

TREVI BOOST INSTALLATION

INSTALLER
After installation pass
to user for future reference

TS22 3/95

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.

Trevi Showers pursues a policy of continuing improvement in design and performance of its products. The right is, therefore, reserved to vary specification without notice.

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Built-in Shower Mixer Exposed Shower Mixer

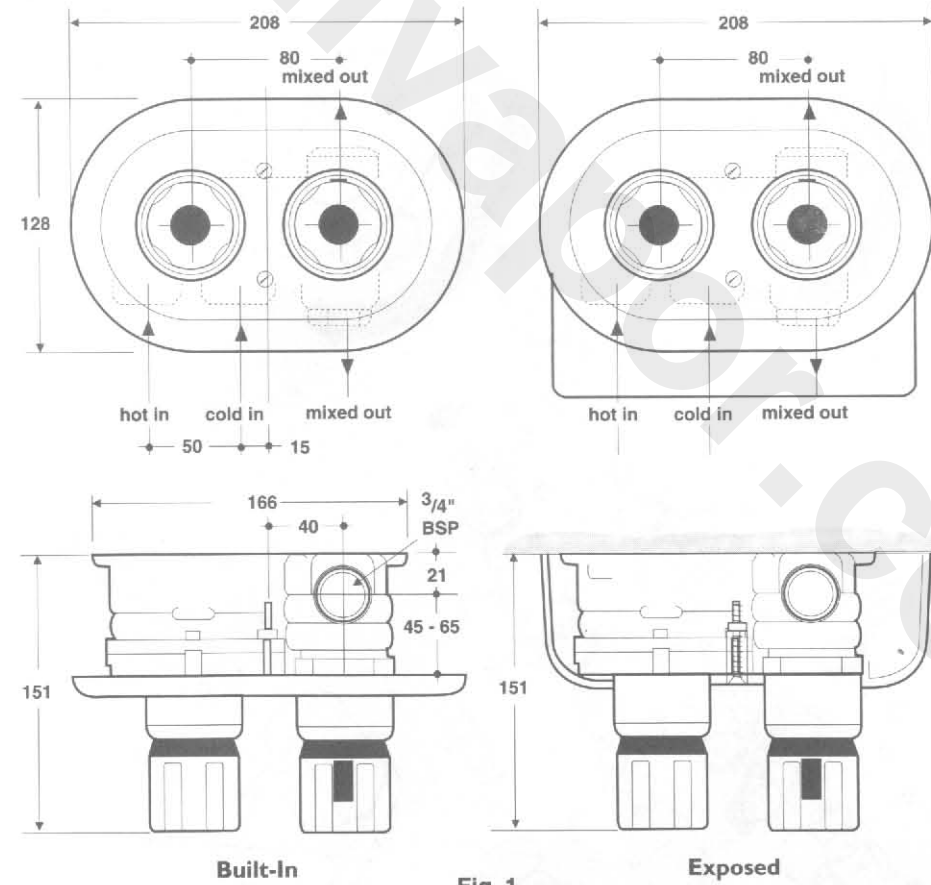
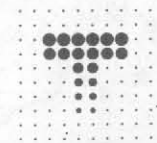


Fig. 1

Dimensions (in millimetres) may vary within permitted tolerances.

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.



