

# ***mira***

finno



**SHOWER CONTROL**

Installation &

User Guide

**THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER**

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If you experience any difficulty with the installation or operation of your new shower control, then please refer to **Section 10, "Fault Diagnosis"**, before contacting Kohler Mira Limited. Our telephone and fax numbers can be found on the back cover of this guide.

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 Fino is a thermostatic shower control with independent selection of spray force and temperature. The shower control incorporates a wax capsule temperature sensing unit. This provides an almost immediate response to changes in pressures or temperature of the incoming water supplies to maintain the selected temperature. An adjustable maximum temperature stop is provided which limits the temperature to the desired level. An override button allows the user to exceed the preset maximum temperature. The flow control utilizes ceramic plate technology operating directly on the outlet to provide precise control and isolation of the water outlet. The Mira Fino also includes checkvalves and strainers.

Shower controls covered by this guide:

### **Mira Fino**

An exposed shower control for connection to exposed (rising or falling) or rear entry pipework.

### **Mira Fino B**

A built-in shower control for connection to concealed pipework.

## **Warning!**

Products manufactured by us are safe provided they are installed, used and maintained in good working order in accordance with our instructions and recommendations

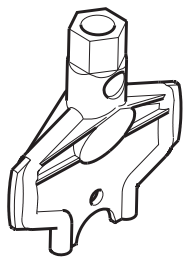
## **Caution!**

1. Read all of these instructions.
2. Retain this guide for later use.
3. Pass on this guide in the event of change of ownership of the installation site.
4. Follow all warnings, cautions and instructions contained in this guide.
5. The plumbing installation must comply with the requirements of UK Water Regulations/ Byelaws (Scotland), Building Regulations or any particular regulations and practices, specified by the local water supplier. **The installation should be carried out by a plumber or contractor who is registered or is a member of an association such as:**
  - Institute of Plumbing (IOP), throughout the UK.
  - National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales.
  - Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland.
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, or anyone inexperienced in the correct operation of the controls.

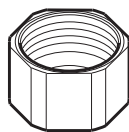
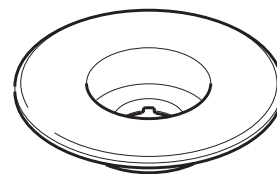
Tick the appropriate boxes to familiarise yourself with the part names and to confirm that the parts are included.

## 1. Mira Fino Surface Mounted Shower Control

1 x Fino Shower Control



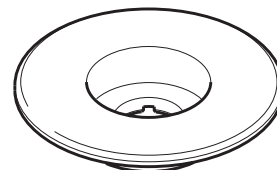
1 x Quad Key



2 x Compression Nuts



2 x Olives



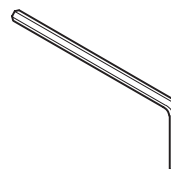
2 x Pipe Concealing Plates



2 x Fixing Screws

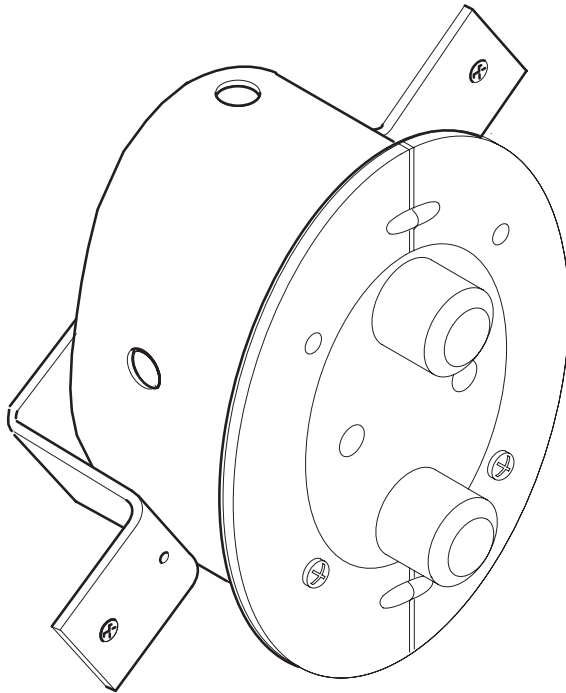


2 x Wallplugs

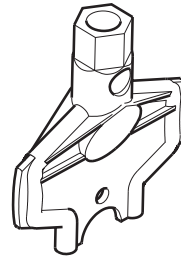


1 x 3 mm A/F Hexagon Wrench

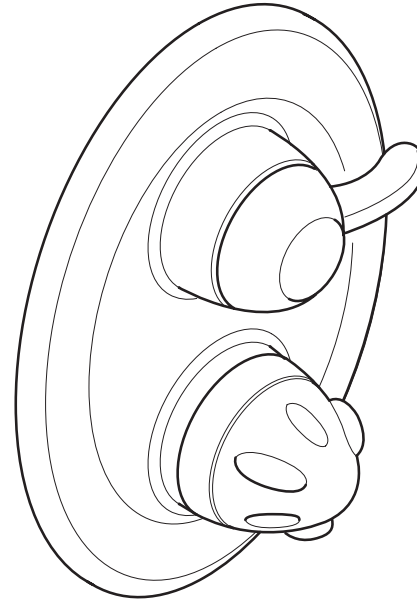
## 2. Mira Fino Built-in Shower Control



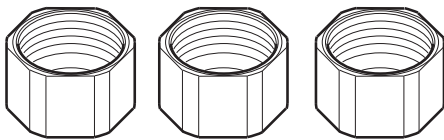
1 x Fino Built-in Shower Control   
 (with bracket, cavity seal and  
 building-in shroud fitted)



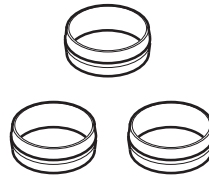
1 x Quad Key



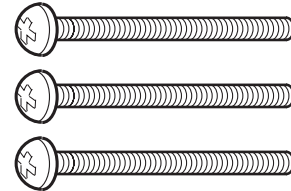
1 x Concealing Plate Assembly



3 x Compression Nuts



3 x Olives



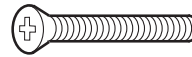
3 x M5 x 60 mm (two fitted)



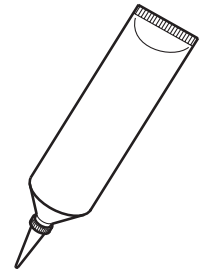
2 x Fixing Screws



2 x Wallplugs



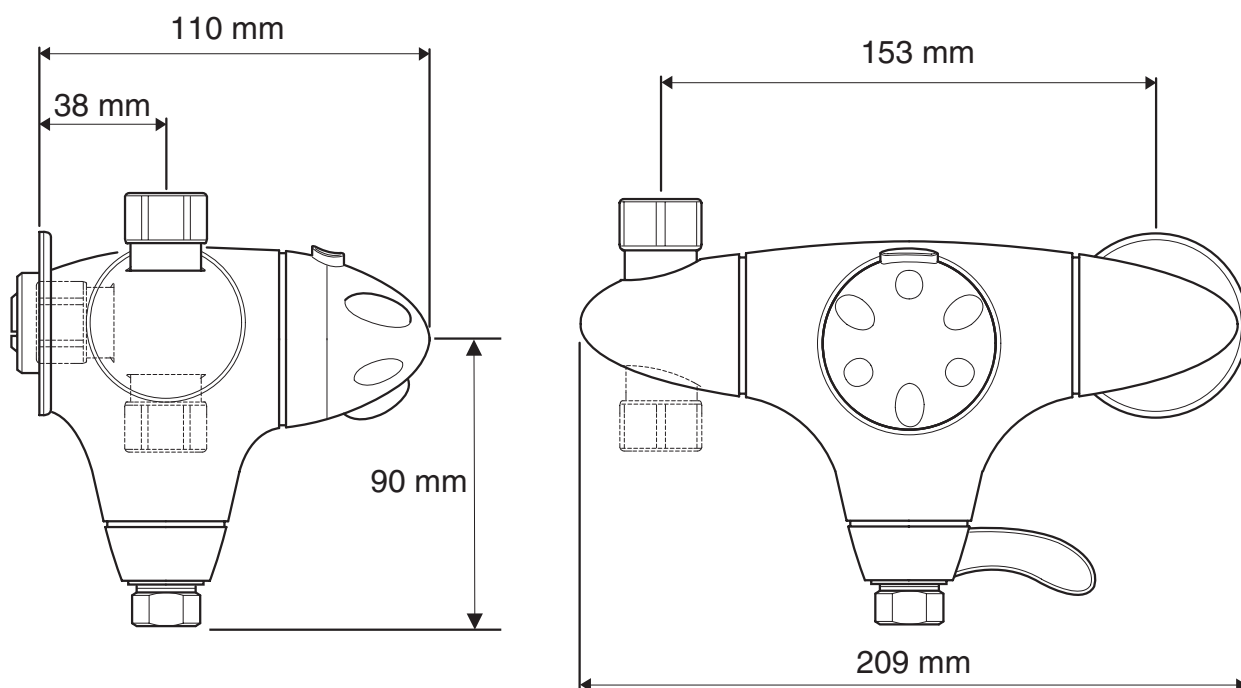
2 x M4 x 30 mm



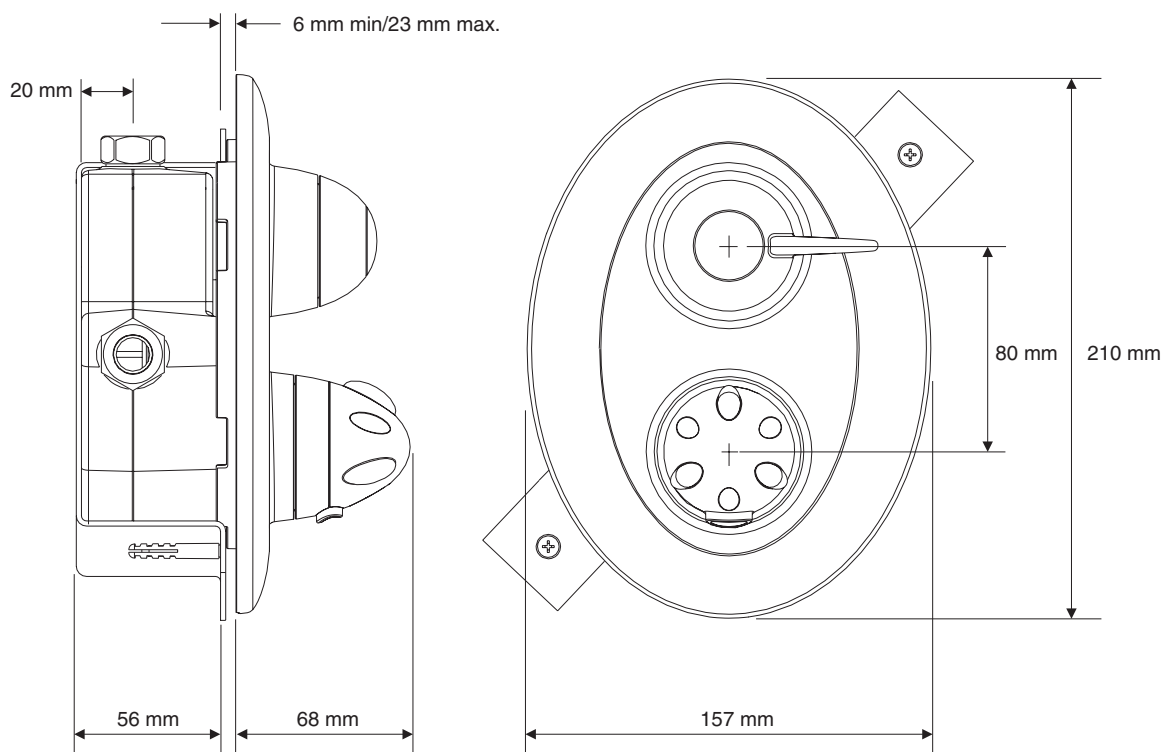
1 x Silicone Sealant

## 3. Documentation

1 x Installation and User Guide   
 1 x Customer Support Brochure



## Mira Fino Shower Control



## Mira Fino Built-in Shower Control

*All dimensions are nominal and in millimetres*

## Pressure Range

Optimum maintained pressure: **1 bar** (Conversion 1 bar=10 Metres water= 100 kPa).

Maximum maintained pressure: **5 bar**.

Maximum static pressure: **10 bar**.

Maximum flow rate: **40 l/min**.

**Note!** For optimum performance, the initial supply pressures should be nominally equal.

The Mira Fino will maintain a satisfactory spray pattern and thermostatic performance with inlet pressures down to 0.2 bar.

## Temperatures

- Close temperature control is provided between 30 and 45 °C.

**Note!** The temperature control specification, outlined below, is achieved with the blend set between 35 °C and 45 °C, with supply temperatures of 15 °C cold and 65 °C hot, **AND**, nominally equal inlet supply pressures.

- The blended temperature is maintained within 1 °C with a 10 °C change in the hot or cold supply.
- The blended water temperature is maintained within 1 °C when the pressure between the inlet and outlet is halved (defined as a pressure loss ratio of 2:1) on either the hot or cold side.
- The shower control will maintain temperature control with a pressure loss of up to 10:1.
- The wax capsule sensor effects a shut down to seepage in approximately 2 seconds if the cold supply fails. Shut down to seepage is only achieved if the hot supply is 12 °C above the blend temperature.
- Maximum hot water supply temperature is 85 °C although maximum recommended is 60 °C for safety reasons.

## Connections

### Inlet

15 mm Compression or 1/2" BSP male (**Fino**).

15 mm Compression (**Fino B**).

### Outlet

1/2" BSP male (**Fino**), for connection to bottom outlet flexible hose only.

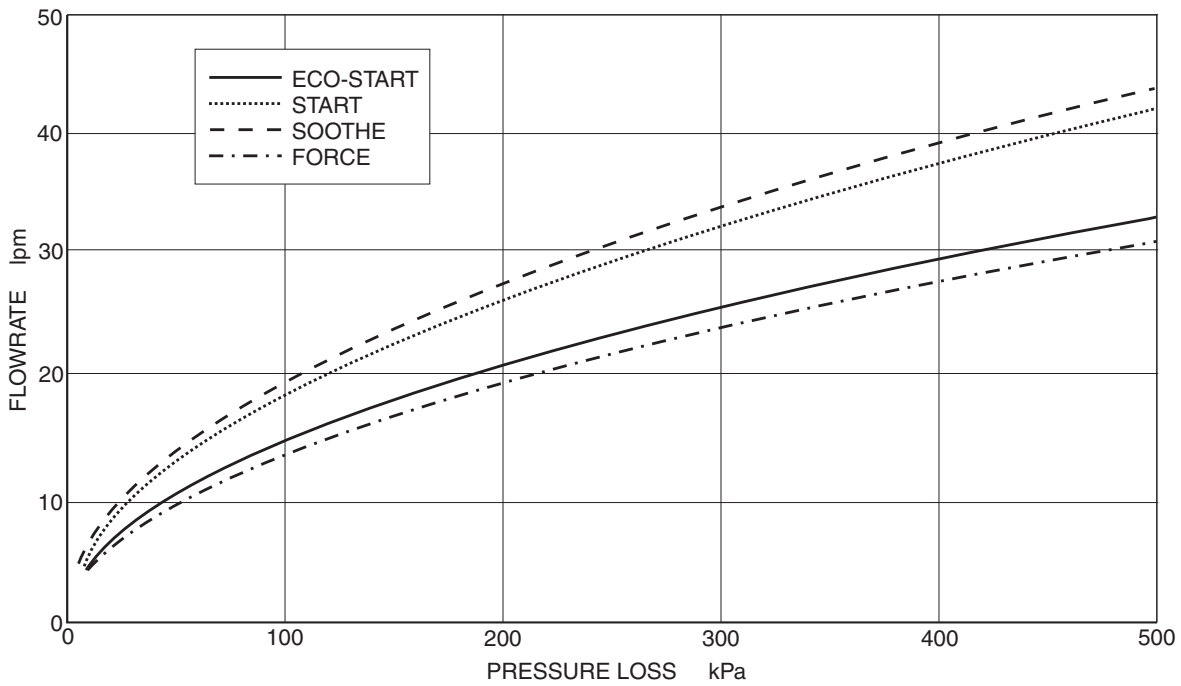
15 mm Compression or 1/2" BSP male (**Fino B**).

# Standards

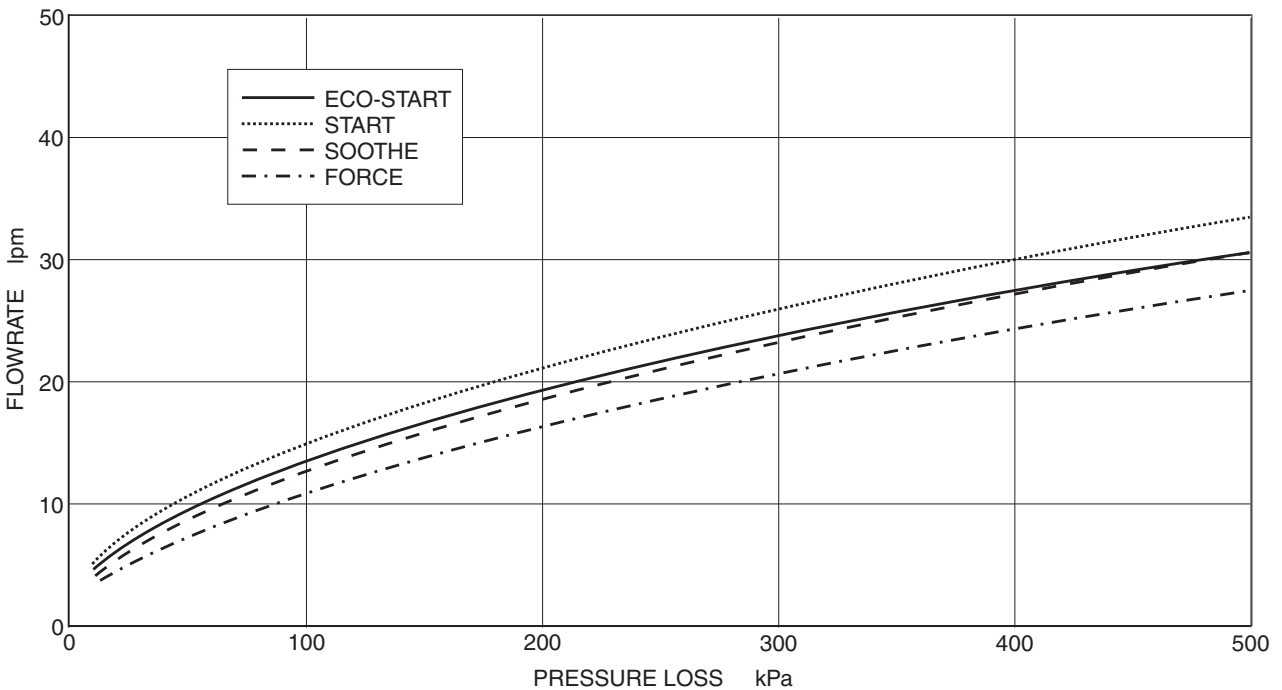
Designed to comply with BS EN 1111 and 1287 for thermostatic mixing valves, and to be used within systems designed to BS6700.

