all electrical connections are tight, to prevent overheating.

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 Elite 8.5 is a high performance tank-fed (cistern-fed) pumped electric shower for use where the mains water supply pressure is too low, unreliable or non-existent, to operate a conventional electric shower.

The Mira Elite 8.5 (the appliance) features an internal pump unit which has been designed to provide all year round performance, even at the highest flow rates which occur during the summer months. The appliance has separate controls for power selection and temperature/flow adjustment. For optimum performance the appliance must have its own separate cold water supply from the cistern.

Appliances covered by this guide:

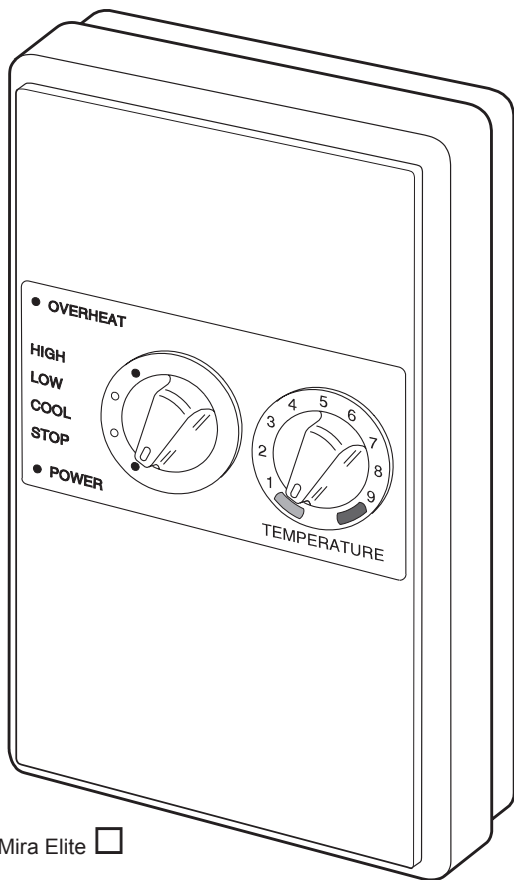
Mira Elite 8.5 kW 230 Volts white/chrome finish

Mira Elite 8.5 kW 240 Volts white/chrome finish

If you experience any difficulty with the installation or operation of your new Mira Elite, then please refer to the back cover of this guide for Caradon Mira contact telephone and fax numbers.

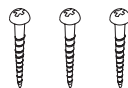
☒ Tick the appropriate boxes to familiarize yourself with the part names and to confirm that the parts are included.

1.Mira Elite



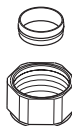
1 x Mira Elite ☐

3 x Wall Screws ☐



3 x Wall Screws ☐

1 x Olive ☐



1 x Compression Nut ☐

2. Documentation

1 x Installation, Operation and Maintenance Guide ☐

1 x Customer Support Brochure ☐

1. Plumbing

- 1.1. The 15 mm inlet compression connector incorporates an inlet filter, which swivels to allow three entry positions, top, back and bottom inlet.
- 1.2. The outlet terminates with a 1/2" BSP male thread for connection to a Mira flexible shower hose.
- 1.3. The appliance is designed to operate with a minimum inlet head of 80 millimetres up to a maximum inlet head of 10 metres (i.e. the vertical distance from the base of the cold cistern to the top of the appliance).

2. Electrical

- 2.1. The terminal block will not accept cable larger than 10 mm².
- 2.2. Pump duty cycle: 25%: 15 minutes on, 45 minutes off.
- 2.3. The motor is fitted with a self resetting thermal trip protection device, designed to operate if the duty cycle is exceeded or the ambient temperatures become too high. The maximum recommended ambient temperature for the appliance is 30°C.
- 2.4. The following power ratings for the heater tanks are available with their respective voltages:
 - Mira Elite 8.5 240V 36 Amps
 - Mira Elite 8.5 230V 38 Amps
- 2.5. The motor will absorb approximately 100 Watts maximum power under normal working conditions.

3. Standards and Approvals

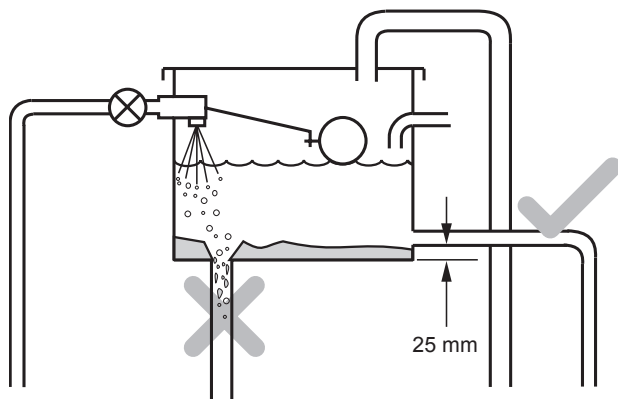
- 3.1. All materials in contact with water are Water By-laws Scheme (WBS) approved.
- 3.2. When installed correctly, the appliance complies with the requirements of BS 7671 "Requirements for Electrical Installations" (IEE Wiring Regulations).
- 3.3. The appliance has been designed to comply with the requirements of BS 3456 "Specification for Household and Similar Electrical Appliances", Part 3, Section 3.9: 1979.
- 3.4. British Electrotechnical Approvals Board (BEAB) and WBS approval pending.
- 3.5. This appliance complies with the electromagnetic compatibility (EMC) directive EN50082-1 (1992), EN55022 (1987) and EN60555-2/3 (1987). Please see carton for CE approval label.

1. Plumbing

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

- 1.1. The appliance is designed to operate with water supply pressures from 0.008 bar (80 millimetres head) to 1 bar (10 metres head) (i.e. the vertical distance from the base of the cold cistern to the top of the appliance). However, the minimum head required will increase with pipe length and the guide given in paragraph 1.17. should be used to ensure that adequate head is available for any given installation.

The appliance **MUST** have its own separate supply from the cistern.



Correct Cistern Take Off

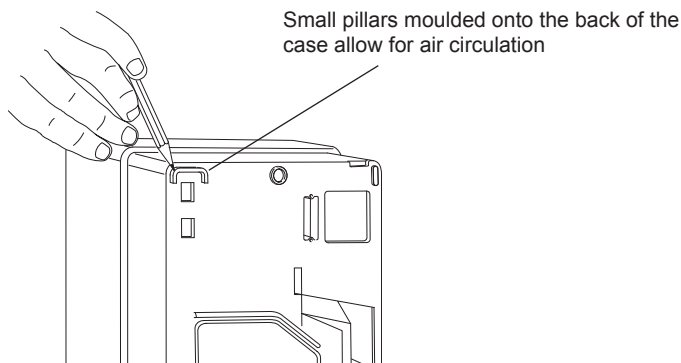
Positioned away from the ball valve, with a 25 mm distance up from the base of the cistern. This connection will prevent air and debris entering the shower supply.

Incorrect Cistern Take Off

Debris from the bottom of the cistern and air generated when the cistern refills will enter the shower supply.

- 1.2. The appliance is suitable for installation within the shower area and is fitted with two pressure relief valves. It must be positioned over a water catchment area with the controls at a convenient height. The shower fitting should be positioned so that it discharges down the centre line of the bath, or across the opening of a shower cubicle, and must be directed away from the shower unit.
- 1.3. Use a minimum of 15 mm diameter supply pipework. It should be noted, however, that on long pipe runs this should be increased to 22 mm (refer to para 1.17. for guidance). When using flexible plastic pipe it is essential that the pipe is kept flat and not looped up at any point as this may lead to air build up which may impair performance of the shower.

- 1.4. We recommend that a non restrictive (free flowing) isolating valve is fitted into the supply from the cold water cistern, for maintenance purposes.
- 1.5. The appliance must be fitted **ONTO** the finished wall surface i.e. on top of the tiles. **DO NOT** block the air ventilation gaps around the sides of the unit, either by tiling up to the sides of the unit or by using a sealant around the case. This appliance is designed to be ventilated. Failure to do this may cause product failure.

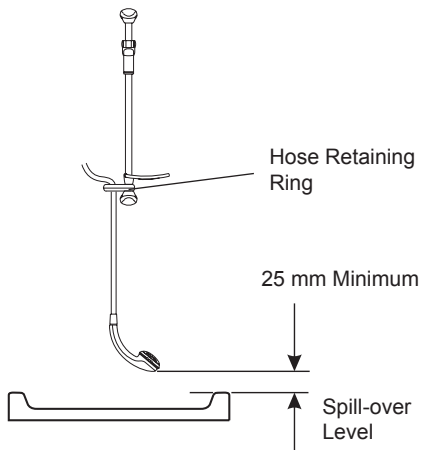


- 1.6. Inlet: 15 mm inlet compression connector is designed to accept plumbing supplies from the top, bottom or back.
- 1.7. Back entry plumbing is accommodated without the need to recess the 15 mm inlet compression connector, enabling the wall's surface to be completed and sealed to prevent water ingress, before final fitting.
- 1.8. Use only the 15 mm inlet compression connector supplied with the appliance, do not use any other types of fitting.
- 1.9. Outlet: 1/2" BSP male, to accept Mira flexible hose.
- 1.10. Refrain from applying excessive force when making connections.

