

TRITON



RAMOR

Shower Tower

Thermostatic mixer



Installation and Operating Instructions

INSTALLERS PLEASE NOTE THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

INTRODUCTION

This book contains all the necessary fitting and operating instructions for your Triton Ramor Shower Tower thermostatic mixer shower. Please read them carefully.

Read through the whole of this book before beginning your installation.

The shower installation must be carried out by a suitably competent person and in sequence of this instruction book.

Care taken during the installation will give a long and trouble free life from your shower.

This shower tower is designed to operate on the higher pressure systems found in the UK up to a maximum of 6 bar running pressure.

The shower **MUST NOT** be subjected to water temperatures above 80°C.

This mixer shower is suitable for fully modulating type combination boilers and multi-point hot water heaters. It is also suitable for thermal storage, unvented systems and pumped gravity systems.

IMPORTANT: Before installing with a gas instantaneous water heater, make sure it is capable of delivering hot water at a minimum switch-on flow rate of 3 litres per minute. At flow rates between 3 and 8 litres per minute, the appliance must be capable of raising the water temperature to a minimum of 52°C. Water temperature at the inlet to the mixer must remain relatively constant when flow rate adjustments are made (*refer to the water heater operating manual to confirm compatibility with this shower tower*).

This shower tower is supplied with an integral single check valve and integral large area filter in each inlet elbow. Inlet connections are by braided hoses having ½" BSP unions.

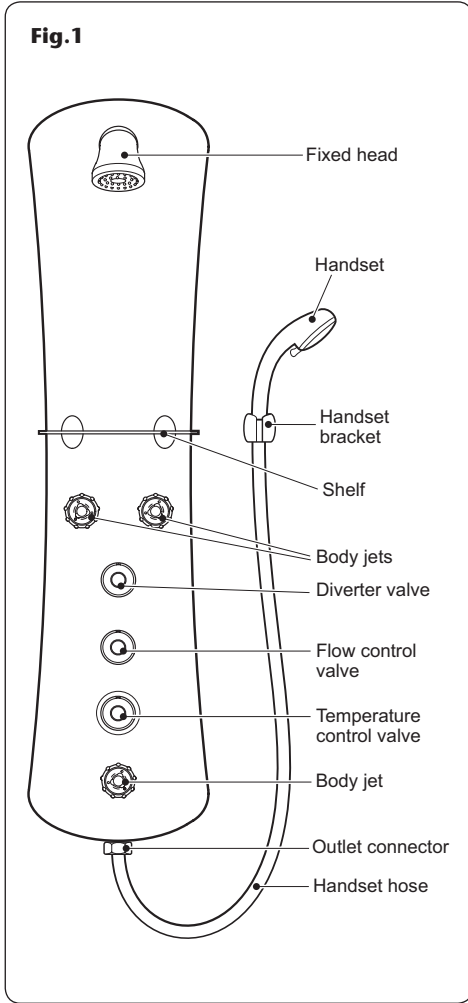
SAFETY WARNINGS

- a. Layout and sizing of pipework must be such that when other services are used, pressures at the shower control inlets do not fall below the recommended minimum.
- b. **DO NOT choose a position where the shower could become frozen.**
- c. DO NOT connect this shower to any form of tap or fitting not recommended by the manufacturer.
- d. The showerhead must be regularly cleaned to remove scale and debris.
- e. Conveniently situated isolating valves in each inlet supply must be fitted as an independent method of isolating the shower should maintenance or servicing be necessary.
- f. If it is intended to operate the shower in areas of hard water (above 200 ppm temporary hardness), a scale inhibitor may have to be fitted. For advice on the Triton scale inhibitor, please contact Customer Service.
- g. DO NOT operate the shower outside the guidelines as laid out in '*site requirements*'.
- h. If fitting onto a tiled wall DO NOT tile around the unit. Always fit the unit on the tiles as this will ease access for servicing.

Replacement parts can be ordered from Triton Customer Service. See '*spare parts*' for details and part numbers.

Due to continuous improvement and updating, specification may be altered without prior notice.

Fig.1



MAIN COMPONENTS

WARNING!

