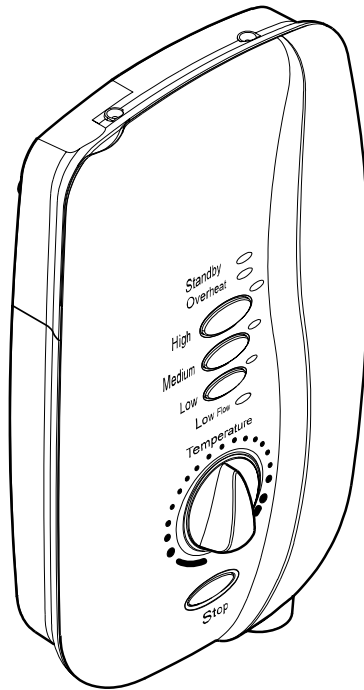


10.8 kW

mira
Sport



ELECTRIC SHOWERS

Installation

Operation &

Maintenance Guide

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

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

The Mira Sport electric shower has separate controls for power selection and temperature/flow adjustment. A unique flow regulator stabilises temperature changes caused by water pressure fluctuations. These can result from taps being turned on or off or toilets being flushed.

Mira Sport 10.8 - A 10.8 kW 240 V AC (9.9 kW 230 V AC) heater with a Mira RF1 adjustable spray handset with three different spray actions (start, force and soothe).

Individual lights indicate '**Standby**', '**Low Flow**' and '**Overheat**'.

Supplied complete with flexible hose, adjustable clamp bracket assembly, soap dish, slide bar, supports and hose retaining ring.

Available in the following finishes; white/chrome, white and light golden.

If you experience any difficulty with the installation or operation of your new shower control, then please refer to the **Fault Diagnosis** section, before contacting Caradon Plumbing Solutions. Our telephone and fax numbers can be found on the back cover of this guide.

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.
- 1.2. THIS MIRA SPORT **MUST** BE EARTHED.
- 1.3. In accordance with the current edition of 'The Plugs and Sockets etc. (Safety Regulations)' in force at the time of installation, this Mira Sport is intended to be permanently connected to the fixed electrical wiring of the mains system.
- 1.4. **DO NOT** twist the individual cable cores of the live and neutral conductors, as this will prevent them from entering the terminal block.
- 1.5. Make sure that any pipework that could become frozen is properly insulated.
- 1.6. **DO NOT** operate this Mira Sport if it is frozen. Allow the Mira Sport to thaw before using again. **DO NOT** use if suspected of being frozen.
- 1.7. If water leaks from the pressure relief valve, maintenance will be required before the Mira Sport can be safely used.
- 1.8. **DO NOT** fit any form of outlet flow control as the outlet acts as a vent for the tank body. Only Mira recommended outlet fittings should be used.
- 1.9. There are no user serviceable components beneath the cover of the Mira Sport. Only a competent tradesperson should remove the cover.
- 1.10. If any of the following conditions occur, isolate the electricity and water supplies and refer to "**To contact us**", on the back page of this guide.
 - 1.10.1. If the cover is not correctly fitted and water has entered the Mira Sport case.
 - 1.10.2. If the case is damaged.
 - 1.10.3. If the Mira Sport begins to make an odd noise, smell or smoke.
 - 1.10.4. If the Mira Sport shows signs of a distinct change in performance, indicating a need for maintenance.
 - 1.10.5. If the Mira Sport is frozen.
- 1.11. Isolate the electrical and water supply before removing the cover.
- 1.12. Mains connections are exposed when the cover is removed.

1.13. Refer to the wiring diagram before making any electrical connections.

1.14. Ensure all electrical connections are tight, to prevent overheating.

2. Caution!

2.1. Read all of these instructions and retain this guide for later use.

2.2. Pass on this guide in the event of change of ownership of the installation site.

2.3. Follow all warnings, cautions and instructions contained in this guide, and on or inside the Mira Sport.

2.4. The electrical installation must comply with the “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 in force at the time of installation. The installation should be carried out by an electrician or contractor who is registered, or is a member of, an association such as:

2.4.1. National Inspection Council for Electrical Installation and Contracting (NICEIC), throughout the UK, Tel: 0171 582 7746.

2.4.2. The Electrical Contractors Association (ECA), England and Wales, Tel: 0171 229 1266.

2.4.3. The Electrical Contractors Association of Scotland (ECAS), Tel: 0131 445 5577.

2.5. This is a high power unit; it is essential to contact your electricity supply company to ensure that the electricity supply is adequate for the purpose.

2.6. 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:

2.6.1. Institute of Plumbing (IOP), throughout the UK, Tel: 01708 472791.

2.6.2. National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales, Tel: 01203 470626.

2.6.3. Scottish and Northern Ireland Plumbing Employers’ Federation (SNIPEF), Scotland and Northern Ireland, Tel: 0131 225 2255.

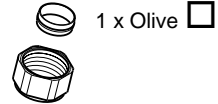
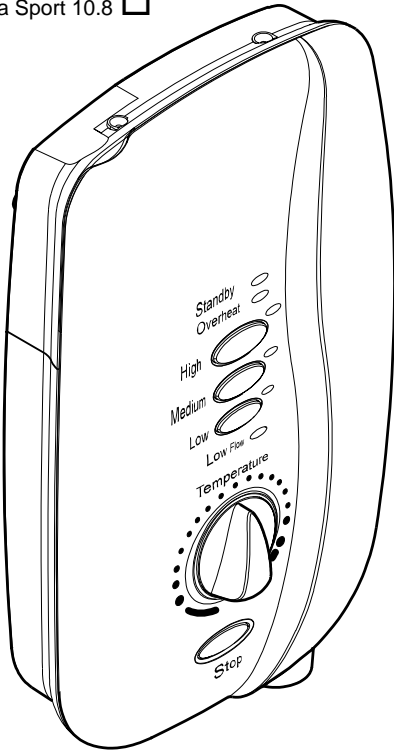
2.7. Anyone who may have difficulty understanding or operating the controls of any shower should be attended whilst showering. Particular consideration should be given to the young, the elderly, the infirm, or anyone inexperienced in the correct operation of the controls.