Note! Excessive force on the pump housing can impair pumping performance. Make sure that the supply pipe is trimmed and bent such that the 15 mm inlet connector sits (or can be lightly pressed) easily on the back of the clamp bracket prior to connection with the pump housing.
- 1.11. To avoid damage to the case when soldered fittings are used, pre-solder the pipework and fittings before connecting them to the 15 mm inlet compression connector.
- 1.12. Supply pipework **MUST** be flushed to clear debris before connecting the appliance (Bye-law 55).

- 1.13.** To comply with Bye-law 17 which refers to shower hose connections, a hose retaining ring is supplied to prevent the handset from dropping below the spillover level of the bath or shower, which could lead to contamination from back-siphonage.

The supplied hose retaining ring should meet the great majority of user requirements for shower installations with flexible outlet fittings. However, there will be occasions when the hose retaining ring will not provide a suitable solution. In these instances an **outlet** double checkvalve, e.g. the Mira DCV-H, **must** be fitted. Double checkvalves, fitted in the inlet supply to the appliance are not recommended as they cause a pressure build-up, which could exceed the maximum static inlet pressure for the appliance.



- 1.14.** When installed in very hard water areas (above 200 ppm temporary hardness) your installer may advise the installation of a water treatment device, to reduce the effects of limescale formation. Appliance malfunction due to excessive limescale formation is not covered by the manufacturer's guarantee. Your local water company will be able to advise of the hardness of water in your area. Where relevant the requirements of Bye-law 91 must be met if a water treatment device is fitted.
- 1.15.** Avoid layouts where the hose will be sharply kinked. This may reduce the life of the hose.
- 1.16.** Water flow can be obtained, using the available gravity head, without the electrical power being connected. This allows the plumbing connections to be tested prior to final connection of the electrical supply.
- 1.17.** Long pipe runs and excessive use of 90° elbows will significantly reduce the available head to supply the appliance. The following table should be completed to ensure that adequate head is available for any given application.

1. Pipework

Size	Quantity (A)	Head Loss Per Metre (B)	Total Head Loss (mm) (A) x (B)
15 mm pipe	_____ (m).	80 mm	
22 mm pipe	_____ (m).	15 mm	

2. Elbows

Size	Quantity (C)	Head Loss Per Elbow (D)	Total Head Loss (mm) (C) x (D)
15 mm	_____	30 mm	
22 mm	_____	10 mm	

Pipework (1) + Elbows (2) = Head of Water Required mm

The figure above is the minimum head that must be provided from the top of the appliance to the base of the cold water cistern to ensure adequate performance.

eg. 15 mm pipe length is 4 metres (the head loss per metre is 80 mm).
Therefore

4 x 80 = 320 mm

Number of 15 mm elbows used is 5 (the head loss per elbow is 30 mm).

Therefore

5 x 30 = 150 mm

Pipework (320 mm) + Elbows (150 mm) = 470 mm

Head of water required between base of cold water cistern and top of appliance =

470 mm

2. Electrical

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

- 2.1.** The installation must comply with BS 7671 “Requirements for Electrical Installations” commonly referred to as the IEE Wiring Regulations, or any particular regulations and practices, specified by the local electricity supply company.
- 2.2.** In a domestic installation, the electricity company fuse must be a minimum of 80 Amps. As an 8.5 kW appliance is a high power unit it is essential to contact your electricity supply company to ensure that the supply is adequate for the purpose.

Mira Elite 8.5 240V 36 Amps

Mira Elite 8.5 230V 38 Amps

Note! Voltage drop due to local heavy demand will reduce the shower performance.

- 2.3.** A separate permanently connected supply must be taken from the consumer unit to the shower, via a double pole switch, with at least a 3 mm contact separation. The switch can be a ceiling mounted pullcord switch within the bathroom, or a wall mounted switch in an adjacent room.

Suitable ceiling mounted pullcord switches for Mira electric showers include:-

Make	Model	Rating
Ashley	CS445N	45 Amp
Crabtree	2167	40 Amp
MK	3164 WHI	45 Amp
Tenby	CS7545	45 Amp
Volex	VX9706	40 Amp

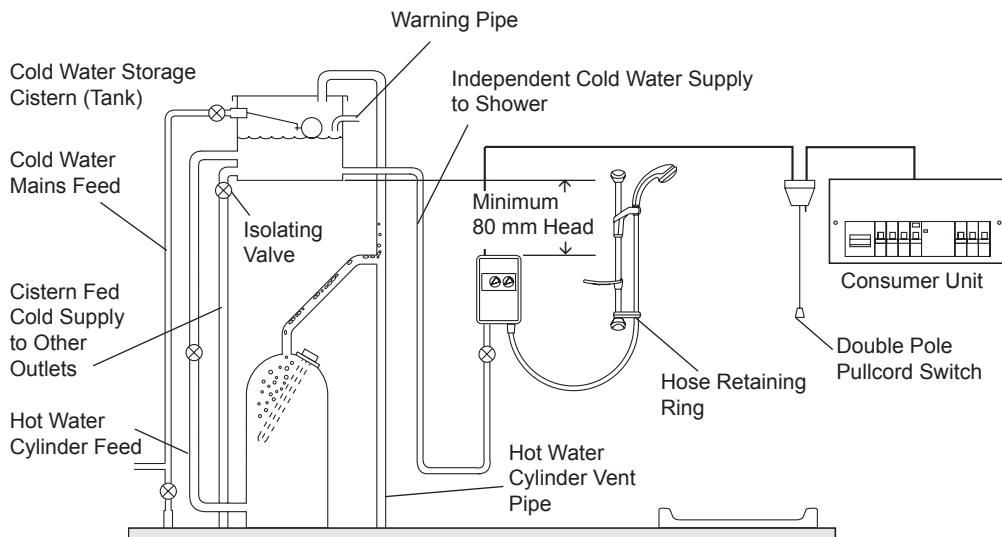
- 2.4.** The minimum cable size required is 6 mm². To obtain full advantage of the electrical power provided by the appliance, use the shortest possible cable route from the consumer unit to the appliance.

As a guide only, the maximum 6 mm² cable length allowed with a 5 Volt drop and RCD installed, is 18 m for an Elite 8.5. If longer cable runs are required then 10 mm² should be used. Refer to BS 7671 for further clarification.

- 2.5.** We recommend the inclusion of a 30 mA residual current device (RCD). This may be part of the consumer unit or a separate unit.
- 2.6.** The terminal block will not accept cable larger than 10 mm².

- 2.7. The appliance must be earthed by connecting the supply cable earth conductor to the earth terminal. All exposed metal parts within 3 metres of the shower, within the shower room, must be electrically bonded to earth using a minimum cable size of 2.5 millimetres².
- 2.8. Do not turn on the electrical supply until the plumbing has been completed, and the pump primed, as the unit must not be operated dry (see Section 7, Commissioning).
- 2.9. The appliance is fitted with a pump motor, and some mechanical noise can be expected from the appliance in addition to the noise generated by the spray from the handset. The type of wall surface will affect the perceived sound levels. Stud partition and panel walls have a tendency to resonate, whilst solid walls will provide the quietest operation. The tone of the pump motor may change when the temperature control knob is adjusted. This is quite normal.

Plumbing and Electrical Schematic Diagram



1. Appliance

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

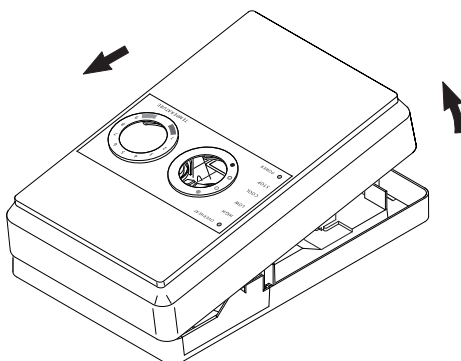
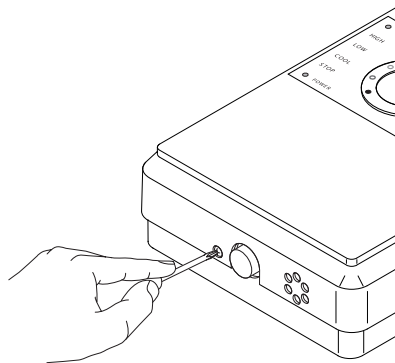
WARNING! Isolate the electrical and water supplies before proceeding with the installation of the appliance.

