Please read these instructions carefully before commencing installation and familiarise yourself fully with the assembly details, the exploded diagram (Fig. 2) and list of components which are numbered and referred to in the instructions. Dimensions of the mixers are shown in Fig. 1.

Dimensions (in millimetres) may vary within permitted tolerances.
Fig. 2 - illustrated in installation configuration B. (See Fig. 9)
Trevi Boost is designed to be installed on normal UK tank fed hot supply and mains fed cold supply. The pressure of the cold water is used to boost the pressure of the blended water above that of the hot supply. This is done using the Venturi principle as described in section on Operation. Both models have been manufactured to be fitted in a variety of installation configurations to suit the shower room design, (see installation section item 1). Connections on the all brass mixer body are 3/4" BSP and are marked ‘hot in’, ‘cold in’, and ‘mixed out’. There are two mixed water outlets, one of which must be plugged with the blanking plug supplied, (22).

The supply pipework should be 15mm copper on the cold side and 22mm copper on the hot side. A more stable showering temperature will be achieved if the hot supply pipe is taken from a direct cylinder connection. Supplied with the exposed shower mixer are two 3/4" BSP x 22mm compression elbows (32) for connecting hot and cold supplies when concealed in the wall. If the mixer is to be installed with surface mounted pipework appropriate pipe fittings are used (not supplied).

The Trevi Boost is supplied with its own shower kit. (Handspray with flexible hose or fixed head). These are sized for optimum performance and should not be replaced with alternatives. If an alternative shower kit of higher or lower resistance is used the performance of Trevi Boost will be affected and a satisfactory mixed showering temperature may not be achieved. In the event of the shower head becoming partially blocked (for example with lime scale) or the shower hose becoming kinked the boosting performance and showering temperature will be markedly reduced. Clean the shower heads regularly. Only use genuine Trevi spare parts if replacements are required.
Operating Conditions

Trevi Boost is designed to be installed on traditional UK vented systems where the hot cylinder is fed from a cold storage cistern. It is intended to be installed where the storage cistern is on the same floor as the shower room or in the roof space immediately above the shower room (see Fig. 5). The cold water pressure must be 1.5 bar minimum and 3.0 bar maximum. If the cold water pressure is between 1.5 and 2.0 bar the Trevi Boost will give satisfactory results if the hot water pressure and temperature are within the shaded area of Fig.3. For cold pressures between 2.0 - 3.0 bar, the hot water conditions defined in Fig. 4 will apply. If direct mains cold water pressure is greater than 3.0 bar, a pressure reducing valve must be fitted. If input conditions are minimal, (i.e. on the diagonal line on Figs 3 or 4), then mixed shower temperature may only read 40°C. (See Installers Guide for further information).

Hot water requirement when cold pressure is 1.5 - 2.0 bar

![Graph showing hot water temperature vs. hot water head for cold pressure range 1.5 - 2.0 bar.](image)

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Hot water requirement when cold pressure is 2.0 - 3.0 bar

![Graph showing hot water temperature vs. hot water head for cold pressure range 2.0 - 3.0 bar.](image)
hose must be restrained to ensure handspray cannot come within 20mm of spill-over level of bath or shower tray

3m max

50cm max

5cm max

1m min

single check valve

%" or 22mm minimum hot supply

must be first point of draw off

hot water storage cylinder

single check valve

¼" or 15mm minimum cold supply

hot supply to other appliances

cold mains

cold water storage tank

vent pipe

Fig. 5
Principle of Operation

The hot and cold inlet supplies are controlled by twin ceramic disc cartridges (17). To operate the valve, turn the volume control handle (23) anti-clockwise through 180°. This admits hot and cold water into the booster element which is also a separate removable cartridge.