2.8. When this Mira Sport 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.

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

1. Mira Sport 10.8 kW

1 x Mira Sport 10.8



1 x Olive

1 x Compression Nut



3 x Wall Plug



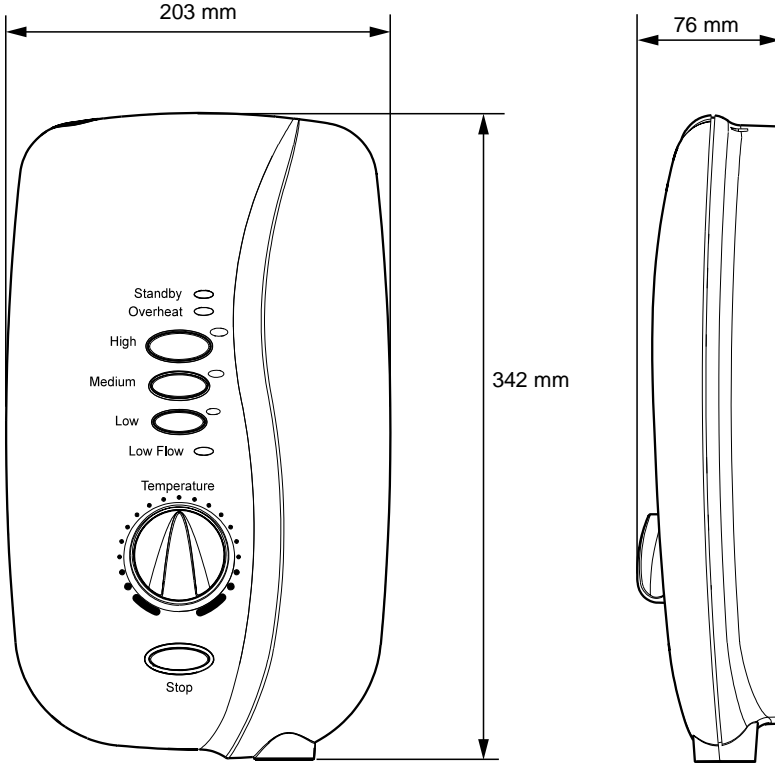
3 x Fixing Screws

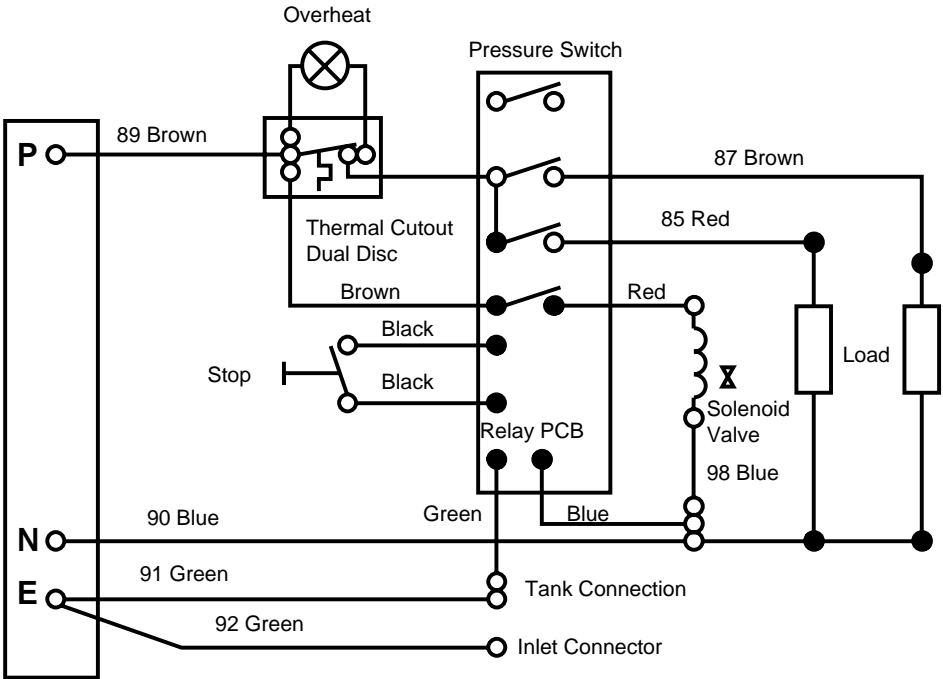
2. Documentation

1 x Installation, Operation and Maintenance Guide

1 x Installation Template

1 x Customer Support Brochure





1. Plumbing

- 1.1. Minimum maintained inlet pressure 1.0 bar for satisfactory operation.
- 1.2. Maximum static inlet pressure 10 bar.
- 1.3. Minimum static pressure 0.2 bar to keep the flow valve closed.

2. Electrical

- 2.1. The Mira Sport requires a 45 Amp fuse.
- 2.2. The terminal block will not accept cable larger than 16 mm².

3. Standards and Approvals

- 3.1. The Mira Sport has been designed to comply with the requirements of the British Electrotechnical Approvals Board (BEAB) and UK Water Regulations/Bylaws (Scotland)
- 3.2. This Mira Sport complies with all relevant directives for CE marking.

1. Plumbing

- 1.1. The Mira Sport is designed to operate with a minimum **maintained inlet pressure of 1.0 bar** up to a **maximum static inlet pressure of 10 bar**.
- 1.2. The Mira Sport is normally connected to the cold water mains-fed supply. However, the water supply can be taken from a cold water storage cistern, provided there is a minimum maintained inlet head of water of 10 metres (the vertical distance from the base of the cold water storage cistern to the shower fitting handset). The cistern-fed water supply must be independent from other supply draw-offs, and should avoid long horizontal pipe runs and use swept bends rather than 90° elbows.
- 1.3. The Mira Sport is suitable for installation within the shower area. It must be positioned over a water catchment area with the controls at a convenient height for the user.
- 1.4. The Mira Sport is fitted with a brass inlet connector assembly intended to connect to a 15 mm compression fitting supplied from the top, bottom or back.
- 1.5. **Do not** fit the Mira Sport to the wall and tile up to the case. The Mira Sport must be fitted on to the finished flat and even wall surface. This is important as difficulty may be encountered when fitting the cover and subsequent operation of the unit could be impaired (Small pillars moulded on to the back of the case allow air circulation).
- 1.6. Refrain from applying excessive force when making any connections. Always provide mechanical support when making the plumbing connections.
- 1.7. **Do not install the Mira Sport in a position where it may become frozen.** The shower unit must not be fitted where it may be exposed to freezing conditions. The shower unit must not be used if suspected of being frozen.
- 1.8. We recommend that a non-restrictive (free flowing) isolating valve is fitted in the cold water supply pipe to allow the complete maintenance of the Mira Sport. **Do not** use a valve with a loose washer plate (jumper).
- 1.9. To avoid damage to the case when soldered fittings are used, pre-solder the pipework and fittings before connecting them to the inlet connector assembly.
- 1.10. The Mira Sport is fitted with a ½ " BSP male outlet thread, to accept a Mira shower hose.

- 1.11. Supply pipework **MUST** be flushed to clear debris before connecting the Mira Sport.
- 1.12. 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. Mira Sport malfunction due to excessive limescale formation is not covered by the manufacturer's guarantee. Your local water company will be able to advise the hardness of water in your area.
- 1.13. 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 backsiphonage (refer to **Figure 1**). 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. The inclusion of the Mira DCV-H will increase the required supply pressure typically by 0.1 bar.
- Double checkvalves, fitted in the inlet supply to the appliance, cause a pressure buildup, which could exceed the maximum static inlet pressure for the appliance.
- 1.14. Avoid layouts where the shower hose will be sharply kinked. This may reduce the life of the hose.

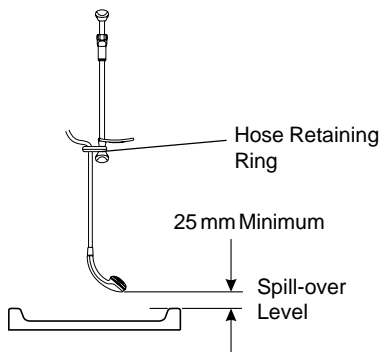


Figure 1

2. Electrical

- 2.1. In a domestic installation, the rating of the electricity supply company fuse and the consumer unit must be adequate for the additional demand. As these Mira Sports are high power units, it is essential to contact your electricity supply company to ensure that the supply is adequate for the Mira Sport. Voltage drop due to local heavy demand will reduce the shower's performance.

2.2. The Mira Sport **must be earthed** by connecting the supply-cable earth conductor to the earth terminal.

Supplementary bonding: Within the bathroom or shower room, all accessible conductive parts of electrical equipment and extraneous conductive parts that are likely to introduce earth potential, must be electrically bonded to earth using a minimum cable size of 4.0 mm² if the cable is not mechanically protected (2.5 mm² if mechanically protected).

2.3. The minimum cable size (cross-sectional area) required is 6 mm² under normal conditions of installation.

Important! The shower circuit should be separated from other circuits by at least twice the diameter of the cable or conduit and it should not be run through thermally insulating material or in locations where the ambient temperature is likely to exceed 30 °C. If any of these conditions are unavoidable it is necessary to determine the cable size which will prevent damage to the cable size which will prevent damage to the cable caused by overheating.