This product is NOT suitable for low pressure gravity fed supplies unless a suitable pump is also installed.

Check components and quantity before installation. In the unlikely event of anything being amiss, please contact Triton Customer Service.

Pack contents

Shower tower body – 1 off
 Fixed head – 1 off
 Handset and hose – 1 off
 Hanging brackets – 2 off
 Screws and wall plugs – 4 off
 Instructions and guarantee details.

Important notes before you start

This product has passed a factory control test before reaching you. DO NOT attempt to dismantle or modify it.

- Check there are no hidden service pipes and cables where you intend to drill.
- Check the hot and cold supply pipes are flushed out before final connection to the unit.
- The working pressure of this product is 1.0 bar – 6 bar (10 bar static).
- Please be aware of your safety while drilling and installing.

SITE REQUIREMENTS

The installation must be in accordance with Water Regulations and Bylaws.

Minimum running water pressure:	1.0 bar
Maximum running water pressure:	6 bar
Maximum static water pressure:	10 bar

Both hot and cold supplies should be at nominally equal pressures with a minimum flow rate of 8 litres per minute to both inlets.

While the shower tower is operational (open outlet), inlet pressures must not be capable of exceeding 6 bar. For effective operation of the internal seals, the maximum static pressure must not be exceeded.

Note: On sites where the running pressure is above 6 bar, the use of a suitably sized pressure reducing valve fitted in the cold mains supply pipework can provide nominally equal pressures at the shower tower.

For a satisfactory performance from the shower tower both cold and hot inlet supplies must be from a balanced supply.

Additional isolating valves must be fitted as an independent means of isolating the water supplies should maintenance be necessary.

The pipework should be installed such that the flow is not significantly affected by other taps and appliances being operated elsewhere on the premises.

Note: Where thermal store systems and instantaneous gas water heaters are used, if excessive draw offs take place the boiler may not be able to maintain an adequate output temperature. This could result in the shower temperature becoming noticeably cooler.

DO NOT use jointing compounds on pipework.

Water temperature requirements

Recommended maximum 65°C.

BS 6700 recommends the temperature of stored water should never exceed 65°C.

A stored water temperature of 60°C is considered sufficient to meet all normal requirements and will minimise the effects of scale in hard water areas.

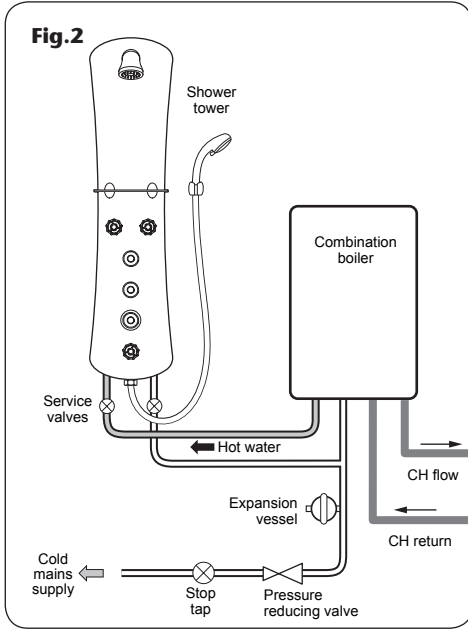
Temperature adjustment range

The mixed water temperature can be adjusted from cold through to the temperature of hot water available from the hot water appliance.

Should there be a loss of flow to either incoming supply then water from the shower will stop or be reduced to a trickle until both supplies are restored.

Flow rate performance

For all systems, the ability to use showerheads and body jets simultaneously is dependent on domestic hot water pressures and flow rates.