The booster element increases the pressure of the blended water using the Venturi principle, (See Fig. 6). Trevi Boost is designed to give a reasonably stable outlet temperature even though the cold inlet pressure may vary as other fittings in the house are being used. However, to provide complete protection in the event of a cold water failure, it incorporates a thermal shutdown device. This device uses a thermal element which reacts to over-temperature water, pushing a valve on to the seat at the bottom of the booster cartridge, (see Fig. 6). In the event of a cold water failure this valve element reduces the output flow of Trevi Boost to a trickle if the water exceeds 45°C. The actual temperature at which the mixed flow is cut off will vary from valve to valve but will usually occur in the temperature range 45 - 48°C. The flow is not completely stopped since to do so may confuse the user into thinking the valve is turned off when in reality it would reset as soon as the water inside it had cooled. Trevi Boost is a little sensitive to the height of the flexible spray head and a slight temperature rise may be noticed as the spray head is lowered.

Fig. 6

- Hot water inlet (head from -0.5m to 3.0m) temperature from 55°C minimum
- Boosted mixed water outlet
- Cold water inlet (pressure from 1.5bar to 3.0bar)
- Thermal shut down device (reduces flow to a trickle if mixed water temperature rises above 45°C)
Byelaws Installation Requirements

As the incorrect installation of water fittings may result in contravention of Water Byelaws requirements the following INSTALLATION REQUIREMENTS AND NOTES (IRN) are intended as guides to water undertakers and consumers, installers and their customers.

The IRN’s relate to the Byelaws implemented by water undertakers from 1st January 1989. For further information see “Water Supply Byelaws Guide” published by the Water Research Centre (International Book No. ISBN 1 870779 02 9)

The following IRN’s apply to the Trevi Boost fitting. IRN Nos. 101 * and 109*. Refer to list included on separate sheet.

Installation

Single check valves must be installed on both hot and cold inlets to prevent crossflow. A 22mm single check valve is essential on the hot side and ideal on the cold side, however a 15mm check valve can be fitted to the cold side as an alternative. These should be fitted as close upstream as is practicable, however it is essential they be positioned such that they can be serviced after installation since an obstruction, especially in the hot side will greatly reduce the showering temperature. It is recommended that the pipework upstream of the check valve be flushed out before the check valve is fitted. The following WRC listed check valves have been tested and found to be suitable for use with Trevi Boost.

Socla
22m CR Socla 22 BS- 6282 (22mm) Socla CR 3/4”

Brefco
SC2CR Flamco DN 22 (22mm)

Reliance Water Control Ltd.
RWC Flowguard SC 75 C CRW (22mm)

Conex Sanbra Ltd.
CR Alsta Saeflo A 30 (22mm).

The restraint ring supplied with the Trevi shower kit MUST be fitted such that the shower head can come no closer than 20mm above spillover level of the shower tray or bathtub over which the shower is installed.

1. Trevi Boost is delivered ready for installation with the volume control on the left and the temperature control on the right. (See configuration A - Fig. 7).

Fig. 7 As delivered Installation Configuration A

Fig. 8 Installation Configuration B

Trevi Boost can also be installed in a vertical position as illustrated.
Installation (continued)

Changing the Valve Orientation

2. If configuration B - Fig. 8 is required, proceed as follows.

2.1 Remove the cap (7) and undo the screw (8). Pull off the temperature control handle (24), the shroud (9) and the shroud spacer washers (19).

2.2 Unscrew the temperature handle carrier (20) and prise off the temperature handle stop (21) by inserting a screwdriver in the slots provided.

2.3 Place the Trevi Boost body in the orientation required and refit the temperature handle stop (21) so that the large stop step is to the right hand side and the appropriate screwdriver recess is at the top. Ensure the temperature handle stop (21) is pushed fully on to the hex, (see Fig. 9).

2.4 Refit the temperature handle carrier (20) by screwing fully clockwise. Replace shroud spacer washers (19) and shroud (9) and push fully home.

2.5 Place temperature control handle (24) on the handle carrier (20) with the black button (Fig, 12) approximately to the top and push fully home. Withdraw handle again carefully by about 6mm or 7mm until it is only just free of the splines and able to rotate. Hold this distance from the body, rotate carefully clockwise until the handle is felt to touch the slop. Push temperature handle (24) fully home and tighten screw for temperature control handle (8).

