

BOOST

A 5699 ..



Installation Manual for Exposed Shower Mixer

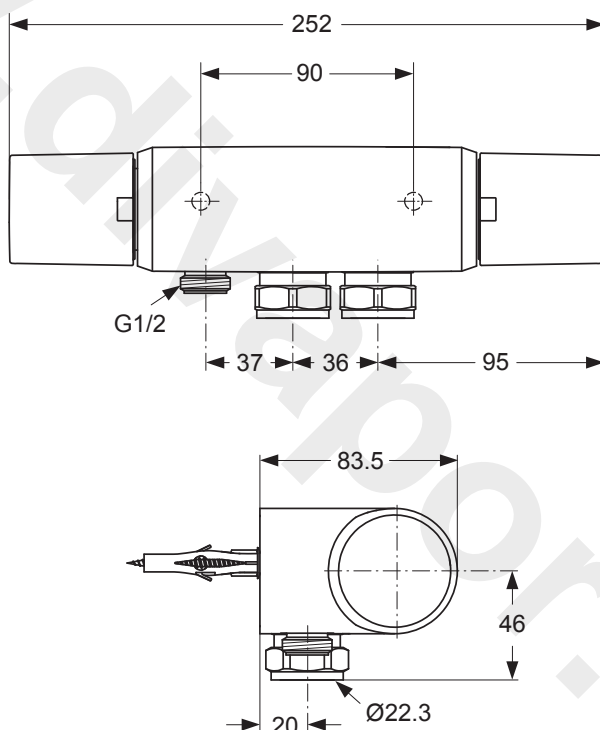


Fig.1

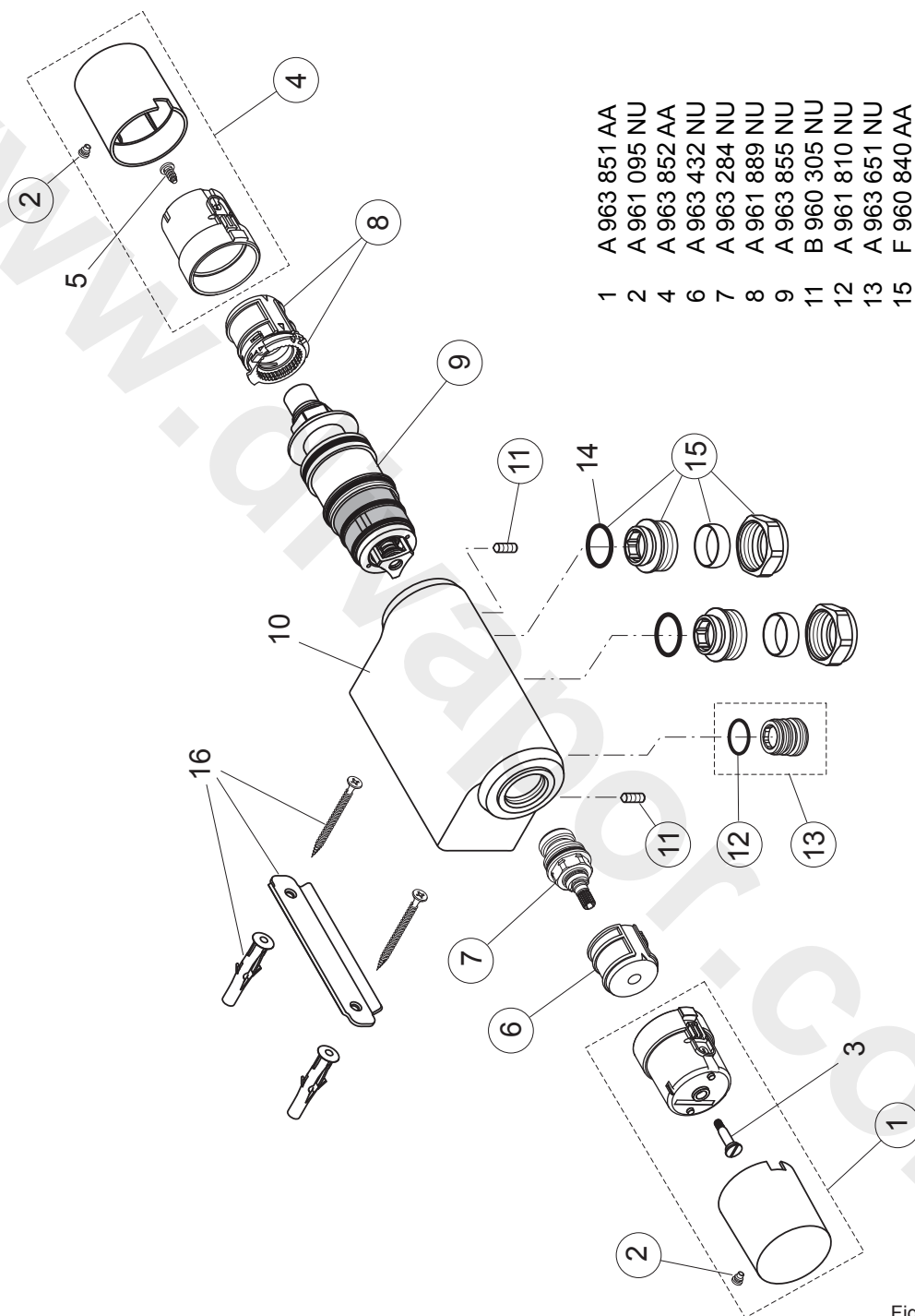
Dimensions (in millimetres) may vary within permitted tolerances