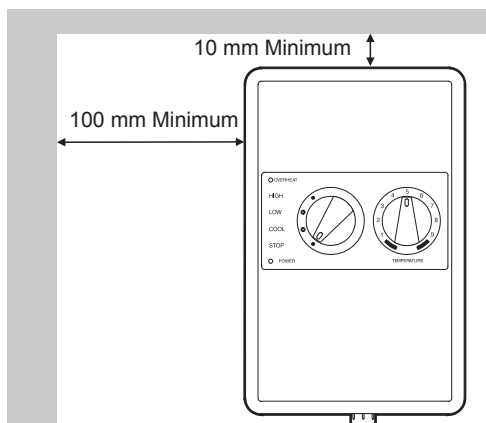
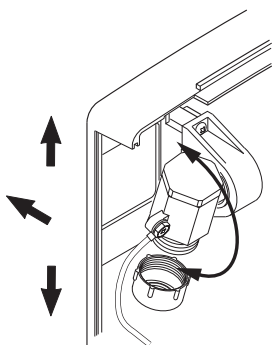
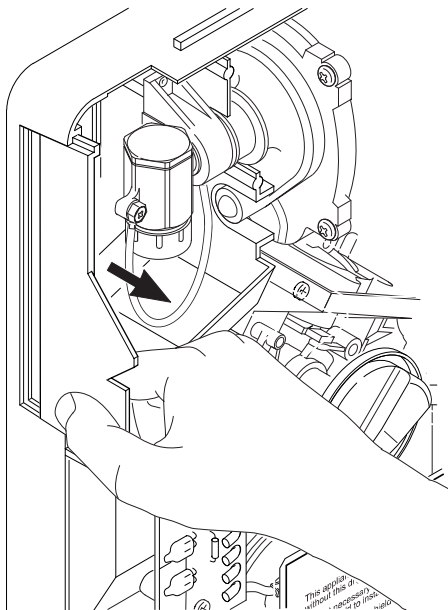
WARNING! DO NOT connect this appliance to a mains-fed water supply. Such a connection will damage the appliance, and is not covered under the manufacturer’s guarantee.

Note! Bottom inlet is illustrated for clarity in these instructions.

- 1.1. Release the captive cover retaining screw. The control knobs remain on the appliance.
- 1.2. When installing the appliance with concealed water and electrical supplies refer to **Appendix 1, “Dimensions: Water and cable entry points”**.

- 1.3. Pull the bottom of the cover outwards and upwards off the case. **Do not** remove the two control knobs or clear plastic dripshield.





- 1.4.** Slide out the case insert adjacent to the 15 mm inlet compression connector.
- 1.5.** Determine whether the cold water supply will be top (falling), bottom (rising), or back inlet to the appliance. Remove the inlet blanking cap.
- 1.6.** Swivel the 15 mm inlet compression connector to suit. Avoid trapping the green earth bonding wire.
- 1.7.** Remove as appropriate the thinned case and cover areas to allow the pipe and cable to enter the product.
- 1.8.** When deciding the position of the appliance on the wall:

allow a minimum of 100 mm clearance to the left-hand side of the appliance case, to provide unrestricted access to the inlet connector, for installation and future maintenance.

allow a minimum of 10 mm clearance from the top of the case to allow the cover to be removed.

Offer the appliance up to the wall and temporarily connect the cistern-fed cold water supply pipe. Mark through the casing the position of the three fixing holes. Remove the appliance.

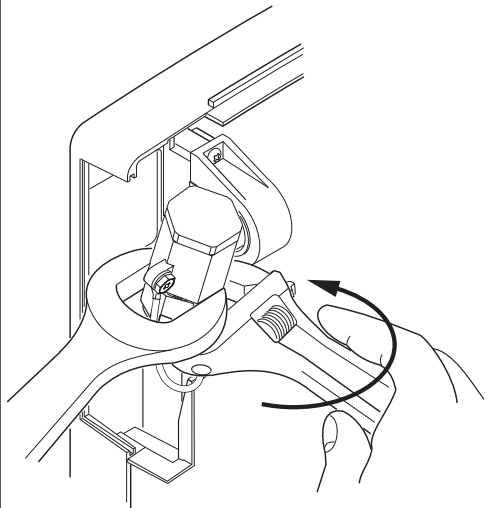
1.9. Install the cistern-fed cold water supply pipe. An installation pipe template is supplied (refer to Appendix 5) and can be used so the last 150 mm of the incoming supply pipe can be bent to 17 °. The 17 ° bend in the pipe ensures that the supply pipe lies parallel to the finished surface of the wall. It also ensures that no stress is put on the pump and clamp bracket.

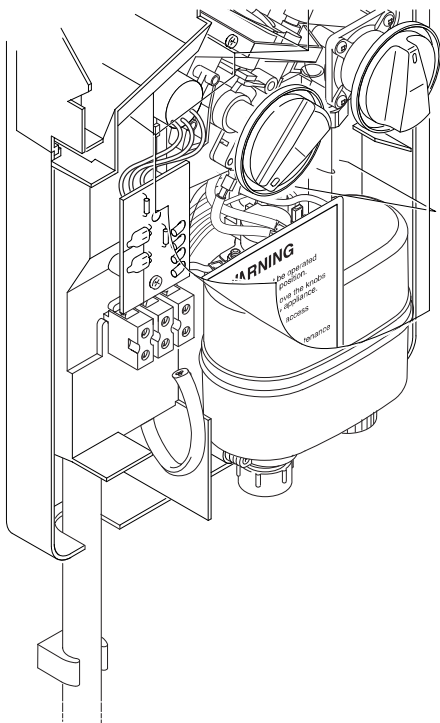
For back inlet supplies, the cold water supply pipe must emerge from the walls surface 'square' to prevent straining the inlet connector clamp bracket.

1.10. Thoroughly flush the cistern-fed cold water supply pipe. The supply must be clean and free from debris before connecting the appliance (Bye-law 55).

1.11. Avoiding buried cables and pipes, drill and suitably plug the three fixing holes. Secure the appliance to the wall with the screws provided. Alternative fixings (not supplied) may be necessary for some wall structures.

1.12. Make the connection to the cistern-fed cold water supply pipe. Hold a wrench across the flats of the 15 mm inlet compression connector to prevent damage to the connector whilst tightening the compression nut.





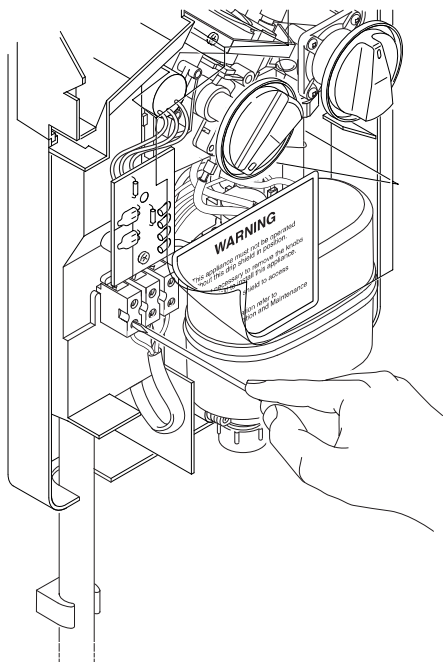
- 1.13. Bring the electrical supply cable into the case via one of the cable entry points, and offer up to the terminal block. Cut the thinned case areas as necessary.

- 1.14. Strip back approximately 40 mm of the outer cable insulation.

Lift up the bottom of the dripshield to access the terminal block (there is no need to remove the dripshield).

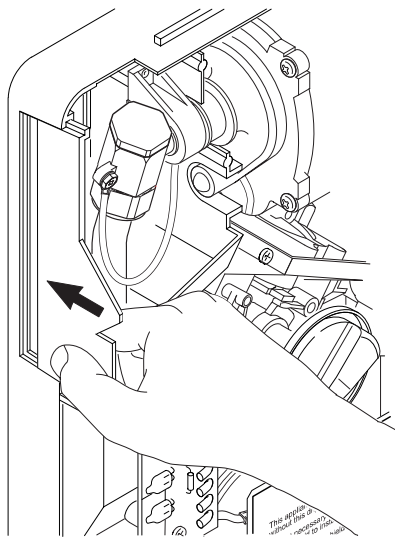
Note! DO NOT twist the individual cable cores as this will prevent them from entering the terminal block.

Connect the conductors firmly into the terminal block (refer to wiring diagram). Fit an earth sleeve to the earth conductor. Ensure that the cable is clear of the cover when it is refitted.

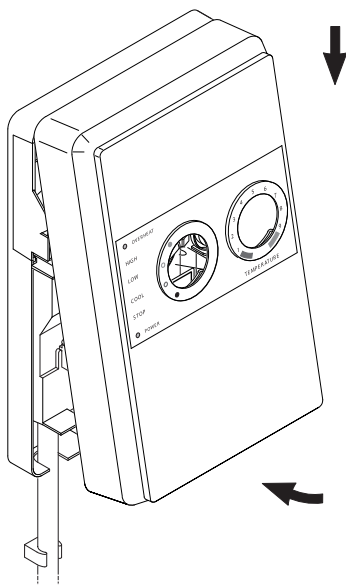


- 1.15. Refit the case insert and ensure that the earth bonding wire to the inlet connector is tight.

Finally re-tighten the screws of the terminal block.



- 1.16. Refit the cover by locating the top of the cover onto the spigot on the top of the case. Push the bottom of the cover against the case and tighten the captive cover retaining screw.