2.6 Rotate handle clockwise and then anti-clockwise again and check that handle stops against the stop.

Built-In installation

3. The Trevi Boost built-in model is designed to be recessed into the wall and the depth of recess should be measured from the finished wall surface.

An allowance for tiling etc. must be made. There is an adjustment of 20mm in the installation depth - minimum to 45mm maximum 65mm from finished wall surface to the centre line of the connections. The maximum/minimum depths are indicated on the mounting template / plaster guard (25) supplied.
4. Chase out wall for mixer body and pipework. Locate pipework to suit connections on the mixer body and flush out thoroughly to remove debris. (see item 13).

5. Screw blanking plug (22) into the unused mixed water connection on the mixer body using PTFE tape.

6. With mounting template/plaster guard (25) attached to the mixer body, locate the body in the wall and connect pipework using appropriate pipe fittings and PTFE tape. Inlets and outlets are clearly marked on the mounting template/plaster guard (25). Do not make any soldered joints near the mixer as this could damage the cartridges.

7. Screw the mixer body to the wall using fixing lugs as shown in Fig. 10. The mixer must be square with the finished wall surface. Ensure pipework is rigidly secured to wall.

6. Remove plaster guard (25). Exposed Installation

9. If concealed pipework is to be installed, fit the two 314” BSP x 22mm compression elbows, using PTFE tape, to the hot and cold connections on the mixer body (Fig. 11). The removal of coupling nuts on the elbows will facilitate the operation otherwise the nuts will foul each other. Connections for surface mounted pipework are shown in Fig. 11 and again PTFE tape should be used. Do not make soldered joint near the mixer as this could damage the cartridge.

10. Fit the 3/4” x 1/2” BSP shower outlet (31) in the bottom mixed water connection. Fit the blanking plug (22) in the top mixed water connection. PTFE tape should be used with both items. See also Fig. 11.

11. For a concealed pipework installation chase out the wall for supply pipework and the two 3/4” BSP x 22mm compression elbows which will project beyond the back of the mixer (Fig. 12). Locate pipework and flush out thoroughly to remove debris. Connect supply pipework to the two compression elbows and pack out the mixer behind, if necessary, so that the back will be level with the finished tiled surface. Complete plastering and tiling and screw the mixer to the wall using fixing lugs (Fig. 12).

12. For a surface mounted installation screw the mixer to the wall using fixing lugs. Locate pipework (Figs. 7 and 8), flush out thoroughly to remove debris. Connect supply pipework to the mixer and ensure that it is rigidly secured to the wall. Fit plastic pipe trims for cover (28a) as appropriate.
Flushing Operation

Before operating the fitting it is essential to flush the pipework to prevent debris from the plumbing operation blocking the filter and even the booster element see Fig. 13 and 14. To do this proceed as follows:-

Turn the volume control handle fully clockwise to ensure both cartridges are closed. Pull off handle (23) and shroud (9). Loosen screw and remove handle carrier (10).

Remove clutch cover fixing screws (12) and pull off clutch cover (11). Pull out clutch drive shaft (13) and loosen cone screws (14a) to release clutch gears (14). Lift off both clutch gears (14) and lift off clutch backplate (15).

Remove cold cartridge by unscrewing anti-clockwise and insert in its place the flushing outlet (16). Attach a drain tube. Flush cold system and replace cold cartridge. Repeat operation for hot cartridge and flush hot system. Replace hot cartridge and ensure both are set in the 'off' position.

Replace clutch backplate (15) and both clutch gears (14), with the flat side facing downwards and secure with cone screws (14a). Replace clutch drive shaft (13) and clutch cover (11) and secure with screws (12). Replace shroud (9), volume control handle carrier (10) and volume control handle (23). Turn volume control handle (23) clockwise through 360° to synchronise the hot and cold cartridges. The volume control handle incorporates a slipping clutch to prevent damage in the event of over tightening.

Ensure volume control is turned fully to the off position. Turn on water supplies and check for leaks.

