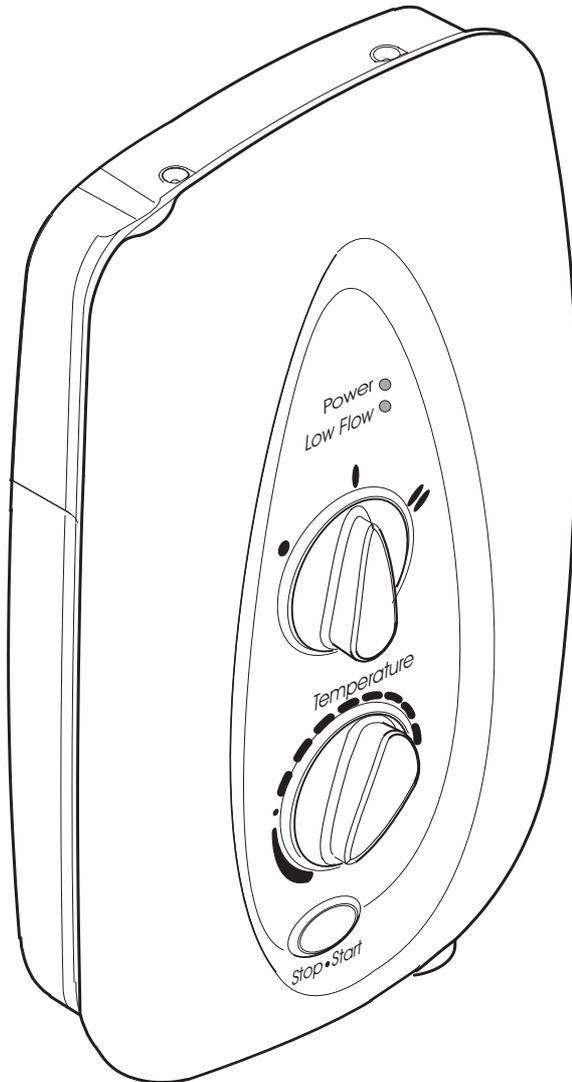


8.5 and 9.5 kW

mira Sprint



ELECTRIC SHOWERS

Installation & User Guide

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

CONTENTS

Introduction	3
Important Safety Information	4
Pack Contents Checklist	6
Dimensions	7
Wiring Diagram	8
Specifications	9
Plumbing	9
Electrical	9
Standards and Approvals	9
Installation Requirements	9
Installation	13
Commissioning	16
Maintenance	18
General	18
Cleaning	18
Operation	23
Fault Diagnosis	27
Spare Parts	32
Notes	34
Customer Service	36

INTRODUCTION

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

The Mira Sprint is a range of electric showers having 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 Sprints covered by this guide:

Mira Sprint 8.5 - An 8.5 kW 240 V AC heater with a Mira Response adjustable spray handset with three different spray actions (start, force and soothe). Individual lights indicate 'POWER' and 'LOW FLOW'. Supplied complete with flexible hose, adjustable clamp bracket assembly, soap dish, slide bar and supports and hose retaining ring. Available in white/chrome finish.

Mira Sprint 9.5 - A 9.5 kW 240 V AC heater with a Mira Response adjustable spray handset with three different spray actions (start, force and soothe). Individual lights indicate 'POWER' and 'LOW FLOW'. Supplied complete with flexible hose, adjustable clamp bracket assembly, soap dish, slide bar and supports and hose retaining ring. Available in white/chrome finish.

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

IMPORTANT SAFETY INFORMATION

Please read all of these instructions and retain this guide for later use.

1. Please pass on this guide in the event of change of ownership of the installation site.
2. Follow all warnings, cautions and instructions contained in this guide, and on the appliance.
3. Make sure you know how to isolate the water and electricity supply.
4. This appliance is not thermostatic and can produce scalding temperatures if not operated in accordance with the instructions given in this manual.
5. Make sure that you fully understand how to operate this shower and make sure that it is properly maintained in accordance with the instructions given in this manual.
6. 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, the disabled, anyone who suffers from a medical condition that can result in temporary incapacity (e.g. epilepsy or blackouts) and anyone inexperienced in the correct operation of the controls.
7. Sunburn or skin conditions can increase your sensitivity to hot water. Make sure that you set the shower to a cooler temperature.
8. The installation should be carried out by a competent installer who is familiar with electrical and plumbing systems (refer to **INSTALLATION REQUIREMENTS** for further details).
9. The shower unit must not be exposed to freezing conditions. If the shower is to be left for long periods of time (e.g. holiday) we would recommend that supplies to the shower are isolated.
10. **DO NOT** fit any form of outlet flow restriction (trigger handset). Use only Mira recommended fittings.
11. 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.
 - If the cover is not correctly fitted and water has entered the appliance case.
 - If the case is damaged.
 - If the appliance begins to make an odd noise, smell or smoke.
 - If the appliance shows signs of a distinct change in performance, indicating a need for maintenance.
 - **DO NOT** operate if water leaks from this appliance.
 - **Warning! DO NOT** operate the appliance if it is frozen. If suspected of being frozen, allow to thaw and contact installer before using again.

12. 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.
13. This product is not suitable for areas of very high humidity (i.e. Steam rooms). Contact your installer for more advice.
14. Turn off the electrical and water supplies before commencing installation. The electricity must be turned off at the mains and the appropriate circuit fuse removed, if applicable.
15. Mains connections are exposed when the cover is removed.
16. Refer to the wiring diagram before making any electrical connections.
17. Having completed the installation, make sure that the user is familiar with the operation of the appliance.
18. 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 Part P (Building Regulations) and is a member of, an association such as:
 - National Inspection Council for Electrical Installation and Contracting (NICEIC), throughout the UK.
 - The Electrical Contractors Association (ECA), England and Wales.
 - The Electrical Contractors Association of Scotland (ECAS).
19. The installation must must comply with relevant building regulations and water regulations. The installation should be carried out by a plumber or contractor who is registered, or is a member of, an association such as:
 - Institute of Plumbing (IOP), throughout the UK.
 - National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales.
 - Scottish and Northern Ireland Plumbing Employers’ Federation (SNIPEF), Scotland and Northern Ireland.
20. **THIS APPLIANCE MUST BE EARTHED. ENSURE SUPPLEMENTARY BONDING COMPLIES WITH THE “REQUIREMENTS FOR ELECTRICAL INSTALLATIONS”.**

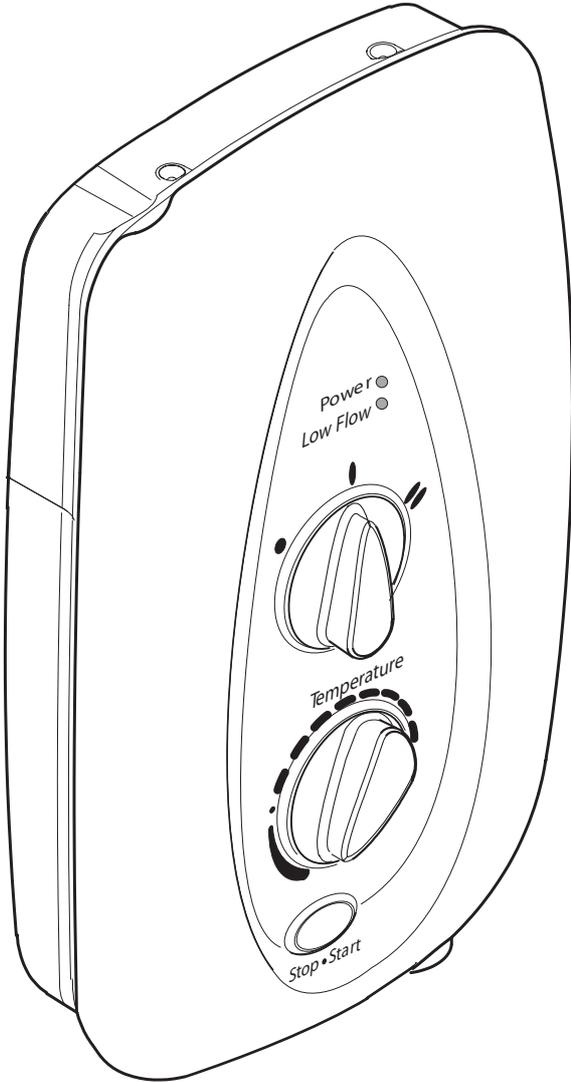
In accordance with the current edition of ‘The Plugs and Sockets etc. (Safety) Regulations’ in force at the time of installation, this Mira Sprint is intended to be permanently connected to the fixed electrical wiring of the mains system.
21. **DO NOT** commission this appliance if water leaks from the unit or the heater tank pressure relief valve.
22. **Ensure all electrical connections are tight, to prevent overheating.**
23. Do not remove the internal splash-guard from the unit.