TYPICAL SUITABLE INSTALLATIONS

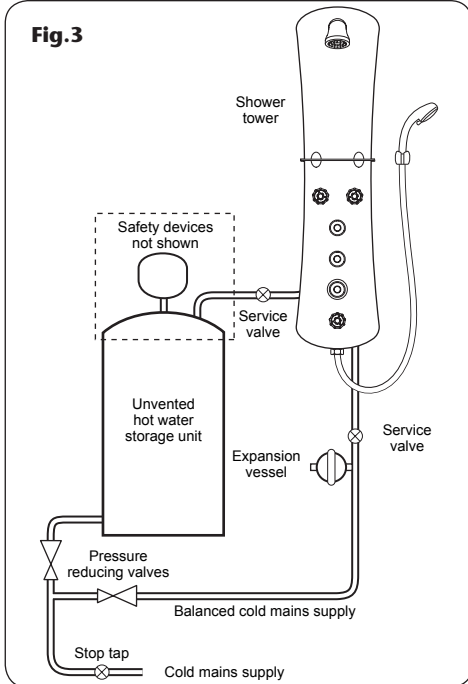
a) Instantaneous gas-heated systems, e.g. combination boilers (fig.2)

The shower tower can be installed with a multipoint gas water heater or combination boiler of a fully modulating design (i.e. to maintain relatively stable hot water temperatures).

A drop tight pressure reducing valve **MUST** be fitted if the supply pressures exceed 6 bar running.

An expansion vessel (typically sized at 0.16 litres) as shown in (fig.2), **MUST** be fitted and regularly maintained, to ensure the shower mixer is not damaged by excess pressures. This may already be installed within the boiler (check with manufacturer) and is in addition to the normally larger central heating expansion vessel.

The layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved and the effects of other draw-offs are minimised.



b) Unvented mains pressure systems (fig.3)

The shower tower can be installed with an unvented, stored hot water cylinder.

For systems with no cold water take off after the appliance reducing valve, it will be necessary to fit an additional drop tight pressure reducing valve when the mains pressure is over 6 bar. The drop tight pressure reducing valve **MUST** be set at the same value as the unvented package pressure reducing valve (fig.3).

Note: An additional expansion vessel (0.16 litres) may be required if a second pressure reducing valve is installed. This does not apply to packages with a cold take off after the pressure reducing valve to the cylinder.

The layout and sizing of pipework **MUST** be such that nominally equal inlet supply pressures are achieved and the effects of other draw-offs are minimised.

c) High output thermal store systems (fig.4)

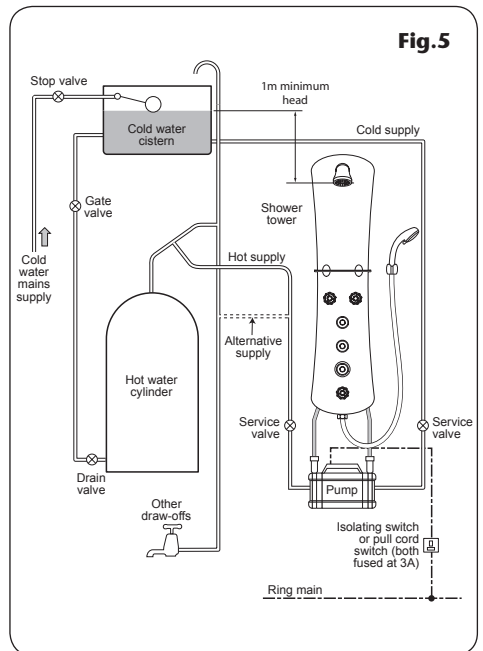
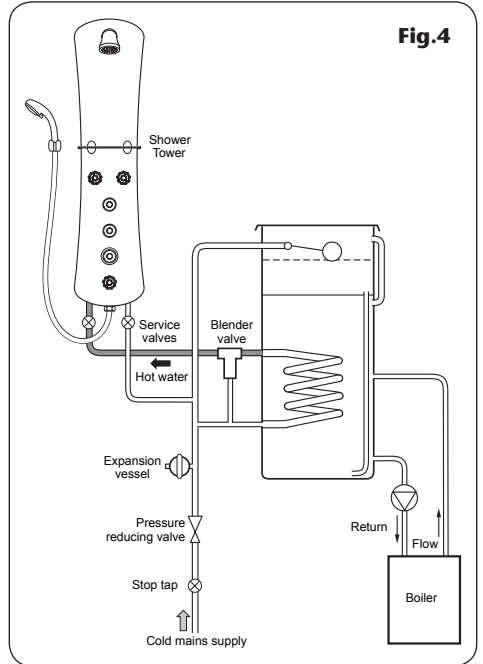
Packages of this type, fitted with a blender valve can be used. A drop tight pressure reducing valve MUST be fitted if the supply pressures exceed 6 bar running.

