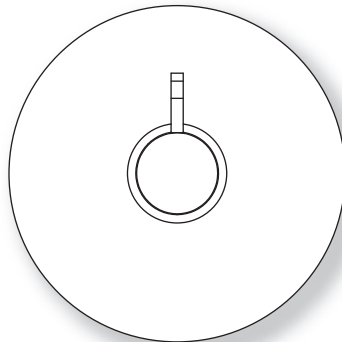
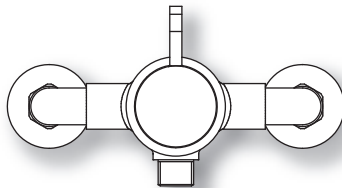


inta

puo
Shower Mixing Valves
PU70014CP & PU70024CP
Installation and Maintenance Instructions



In this procedure document we have endeavoured to make the information as accurate as possible.

We cannot accept any responsibility should it be found that in any respect the information is inaccurate or incomplete or becomes so as a result of further developments or otherwise.

inta

Intatec Ltd

Airfield Industrial Estate

Hixon

Staffordshire

ST18 0PF

Tel: **01889 272 180**

Fax: **01889 272 181**

email: **sales@intatec.co.uk**

web: **www.intatec.co.uk**

Introduction

This installation guide has been produced for the Puro concealed and exposed thermostatic dual control shower mixing valves. These instructions cover the installation, operation and maintenance. Please read the enclosed instructions before commencing the installation of this product, please note;

We recommend that the installation of any Inta product is carried out by an approved installer.

The installation must be carried out strictly in accordance with the Water Supply (Water Fitting) Regulations 1999 and any local authority regulations.

If in doubt we recommend that you contact WRAS - Water Regulations Advisory Scheme on Tel: 0333 207 9030, your local water authority - details available on the WRAS website or the Chartered Institute of Plumbing and Heating Engineers on Tel: 01708 472 791.

All products **MUST** be re-commissioned to suit site conditions to ensure optimum performance levels of the product are obtained

Safety

This thermostatic shower must be installed and commissioned correctly to ensure that water is supplied at a safe temperature to suit the users.

The shower is pre-set using ideal conditions to 38°C at the stop with a manual push button override to 46°C (can be re-set to suit site conditions or user preference – see calibration page 10).

The maximum mixed temperature takes account of the allowable tolerances inherent in thermostatic shower mixers and temperature losses.

It is not a safe bathing temperature for adults or children.

The British Burns Association recommends 37 to 37.5°C as a comfortable bathing temperature for children. In premises covered by the Care Standard Act 2000, the maximum mixed water outlet temperature is 43°C.

Products

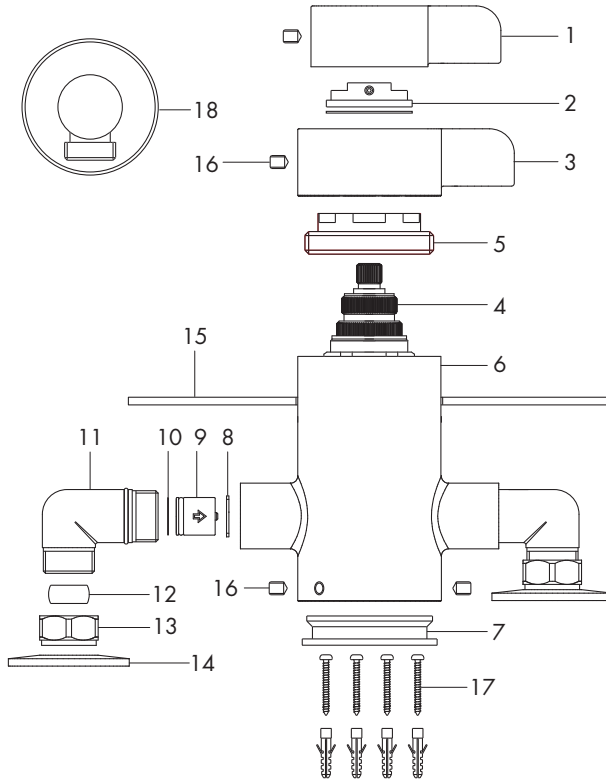
Puro Exposed Dual Control Concentric Shower Valve with Flexible Slide Rail kit	PU70014CP
Puro Concealed Dual Control Concentric Shower Valve with Flexible Slide Rail kit	PU70024CP

Check Content

Before commencing remove all components from packaging and check each component with the contents list.