## Flow Rates

### Fino with Linessse Fittings High Capacity Spray Plate



### Fino with Linessse Fittings Low Capacity Spray Plate





1. Layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved and effects of other draw-offs are minimised.
2. The Mira Fino is **suitable** for installation as part of a gravity-fed plumbing system. Minimum inlet pressures of 0.2 bar (2 metre head) are required, though inlet pressures of 1 bar (10 metre head) are recommended for optimum performance. If minimum inlet pressures are not available then it will be necessary to install a pump.
3. When used with a **high pressure system above 5 bar maintained pressure**, a pressure reducing valve will be necessary. It is important that the system pressures are within the range specified for the Mira Fino.










If the system pressure is not known then the system pressure **MUST** be measured.

Pressures are those present at the inlet to the appliance either whilst running (maintained) or in the off state (static). Nearby hot and cold taps connected to the same proposed feed pipes as the appliance can be used to measure the static pressure. No other fitting or appliance should be in use at this time.

4. Supply pipes **MUST** be flushed to clear debris before connecting the shower control.
5. Conveniently situated isolating valves **MUST** be fitted for servicing purposes.
6. If the shower control is to be used with a fully modulating multipoint water heater, fully modulating combination boiler, thermal store or unvented system an expansion vessel must be fitted to accommodate the expansion of water in the domestic hot water supply (this may already be part of the system, check the details on the boiler/heater or contact the boiler/heater manufacturer).
7. No form of outlet flow control should be fitted, only Mira recommended fittings should be used in the outlet pipework.

## Typical Suitable Installations

Key to symbols appearing throughout this guide.

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

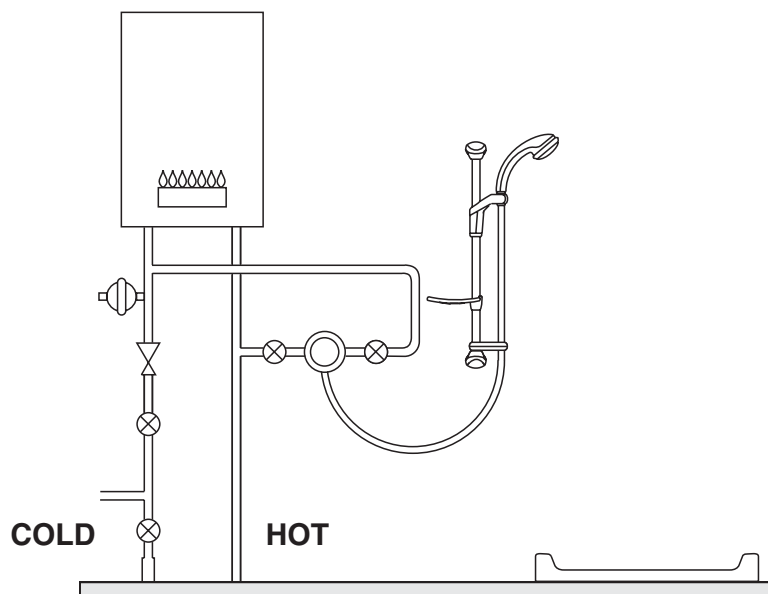
## Instantaneous gas-heated showers (e.g. combination boilers)

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

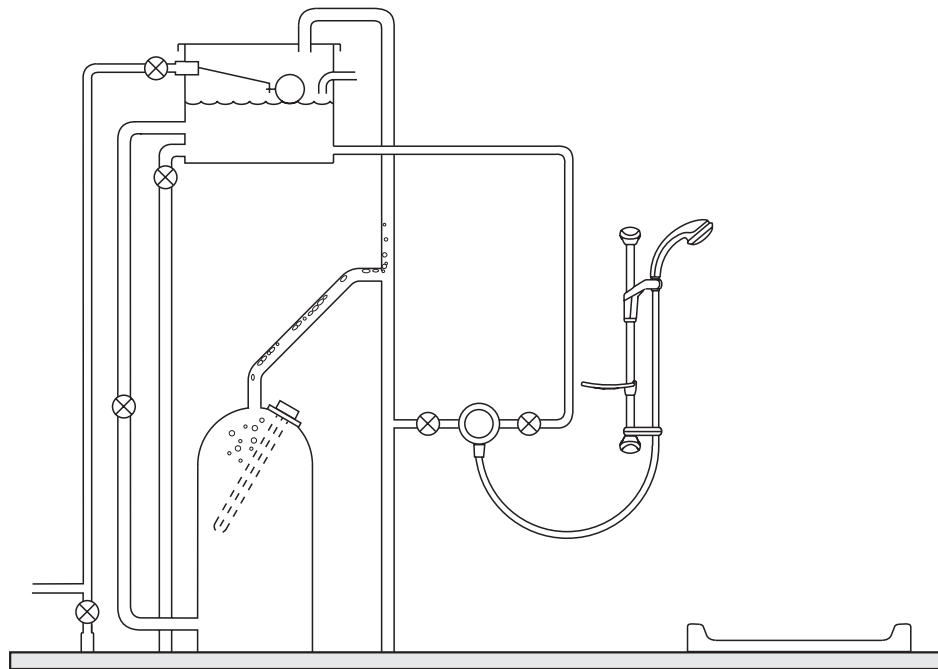
A drop tight pressure reducing valve **MUST** be fitted if the supply pressures exceed 5 bar maintained.

An expansion vessel **MUST** be fitted (and regularly maintained) as shown in the diagram below to ensure that excess pressures do not damage the product. This may already be fitted within the boiler (check with the manufacturer) and is in addition to the normally larger central heating expansion vessel.

The hot supply temperature **MUST** be at least 12 °C hotter than the required blend temperature for optimum performance.



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

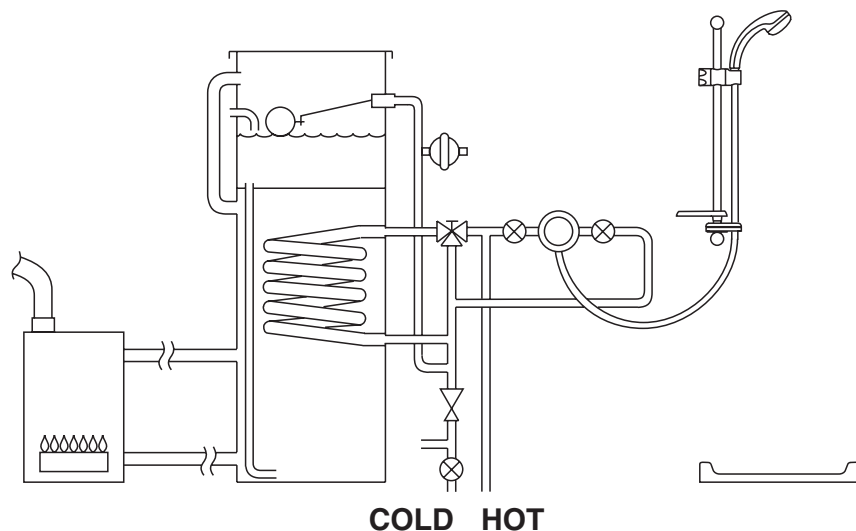


**Mains pressurised instantaneous hot water shower, heated from a thermal store**

Packages of this type, fitted with a tempering valve can be used.

A drop tight pressure reducing valve **MUST** be fitted if the supply pressures exceed 5 bar maintained.

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

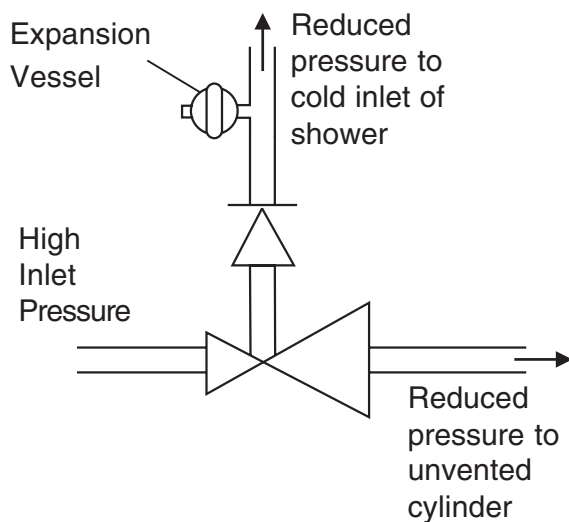
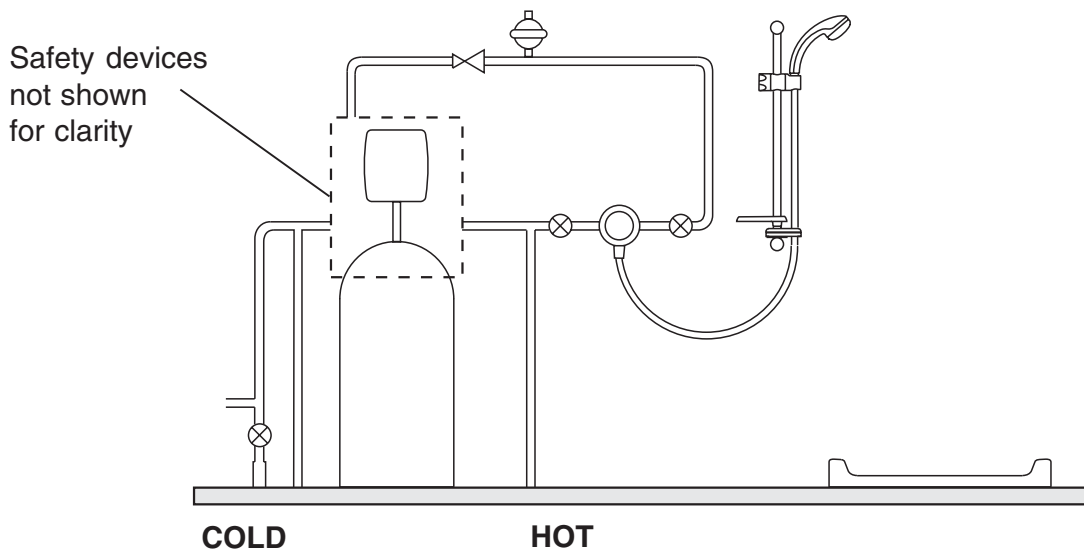


## Unvented mains pressure showers

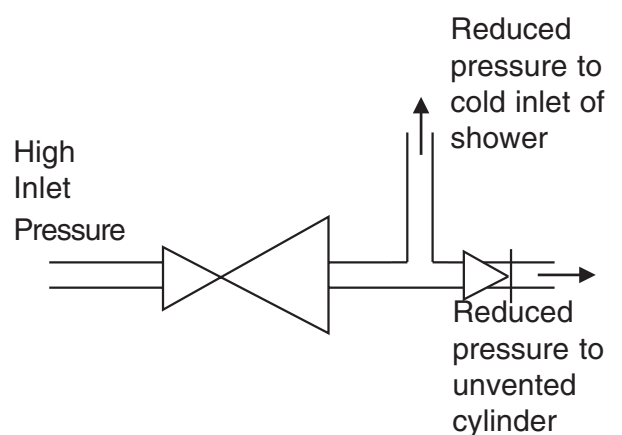
The shower can be installed with an unvented, stored hot water cylinder. Only a "competent person" as defined by the Building Regulations may fit this type of system.

For packages with no cold water take off after the appliance reducing valve, it will be necessary to fit an additional drop tight pressure reducing valve when the mains pressure is over 5 bar. The drop tight pressure reducing valve must be set at the same value as the unvented package pressure reducing valve.

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



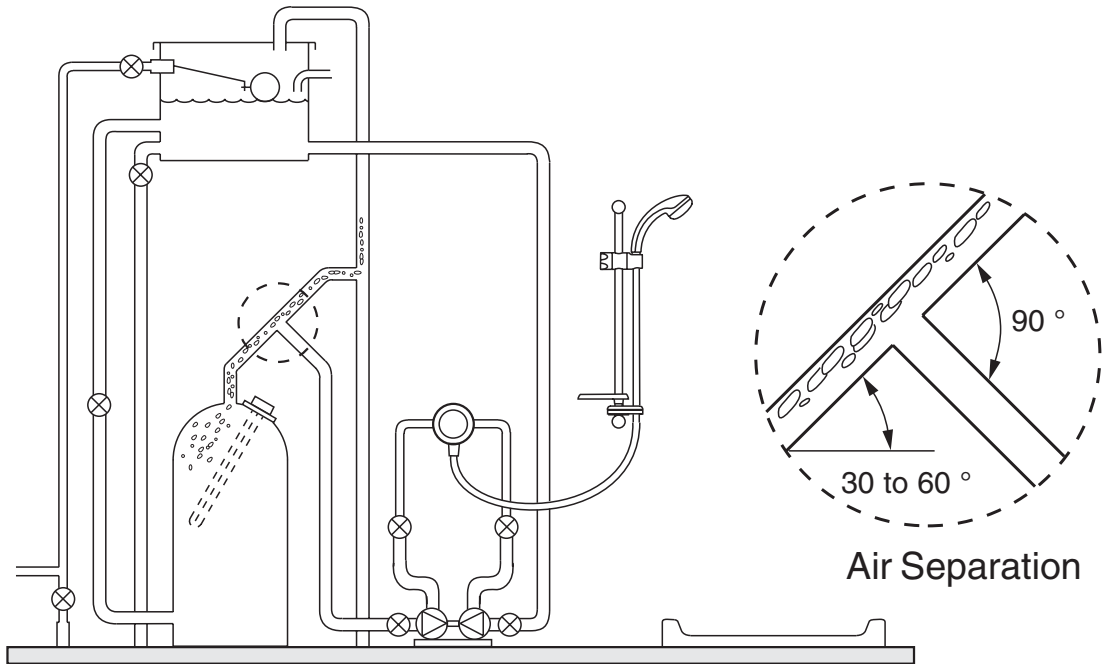
**Combined outlet PRV with internal non-return valves**  
**- Expansion vessel required.**



**Cold takeoff after PRV**  
**- Expansion pressure taken up by unvented cylinder expansion vessel.**

## Pumped showers (inlet pumps)

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



## Mira Fino Surface Mounted Shower Control

### Rising or Falling Inlet Supplies

**Note!** The Mira Fino is supplied with inlet connections **hot left, cold right** and **bottom outlet** as standard. For installations with reversed hot and cold supplies refer to the section **Installation: "Reversed Inlet Connection"**.

1. Before you complete the installation, determine whether the hot or cold water services will be connected to the shower control from the bottom (rising) or from the top (falling).

Before you decide on the final position of your shower control, please bear in mind the following:

Decide on a suitable position for the shower control. The position of the shower control 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.

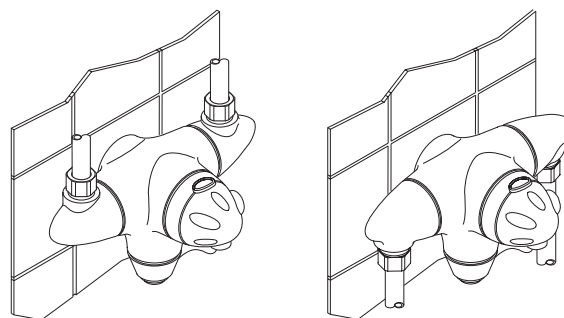
2. Remove the backplate by releasing, anticlockwise, the two recessed grub screws which retain the backplate against the brass shower control body, using the 3 mm A/F hexagon wrench (supplied).
3. Use the installation template to mark the positions of the fixing holes for the backplate on the wall.

Ensure the holes are vertically aligned.

**Warning!** Ensure there are no buried cables or pipes in the wall before drilling.

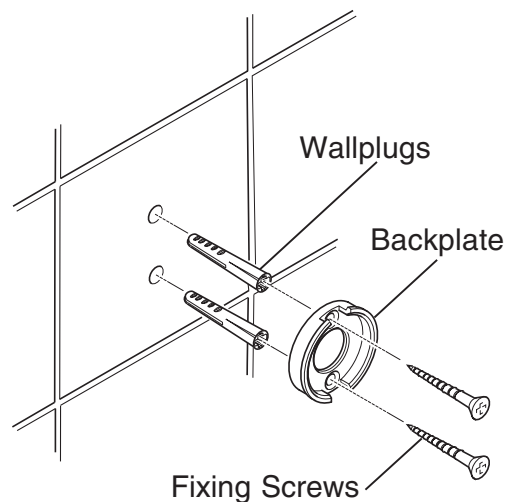
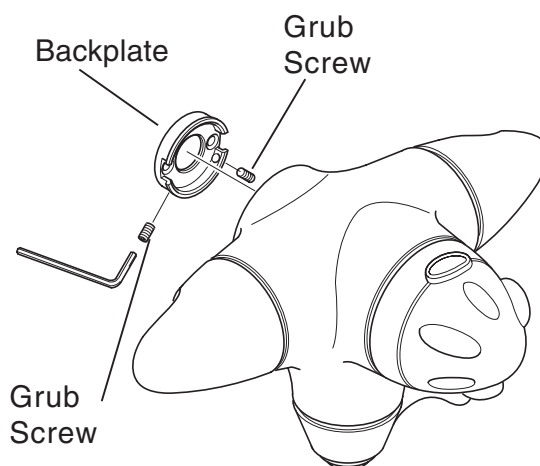
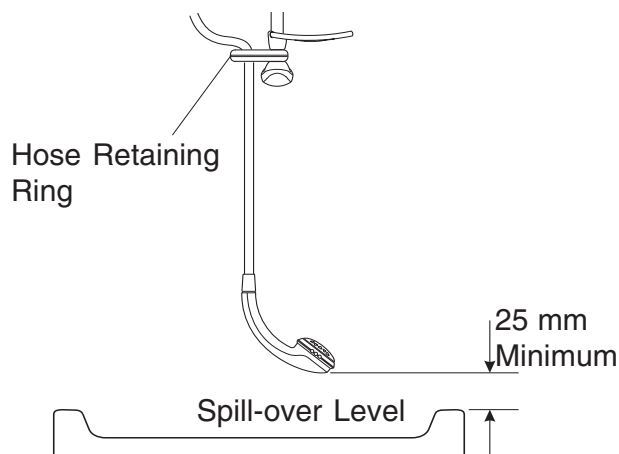
4. Drill the two marked fixing holes and fit the wallplugs provided. Secure the backplate to the wall with the two fixing screws provided.