PACK CONTENTS CHECKLIST



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

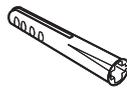
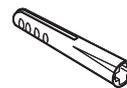
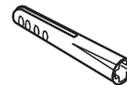
1. Mira Sprint 8.5 and 9.5



1 x Mira Sprint 8.5 and 9.5



3 x Wall Plug



3 x Fixing Screws



2. Documentation

1 x Installation and User Guide



1 x Installation Template



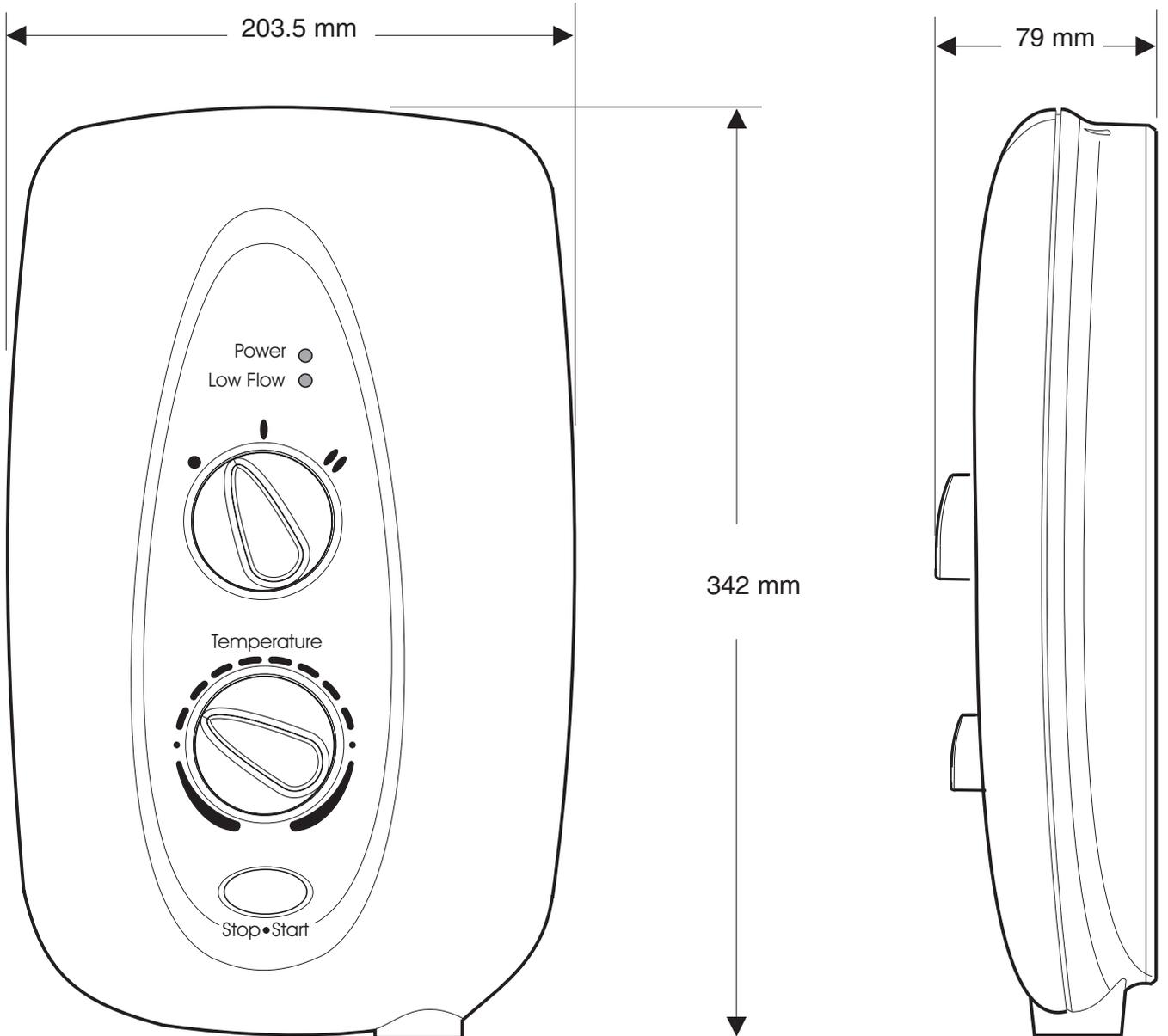
1 x Customer Support Brochure



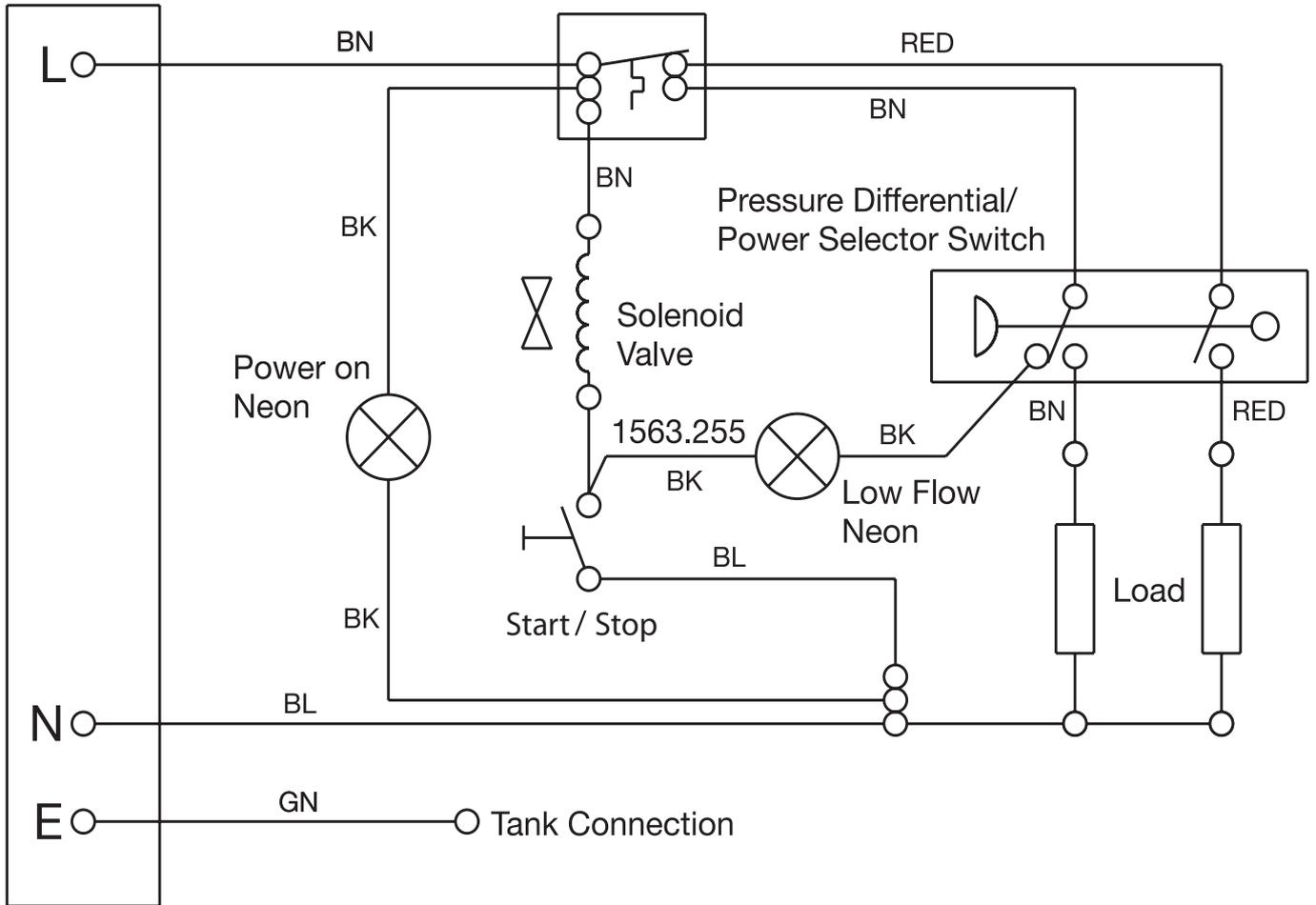
1 x Installer Checklist



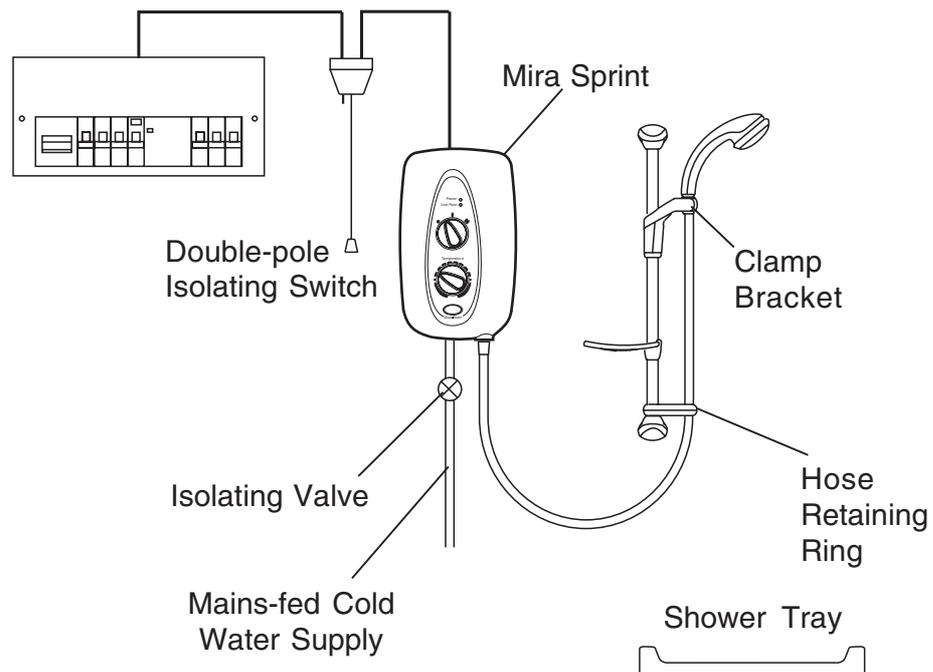
DIMENSIONS



WIRING DIAGRAM



Internal Wiring Diagram



Electrical Schematic Diagram

SPECIFICATIONS

Plumbing

1. Minimum maintained inlet pressure 70 kPa (0.7 bar) for satisfactory operation.
2. Maximum static inlet pressure 1000 kPa (10 bar).
3. Minimum static pressure 20 kPa (0.2 bar) to keep the flow valve closed.

