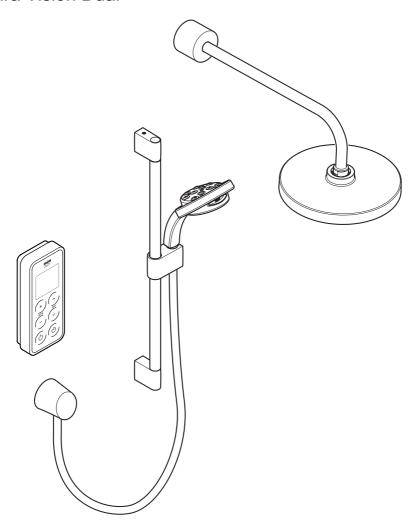
## Mira Vision Dual



These instructions must be left with the user

Installation Guide

Showering perfection

Showering perfection

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If you experience any difficulty with the installation or operation of your new shower, then please refer to the **Fault Diagnosis** section, before contacting **Kohler Mira Ltd**.

Our telephone and fax numbers can be found in the back of this guide.

## 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 Vision Dual Mixer Valve is designed to be used with the Mira Vision showerhead and fittings.

#### Products Covered by this Guide

Mira Vision Dual Digital Mixer - High Pressure/Combi Valve

Mira Vision Dual Digital Mixer - Pumped Valve.

Mira Vision Dual Wireless Controller.

Mira 360 Fittings (Ceiling Fed or Rear Fed).

#### Guarantee

For domestic installations, Mira Showers guarantee the Mira Vision Dual against any defect in materials or workmanship for a period of five years from the date of purchase (shower fittings for one year).

For non-domestic installations. Mira Showers guarantee the Mira Vision Dual against any defect in materials or workmanship for a period of one year from the date of purchase.

For terms and conditions refer to the back cover of this guide.

Recommended Usage		
Domestic	✓	
Light Commercial	×	
Heavy Commercial	×	
Healthcare	×	

## Patents and Design Registration

Design Registration	001295935	
Patents	GB: 2 421 297	
	USA: 7 669 776	
Patent Applications	WO: 2009/022112	
	EUROPE: 2 227 647	
	USA: US-2010 - 0282 326 - A1	
	CHINA: CNI01918743A	
	INDIA: 1306/MUMNP/2010	

# **IMPORTANT SAFETY INFORMATION**

#### Warning!

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

- THIS APPLIANCE MUST BE EARTHED. ENSURE SUPPLEMENTARY BONDING COMPLIES WITH THE "REQUIREMENTS FOR ELECTRICAL INSTALLATIONS". The Mira Digital Mixer Valve is intended to be permanently connected to the fixed electrical wiring of the mains system. A means for electrical isolation of the appliance shall be provided in the fixed wiring in accordance with local wiring regulations.
- Products manufactured by us are safe and risk-free, provided that they are installed, used and maintained in good working order, in accordance with our instructions and recommendations.
- 3. Isolate the electrical and water supplies before connecting to the appliance.
- 4. This appliance must be provided with means for disconnection that is incorporated into the fixed wiring in accordance with the relevant local wiring regulations.
- 5. Refer to the wiring diagram before making any electrical connections.
- Mains connections are exposed when the cover of the Digital Mixer Valve is removed.
- 7. The Digital Mixer Valve must not be installed where it can become frozen.
- 8. Make sure that any pipework that could become frozen is properly insulated.
- In accordance with BS7671 a 30mA Residual Current Device (RCD) should be included in the electrical circuit. This may be part of the consumer unit or a separate unit.
- 10. All pipework must be checked for leaks before the product installation is completed. The product should be pressurised and both inlet & outlet connections inspected.
- 11. If the shower is dismantled during installation or servicing then upon completion the product must be inspected to ensure all electrical connections are tight and that there are no leaks.
- 12. Having completed the installation, make sure that the user is familiar with the operation of the appliance.
- 13. **DO NOT** commission this appliance if water leaks from the unit.
- 14. Only Mira recommended outlet fittings should be used.
- 15. Ensure all electrical connections are tight, to prevent overheating.
- 16. This product is not suitable for areas with high humidity (i.e steam rooms). Please consult your installer.
- 17. The water supplies to this product must be isolated if the product is not to be used for a long period of time. If the product or pipework is at risk of freezing during this period they should also be drained of water.

#### Caution!

- 1. Read all of these instructions and retain this guide for later use.
- 2. The electrical installation must comply to "BS 7671 Requirements for Electrical Installations" commonly referred to as the IEE Wiring Regulations, or any particular regulations and practices, specified by the local electricity supply company.
- The plumbing installation must comply with the requirements of UK Water Regulations / By-laws (Scotland), Building Regulations or any particular regulations and practices, specified by the local water company or water undertakers.
- 4. 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.
- 5. Children should be supervised to make sure that they do not play with the appliance.
- 6. Anyone who may have difficulty understanding or operating the controls of the shower should be supervised 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).
- Anyone inexperienced in the correct operation of the controls.
- 7. The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, unless they are supervised or have been given instruction concerning the use of the appliance by a person responsible for their safety. Sunburn or skin conditions can increase your sensitivity to hot water. Make sure that you set the shower to a cooler temperature.
- 8. If any of the following conditions occur, isolate the electricity and water supplies and refer to section "**To contact us**", in the back cover 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.
- 9. **DO NOT** operate if water leaks from the appliance.
- 10. **DO NOT** operate this appliance if it is frozen. If suspected of being frozen, isolate and contact us for advice.

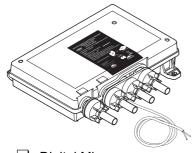
# **PACK CONTENTS**

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

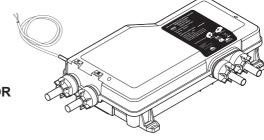
#### Documentation

- 1 x Wireless Controller User Guide
- 1 x Showerhead User Guide
- 1 x Customer Support Brochure

#### Digital Mixer Valve



OR



- Digital Mixer -High Pressure / Combi Valve
  - 1 x Orange Flow Regulator
  - 1 x Green Flow Regulator ( HP / Combi valve only)

( HP / Combi valve only)

Digital Mixer - Pumped Valve



3 x Fixing Screws



3 x Wall Plugs

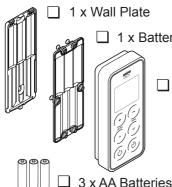


☐ 2 x Push-Fit Isolators



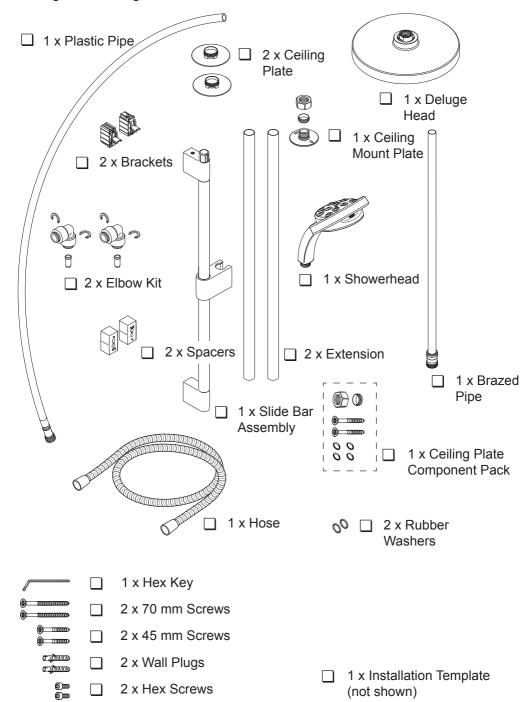
2 x Outlet Connector

#### Wireless Controller

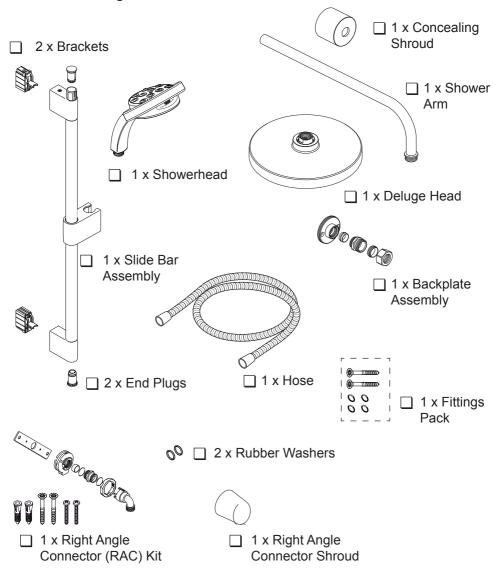


- 1 x Battery Cover
  - ☐ 1 x Wireless Controller
- 2 x Fixing Screws
- 2 x Wall Plugs

#### Ceiling Fed Fittings



#### Rear Fed Fittings



- ☐ 2 x Hex Screws
- 2 x Wall Plugs
- ☐ 2 x 45 mm Screws
- ☐ 1 x Hex Key



1 x Installation Template (not shown)

# **SPECIFICATIONS**

## Standards and Approvals

The Mira Vision Dual complies with all relevant directives for CE marking. The Mira Vision Dual is a type 1 electronic, independently mounted control for surface mounting.