TREVI SHOWERS

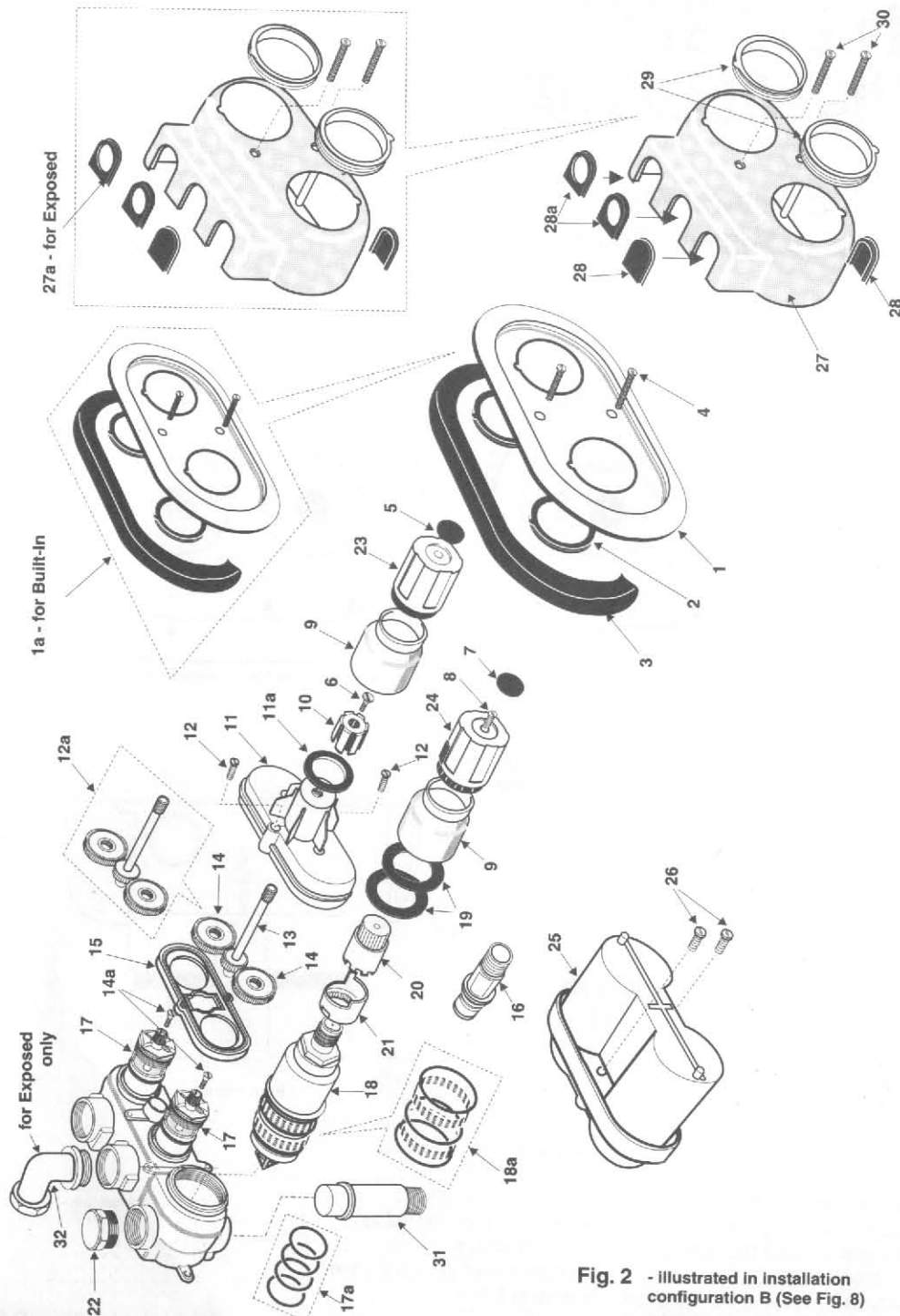


Fig. 2 - illustrated in installation configuration B (See Fig. 8)

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

Operation

Ceramic disc cartridges control the flow of hot and cold water. Turn the volume control handle through 180° to move from off

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.

pressures.

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

to fully on. It is better to operate the Trevi Boost in the fully on position since the set temperature may vary as the

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 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.

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

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

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

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.