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.

INSTALLER

**After installation pass
to user for future reference**

SPARE PARTS



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General Information

The Boost is intended for use with traditional UK gravity fed HOT water systems.

The Boost is designed to use a gravity HOT WATER Supply and mains pressure COLD WATER supply. The product uses a venturi principle to enable the cold water to boost the pressure of the blended water.

This makes the Boost a real alternative to an electric shower in most circumstances being able to give a higher flow rate and better feel of water delivery pressure. The product can even be installed in systems with a small negative hot head of water (i.e. where the handset is slightly above feed tank water level).

The product is available in both exposed and concealed versions.

The Boost Valve whilst not thermostatic does include a high limit thermostat which will shut the valve down to a dribble in the event of the outlet temperature getting excessively high $> 46^{\circ}\text{C}$, resulting from any destabilising supply conditions.

Principle of Operation

The Boost's Venturi principle cartridge uses the energy present in the cold water supply to induce a higher than natural flow through the gravity tank fed hot side of the fitting. This results in a shower performance which is better than a normal gravity tank shower solution and can in fact deliver a shower when the hand spray is level with or even slightly above the hot water source level. The venturi principle of linking the ratio of hot water to that of the cold water means that reasonably stable temperatures will be achieved even when the cold flow pressure changes as a result of other fittings being used. The cartridge is also fitted with a thermal element shut down device to almost stop the flow in the event of excessive temperatures being achieved e.g. due to say, a cold water starvation condition. The low flow rate during the thermal shut down condition is for safety insufficient to shower under, however it allows the user to see that the fitting has not been turned off and also allows the mechanism to reset when the cold water supply is restored.