2. Shower fittings

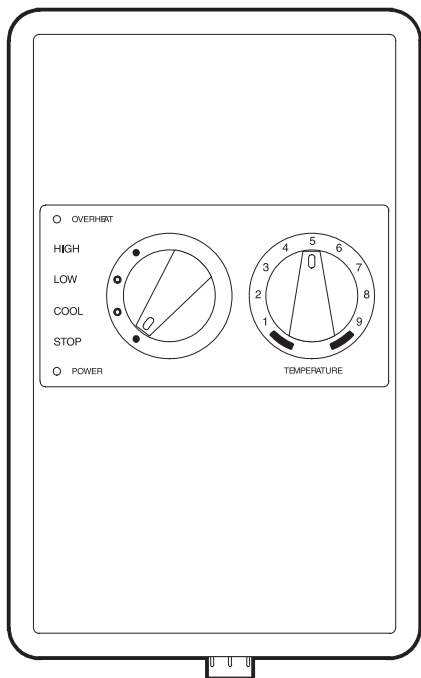
Read the section "**Important Safety Information**" first

- 2.1. To install the shower fittings, please refer to the appropriate section in the Installation, Operation and Maintenance Guide which accompanies the fittings.
- 2.2. The high capacity spray plate illustrated in the guide is not supplied with this appliance.

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

The appliance must not be run dry. Before proceeding any further with the installation it is important to prime the pump assembly before switching on the electrical supply.

If you are unsure how electric showers work, it is advisable to read, Section 8, “**Advice to users**” and “**Appliance**”.



1. Connect the flexible hose from the shower fitting to the outlet of the appliance. Ensure the hose seal is fitted and that the handset is in the handset holder and aimed in the water catchment area. Do not overtighten. Over-tightening the flexible hose will shorten its life.
2. Ensure that the left hand control knob is in the “STOP” position.
3. Turn the right-hand control knob fully anticlockwise to the full cold position (approximately $\frac{3}{4}$ of a turn from hot to cold).
4. Turn on the water supply fully at the isolating valve, check that water is not leaking from the bottom of the case.
5. Turn the left-hand control knob to the “COOL” position. Check that water flows freely from the shower within a few seconds. It may be necessary to lower the handset. The pump is now primed. Replace the handset if it was removed.
6. Switch on the electrical supply at the double pole switch. The “POWER” light on the appliance will provide a visual indication that the electrical supply is connected, and you will hear the pump start.
7. Check that water continues to flow freely from the shower. The water from the handset will be at full force, and at a cool temperature.

8. Turn the right-hand control knob slowly clockwise, as the knob is turned the flow will be reduced and the temperature will remain cool. Turn the knob back to full flow (this checks the operation of the regulator assembly).
9. Turn the left-hand control knob to position "LOW". The temperature of the water should rise slightly. Allow a few seconds for the warm water to reach the handset (this checks the operation of the half power element).
10. Turn the left-hand control knob to position "HIGH". The temperature of the water will rise further (this checks the operation of the full power element).

To select a shower temperature turn the right-hand control knob clockwise for hotter water, anticlockwise for cooler water.

Note! When the temperature is changed the flow rate will change.

High flow = Low temperature
Low flow = High temperature

The temperature control knob will need to be adjusted to take account of seasonal conditions which affect the temperature of the incoming water supply. The user can expect a lower flow rate from the handset in the Winter months when attempting to achieve the same shower temperature set during the Summer months.

11. When the required temperature is reached, turn the left-hand control knob to "STOP" and isolate power at double pole switch.

Note! If the water supply to the Elite should fail, then the pump may airlock. This symptom will be recognised by no water flow and an increase in motor tone. Should this occur the pump will require priming.

Priming the pump

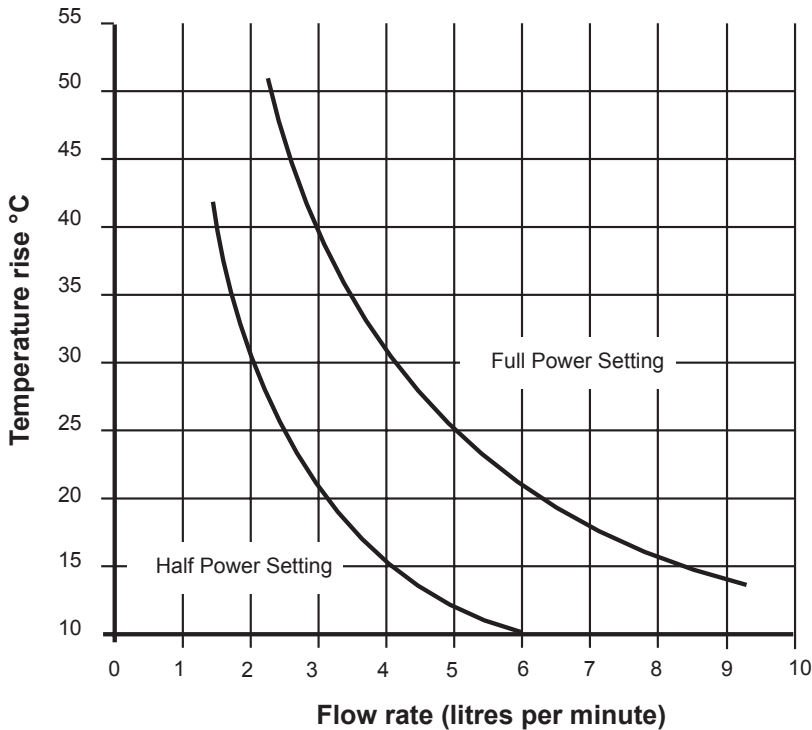
Isolate the electrical supply, remove the handset from the shower hose and lower the shower hose. Turn the left-hand control knob to the **cool** position and the right-hand control knob to the **number 1** position. Check that water flows freely from the hose. The pump is now primed. Refit the handset and replace in clamp bracket. Restore electrical supply and check that water continues to flow freely.

1. Advice to users

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

- 1.1. Pumped electric showers work by taking cold water and passing it over the heating elements contained in the heater tank of the shower appliance.
- 1.2. The showering temperature is adjusted by turning the temperature control knob, which varies the flow of cold water across the elements. The slower the rate of flow, the warmer the water and vice versa. The holes in the spray plate of the shower handset should always be kept clean to maintain a consistent flow and assist in temperature control.
- 1.3. All Mira electric showers are designed to stabilise temperature changes caused by water pressure fluctuations. Average shower temperatures will be held within a 6°C band, provided that the minimum required pressure is maintained.
- 1.4. The current design of Mira pumped electric showers does not thermostatically control the showering temperature, and as such cannot react to changes in temperature caused by a change in mains voltage, or changes in the cistern-fed water temperature.
- 1.5. The temperature of cistern-fed water will vary between Summer and Winter, and therefore, the temperature control knob will need to be adjusted to take account of these seasonal conditions. The length of dead leg of the water supply pipe or its proximity to hot pipes, may effect the showering temperature.
- 1.6. If the water temperature reaches an unsafe level, the thermal switch assembly turns off the elements. When the water temperature falls the elements will be turned on. The switch will cycle on/off/on if the flow rate is not increased, and the shower temperature reduced. The “OVERHEAT” light on the Elite 8.5 will provide a visual indication of this condition.
- 1.7. When the shower is first turned on or a different temperature is selected, there will be a slight delay before the shower temperature changes, to allow the previously heated water to be used up.

Temperature rise versus flow for the Mira Elite



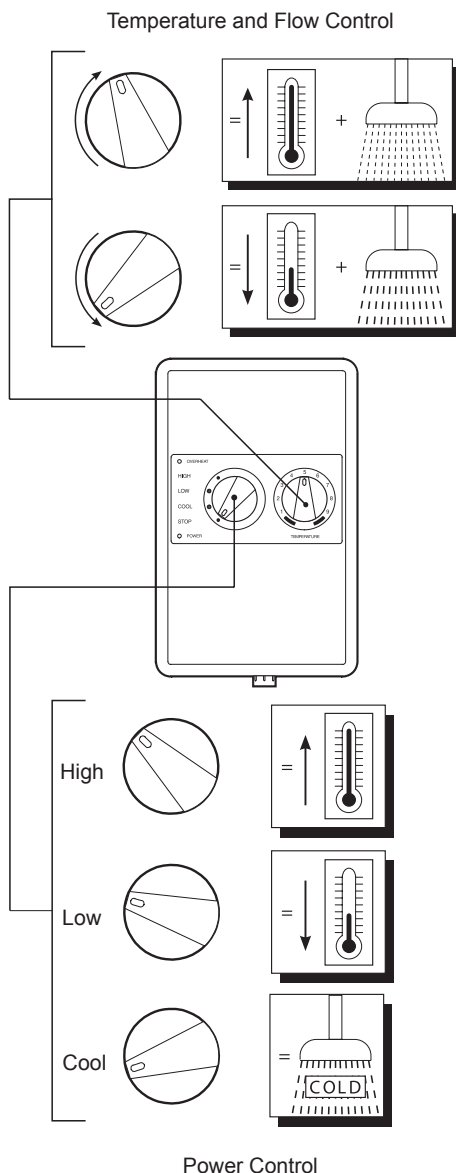
- (i) These curves are for the specified outputs at 230 and 240V.
- (ii) All heaters have a manufacturing tolerance. Thus flow rates can be above or below those indicated.
- (iii) The left-hand scale is temperature rise. (Temperature rise = Showering temperature minus the incoming cold water temperature.)

Example: For a Mira Elite 8.5 on full power setting with cistern-fed water supply at 10°C and a showering temperature at 42°C, the temperature rise is 32°C. The flow rate is therefore 4 l/min.