Electrical

1. The Mira Sprint requires a 40 Amp fuse.
2. The terminal block will not accept cable larger than 16 mm² .

Standards and Approvals

1. This Mira Sprint complies with all relevant directives for CE marking.

INSTALLATION REQUIREMENTS

Plumbing

1. The Mira Sprint is designed to operate with a minimum **maintained inlet pressure of 70 kPa (0.7 bar)** up to a **maximum static inlet pressure of 1000 kPa (10 bar)**.
2. The Mira Sprint must be connected to the cold water mains-fed supply. If you can only cistern feed your shower, Mira produce a pumped electric shower (Elite 2) designed for this particular application.
3. The Mira Sprint is suitable for installation within the shower area. It is fitted with a pressure relief device and must be positioned over a water catchment area with the controls at a convenient height for all users.
4. The Mira Sprint is fitted with a plastic inlet connector intended to connect to a 15 mm compression fitting, supplied from the top, bottom or back.

5. **Do not** fit the Mira Sprint to the wall and tile up to the case. The Mira Sprint must be fitted **on to** a finished, flat and even wall surface (this wall surface should be tiled or waterproofed). This is important as difficulty may be encountered when fitting the cover. Also the operation of the unit could be impaired due to lack of air flow (small pillars moulded on to the back of the case allow air circulation).
6. Refrain from applying excessive force when making any connections. Always provide mechanical support when making the plumbing connections.
7. **Warning! Do not install the Mira Sprint in a position where it may become frozen.** The shower unit must not be fitted where it may be exposed to freezing conditions. Do not operate the unit if suspected of being frozen.
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 Sprint. **Do not** use a valve with a loose washer plate (jumper) as this can lead to a build up of static pressures.
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.
10. The Mira Sprint is fitted with a ½ " BSP male outlet thread, to accept a Mira shower hose.
11. **BEFORE connecting the Mira Sprint, thoroughly flush the mains-fed cold water supply pipe with a minimum of 10 litres of water. The supply must be clean and free from debris.**
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 Sprint malfunction due to excessive limescale formation is not covered by the manufacturer's guarantee. Your local water company will be able to advise you of the hardness of water in your area.
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 back-siphonage (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. Double checkvalves, fitted in the inlet supply to the appliance, cause a pressure build-up, which could exceed the maximum static inlet pressure for the appliance. 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.

14. Avoid layouts where the shower hose will be sharply kinked. This may reduce the life of the hose.

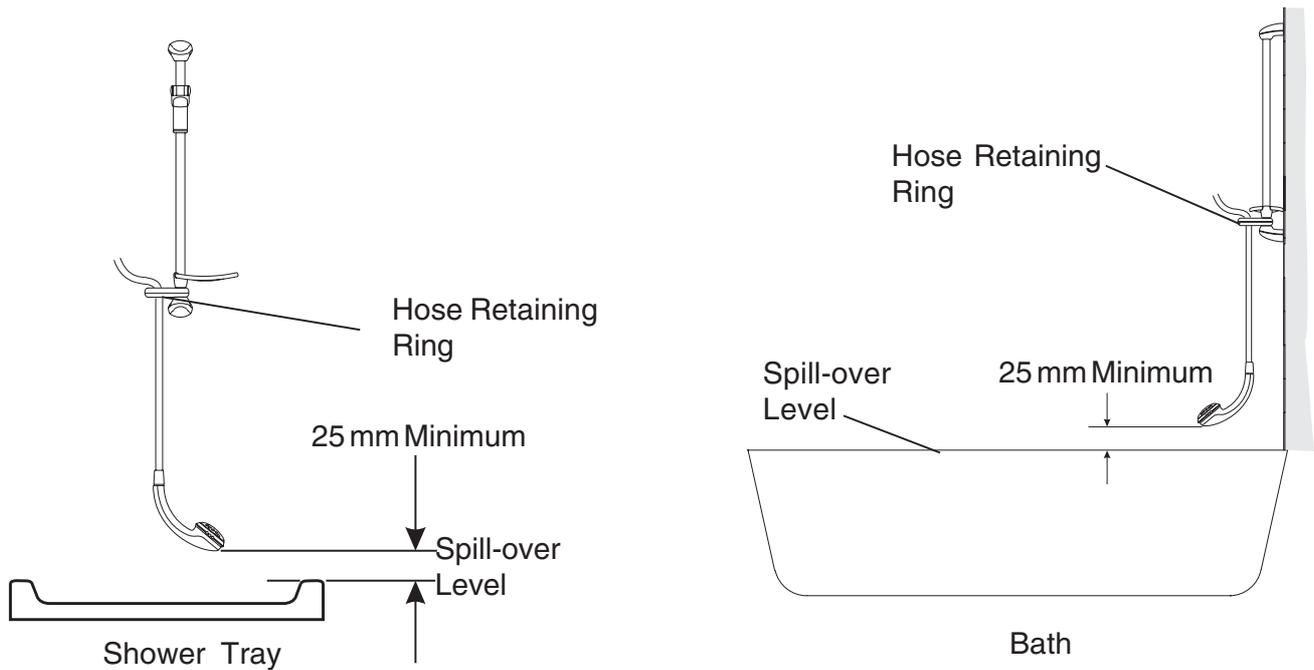


Figure 1

Electrical

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

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 the Mira Sprint is a high power unit, it is essential to contact your electricity supply company to ensure that the supply is adequate for the appliance. Voltage drop due to local heavy demand will reduce the shower's performance.

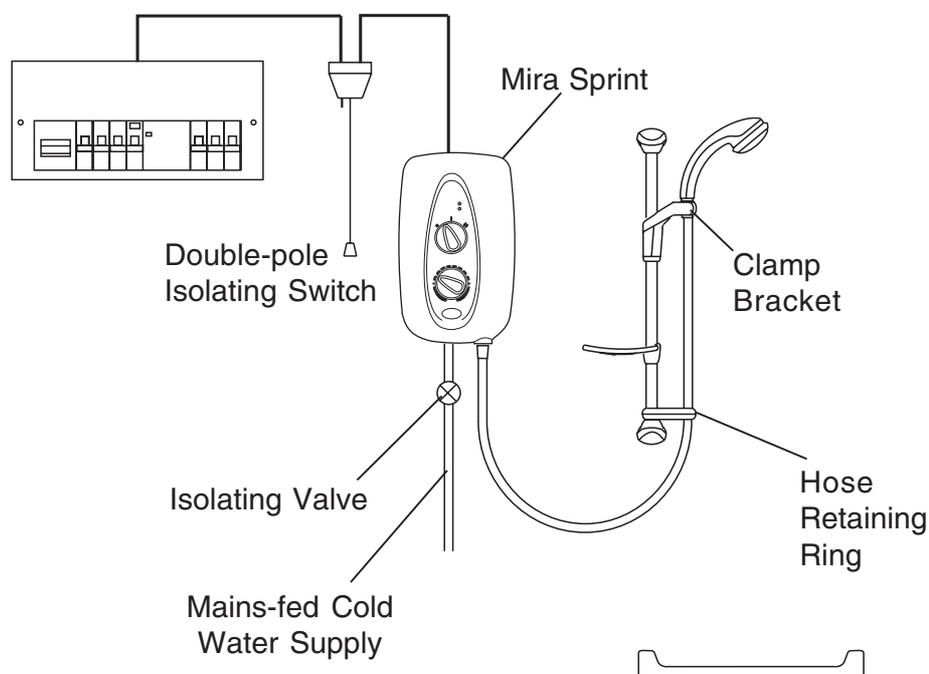
2. The appliance **must be earthed** by connecting the supply-cable earth conductor to the earth terminal.

Supplementary bonding: Within the bathroom or shower room, all accessible conductive parts of electrical equipment and extraneous conductive parts (metal 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).

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 caused by overheating.