Flushing Operation

13. 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

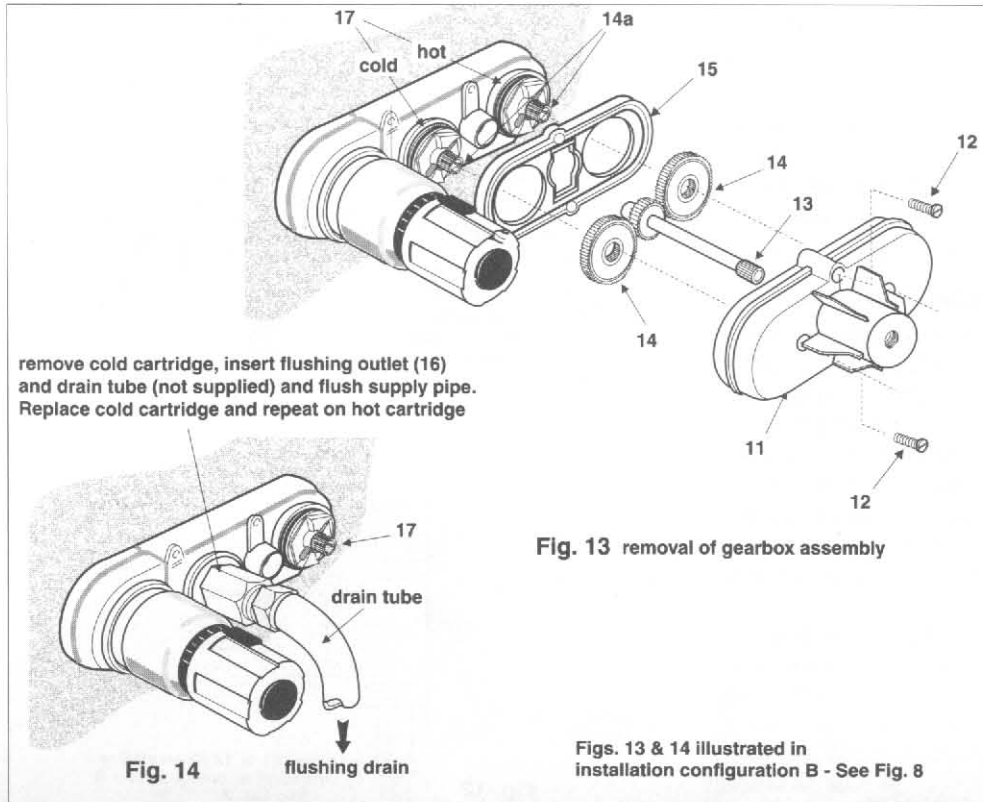
screws (14a) to release clutch gears (14). Lift off both clutch gears (14) and lift off clutch backplate (15).

14. 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.

15. 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.

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



Ref No.	Description	Part No.	Ref No.	Description	Part No.
1	cover plate for Built-In		18	booster cartridge	096334800
1a	cover plate complete for Built-In	0964066--	18a	set of 'O' rings and screens for booster cartridge	096306900
2	cover plate sealing rings for Built-In	096260100	19	shroud spacer washers (rubber)	
3	foam gasket for Built-In		20	temperature handle carrier	096258900
4	cover plate fixing screw for Built-In	0961137--	21	temperature handle stop	986258900
5	cap for volume control handle	096258500	22	blanking plug	
6	screw for volume control handle		23	volume control handle	0962586--
7	cap for temperature control handle	096307300	24	temperature control handle	0963347--
8	screw for temperature control handle	091841600	25	mounting template/plaster guard for Built-In	
9	shroud	0962599--	26	mounting template/plaster guard screws for Built-In	
10	volume control handle carrier	096165900	27	cover for Exposed	
11	clutch cover		27a	cover complete for Exposed	0990953--
11a	clutch cover sealing washer		28	plastic trims for Exposed cover	096307200
12	clutch cover fixing screws		28a	plastic pipe trims for Exposed cover	096326400
12a	clutch complete		29	cover sealing rings for Exposed	096260100
13	clutch drive shaft	096306700	30	cover fixing screw for Exposed	0961137--
14	gears for clutch		31	3/4" x 1/2" BSP shower outlet for Exposed	099107700
14a	cone screw		32	3/4" BSP x 22mm compression elbows for Exposed	099108200
15	back plate for clutch assembly				
16	flushing outlet	096292700			
17	1/2" cartridges	096164800			
17a	'O' rings for cartridges				

Spares: Please state description and part number when ordering.