2. Appliance

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

THE SPRAY PLATE HOLES MUST BE KEPT CLEAR. The spray plate should be regularly removed and cleaned in descalent. Lack of regular spray plate cleaning will lead to poor performance and cause early failure of the appliance.



- 2.1. Switch on pullcord or wall mounted switch. The “**POWER**” light on the appliance will provide a visual indication that the switch is on.
- 2.2. Rotate the left-hand control knob to position “**HIGH**” (full power).
- 2.3. Wait **15–20** seconds for warm water to reach the handset.
- 2.4. If necessary turn the right-hand control knob slowly to adjust temperature. Allow **10–15** seconds for the adjusted temperature to reach the handset. The control knob operates through approximately 3/4" of a turn from cold to hot.

Clockwise - **WARMER** - less flow
Anticlockwise - **COOLER** - more flow

Note! The tone of the pump motor may change when the temperature control knob is adjusted. This is quite normal

- 2.5. **TO TURN OFF** turn the left control knob anticlockwise to “**STOP**” position.

(For summer economy showering use position “**LOW**” (half power) on the control. For a cold shower select “**COOL**”.

- 2.6. Switch off pullcord or wall mounted switch.

3. Cleaning

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

- 3.1. 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.
- 3.2. Spray pattern deterioration can be caused by either, debris trapped in the spray head, or a limescale buildup in the spray holes. The spray head can be removed and cleaned in a proprietary plastic kettle descaler, following the manufacturer’s instructions.
- 3.3. To clean the head or spray plate, please refer to the appropriate section in the Installation, Operation and Maintenance Guide which accompanies the shower fittings.

4. Troubleshooting

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

The Mira Elite range of pumped electric showers are fully performance tested after assembly. In the unlikely event that you experience problems with your shower, then the following procedures will enable you to undertake basic troubleshooting before contacting the person responsible for installing your shower.

WARNING! There are no user serviceable components beneath the cover of the appliance. Only a competent tradesperson should remove the cover.

Key

A = “**POWER**” light ✓ = light illuminated (lower)

B = “**OVERHEAT**” light ✓ = light illuminated (upper)

Malfunction	A	B	Cause	Remedy
No water or very low flow rate.	✓	✓	Spray plate blocked.	Remove and clean as detailed in the Installation, Operation and Maintenance Guide supplied with the shower fittings . Turn on.
	✓		Supply stop valve turned down.	Turn on.
	✓		Shower isolating valve turned down or off.	Turn on.
	✓	✓	Hose blocked.	Clear blockage and refit hose.
No water and motor tone immediately increases.	✓		Cistern has run out of water.	Turn off appliance immediately and resolve cistern storage difficulty. Product will airlock refer to Priming the pump, Section 7, Commissioning .
No water and no motor noise.	✓		Internal pump unit faulty or thermal trip has operated.	Wait for internal pump appliance to cool down. If still faulty contact your installer.

Malfunction	A	B	Cause	Remedy
Appliance fails to operate in any switch position.			Double-pole pullcord switch turned off. Supply fuse failed/RCD tripped (which signals an electrical fault).	Switch on. Contact a competent electrician.
Shower temperature alternates hot and cold.	✓	✓	The appliance is fitted with a fixed temperature thermal safety switch. Steady high temperatures are thus prevented.	Turn the temperature knob sufficiently anticlockwise to prevent operation of the thermal switch. Allow time for the temperature to stabilise. DO NOT tamper with the thermal switch inside the appliance.
Unable to select a cool enough shower (Summer months only).	✓		The incoming cold water supply temperature is often higher than experienced during the Winter.	Turn the control knob to “ LOW ” power setting and readjust the temperature.

1. Fault Diagnosis

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

WARNING! Isolate the electrical and water supply before removing the cover.

WARNING! Mains connections are exposed when the cover is removed.

WARNING! Refer to wiring diagram before making any electrical connections

WARNING! Ensure all electrical connections are tight to prevent overheating.

WARNING! Ensure all plumbing connections are watertight to prevent leakage.

WARNING! Moving parts are exposed when the cover is removed.

Providing the appliance has been correctly installed and is operated in accordance with the instructions contained in the 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, wiring diagram and basic outline instructions are provided.

When following these instructions, it is sometimes necessary to examine the appliance with the electrical supply turned on, as well as the water supply. It is therefore essential that the appropriate safe working practices are followed in accordance with the Health And Safety At Work Act 1974.

Using a device for measuring continuity (DVM, AVO Voltmeter), follow through the following tests.

Key

A = “**POWER**” light ✓ = light illuminated (lower)

B = “**OVERHEAT**” light ✓ = light illuminated (upper)

Malfunction	A	B	Cause	Remedy
No water flow or very low flow rate.	✓	✓	Isolating valve turned off.	Turn on.
	✓	✓	Spray plate blocked.	Remove and clean, following the instructions contained in the Installation, Operation and Maintenance Guide, supplied with the shower fittings .

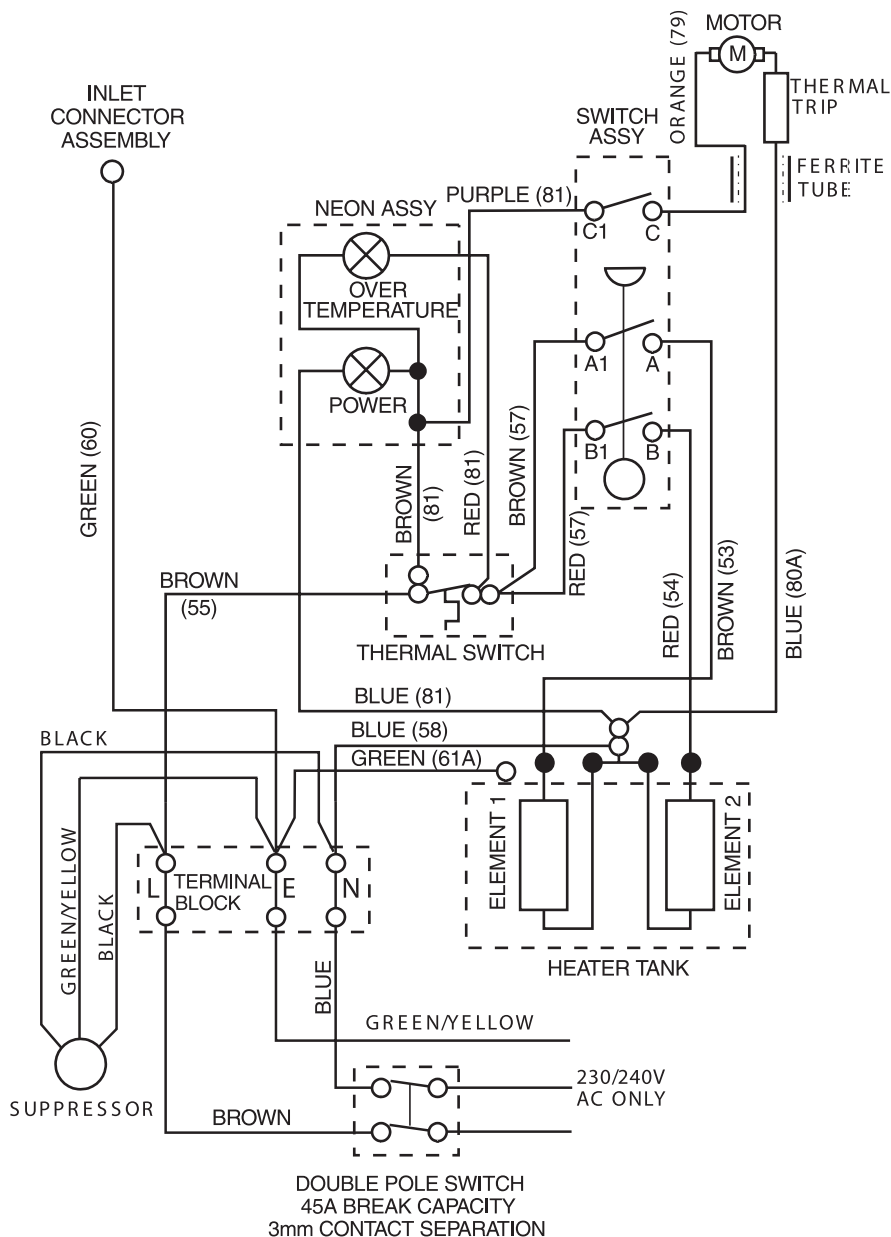
Malfunction	A	B	Cause	Remedy
No water flow or very low flow of water.	✓	✓	Isolating valve turned off.	Turn on.
	✓	✓	Spray plate blocked.	Remove and clean following the instructions contained in the Installation, Operation and Maintenance Guide supplied with the shower fittings .
	✓		Inlet strainer blocked.	Remove and clean.
	✓	✓	Hose and handset blocked.	Clear blockage or replace hose or handset.
	✓	✓	Heater tank excessively filled with limescale. Regulator flow switching assembly faulty. Cold cistern empty.	Replace. Replace. Turn off appliance immediately and resolve cistern storage difficulty.
Appliance fails to operate in any switch position.			Double-pole switch isolated.	Switch on.
			Supply fuse failed, MCB or RCD tripped.	Rectify fault and replace fuse or reset RCD.
			Internal pump not working.	Replace internal pump.
			Possible malfunction of:- pressure switch, micro-switch, thermal switch, heater tank wire connections, and mechanisms.	Check continuity of pressure switch micro-switch and thermal switch. Check integrity of wire connections. Replace faulty parts.