The Mira Vision Dual is in compliance with the essential requirements of the R&TTE directive 1999/5/EC. A copy of the declaration of conformity may be obtained by contacting Kohler Mira Limited, U.K customer services department.

#### General

Pollution Degree	2
Rated Impulse Voltage	2.5 kV
Suitable for Drinking	Not Suitable
Connections	15 mm Compression/Pushfit

## Mira Digital Mixer Valve High Pressure

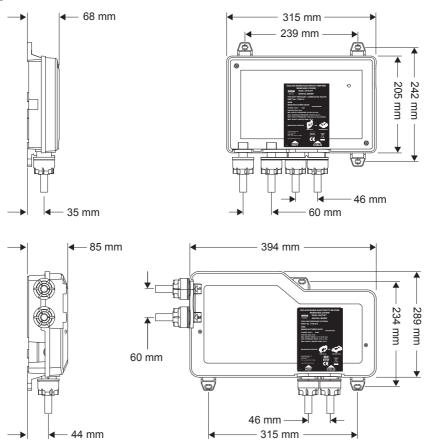
Pressures			
Maximum Static Pressure	1000 kPa (10 bar) = 100 m max. total head		
Maximum Maintained Pressure	500 kPa (5 bar) = 50 m max. total head		
Minimum Maintained Pressure	50 kPa (0.5 bar) = 5 m max. total head		
Supply Pressure Differential	Nominally Equal		
Temperatures			
Maximum Temperature (factory preset)	45 °C		
Maximum Temperature (setting range)	39 °C - 48 °C		
Minimum Temperature	Thermostatic control down to 30 °C Full cold also selectable		
Hot Water Range	55 °C - 65 °C		
Cold Water Range	1 °C - 20 °C		
Temperature Stability	± 1 °C at recommended supply conditions		
Ambient Temperature	1 °C - 40 °C		
Maximum Relative Humidity	95% non-condensing		
Flow Rates and Times			
Nominal Flow Rates (will vary depending on inlet maintained pressure and spray mode)	Max @ 1.0 bar = 16l/min Min @ 1.0 bar = 5l/min		
Electrical			
Supply Voltage	230V AC 50 Hz		
Maximum Load	20 W		

# Mira Digital Mixer Valve Pumped

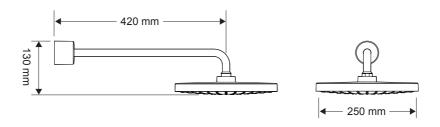
Pressures			
Maximum Static Pressure	100 kPa (1 bar) = 10 m max. total head		
Maximum Maintained Pressure	100 kPa (1 bar) = 10 m max. total head		
Minimum Maintained Pressure	1 kPa (0.01 bar) = 0.1 m min. total head		
Supply Pressure Differential	Nominally Equal		
Temperatures			
Maximum Temperature (factory preset)	45 °C		
Maximum Temperature (settable range)	39 °C - 48 °C		
Minimum Temperature	Thermostatic control down to 30 °C Full cold also selectable		
Hot Water Range	55°C - 65°C		
Cold Water Range	1°C - 20°C		
Temperature Stability	± 1°C at recommended supply conditions		
Ambient Temperature	1°C - 40°C		
Maximum Relative Humidity	95% non-condensing		
Flow Rates and Times			
Flow Rates (will vary depending on inlet maintained pressure and spray mode)	Max @ 0.01 bar = 16 l/min Min @ 0.01 bar = 6 l/min		
Electrical			
Supply Voltage	230V AC 50 Hz		
Maximum Load	200 W at 230V AC		

# **DIMENSIONS**

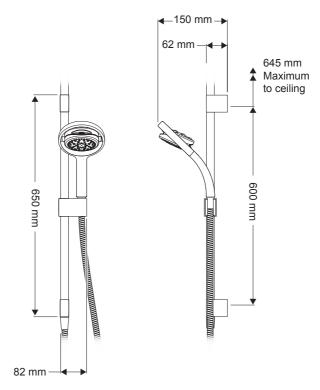
#### **Digital Mixer Valve**



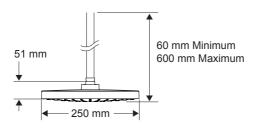
#### Shower Fittings - Fixed Head Arm



#### Shower Fittings - Slide Bar and Showerhead



## **Shower Fittings - Ceiling Fed Arm**



# **INSTALLATION**

#### General

The installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

The digital mixer valve may be installed in a loft space, under the bath or in a convenient cupboard space provided there is enough room for maintenance (e.g. Removal of digital mixer valve lid). Failure to do so may result in an inability to carry out any maintenance. Safe and easy access to the product should be available at all times.

When installing a mixer valve in an area not regularly accessed, consideration for potential leaks must be taken into account. While such events are unlikely, it is advisable to periodically check the installation for traces of water on or around the product. If possible, site the valve in a location where any leak would be contained or routed to avoid areas sensitive to water damage.

Isolating valves **must** be installed to both inlets (supplied) and outlet, close to the digital mixer valve for ease of maintenance.

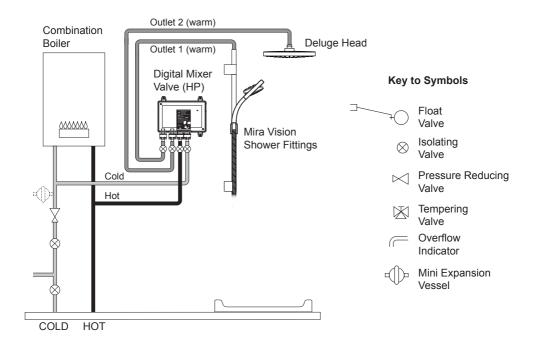
Caution! Risk of product damage. The digital mixer valve must be installed in a dry, ventilated area where it will not freeze.

#### Important Information Regarding Radio Controlled Devices

- Metal objects such as steel baths or sinks, cold water storage tanks, hot
  water cylinders, foil lined plaster board walls, radiators and even thick brick
  walls, can all dramatically reduce the radio operational range of any radio
  controlled product.
- Interference from other radio signals can dramatically reduce the ability of the Mira Vision User Interface / digital mixer to communicate. This may include; mobile phones, radio control boiler thermostats, wireless broadband routers, radio control toys, cordless phones, remote outdoor weather stations etc.
- Note! Failure to follow these guidelines can result in poor, intermittent or complete failure to communicate with the digital mixer.

#### Typical Suitable Installations:

1. Instantaneous Multipoint Water Heaters and Combination Boilers Caution! Risk of product damage. Do not fit the Mira Digital Mixer - PUMPED VALVE with Instantaneous Multipoint Water Heaters or Combination Boilers.



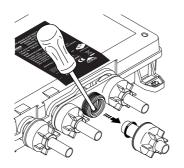
Only install the High Pressure Digital Mixer Valve with a multipoint gas water heater or combination boiler of a **fully modulating design** (i.e. where the water draw-off rate indirectly controls the gas flow rate to the burner).

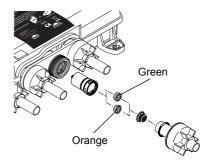
An expansion vessel **must** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve or PRV. This will ensure that excess expansion or pulse pressures do not damage the product or plumbing system. The expansion vessel may already be fitted within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

### Use of Flow Regulators with Combination Boilers

The Mira digital mixer valve can demand hot water quicker than some instantaneous water heaters/combination boilers can provide, especially in winter when the mains water is colder. A flow regulator may need to be used to ensure that the digital mixer valve can deliver a full range of water temperatures. The table indicates the flow regulator to be fitted in the hot water inlet of the Mira digital mixer valve.