Fig. 13 removal of gearbox assembly

Figs. 13 & 14 illustrated in installation configuration B - See Fig. 6
Safety for the user

Trevi Boost is not thermostatically controlled and outlet temperature depends on the position of the handle, hot and cold inlet temperatures and pressures.

Before using the shower check that the temperature of the mixed water is satisfactory.

Young children, the elderly and infirm should be supervised when using a shower.

Operation

Ceramic disc cartridges control the flow of hot and cold water. Turn the volume control handle through 180° to move from off to fully on. It is better to operate the Trevi Boost in the fully on position since the set temperature may vary as the flow control is adjusted.

The temperature control handle is marked from 1 to 5 - position 5 being the hottest.

Maintenance

Ceramic disc cartridges

The unique ceramic disc hot and cold cartridges contain ultra smooth ceramic discs. They are so hard that they always remain sealed together polishing one another in use, and sand, sediment or other water-borne matter cannot get between them or damage them. Even the hardest water has no effect and this means that the Trevi Boost shower mixer should give many years of efficient, trouble-free service without the drip and liming-up problems associated with traditional shower valves. However, in the unlikely event of a failure or any problem simply exchange the cartridges.

To Remove Hot and Cold Cartridges

Shut off water supply and turn volume control handle to the 'off' position.

Refer to section ‘Flushing operation’ for details on how to remove hot and cold cartridges.

NOTE: Cartridges are supplied in sets and both cartridges should be changed at the same time. They both operate in the same direction therefore they can be fitted to either side.

Trevi Boost Cartridge

If the flow performance of Trevi Boost has become impaired it is possible the shower head may have become blocked with limescale or plumbing debris may have become lodged on the filter screen on the booster cartridge.

Shower Handspray

The shower head must be cleaned at frequent intervals especially in hard water areas. The construction of the handspray facilitates this. Adjust temperature handle to position 1 (full cold setting). Turn on flow control. Rub the flexible spray plate nozzles with the fingers, This enables any limescale deposit to become detached, and ejected by the pressure of the spray. If this does not completely clean the handspray, proceed as indicated in the cleaning instructions supplied with shower head. If this does not improve the situation the Trevi Boost cartridge should be removed and the filter screen cleaned. To do this, proceed as follows:-

Unscrew handle (24) and remove shroud (9) and shroud spacer washers (19). Unscrew cartridge and examine filter screen. If blocked, clean and replace in body.

Cleaning

No abrasive powders, detergents or polishes should be used for cleaning plated, white or colour finished bathroom fittings. Cleansers containing alcohol and other organic solvents or corrosive chemicals should not be used. Bleach and denture cleansers can damage plated or coated finish brassware. The finish should be maintained by wiping with a clean, damp cloth, then polishing with a clean, soft, dry duster.
Spares

Spare components and replacement cartridges are available from Trevi Showers stockists.

If you have any difficulty in obtaining spares locally, please contact Trevi Showers, PO Box 60, National Avenue, Kingston upon Hull, HU5 4JE. Telephone: (01482) 470788. Telex: 592113. Telefax: (01482) 445886.

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Trevi Boost is designed to be installed to provide a good shower where otherwise a normal plumbed-in shower would be poor or even impossible. i.e. where the available hot water head is very low or even slightly negative. It can also be installed where the available hot head is better than minimal in which case the performance will be even better.

Trevi boost uses the energy from the mains cold water to boost the mixed pressure by mixing the two streams in a special pressure boosting venturi mechanism. Only the energy contained in the cold water consumed is available for this process and it is essential therefore that the whole system, particularly the hot plumbing is installed to give minimum pressure losses.

Diagram:

- Cold mains
- Hot water storage tank
- Vent pipe
- Cold water storage tank
- Hot water storage cylinder
- Hot supply to other appliances
- Hot supply to 3/4" or 22mm minimum hot supply
- Single check valve
- Single check valve 3/4" or 15mm minimum cold supply

- Hose must be restrained to ensure handspray cannot come within 20mm of spill-over level of bath or shower tray
- 300cm max
- 50cm max
- 8cm max
- 100cm min
Supply Conditions

When the input conditions are at the minimum levels specified in the following charts (Figs 1 & 2) the performance of the valve will also be on the minimum.