2.4. To obtain full advantage of the power provided by this unit, use the shortest possible cable route from the consumer unit to the shower. It is also necessary to satisfy the disconnection time and thermal constraints which mean that, for any given combination of current demand, voltage drop and cable size, there is a maximum permissible length of circuit.

As a guide only, the following maximum permissible lengths are given for 6 mm² and 10mm² cable protected by a 45A MCB type B and allowing for a 5 volt drop:

Mira Sport 10.8 kW (240 V AC) at 240 V - 15 metres 6 mm cable

Mira Sport 10.8 kW (240 V AC) at 240 V - 25 metres 10 mm cable

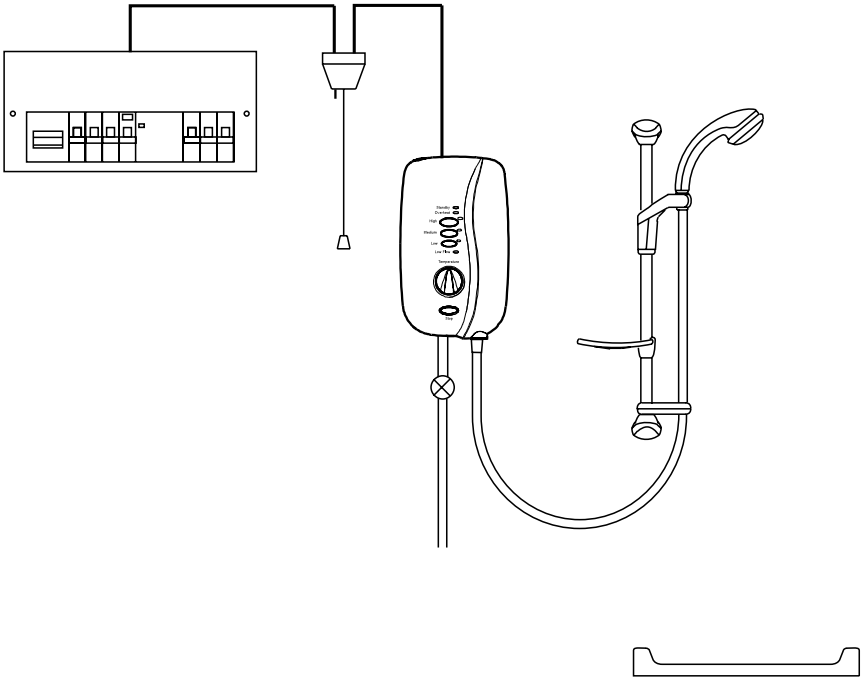
2.5. A 30 mA residual current device (RCD) should be fitted. This may be part of the consumer unit or a separate unit.

2.6. A separate, permanently connected supply must be taken from the consumer unit to the Mira Sport through a 45 amp double-pole switch, which has at least 3 mm contact separation. The switch can be a ceiling mounted pull-cord type within the shower room or a wall mounted switch in an adjacent room.

2.7. DO NOT twist the individual cable cores of the live and neutral conductors, as this will prevent them from entering the terminal block.

2.8. DO NOT exert strain on the terminal block.

2.9. DO NOT turn-on the electrical supply until the plumbing has been completed.



Plumbing and Electrical Schematic Diagram

1. Mira Sport

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

Note! An installation template is supplied to help you install the Mira Sport.

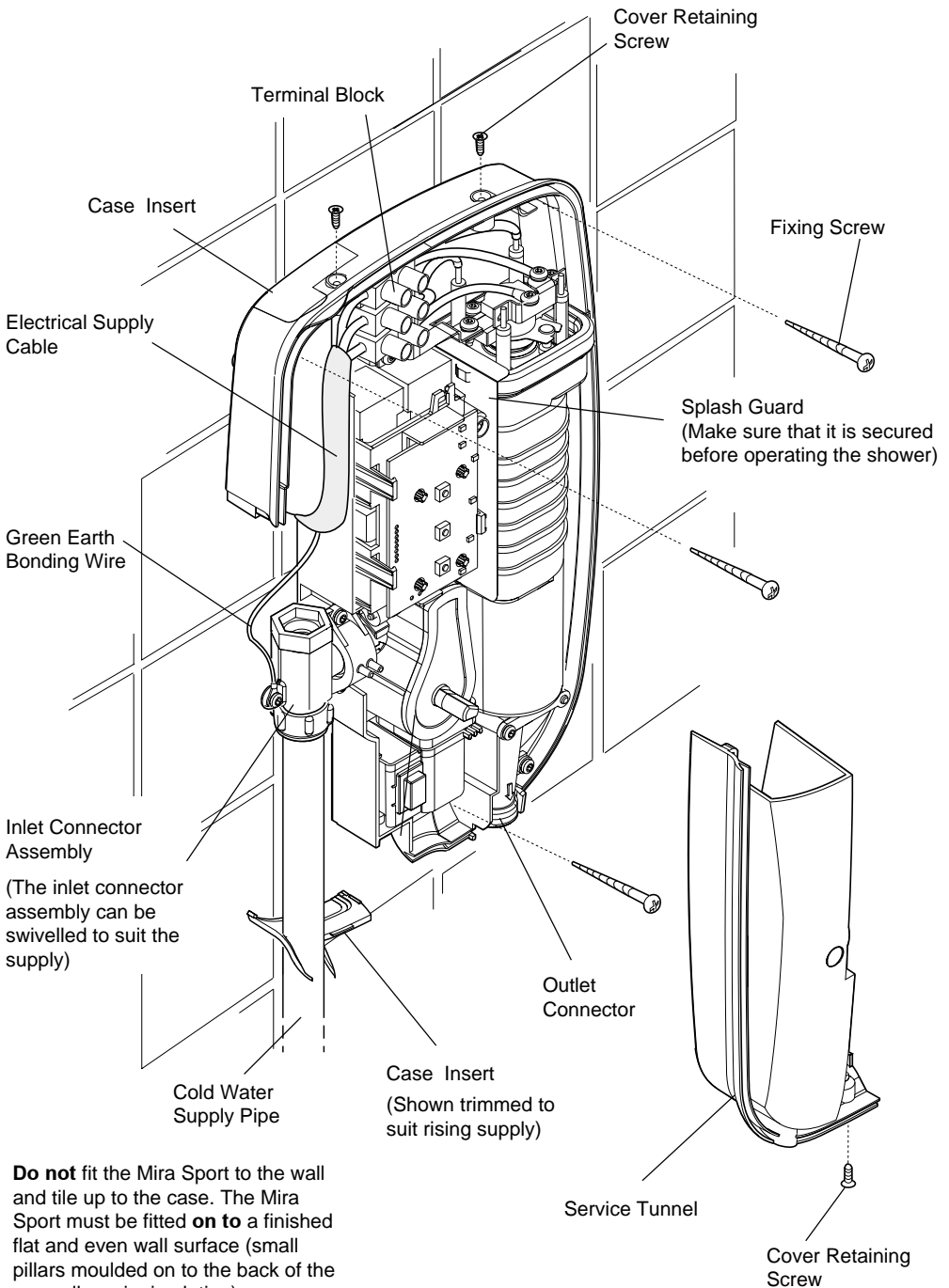
- 1.1. Decide on a suitable position for the Mira Sport (minimum distance of 200 mm from the ceiling to allow for cover fit and removal). The position of the Mira Sport and the shower fittings must provide a minimum gap of 25 mm between the spill-over level of the shower tray/bath and the handset. This is to prevent backsiphonage (Refer to Figure 1, Section 7).
- 1.2. Remove the three cover retaining screws.
- 1.3. Remove the cover.
- 1.4. Remove the service tunnel.
- 1.5. Determine the direction of the inlet water supply: top (falling), bottom (rising), or back inlet.