Boiler Rating	24 kW (80,000 Btu/h)	30 kW (100,000 Btu/h)	36 kW (120,000 Btu/h)
Flow Regulator	7 litres/min	9 litres/min	Not required
Colour	White Green	White/Orange	-





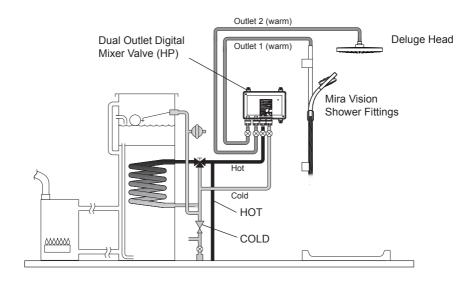
- Unscrew hot inlet plastic nuts and remove pipe and seal to gain access to the checkvalve cartridge and filter.
- Use flat blade screwdriver to carefully lever cartridge out.
- Fit flow regulator in checkvalve cartridge behind filter as shown.
- Refit seal, pipe and plastic nut. Plastic nuts require hand tightening only.

## Use of Warm-up Feature with Combination Boilers

When using the warm-up feature (see User Guide) with the digital mixer valve supplied via an instantaneous water heater/combination boiler, the user may experience a brief temperature fluctuation. This is caused by the normal operation of a standard instantaneous water heater/combination boiler whereby the boiler will turn off when the flow is stopped (as happens after the warm-up sequence has been completed). Upon restart of the shower, a cold shot will be flushed through followed by a brief hot shot until the hot water supply has stabilised.

# 2. Mains Pressurised Instantaneous Hot Water Shower, Heated from a Thermal Store

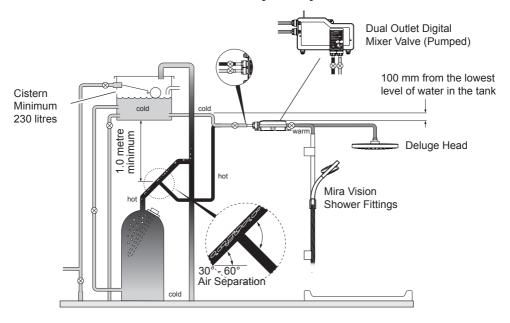
Caution! Risk of product damage. Do not fit the Mira Digital Mixer - PUMPED VALVE with Mains Pressurised Systems.



Packages of this type, fitted with a tempering valve can be used. A drop type pressure reducing valve **must** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve, PRV, then an expansion vessel should also be fitted. 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).

#### 3. Gravity Fed Showers

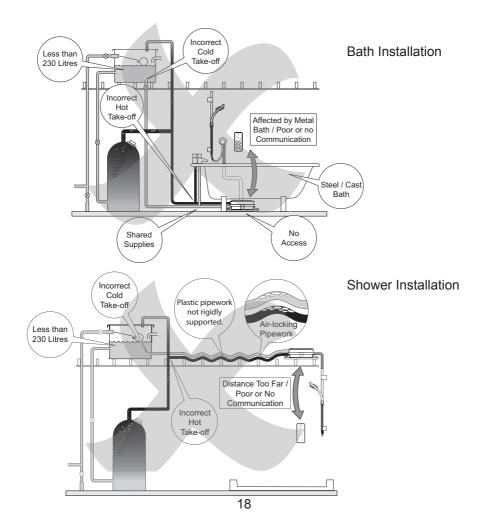
Caution! Risk of product damage. Do not fit the Mira Digital Mixer - HIGH PRESSURE / COMBI VALVE with Gravity Fed Systems.



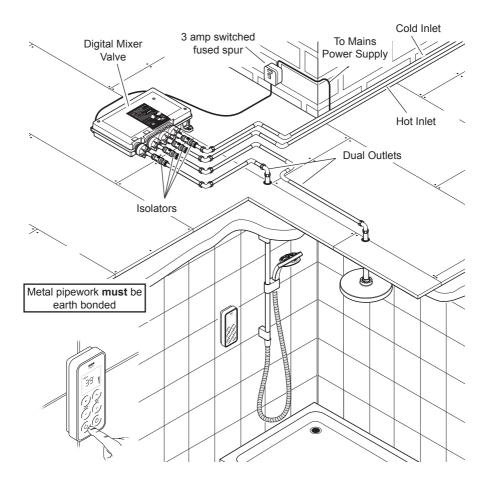
The shower control **must** be fed from a **cold water storage cistern and a hot water cylinder** providing nominally equal pressures. Pipework layouts and connections **must** be such that other draw-offs will not effect water supplies to the shower, shared supplies may lead to airlocking or water starvation. It is therefore best practice to have independent hot and cold supplies to the Low Pressure (pumped) Digital Mixer Valve.

# Typical Examples of Poor Plumbing and Installation Practices DO NOT:

- Install the Digital Mixer Valve where it can become frozen
- Position the Digital Mixer Valve where maintenance access is poor
- Install into a system where the cold water cistern holds less than 230 litres
- Install into a system where air locking could occur
- Install the user interface in a position where communication with the Digital Mixer Valve is poor e.g. mixer valve installed under metal bath, in front of metal cistern, more than the recommended distance away etc.
- Install the Digital Mixer Valve onto shared water supplies
- Install the Digital Mixer Valve less than 100 mm from the lowest level of water in the cistern
- Fit plastic pipework unless rigidly supported



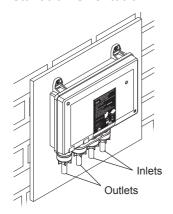
#### Installation Schematic

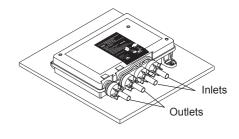


- A separate, permanently connected supply **must** be taken from the ring main to the appliance through a **3 amp** double pole switched fuse spur providing a minimum 3 mm contact separation gap in each pole.
- ➤ The use of supply-line or zone strainers will reduce the need to remove debris at the digital mixer valve. The recommended maximum mesh aperture dimension for such strainers is 0.5 mm.
- Pipework must be rigidly supported to avoid any strain on the connections.
- ➤ A 30 mA Residual Current Device (RCD) should be included in the electrical circuit. This may be part of the consumer unit or a separate unit.

- Long inlet pipework (dead-legs) should be kept to a minimum to avoid temperature fluctuations.
- Supply pipework layout must be arranged to minimize the effect of other outlet usage upon the dynamic pressures at the digital mixer valve inlets.
- To eliminate pipe debris it is essential that supply pipes are thoroughly flushed through before connection to the digital mixer valve.

#### **Valve Installation Orientation**



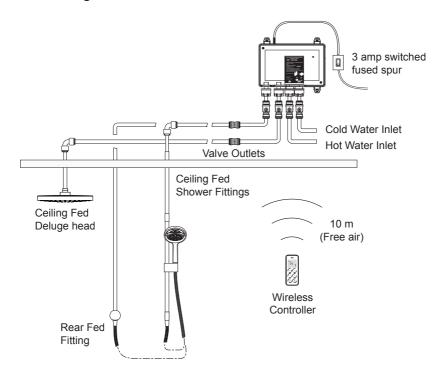


Mounting on a Vertical Surface

Mounting on a Horizontal Surface

- ➤ The digital mixer valve (which contains the thermostatic mixing valve) may only be orientated in the positions shown above when mounted on a vertical or horizontal surface. Failure to do so will compromise the ability of the unit to fail-safe and deliver constant blend.
- If the power supply cable is damaged, it **must** be replaced by the manufacturer or a service engineer.
- Warning! Turn off the electrical and water supplies before proceeding with the installation of the appliance. The electricity must be turned off at the mains and the appropriate circuit fuse electrically isolated, if applicable.