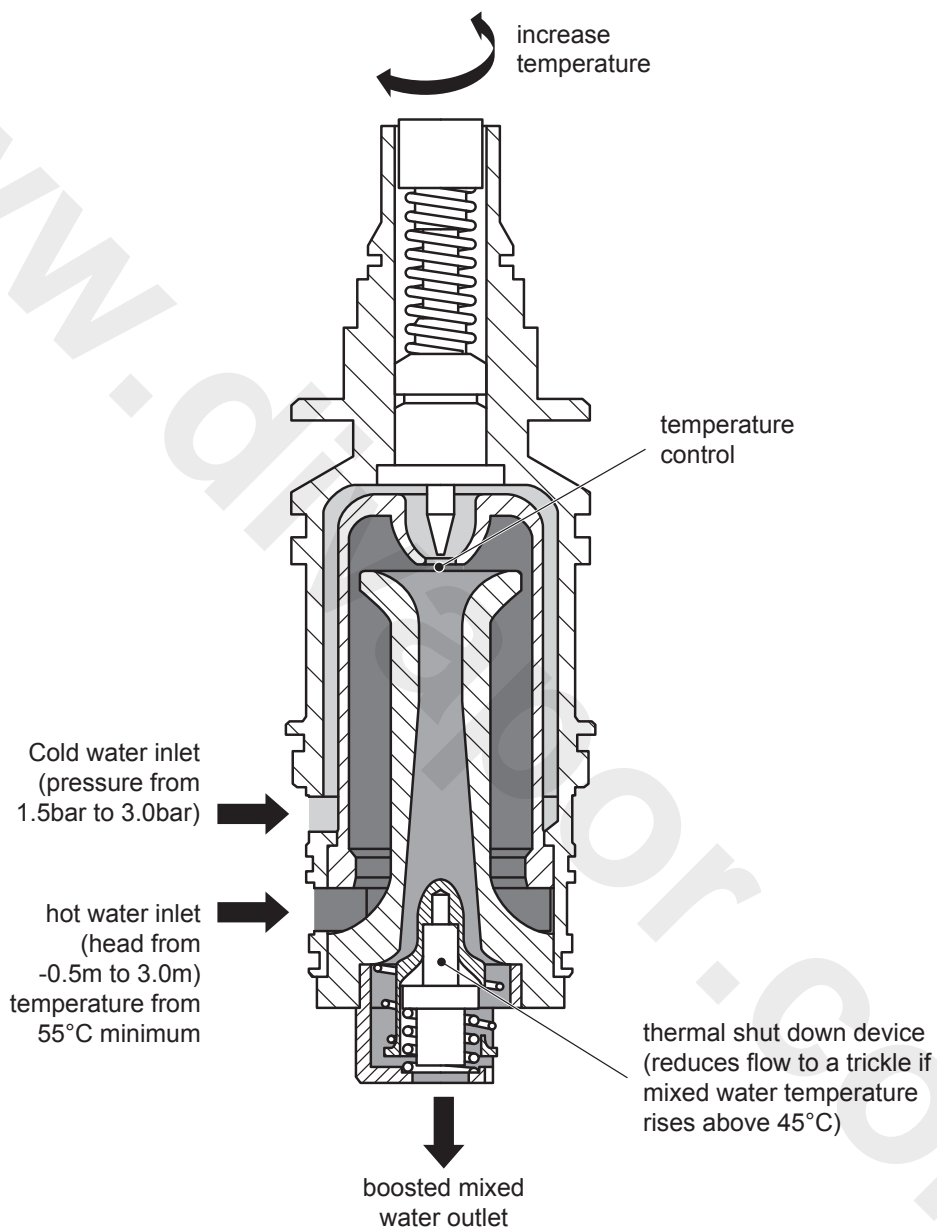


Fig.3 Venturi Cartridge

Installation Criteria

The hot and cold water inlets are to suit $\frac{3}{4}$ " plumbing and the shower outlet is $\frac{1}{2}$ ".

It is extremely important that the Hot supply is free from unnecessary restrictions, it should be plumbed from the cylinder to the valve with $\frac{3}{4}$ " pipe work with the minimum possible changes of direction. We would recommend swept bends in preference to 90° fittings and the shortest possible pipe runs. A direct connection to the Hot water cylinder is ideal, alternatively make the Boost connection the first draw off the cylinder thereby making it less susceptible to other hot draw offs. If possible high level (above the ceiling) pipe work should be avoided, if this is not possible care must be taken to ensure said pipe work is vented to prevent air locking due to the bubbles present in hot water. Both the Hot and cold water supplies must be fitted with check valves in order for the product to perform correctly, they are also required to comply with water regulations. The separate check valves provided should be positioned in the fittings supply pipe work at locations which would facilitate easy access for servicing, should this prove necessary. NB: It is not necessary for them to be adjacent to the fitting but it is necessary that they are installed in the fittings supply pipe work.

We highly recommend thorough flushing of the new pipe work prior to finally connecting the valve. This will wash out any debris resulting from the installation work which could adversely affect the durability of the fitting. It is particularly important to ensure no plumbing debris can foul the check valves as this would result in cross flow.

We also strongly recommend fitting full bore isolation valves on both supplies upstream of the check valves to facilitate future maintenance.

The cold water supply should be at mains pressure and of 1.5 bar or more. This can be plumbed in 15mm pipe work, again a check valve should be included.

The Shower Kit (Hose and Hand Spray) is also a low resistance design, this is necessary to give maximum venturi benefit.