4. To obtain full advantage of the power provided by this unit the shortest possible cable route from the consumer unit to the shower should be used. The maximum permissible circuit length is dependent on current demand, voltage drop and cable size, refer to the IEE Wiring Regulations for further information.
5. A 30 mA residual current device (RCD) **MUST** be fitted. This may be part of the consumer unit or a separate unit.
6. A separate, permanently connected supply must be taken from the consumer unit to the Mira Sprint through a 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.
7. **DO NOT** twist the individual cable cores of the live and neutral conductors, as this will prevent them from entering the terminal block.
8. **DO NOT** exert strain on the terminal block.
9. **DO NOT** turn-on the electrical supply until the plumbing has been completed.



Plumbing and Electrical Schematic Diagram

INSTALLATION

Mira Sprint

Warning! Turn off the electrical and water supplies before proceeding with the installation of the Mira Sprint. The electricity must be turned off at the mains and the appropriate circuit fuse removed, if applicable.

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

1. Decide on a suitable position for the Mira Sprint (minimum distance of 200 mm from the ceiling to allow for cover fit and removal). The position of the Mira Sprint 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, **INSTALLATION REQUIREMENTS**).
2. Remove the three cover retaining screws.
3. Remove the cover.
4. Remove the service tunnel.
5. Determine the direction of the inlet water supply: top (falling), bottom (rising), or back inlet.

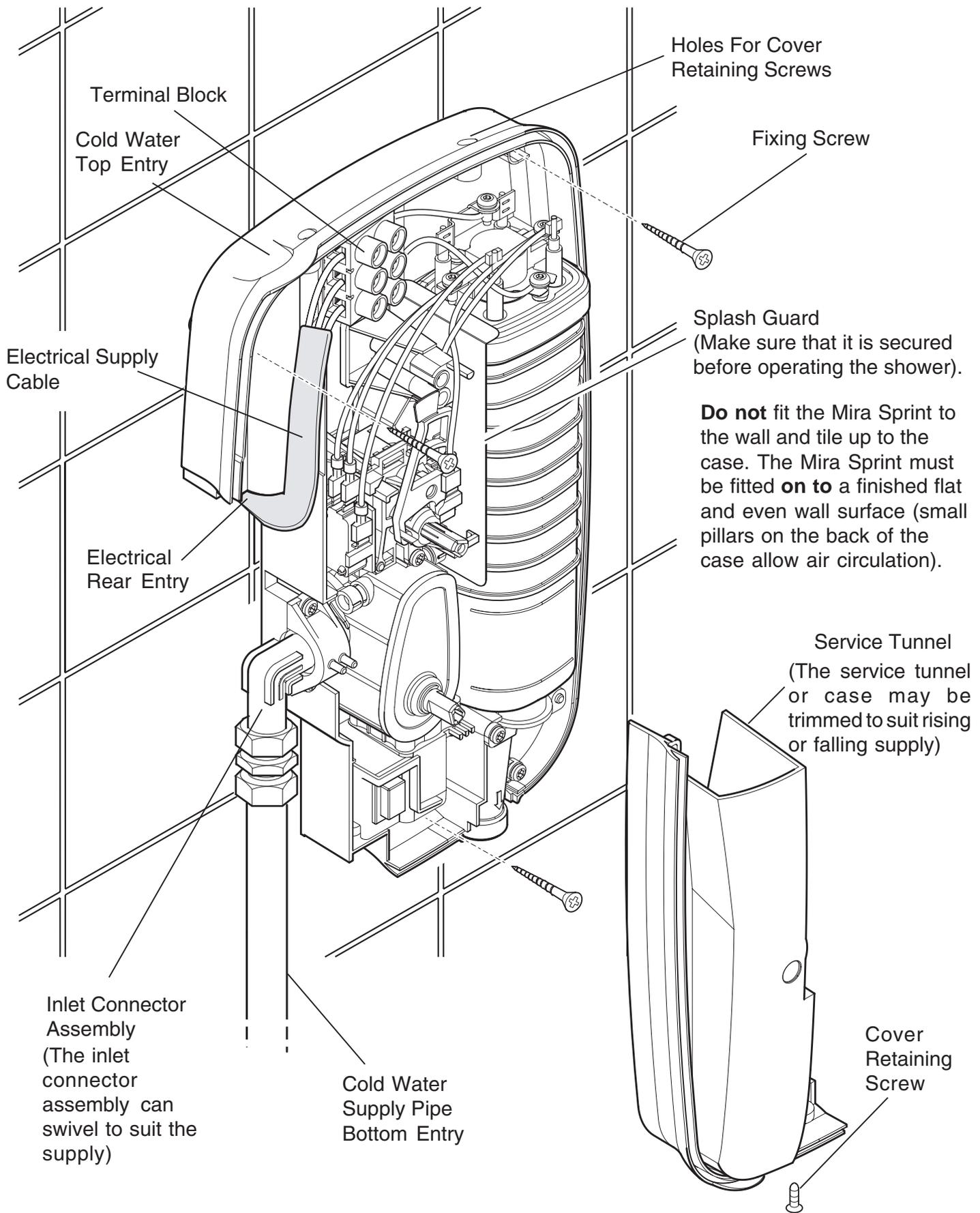
Note! For back inlet, the connection to the inlet connector must still be made from the top or bottom through a bend.

Warning! 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.

6. Swivel the inlet connector assembly to suit. Remove the inlet blanking cap.
7. Remove as appropriate, the thinned sections of the Mira Sprint case, to allow the supplies to enter the product.
8. **Thoroughly flush the mains-fed cold water supply pipe. The supply must be clean and free from debris BEFORE connecting the Mira Sprint.** To flush the pipework, turn on the water supply and drain a minimum of 10 litres (2 gallons) of water into a bucket or catchment area. Turn off the water supply.
9. Put the installation template on the wall and mark through the positions of the fixing holes. Ensure the position of these holes do not come in line with any buried cables or pipework. Make sure that sufficient electrical supply cable is available for connection to the terminal block.
10. Drill and plug the top two fixing holes. Secure the Mira Sprint 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.

Caution! Refrain from applying excessive force when making any connections. Always provide mechanical support when making the plumbing connections.

11. Install the mains-fed cold water supply pipe.



Do not fit the Mira Sprint to the wall and tile up to the case. The Mira Sprint must be fitted **on to** a finished flat and even wall surface (small pillars on the back of the case allow air circulation).

Installation of the Mira Sprint

12. Make the connection to the mains-fed cold water supply pipe.
13. Bring the electrical supply cable into the case through one of the cable entry points.
14. Strip back sufficient of the outer cable insulation to enable routing to terminal block.

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

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	=	Brownwire
N	=	Black / Blue wire
E	=	Yellow/Green sleeved wire

16. Re-tighten the terminal block screws.
17. If necessary, fit an earth bonding clamp to the copper supply pipe and ensure bonding complies with the relevant regulations in force at the time of installation.
18. Refit the cover. Fit and tighten the three cover retaining screws.

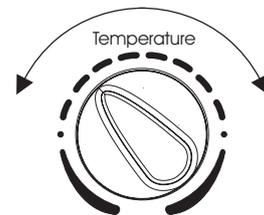
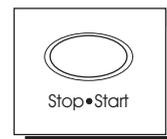
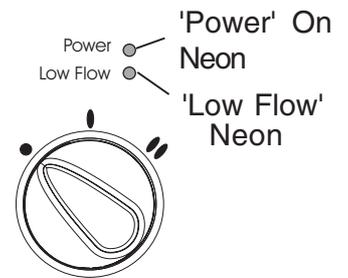
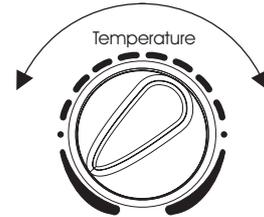
Important! Do not use any alternative screws to secure the cover as this could cause damage to internal components.

19. Fit the shower fittings. Refer to separate instructions.

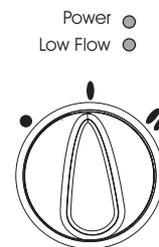
COMMISSIONING

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

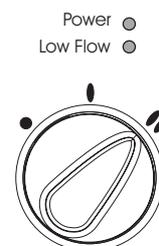
1. Make sure that the electrical supply is turned off at the mains.
2. Turn the **BOTTOM** control knob fully anticlockwise to the full cold position.
3. Turn the water supply fully on at the isolating valve, check that water is not leaking from the bottom of the case.
4. Turn the **TOP** control knob to the **LOW** position.
5. Switch on the electrical supply at the double pole switch. The **'POWER'** neon will provide a visual indication that the electrical supply is connected.
6. Press the **START** button. Check that water flows freely from the shower within a few seconds. If not refer to **Maintenance**. The water from the handset will be at full force and at a cool temperature.
7. Turn the **BOTTOM** 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 knob anticlockwise to full cold position.



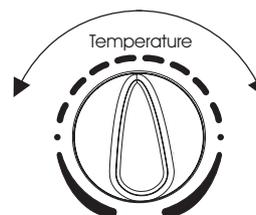
8. Turn the **TOP** knob to the **MEDIUM** position. The temperature of the water should rise slightly. Allow a few seconds for the warm water to reach the handset - this shows that the **MEDIUM** power setting is operating correctly.