## Position and Signal Test



**Important!** When choosing a position for the digital mixer valve in relation to the Wireless Controller and the Shower Fittings, consider the following points:

- The Wireless Controller can be sited up to 10 m (free air) from the digital mixer valve. However, wall thicknesses and construction types may affect the remote signal strength and thereby reduce the range. The controller range should be tested on site prior to installation to ensure shower's reliability.
  - Refer to Section INSTALLATION "Important Information Regarding Radio Controlled Devices".
- ➤ The length of pipework running from the digital mixer valve to the Shower Fitting will have an effect on the showering temperature and the response time when changing the temperature using the wireless controller. The shorter the length of pipework from the digital mixer valve the better the shower will respond. It is recommended that this length does not exceed 5m from the valve outlet to shower fitting.
- ➤ The ambient temperature of digital mixer valve site (loft space, airing cupboard etc...) can have an effect on showering temperature. Insulate all pipework as required, particularly from the digital mixer valve to the Shower Fitting. If the valve is fitted in the loft space it is recommended that any insulation is removed from underneath the valve.

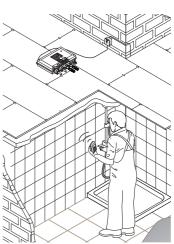
- Fit 3 x AA batteries (supplied) into the wireless controller.
- Ensure the wireless controller LCD lights up then switch on power to the digital mixer valve.
- ▶ Depending on the type and version of your wireless controller, the software revision number (eg. r04) may be briefly displayed, the controller will then display its default time of 10:00.
- Place wireless controller in approximate final position (no more than 10 m (free air) from digital mixer valve) and test wireless signal by pressing either "0" or "0", and adjusting the temperature. If temperature display remains unchanged and "out of range" symbol is displayed, units are unable to communicate with each other.
- If test fails, reposition the controller closer to the digital mixer valve and repeat test until satisfied the shower will work reliably at all times.

Caution! Risk of product damage. Do not run Pumped Valve (low pressure version) without a water supply for longer than 15 minutes during test.

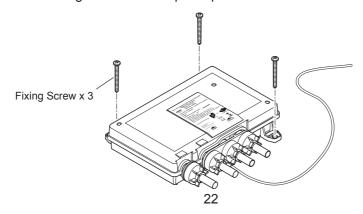
Isolate electrical supply to digital mixer valve.



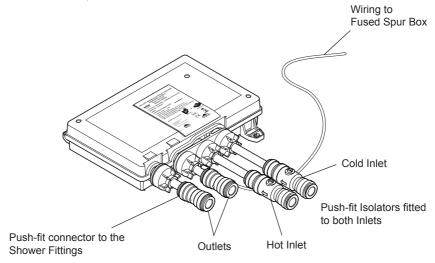




Mark the fixing holes in the required positions.



- Drill and plug the fixing holes.
- Note! Installers may wish to use alternative cavity fixings, when installing onto a dry lined, stud partition, shower cubicle or laminated panel wall structures. However, these methods of fixing are beyond the scope of this guide.
- Secure the digital mixer valve in position with the fixing screws (supplied).
- Caution! Risk of product damage. Make sure both hot and cold supply pipes are flushed thoroughly prior to connection to the digital mixer valve. Any product malfunction caused by pipework debris is not covered under the guarantee.
- Connect the hot and cold water supply pipes to the digital mixer valve as indicated on the product lid.



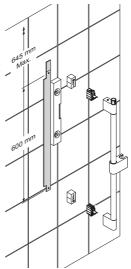
Install the shower fittings and wireless controller (see further instructions).

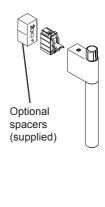
#### Shower Fittings - Ceiling Fed Slide Bar / Showerhead

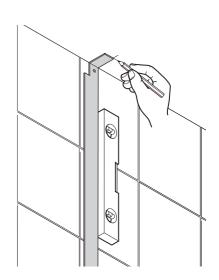
Suitable for solid, dry-lined, stud partition, shower cubicle or laminated panel walls.

The Slide Bar should be fixed to the wall at a convenient height for all the family. It should be positioned so that water sprays down the centre of the bath, or away from the opening of a shower cubicle. Water should spray away from the Wireless Controller when the Showerhead is held on the Slide Bar.

- Decide on suitable position for Slide Bar avoiding buried cables and pipes in both wall and ceiling. Make sure slide bar extension will fit through ceiling. Ceiling hole centre can be altered to avoid roof joists by using supplied spacers.
- Using template as guide, mark positions of the fixing holes for Wall Brackets (600 mm). Upper hole to be no more than 645 mm from ceiling.
- Note! Use spirit level to make sure fixing holes are vertical.
- Fold long end of template and move up to ceiling. Using upper marked fixing hole as guide, mark centre for hole in ceiling.
- Important! If supplied Slide Bar spacers are required, centre distance for hole will increase to 75 mm from wall.
- Cut hole in ceiling 29 mm diameter.

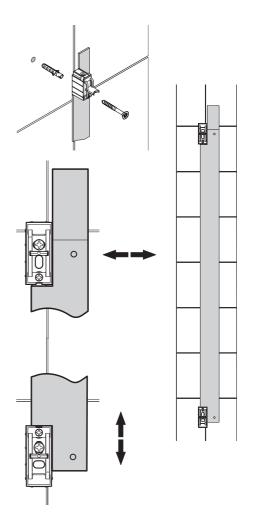




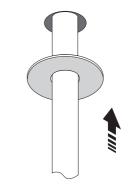


Drill and plug Slide Bar Assembly fixing holes.

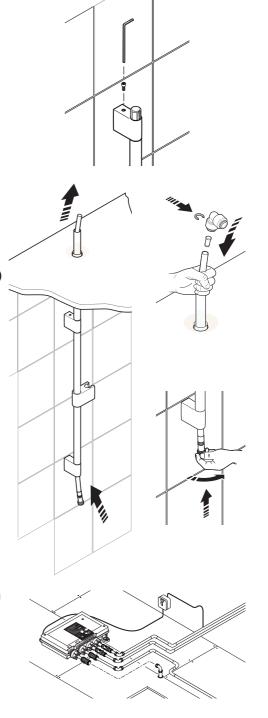
- Insert fixing screws through holes in Wall Brackets and fix to wall. Do not fully tighten. Use template to set correct distances between Wall Brackets. Fully tighten screws. Use longer fixing screws if using spacers supplied.
- Note! Slots in Wall Brackets allow for adjustment. Use one horizontal slot and one vertical slot. Make sure that holes for Slide Bar Securing Screws are positioned correctly, as shown.



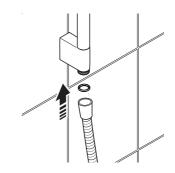
- Fit ceiling plate and extension tube.
- Note! Extension tube may need to be shortened, use a pipecutter to shorten tube, remove all burrs. Make sure rough end is concealed in ceiling.



- Fit Slide Bar Assembly over Wall Brackets and secure with screws supplied. Do not overtighten.
- Connect ceiling extension tube.
- Feed plastic pipe up through the slide bar and extension into ceiling. Do not allow any debris to block the plastic pipe.
- Note! If plastic pipe requires shortening, make sure there is enough length to fit elbow (supplied) or alternative push-fit/compression fitting (not supplied).
- When shortening for use with any push-fit (e.g. John Guest) fitting, follow manufacturer's guidelines for finishing and cleaning the pipe.
- Push and twist plastic pipe end until it "clicks" and locks in place.
- Connect plastic pipe in ceiling to outlet pipe from valve using elbow supplied. Push all parts together fully and lock elbow onto pipes using clips supplied.
- Connect elbow to digital mixer valve. Fit an isolating valve between to enable easy maintenance. (Pipe and isolating valve not supplied). Lock pipe to elbow using clip supplied. Follow manufacturer's guidelines for fitting alternative push-fit connections and flexible pipework.



Place first washer in end of hose, then attach to pipe end. Do not fit showerhead until after pipework has been fully flushed through. Refer to section "Commissioning".



#### Ceiling Fed Deluge Head

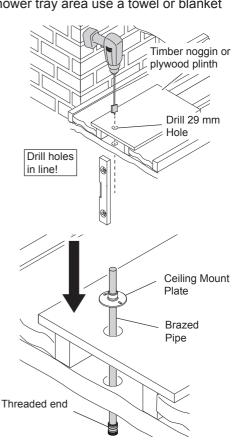
The Deluge Head should be fixed to the ceiling at a convenient height for all the family. It should be positioned so that water sprays down over the centre of the bath, or away from the opening of a shower cubicle.

The fitting of the Deluge Head into the ceiling will be easier with the aid of a helper.