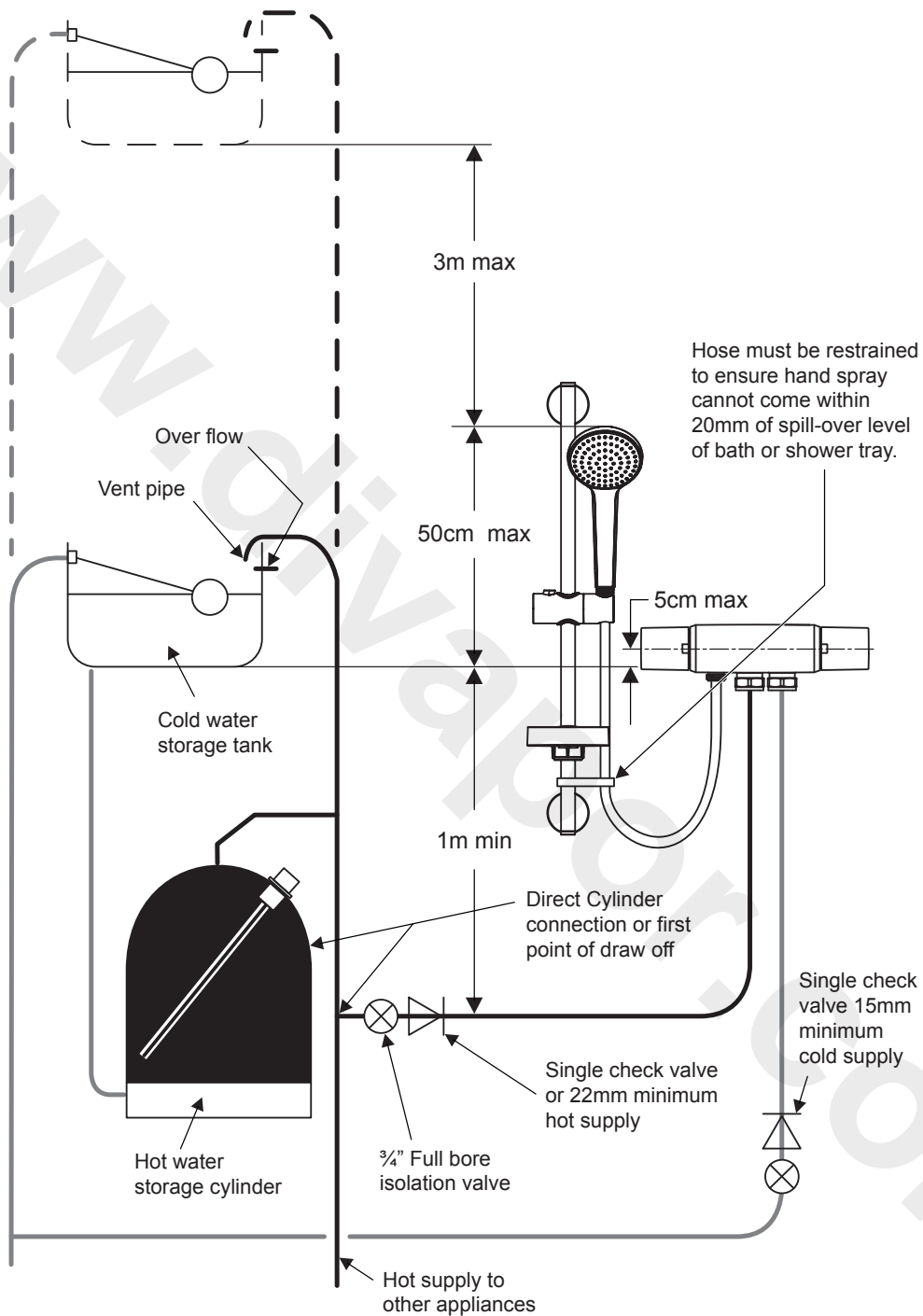