Note! Make sure that the back inlet does not go directly back into a solid wall. Use a soldered elbow.

- 1.6. Swivel the inlet connector assembly to suit. Remove the inlet blanking cap. Avoid trapping the green earth bonding wire.
- 1.7. Two case inserts are supplied with the Mira Sport, so that they can be trimmed to suit the supplies entering the product. Before fitting the case, make sure that the case inserts are fitted.
- 1.8. **Thoroughly flush the mains-fed cold water supply pipe. The supply must be clean and free from debris BEFORE connecting the Mira Sport.**
- 1.9. Put the installation template on the wall and mark through the positions of the fixing holes. Make sure that sufficient electrical supply cable is available for connection to the terminal block.

- 1.10.** Drill and plug the top two fixing holes. Secure the Mira Sport to the wall with the screws provided. Drill the bottom fixing hole with the product in place. Alternative fixings (not supplied) may be necessary for some wall structures. Avoid drilling into any supply cable/pipe.
- 1.11.** Install the mains-fed cold water supply pipe.
- 1.12.** Make the connection to the mains-fed cold water supply pipe.
- 1.13.** Bring the electrical supply cable into the case through one of the cable entry points.
- 1.14.** Strip back sufficient of the outer cable insulation to enable routing to terminal block.
- 1.15.** Fit an earth sleeve to the earth conductor. Connect the conductors firmly into the terminal block. Make sure that the bare cores of each conductor are securely trapped within each conductor clamp.

L = Red wire
N = Black wire
E = Yellow/Green sleeved wire.
- 1.16.** Re-tighten the terminal block screws.
- 1.17.** If necessary, fit an earth bonding clamp to the copper supply pipe and ensure bonding complies with relevant regulations in force at the time of installation.
- 1.18.** Refit the cover. Fit and tighten the three cover retaining screws.
- 1.19.** Fit the shower fittings. Refer to separate instructions.



Installation of the Mira Sport

1. Mira Sport

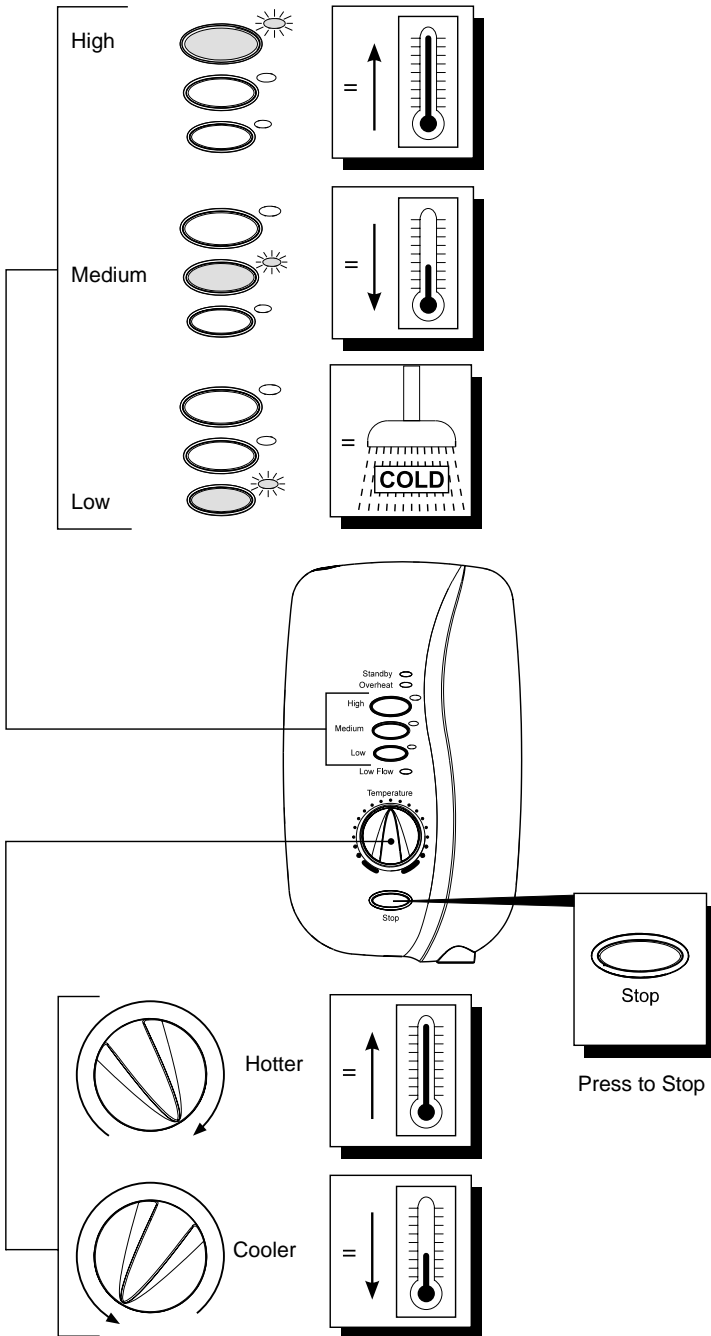
If you are unsure how electric showers work, please read through **Section 10, Operation** before continuing.

- 1.1. Turn the **Temperature** control knob fully anticlockwise to the full cold position.
- 1.2. Turn on the water supply fully on at the isolating valve, check that water is not leaking from the bottom of the case.
- 1.3. Switch on the electrical supply at the double pole switch. The '**Standby**' neon will provide a visual indication that the electrical supply is connected.
- 1.4. Press the '**Low**' button. Check that water flows freely from the shower within a few seconds. If not refer to **Section 12, Fault Diagnosis**. The water from the handset will be at full force and at a cool temperature.
- 1.5. Turn the **Temperature** control knob slowly clockwise. As the knob is rotated the flow will be reduced and the temperature will remain cool - this shows that the flow regulator assembly is operating correctly. Return the **Temperature** control knob anticlockwise to full cold position.
- 1.6. Press the '**Medium**' button. The temperature of the water should rise slightly. Allow a few seconds for the warm water to reach the handset - this shows that the '**Medium**' power setting is operating correctly.
- 1.7. Press the '**High**' button. The temperature of the water will rise further - this shows that the full power setting is operating correctly.
- 1.8. Set the shower temperature by rotating the **Temperature** control knob as necessary. Turn the **Temperature** control knob clockwise for hotter water and anticlockwise for cooler water.

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

- 1.9. When the required temperature is reached, push the **STOP** button to stop the flow. Water will continue to flow from the handset for a few seconds, as water is purged from the tank. Isolate the power at the double pole switch.

Note! A slight hissing sound may be heard from the Mira Sport during operation. High mains water pressure and high shower temperatures will affect the tone. This is quite normal in use.