Ensure all parts are present, before discarding any packaging. If any parts are missing, do not attempt to install your Inta shower valve until the missing parts have been obtained.

Components



Item	Qty	Component	Item	Qty	Component
1	1	Temperature control knob	10	2	Filter
2	1	Temp stop ring and washer	11	2	Elbow
3	1	Flow control knob	12	2	Olive
4	1	Thermostatic cartridge	13	2	Compression nut
5	1	Retaining Ring	14	2	Concealing plate exposed
6	1	Body	15	1	Concealing pl. concealed
7	1	Wall plate	16	4	Grub screw
8	2	Spring retaining clip	17	4	Fixing screw
9	2	Check valve	18	1	Outlet elbow

Technical Data

This Inta Puro thermostatic shower valve is suitable for installations on all types of plumbing systems, including gravity supplies, fully pumped, modulating combination boiler, unvented water heater and unbalanced supplies i.e. Cold Mains & Tank Fed Hot. They are not suitable for non-modulating combination boilers.

Max Inlet Pressure (Static)	10 bar	Max Inlet Temperature	85°C
Max Inlet Pressure (Dynamic)	5 bar	Pre Set Factory Temp Setting	38°C
Min Operating Pressure (Dynamic)	0.2 bar	Temperature Stability	±2°C
Max Unbalanced Pressure Ratio	5:1	Min Temp Differential to	
Outlet Connections - Body	G½"	ensure fail-safe between hot	
		and cold supplies	10°C

Unvented Mains Pressure System

The drawing shows a typical installation of a shower mixing valve in conjunction with an unvented hot water system. This type of installation must be carried out in accordance with Part G of the Building Regulations.

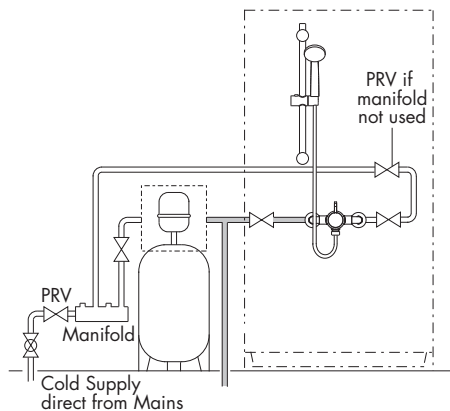
Whilst pressures are theoretically equal (balanced) most unvented hot systems have a pressure reducing valve on the incoming cold water prior to the hot water storage vessel. This means that the hot and cold pressures can be significantly different.

Most unvented systems use an inlet manifold located directly after the pressure reducing valve.

It is recommended that the cold supply be taken from one of the outlets of the manifold directly to the shower as an independent supply.

For systems without a manifold unit after the pressure reducing valve and where the cold water supply pressure is significantly higher than the hot supply we recommend that a separate pressure reducing valve is fitted to the cold supply, as close as possible to the shower valve and with no draw off points between it and the shower valve.

Flow regulators are required for installations where a PRV is not fitted to ensure simultaneous demand is accounted for.



Pumped Systems

Pumped systems use a booster pump to increase the pressure of the gravity fed water supplies.

These booster pumps are used where the head of water is insufficient to provide a satisfactory shower or where a high performance shower is required.

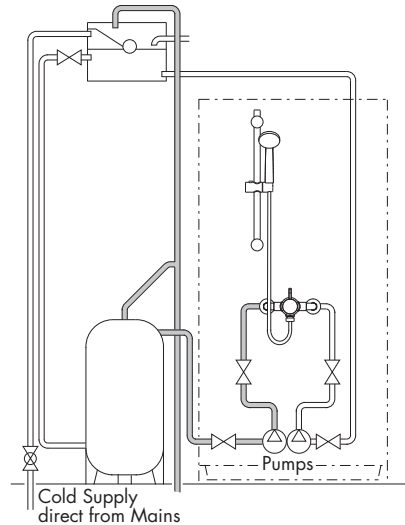
Please ensure that the performance of the pump is matched to suit the shower.

Follow the instructions for gravity fed installations taking into account the installation requirements of the pump.

Ensure that the hot and cold water storage capacity is sufficient to supply the shower and any other draw off points that may be used simultaneously.

Most pumps require a minimum head of water to allow the flow switches to operate automatically. Where this is not available a negative head kit may be required to operate the pump.