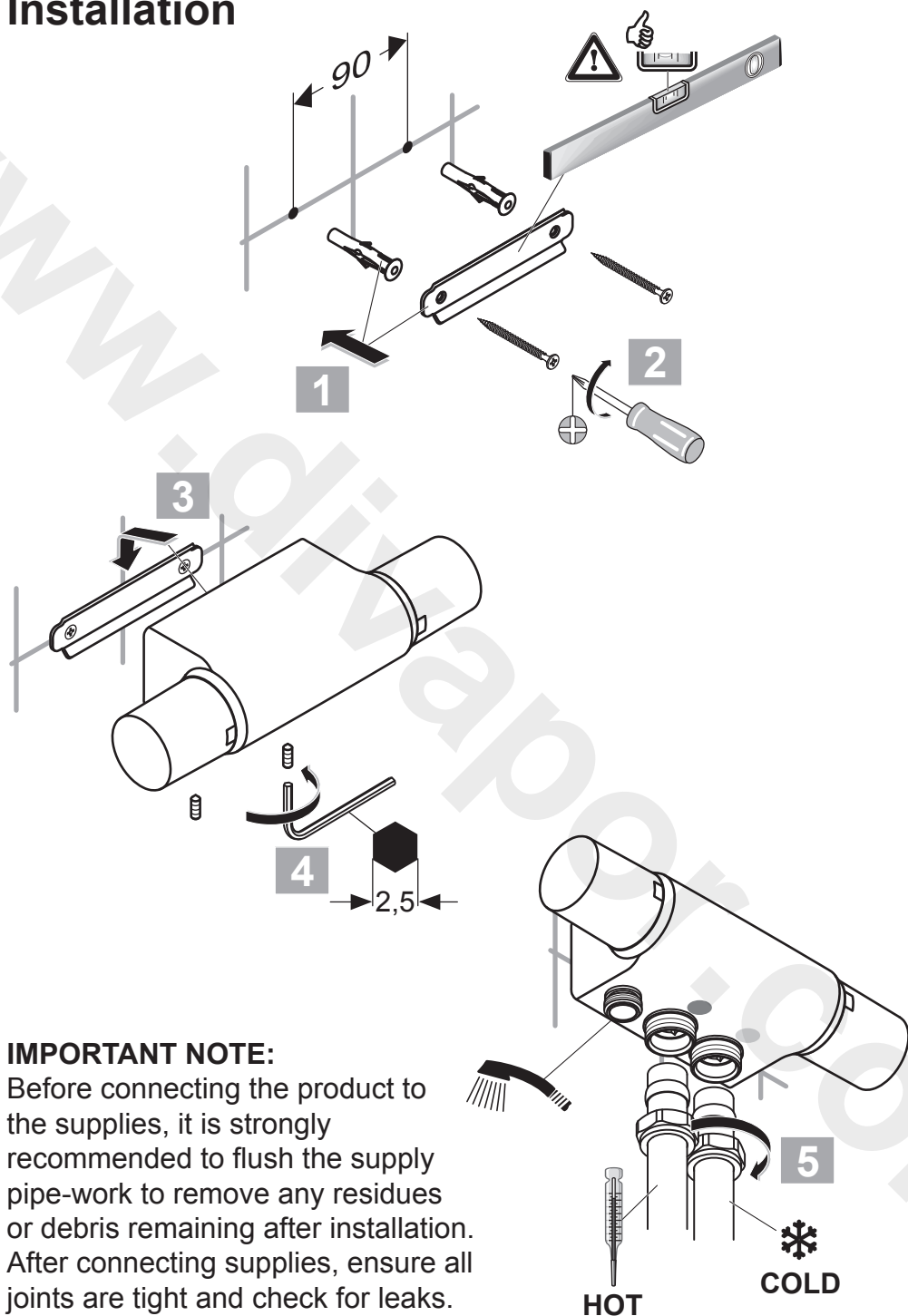