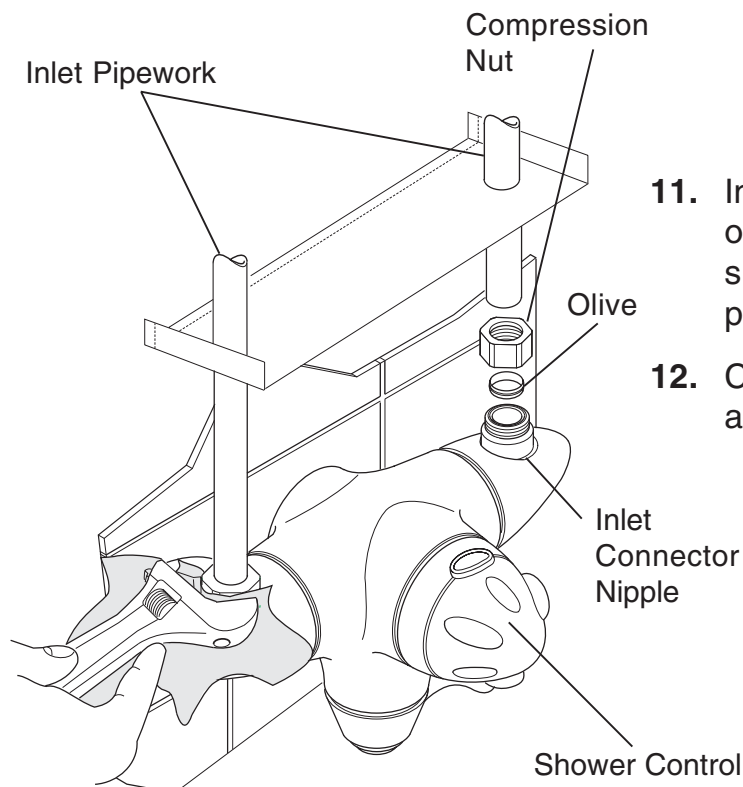
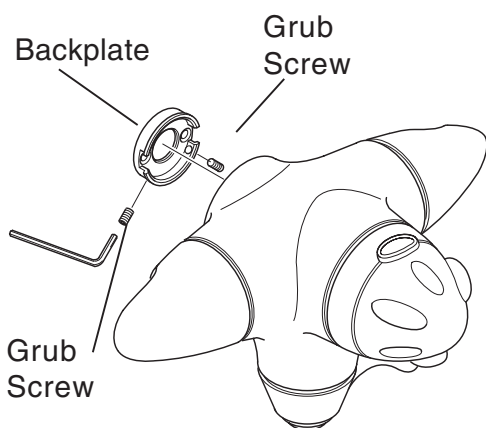
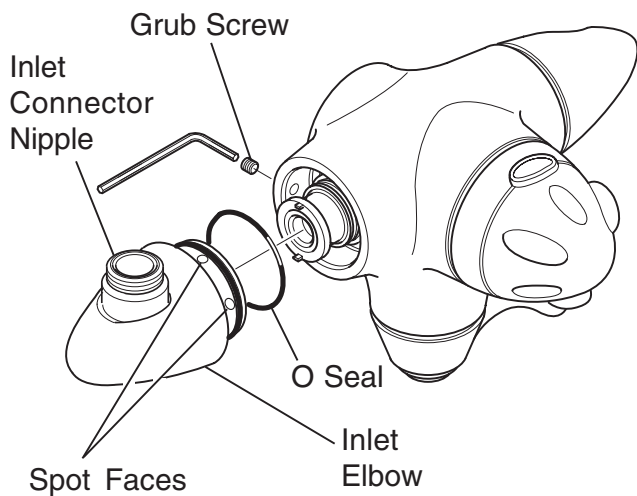
**Note!** Screws with larger heads will foul the shower control body.



Falling Supplies

Rising Supplies





5. Install the inlet pipework.

If necessary, use the installation template to ensure the pipework is in the correct position.

6. **Thoroughly flush the incoming hot and cold water supplies before connecting the shower control.**

7. Use the 3 mm A/F hexagonal wrench to loosen the two grub screws that hold the inlet elbows in position.

8. Rotate the inlet elbows so that the inlet connector nipple is pointing up for falling supplies, or down for rising supplies. Tighten the grub screws.

**Make sure the elbow is aligned so that the grub screws locate into the spot faces in the inlet elbow.**

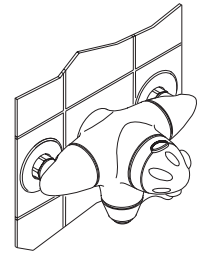
9. Fit the shower control body onto the backplate and secure by in position with the two grub screws, using the 3 mm A/F hexagonal wrench.

10. Slide the compression nut, then the olive, over the hot and cold inlet pipework. If necessary, smear 'liquid jointing' sparingly on the pipe end and the outside of the olive.

11. Insert the hot and cold inlet pipework into the opening of the inlet connector nipple then slide the olive and compression nut into place.

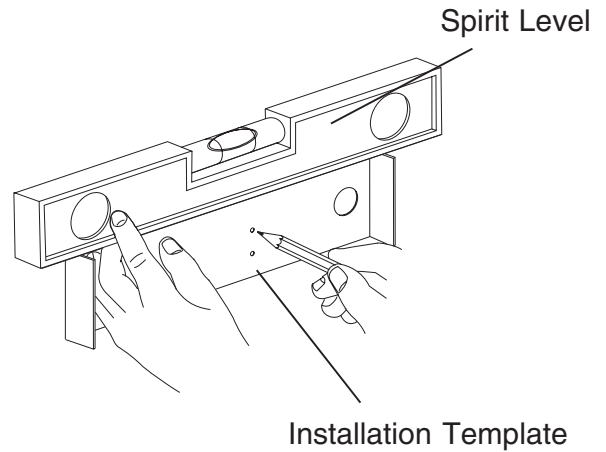
12. Carefully tighten the compression nut. Use a cloth to protect the plated surfaces.

# Back Inlet Supplies



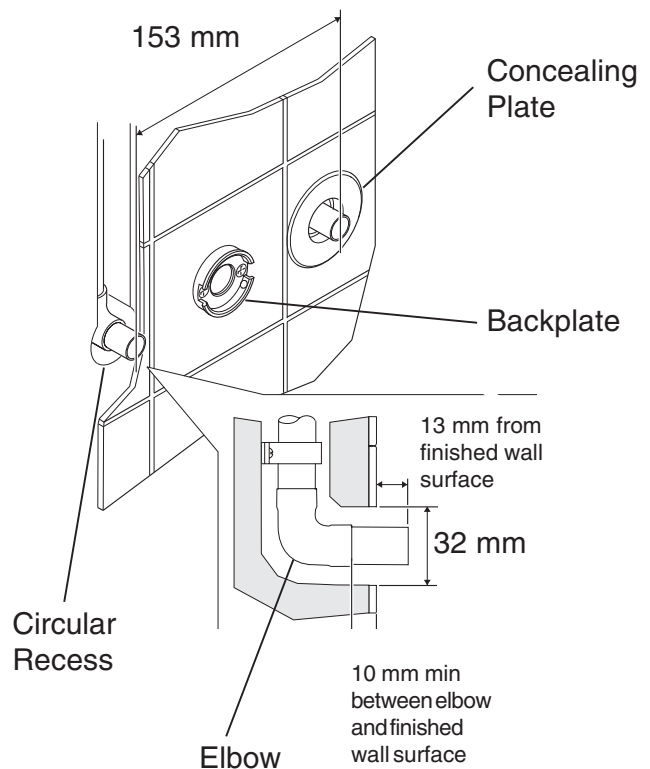
1. Follow the shower control installation procedure as for “**Rising or Falling Inlet Supplies**”: **instructions 1. to 4. inclusive.**
2. Use the cardboard installation template to mark the positions of the holes for the backplate and the pipe centres.
3. Remove the plaster and brickwork to the required depth to conceal the supply pipework.

**Note!** Depth must be sufficient to prevent pipe concealing plates fouling on the plumbing elbows.

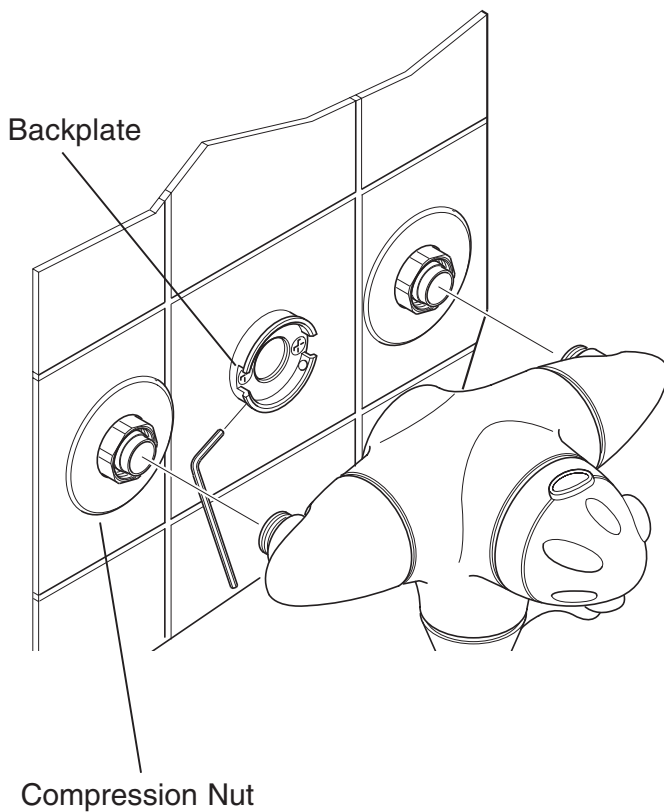


4. Install the hot and cold water supply pipework ensuring that the pipe ends emerge from the wall surface at **153 mm** centres, and project from the finished wall surface by **13 mm**.

Use the installation template to ensure the pipes are in the right position.





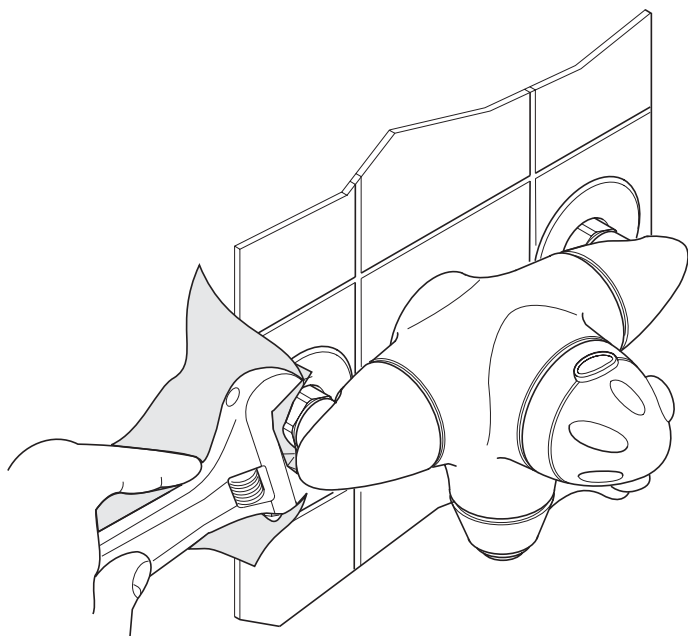


5. Make good the wall surface, allowing for two circular recesses measuring **32 mm** diameter x **10 mm** depth, to accept the two pipework concealing plates.

Fit the pipework concealing plates over hot and cold water supply pipework.

6. **Thoroughly flush the incoming hot and cold water supply pipes before connecting the shower control.** Failure to do so may result in product malfunction.

7. Slip the compression nuts and olives over the supply pipes.



8. Locate the shower control body onto the backplate and inlet supply pipework, then secure by tightening, clockwise, the two recessed grub screws, using the 3 mm A/F hexagon wrench (supplied).

Tighten the compression nuts, using if necessary, a cloth to protect the plated surfaces.

**Turn on the water supplies and check for any leaks!**

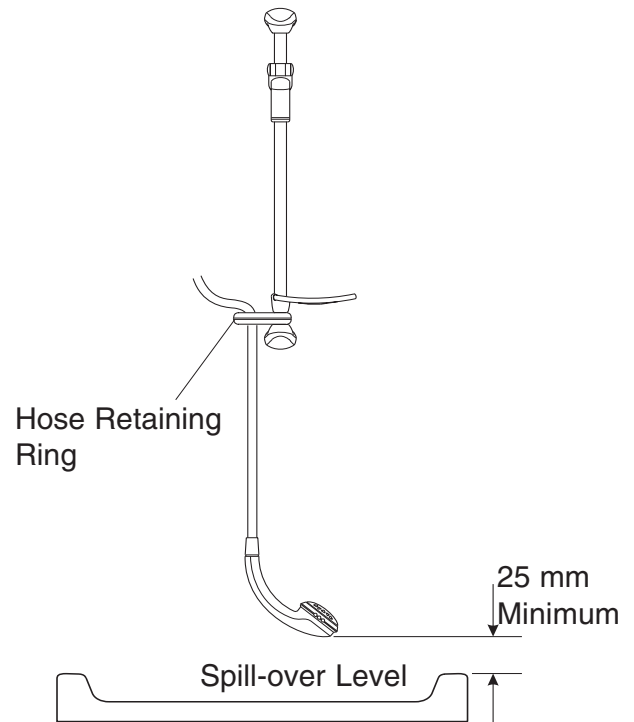
9. This completes the installation of the Mira Fino for “**Back Inlet Supplies**”.

# Mira Fino Built-in Shower Control

## Solid, Dry Lined, Stud Partition or Dry Partition Wall Structures

The built-in shower control incorporates an integral wall mounting bracket assembly which can be used to install the shower into a solid, dry-lined, stud partition or dry partition wall structure, shower cubicle or laminated panel.

1. Before you decide on the final position of your shower control, please bear in mind the following:
  - Decide on a suitable position for the shower control. The position of the shower control 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.
  - Determine whether the hot or cold water services will be connected to the shower control from the top (falling) or from the bottom (rising).

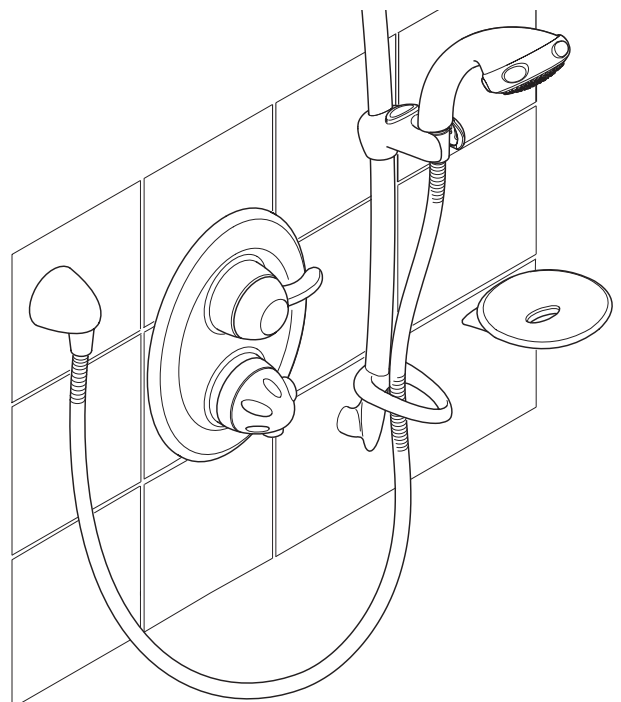


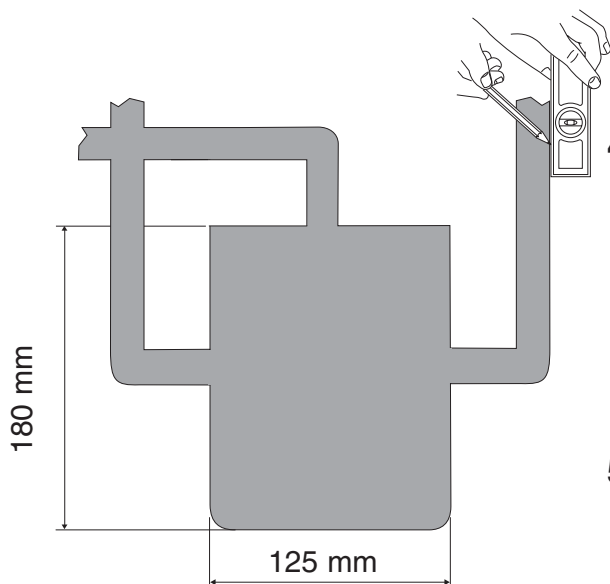
2. Familiarise yourself with the hot and cold water inlet ports and outlet port. They can be identified as follows:

The Mira Fino is supplied with inlet connections **hot left, cold right** and **top outlet** as standard.

To change the position of the inlet refer to "**Reversed Inlet Connection**": **instructions 1. to 6. inclusive.**

3. Determine the route for the incoming hot and cold water supply pipework. The outlet pipework to a flexible shower fitting is best positioned to emerge above and to one side of the shower control to allow the flexible hose to drape around the underside of the shower preventing the hose from interfering with the knob (refer to diagram).

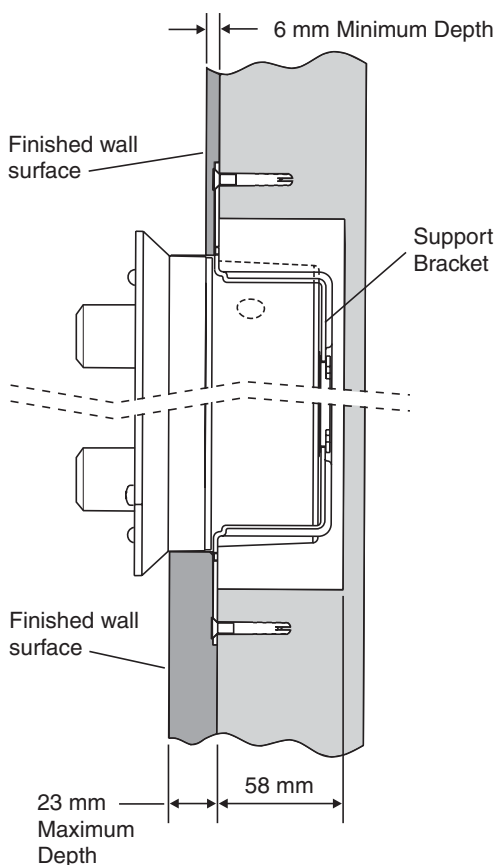
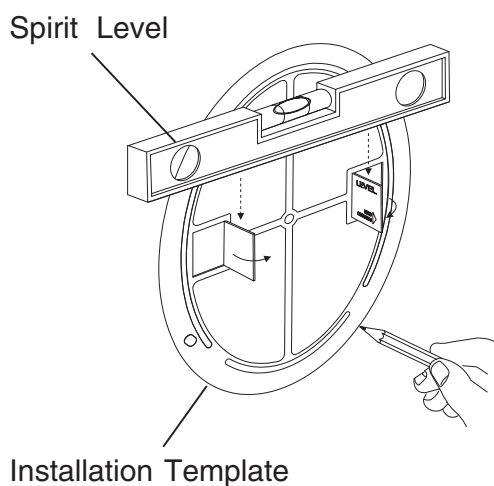




4. If installing the shower into a solid wall, mark an opening sufficient to accommodate the shower control approximately **180 mm x 125 mm** on the surface of the wall.