9. Turn the **TOP** knob to the **HIGH** position. The temperature of the water will rise further - this shows that the full power setting is operating correctly.

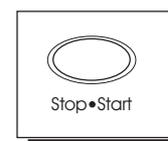


10. Set the shower temperature by rotating the **BOTTOM** knob as necessary. Turn the knob clockwise for hotter water and anticlockwise for cooler water.



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

11. 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 Sprint during operation. High mains water pressure and high shower temperatures will effect the tone. This is quite normal in use.

MAINTENANCE

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 identified.

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

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.

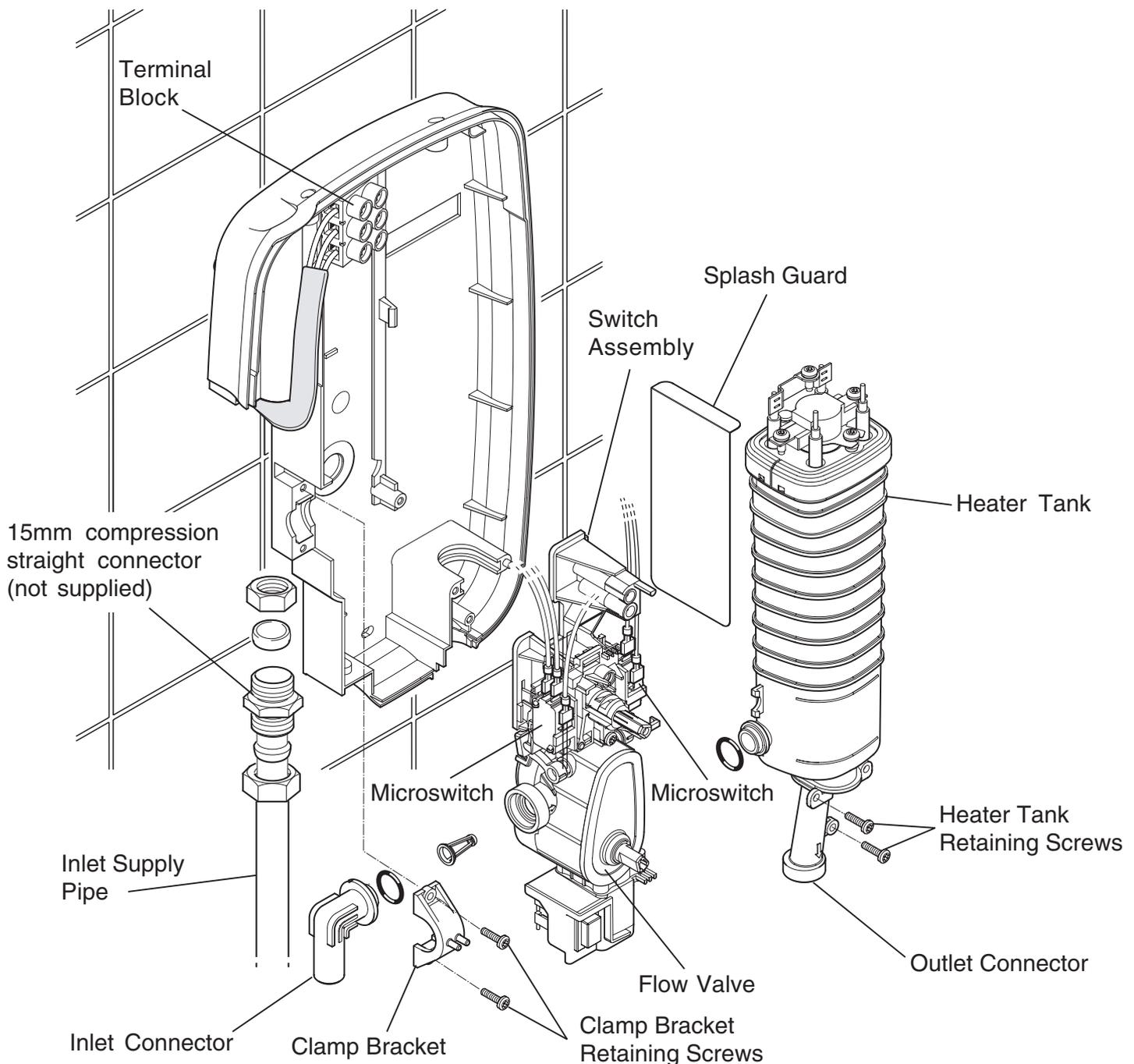
THE SPRAY PLATE HOLES MUST BE KEPT CLEAR. The spray plate should be regularly cleaned. Depending on the hardness of the water to the shower this should be carried out at least once a month. Lack of regular spray plate cleaning will lead to poor performance and cause early failure of the Mira Sprint. Refer to the Installation and User Guide for the fittings.

Flow Valve and Switch Assembly - Removal and Installation

WARNING! Make sure that the electrical supply is turned off at the mains and the appropriate circuit fuse is removed. Mains electrical connections are exposed when the cover is removed. Turn off inlet water supply.

1. Remove the three cover retaining screws, the cover and the service tunnel.
2. Remove the hose from the outlet connector and loosen the connection to the inlet connector assembly.
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.
4. Remove the screws that hold the inlet clamp bracket in position and remove the clamp bracket.
5. Remove the screws that hold the flow valve, switch assembly and heater tank in position.
6. Carefully pull the flow valve, switch assembly and heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.
7. Remove the outlet connector from the heater tank.

8. Remove the heater tank and the inlet connector assembly from the flow valve and switch assembly.
9. Remove the microswitches from the flow valve and switch assembly.
10. Make a note of the positions of the solenoid wires on top of the heater tank. Remove the solenoid wires.
11. Replace the flow valve and switch assembly.
12. Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions.

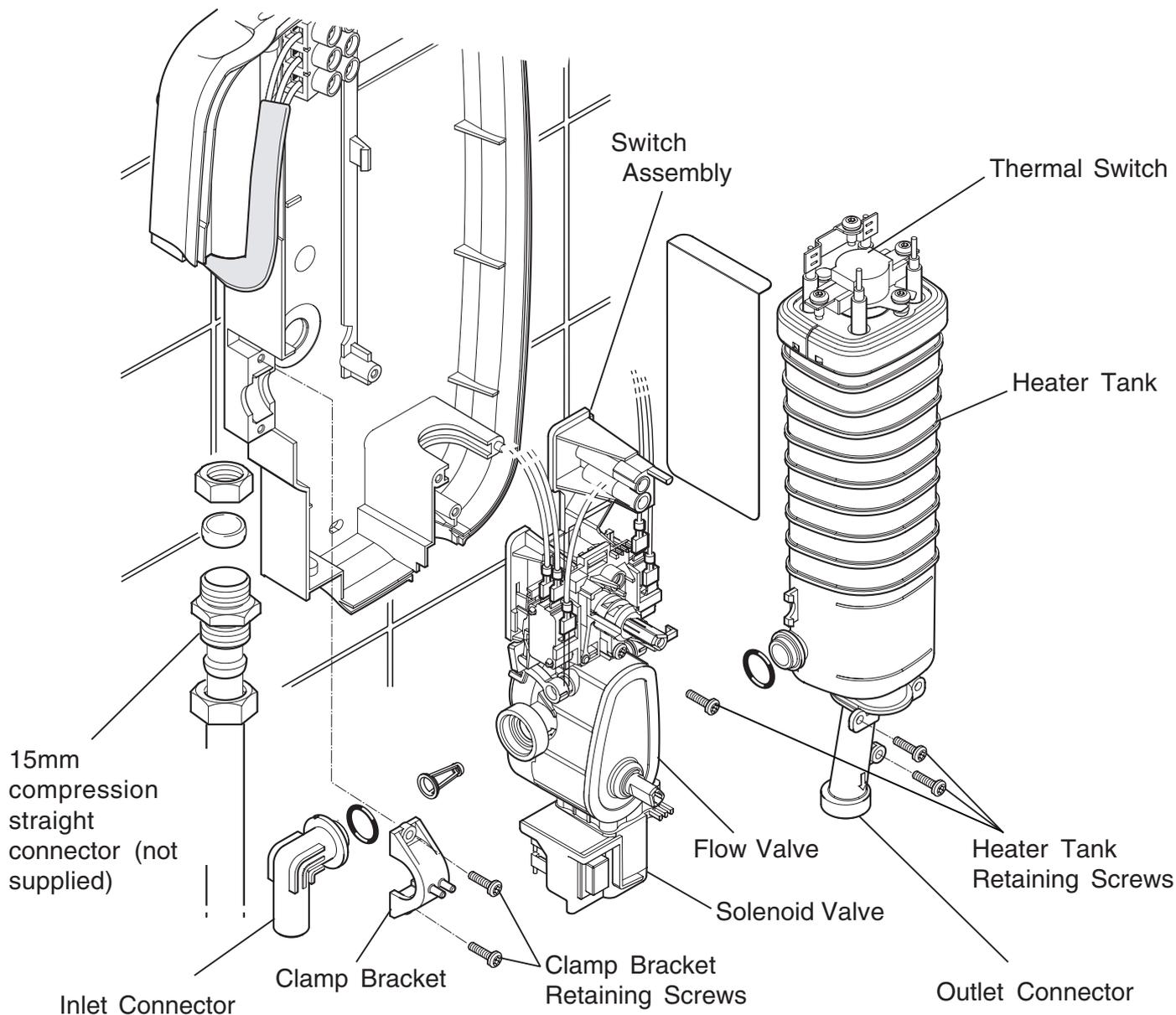


Flow Valve and Switch Assembly - Removal and Installation

Heater Tank - Removal and Installation

Warning! Make sure that the electrical supply is turned off at the mains and the appropriate circuit fuse is removed. Turn off inlet water supply.