General Notes

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 3/4" x 1/2" BSP shower outlet (31) for the exposed model is connected to the bottom mixed water connection for attaching the shower hose and hand spray.

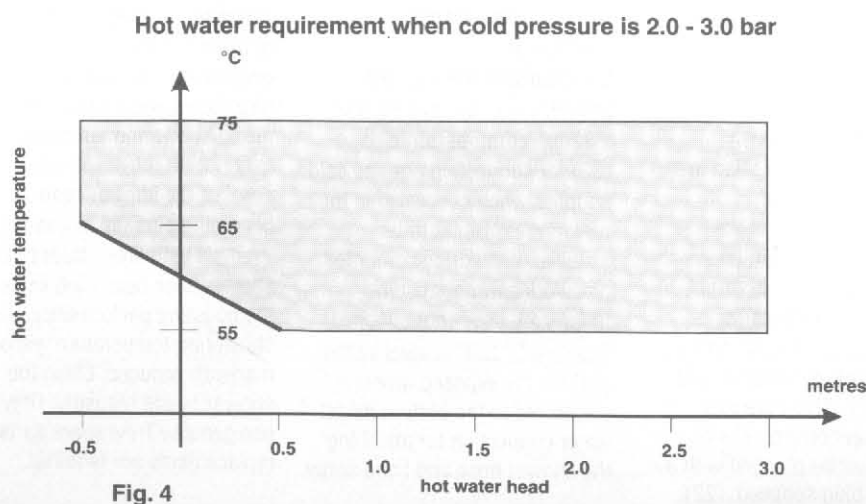
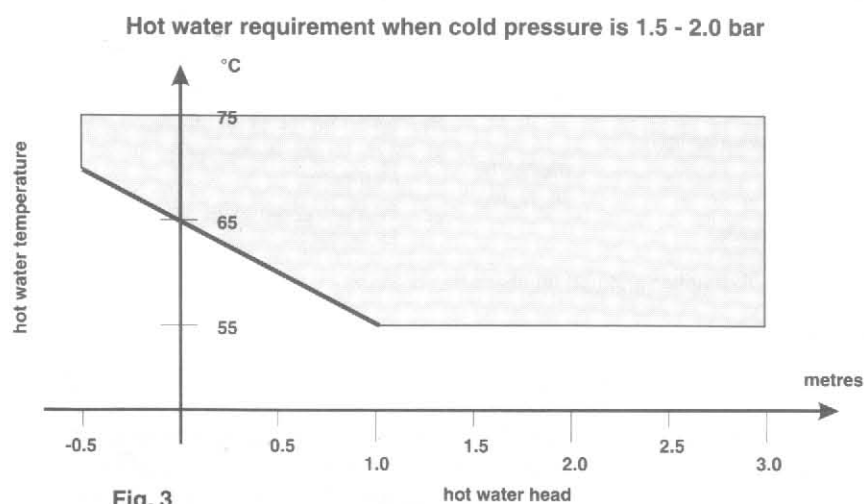
The Trevi Boost is supplied with its own shower kit. (Handspray with flexible hose or fixed head). These are sized for optimum performance and should not be replaced with alternatives. If an alternative shower kit of higher or lower resistance is used the performance of Trevi Boost will be affected and 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).



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.