Alternatively, if installing the shower into a dry-lined wall, use the installation template and mark around the outside edge.

5. Mark the route of the supply and outlet pipes.



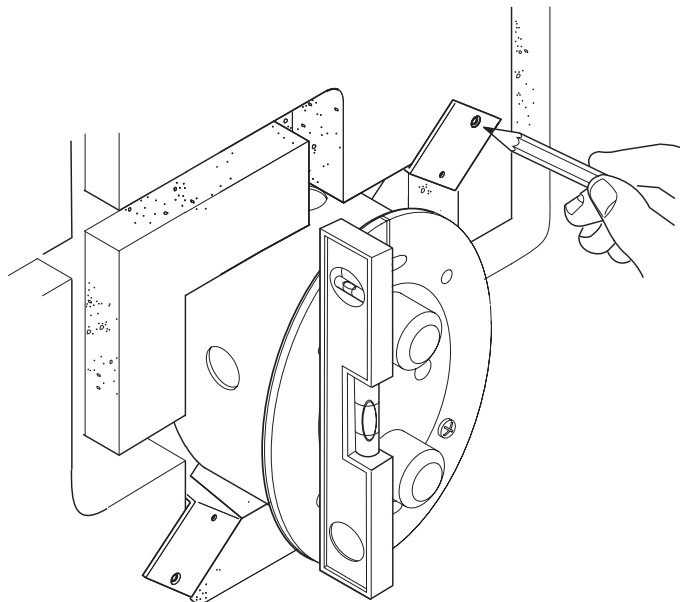
6. Remove the plaster and brick/block for the shower control to a depth of between **64 mm and 81 mm** from the finished surface of the wall. The support bracket requires a clearance depth of **58 mm**, with a finished wall surface thickness of between **6 and 23 mm**.

**Note!** The maximum and minimum depth levels are indicated on the outer sections of the building-in shroud.

7. Remove the plaster and brick/block work for the supply and outlet pipes.

8. Mark the final position on the wall of the two larger outer diameter fixing holes in the flanges of the wall mounting bracket. This bracket must be fixed at 45°.
9. Drill and suitably plug the two marked fixing holes.

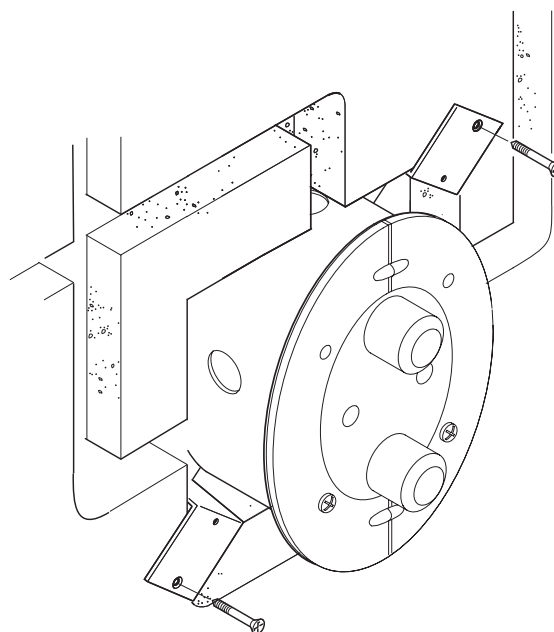
Position the hot and cold supplies.



10. Install the shower control aligning the two flange holes of the wall mounting bracket assembly with the pre-drilled fixing holes.

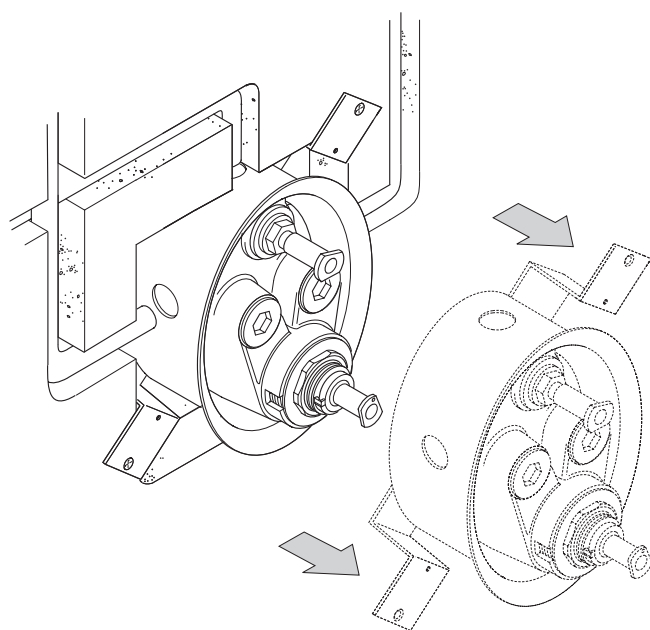
Secure the shower control with the two fixing screws supplied.

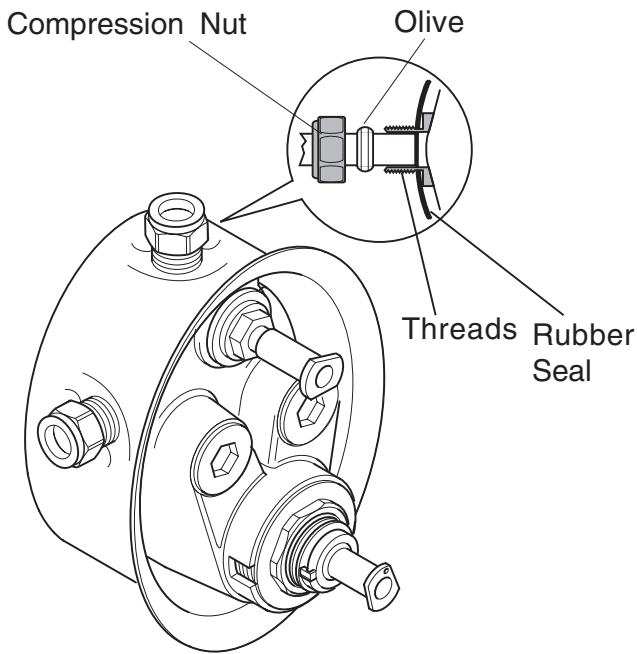
11. Remove all three sections of the building-in shroud. Align the hot and cold supply and top outlet pipes with the valve but do not connect to the valve.



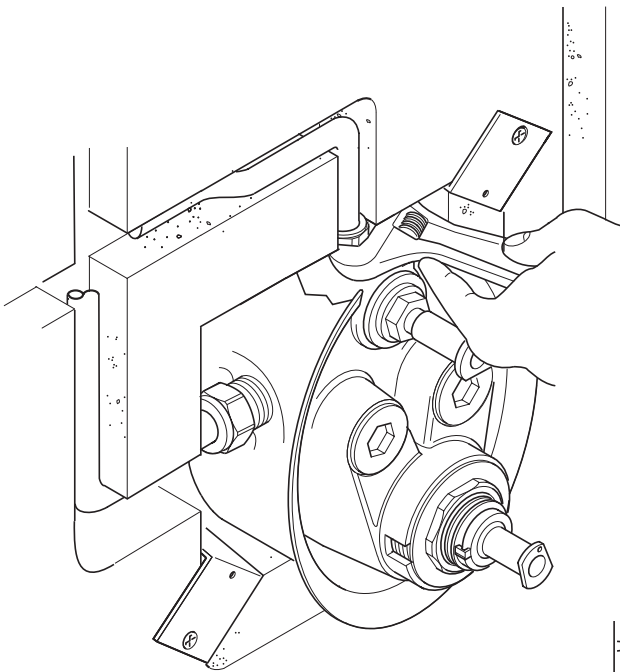
12. Remove the support bracket and valve unit from the wall and thoroughly flush the hot and cold water supply pipes. **The supplies must be clean and free from debris before connecting the shower control. Failure to do so may result in product malfunction.**

**Note!** The Fino is supplied with inlet connections **hot left, cold right** and **top outlet** as standard. For installations with reversed hot and cold refer to **Section 9, Reversed inlet connections.**





13. Stretch the rubber seal over the valve inlet and outlet threads and loosely attach the compression nuts and olives.

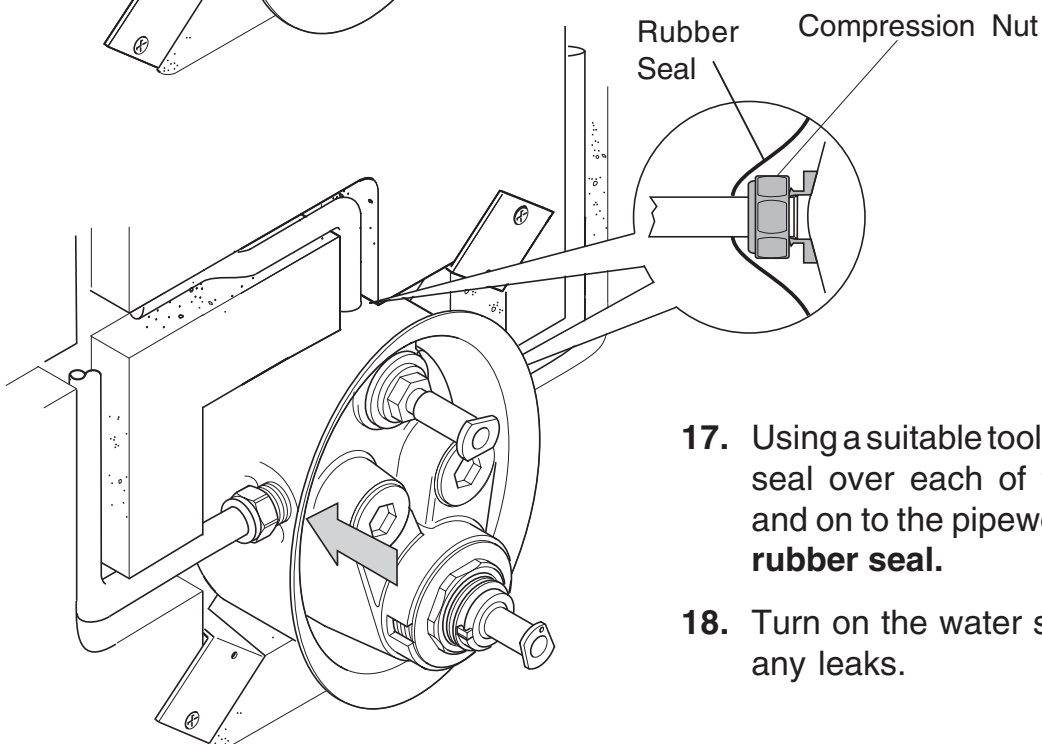


14. Fix the support bracket and valve unit into the wall with the two fixing screws.

15. Insert the hot and cold supply and top outlet pipes through the compression nuts and olives. **Ensure that each pipe is pushed fully into the valve.**

**Note!** For falling inlet supplies the outlet pipe may have to be set deeper into the wall.

16. Hold each pipe in position and use a suitable spanner to tighten the compression nuts. **Do not pinch the rubber seal.**



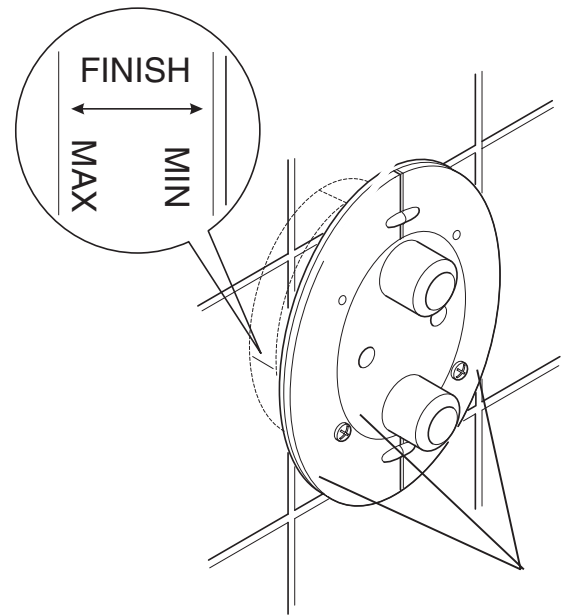
17. Using a suitable tool, push the rubber cavity seal over each of the compression nuts and on to the pipework. **Do not pierce the rubber seal.**

18. Turn on the water supplies and check for any leaks.

**19** Refit the three building-in shroud sections that you removed earlier. Secure the shroud in position with the screws.

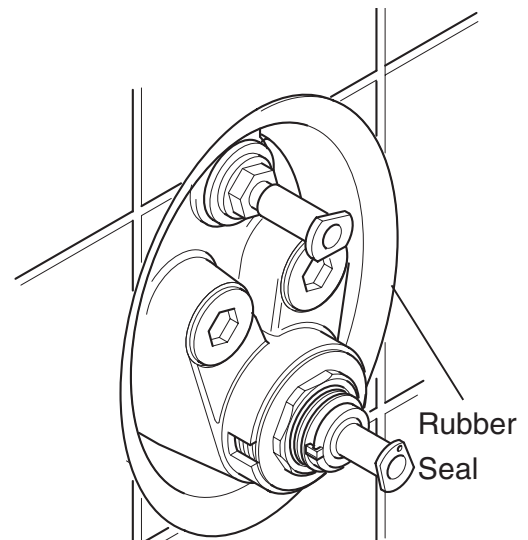
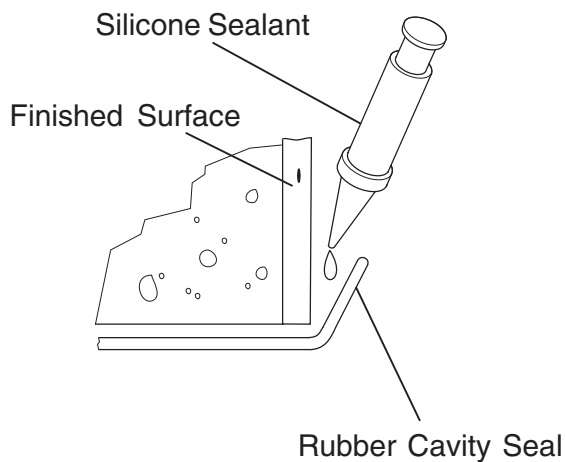
**20.** Plaster and tile up to the tapered sides of the plastic building-in shroud and, when set, remove the shroud. The two longer shroud retaining screws should be kept for use later.

Make sure that the finished tiled wall surface is within the FINISH arrow on the building-in shroud.



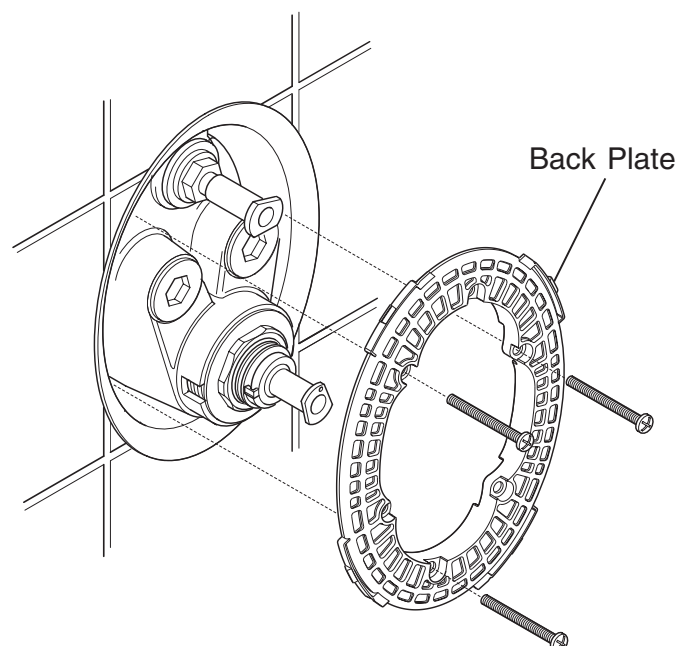
Building-in Shroud

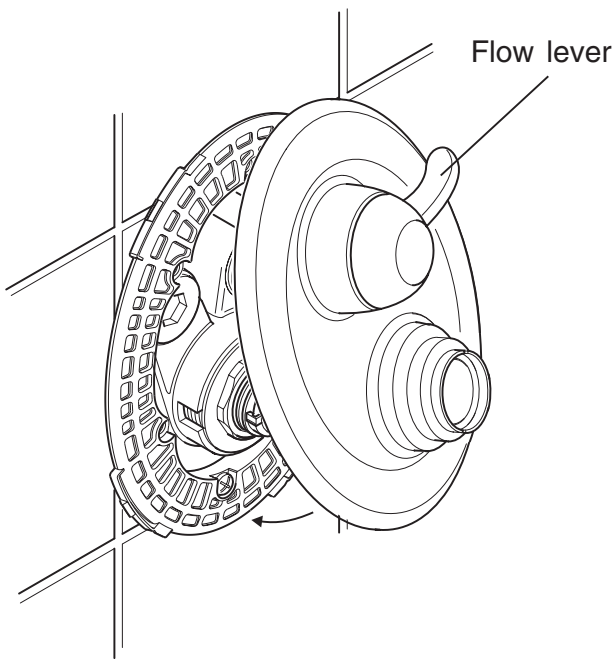
**21.** Apply a bead of silicone sealant between the rubber seal and the tiled surface.



**22.** Fit the back plate over the valve making sure that the rubber seal is between the plate and the tiled surface. Secure the back plate in position with the three M5 x 60 mm fixing screws (supplied).