Commissioning the Mira Sport

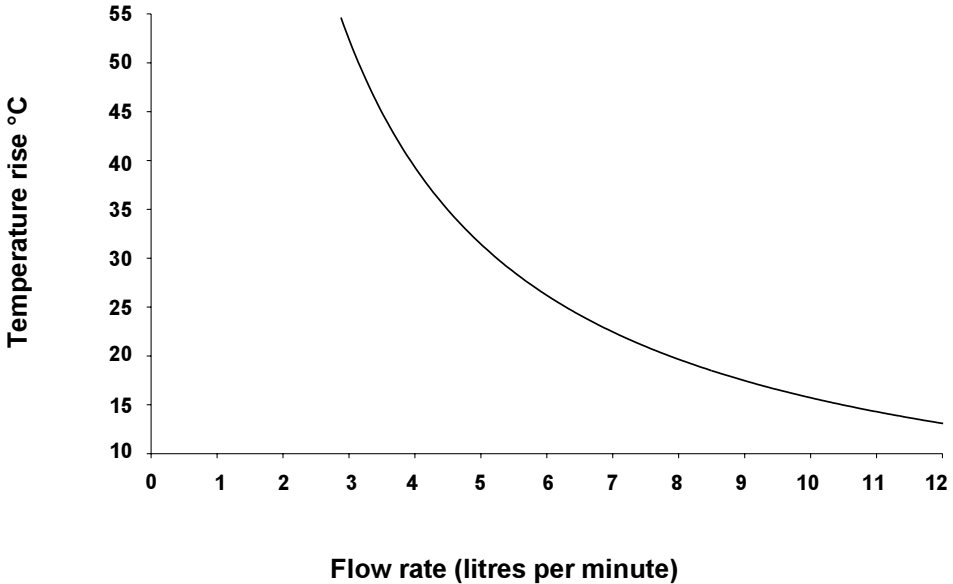
1. Advice to Users

- 1.1. Electric showers work by taking in cold water and passing it over the heating elements contained in the tank body of the shower.
- 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 stable shower temperatures.
- 1.3. The Mira Sport is designed to stabilise temperature changes caused by water pressure fluctuations. These can result from taps being turned on or off or toilets being flushed. Under such conditions average shower temperatures will be held within a 6 °C band, provided that the minimum required pressure is maintained.
- 1.4. Seasonal changes in the temperature of the incoming cold water supply and or fluctuations in mains electrical voltage, will require the '**Temperature**' knob to be adjusted as necessary.
- 1.5. The Mira Sport requires a minimum maintained/running pressure of 1.0 bar to operate. At pressures above 1.0 bar the Mira Sport will minimise the temperature fluctuations caused when other draw-off points are used. If the flow rate drops below an acceptable value, the Mira Sport will turn the heater elements off, resulting in a cool shower. The '**Low Flow**' neon will provide visual confirmation of this condition.
- 1.6. If the water temperature reaches an unsafe level, the thermal switch assembly turns off the heater elements. As the water temperature falls the heater elements will be turned on. The switch will cycle on/off/on if the flow rate is not increased and the temperature of the shower reduced. The '**Overheat**' neon will provide visual confirmation of this condition.

Caution! This shower is **NOT** thermostatic. It can be set to scalding temperatures. The young, the elderly, the infirm, or anyone inexperienced in the correct operation of the shower should be supervised.

- 1.7. Check the shower temperature before entering the shower. The previous user may have selected a **different** temperature setting.
- 1.8. When the shower is first turned on, or a different temperature is selected, there will be a slight delay before the water temperature changes.

Temperature rise versus flow rate for the Mira Sport 10.8kW



- (i) These curves are for the specified outputs at 240V.
- (ii) All Mira Sport heating elements 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.)

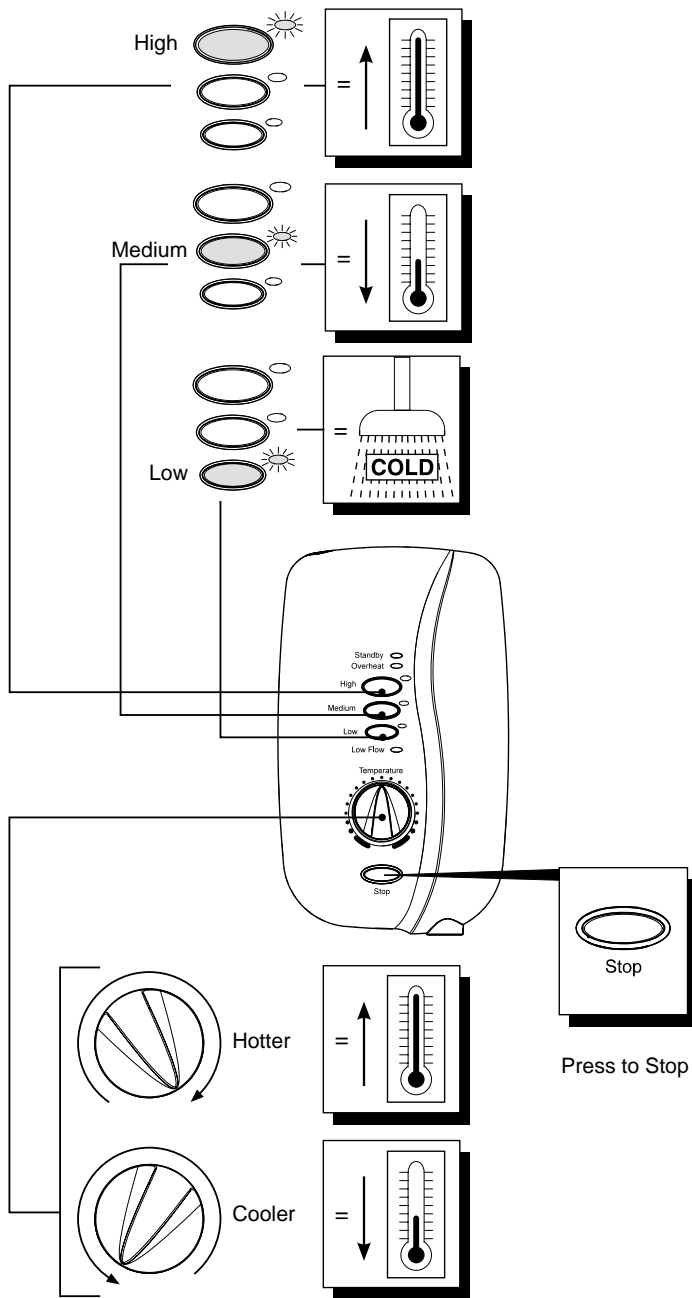
Example: For the Mira Sport 10.8 kW on full power setting with an incoming water supply at 10°C and a showering temperature at 40°C, the temperature rise is 30°C. The flow rate is therefore, 5 l/min.

2. Mira Sport

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 Mira Sport.

- 2.1. **Switch on** pullcord or wall mounted switch. The '**Standby**' neon on the Sport will provide a visual indication that there is power to the shower.
- 2.2. **Press** one of the three power buttons, '**High**', '**Medium**' or '**Low**'. The adjacent green indicator will illuminate and confirm the action.
- 2.3. Wait **15-20** seconds for warm water to reach the handset.
- 2.4. If necessary turn the '**Temperature**' control knob **clockwise** to increase the temperature and **anticlockwise** to decrease the temperature. Wait **10-15** seconds for the adjusted temperature to reach the handset. The control knob operates through approximately $\frac{3}{4}$ of a turn from cold to hot.
- 2.5. **TO TURN OFF** press the '**Stop**' button.
- 2.6. A small amount of water may be retained in the shower fitting after the shower control has been turned off. This may drain over a few minutes.
- 2.7. **Switch off** at the pull-cord or wall mounted switch.



Operation of the Mira Sport

1. General

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

Providing the shower 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 maintenance instructions are provided. Before replacing any parts ensure that the underlying cause of the malfunction has been resolved.