When you are working within the bath or shower tray area use a towel or blanket

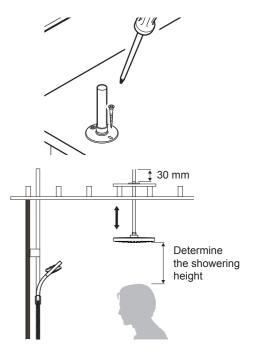
to protect the surface from damage.

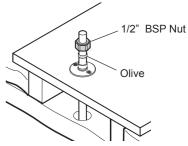
- Decide on a suitable position for the deluge head avoiding cables and pipes hidden between joists or rafters. Note! A timber noggin or plywood plinth securely fixed to the joist should be used to mount the Deluge Head.
- Drill a 29 mm hole through the ceiling and the wooden support. Ensure the two holes drilled are directly in line or the ceiling pipework will be at an angle.
- Push the Brazed Pipe through the Ceiling Mount Plate then push the threaded end of the brazed pipe down through the holes made in the ceiling.

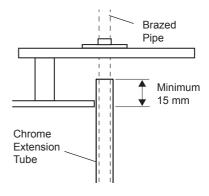


Centralise the brazed pipe in the hole then screw the ceiling mount plate to the wooden support.

- Offer the deluge head to the brazed pipe and determine the showering height required. Push / pull the brazed pipe using a twisting motion to adjust the height. Check the height is correct and use a 15 mm pipe cutter to cut the pipe to the desired length. Note! Cut the brazed pipe at least 30 mm above the ceiling mount plate to allow room to fit the olive, nut and elbow.
- Secure the brazed pipe to the ceiling mount plate with the olive and 1/2" BSP nut. Note! This is not a water tight connection, tighten sufficiently to clamp the pipe in place.
- Offer the Chrome Extension Tube to the brazed pipe and determine the length required to allow the tube to conceal the brazed pipe and protrude into the ceiling space a minimum of 15 mm. Use a pipe cutter to cut the tube to the desired length. Remove all burrs.
  Note! Take care not to crush the pipe when cutting.



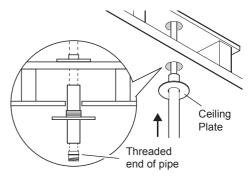


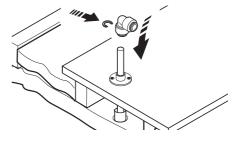


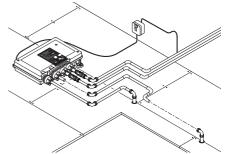
Push the cut end of the chrome extension tube into the Ceiling Plate then slide the extension tube over the threaded end of the brazed pipe and up through the hole until the ceiling plate is secured in the hole and the ceiling plate is flat against the ceiling.

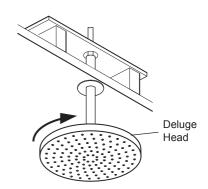
**Note!** If the hole in the ceiling is oversize use silicone sealant on the underside of the ceiling plate to retain it.

- Connect brazed pipe in ceiling to outlet pipe from digital mixing valve using elbow supplied. Push all parts together fully and lock elbow onto pipe using clip supplied.
- Connect elbow to digital mixer valve. Fit an isolating valve between to enable easy maintenance. (Pipe and isolating valve not supplied). Lock pipe to elbow using clip supplied. Follow manufacturers guidelines for fitting alternative push-fit connections and flexible pipework.
- Do not fit deluge head until after pipework has been fully flushed through. Refer to section "Commissioning" in digital mixer valve Installation guide.
- Screw the deluge head onto the brazed pipe outlet by hand. Note!
   Use two suitably sized wrenches to fully tighten (approximately 1/4 turn).
- Slide the extension tube down to conceal the brazed pipe.









#### Rear Fed Slide Bar / Showerhead

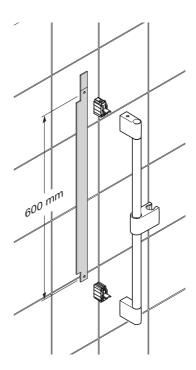
Suitable for solid, dry-lined, stud partition, shower cubicle or laminated panel walls.

The Slide Bar should be fixed to the wall at a convenient height for all the family. It should be positioned so that water sprays down the centre of the bath, or away from the opening of a shower cubicle. Water should spray away from the wireless controller when the Showerhead is held on the Slide Bar.

- Decide on suitable position for the Slide Bar avoiding buried cables and pipes in wall.
- Using the template as guide, mark positions of the fixing holes for Wall Brackets (600 mm).

**Note!** Use spirit level to make sure fixing holes are vertical.

Drill and plug fixing holes.



Insert fixing screws through holes in wall brackets and fix to wall. Do not fully tighten at this stage. Use template to set correct distances between wall brackets. Fully tighten screws.

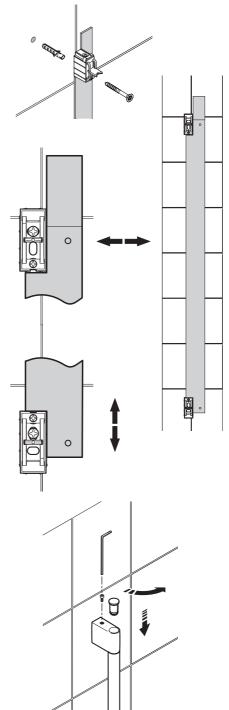
**Note!** Slots in wall brackets allow for adjustment. Use one horizontal slot and one vertical slot.

Make sure that holes for Slide Bar

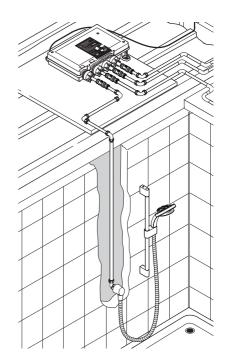
Make sure that holes for Slide Bar Securing Screws are positioned correctly, as shown.

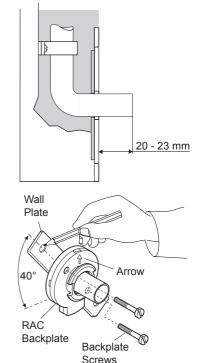


► Fit Slide Bar End Caps into top and bottom of Slide Bar Assembly. Push and twist caps until they "click" and lock in place.

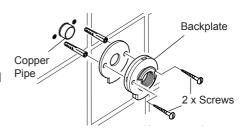


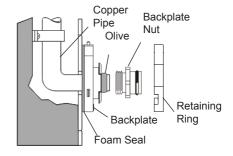
- The pipe work **must** protrude through the wall between 20 23 mm from the finished surface of the wall. If the pipe protrudes further than 23 mm, it will prevent the backplate nut from engaging with the backplate. If necessary cut the pipe to the correct length and remove any burrs.
- Fit an isolating valve (not supplied) close to the digital mixer valve for ease of maintenance.
- ► Loosely screw the backplate to the RAC wallplate with the two screws provided.
- Place the RAC wallplate and backplate assembly over the pipe then mark the position of the RAC wallplate and its fixing holes on the wall.
- Remove the screws and RAC wallplate from the backplate.
- Drill the two RAC wallplate fixing holes. If necessary, make a recess approximately 6 mm deep to accept the RAC wallplate. Plug the two fixing holes.
- Fix the wallplate to the wall with the two fixing screws.
- Temporarily fit the two screws to the wallplate. This will prevent the holes from being blocked with plaster and grout.
- Finish the surface of the wall as required.

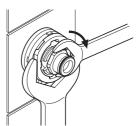


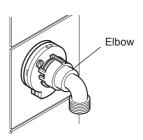


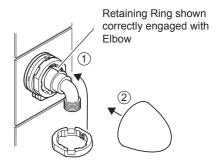
- Place the backplate over the outlet pipe with the arrow pointing vertically up and tighten the two backplate screws. Make sure that the foam seal abuts the finished wall surface.
- Fit the olive and the backplate nut over the outlet pipe, do not tighten the nut fully at this point.
- Check that the 'O' seal is fitted to the outside of the backplate nut. Press the elbow onto the backplate, make sure that the clips on the elbow engage with the backplate.
- To prevent the backplate from turning while tightening the nut, fit the retaining ring over the backplate nut making sure the slots engage with the screws on the backplate, hold the retaining ring with a wrench while tightening the backplate nut. Remove the retaining ring after use.
- Slide the retaining ring over the elbow and engage with the elbow clips. Note! The retaining ring must be engaged correctly to lock the elbow to the backplate, rotate the retaining ring to the postition illustrated.
- Press the shroud over the elbow, make sure that it engages with the lugs on the backplate.
- Place first washer in end of hose, then attach to elbow. Do not fit showerhead until after pipework has been fully flushed through. See section "Commissioning".