**Caution!** Make sure that you do not overtighten the screws.

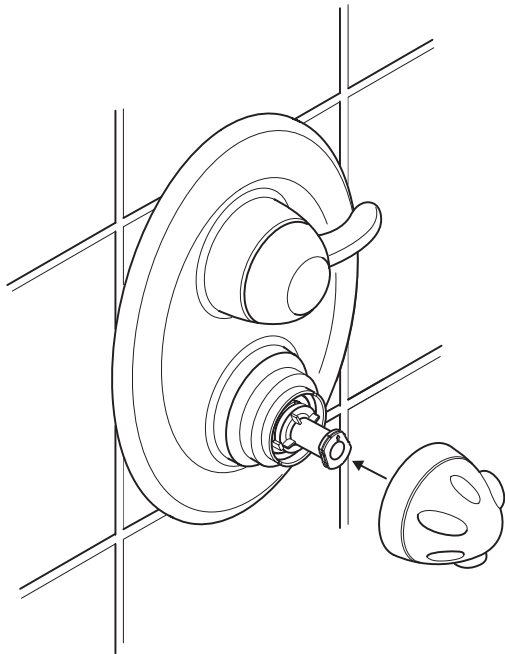




23. Remove the temperature knob from the concealing plate.

Line up the flow lever with the top hub. To fit the concealing plate, firstly clip it over the top of the back plate and then push it firmly until it locates on the bottom.

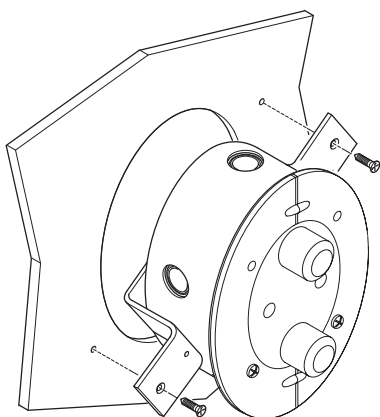
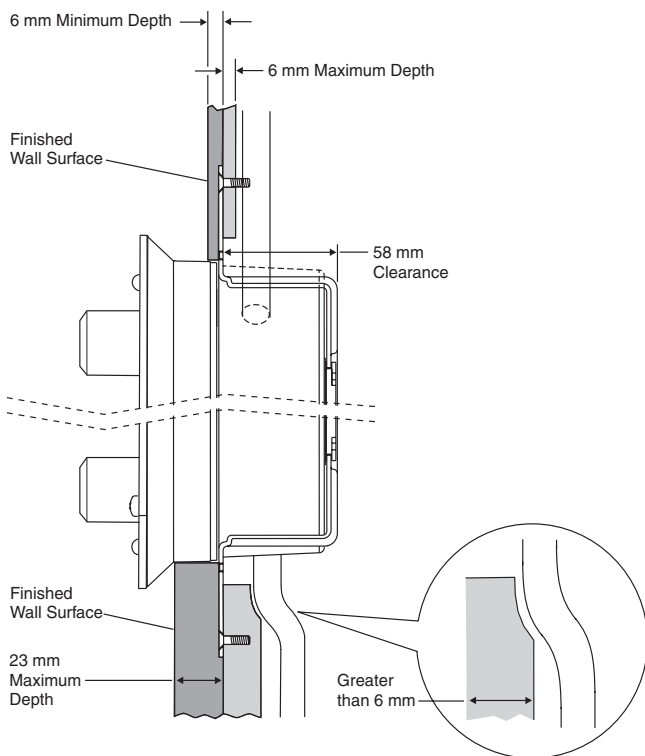
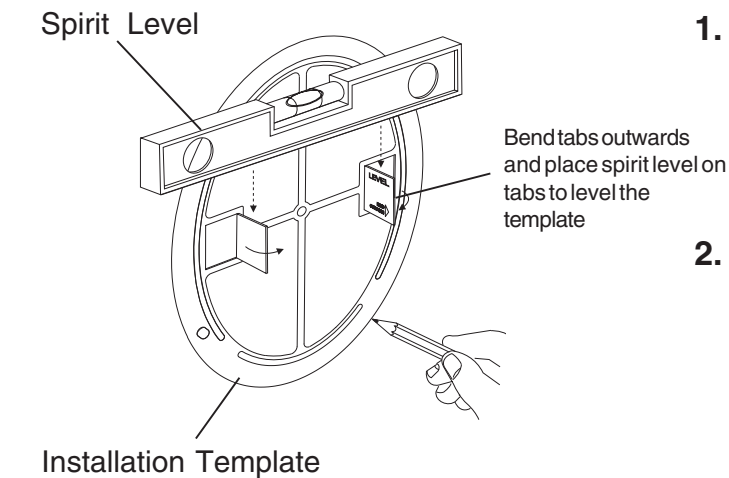
Align the temperature knob with the bottom hub and re-attach.



24. This completes the installation of the **Mira Fino** for installation into “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”.

# Laminated Panel and Shower Enclosures (Front Face)

The built-in shower control is supplied with a support bracket that can be used to install the shower control into the front face of a stud partition wall structure or shower enclosures. The front face installation of the support bracket is only practical where an applied surface finish e.g. plaster or tiles can conceal flanges of the bracket.



1. Follow the shower control installation procedure as for “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”: instructions 1. to 3. inclusive.

2. Use the installation template (supplied) to mark the size of the hole required on the panel.

Bend the tabs outwards and use a spirit level to ensure that the hole is marked symmetrically.

Mark around the **outside edge** of the template.

3. Carefully cut the hole in the panel.

4. Follow the shower control installation procedure as for “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”: instructions 8. and 9. inclusive.

5. Fix the mounting bracket and valve unit to the panel with the two fixing screws (alternative fixing screws may be required). Make sure that the lip on the rubber seal is on the outside face of the panel.

6. To complete the installation, follow instructions 11 to 23 of “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”.



## Laminated Panels and Shower Enclosures (Rear Face)

The built-in shower control incorporates an integral wall mounting bracket assembly which can be used to install the shower into the rear face of a shower enclosure or laminated panel.

The building-in depth for the integral wall mounting bracket assembly is **58 mm**. The integral wall mounting bracket assembly can be used to install the shower control into a laminated panel or shower enclosure of between **4** and **21 mm**. The building-in depth calculation must include the final thickness of plaster and tiles.

1. Follow the shower control installation procedure as for “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”: instructions 1. to 3. inclusive.

2. Use the installation template (supplied) to mark the size of the hole required on the panel.

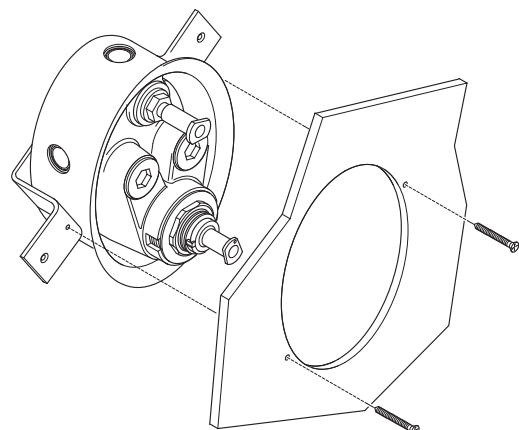
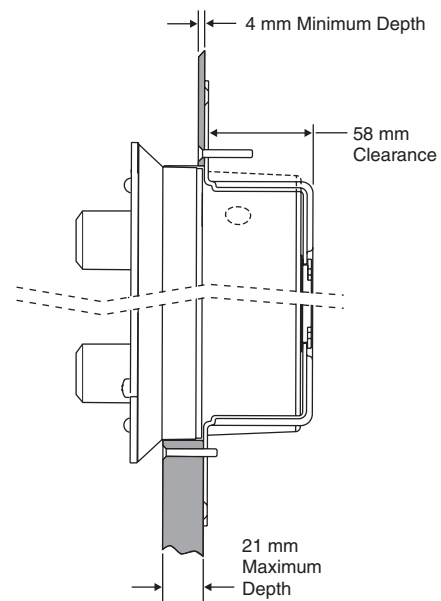
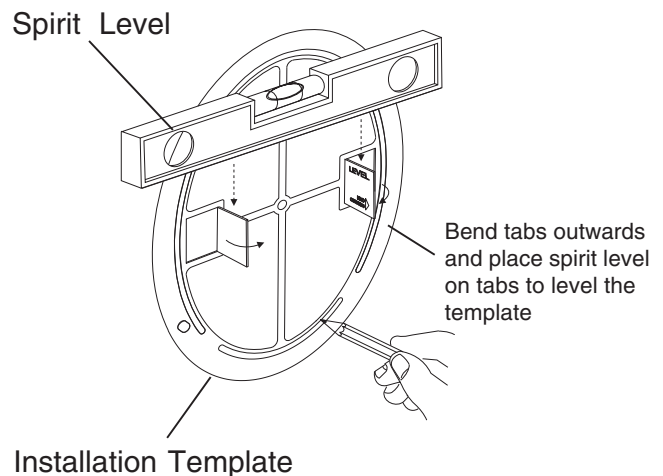
Bend the tabs outwards and use a spirit level to ensure that the hole is marked symmetrically.

Mark through the **inner slots** of the template and mark the position of the fixing holes for the support bracket.

3. Carefully cut the hole in the panel.
4. Drill a 6.0 mm diameter hole at each of the marked positions.
5. Position the hot and cold supply pipes but do not connect to valve.
6. Remove the three building-in shroud sections and fix the support bracket and valve unit in position using the two screws (supplied).

Pull the cavity wall seal through the hole.

7. Align the hot and cold supply and top outlet pipes with the valve but do not secure the pipes.
8. To complete the installation, follow instructions 12 to 23 of “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”.



## Reversed Inlet Connection

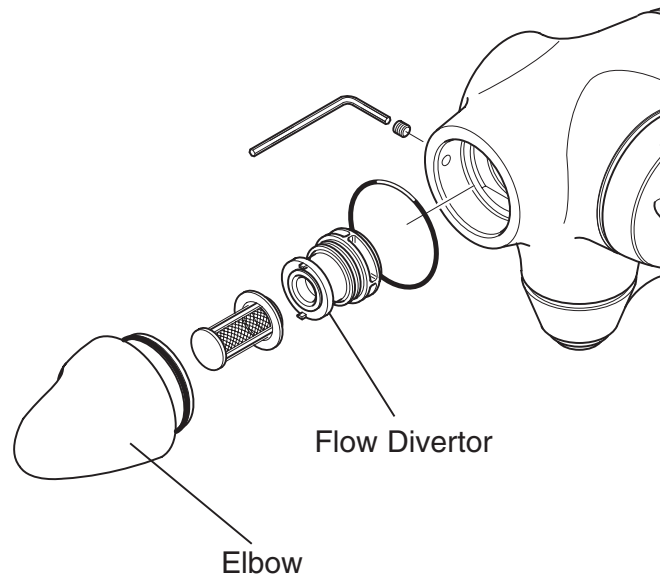
Mira Fino shower controls are supplied with inlet connections **hot left, cold right** and **bottom outlet**. The Fino Built-in is supplied with inlet connections **hot left, cold right** and **top outlet** as **standard**.

The flow divertors on the exposed and built-in models are colour coded **RED** and **BLUE**.

To reverse the inlet position proceed as follows:

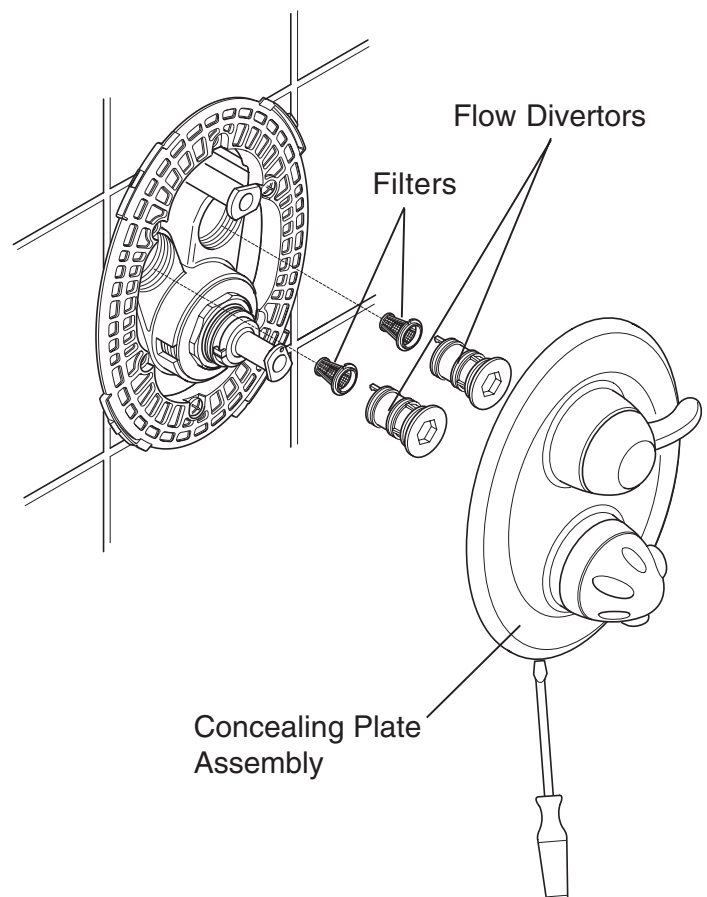
### Fino Exposed

1. Using the 3 mm hexagonal wrench (supplied) remove the grub screws that hold the elbows in position.
2. Remove the elbows.
3. Remove the coloured flow divertors.
4. Refit the flow divertors in the opposite sides (refit the BLUE divertor where you removed the RED divertor from and vice versa).
5. Refit the elbows and secure in position with the grub screws.
6. This completes the procedure for **“Reversed Inlet Connection”**.



### Fino Built-in

1. If fitted, carefully prise off the concealing plate assembly using the screwdriver slot at the bottom of the concealing plate.
2. Remove the coloured flow divertors, using the supplied quad key.
4. Refit the flow divertors in the opposite sides (refit the BLUE divertor where you removed the RED divertor from and vice versa).
5. To refit the concealing plate assembly, follow instruction **23** of **“Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures”**.
6. This completes the procedure for **“Reversed Inlet Connection”**.

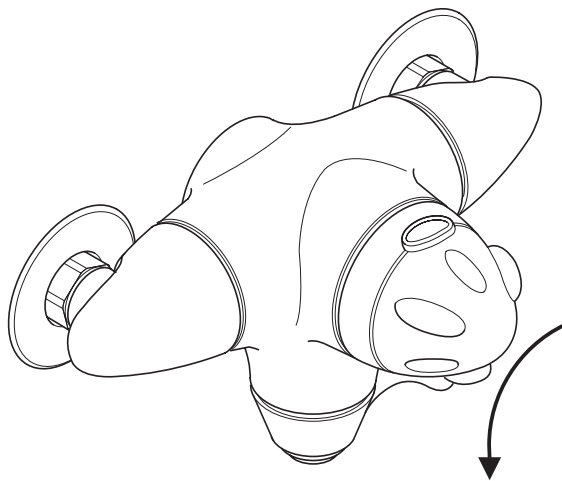


## 1. Maximum Temperature Setting

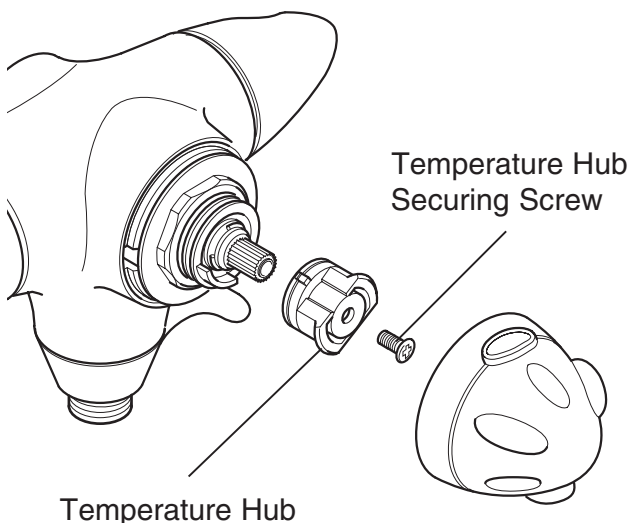
All Mira Fino shower controls are fully performance tested and the maximum temperature has been set under ideal installation conditions at the factory. The temperature stop is set to 41 ° C and depressing the override will increase the temperature by 5 ° C to approximately 46 ° C. Site conditions and personal preference may make it necessary to reset these temperatures.

**Note! An adequate supply of hot water at least 12 °C above the required temperature must be available for correct operation of the shower control.**

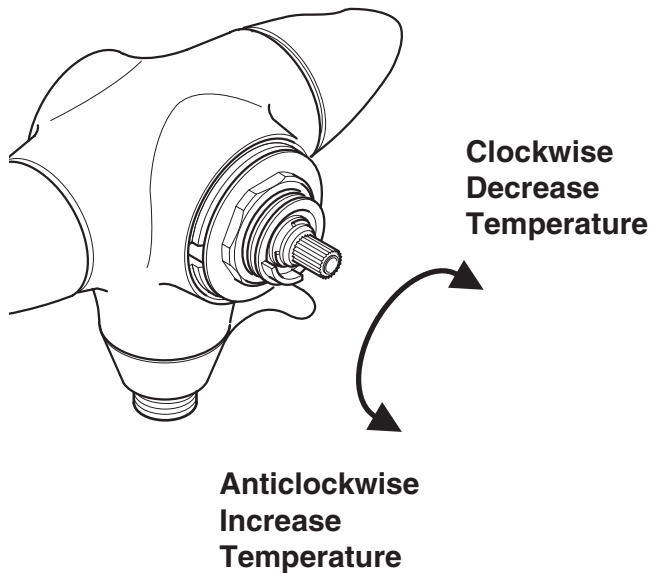
**Warning!** Altering the position of the temperature stop will reset the maximum temperature obtainable with the override operated.



- 1.1. Turn the temperature knob to the maximum temperature stop. **Do not depress the override button.**
- 1.2. Turn the flow knob fully anticlockwise (maximum flow) and allow the temperature to stabilize.
- 1.3. Measure the water temperature. If the temperature is satisfactory then no adjustment is needed. If adjustment is necessary continue with the commissioning procedure.



- 1.4. Carefully pull off the temperature knob.
- 1.5. Remove the temperature hub securing screw.
- 1.6. Use a screwdriver to carefully lever off the temperature hub. Ensure that the pressure washer remains in position.

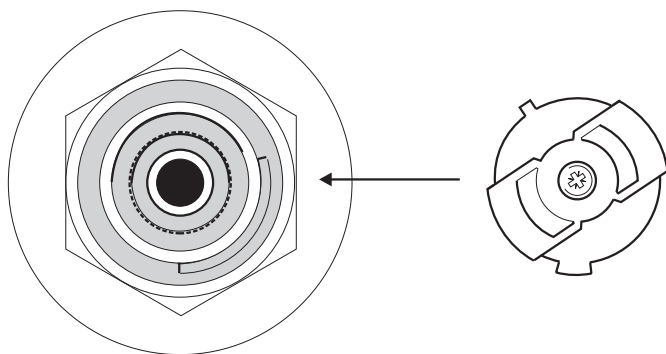


- 1.7. Rotate the temperature spindle until the required temperature is obtained. Turn the spindle anticlockwise to increase the temperature or clockwise to decrease the temperature.