Malfunction	A	B	Cause	Remedy
Rotation of temperature knob has little or no effect on temperature.	✓	✓	Flow regulator faulty.	Clean, or replace if still faulty.
	✓	✓	Spray plates blocked.	Remove and clean following the instructions contained in the Installation, Operation and Maintenance Guide supplied with the shower fittings .
No change in temperature between “LOW” and “HIGH” settings.	✓		Internal pump not working.	Replace internal pump.
	✓		Possible malfunction of:- pressure switch, micro-switch, thermal switch or heater tank .	Check continuity of pressure switch, micro-switch, thermal switch and heater tank elements. Replace faulty parts.
Water leaking from the bottom of the case.	✓		The appliance is fitted with two pressure relief valves which will operate to reduce the damage if the outlet is blocked, frozen or if the appliance has been connected to the cold water mains supply. When the relief valve is operated a small rubber ball is ejected.	Reset the relief valve. Refer to Section 9, Maintenance: “Tank pressure relief ball - refitting” or “Pump pressure relief ball - refitting” .

Malfunction	A	B	Cause	Remedy
Shower cycles on/off/on at high temperature/low flow.	✓	✓	The temperature control has been turned too far clockwise. To protect the appliance, a thermal switch disconnects the power to reduce the water temperature. When it has cooled down the power is then re-applied. This will cause the shower temperature to increase again.	The temperature control should be turned anticlockwise to increase the flow, preventing the operation of the thermal switch.
	✓	✓	Spray plate blocked.	Remove and clean, following the instructions contained in the Installation, Operation and Maintenance Guide, supplied with the shower fittings .
Water will not turn off.	✓		Regulator flow switching assembly faulty.	Replace.
With pull-cord turned on “ POWER ” LED is lit. LED then goes out when appliance is turned on.			Neutral fault on supply cable.	Locate fault and remedy.
Temperature knob will not move fully from blue bar to red bar, resulting in difficulty in adjusting to required temperature.			Temperature control knob replaced on splines incorrectly.	Refit temperature control knob. Refer to Section 9, Maintenance: “Appliance control knobs - refitting” .

Wiring diagram Mira Elite Electric Shower

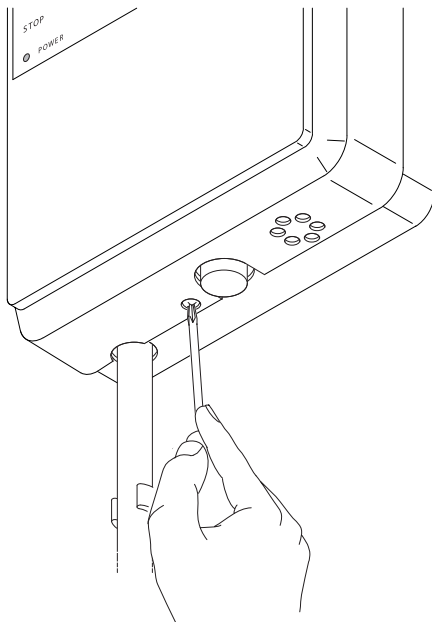
All dimensions are nominal and in millimetres.



2. Appliance cover - removal

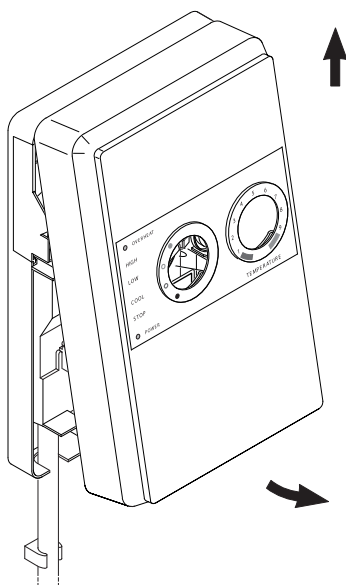
Read the section “Important Safety Information” first

- 2.1.** Release the captive cover retaining screw. Do not remove appliance control knobs.



- 2.2.** Remove cover by pulling cover in an outward and upwards direction from the bottom. If the control knobs are inadvertently removed, refer to; **Section 9, Maintenance: “Appliance control knobs - refitting”**, for correct positioning.

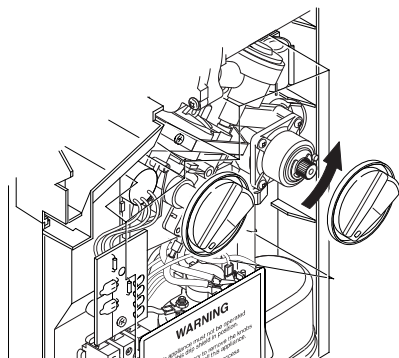
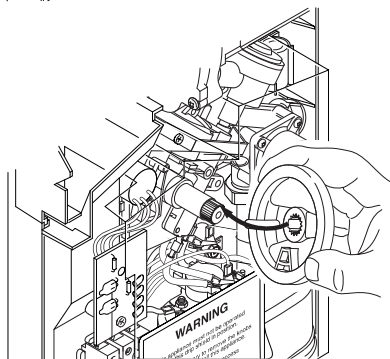
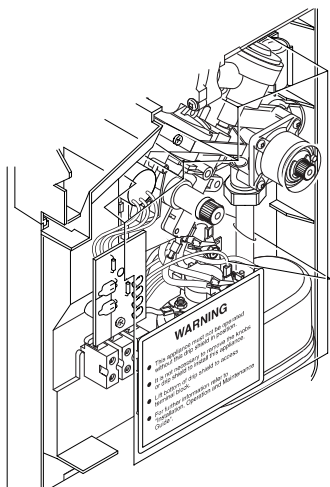
- 2.3.** Refitting the cover is the reverse of removal.



3. Appliance control knobs - refitting

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

Do not remove the appliance control knobs when removing the cover of the appliance, if they have been inadvertently removed, then the following procedure will allow them to be refitted.



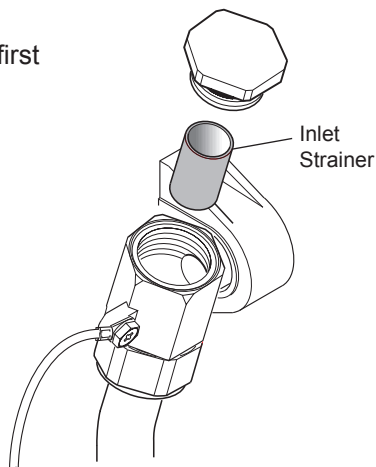
- 3.1. Ensure that the clear plastic dripshield is in place over both spindles with the label facing forward.
- 3.2. Fit left hand knob on to locating splines on left-hand spindle.
- 3.3. Turn right-hand spindle (temperature) fully anticlockwise.
- 3.4. Fit right-hand knob on to splines so that pointer is at 7 o'clock.

4. Inlet strainer - cleaning

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

4.1. To clean the inlet strainer:

- 4.1.1. Remove the hexagon nut on top of 15 mm inlet compression connector. Do not remove the 'O' seal.
- 4.1.2. Remove the inlet strainer.
- 4.1.3. Clean the inlet strainer with a stiff brush. If necessary, use a kettle descalent in accordance with the manufacturer's instructions.
- 4.1.4. Refit the components in reverse order.



Note! Ensure that the filter is pushed fully home.

5. Draining the appliance

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

All the following maintenance procedures require that the appliance is drained of water.

5.1. To drain the appliance:

- 5.1.1. Lower handset.
- 5.1.2. Turn left-hand knob to “COOL” position.
- 5.1.3. Remove inlet clamp.
- 5.1.4. Separate inlet connector from pump housing.
- 5.1.5. Water retained in appliance will now be free to drain away through handset.

5.2. To remove the pump and motor assembly:

- 5.2.1. Remove transfer tube retaining clip.
- 5.2.2. Remove wiring connections.
- 5.2.3. Renew pump and motor
- 5.2.4. Refit in reverse order.

5.3. To refit the pump pressure relief valve ball:

- 5.3.1. Refer to **Section 9, Maintenance: “5.2. To remove the pump and motor assembly”** and follow instructions 5.2.1. to 5.2.3. inclusive.
- 5.3.2. Remove pump housing retaining screws.
- 5.3.3. Separate pump housing from pump assembly.
- 5.3.4. Moisten ball and push firmly into end of pressure relief valve.
- 5.3.5. Ensure transfer tube and retaining ring are correctly located.
- 5.3.6. Refit in reverse order.

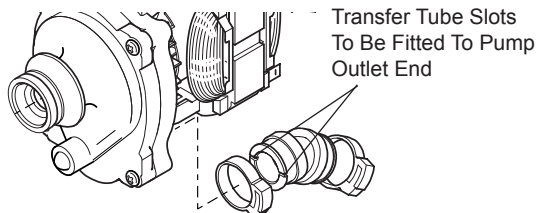
5.4. To renew the transfer tube:

5.4.1. Refer to "**Section 9, Maintenance, 5.2.**" To remove the pump and motor assembly" and follow instructions 5.2.1. to 5.2.3. inclusive.