Please consult the pump manufacturer's installation requirements



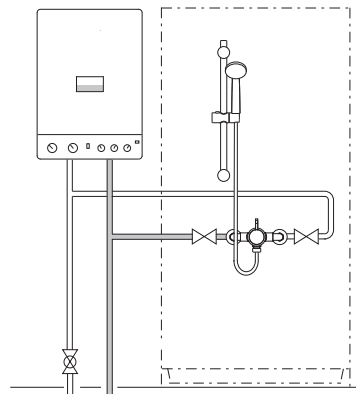
Modulating Combi Boiler / Instantaneous Gas Water Heater

The drawing shows a typical installation of a shower valve in conjunction with a combination boiler.

Combi boilers will produce a constant flow of water at a temperature within its operating range. However we recommend that the system should supply hot water in excess of 60°C.

The hot water flow rates are dependant upon the type of boiler / heater used and the temperature rise required to heat the cold water to the required temperature.

The cold water flow rates may be much greater as they are generally unrestricted from the mains cold water supply. To ensure relatively balanced flow rates, we recommend that a pressure reducing valve or 6 l/min flow regulator is fitted in the cold water supply pipe.



Gravity System

The drawing shows a typical installation of a shower valve on a gravity supplied system.

Please note the minimum head pressure required to ensure correct operation of the valve. In accordance with good plumbing practice, we recommend that a totally independent hot and cold water supply be taken to the valve.

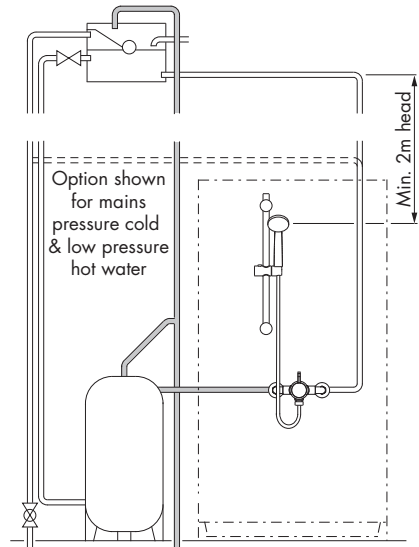
The cold water supply must be connected directly to the water cistern. The hot water supply should be connected to the hot water cylinder via an Essex flange or Sussex flange or to the vent or a draw off pipe as close as possible to the top of the cylinder.

For equal tank fed pressures there is no need to fit the flow regulators. This installation is the recommended minimum for gravity supplies.

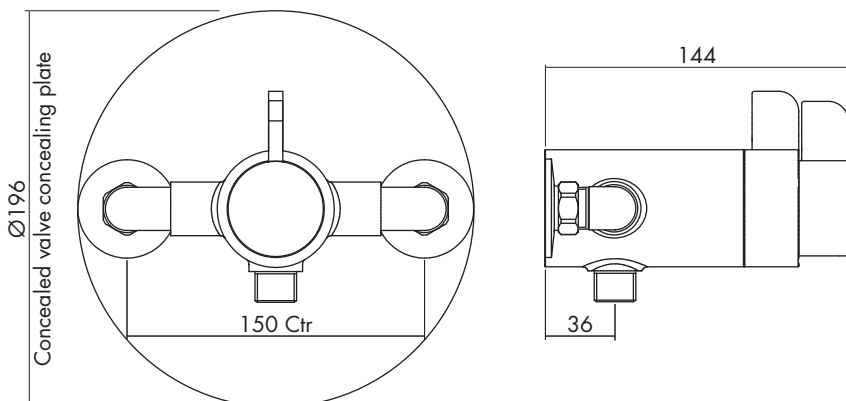
For systems with less than 2 metre head pressure, we recommend that a suitable booster pump is fitted to increase the supply pressure.

Cold Mains & Gravity Hot Supplies

If the cold supply to the shower is direct from the cold water mains and the hot water supply is gravity fed from the cold water cistern via the hot water cistern you **MUST** fit a pressure reducing valve or a 6 l/min flow regulator.



Dimensions



Site Preparation - General

It is important to plan the installation thoroughly to suit site conditions before commencing.