If resistance is felt **DO NOT USE FORCE** to rotate the spindle as this is the **maximum obtainable temperature** from the shower control with the available hot water supply temperature. **FORCE** will **DAMAGE** the internal components of the cartridge assembly.

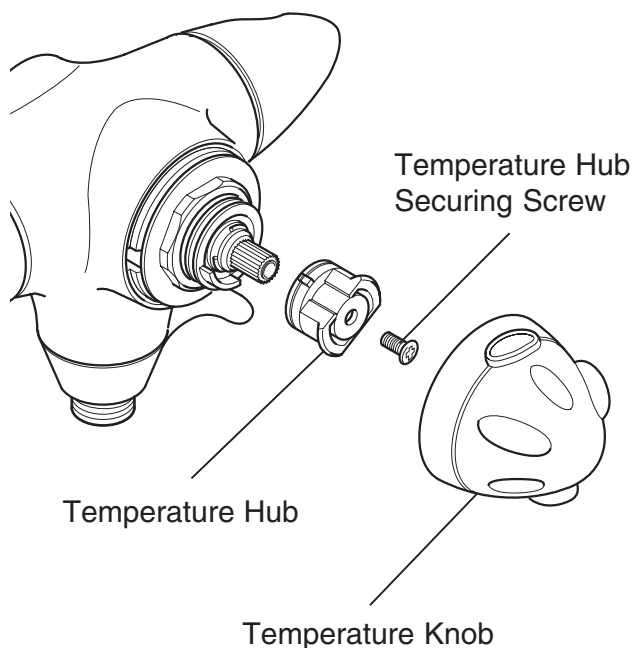
- 1.8. Turn the flow knob off (fully clockwise).

- 1.9. Refit the temperature hub making sure that the arrow on the hub aligns with the cut out.



- 1.10. Refit the securing screw and the temperature knob. Check that the temperature knob can be rotated fully in both directions.

- 1.11. Turn the flow knob fully anticlockwise (maximum flow) and check the temperature is correct and the override functions correctly. If necessary repeat the procedure until the correct temperature is achieved.



## Temperature Override Button Disable

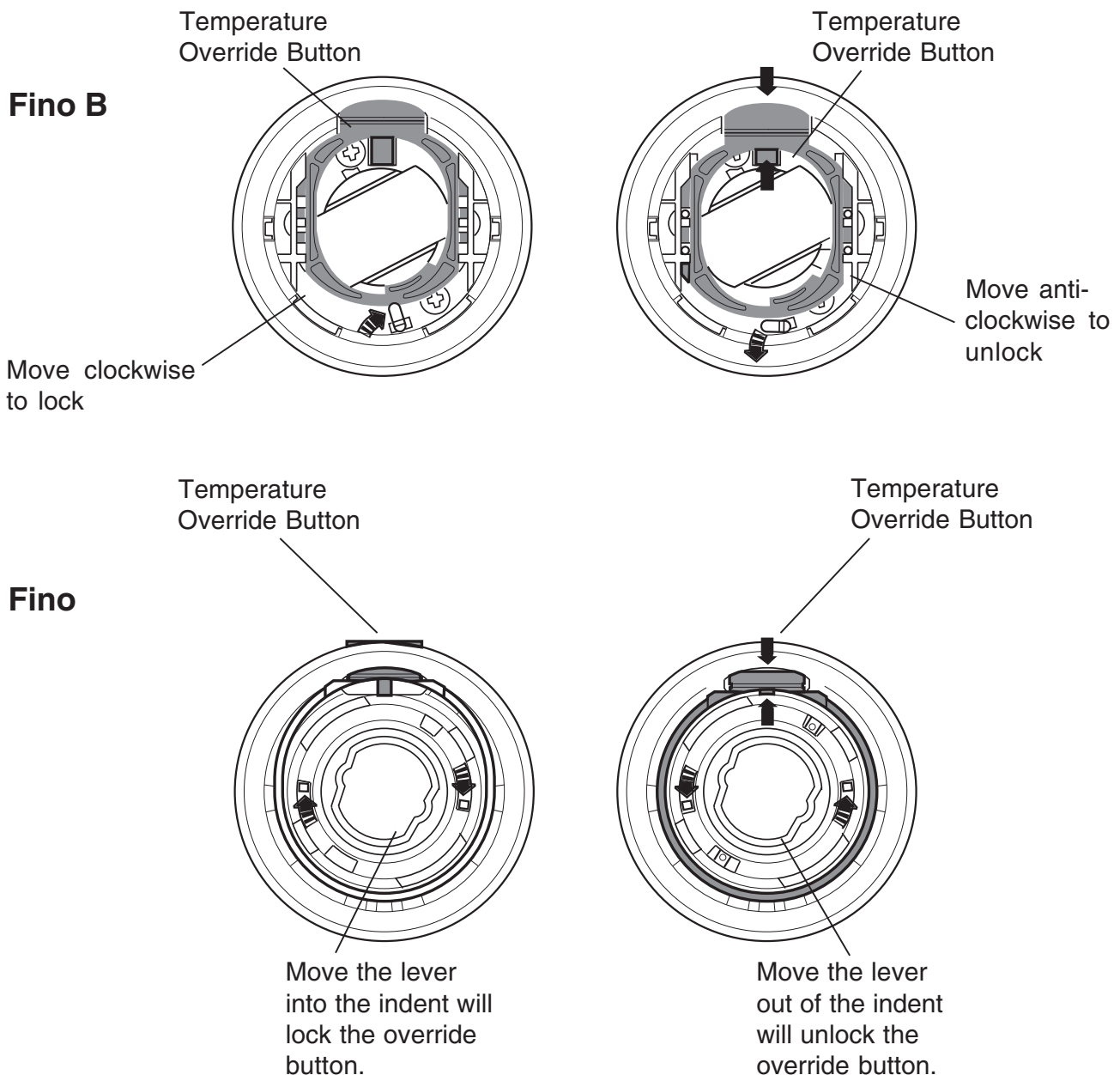
The Mira Fino incorporates a temperature override button that allows the user to override the preset maximum temperature. The following procedure can be used to disable the override button, limiting the maximum temperature available to the preset value. This setting is recommended for the young, the elderly, the infirm, or anyone inexperienced in the correct operation of the controls.

1. Ensure the shower control is turned off.
2. Remove the temperature knob.
3. Disable the temperature override button as follows;

**Fino B** - on the rear of the temperature knob move the lever in the slot, this will either lock or release the button depending on how it had been previously set.

**Fino** - on the rear of the temperature knob move the small plastic lever to lock it in the indent. Placing the lever in the indent will lock the override button.

4. Install the temperature knob back on the valve.



## 1. Fino and Fino B

The Mira Fino incorporates a temperature override button that allows the user to override the preset maximum temperature. It is recommended that this facility is disabled for the young, the elderly and the infirm, or anyone inexperienced in the correct operation of the controls. Refer to **Section 8, Commissioning: "2. Temperature override button disable"**.

### Fino

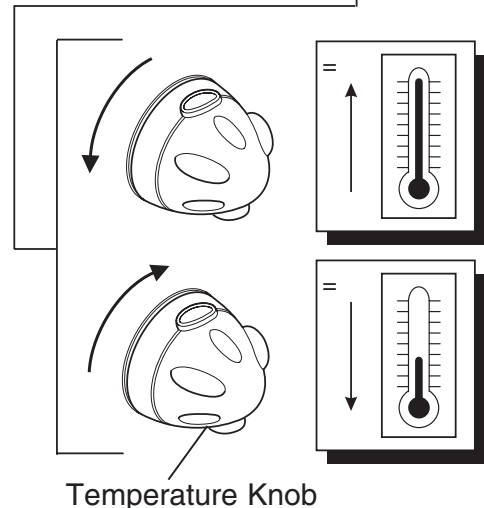
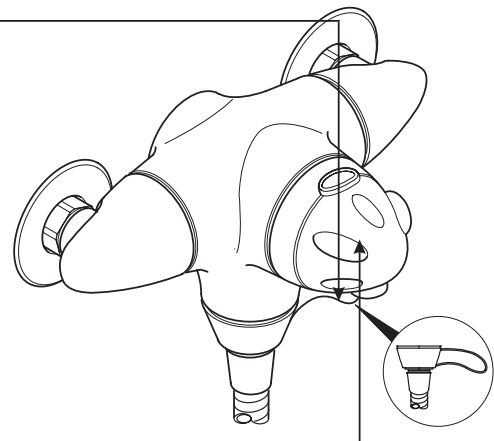
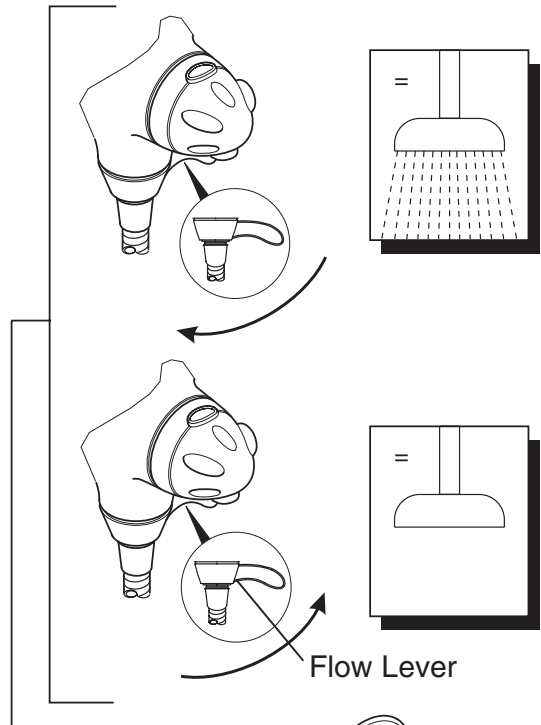
- 1.1. Turn the flow lever until the desired force of water is obtained.

**Note!** When the Fino is installed with a fully modulating multipoint or combination type gas water heater, the maintained mains water pressure, and hence the flow, must be sufficient to keep the heater ignited. Therefore, it is important to ensure that the flow knob is fully open to prevent variation in the hot water supply temperature.

- 1.2. Turn the temperature (outer) knob anticlockwise for warmer water or clockwise for cooler water. The preset maximum temperature can be adjusted as required to suit both site conditions and the user's comfort. Refer to **Section 8, Commissioning: "1. Maximum temperature setting"**.

**Warning!** Operation of the override button will allow a shower temperature above the preset maximum.

- 1.3. To override the preset maximum temperature depress the override button and turn the temperature knob fully anticlockwise.



## Fino B

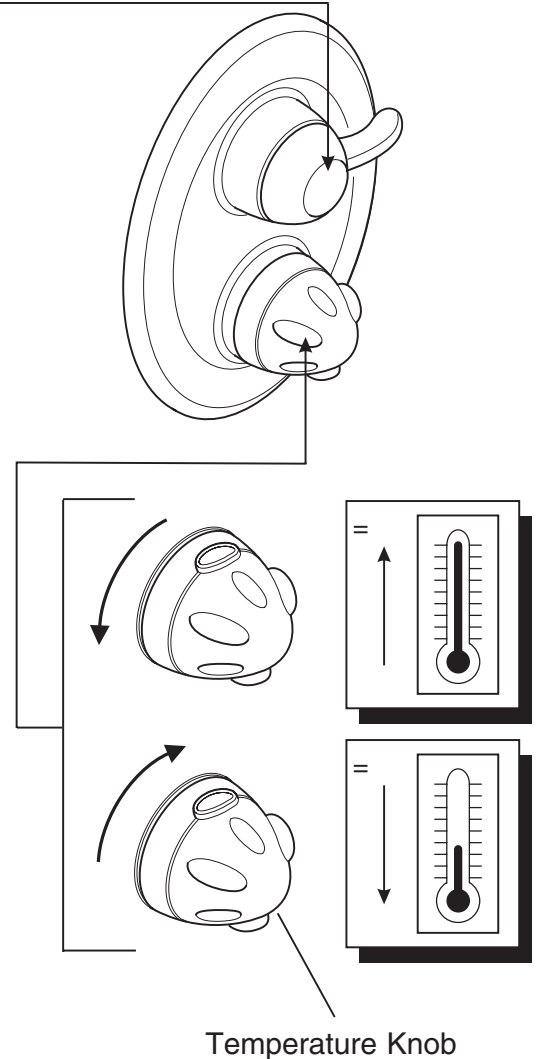
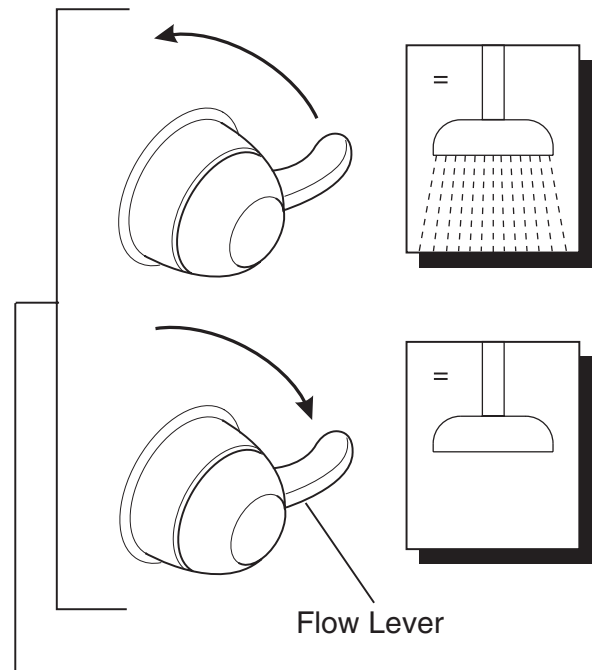
- 1.1. Turn the flow lever anticlockwise until the desired force of water is obtained.

**Note!** When the Fino is installed with a fully modulating multipoint or combination type gas water heater, the maintained mains water pressure, and hence the flow, must be sufficient to keep the heater ignited. Therefore, it is important to ensure that the flow knob is fully open to prevent variation in the hot water supply temperature.

- 1.2. Turn the temperature knob anticlockwise for warmer water or clockwise for cooler water. The preset maximum temperature can be adjusted as required to suit both site conditions and the user's comfort. Refer to **Section 8, Commissioning: "1. Maximum temperature setting"**.

**Warning!** Operation of the override button will allow a shower temperature above the preset maximum.

- 1.3. To override the preset maximum temperature depress the override button and turn the temperature knob fully anticlockwise.



Symptom	Cause/Rectification
<p>1. Only hot or cold water from outlet.</p>	<ul style="list-style-type: none"> <li>a. Inlet supplies reversed (see reversed inlets section). Check.</li> <li>b. No hot water reaching shower control. Check.</li> <li>c. Check strainers and inlet fittings for blockage.</li> <li>d. Refer to symptom 5 below.</li> <li>e. Installation conditions continuously outside operating parameters: refer to <b>SPECIFICATION</b>, and <b>2e</b> below.</li> </ul>
<p>2. Fluctuating or reduced flow rate.</p>	<p>Normal function of thermostatic control when operating conditions are unsatisfactory;</p> <ul style="list-style-type: none"> <li>a. Check strainers and inlet/outlet fittings for flow restriction.</li> <li>b. Make sure that minimum flow rate is sufficient for supply conditions.</li> <li>c. Make sure that maintained inlet pressures are nominally balanced and sufficient.</li> <li>d. Make sure that inlet temperature differentials are sufficient.</li> <li>e. (Subsequent to rectification of supply conditions) Check thermostatic performance; renew thermostatic cartridge, if necessary.</li> </ul>
<p>3. No flow from shower control outlet.</p>	<ul style="list-style-type: none"> <li>a. Check strainers and inlet/outlet fittings for blockage.</li> <li>b. Hot or cold supply failure; thermostat holding correct shutdown function: rectify, and refer to symptom <b>2.e</b> above.</li> <li>c. Flow control cartridge faulty. Check and renew if necessary.</li> <li>d. Check shower head is not blocked. Clean if necessary.</li> </ul>
<p>4. Blend temperature drift.</p>	<p>Indicates operating conditions changed.</p> <ul style="list-style-type: none"> <li>a. Refer to symptom 2 above.</li> <li>b. Hot supply temperature fluctuation.</li> <li>c. Supply pressure fluctuation.</li> </ul>
<p>5. Hot water in cold supply or vice versa.</p>	<p>Indicates checkvalves require maintenance, refer to <b>MAINTENANCE</b>.</p>



Symptom	Cause/Rectification
<p><b>6.</b> Maximum blend temperature setting too hot or too cool.</p>	<p><b>a.</b> Indicates incorrect <b>maximum temperature setting</b>; refer to <b>COMMISSIONING</b>.</p> <p><b>b.</b> As symptom <b>4</b> above.</p> <p><b>c.</b> As symptom <b>5</b> above.</p>
<p><b>7.</b> Water leaking from shower control body.</p>	<p>Seal(s) worn or damaged.</p> <p><b>a.</b> Obtain service pack and renew all seals.</p> <p><b>b.</b> (If leak persists from around temperature spindle) Renew thermostatic cartridge.</p>
<p><b>8.</b> Flow knob or temperature knob stiff to operate.</p>	<p><b>a.</b> Impaired free movement of internal components. Renew the appropriate cartridge.</p> <p><b>b.</b> Supply pressures too high. Fit pressure reducing valve. Refer to <b>SPECIFICATIONS</b> for acceptable operating pressures.</p> <p><b>c.</b> Pressure build up. This may be due to domestic hot water expansion. Fit domestic hot water expansion vessel (available from your local stockist). If one already fitted, it may be deflated and require repressurization.</p>
<p><b>9.</b> Drip from handset spray plate assembly or bir spray plate.</p>	<p><b>a.</b> A small amount of water may be retained in the shower fitting after the shower control has been turned off. This is quite normal and should drain after a few minutes. Changing the angle of the shower fitting may vary the draining time.</p> <p><b>b.</b> The ceramic plates within the shower control may be defective. Renew the cartridge assembly. Check that the pressures are not in excess of the maximum for product (refer to symptom <b>8</b> above).</p>
<p><b>10.</b> Fino noisy during operation.</p>	<p><b>a.</b> The inlet supply pressures may be unbalanced. Fit a drop tight PRV just after the incoming mains stopcock, effectively balancing the hot and cold supply pressures. Ideally set the PRV to 3.5 bar.</p> <p><b>b.</b> The inlet supply pressures may be high. The maximum maintained pressure should not exceed 5 bar. If greater, fit a drop tight PRV installed as detailed above.</p>

Mira products are precision engineered to provide satisfactory performance provided they are installed and operated in accordance with the recommendations contained in this guide.