8. Remove plaster guard (25).

Exposed Installation

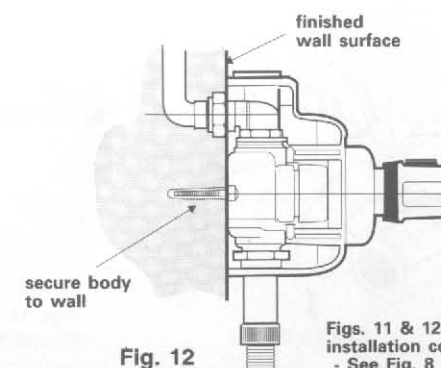
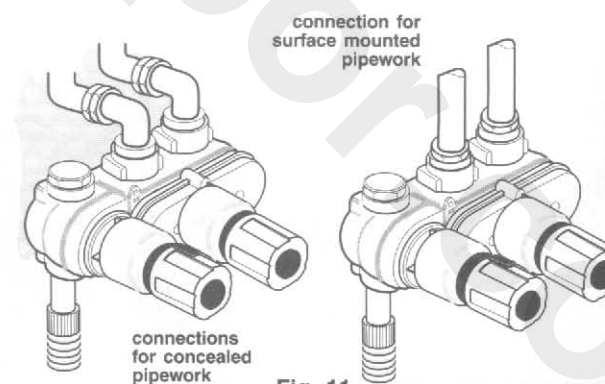
9. If concealed pipework is to be installed, fit the two 3/4" BSP x 22mm compression elbows, using PTFE tape, to the hot and cold connections on the mixer body (Fig. 11). The removal of coupling nuts on the elbows will facilitate the operation otherwise the nuts will foul each other. Connections for 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.



Figs. 11 & 12 illustrated in installation configuration B - See Fig. 8

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 stop. Push temperature handle (24) fully home and tighten screw for temperature

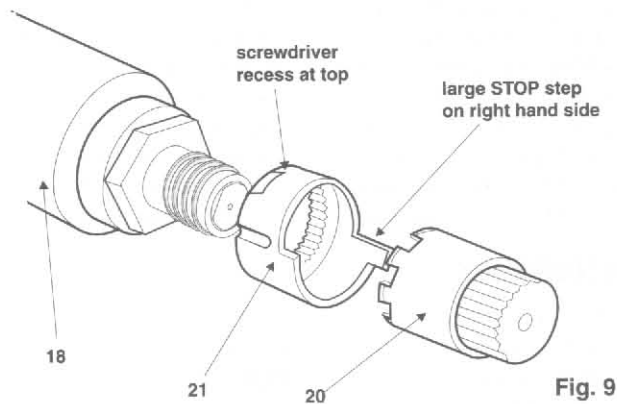


Fig. 9

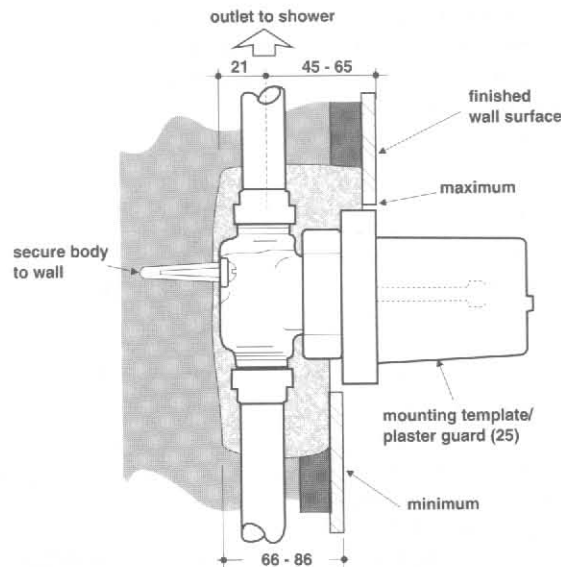


Fig. 10 detail showing plaster guard use

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.