- Before commencing the installation ensure site conditions are suitable.
- Depending upon the model, the shower valve is designed for exposed or concealed pipework, whether in a solid or studded wall.
- The thickness of wall tiles, plaster or plaster board should all be considered when positioning the shower valve and routing the hot and cold supply pipes.
- The concealed shower valve must protrude sufficiently from the finished tiled surface to allow the concealing plate and control handle to be fitted.
- Ensure the shower valve will be horizontal when installed.
- The supply pipes can come from below, above, the side or through the wall.
- The concealed shower valve must be installed securely into the wall. If not embedded into the wall with plaster the shower valve must be fixed secure to the studding using screws in the 2 mounting holes.
- Each shower valve is supplied with integral non return valves in the cold and hot inlet tail pieces to prevent cross contamination of the water supplies. Additional check valves may be necessary in certain circumstances to comply with the Water Regulations. With flexible hose kits, where the hand set is capable of falling within 25 mm of the top of the shower tray, additional backflow prevention devices may be required.
- Where possible, 22 mm hot and cold supplies should be used as close to the valve as possible and pipe runs should be kept to a minimum to maintain flow rates on low pressure installations.

NOTE: The inlets connections to the elbows to the shower valve are 15mm compression.

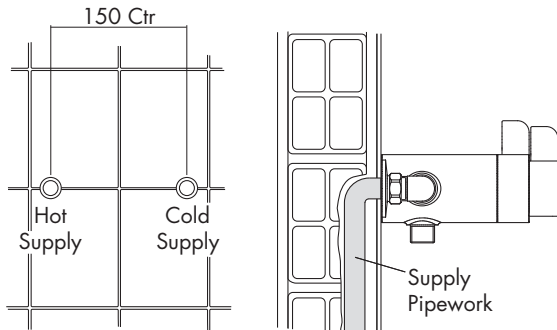
- The whole system should be thoroughly flushed, prior to connecting of the hot and cold water supplies to the shower valve, to remove any debris that may be in the supply pipework.
- Ensure there are no joint leaks before finishing the wall.
- Isolation valves must be fitted in an accessible position to both the hot and cold supplies should the valve need to be isolated in the future for servicing.

Site Preparation - Exposed Valve

Ensure the hot and cold supplies are positioned correctly to connect to the shower valve and the main compression joints are accessible for future servicing.

When facing the shower valve the hot water supply should be on the left and the cold on the right.

Ensure the valve is positioned to allow the shower kit to be installed at the required height to suit the tallest user.



Connection - Exposed Valve

Apply a bead of mastic to the back of the wall plate (7) and fit to the wall in the required position using the four screws and appropriate wall plugs to suit the wall type.

The Puro shower valve has a bottom ½" male shower connector, suitable for use with a flexible hose kit.

Fit the valve body to the wall plate (7) and secure having first fitted any required flow regulators.

Apply a bead of mastic to the back of the concealing plates (14) and locate on the supply pipes

Connect the hot and cold supplies to the valve using the 15mm compression joints and check the joints for leakage.

Apply a bead of mastic to seal the joints around the hot and cold supply pipes and press the concealing plates (14) to the wall.

Check the function of the valve, the maximum temperature should not exceed 38°C. If the maximum mixed water temperature exceeds this the valve must be re-calibrated to suit site conditions.

Site Preparation - Concealed Valve

Prepare the cavity to receive the valve, ensure the hot and cold supplies are positioned correctly and isolation valves are fitted in an accessible position.

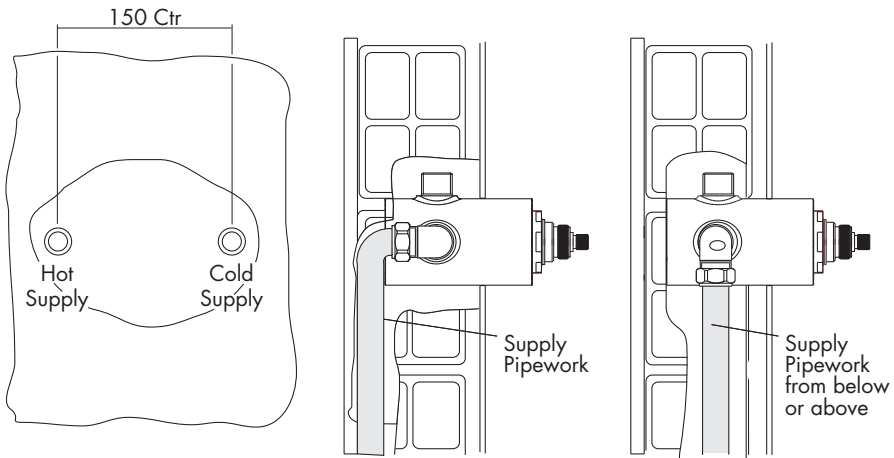
When facing the shower valve the hot water supply should be on the left and the cold on the right.