5.4.2. Release transfer tube retaining clip.

5.4.3. Remove transfer tube.

5.4.4. Fit new transfer tube. Make sure that the transfer tube is fitted correctly.



5.4.5. Refit in reverse order.

5.5 To renew the flow switching assembly:

5.5.1. Remove appliance knobs and dripshield.

5.5.2. Slacken off heater tank retaining screws.

5.5.3. Slacken off heater tank inlet connector nut.

5.5.4. Remove transfer tube retaining clip.

5.5.5. Remove regulator flow switching assembly retaining screws.

5.5.6. Remove wiring connections from assembly. Note connection sequence.

5.5.7. Renew assembly and refit in reverse order.

6. Heater tank

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

6.1. To renew the heater tank:

6.1.1. Ensure that left-hand appliance control knob is in "STOP" position to prevent the release of water contained in the cold water supply pipe.

6.1.2. Remove appliance knobs and dripshield.

6.1.3. Remove the thermal switch fixing nut and the nuts and washers that secure the earth wire to the top of the heater tank. Note connection sequence.

6.1.4. Remove the earth wire.

6.1.5. Slacken off heater tank inlet connector nut.

6.1.6. Remove wiring connections from assembly. Note connection sequence.

6.1.7. Remove the two screws and the clamps from the outlet connector.

6.1.8. Renew heater tank.

6.1.9. Refit in reverse order. Ensure earth wire is refitted.

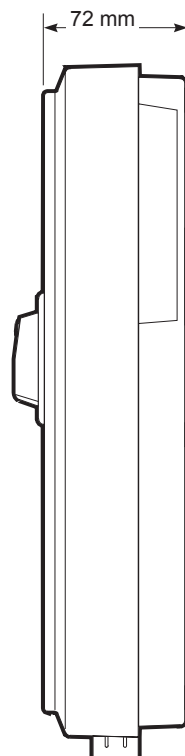
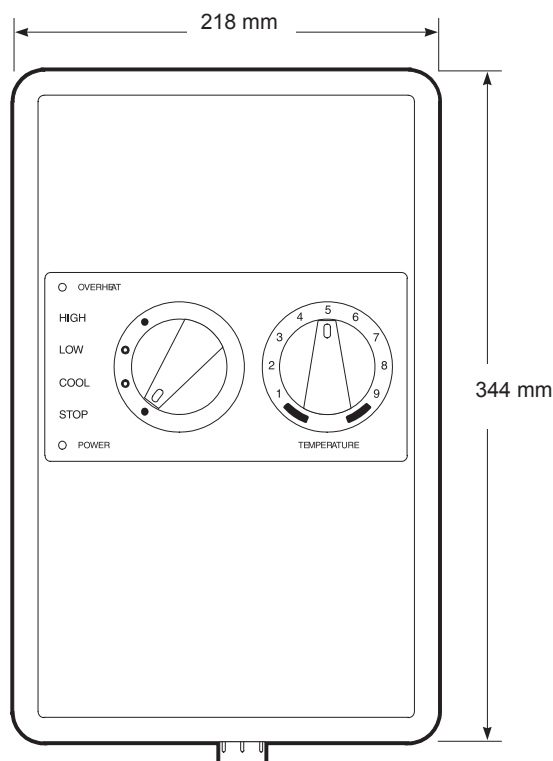
- 6.2. To renew the thermal switch:
 - 6.2.1. Remove appliance knobs and dripshield.
 - 6.2.2. Remove wiring connections from thermal switch. Note connection sequence.
 - 6.2.3. Remove thermal switch retaining nuts and slide out from flange retainer.
 - 6.2.4. Renew thermal switch.
 - 6.2.5. Refit in reverse order. Ensure that new switch is correctly seated flat, on top of heater tank.
- 6.3. To refit the tank pressure relief ball:
 - 6.3.1. Remove pressure relief valve.
 - 6.3.2. Moisten ball and push firmly into inner end of relief valve.
 - 6.3.3. Refit pressure relief valve.

7. Light assembly

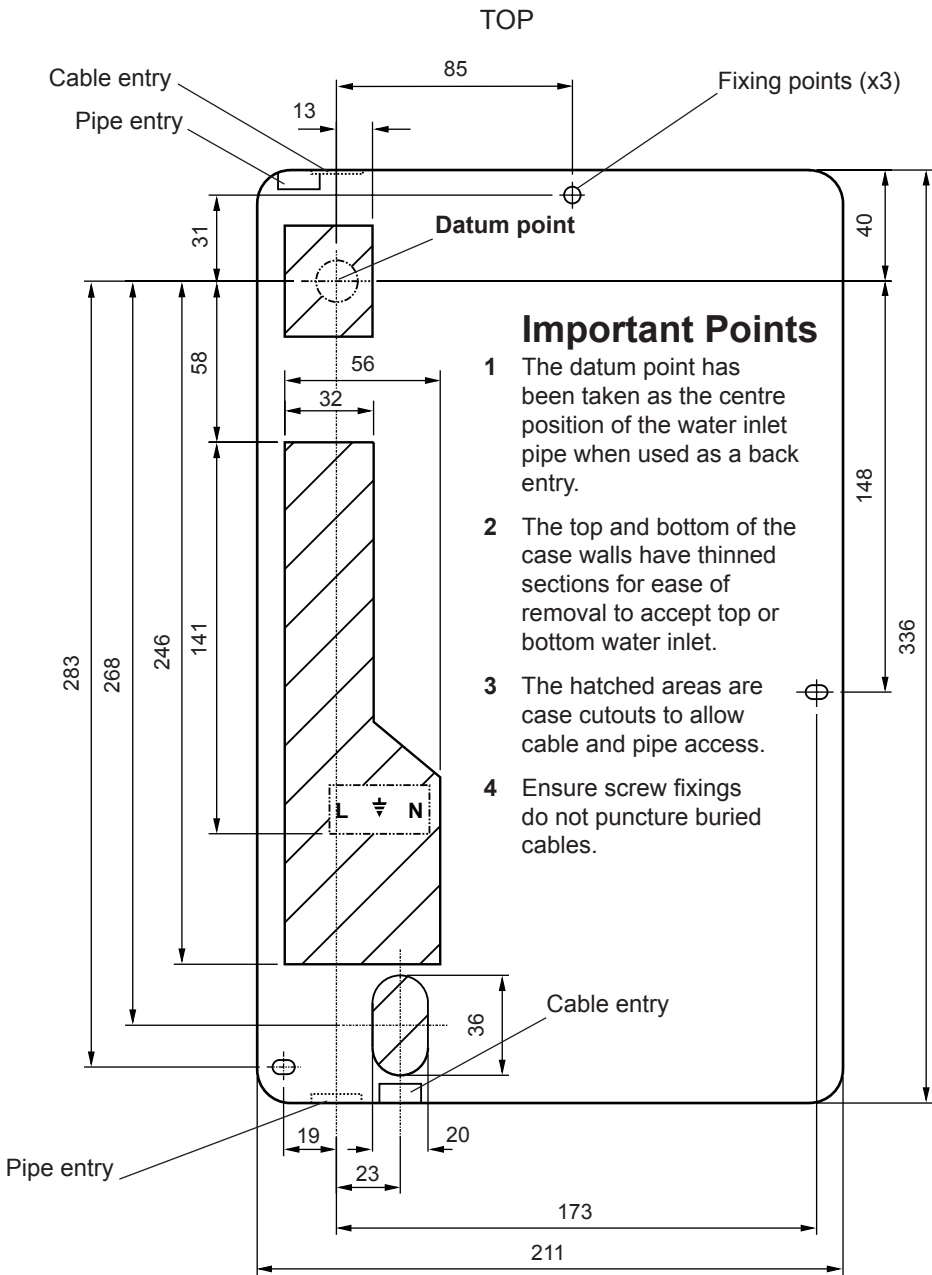
Read the section “**Important Safety Information**” first

- 7.1. To renew the light assembly:
 - 7.1.1. Lift up dripshield.
 - 7.1.2. Remove wiring connections from light assembly. Note connection sequence.
 - 7.1.3. Remove light assembly retaining screw.
 - 7.1.4. Renew light assembly.
 - 7.1.5. Refit in reverse order. Ensure that assembly is correctly seated on spigot in case.