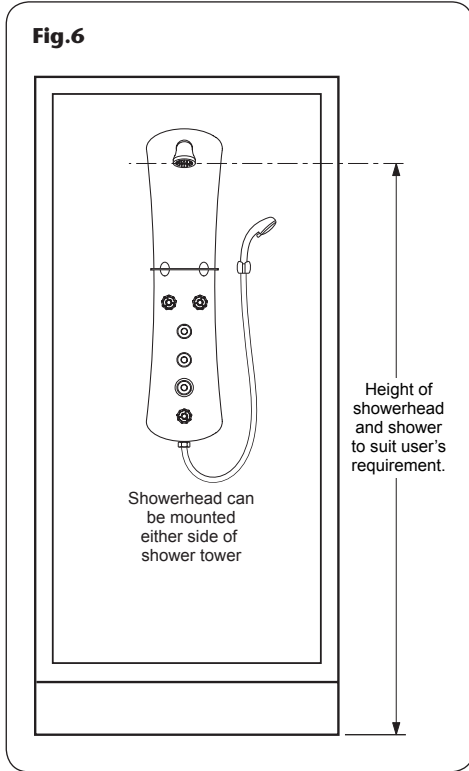
An expansion vessel (0.16 litres) as shown in (fig.4), MUST be fitted and regularly maintained to ensure the unit is not damaged by excess pressures. This may already be installed externally or internally within the thermal store (check with thermal store manufacturer).

d) Pump assisted gravity fed systems (fig.5)

The pump MUST be fed from a cold water cistern and hot water cylinder providing nominally equal pressures. To use this shower tower with a gravity fed system will require the use of a suitable pump.

Refer to the pump installation guide to establish the requirements for automatic operation of the pump (fig.5).





SITING OF THE SHOWER

Refer to **(fig.6)** for correct siting of the shower.

Position the shower on the wall so that all controls can be comfortably reached while using the shower.

IMPORTANT: The hot entry piping is on the left-hand side of the mixer body.

INSTALLATION

General conditions

Note: The outlet of the shower must not be connected to anything other than the hose and showerhead supplied.

DO NOT use jointing compounds on any pipe fittings for the installation.

Use only the compression fittings supplied.

DO NOT solder fittings near the shower as heat can transfer along the pipework and damage components.

Note: Suitable isolating valves (complying with Water Regulations and Bylaws) MUST be fitted on the hot and cold water supplies to the shower tower as an independent means of isolating the water supplies should maintenance or servicing be necessary.

When connecting pipework avoid using tight 90° elbows. Swept or formed bends will give the best performance.

Note: Water Regulations require that where the showerhead can be lowered into the bath a double check valve or similar device MUST be fitted in the supply pipework to prevent back syphonage.

IMPORTANT: The water circuit should be installed such that the flow is not significantly affected by other taps and appliances being operated elsewhere on the premises. Water pressure must not fall below specification of the shower.

Note: Hot water pipe entry must be made to the left-hand side inlet.

Instantaneous Gas Water Heaters

In order to provide the optimum performance from the shower when connected to an instantaneous water heater, the appliance must be capable of raising the temperature of the incoming water to a minimum of 52°C and delivering a flow rate of not less than eight litres per minute.

Fitting the pipework

Establish the required position of the shower tower, and mark two holes for the incoming water supplies.

For a wall mounted shower tower the suggested final separation between pipe centres is about 150mm (**fig.7**).

Remove the plaster and brickwork (or plasterboard) to the depth required and chase out the additional areas to allow for the incoming pipework.

Complete the outlet pipework with a standard 15mm x ½" BSP female thread elbow or straight coupler (depending on direction of entry supplies).

It is preferable to flush the pipework (**fig.8**) to clear the system of debris and check for leaks before connecting to the elbows.