Fit the wall plate (7) to the wall.

In a stud wall it may be necessary to fit a batten to support the valve.

Ensure the outlet elbow (18) is positioned to allow the shower kit to be installed at the required height to suit the tallest user.

Depth of cavity 58 mm minimum to 73 mm maximum to the finished wall surface including wall tiles.



Connection - Concealed Valve

The Puro shower valve has a ½" male connection.

The valve can be installed with the outlet at the bottom or the top of the valve as shown for ease of connection to the outlet elbow (18).

Fit the valve body to the wall plate (7) and secure with the 2 grub screws (16), having first fitted any flow regulators into the elbows as required.

The supply pipe can be from behind, below or above the valve to suit site conditions.

Connect the hot and cold supplies to the valve using the compression joints provided.

Connection - Concealed Valve

Turn on the water supplies and check for leaks.

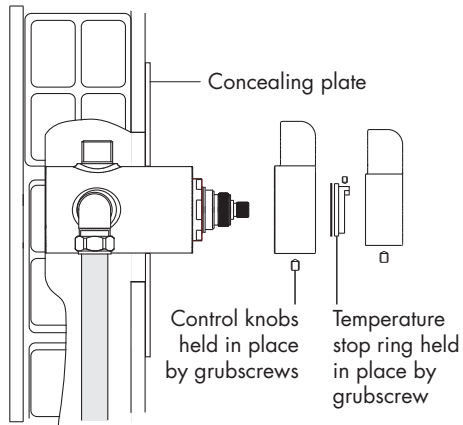
Concealed Valve - Fitting the Concealing Plate

Once the valve has been installed, all the connections have been checked for leakage and the surface of the wall has been finished the concealing plate (15) can be fitted.

It may be necessary to lubricate the seal in the centre of the concealing plate to ease assembly onto the valve body.

Remove control handles to allow the concealing plate to slide onto the valve.

Apply a bead of mastic to the outer edge, on the back of the concealing plate (15) and slide the plate over the valve body and press firmly to the wall.



Re-fit the flow control knob (3) to the valve with the lever part upper most and secure with the grub screw (15).

Fit the temperature control knob (1) to the valve with the lever part upper most and secure with the grub screw (16).

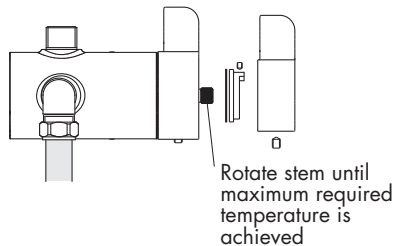
Check the function of the valve, the maximum temperature should not exceed 38°C, which Inta would deem a safe showering temperature. If the maximum mixed water temperature exceeds this the valve must be re-calibrated to suit site conditions.

Calibration

The factory outlet temperature setting of 38°C can be altered to suit site conditions.

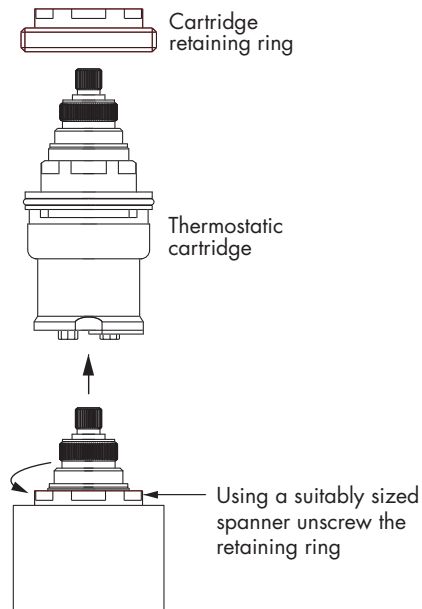
WARNING: Care should be taken when altering the setting as incorrect calibration can cause injury.