1. Remove the three cover retaining screws, the cover and the service tunnel.
2. Remove the hose from the outlet connector and loosen the inlet connector assembly.
3. To improve access to the terminals on top of the tank, the terminal block may be loosened by removing the fixing screw.
4. Remove the screws that hold the inlet clamp bracket in position and remove the clamp bracket.
5. Remove the screws that hold the flow valve and switch assembly and the heater tank in position.
6. Carefully pull the flow valve, switch assembly and heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.
7. Make a note of the positions of the wiring on top of the heater tank.
8. Remove the blue wire and associated solenoid wires from the top of the heater tank.
9. Remove the brown and red wires from one side of the thermal switch and the second brown wire from the other side of the thermal switch.
Caution! Do not press printed disc on the thermal switch as this will make the component unserviceable.
10. Remove the fixing screw and remove the thermal switch and green earth bonding wire.
11. Remove the red and brown tank wires from the microswitches.
12. Separate the heater tank from the flow valve and switch assemblies.
13. Remove the outlet connector from the heater tank.
14. Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions. In Particular the green earth bonding wire must be reconnected above the thermal switch flange.



Heater Tank - Removal and Installation

Thermal Switch - Removal and Installation

Warning! Make sure that the electrical supply is turned off at the mains and the appropriate circuit fuse is removed. Turn off inlet water supply.

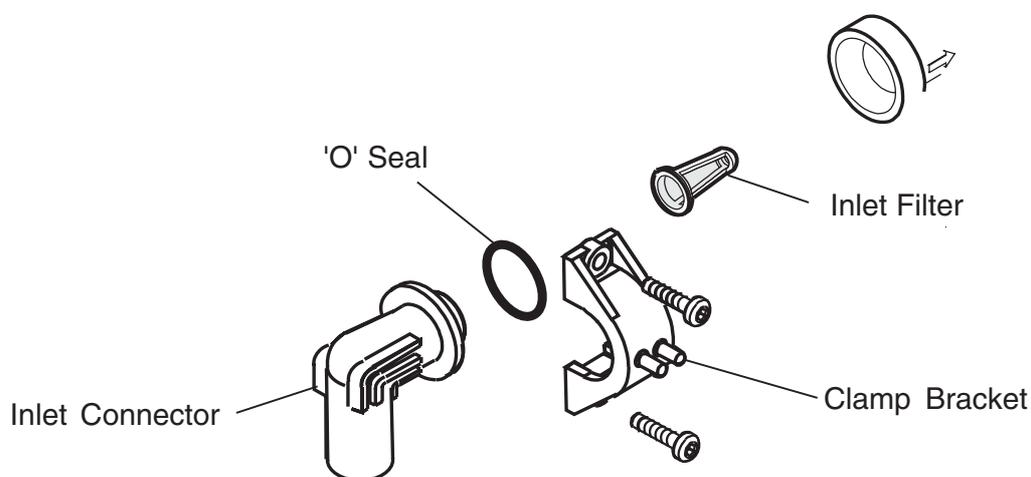
1. Remove the three cover retaining screws, the cover and the service tunnel.
2. Remove the hose from the outlet connector and loosen the connection to the inlet connector assembly.
3. To improve access to the top terminals of the tank, the terminal block may be loosened by removing the fixing screw.
4. Remove the screws that hold the inlet clamp bracket in position and remove the clamp bracket.
5. Remove the screws that hold the flow valve, switch assembly and heater tank in position.

6. Carefully pull the flow valve, switch assembly and heater tank away from the case. Make sure that you ease the inlet connector assembly off the inlet supply pipe.
7. Remove the brown and red wires from one side of the thermal switch and the second brown wire from the other side of the thermal switch.
8. Remove the fixing screw then remove the thermal switch and green earth bonding wire.
Caution! Do not press printed disc on the replacement thermal switch as this will make the component unserviceable.
9. Refit the components in reverse order. Make sure that the electrical wires are installed in the correct positions. In particular the green earth bonding wire must be reconnected above the thermal switch flange.

Inlet Filter - Replacement

Warning! Make sure that the electrical supply is turned off at the mains and the appropriate circuit fuse is removed. Turn off inlet water supply.

1. Remove the three cover retaining screws, the cover and the service tunnel.
2. Remove the screws that hold the inlet clamp bracket in position and remove the clamp bracket.
3. Loosen the screws that hold the flow valve and switch assembly and the heater tank in position.
4. Carefully pull the flow valve and switch assembly and the heater tank away from the case. Make sure that you ease the inlet connector off the inlet supply pipe.
5. Remove the inlet connector complete with 'O' seal. Use a suitable tool to withdraw the inlet filter. Discard the inlet filter.
6. Renew the inlet filter. Make sure that the inlet filter is correctly orientated.
7. Refit the components in reverse order. **Ensure that the filter is pushed fully home.**



Inlet Filter - Replacement

OPERATION

Advice to Users

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

1. Electric showers work by taking in cold water and passing it over the heating elements contained in the shower.
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 temperature.
3. The Mira Sprint 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.
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.
5. The Mira Sprint requires a minimum maintained/running pressure of 0.7 bar to operate. At pressures above 0.7 bar the Mira Sprint will minimise the temperature fluctuations caused when other draw-off points are used. If the flow rate drops below an acceptable value, the Mira Sprint will turn the heater elements off, resulting in a cold shower. The '**LOW FLOW**' neon will provide visual confirmation of this condition.
6. If the water temperature reaches an unsafe level, the thermal switch assembly turns off the heater elements. As 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 temperature of the shower reduced.
7. Check the temperature before entering the shower. The previous user may have selected a **different** temperature setting.
Caution! Never change the power setting or temperature whilst you are under the shower.
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.

How Your Electric Shower Works

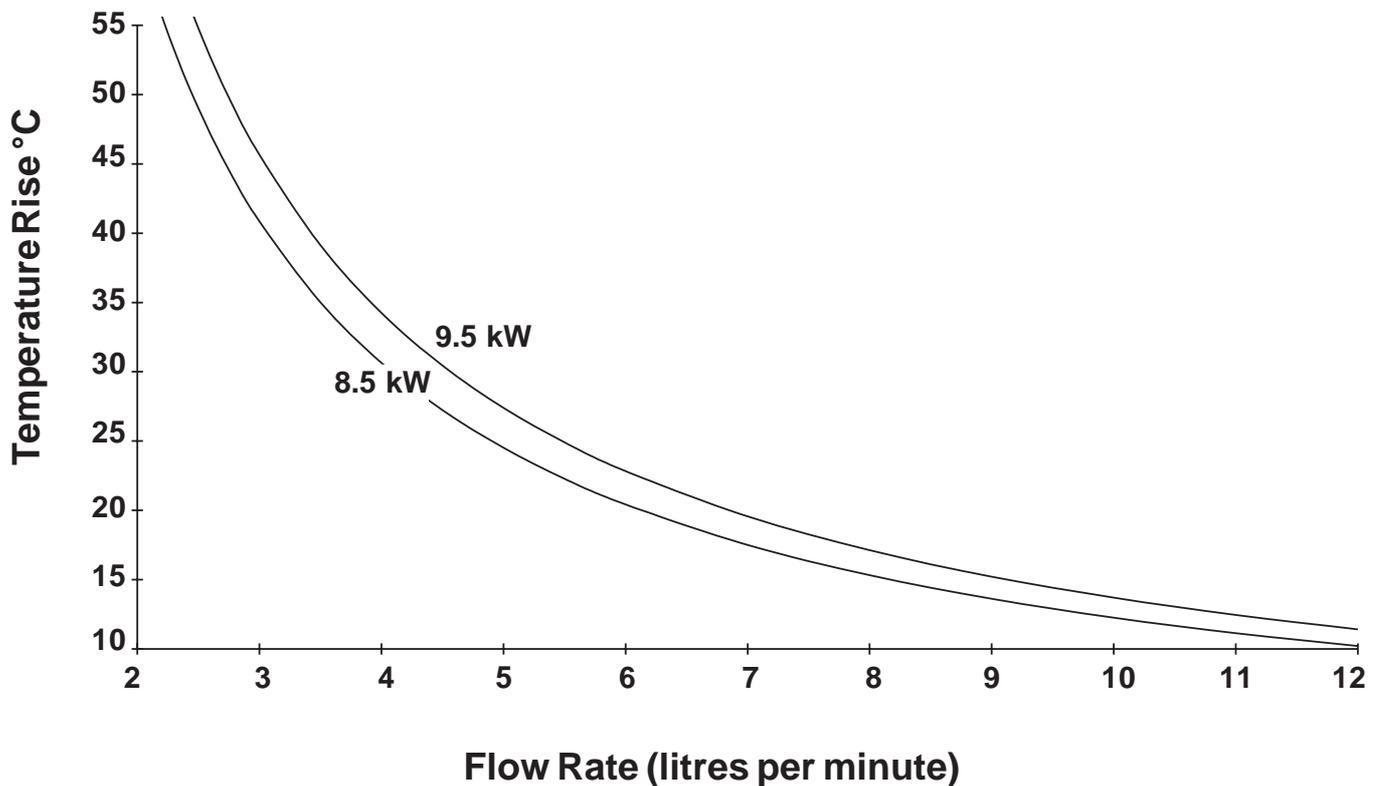
The higher the temperature the lower the flow rate will be through the shower head and vice versa. This flow rate will also be affected by the incoming cold water temperature. The graph allows you to determine the flow rate through the shower head (see example).