IMPORTANT: Using a suitable sealant, always seal around the incoming pipework to prevent water entering the wall. Complete any plastering and tiling.

Note: Pipes can be surface mounted but cut-outs must be fashioned in the top or bottom of the shower tower.

Fitting the hanging brackets

IMPORTANT: If fitting to a tiled wall, always mount the unit on the surface of the tiles. NEVER tile up to the unit.

Using the centres of the supply holes as the datum line (**fig.9**) mark the position for the four locating screws for the hanging brackets, making sure they align vertically and horizontally.

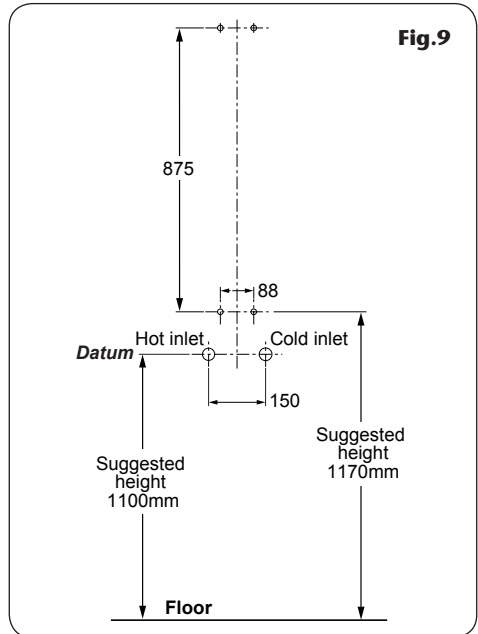
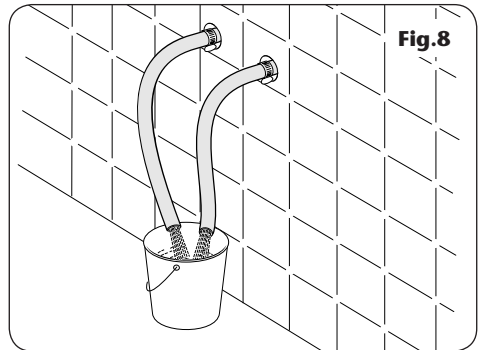
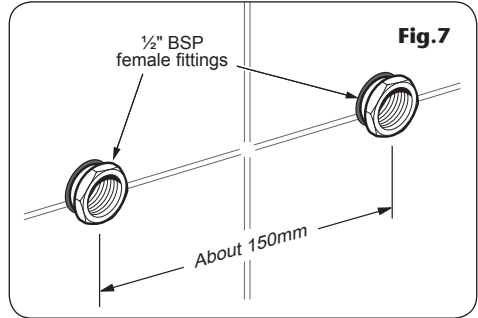
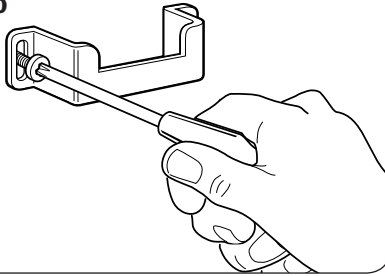


Fig.10



Drill and plug the wall using the wall plugs provided (*the wall plugs are suitable for most brick walls — use an appropriate masonry drill, but if the wall is plasterboard or a soft building block, use suitable wall plugs and a suitable drill bit*).

Secure the hanging brackets to the wall using the screws supplied (**fig.10**).

Fitting the shower tower body

Wrap the elbow threads with PTFE tape and connect them to the hot and the cold water pipes. Make sure the elbows face upwards and tighten to prevent leaking (**fig.11**).

Fit the filter and check valve onto the elbow to prevent debris entering the mixer valve (**fig.12**).

Facing the front of the shower tower body, connect the left-hand flexible hose inside the unit to the hot water elbow, and then connect the right-hand flexible hose to the cold water elbow (**fig.13**).

Screw tightly to avoid leaking. Note there is a gasket on each hose which must be in place.

Hitch the two hooks inside the shower body onto the hanging brackets on the wall. Make sure the installation is stable.