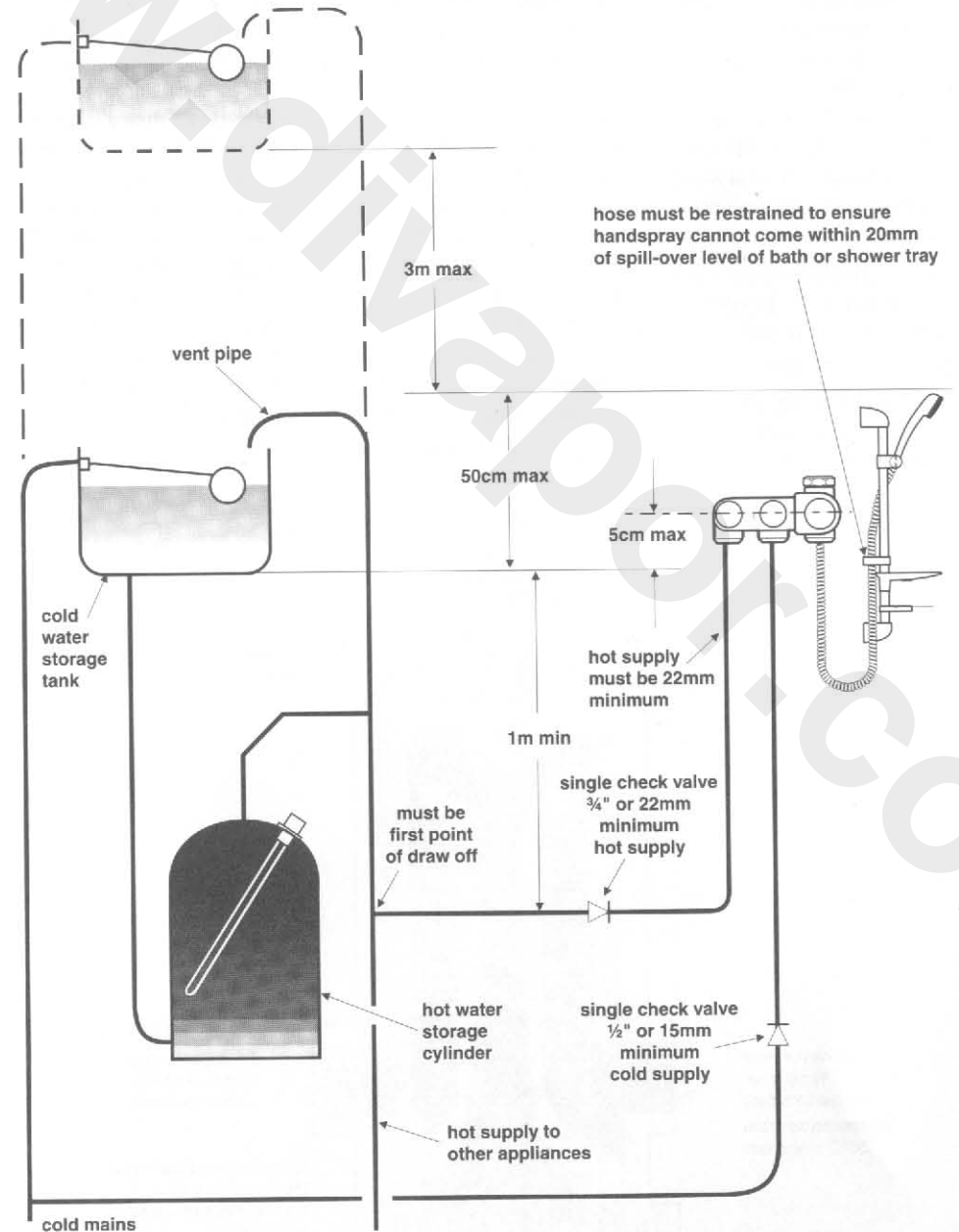


Fig. 5

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_{-0}^{+3} °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.