Fig.4 schematic plumbing diagram

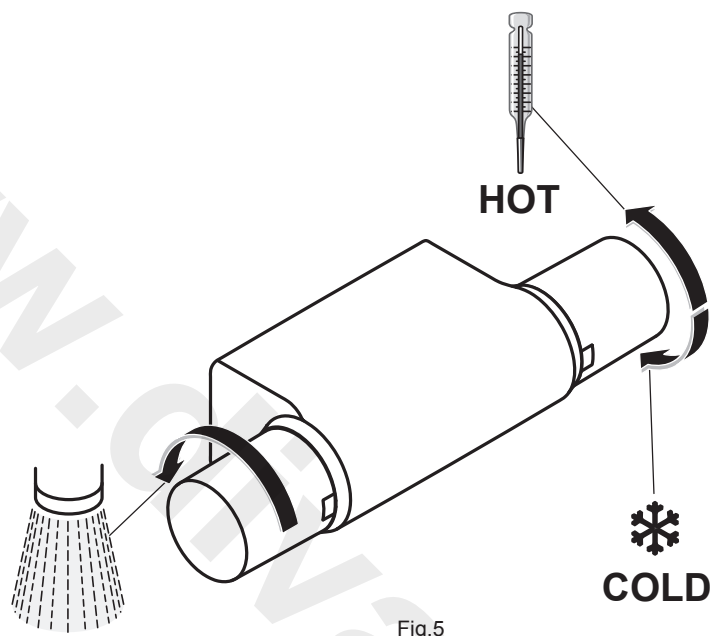
Installation



IMPORTANT NOTE:

Before connecting the product to the supplies, it is strongly recommended to flush the supply pipe-work to remove any residues or debris remaining after installation. After connecting supplies, ensure all joints are tight and check for leaks.

Operation



Operating Conditions

Operating Range	
Maximum static pressure - bar	10
Dynamic (flow) pressure cold - bar	1.5 to 3.0
Dynamic (flow) pressure hot - metres	-0.5 to +3.0
Cold supply temperature	5°C to 20°C
Hot supply temperature (see charts 1&2)	variable 55°C to 70°C
Flowrate (see chart 5)	variable

The charts 1 & 2 below indicate the hot water requirement for cold water pressures 1.5 – 2.0 bar and 2.0 – 3.0 bar.