The shower control is designed for the minimum of maintenance in normal domestic use. If a malfunction occurs then this will probably necessitate a complete cartridge replacement.

**Important!** The cartridge contains no internally serviceable parts.

When installed in very hard water areas (above 200 p.p.m. temporary hardness) your installer may advise the installation of a water treatment device to reduce the effects of limescale formation in the heating appliance and spray plates.

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

The light golden colour finish is softer than the chrome finish and its abrasive resistance much less. When cleaning or using tools during maintenance extra care must be taken.

## Cartridge Renewal (Temperature)

Should the cartridge require renewal then the following procedure should be followed:

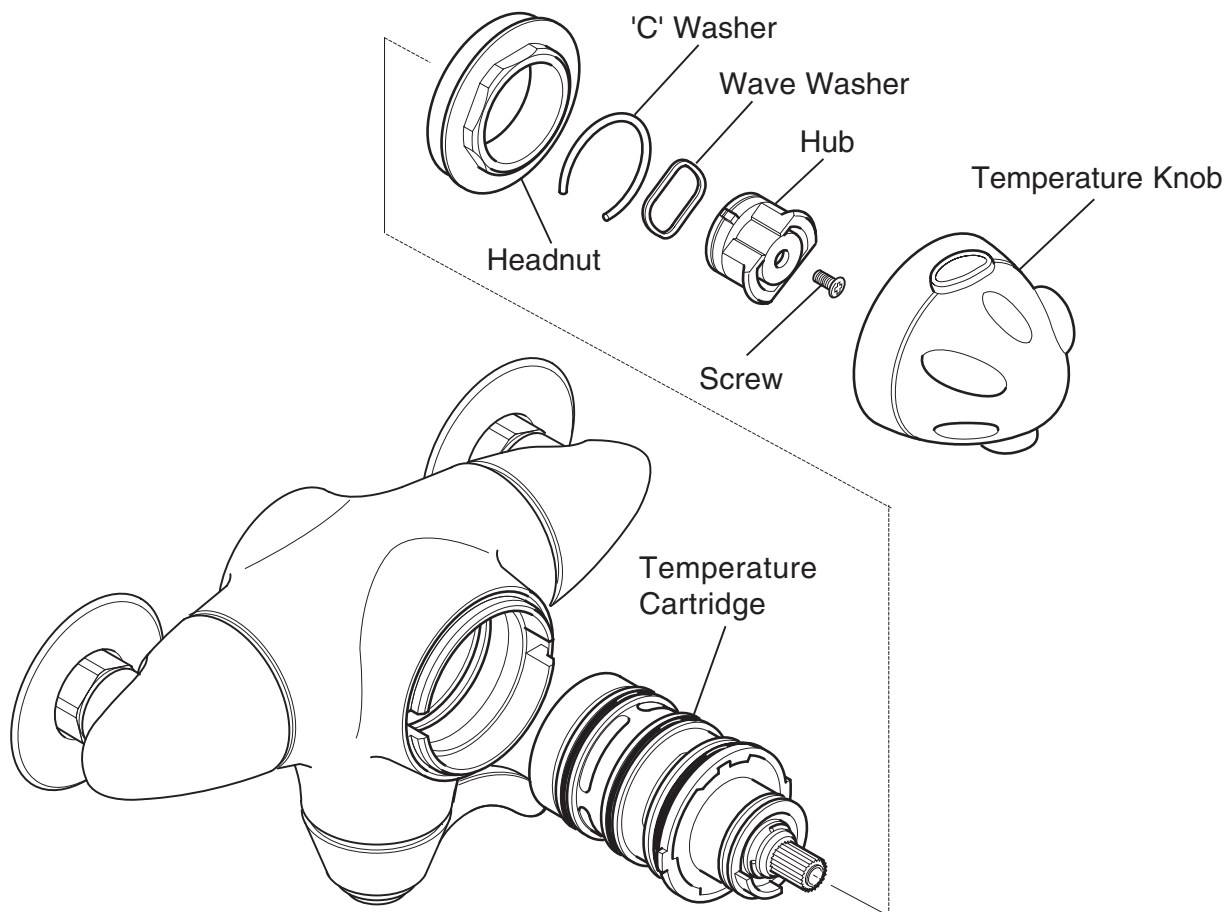
**Important!** Use only silicone based lubricants when reassembling.

### Fino Exposed (Refer to Figure 1)

1. Turn off the water supplies and open the shower control to relieve the trapped water pressure.
2. Carefully pull off the temperature knob.
3. Unscrew the headnut and pull out the cartridge.
4. Remove the 'C' washer and the headnut from the cartridge.

**Important!** When fitting a new cartridge make sure that you fit the correct hub.

5. Carefully fit the new cartridge into the valve body, making sure that it locates correctly in the slots in the valve body.
6. Fit the headnut and secure in position with the 'C' washer.
7. The maximum temperature will now require resetting following the procedure “**Maximum Temperature Setting**” in the section **Commissioning**.
8. Refit the temperature knob.



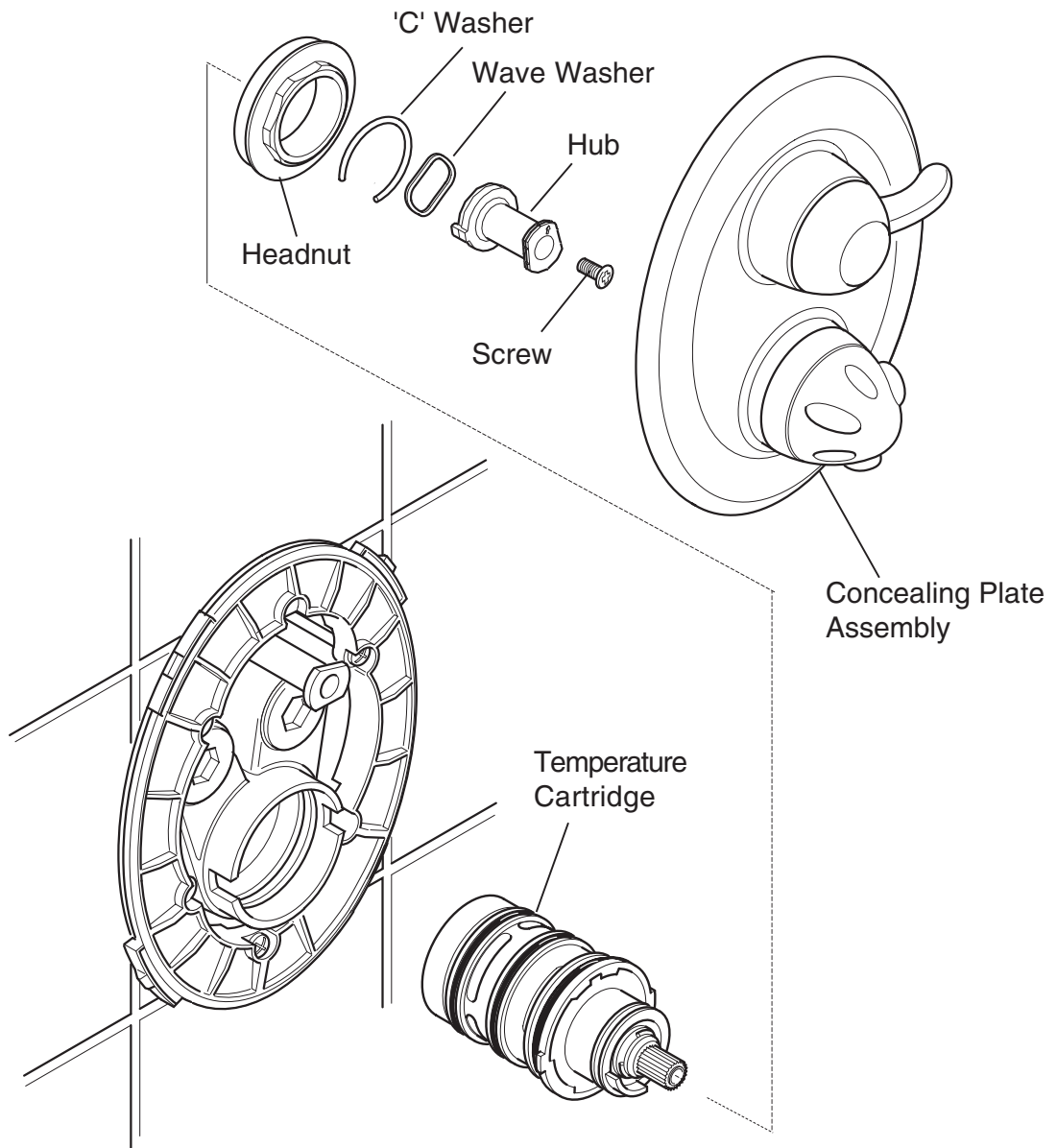
**Temperature Cartridge Renewal - Fino**  
**Figure 1**

**Fino Built-in (Refer to Figure 2)**

1. Turn off the water supplies and open the shower control to relieve the trapped water pressure.
2. Using the screwdriver slot at the bottom of the concealing plate, carefully prise off the concealing plate assembly.
3. Unscrew the headnut and pull out the cartridge.
4. Remove the 'C' washer and the headnut.

**Important!** When fitting a new cartridge make sure that you fit the correct hub.

5. Carefully fit the new cartridge into the valve body, making sure that it locates correctly in the slots in the valve body.
6. Fit the headnut and secure in position with the 'C' washer.
7. The maximum temperature will now require resetting following the procedure “**Maximum Temperature Setting**” in the section **Commissioning**.
8. Refit the concealing plate assembly.



**Temperature Cartridge Renewal - Fino B  
Figure 2**

## Checkvalve/Strainer Renewal

Should the checkvalve/strainers require renewal or cleaning then the following procedure should be followed:

**Important!** Use only silicone based lubricants when reassembling.

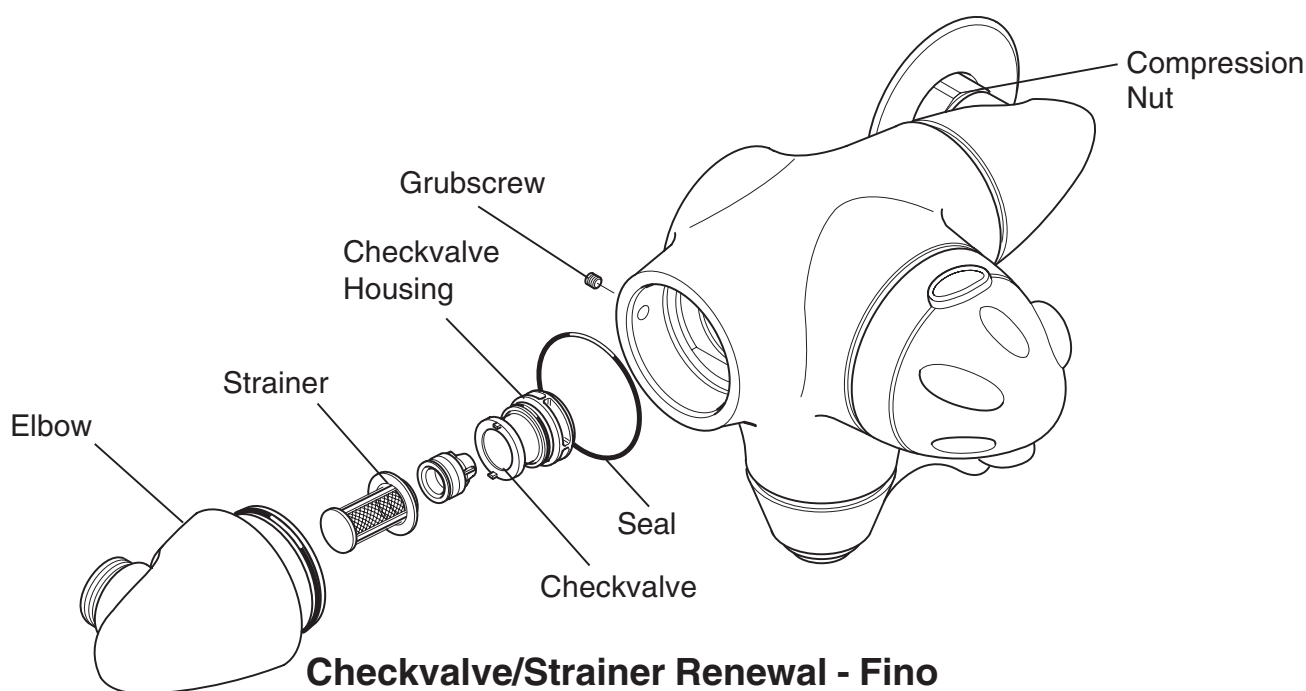
### Fino Exposed (Refer to Figure 3)

1. Turn off the water supplies and open the shower control to relieve the trapped water pressure.
2. Remove the valve from the backplate by releasing, anticlockwise, the two recessed grub screws, using the 3 mm A/F hexagon wrench (supplied).
3. Unscrew the compression nuts and carefully release the valve from the wall.
4. Remove the grub screw and remove the elbow.
5. Pull out the checkvalve housing and strainer from the elbow.

**Note!** If necessary, clean the checkvalve and the strainer. The checkvalves and strainers may be cleaned under a jet of water, or renewed. Also ensure that there is no debris/damage to the 'O' seals

6. Fit the strainer to the checkvalve housing.
7. Fit the checkvalve assembly into the elbow.
8. Fit the elbow into the valve body and tighten the grub screw.
9. Locate the shower control body onto the backplate and inlet supply pipework, then secure by tightening, clockwise, the two recessed grub screws, using the 3 mm A/F hexagon wrench (supplied).

Tighten the compression nuts, using if necessary, a cloth to protect the plated surfaces. Ensure there are no leaks.



**Checkvalve/Strainer Renewal - Fino  
Figure 3**

### Fino Built-in (Refer to Figure 4)

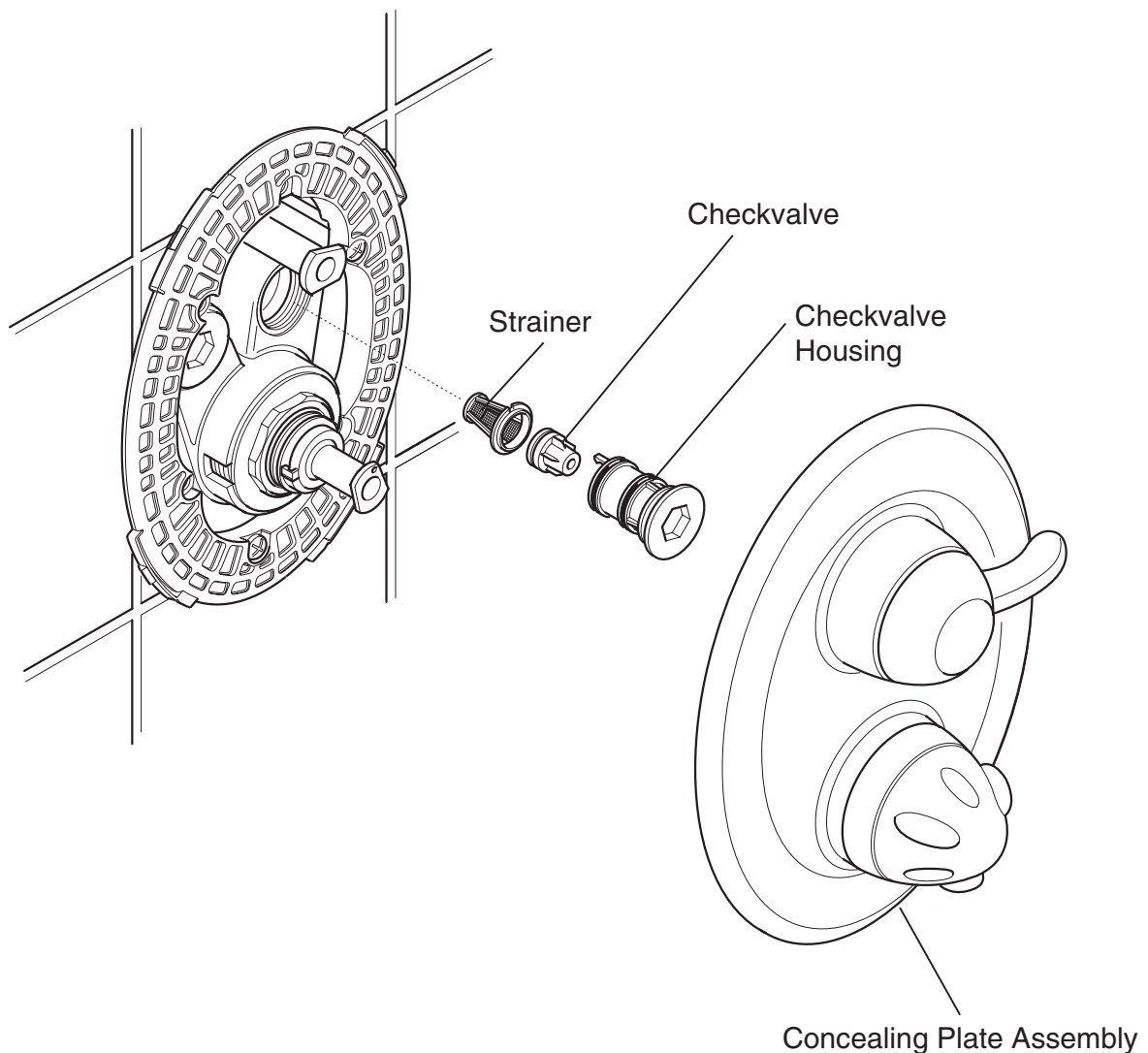
1. Turn off the water supplies and open the shower control to relieve the trapped water pressure.
2. Using the screwdriver slot at the bottom of the concealing plate, carefully prise off the concealing plate assembly.
3. Using a 12 mm A/F hexagonal wrench or the quad key, unscrew and remove the checkvalve housing.

**Note!** The strainer will be attached to the checkvalve housing.

4. Remove the strainer.

**Note!** If necessary, clean the checkvalve and the strainer. The checkvalves and strainers may be cleaned under a jet of water, or renewed.

5. Fit the strainer onto the checkvalve housing using the clip feature to keep it in place.
6. Fit the checkvalve into the valve body and tighten.
7. To complete the installation, follow instruction **23** of “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”.