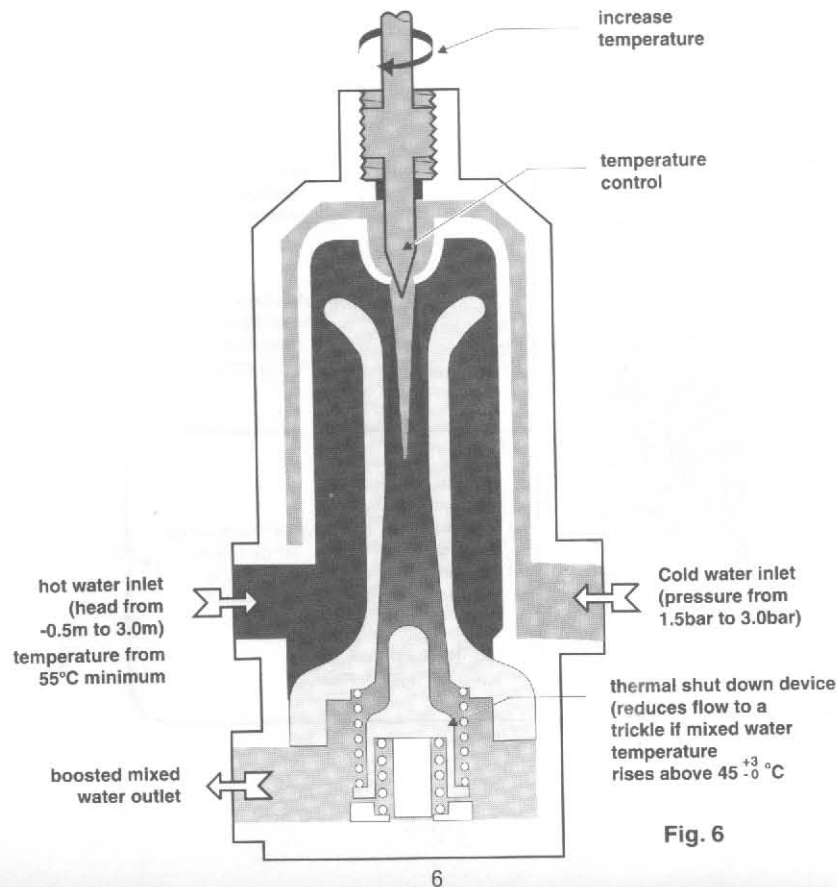


Fig. 6

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).

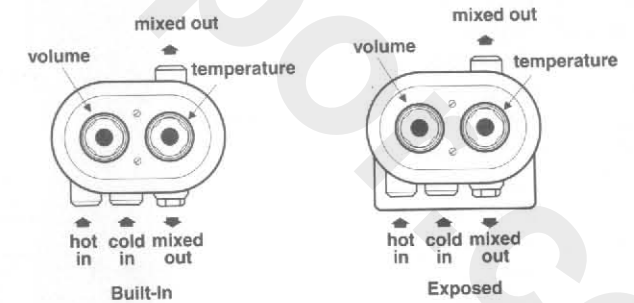


Fig. 7 As delivered Installation Configuration A

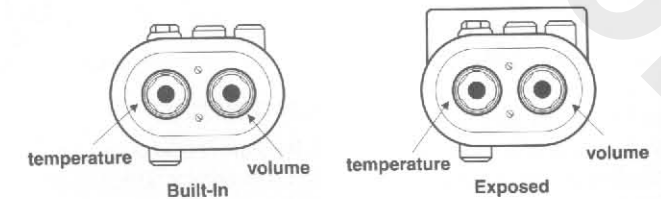
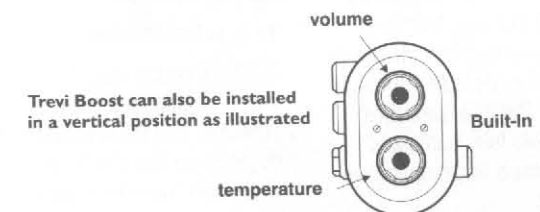


Fig. 8 Installation Configuration B



Trevi Boost can also be installed in a vertical position as illustrated