Hot water requirement when cold water pressure is 1.5 - 2.0 bar

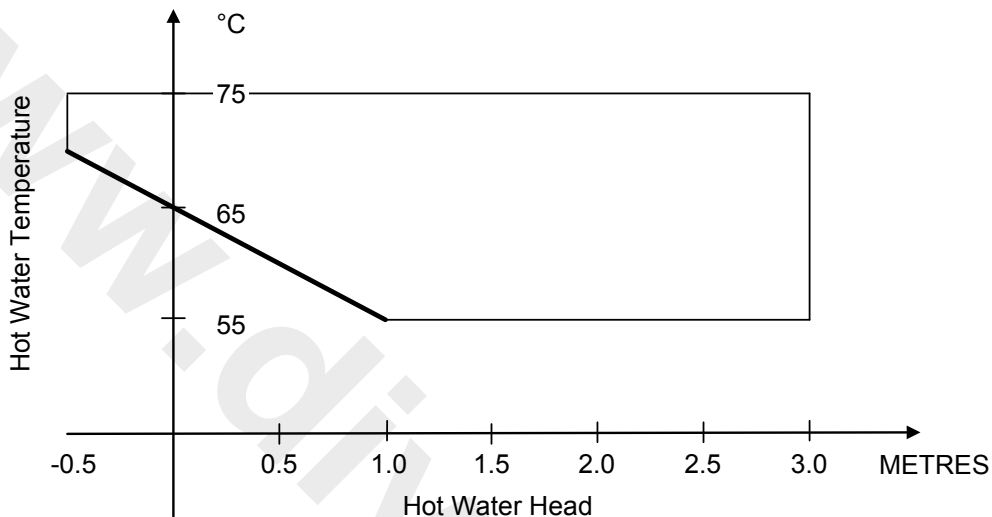


Chart 1

Hot water requirement when cold water pressure is 2.0 - 3.0 bar

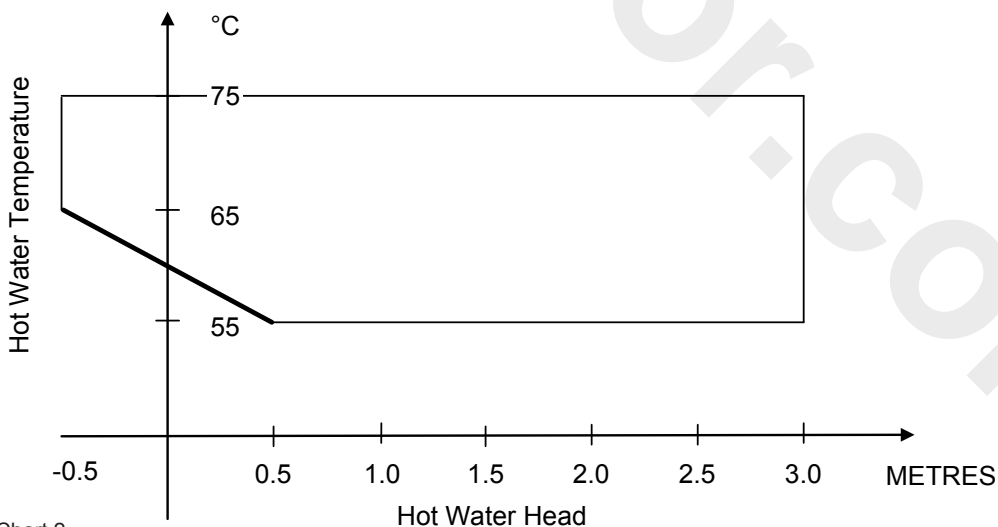
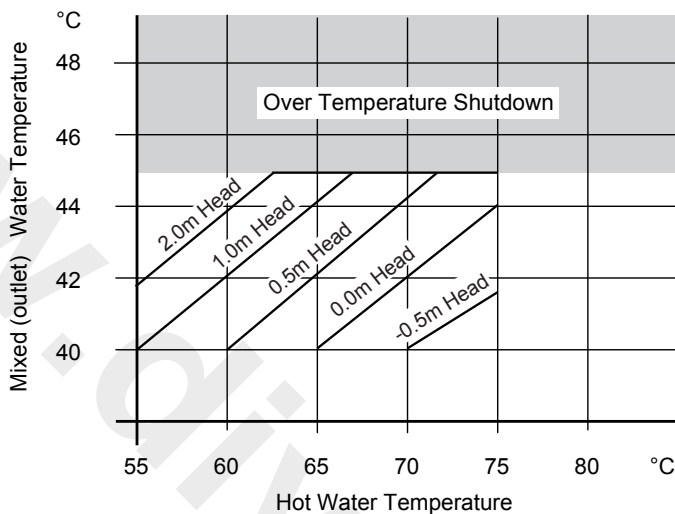


Chart 2

Charts 3,4 & 5 give anticipated performance data temperature expectations and flow performance

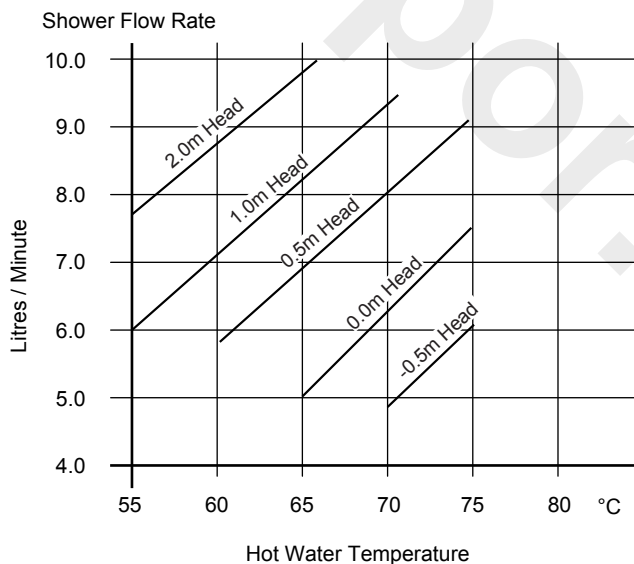
TREVI BOOST- Maximum Mixed Water Temperature at Various Hot Water Heads with Cold Water flow pressure at 1.5 BAR



Note: Maximum temperatures are approximate and may vary slightly due to installation conditions

Chart 3

TREVI BOOST- Flow Rates at 40°C Cold Water flow pressure at 1.5 BAR



Note: Flow Rates given are approximate and may vary slightly due to installation conditions

Chart 4

Maintenance

Before carrying out any maintenance on the product both water supplies must be isolated.

Only with both supplies isolated should you undertake either the Boost cartridge or Flow control valve removal. We would expect long trouble free performance from both the boost cartridge and the flow control valve. Should you need to replace them see the spares section of these instructions.

Water borne debris could lead to cross flow at the check valves, this could manifest as a dripping cistern overflow. If your supply is prone to debris it may be advisable to fit a strainer on the incoming cold supply.

If the hand spray becomes blocked or restricted with lime scale this could lead to reduction in the venturi effect and consequently a cooler showering experience. Keep the hand spray clear of lime scale, if you replace it you should ensure the selected spray has a comparable / appropriate flow performance to avoid loss of performance.