- Remove the grub screw (16) from the temperature control knob (1).
- Taking note of the lever position of the temperature control knob (1) pull away for the valve.
- Unscrew the grub screw of the temperature stop ring (2), taking note of the position before removing.
- Fully open the flow control (3) to establish a stable flow of water.
- To increase the maximum outlet temperature, remove the temperature stop ring and rotate anti-clockwise by one or two spline positions at a time, refit handle and check until the required temperature is achieved.
- Refit the grub screw to the temperature stop ring (2) and tighten to secure.
- Refit the temperature control knob (1) in the same position as when it was removed.
- The temperature can be measured from the mixed water outlet on the exposed valve and from the wall elbow or shower head outlet with the shower head removed for fully concealed installations.
- Allow the temperature to stabilise and re-check the minimum and maximum temperature range, this may be required several times until the required temperature is achieved.



Cartridge Replacement

- Isolate both the hot and cold water supplies
- Remove the temperature control knob (1), the temperature stop ring (2) and flow control (3) knob.
- Using a suitably sized spanner unscrew the cartridge retaining ring (5).
- Pull the cartridge (4) from the body
- Replace with a new cartridge and re-assemble the controls in the reverse order
- The shower valve must be re-calibrated after fitting the new cartridge following the Calibration procedure on page 10.



Aftercare

Inta shower mixing valves have a high quality finish and should be treated with care.

An occasional wipe with a mild washing-up liquid on a soft damp cloth followed by a thorough rinsing is all that is required.

The nozzles in the hand set should be cleaned periodically to remove any build up of debris or deposits which may affect the performance of the shower.

Do not use an **abrasive** or **chemical household cleaner** as this may **cause damage**.

Spares

A full range of spares are available for this product.

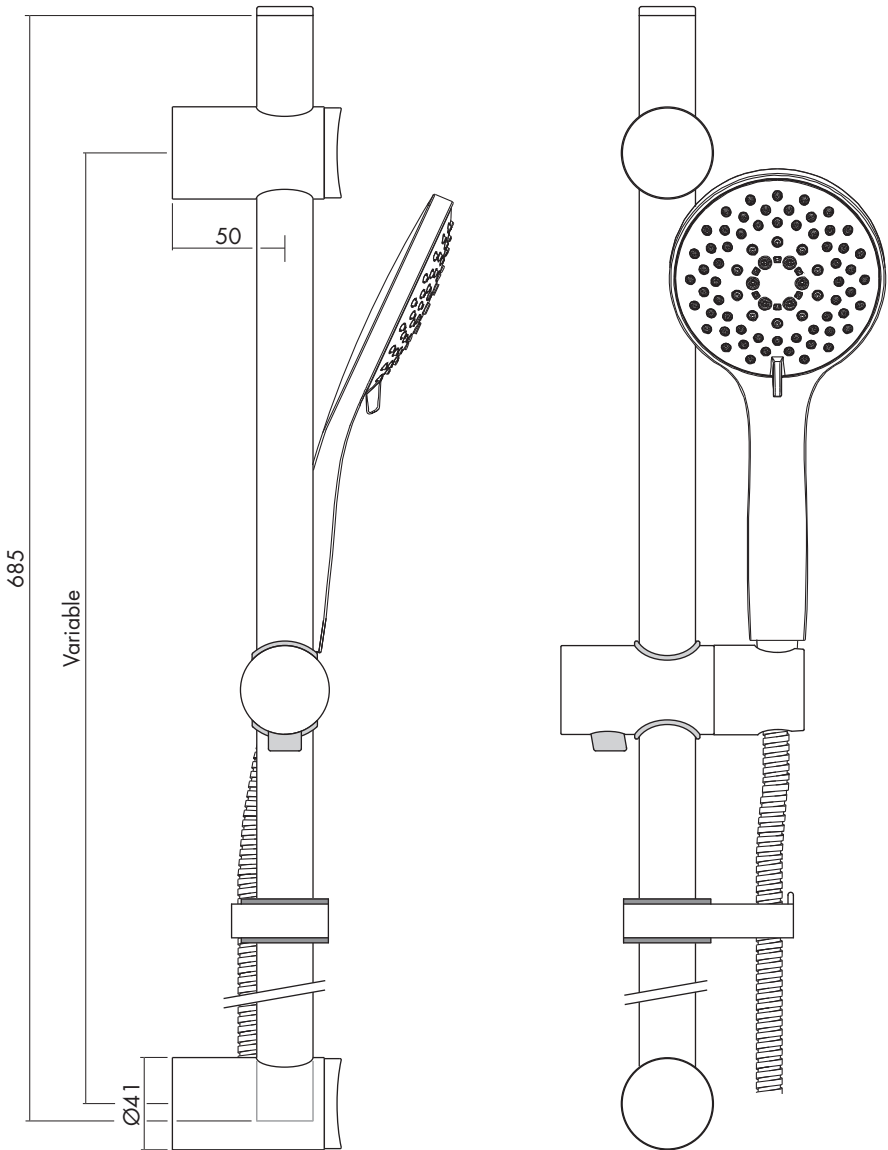
PLEASE NOTE: Only genuine spares should be used.