- (i) These curves are for the specified outputs at 240V.
- (ii) All Mira Sprint 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 Sprint 8.5 kW on full power setting with an incoming water supply at 10°C and a showering temperature at 45°C, the temperature rise is 35°C. The flow rate is therefore, 3.6 l/min.

Warning! This unit can produce temperature rises in excess of 45°C if incorrectly adjusted which is not shown.

Temperature Rise Versus Flow Rate For The Mira Sprint , 8.5 kW and 9.5 kW



Recommended use of the Mira Sprint

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

WARNING! NON-THERMOSTATIC ELECTRIC SHOWERS CAN PRODUCE VERY HOT WATER. DO NOT ENTER THE SHOWER UNTIL YOU HAVE FOLLOWED THIS PROCEDURE.

Caution! Always check the temperature before entering the shower. The previous user may have selected a **different** temperature setting.

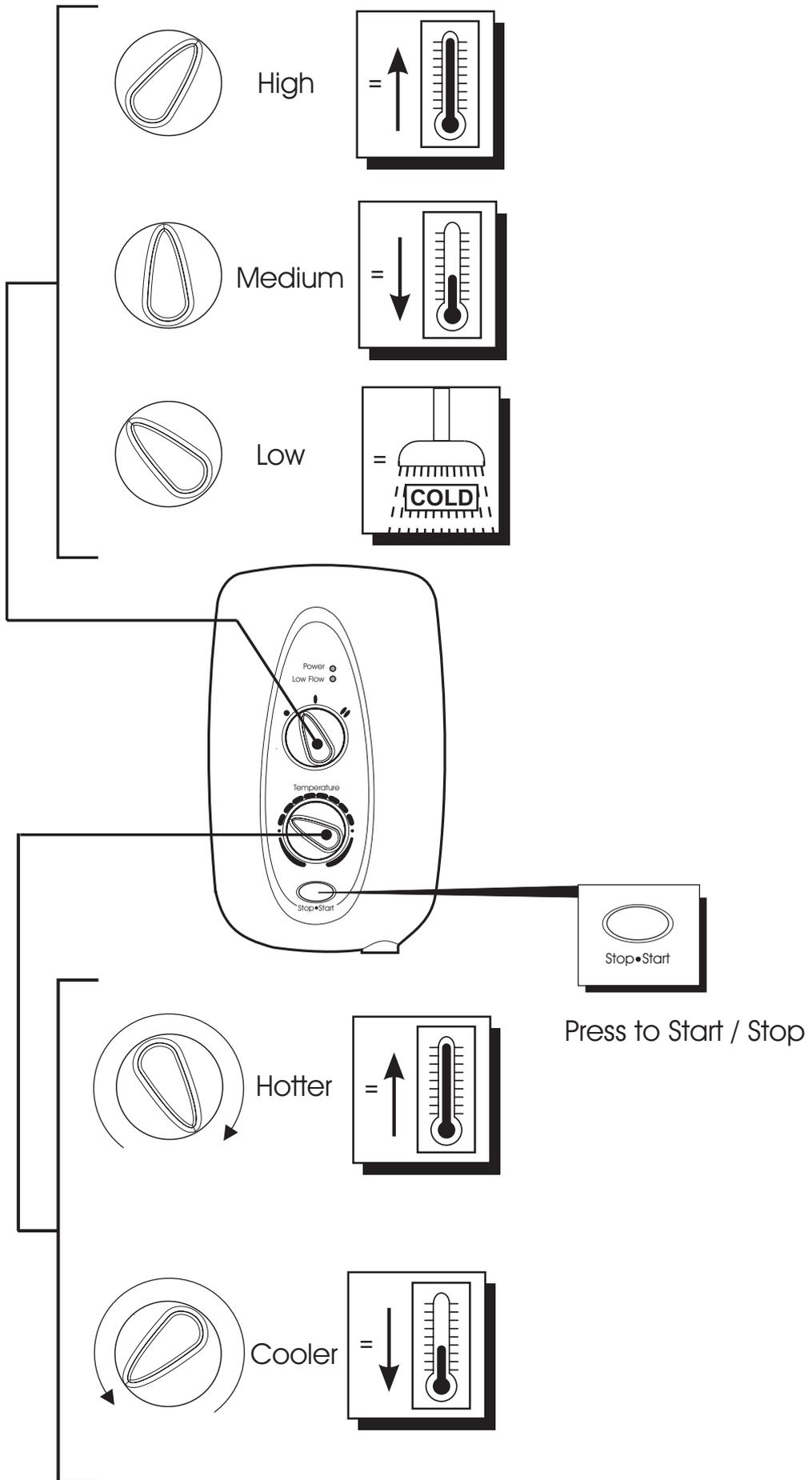
1. **Switch on** pullcord or wall mounted switch. The '**POWER**' neon will provide a visual indication that the switch is on.
2. Press the **START** button.
3. Rotate the **TOP** control knob to the high position (Full Power).
4. Wait **15-20** seconds for warm water to reach the handset.
5. If necessary turn the **BOTTOM** control knob slowly to adjust temperature. Allow **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.

Clockwise rotation will give warmer water with less flow. Anticlockwise rotation will give cooler water with more flow.

6. **TO TURN OFF** the Mira Sprint press the **STOP** button. The appliance will continue to run for a few seconds before stopping.
7. A small amount of water may be retained in the shower handset after the shower control has been turned off. This may drain over a few minutes.

For summer economy showering use position '**MEDIUM**' (Half Power) on the control. For a cold shower select '**LOW**'.

8. **Switch off** pull-cord or wall mounted switch.



Shower Controls

FAULT DIAGNOSIS

Customer 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 Installation and User Guide for the fittings).
	Incoming water supply stop valves or appliance isolating valve turned down or off.	Turn stop/isolating valve fully to fully 'on' position.
	Hose or Handset blocked	Clear blockage or renew
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 Installation and User 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	Due to the rise in water mains supply temperature, the power rating may be too high.	Turn the TOP knob to MEDIUM setting 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 Installation and User Guide for the fittings). If fault still persists contact your installer.

Installer Fault Diagnosis: refer to appliance diagram and customer fault diagnosis

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 fault diagnosis chart and maintenance instructions are provided. Before replacing any parts ensure that the underlying cause of the malfunction has been identified.

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

Key - ✓ = light illuminated

A = 'POWER' indicator

B = 'LOW FLOW' indicator

Malfunction	A	B	Cause	Remedy
No water or very low flow rate.	✓		Handset spray plate assembly blocked.	Remove and clean (refer to Maintenance in the Installation and User Guide for the shower fittings).
	✓	✓	Incoming water supply stop valves or appliance isolating valve turned down or off.	Turn fully on.
	✓		Hose or handset blocked.	Clear blockage or renew hose or handset.
	✓	✓	Insufficient water supply pressure.	Contact local water authority/undertaker.
	✓		Heater tank excessively scaled.	Renew the heater tank.
	✓		Flow valve faulty.	Renew the flow valve.
	✓		Inlet strainer blocked.	Remove and clean, refer to Maintenance: "Inlet strainer cleaning" .

Malfunction	A	B	Cause	Remedy
Appliance fails to produce hot water in any switch position.			Electrical supply isolated at double pole switch (the pullcord).	Switch on.
			Fuse 'blown' or MCB/RCD tripped - indicating an electrical fault e.g. heater tank element failure.	Correct the fault and renew the fuse or reset the MCB/RCD. Renew the heater tank.
	✓	✓	Insufficient water supply pressure.	Contact local water authority/undertaker.
	✓		Possible failure of the microswitch or thermal switch.	Use a suitable continuity measuring device to check the continuity of the microswitches or thermal switch and renew parts as necessary.
	✓		Poor internal wire connections.	Check integrity of internal wiring.
Shower cycles hot and cold.	✓	✓	The temperature is set to an unsafe level. To protect the appliance, a fixed temperature thermal switch is incorporated that cuts the power to the heater tank at too high a temperature.	Turn the temperature knob sufficiently anticlockwise to increase the water flow and prevent operation of the thermal switch. DO NOT tamper with the thermal switch.
	✓	✓	Handset spray plate blocked.	Remove and clean (refer to Maintenance in the Installation and User Guide for the shower fittings).