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

2. Cleaning

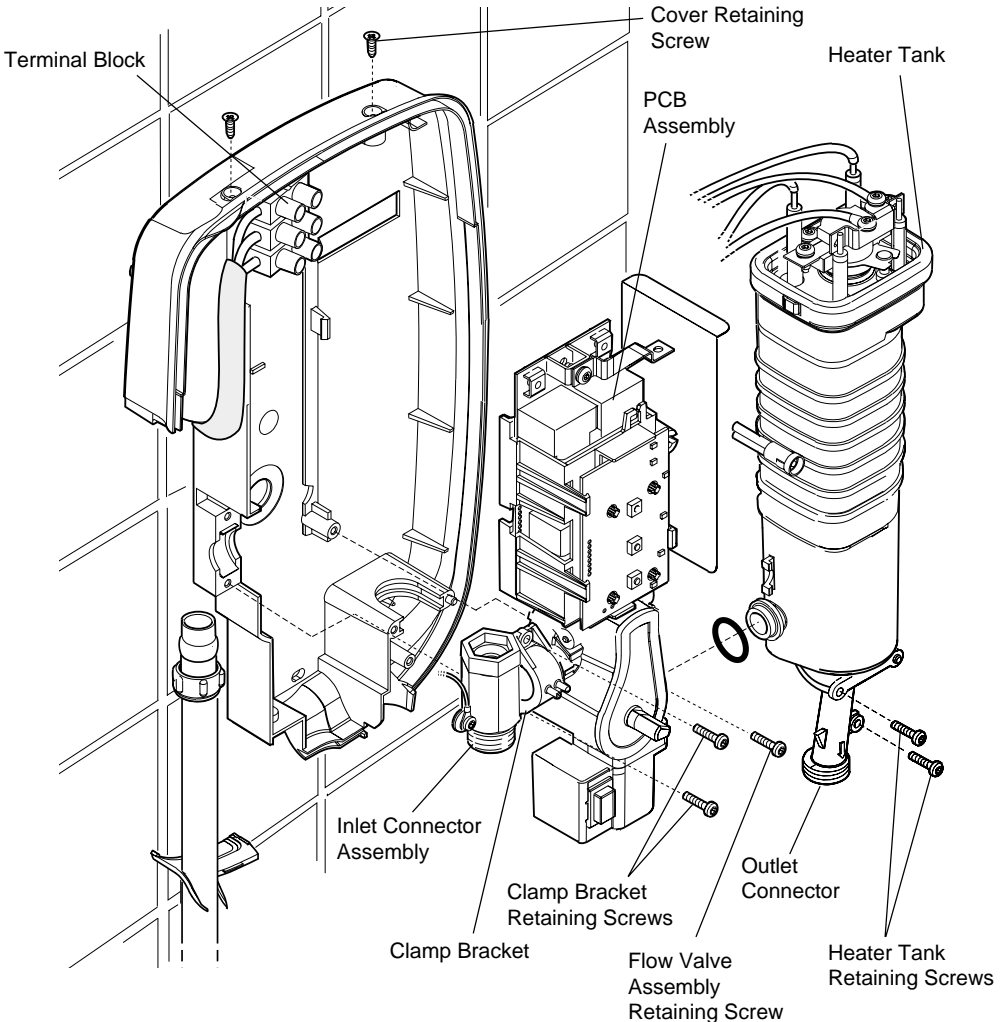
Many household cleaners contain abrasives and chemical substances, and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.

3. Flow Valve Assembly - Removal and Installation

WARNING! Isolate the electrical and water supplies before removing the cover. Mains electricity connections are exposed when the cover is removed.

- 3.1. Remove the three cover retaining screws, the cover and the service tunnel.
- 3.2. Remove the hose from the outlet connector and loosen the connection to the inlet connector assembly.
- 3.3. Remove the screw that holds the terminal block in position. This will give you sufficient room to carry out the procedure without disconnecting any mains electrical wiring.
- 3.4. Remove the splash guard located between the heater tank and the flow valve assembly.
- 3.5. Remove the screws (2 off) that hold the inlet clamp bracket in position and remove the clamp bracket.
- 3.6. Remove the screws (4 off) that hold the flow valve assembly, PCB assembly and the heater tank in position.
- 3.7. Carefully pull the flow valve assembly, PCB assembly and the heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.

- 3.8. Remove the outlet connector from the heater tank.
- 3.9. Remove the flow valve from the PCB assembly, inlet connector assembly and the heater tank.
- 3.10. Make a note of the positions of the solenoid wires. Remove the solenoid wires from the solenoid.
- 3.11. Remove the flow valve.
- 3.12. Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions.

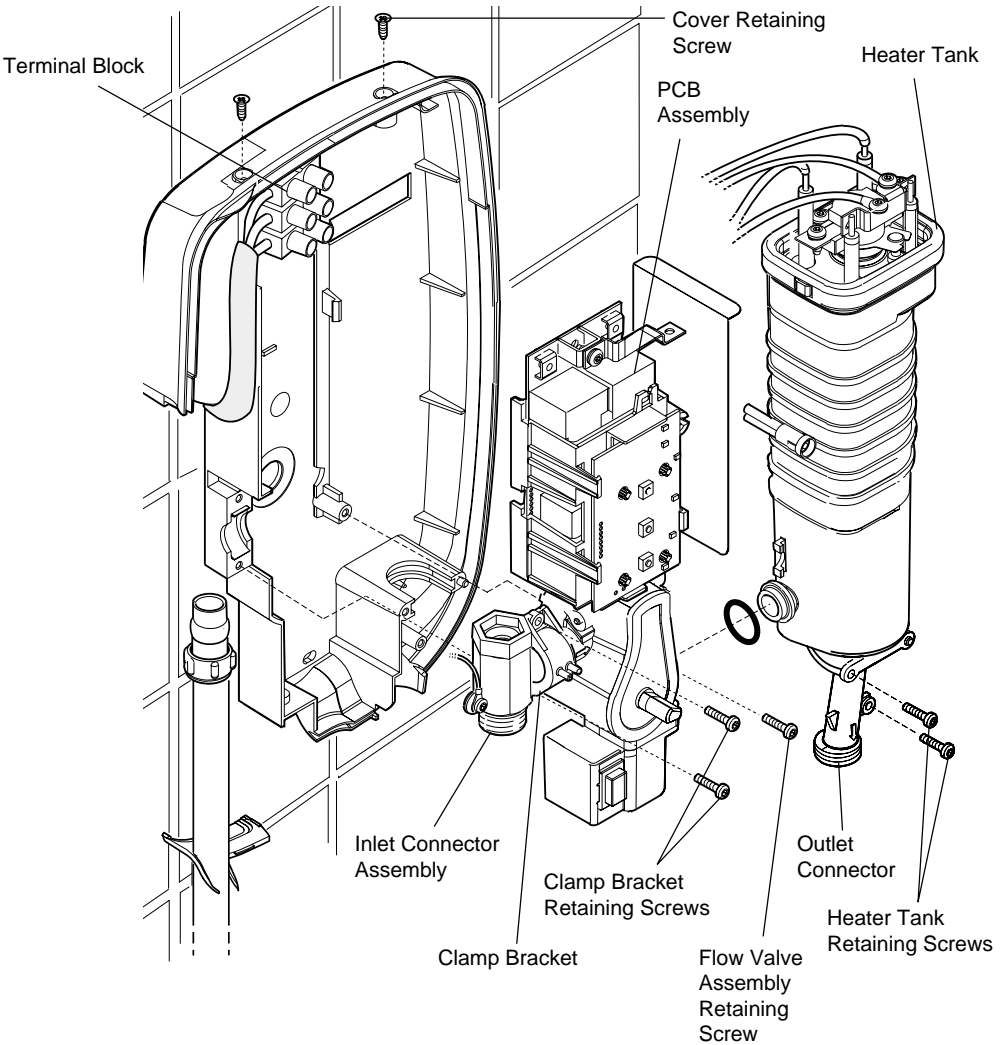


Flow Valve Assembly - Removal and Installation

4. Heater Tank - Removal and Installation

WARNING! Isolate the electrical and water supplies before removing the cover. Mains electricity connections are exposed when the cover is removed.