If the hose becomes kinked this will similarly adversely effect the venturi performance. Try to avoid kinking the hose, should a replacement become necessary ensure that a large bore hose of similar performance is used as a replacement to avoid performance problems.

Boost Cartridge

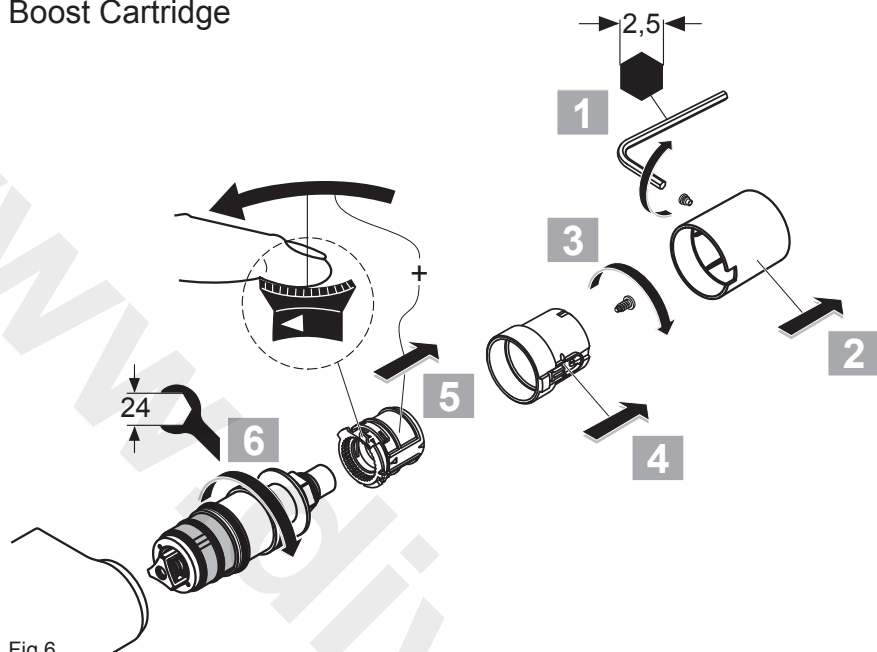


Fig.6

IMPORTANT NOTE:

SHUT OFF WATER SUPPLY before you replace the Cartridge or Valve!!!

Rubber valve

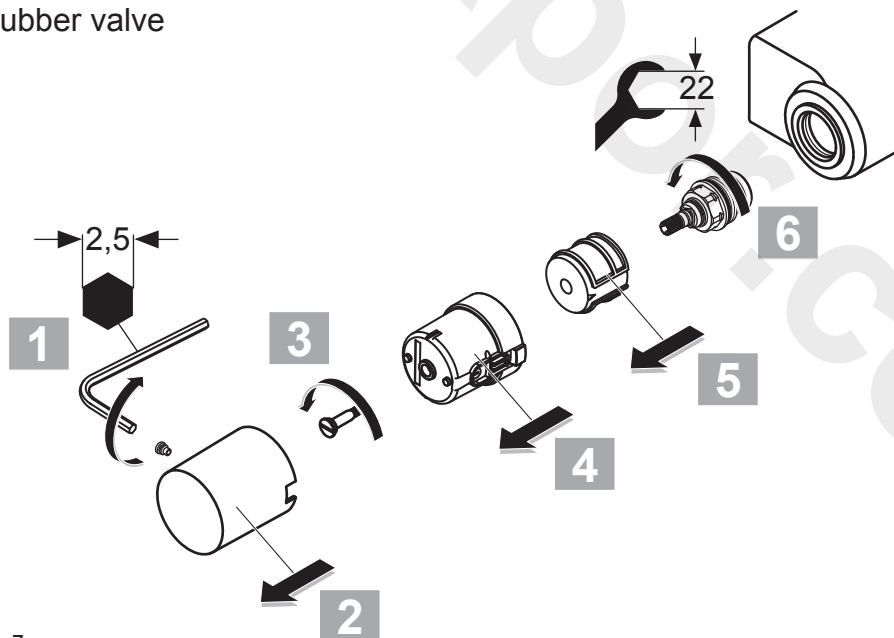


Fig.7

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