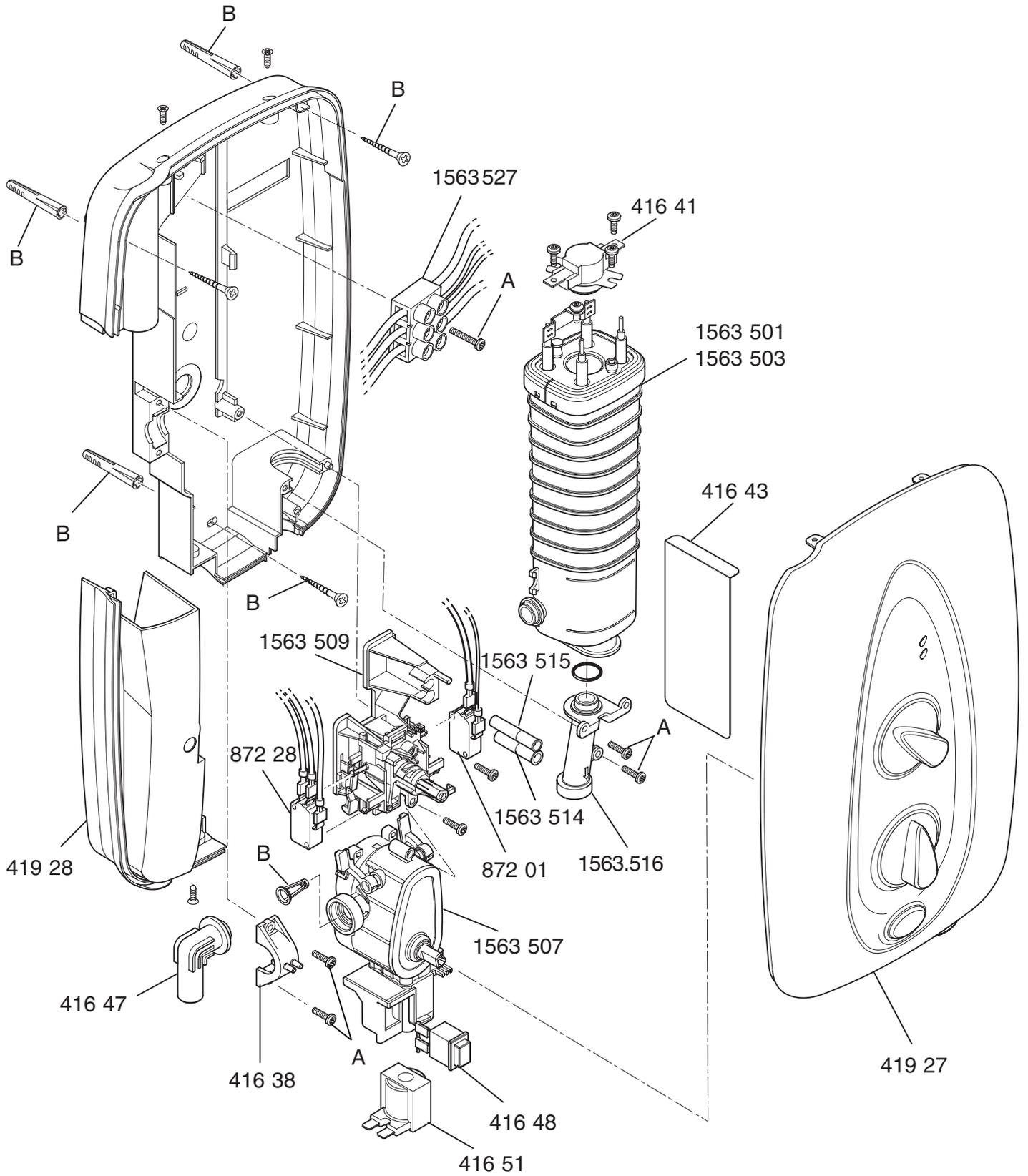
Malfunction	A	B	Cause	Remedy
Operation of temperature knob has little or no effect on water temperature.	✓ ✓		Flow valve faulty. Handset spray plate blocked.	Renew the flow valve. Remove and clean (refer to Maintenance in the Installation and User Guide for the shower fittings).
No change in temperature between 'MEDIUM' and 'HIGH' setting.	✓ ✓	✓	Insufficient water supply pressure. Possible failure of the flow valve, microswitch or heater tank.	Contact local water authority/undertaker. Use a suitable continuity measuring device to check the continuity of the microswitch or heater tank, check flow valve paddles are operating the microswitches. Renew parts as necessary.
Water will not turn off.	✓ ✓		Flow valve, solenoid or on/off switch faulty. Supply pressure below 0.2 bar.	Renew parts as necessary. Contact local water authority/undertaker. Check water supply static pressure. Note! Static pressure may fall below 0.2 bar when other appliances are operated e.g. dishwasher, washing machine etc.
'POWER' neon goes off when unit is turned on.			Loose connections/broken wire within the shower or on the cable run to it, isolator pull cord or within the consumer unit.	Check continuity and rectify supply cable fault.

SPARE PARTS

Mira Sprint Spare Parts List

416 38	Clamp Bracket (Inlet)
416 41	Thermal Switch
416 42	Cover Seal (not shown)
416 43	Splash Guard
416 47	Inlet Connector Assembly
416 48	Latching Switch
416 51	Solenoid Coil
416 65	Component Pack - components identified 'B'
419 27	Cover Assembly
419 28	Service Tunnel
872 01	Microswitch N/O - 2 pin
872 28	Microswitch C/O - 3 pin
1563 501	Heater Tank 8.5 kW
1563 503	Heater Tank 9.5 kW
1563 507	Flow Valve Assembly
1563 509	Switching Assembly
1563 513	Screw Pack - components identified 'A'
1563 514	Low Flow Neon Assembly
1563 515	Power On Neon Assembly
1563 516	Outlet Connector
1563 527	Terminal Block

Mira Sprint Spare Parts Diagram



NOTES

CUSTOMER SERVICE

Guarantee of Quality

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

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

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

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

To be free of charge, service work must only be undertaken by Mira Showers or our approved agents in Northern Ireland and Republic of Ireland.

Service under this guarantee does not affect the expiry date. The guarantee on any exchanged parts or product ends when the normal product guarantee period expires.

Not covered by this guarantee:

Damage or defects arising from incorrect installation, improper use or lack of maintenance, including build-up of limescale.

Damage or defects if the product is taken apart, repaired or modified by any person not authorised by Mira Showers or our approved agents.

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

Before using your shower

Please take the time to read and understand the operating and safety instructions detailed in this manual.

What to do if something goes wrong

If when you first use your shower it doesn't function correctly, first contact your installer to check that installation and commissioning are satisfactory and in accordance with the instructions in this manual. We are on hand to offer you or your installer any advice you may need.

Should this not resolve the difficulty, simply contact our Customer Services who will give every assistance, and if necessary arrange for our service engineer to visit.

If later the performance of your shower declines, consult this manual to see whether simple home maintenance is required. Please call our Customer Services to talk the difficulty through, request service under guarantee if applicable, or take advantage of our comprehensive After-Sales service.

As part of our quality and training programme calls may be recorded or monitored.

Our Customer Services Team is comprehensively trained to provide every assistance you may need: help and advice, spare parts or a service visit.

Spare Parts

We maintain an extensive stock of spares, and aim to have functional parts available for ten years from the date of final manufacture of the product.

Spares can be purchased from approved stockists or merchants (locations on request) or direct from Customer Services.

Spares direct will normally be despatched within two working days. Payment can be made by Visa or MasterCard at the time of ordering. Should payment by cheque be preferred a pro-forma invoice will be sent.

Note! In the interests of safety, spares requiring exposure to mains voltages can only be sent to competent persons.

Service

Our Service Force is available to provide a quality service at a reasonable cost. You will have the assurance of a Mira trained engineer/agent, genuine Mira spares, and a 12 month guarantee on the repair.

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

To contact us

England, Scotland & Wales

Mira Showers Customer Services

Telephone: 0870 241 0888

8:30 am to 5:00 pm Working days (4:30 pm Friday)

8:30 am to 12.30 pm Saturday

E-mail: technical@mirashowers.com

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By Post: Cromwell Road
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GL52 5EP

Northern Ireland

Wm H Leech & Son Ltd

Telephone: 028 9044 9257 – Mon to Fri 9 am-5pm

Fax: 028 9044 9234

Post: Maryland Industrial Estate
Ballygowan Road
Moneyreagh, Co Down
BT23 6BL

Republic of Ireland

Modern Plant Ltd

Telephone: 01 4591344 – Mon to Fri 9am to 5pm

Fax: Dublin 01 4592329

Post: Otter House
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