### Rear Fed Shower Arm and Deluge Head

The Shower Arm and Deluge Head should be fitted at a convenient height for all the family. It should be positioned so that water sprays down over the centre of the bath, or away from the opening of a shower cubicle.

➤ The outlet pipe **must** protrude 18 mm (± 2 mm) from the finished wall surface and a minimum 35 mm from the ceiling.

**Note!** Cut the pipe to the correct length and remove any burrs.

- Fit an isolating valve (not supplied) close to the digital mixer valve for ease of maintenance.
- Mark the positions of the backplate fixing holes.

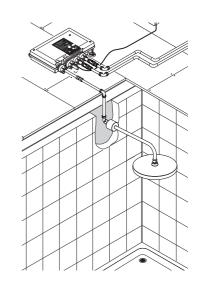
**Caution!** Be aware of hidden pipes or cables.

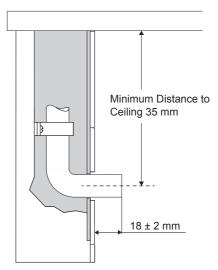
► For solid walls drill the fixing holes for the backplate with a 6 mm drill and insert the wall plugs (supplied). For other types of wall structure alternative fixings may be required (not supplied).

**Caution!** Take care not to drill into hidden pipes or cables.

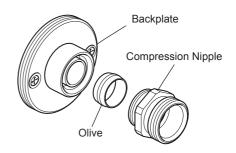
Carefully fit the backplate over the outlet pipe and secure with the fixing screws (supplied).

**Caution!** Take care not to damage the 'O' Seal in the back of the backplate.



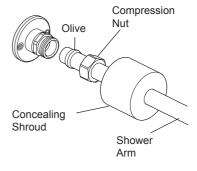


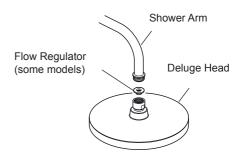
Fit the olive and compression nipple over the outlet pipe and tighten the compression nipple.



- Fit the concealing shroud onto the shower arm.
- Fit the compression nut and olive onto the shower arm.
- Fit the shower arm into the compression nipple and tighten the compression nut.
- Hand tighten the concealing shroud onto the backplate.
- Do not fit deluge head until after pipework has been fully flushed through. Refer to section "Commissioning" in the Dual Outlet Installation Guide.
- Screw the deluge head onto the shower arm by hand.
   Note! Use a suitably sized wrench to fully tighten (approximately 1/4 turn).

**Caution!** The shower arm is not designed to take weight, therefore care needs to be taken when installing the deluge head.





#### Wireless Controller

Suitable for solid, dry-lined, stud partition, shower cubicle or laminated panel walls.

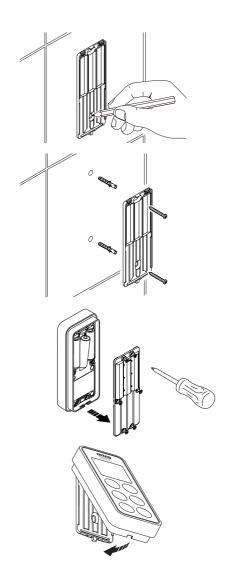
The wireless controller should be fixed to the wall at a convenient height for all the family. It should be positioned so that water does not spray over it when the Showerhead is held on the Slide Bar.

Important! Make sure wireless signal has been tested between wireless controller and digital mixer valve before permanently fixing to wall. (See "Digital Mixer Valve").

 Mark position for backplate holes.
 Mount backplate on flat surface (e.g. Centre of tile).
 Drill and plug holes.

Caution! Avoid drilling through buried cables or pipes.

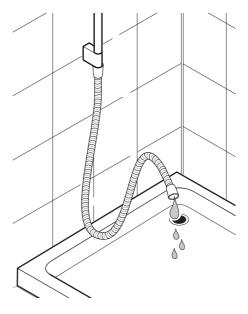
- Make sure surface is clean and dry. Fix backplate to finished wall surface.
- Turn controller over and remove the battery cover by loosening the screws with a pozi drive screwdriver. Note! The screws remain attached to the battery lid.
- Only fit new batteries of same make and type. Do not use rechargeable batteries. Replace all three batteries at the same time.
- Secure battery cover.
- Hook controller on top of backplate and push firmly until controller "clicks" back into place.



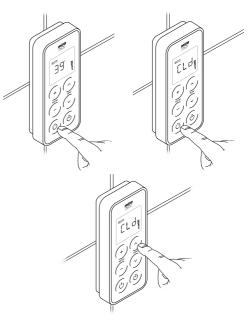
# **COMMISSIONING**

- Turn on electrical supply to digital mixer valve.
- Make sure the end of the hose is in either the bath, shower tray or other water catchment area.

  Note! The overhead mounting will flow water when switched on ("♂" or "♂") depending on the outlet plumbing configuration.



- Press "O" button and reduce temperature to full cold "CLd".
  Press "\texts" to increase to full flow. For Low Pressure (pumped) version, let shower run in order to prime the pump. For long pipe runs, let the shower run to allow the pump to prime until a steady stream of water flows.
- Caution! Risk of product damage. Do not run Pumped Valve (low pressure version) without a water supply for longer than 15 minutes during priming.



- Run cold water through (approximately 2 minutes) and check entire installation for water leaks. Press "O" to turn shower off. Fit the second hose washer and showerhead.
- ▶ Press "O" to turn shower on.

  Test operation of shower by increasing/decreasing both temperature and flow controls.

  (See User Guide for full details.)
- Test operation of showerhead spray modes. (See Showerhead User Guide for full details.)
- ▶ Repeat process for outlet 2 by pressing "ఄ" button.
- Refer to User Guide for further instructions on how to use the shower.
- ► The Wireless Controller factory default settings are as follows:

Maximum Showering Temperature = 45°C Eco Mode = Off Warm-Up Mode = Off

Clock = 10:00 (when batteries connected)

Clock Display = On Shower Duration = Off Bath Fill Mode = Off

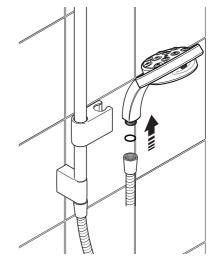
# **CONNECTING A SECOND WIRELESS CONTROLLER**

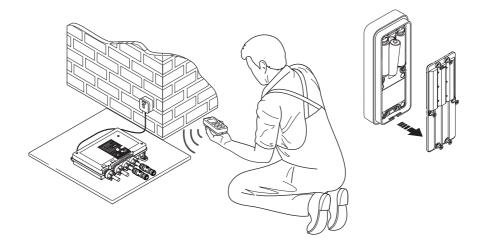
The following procedure details how to assign the Wireless Controller to the Digital Mixer Valve and test the remote signal strength.

**Note!** Other radio signals from sources such as mobile phones, radio controlled boiler thermostats, wireless broadband etc. can dramatically reduce the ability of the digital mixer valve to register.

It is recommended that such items are switched off during this process.

- Isolate electrical supply to the digital mixer valve.
- ▶ Bring the wireless controller to within approximately 1 m of the digital mixer valve. Fit the three AA batteries supplied into the wireless controller.





- Ensure the wireless controller LCD lights up then switch on power to the digital mixer valve.
- Depending on the type and version of your wireless controller, the software revision number (eg. r04) may be briefly displayed, the controller will then display its default time of 4:00 (unregistered).
- The digital mixer valve will now begin to make a noise as it resets itself and registers with the wireless controller.
- Droplet symbol is displayed for approximately 30 seconds. Do not remove the batteries or switch off the digital mixer valve. Droplet symbol goes out indicating the digital mixer valve and wireless controller have been assigned to each other.



Droplet Symbol

Place wireless controller in approximate final position (no more than 10 m (free air) from digital mixer valve) and test wireless signal by pressing either "O" or "O", and adjusting the temperature. If temperature display remains unchanged and "out of range" symbol is displayed, units are unable to communicate with each other



Out of Range Symbol

If test fails, reposition the controller closer to the digital mixer valve and repeat test until satisfied the shower will work reliably at all times.