Thus if a Trevi Boost is installed under the following conditions:

Example:

\[
\begin{align*}
\text{Hot water head} & = 0.0 \text{metre} \\
\text{Hot water temperature} & = 65^\circ \text{C} \\
\text{Cold water flow pressure} & = 1.5 \text{ bar}
\end{align*}
\]

Then the showering conditions would be:

\[
\begin{align*}
\text{Maximum showering temperature} & = 40.5\% \\
\text{Shower flow rate} & = 5.3 \text{litres/minute}
\end{align*}
\]

This assumes the installation has been carried out in accordance with good plumbing practice and that the Trevi Boost installation instructions have been carefully followed.
Performance Expectations

Figs 3 and 4 show the mixed showering temperature and mixed water flow rate to be expected under any particular set of installation conditions.

**TREVI BOOST** - Maximum Mixed Temperature at Various Hot Water Heads
Cold water flow pressure 1.5 BAR

Note: Maximum temperatures are approximate and may vary a little depending on installation conditions

**Fig. 3**

If difficulties are experienced in reaching these levels of performance there may be several causes. See items 1 - 6 on the following pages.
There may be a restriction in the hot supply pipes.

Since the energy to boost the shower pressure comes only from the cold water consumed, any restriction in the flow of hot water will upset the ratio of Hot and Cold and thus reduce the mixed water temperature. If difficulties are being experienced the flow rate through the hot pipework should be checked as follows.

Turn off hot supply and remove hot cartridge. Replace with the flushing outlet (Part No.096292700) Item No. 16.

Turn on hot supply and measure flow rate in litres per minute from the nozzle. If the flow rate does not match that shown on Fig. 5 then a restriction must exist in the hot plumbing and the following points should be checked.

(a) The hot side of the system must be plumbed in 22mm pipe with as few bends as possible. If 15mm is used even for a short length of the hot supply, the temperature of the mixed water will be reduced.

(b) The check valve on the hot side must be 22mm or size 3/4.

(c) The check valve may have become partially blocked due to limescale or plumbing installation debris, if this happens the effective head of the hot supply will be reduced and a lower mixed water temperature will result.
NB The check valve must be sited in a position where it can be serviced after installation.

(d) If the hot supply is conducted above the ceiling care must be taken to ensure the pipe is properly vented since air locking which can result will restrict the hot flow. This will reduce the mixed water temperature.

(e) There must be no other obstructions eg: PTFE tape bridging the end of a connection spigot.

(f) Where hot water head is less than 0.5 m, long pipe runs and many bends must be avoided.

(g) The stop valve/or valves between the cold cistern and hot storage cistern may only be partially open. Ensure all stop valves are fully open.

2 The mixed water outlet may be partially obstructed

The Trevi Boost's performance is dependant on a carefully controlled back pressure. For this reason a special hose (where a flexible shower is specified) and spray head are supplied with the valve. If Trevi Boost is failing to give the temperature indicated on Fig 3 then there may be an obstruction downstream of the boost cartridge. One of the following reasons may be the cause:

a) The shower head may have become partially limed up. To clean the shower head, turn the temperature control knob to full cold and open the flow control fully. Rub the rubber spray nozzles on the spray plate with the fingers - this should dislodge any limescale which may have started to build up. If this fails to clear the spray holes completely it will be necessary to dismantle the spray head and clean the rubber spray plate separately. Reassemble and check the mixed temperature.

If the handspray has become damaged in any way and requires to be replaced it is essential to the correct operation of the Trevi Boost that it be replaced with a handspray of the same resistance. This handspray has Part No.035566200

b) If the flexible shower hose has at any stage been partially flattened or kinked the inner skin of the hose may have become detached and could be causing a restriction. Fit a replacement hose of the same type and try again.
The performance of Trevi Boost is dependant on the Correct hose being fitted. Replacement hose Part No.0991 02463

(c) **Installation debris** may have become lodged in the Trevi Boost cartridge around the temperature safety cut-out and may be causing a restriction. With flow control turned off remove the Trevi Boost cartridge and inspect. If obstructed clean carefully and replace.