IMPORTANT: DO NOT use silicon sealant around the shower tower since it may be necessary to access and clean the inlet filters periodically.

Fitting the shelf

Loosen the grub screws in the base of the shelf brackets. Slide the shelf into the brackets (**fig.14**) and secure in place using the grub screws.

Fig.11

Apply PTFE tape to threads

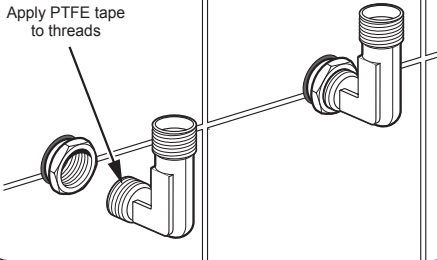


Fig.12

Check valve

Filter

Elbow

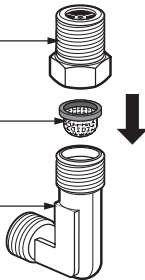
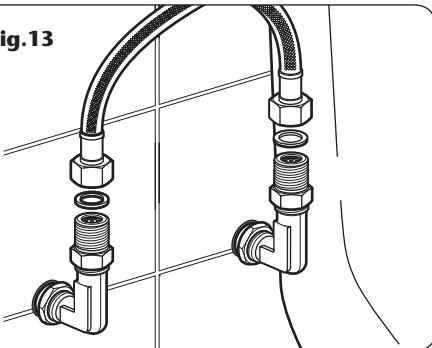


Fig.13



FITTING THE SHOWERHEADS

Fitting the fixed head

Slide the movable sleeve to expose the grub screw in the top of the showerhead. Making sure the 'O' ring stays in place, push fit the fixed head (**fig.15**) onto the topmost outlet connector of the shower tower body. Tighten the grub screw to secure the showerhead to the connector and slide the sleeve back into position.

Fitting the hose and showerhead

With the sealing washer in place, connect the swivel nut of the shower hose to the bottom outlet connector (**fig.16**) on the shower tower body. Screw the other end of the hose to the handset then locate the handset into the handset bracket.

Check the pipework is stable and watertight to avoid leaks before using the shower tower.

Fitting the handset bracket

Decide on a position within the shower area for the handset bracket. Mark the two locating holes and then drill and plug the wall.

Fix the bracket to the wall with the screws provided.