- 4.1. Remove the three cover retaining screws, the cover and the service tunnel.
 - 4.2. Remove the hose from the outlet connector and loosen the connection to the inlet connector assembly.
 - 4.3. Remove the terminal block by unscrewing the fixing screw.
 - 4.4. Remove the splash guard located between the heater tank and the flow valve assembly
 - 4.5. Remove the screws (2 off) that hold the inlet clamp bracket in position and remove the clamp bracket.
 - 4.6. Remove the screws (4 off) that hold the flow valve assembly, PCB assembly and the heater tank in position.
 - 4.7. Carefully pull the flow valve assembly, PCB assembly and the heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.
 - 4.8. Make a note of the positions of the wiring on top of the heater tank.
 - 4.9. Remove the black and the red wires from the PCB.
 - 4.10. Remove the bonding strip and thin black wire from the left side of the thermal switch and the brown wire and thin black wires from the other side of the thermal switch.
 - 4.11. Remove the green and the blue wires from the top of the heater tank.
- Caution!** Do not press printed disc on the thermal switch as this will make the component unserviceable.
- 4.12. Remove the fixing screw and remove the thermal switch.
 - 4.13. Separate the heater tank from the flow valve assembly and PCB assembly.
 - 4.14. Remove the outlet connector from the heater tank.
 - 4.15. Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions.



Heater Tank - Removal and Installation

5. Thermal Switch - Removal and Installation

WARNING! Isolate the electrical and water supplies before removing the cover. Mains electricity connections are exposed when the cover is removed.

- 5.1. Remove the three cover retaining screws, the cover and the service tunnel.
- 5.2. Remove the hose from the outlet connector and loosen the connection to the inlet connector assembly.

- 5.3. Remove the screw that holds the terminal block in position. This will give you sufficient room to carry out the procedure without disconnecting any mains electrical wiring.
- 5.4. Remove the screws (2 off) that hold the inlet clamp bracket in position and remove the clamp bracket.
- 5.5. Remove the screws (4 off) that hold the flow valve assembly, PCB assembly and the heater tank in position.
- 5.6. Carefully pull the flow valve assembly, PCB assembly and the heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.
- 5.7. Remove the bonding strip and thin black wire from the left side of the thermal switch and the brown wire and thin black wires from the other side of the thermal switch.
- 5.8. Remove the green and the blue wires from the top of the heater tank.
- 5.9. Remove the fixing screw and remove the thermal switch.

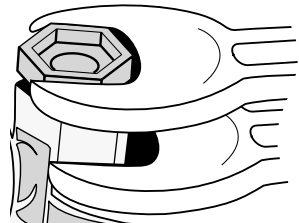
Caution! Do not press printed disc on the replacement thermal switch as this will make the component unserviceable.

- 5.10. Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions.

6. Inlet Filter - Cleaning

WARNING! Isolate the electrical and water supplies before removing the cover. Mains electricity connections are exposed when the cover is removed.

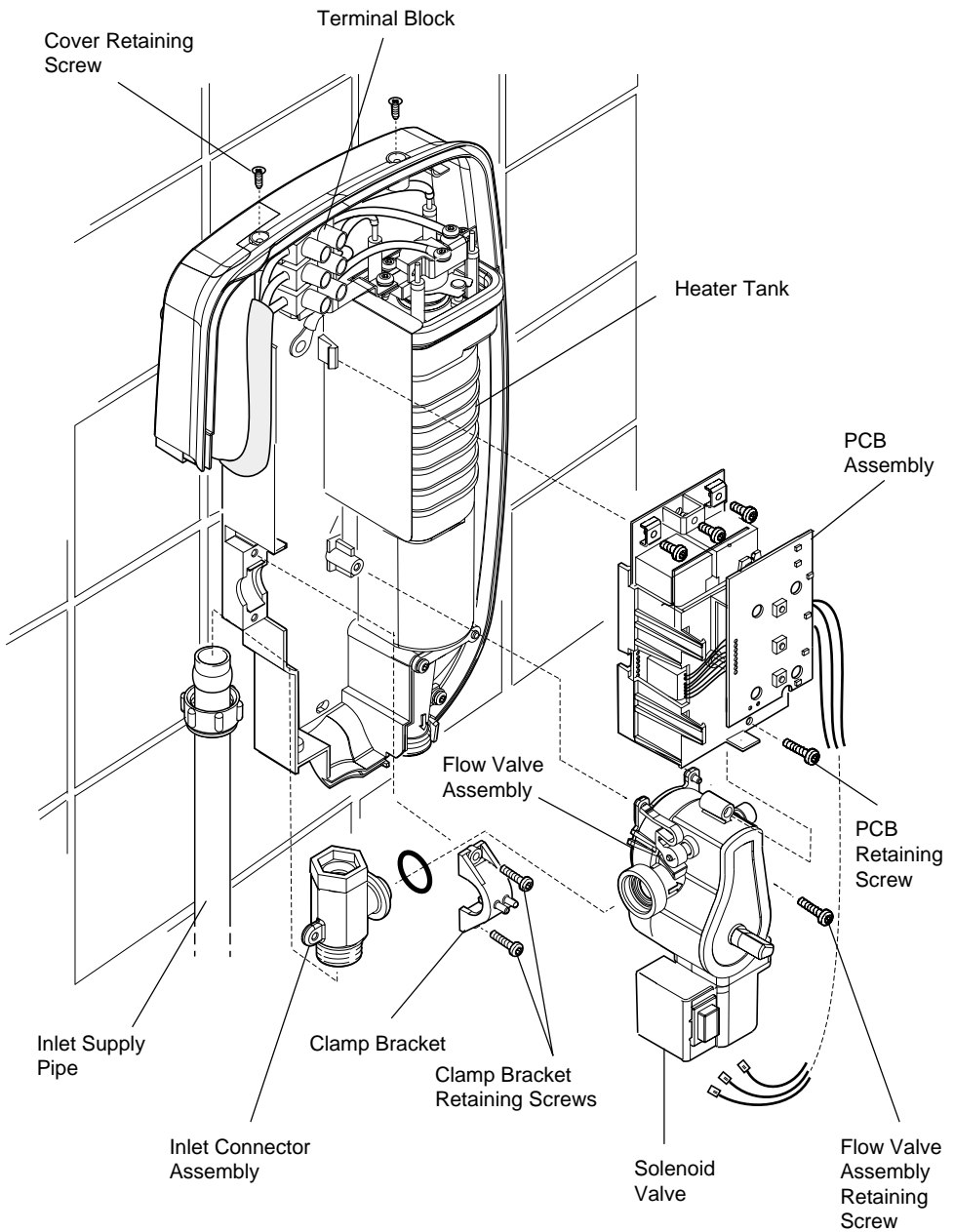
- 6.1. Remove the three cover retaining screws, the cover and the service tunnel.
- 6.2. Hold a wrench across the flats of the inlet connector assembly to prevent damage to the connector, and unscrew the inlet filter.
- 6.3. Withdraw the inlet filter. Clean or renew as necessary.
- 6.4. Refit in reverse order. **Ensure that the filter is screwed fully home.**



7. Printed Circuit Board - Removal and Installation

WARNING! Isolate the electrical and water supplies before removing the cover. Mains electricity connections are exposed when the cover is removed.

- 7.1.** Remove the three cover retaining screws, the cover and the service tunnel.
- 7.2.** Remove the hose from the outlet connector and loosen the connection to the inlet connector assembly.
- 7.3.** Remove the screw that holds the terminal block in position. This will give you sufficient room to carry out the procedure without disconnecting any mains electrical wiring.
- 7.4.** Remove the screws (2 off) that hold the inlet clamp bracket in position and remove the clamp bracket.
- 7.5.** Remove the screws (4 off) that hold the flow valve assembly, PCB assembly and the heater tank in position.
- 7.6.** Carefully pull the flow valve assembly, PCB assembly and the heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.
- 7.7.** Make a note of the positions of the wiring on the PCB.
- 7.8.** Remove the red and brown wires and the busbar from the top of the PCB.
- 7.9.** Make a note of the positions of the wiring on top of the heater tank.
- 7.10.** Remove the brown, blue and green thin wires from the top of the heater tank.
- 7.11.** Make a note of the positions of the wires on the bottom of the solenoid.
- 7.12.** Remove the black and the red wires from the bottom of the solenoid valve.
- 7.13.** Remove the PCB assembly and associated wiring.
- 7.14.** Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions.