3 The temperature control handle may be wrongly positioned on the cartridge

If the handle has been removed during installation it may not have been replaced correctly and may be rotating against the stop before the cartridge has been adjusted through its full travel. This will prevent the mixed showering temperature reaching its design maximum. Refit handle in accordance with the installation instructions.

4 The temperature handle stop may not be fully seated on the body of the booster cartridge

When the temperature stop is pushed on to the hex at the end of the booster cartridge it must be pushed fully home otherwise it will prevent the full travel of the temperature control mechanism. This could prevent the Trevi Boost cartridge being adjusted to the full hot setting.

5 There may be a restriction in the cold supply

If there is a restriction in the cold supply preventing the full line pressure of cold water reaching the Trevi Boost the flow rate and temperature may not reach the performance levels indicated in Figs 1 & 2. To verify the cold flow pressure do the following test.

(a) Set the handspray to the normal showering height and check that the handspray is free from debris and limescale.

(b) Adjust the temperature control knob to full cold.

(c) Turn flow control knob to full on.

(d) Measure flow rate in **litres/minute** using a graduated bucket and stopwatch.

(e) Read off flow pressure on Fig 6 against this flow rate.
TREVI BOOST - Flow Rate at Full Cold
Measured Through Shower Hose and Handspray at Normal Showering Height

![Graph showing flow rate versus cold pressure](image)

(N.B. If the flow rate is less than 12 litres/minute then the flow pressure is less than the required 1.5 bar).

**6 The stored hot temperature may be less than the required minimum**

For a shower of 40°C the following stored hot water temperature is required.

*For Cold Pressure Between 1.5 and 2.0 Bar*

<table>
<thead>
<tr>
<th>Head (hot water)</th>
<th>Required Hot Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.5m to 0.0m</td>
<td>70°C</td>
</tr>
<tr>
<td>0.0m to 0.5m</td>
<td>65°C</td>
</tr>
<tr>
<td>0.5m to 1.0m</td>
<td>60°C</td>
</tr>
<tr>
<td>1.0m and above</td>
<td>55°C</td>
</tr>
</tbody>
</table>

*For Cold Pressure Above 2.0 Bar*

<table>
<thead>
<tr>
<th>Head (hot water)</th>
<th>Required Hot Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.5m to 0.0m</td>
<td>65°C</td>
</tr>
<tr>
<td>0.0m to 0.5m</td>
<td>60°C</td>
</tr>
<tr>
<td>0.5m and over</td>
<td>55°C</td>
</tr>
</tbody>
</table>

It is recommended, in the interests of safety, that hot stored water temperatures above 65°C should only be used where the hot water head is negative.
**Trevi Boost Mixer Only Cartridge**

The highest mixed water temperature achievable is shown on Fig 3 and the previous explanation covers all the likely installation problems which may have combined to reduce this figure. If, however, a higher showering temperature is required it will be necessary to increase either the hot water temperature or the hot water head. In some cases both may have to be increased.

If these have already been optimised it is possible to increase the mixed water temperature by Replacing the standard Trevi Boost cartridge with a “Trevi Boost mixer only cartridge”. This is similar to the standard Trevi Boost cartridge but without the over temperature cut-out.

With this mixer only cartridge fitted the output temperature is still reasonably stable to changes in cold water pressure down to 0.5 bar at hot water heads up to 1.5 meters but, **if the cold water fails completely the full hot water temperature would be delivered**. This of course is no worse than a normal mechanical mixing valve however if making this change to an installation **the householder must be advised**. It should not be necessary to use this solution at hot water heads above 1.5 meters since the performance should already be good.

Please contact Trevi Showers on 01482 470788 if a mixer only cartridge is required.

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**Testing Procedure: Trevi Boost**

Note: the tests are carried out in a sequence intended to “fast track” the problems, but of course the sequence can be varied as preferred!

1. Begin by recording the temperatures of the Hot and Cold supplies, check that they do not vary by running both for at least 5 minutes, ensure that the flow doesn’t vary during this time.