1. Appliance



2. Water and cable entry points



Spare Parts

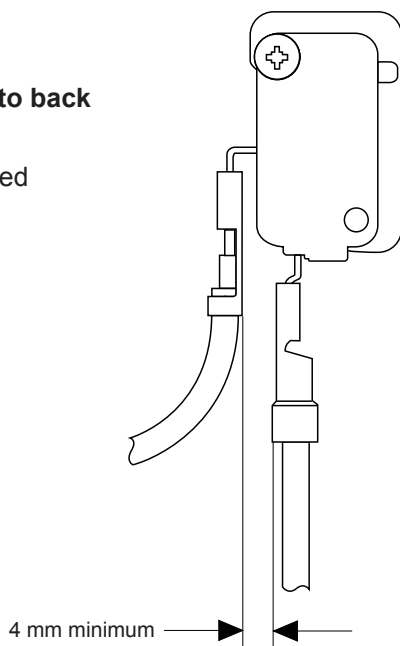
1. Spare parts list

001 32	Cover Assembly
119 77	Clamp Bracket
126 69	Case Insert
147 50	Relief Valve Assembly
215 07	Transfer Tube
215 10	Motor and Pump Assembly
215 12	Thermal Trip Pack (Sintech)
365 36	Dripshield
555 76	Inlet Connector Assembly
588 32	Neon Assembly (Light Assembly)
588 33	Wire Pack (not shown)
857 35	Regulator Flow Switching Assembly
872 01	Micro-switch (normally open)
872 33	Thermal Switch Assembly
895 09	Heater Tank 8.5 kW 240 V
895 10	Heater Tank 8.5 kW 230 V (Southern Ireland only)
932 07	Knob Pack
935 20	Screw Pack - components identified 'B'
935 57	Seal Pack - components identified 'C'

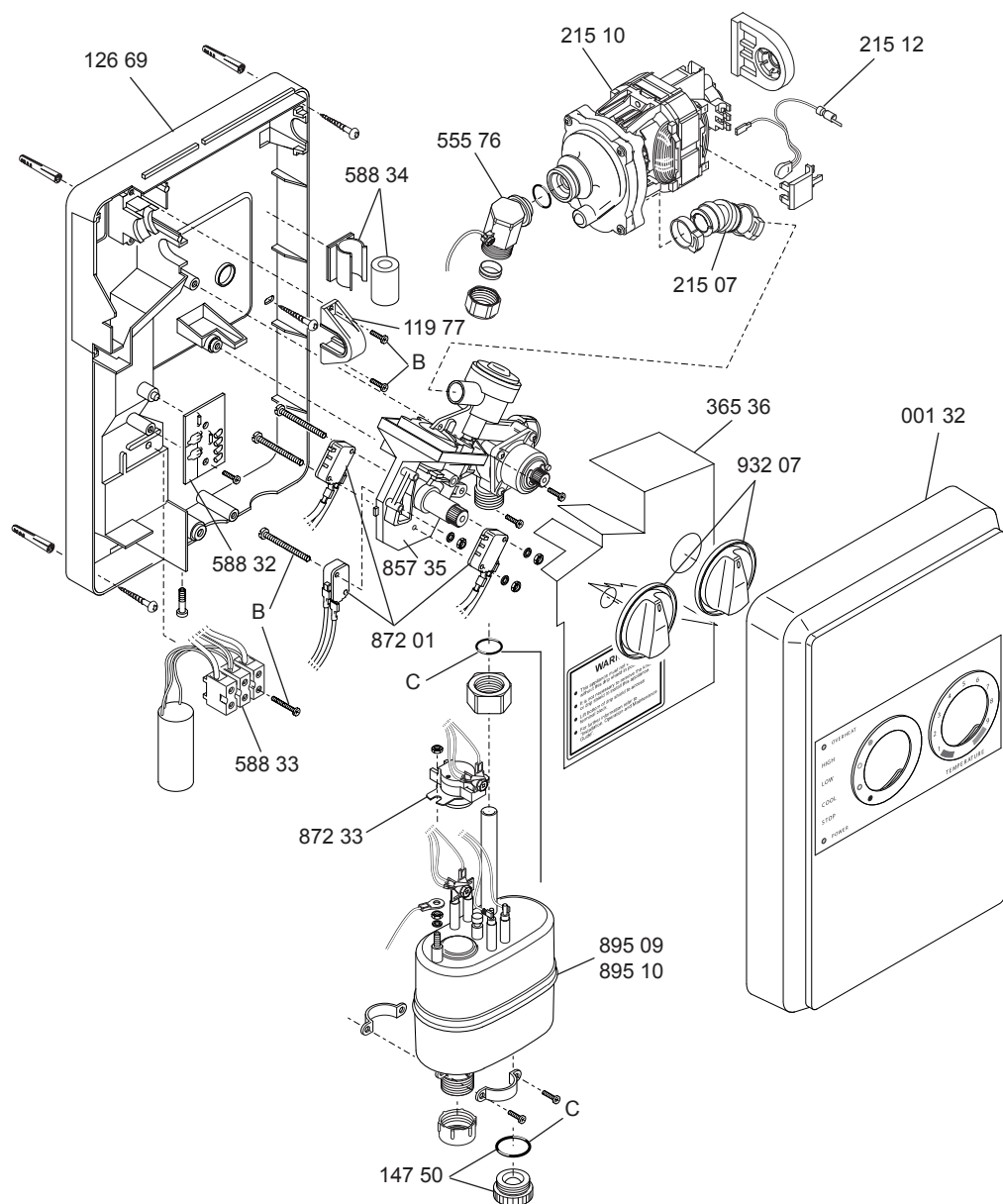
Important Note!

Push-fit connectors must be assembled **back to back** onto terminals of micro-switches.

A minimum air gap of **4 mm** must be maintained between the connectors after assembly.

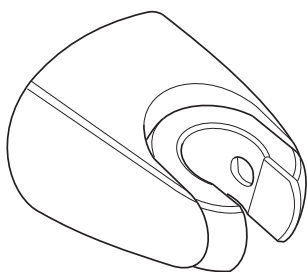


2. Spare parts diagram

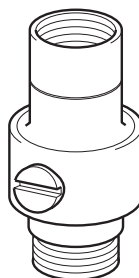


RF2 Fixed handset holder. A simple alternative or additional holder for a shower handset, available as an optional accessory from your Mira stockist.

DCV-H: An outlet double check valve, designed to prevent the backflow or backsiphonage of potentially contaminated water, through shower controls which are fitted with a flexible hose as part of the outlet shower fitting. Its correct fitting will ensure compliance with Bye-law 17. The inclusion of the Mira DCV-H will increase the required supply pressure typically by 0.1 bar. Available as an optional accessory from your Mira stockist.



RF2 Fixed handset holder



DCV-H Outlet double check valve

July 1998 — Revision: P3185 to P3185/1

Page	Format	Status	Summary of Revisions
18	T	R	Para 1.9. changed to change main-fed cold water supply to cistern-fed cold water supply.
45	T	R	Summary of revisions and corrections amended.
B	T	R	Issue number and date change.

Key

I = Illustration

T = Text

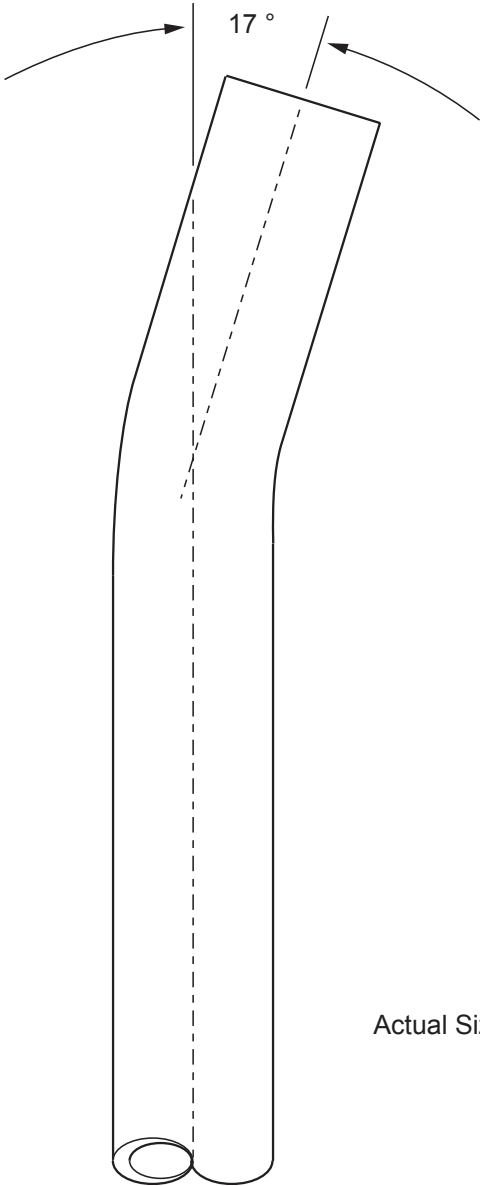
A = Addition

D = Deletion

R = Revision

F = Front cover

B = Back cover



Notes

Customer Service

Guarantee

Caradon Plumbing Solutions 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 Plumbing Solutions.

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

After Sales Service – how we can help you

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

The Caradon Plumbing Solutions Customer Services 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 Plumbing Solutions 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 Plumbing Solutions 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.

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 Services is available, on the number shown below, to advise you or your installer.

If this does not resolve the difficulty, contact our Customer Services 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 pre-arranged 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 Caradon Plumbing Solutions Customer Services

- 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 Plumbing Solutions, 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 Fire

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.

Mira Showers

Caradon Plumbing Ltd
Cromwell Road,
Cheltenham GL52 5EP.

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

www.mira-showers.co.uk
mira_technical@caradon.com



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

Caradon 
Plumbing Solutions