Printed Circuit Board - Removal and Installation

Fault Diagnosis

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

The trouble shooting information tabled below gives details on what you can do as a user without removing the cover should you encounter difficulties whilst operating the shower.


Note! Should these remedies prove to be unsuccessful in solving your problem, contact your installer for advice.

Malfunction	Cause	Remedy
No water or very low flow rate.	Handset sprayplate blocked.	Remove & clean: Refer to Maintenance in the I, O & M guide for the fittings.
	Incoming water supply stop valves or appliance isolating valve turned down or off.	Turn stop/isolating valve to fully on position.
	Hose or Handset blocked	Clear blockage or renew
Appliance fails to produce hot water in any switch position.	Electrical supply isolated at double pole switch (the pullcord).	Switch on electrical supply via the double pole switch.
	Fuse blown or MCB/RCD tripped indicating possible electrical fault.	Renew the fuse or reset the MCB/RCD. If fault persists, contact your installer.
Shower cycles from hot to cold.	The temperature knob is positioned at an unsafe level causing the appliance thermal trip to operate and cut the power to the heater tank.	Turn the temperature knob sufficiently anti clockwise to increase water flow and reduce temperature.

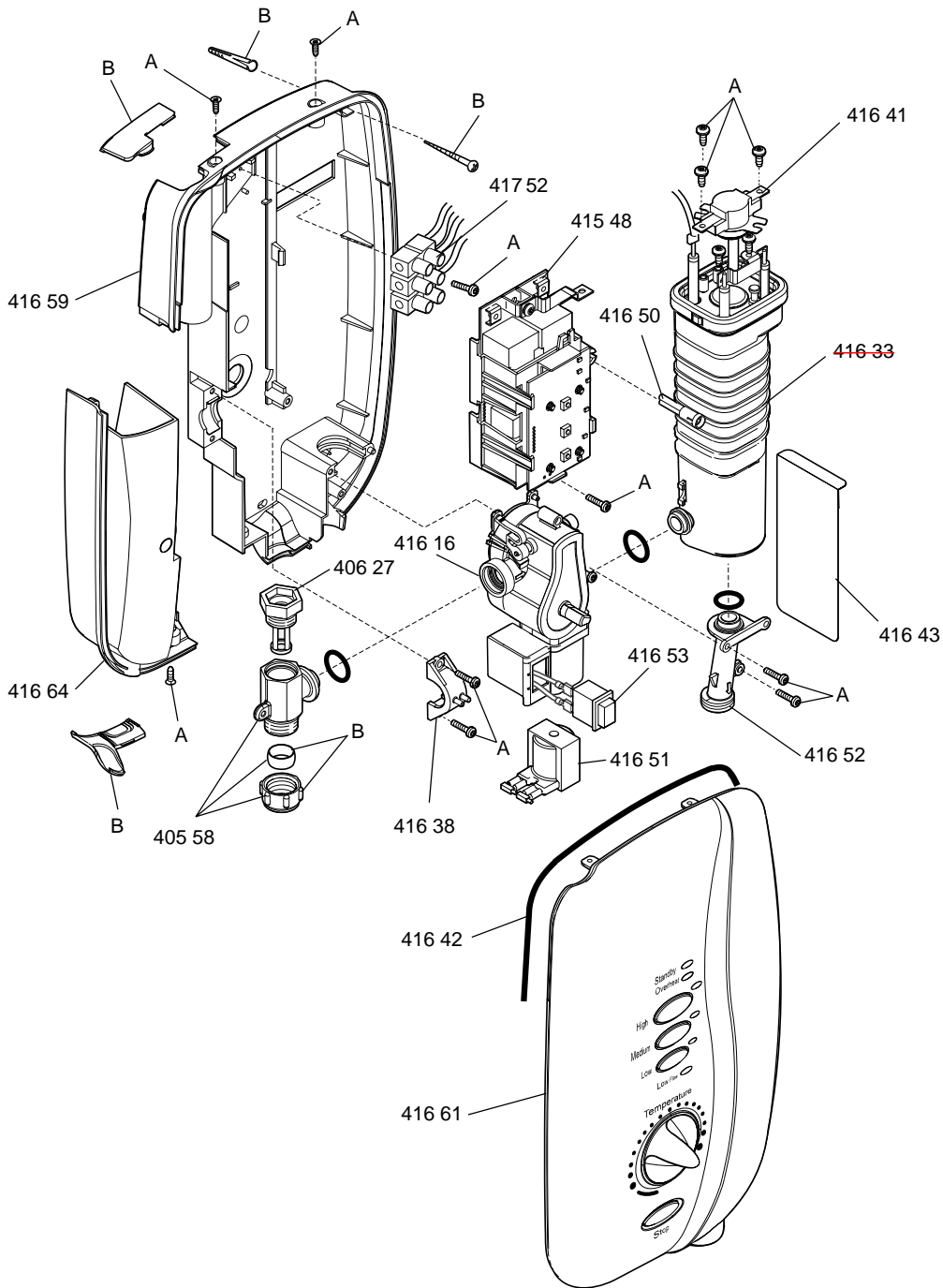
(Continued)

Malfunction	Cause	Remedy
(Continued)	<p>Handset sprayplate blocked.</p> <p>Other outlets being used whilst showering, causing water pressure to drop below minimum required to operate appliance.</p> <p>Water pressure below minimum required for appliance operation.</p>	<p>Remove and clean (Refer to Maintenance in the I, O & M guide for the fittings).</p> <p>Ensure other outlets e.g. bath, washing machine or dishwasher are not in use whilst showering.</p> <p>Ensure incoming water supply stopcock and or appliance isolating valve turned fully on. If fault still persists contact your installer.</p>
Unable to select a cool enough shower during summer months.	Due to the rise in water mains supply temperature, the power rating may be too high.	Press the MEDIUM button and readjust temperature knob until suitable temperature is achieved.
Operation of temperature knob has little or no effect on water temperature.	Handset sprayplate blocked.	Remove Handset and clean (Refer to Maintenance in the I, O & M guide for the fittings). If fault still persists contact your installer.

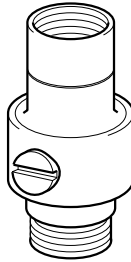
1. Mira Sport Spare Parts List

405 58	Inlet Connector Assembly
406 27	Inlet Filter (with 'O' seal fitted)
415 48	PCB Assembly
416 16	Flow Valve Assembly
416 33	Heater Tank 
416 38	Clamp Bracket (Inlet)
416 41	Thermal Switch
416 42	Cover Seal
416 43	Splash Guard
416 44	Screw Pack - components identified 'A'
416 50	Neon Assembly
416 51	Solenoid Coil
416 52	Outlet Connector
416 53	Momentary Push Button Switch
416 59	Case Assembly
416 61	Cover Assembly
416 64	Service Tunnel
417 19	Component Pack - components identified 'B'
417 52	Terminal Block Assembly
417 54	Wire Pack (wire 98 - refer to wiring diagram)

2. Mira Sport spare parts diagram



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. 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.



DCV-H Outlet double check valve

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 prearranged time a callout charge may be made.

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

To contact us:- For England, Wales and Scotland

Telephone 01242 262888 (12 Direct Lines)
and ask for 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 Eire

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

By Fax: Dublin 01 4592329 – 24 Hours

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

Mira Showers

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Cheltenham GL52 5EP.

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

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SHOWERS