Problem Solving

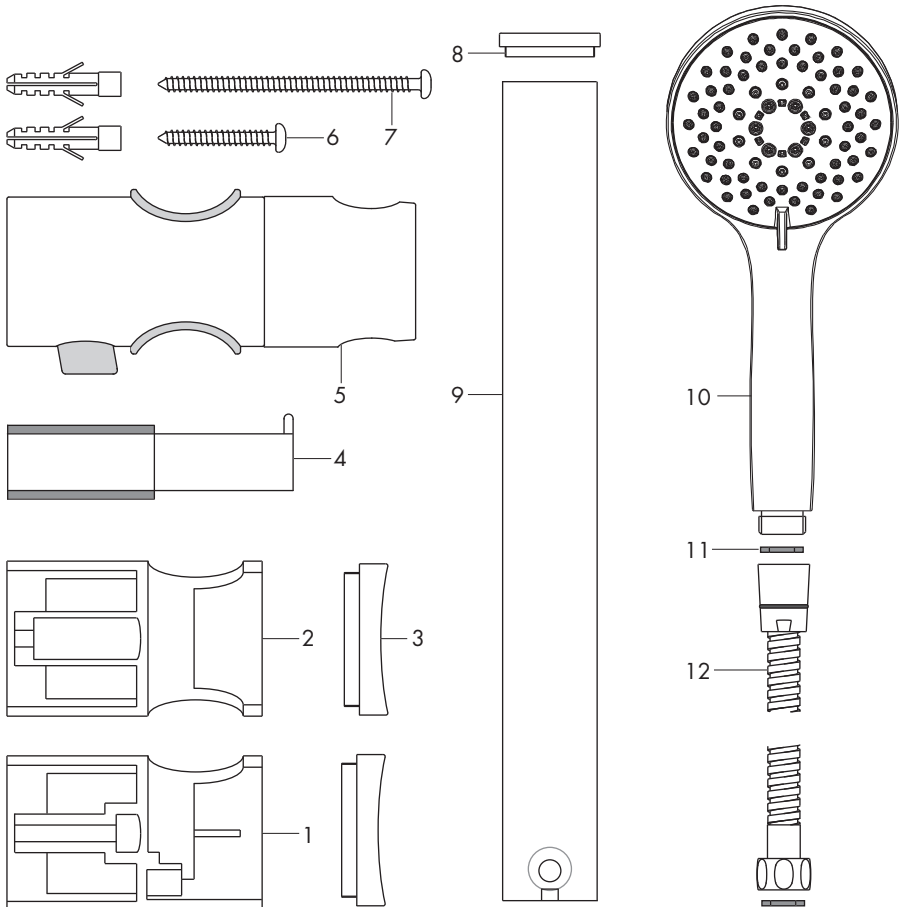
The following details are supplied for on site queries, should you require any further assistance our Technical Department can be contacted directly on 01889 272199.

Fault	Solution
Showering temperature is not hot enough.	Ensure the hot water supply is at a constant temperature above 60°C. Check for air locks in the pipework. Thermostatic cartridge movement limited due to lime scale build up
The water goes cold during showering.	Insufficient stored hot water. When used with a combi boiler confirm that the boiler is still firing. Adjust the boiler to a minimum setting of 65°C which may not necessarily be the best flow rate.
When the water is set at cold, the showering temperature is too hot.	The hot and cold supply connections have been made in reverse. Thermostatic cartridge movement limited due to lime scale build up
The maximum showering temperature is too hot or when set to hot water runs to cold.	Check the commissioned maximum temperature of the shower valve. Check the connections to the valve have not been made in reverse. Thermostatic cartridge movement limited due to lime scale build up
The flow of water from the shower valve is low.	Check the filters are clean and the supply pressure is above 0.2 bar.
No flow of water	Ensure the valve has not fail-safed and check that there is hot and cold water flow to the valve. Ensure the check valves are not closed.
Shower is stiff to operate	Build-up of limescale on flow control cartridge - service and de-scale
Passing/dripping from outlet	Service flow control cartridge.