**Checkvalve/Strainer Renewal - Fino B**  
**Figure 4**

## Flow Cartridge Renewal

Should the flow cartridge require renewal or cleaning then the following procedure should be followed:

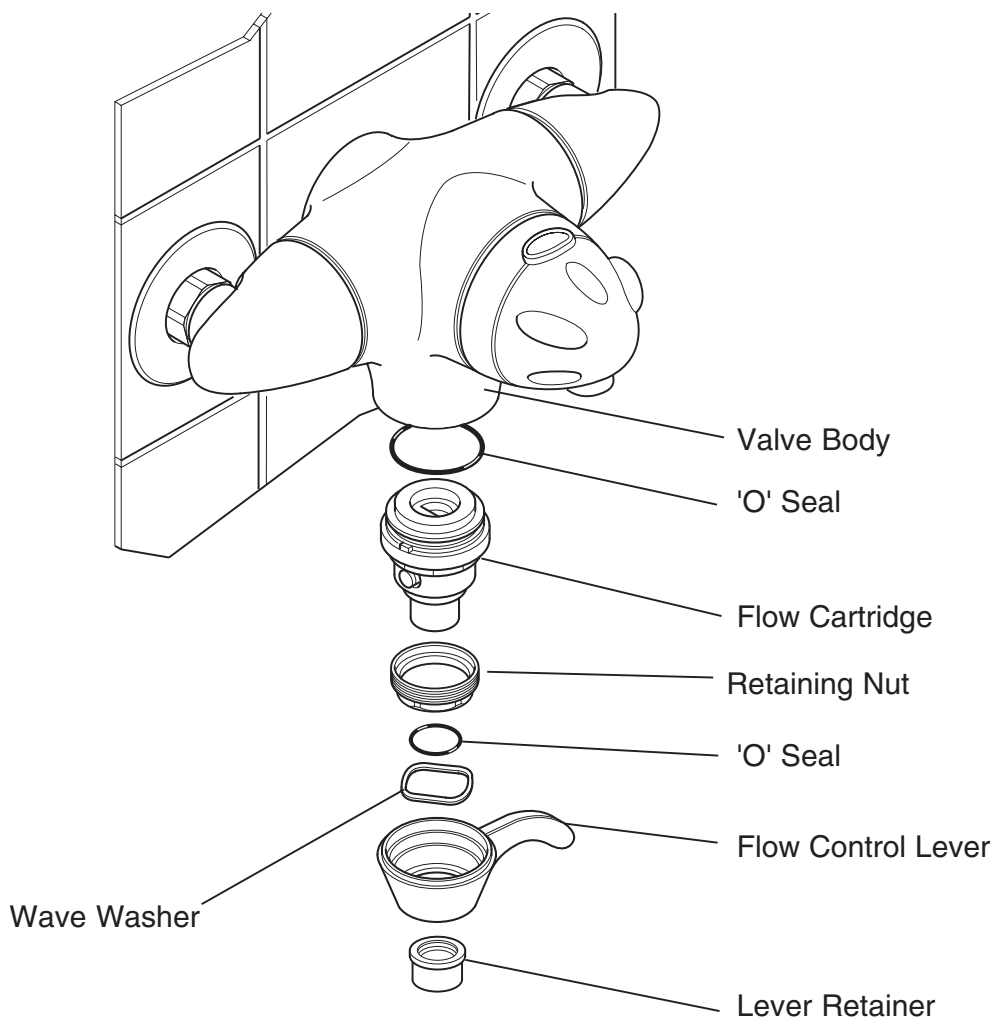
**Important!** Use only silicone based lubricants when reassembling.

### Fino Exposed (Refer to Figure 5)

1. Turn off the water supplies and open the shower control to relieve the trapped water pressure.
2. Remove the hose from the lever retainer.
3. Unscrew and remove the lever retainer using a 12 mm A/F hexagonal key or the quad key. Remove the flow control lever and the wave washer.
4. Undo the flow cartridge retaining nut using a 30 mm A/F spanner and pull out the flow cartridge.

**Note!** Before installing a new flow cartridge make sure that the 'O' seals are correctly installed.

5. Fit the new flow cartridge into the valve body.
6. Fit the wave washer, the flow control lever and secure in place with the lever retainer.
7. Fit the hose to the lever retainer.



**Flow Cartridge Renewal - Fino**  
**Figure 5**

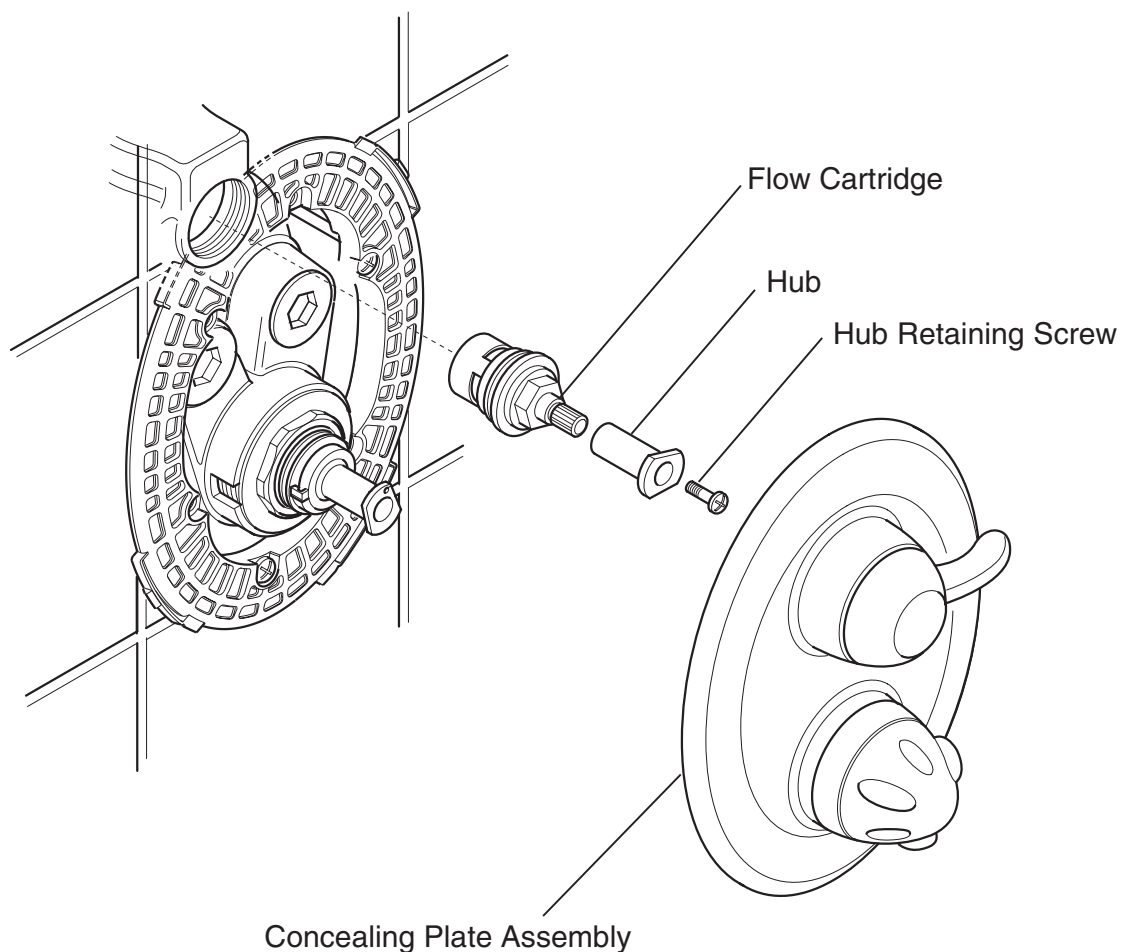
**Important!** Use only silicone based lubricants when reassembling.

### **Fino Built-in (Refer to Figure 6)**

1. Turn off the water supplies and open the shower control to relieve the trapped water pressure.
2. Using the screwdriver slot at the bottom of the concealing plate, carefully prise off the concealing plate assembly.
3. Remove the hub retaining screw and remove the hub.
4. Unscrew and remove the flow cartridge using a suitable spanner or socket.

**Note!** Before installing a new flow cartridge make sure that the 'O' seals are correctly installed.

5. Fit the new flow cartridge into the valve body.
6. Fit the hub and secure in position with the hub retaining screw.
7. To complete the installation, follow instruction **23** of “**Solid, Dry-lined, Stud Partition or Dry Partition Wall Structures**”.



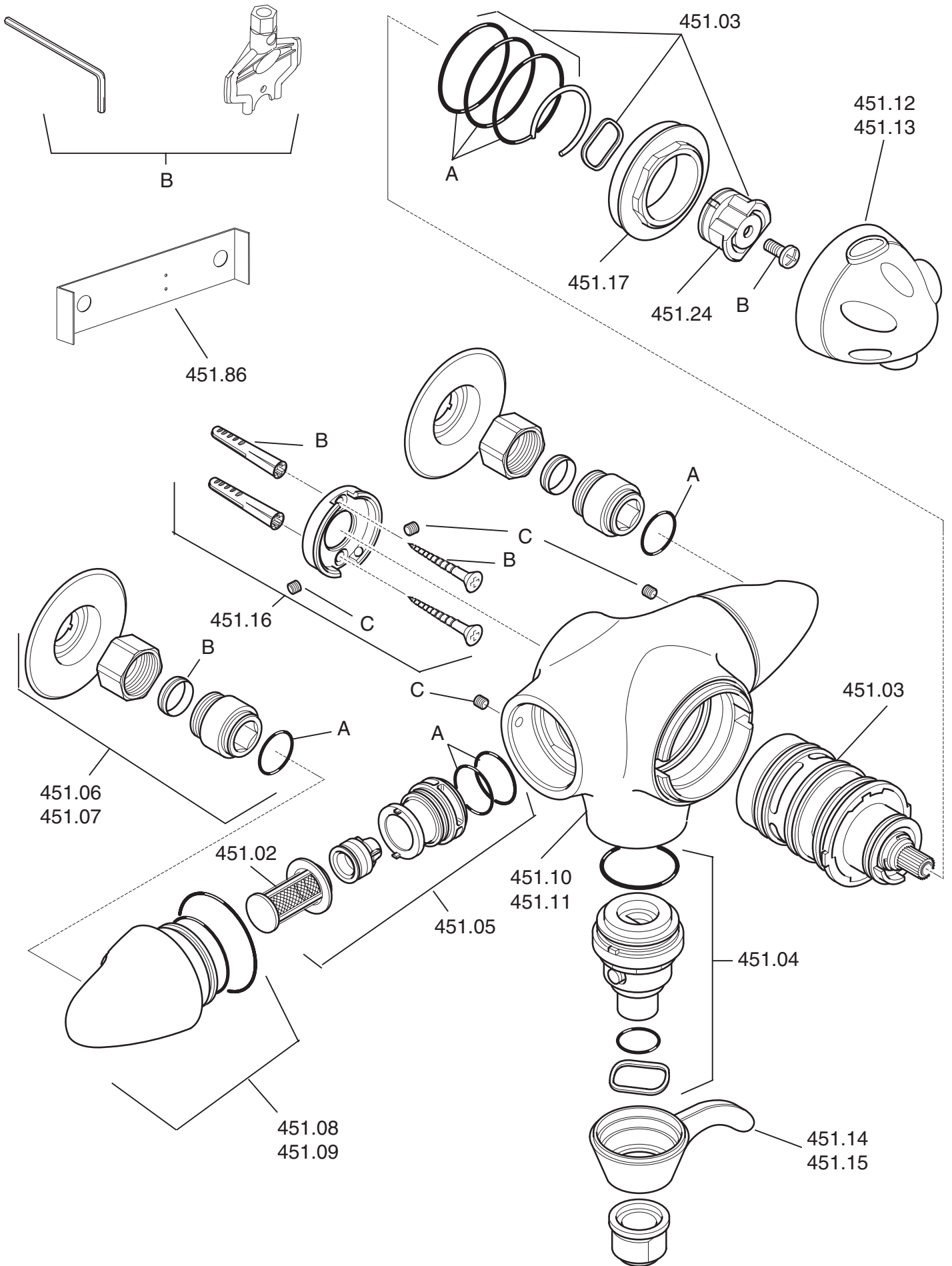
**Flow Cartridge Renewal - Fino B**  
**Figure 6**



**Mira Fino Spare Parts List**

451.01	Seal Pack - components identified 'A'
451.02	Strainer Pack
451.03	Thermostatic Cartridge
451.04	Flow Cartridge Assembly
451.05	Check Valve Assembly
451.06	Inlet Connection Pack - chrome
451.07	Inlet Connection Pack - light gold
451.08	Inlet Elbow - chrome
451.09	Inlet Elbow - light gold
451.10	Body - chrome
451.11	Body - light golden
451.12	Temperature Knob - chrome
451.13	Temperature Knob - light golden
451.14	Flow Lever - chrome
451.15	Flow Lever - light golden
451.16	Backplate
451.17	Headnut
451.18	Component Pack - components identified 'B'
451.19	Screw Pack - components identified 'C'
451.24	Hub Pack
451.86	Installation Template

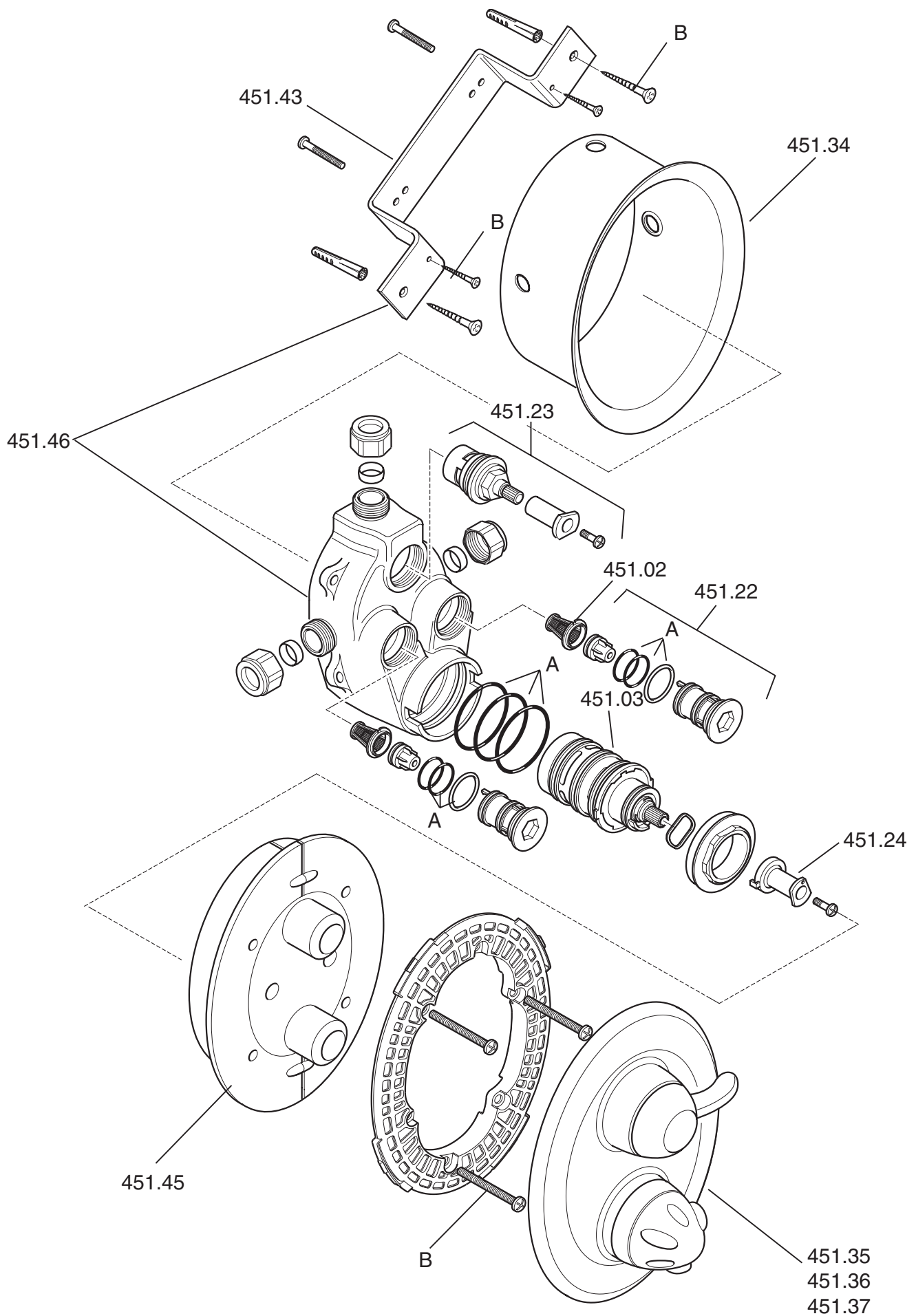
# Mira Fino Spare Parts Diagram



## **Mira Fino B Spare Parts List**

451.01	Seal Pack - components identified 'A'
451.02	Strainer Pack
451.03	Thermostatic Cartridge
451.22	Check Valve Assemblies
451.23	Flow Cartridge
451.24	Hub Pack
451.34	Cavity Wall Seal
451.35	Concealing Plate Assembly - chrome
451.36	Concealing Plate Assembly - satin chrome
451.37	Concealing Plate Assembly - light gold
451.43	Support Bracket
451.44	Screw Pack - components identified 'B'
451.45	Building-in Shroud
451.46	Body and Support Bracket

# Mira Fino B Spare Parts Diagram



# Notes

# Notes

# Notes

# Customer Service

## Guarantee of Quality

Mira Showers guarantee products against any defect of materials or workmanship for one year from the date of purchase (5 years for the NEW Mira Excel/Fino (valve only)).

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

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

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

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

**Not covered by this guarantee:**

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

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

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

## Before using your shower

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

## What to do if something goes wrong

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

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

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

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

## After Sales Service

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

### Spare Parts

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

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

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

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

### Service

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

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

### To contact us:

England, Scotland & Wales

#### Mira Showers Customer Services

Telephone: 01242 262888  
8.30am to 5pm Working days (4.30pm Fri)  
8.30 am to 12.30pm Saturday  
E-mail: Mira\_technical@mirashowers.com  
Fax: 01242 282595  
By Post: Cromwell Road  
Cheltenham  
Gloucester GL52 5EP

For Customers in Northern Ireland

#### Wm H Leech & Son Ltd

Telephone: 028 9044 9257 – Mon to Fri 9 am-5pm  
Fax: 028 9044 9234 – 24 hours  
Post: Maryland Industrial Estate  
Ballygowan Road  
Moneyreagh, Co Down  
BT23 6BL

For Customers in Republic of Ireland

#### Modern Plant Ltd

Telephone: Dublin 01 4591344 - Mon to Fri 9am to 5pm  
Fax: Dublin 01 4592329 – 24 hours  
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