## **RE-REGISTERING**

The wireless controller has previously been registered to the digital mixer valve at the factory. If communication problems are encountered, a re-registering of the wireless controller may be required.

A re-registering of the wireless controller must also be performed should the control PCB in the digital mixer valve be replaced.

To re-register the wireless controller to the digital mixer valve carry out the following sequence.

- Isolate power to the digital mixer valve.
- Press "+" and "♥" buttons simultaneously until "End" is displayed on the screen.
- Restore power to the digital mixer valve.
- ▶ Briefly press the "+" and "Ů" buttons, "SET" will be displayed on the screen. Note! if display reads "Err" press "Ů" and repeat the process.





### **FAULT DIAGNOSIS**

Read the section "Important Safety Information" first.

The digital mixer valve is one part of an entire plumbing system. The fitting of a pump places additional requirements and some systems may require plumbing modifications to allow them to cope with higher flow rates.

Providing the digital mixer valve 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. Before replacing any parts make sure that the underlying cause of the malfunction has been resolved.

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

Symptoms	Probable Cause	Possible Remedy
No display.	The batteries are flat or incorrectly fitted.	Check and rectify.
Out of range symbol appears on wireless controller.	No power to Digital Mixer Valve.	Check electrical connection and supply.
	Signal test incomplete.	Repeat commissioning sequence.
	Re-registering required.	Refer to "Re-Registering".
	Digital Mixer Valve failure.	Contact Kohler Mira Ltd.
	Wireless Controller failure.	Contact Kohler Mira Ltd.
	Radio frequency interference.	Ensure all other radio transmitting devices, including mobile phones, are switched off. Repeat commissioning sequence.

Symptoms	Probable Cause	Possible Remedy	
Low or no water flow.	1. Wireless Controller.		
	Out of range.	Refer to "Out of Range".	
	2. Digital Mixer Valve.		
	No power to Digital Mixer Valve.	Check electrical connection and supply.	
	Isolators closed.	Open isolators.	
	Filters blocked.	Clean filters.	
	Digital Mixer Valve above cold water storage cistern.	Appliance is not suitable for negative head installation. Refer to plumbing system diagrams.	
	Air trapped in plumbing / valve fitted in incorrect orientation.	Rearrage pipework to avoid airlock forming. Refer to "Typical Suitable Installations" / Valve Installation Orientation.	
	3. Shower Fitting/Other.		
	Blocked Showerhead.	Clean/descale showerhead.	
	Water pressure is low.	Check flow rate is above stated minimum. Refer to "Specification".	
Not turning on.	1. Wireless Controller.		
	Out of range.	Refer to "Out of Range".	
	The batteries are flat or incorrectly fitted.	Check and rectify.	
	2. Digital Mixer Valve.		
	No power to Digital Mixer Valve.	Check electrical connection and supply.	
	Isolators closed.	Open isolators.	
	Filters blocked.	Clean filters.	
	3. Shower Fitting/Other.		
	Blocked Showerhead / hose.	Clean/descale showerhead. Change hose.	
Incorrect or fluctuating temperature.	1. Wireless Controller.		
	Controller out of range.	Refer to "Out of range".	
cont	Radio interference.	Change controller frequency channel. Refer to <b>User Guide</b> - "Control Frequency".	

	T		
	Warm-Up feature is being used with combi-boiler. Refer to User Guide - "Fault Diagnosis".	Disable Warm-Up feature. Refer to <b>User Guide - "Warm-</b> <b>Up"</b> .	
	2. Digital Mixer Valve.		
	Appropriate flow regulators not fitted to system using combiboiler - <b>(HP)</b> .	Fit appropriate flow regulator. Refer to " <b>Spare Parts</b> ".	
	3. Shower Fitting/Other		
	Shower temperature affected by use of adjacent hot/cold tap. Insufficiently sized pipe work to feed both Digital Mixer Valve and taps at same time.	Increase pipe sizes or separately feed shower. Refer to plumbing system diagrams under "Installation" for correct connection method.	
Fluctuating or reduced flow.	Filters blocked.	Clean filters.	
Refer to <b>User Guide - "Fault</b> <b>Diagnosis"</b> .	Water pressure too low.	Check maintained pressure is within recommended range. Refer to "Specifications".	
	Flow rate is too low.	Check flow rates are within recommended range. Refer to "Specifications".	
	Fluctuating water temperature.	Check inlet temperatures are within recommended range. Refer to "Specifications".	
Maximum blend temperature too hot or too cold.	1. Digital Mixer Valve.		
too not or too cold.	Incorrect maximum temperature setting.	Refer to <b>User Guide</b> - " <b>Maximum Shower Water</b> <b>Temperature</b> ".	
Not hot enough (combi-boiler).	Appropriate flow regulators not fitted to system using combiboiler - <b>(HP)</b> .	Fit appropriate flow regulator. Refer to " <b>Spare Parts</b> ".	
Continuous flow. Shower will not shut off.	Digital Mixer Valve failure.	Contact Kohler Mira Ltd.	

Symptoms	Probable Cause	Possible Remedy
Shower runs for a short time (30 - 60 seconds) then flow reduces, splutters or stops. Worse when other hot taps are in use. Less evident when shower is on full cold.	Air is being sucked down the vent pipe. (Gravity fed system).	The hot draw off pipe is positioned too high in relation to the lowest water level of the cold water cistern (100 mm min, refer to "Gravity Fed Showers" diagram. Consider increasing size of cold feed pipe to cylinder to 28 mm diameter.
	Warm up setting inadvertantly selected.	Disable Warm-Up feature. Refer to <b>User Guide - "Warm-</b> <b>Up"</b> .
Shower runs for a short time (3 - 5 minutes).	Cistern capacity insufficient (230 litres minimum required).	Increase cistern size.
	Eco setting selected.	Disable Eco feature. Refer to User Guide - "Eco".
Shower runs cold after 5 - 10 minutes.	1. Digital Mixer Valve.	
	Insufficient storage of hot water in cylinder - (LP).	Increase storage of hot water.

## **MAINTENANCE**

#### General

Read the section "Important Safety Information" first.

Before replacing any parts ensure that the underlying cause of the malfunction has been resolved.

If the shower is dismantled during installation or servicing then upon completion the product must be inspected to ensure there are no leaks.

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

#### Cleaning

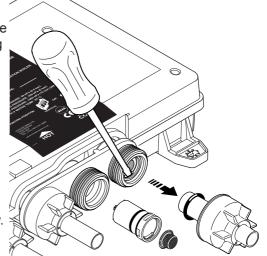
Many household cleaners contain abrasives and chemical substances, and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.

Checkvalve Cartridges and Filters - Removal and Installation Hot water entering the cold supply, or vice versa, indicates that immediate attention is necessary. This is carried out by removing and cleaning, or renewing as necessary, the checkvalve cartridges.

**Note!** Ensure for HP Mixer Valve that flow regulator is refitted in hot supply.

Isolate the electrical and water supplies to the digital mixer valve, and open an outlet fitting to release pressure and to assist the draining of residual water.

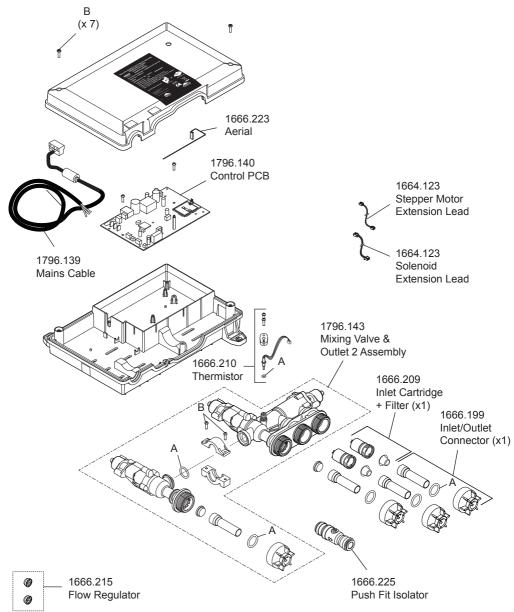
- Unscrew plastic nuts and either withdraw pipework or remove Digital Mixer to gain access to the checkvalve cartridges and filters.
- Use flat blade screwdriver to carefully lever cartridges out.
- Remove filters and clean or renew.