Slide Rail - Dimensions



Flexible Slide Rail - Components



Item	Qty	Component	Item	Qty	Component
1	1	Bottom Wall Bracket	7	1	M4 x 30 Screw & Plug
2	1	Top Wall Bracket	8	1	Rail Cap
3	2	Cover	9	1	Rail
4	1	Flexible Tidy	10	1	Handset
5	1	Handset Holder	11	2	Sealing Washers
6	1	M4 x 70 Screw & Plug	12	1	Flexible Hose

Slide Rail - Installation

The screws and wall plugs supplied are only suitable for use in solid walls. If the wall is plaster board or soft building block use special wall plugs obtainable from most DIY stores.

Ensure there are no supply pipes or cables where you intend to drill.

Where possible, drill holes between ceramic tiles (in the grout). If drilling into ceramic tiles use a ceramic bit.

This product must always be used and fitted in such a way as not to cause water damage, therefore should be located and directed towards a suitable shower tray.

Take care to use power tools safely.

Carefully remove the cover (3) from each wall bracket (1) and (2) to expose the fixing hole.

Drill the 6mm diameter hole for the bottom wall bracket (1).

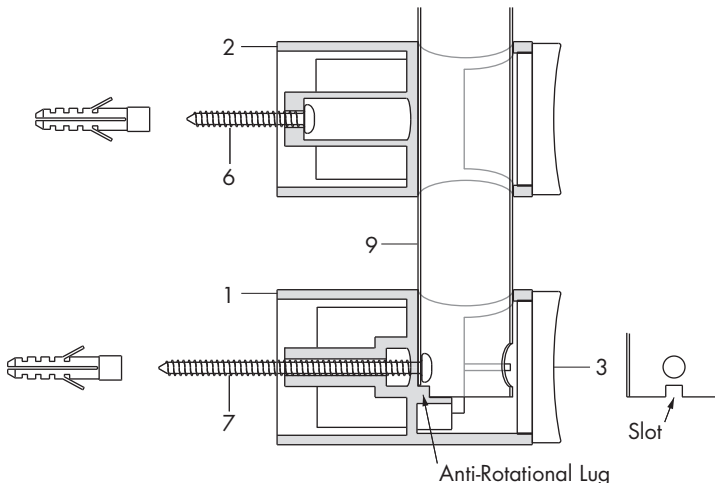
To avoid cracking ensure the wall plug is pushed all the way behind the ceramic tile.

Using the 70mm long screw (7) provided temporarily secure the wall bracket (1) to the wall ensuring the correct orientation for the bracket.

Slide the top wall bracket (2) onto the riser rail (9) and position in the bottom wall bracket (1) ensuring that the slot at the bottom of the riser rail is located over the anti-rotational lug.

Locate the upper bracket onto the wall towards the upper end of rail, approximately 50mm from the end, ensuring the rail is vertical.

Mark round the upper wall brackets with a removeable marker onto the wall.



Slide Rail - Installation

Position the top wall bracket (2) onto the wall within the markings and using the hole as a template, drill a 6mm diameter hole.

Fix the upper wall bracket to the wall using the 30mm long screw and secure.

Assemble the end cap (8) into the end of the rail without horizontal hole.

Assemble the handset holder (5) and the flexible tidy (4) onto the riser rail below the handset holder.

Unscrew the 70mm long screw (7) and remove from the bottom wall bracket (1).

Pass the rail assembly through the hole in the top wall bracket (2) and locate in the bottom wall bracket (1) ensuring that the slot at the bottom of the riser rail is located over the anti-rotational lug.

Pass the 70mm long screw through the hole in the rail and through the wall bracket and secure.

The head of the screw should be inside the rail as shown.

Refit the covers (3) into the wall brackets

Ensure the sealing washers (11) are inserted into both ends of the flexible hose (12) and connect the hose to the shower valve and the handset (10).

Turn on the shower valve and check joints for leakage.

Notes:

inta

Please leave this Manual for the User

To activate your product warranty please visit

www.intatec.co.uk

and click on Product Registration

inta

Intatec Ltd

Airfield Industrial Estate

Hixon

Staffordshire

ST18 0PF

Tel: **01889 272 180**

Fax: **01889 272 181**

email: **sales@intatec.co.uk**

web: **www.intatec.co.uk**

E & O.E

© Intatec Ltd 2017

02-08-17