2. Is the temperature handle fitted in the correct position so that it has the full amount of travel? Correct if wrongly positioned before continuing.

3. Measure the output temperature at the Shower head in its normal position. Is it as it should be?

4. Examine the shower head, is it the correct type? Is the pattern from it good, or is the flow pattern poor? Carry out the normal cleaning operation for the shower head by turning the temperature control knob to position 1 (maximum cold setting) and scratching the spray plate nozzles to dislodge any particles. If the nozzles do not stick out fully from the spray plate, then the diaphragm has shrunk: Replace the insert.

5. Remove the shower head and see if the temperature rises, if it is now at the correct level, replace the shower head, if not do the same test by removing the hose and replacing if necessary.

6. If there is still a problem take off the Handles and front plate from the Trevi Boost, replace the volume control handle. remove the Temperature handle carrier and the handle stop, pack the irregular cavity in the wall with plastic bags to prevent the loss of parts, and leakage of water into the wall cavity and then remove the boost cartridge and examine it. Are the filters clear? Is the temperature limiter off centre in its housing? (this can reduce the output flow and temperature)

7.Undo the two screws on the gearbox and remove the cover and spindle, operate the valves individually and check that they are free moving, and that the clutches work. Replace any defective parts.

8. If a cartridge flushing nozzle is available then the clutches, backplate and each flow cartridge should be removed in turn, and the nozzle used to flush out the body.

9. Refit the gearbox and screws, and refit the volume control knob.

10. If a test Nozzle is available fit it into the mixer port and open turn on the Volume control to test the available hot head.

11. Consult the test charts, Test the Incoming cold Supply Pressure, and the Hot head. Record the results, test also the flow rates through the shower head at maximum hot and cold settings, compare the results with the charts.

12. If there is a discrepancy with the pressures and flows obtained, first examine the Check valves for obstructions and clear them, then do the tests again.

13. If the blockage hasn’t cleared, it will be necessary to test the body casting for internal obstructions: remove the gearbox and clutches etc: insert a 5 pence coin into the shower head end of the hose to seal it, replace the boost cartridge to block the port, turn off the supply and remove each inlet valve in turn, fit the flushing nozzle in place of the valve, restore the respective supply, test and record the flow from the open port.

14. Next replace the back plate for the gearbox and the clutch wheels, but do not refit the drive spindle and gearbox cover. Remove the Boost cartridge, open each valve in turn and test the flow coming out of the boost port. If there is a difference in the readings from this port and the valve ports, then the casting is blocked. (Do not forget to retrieve your 5p piece after this test!

15. Replace the mixer body if a blockage is evident, otherwise rebuild the unit.
16. Consult your collected readings, if the cold pressure and hot head are outside the minimum parameters, then inform the consumer/installer and make for the exits!

17. If the mains pressure is below 1.5 bar, has the plumber turned the main stop cock to the house down in an attempt to raise the temperature from the Boost?

   If the temperature is till low but the pressure is above 1.5 bar, and the hot head is very low, then a P.R.V. will be needed to bring the situation under control: you can prove this will work to the consumer be removing the gearbox cover and spindle and operating the volume control valves independently (ie opening the hot valve fully and the cold valve part way)

18. Ensure that the hot supply is both hot enough and constant, and check that the storage cylinder is of adequate capacity (75 gallons as against the usual 40) does the unit run cool after a time?
   Enquire about airlocking (does the unit make spluttering noises before the warm water arrives?

19. In the rare event of the unit producing hot water that is too hot, has it got a positive head and someone has removed the temperature limiter to “improve the supplies?”

20. Have the pipes been fitted in reverse?

21. Have both supplies been fitted either to a tank feed, or both to mains via say a combi?

Consumers frequently misunderstand the functionality of the Trevi Boost and can’t see that since cold water and hot will always be present, the extremes of the temperature range cannot be achieved. The number of units that are fitted with incorrect Shower heads and Hoses is surprising, and very few consumers actually clean the shower heads, which are often completely limed up when you visit.