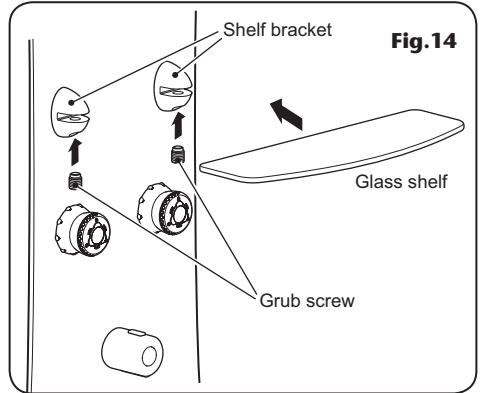


Fig.14

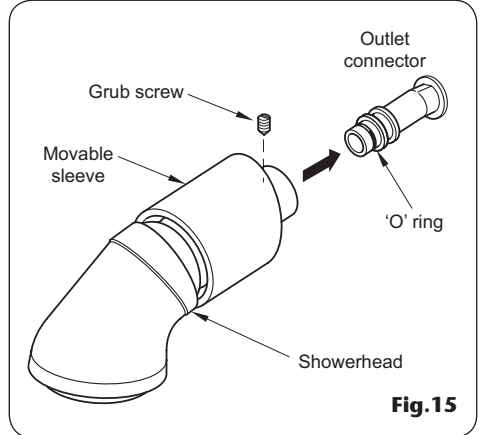


Fig.15

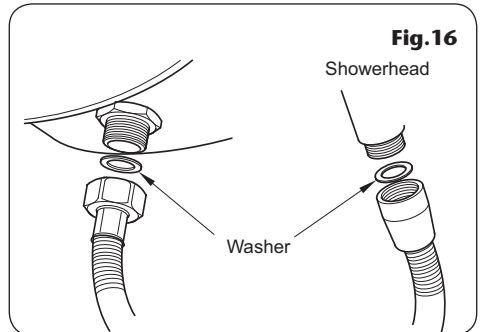
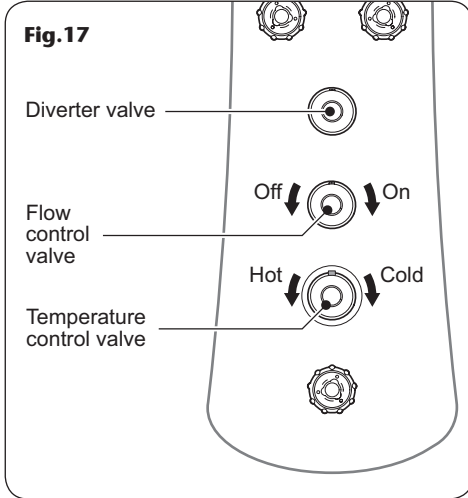


Fig.16



OPERATING THE SHOWER

Using the flow control

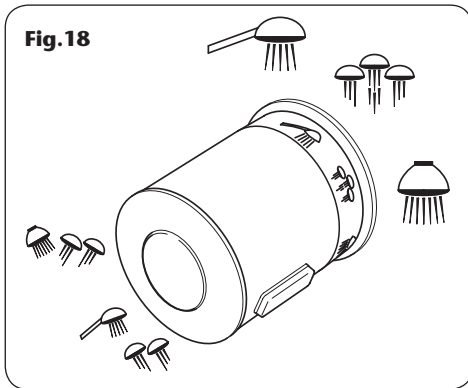
Rotate the flow control anti-clockwise and water will flow from the outlets, depending which has been selected via the diverter valve. Rotate the flow control clockwise and the water flow will cease (**fig.17**).

Using the temperature control

To obtain hot water turn the temperature control anti-clockwise. To obtain cooler water turn the temperature control clockwise (**fig.17**).

The shower tower is fitted with a maximum temperature override button factory set at 38°C. To override the maximum temperature press the red button on the control as you turn it anti-clockwise. To return to a cooler temperature simply rotate the control clockwise.

This should be checked to make sure the setting has not been altered and to ensure user safety.





Using the diverter valves


The diverter valves are combined on/off and graduated flow controls.


Note: The diverter valves (**fig.18**) only operate if the flow control lever is on.

 This setting selects the fixed head.

 This setting selects the handset.

 This setting selects the body jets.

 Turn the diverter to this setting and both the handset and body jets will be selected.

 Turn the diverter to this setting and both the fixed head and body jets will be selected.

CAUTION: It is recommended that persons who may have difficulty understanding or operating the controls should not be left unattended while using the shower tower. Special consideration should be given to young children and the less able bodied.

Adjusting the maximum temperature override setting

Remove the end cap from the temperature control knob to expose the retaining screw (**fig.19**). Undo the screw and pull off the knob. Turn the flow control (left-hand control) clockwise and allow the shower to run until the water temperature has stabilised.

Carefully turn the temperature spindle clockwise to increase the maximum outlet temperature (**fig.20**). Once you are satisfied with the showering temperature refit the temperature control. Take care to align the override button with the white marker on the maximum temperature stop (**fig.21**).

Secure the temperature control in place with the retaining screw and refit the end cap.

MAINTENANCE

Clean the unit frequently and regularly with clean water or mild liquid detergent then rinse with clean water, and dry it with soft cotton cloth.

DO NOT use acid or abrasive detergents.

Cleaning the showerheads and diverters

To clean the showerheads and diverters simply rub your thumb over the nozzles.