- Refit seals, pipes and plastic nuts. Plastic nuts require hand tightening only.
- Restore water supply and electrical supply. Test shower and check for leaks.

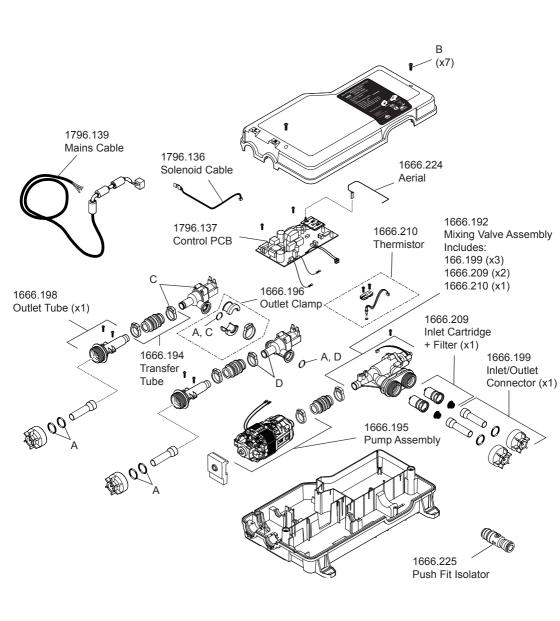
# SPARE PARTS

### Digital Mixer - High Pressure / Combi Valve



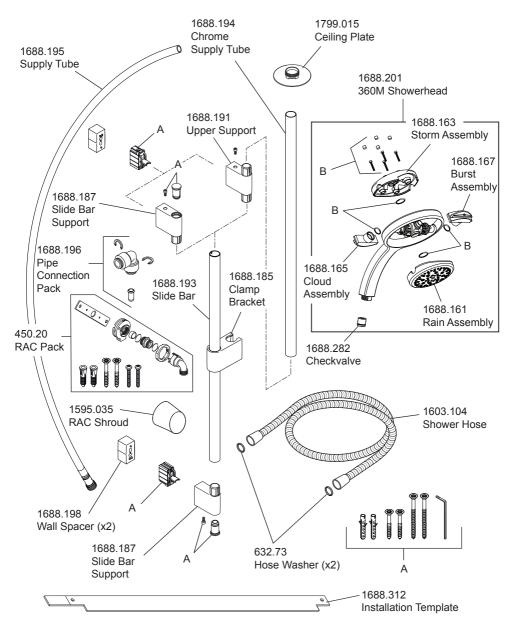
1666.212 Seal Pack - Components Identified 'A' 1666.213 Screw Pack - Components Identified 'B'

### Digital Mixer - Pumped Valve



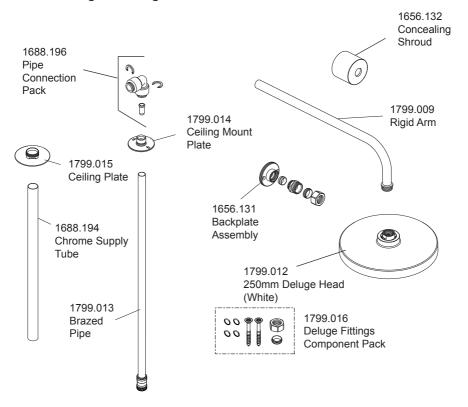
1666.212 Seal Pack - Components Identified 'A' 1666.213 Screw Pack - Components Identified 'B' 1666.197 Solenoid - Components Identified 'C' 1796.138 2nd Outlet Solenoid - Components Identified 'D'

### Shower Fittings - Showerhead

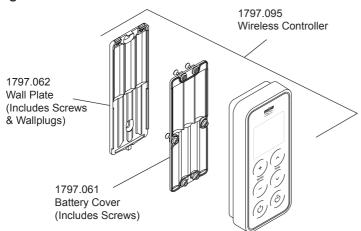


1688.184 Seal and Screw Pack - Components Identified 'B'. 1688.190 Classic Fittings Component Pack - Components identified 'A'.

### Shower Fittings - Deluge Head







### **ACCESSORIES**

Genuine Mira accessories can be purchased direct from Customers Services (our contact details can be found on the back cover of this guide) or from approved stockists or merchants.







**Shower Seat** White - 2.1536.128 White/Chrome - 2.1536.129

area. Folds up when not in use. onto a solid wall

**Premium Shower Seat** White/Chrome - 2.1731.001 Grev/Chrome - 2.1731.002 For use in or out of the showering Stylish, slim-line and robust 600 mm - 2.1605.072 Maximum User Weight - 127 kg of the shower area. Folds up when stainless steel grab bars. - 150 kg (23.5 stone) Note! Must solid wall. be installed onto a solid wall.

Mira Standard Grab Bars 300 mm - 2.1605.070 450 mm - 2.1605.071 shower seat for use in or outside Premium grade, highly polished, (20 stone) Note! Must be installed not in use. Maximum User Weight Note! Must be installed onto a



Wireless Controller White/Chrome - 1.1797.107

Wireless Controller available as a complete accessory if more than one controller is required. Comes complete with batteries and wall fixings. Test before fixing to wall. Install and test in accordance with the instructions contained within this guide.

# **DISPOSAL AND RECYCLING**

#### **End of Product Life**

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.

#### **Batteries**

Spent batteries should not be disposed of with normal household waste. Contact your local authority for information on waste disposal and recycling.



This symbol on the product or its packaging indicates that this product should not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local council office, your household waste disposal service or the shop where you purchased the product.

#### **CUSTOMER SERVICE**

#### Guarantee

Your product has the benefit of our manufacturer's guarantee which starts from the date of purchase.

To activate this guarantee, please return your completed registration card, visit our website or free phone 0800 0731248 within 30 days of purchase (UK only).

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

# This guarantee is in addition to your statutory rights and is subject to the following conditions:

- The guarantee applies solely to the original installation under normal use and to the original purchaser only.
   The product must be installed and maintained in accordance with the instructions given in this user guide.
- Servicing must only be undertaken by us or our appointed representative. Note! if a service visit is required the product must be fully installed and connected to services.
- Repairunderthis guarantee does not extend the original expiry date. The guarantee on any replacement parts or product ends at the original expiry date.
- For shower fittings or consumable items we reserve the right to supply replacement parts only.

#### The guarantee does not cover:

- Call out charges for non product faults (such as damage or performance issues arising from incorrect installation, improper use, inappropriate cleaning, lack of maintenance, build up of limescale, frost damage, corrosion, system debris or blocked filters) or where no fault has been found with the product.
- Water or electrical supply, waste and isolation issues.
- Compensation for loss of use of the product or consequential loss of any kind.
- Damage or defects caused if the product is repaired or modified by persons not authorised by us or our appointed representative.
- Routine maintenance or replacement parts to comply with the requirements of the TMV 2 or TMV 3 healthcare schemes.
- · Accidental or wilful damage.
- Products purchased ex-showroom display.

#### What to do if something goes wrong

If your product does not work correctly refer to this manual for fault diagnosis and check that it is installed and commissioned in accordance with our instructions. If this does not resolve the issue, contact us for help and advice.

#### **Extended Guarantees**

A selection of protection plans are available that enable you to cover repair bills (excludes Eire). Ring 01922 471763 for more details.

Mira is a registered trade mark of Kohler Mira Limited.

The company reserves the right to alter product specifications without notice.



Helpdesk Service - Ring our Customer Services Team for product advice, to purchase spare parts or accessories or to set up service visit. You can contact us via phone or e-mail, details below. Please provide your model name, power rating (if applicable) and date of purchase.



# Mira Showers Website (www.mirashowers. co.uk)

Visit our website to register your guarantee, download user guides, diagnose faults, purchase our full range of accessories and popular spares, or request a service visit.



Spares and Accessories - We hold the largest stocks of genuine Mira spares and accessories. Contact us for a price or visit our website to purchase items from our accessory range and popular spares.



Service/Repairs - No one knows our products better than our nationwide team of Service Technicians. We can carry out service or repair work to your product both during and after the guarantee period. Ask about our fixed price service repairs.

To Contact Us: UK



0844 571 5000



Fax: 01242 282595



E-mail: Visit www.mirashowers.co.uk/contactus



Mira Customer Services Dept, Cromwell Road, Cheltenham, Gloucestershire, GL52 5EP

To Contact Us: Eire Only



01 531 9337



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