SPARE PARTS

Should spare parts be required in the future, contact Unichrome Customer Service on:

08700 678 678

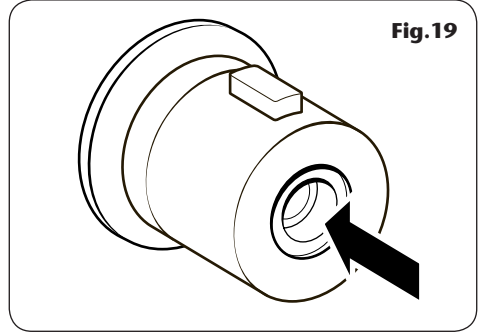


Fig.19

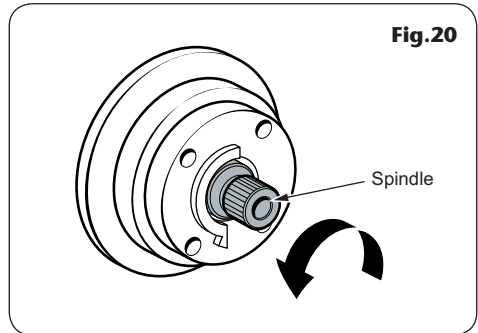


Fig.20

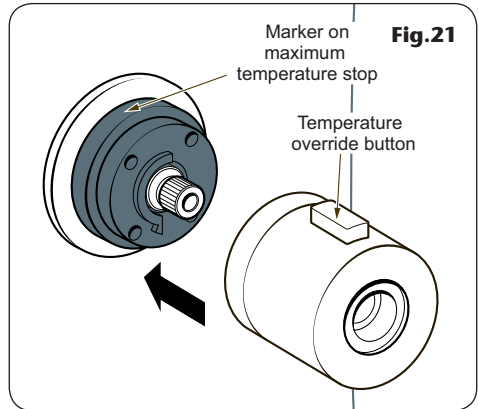


Fig.21

FAULT FINDING

The following can be carried out by a competent person

<i>Problem/Symptom</i>	<i>Cause</i>	<i>Action/Cure</i>
1 Water too hot.	1.1 Not enough cold water flowing through shower.	1.1.1 Turn temperature control clockwise.
	1.2 Increase in the ambient cold water temperature.	1.2.1 Turn temperature control clockwise.
	1.3 Cold water supply blocked.	1.3.1 Check filters are clean. 1.3.2 Turn off shower and consult a competent plumber or contact Triton Customer Service.
	1.4 High volume of cold water drawn off elsewhere.	1.4.1 Reduce the simultaneous demand from the supply.
2 Water too cold.	2.1 Not enough hot water flowing through shower.	2.1.1 Turn the temperature control anti-clockwise.
	2.2 Decrease in the ambient cold water temperature.	2.2.1 Turn the temperature control anti-clockwise.
	2.3 Insufficient hot water supplies from the heating system.	2.3.1 Make sure heating appliance is set to maximum or has sufficient stored hot water. 2.3.2 Make sure heating appliance is igniting by trying a hot water tap elsewhere.
	2.4 Hot water supply blocked or restricted.	2.4.1 Check the filters are clean. 2.4.2 Turn off shower and consult a competent plumber or contact Triton Customer Service.
3 Water does not flow or shower pattern collapses when another outlet is turned on.	3.1 Water supplies cut off.	3.1.1 Check water elsewhere in house and if necessary contact local water company.
	3.2 Shower unit blocked.	3.2.1 Inspect the inlet filters. Clean if necessary.
	3.3 Blockage in pipework.	3.3.1 Turn off the shower and consult a suitably competent plumber.
	3.4 Showerhead blocked.	3.4.1 Clean showerhead.
	3.5 System not capable of supplying multiple outlets at the same time.	3.5.1 Reduce the simultaneous demand. 3.5.2 Make sure stop/service valves are fully open. 3.5.3 Check if sufficient water pressure.

FAULT FINDING

The following can be carried out by a competent person

<i>Problem/Symptom</i>	<i>Cause</i>	<i>Action/Cure</i>
4 Water too cold.	4.1 Running pressure in excess of maximum recommended.	4.1.1 Fit a pressure reducing valve.
5 Shower controls noisy while in use.	5.1 Running pressure in excess of maximum recommended.	5.1.1 Fit a pressure reducing valve.
6 Shower will not shut off.	6.1 Pipework not flushed before connecting the unit (flow valve damaged).	6.1.1 Renew flow valve.



