



# Tristor™ Manual-Fill Installation Guide



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	Date	Parts Replaced	Engineer/ Company
Installed and Commissioned			
First Annual Service			
Third Annual Service			
Fourth Annual Service			
Fifth Annual Service			
Sixth Annual Service			
Seventh Annual Service			
Eighth Annual Service			
Ninth Annual Service			
Tenth Annual Service			

## GUARANTEE:

The Copper Body carries a Two Year Guarantee against faulty manufacture or materials, provided that:

- The product is used solely for the storage of mains quality potable water.
- The product has not been modified or tampered with.
- The product has been installed and maintained in accordance with the installation instructions.
- The product has not been subjected to damage caused by frost, or other external influence.

The immersion heater, water control valves, energy cut out valves are guaranteed for two years from the date of manufacture.

This guarantee is only available in the United Kingdom of Great Britain and Northern Ireland.

Claims made against our Guarantee must be supported with the product serial number along with a copy of the completed Benchmark Log Book.

Your Statutory rights are not affected by this guarantee.

**TECHNICAL ADVICE:** Further advice is available from our Technical department.

Telephone: **01952 257963**

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## TRISTOR Manual Fill - INSTALLATION INSTRUCTIONS ADDENDUM MANUAL FILL (AFS/BC) - E7 LOW TARIFF UNIT

MAINS PRESSURE ALL ELECTRIC STORAGE UNIT WITH COMBINED PRIMARY FEED AND VENT

### PLUMBING INSTALLATION

1. Connections are required to:
  - (a) 22mm Cold Water supply connection from a service valve or inlet group (not provided). Maximum permissible cold water supply pressure to unit is 3bar. For levels above this an appropriate pressure control valve must be fitted.
  - (b) 22mm Hot Water supply from connection to a service valve (not provided)

**Valves are not provided to test and isolate hot and cold water systems independently.** These must be fitted externally to the supply pipe-work.

2. Install the Corrosion Guard and Inhibitor supplied with the cylinder.
  3. Open the 1/4 turn non-return valve in the top section of the unit to fill the store with water to the level mark indicated on the feed and expansion tank (F&E). **Do not over-fill the F&E tank, as this will cause the 2-port valve to close.** Once the water has reached the fill level mark, close the 1/4 turn valve and **disconnect the filling loop** to isolate the store from the mains water supply. Use the caps provided to seal both the filling loop and the connection to the F&E tank.
  4. Check all connections **INCLUDING THOSE MADE AT THE FACTORY.** During transit, Immersion Heaters can work loose! Do not apply excessive torque. Carefully grip back nuts with a suitable spanner where possible.
  5. Open the isolating valve and fill/vent the domestic hot water system by opening all hot water taps/outlets sequentially until good waterflow is established.
  6. Check hot water system, including factory made joints and test system.
- Do not adjust the blend valve or small expansion vessel.**  
These have been factory set.

### ELECTRICAL INSTALLATION

**All controls and electrical work must comply with IEE standards**

The unit is provided with two 3kW immersion heaters. These must be connected to Single Phase 230V supplies via a suitable switched fused isolator.

The control of these units will depend on the type of time/boost controls provided on the installation and the tariff and supply arrangements selected.

The unit is provided with a fully motorised 2-port valve (power open, power close), which has been factory wired. This valve disables the water supply to the cylinder should the water level in the F&E rise for any reason.

## IMMERSION HEATER CONTROLS

The immersion heater control thermostats should be set at 75°C.

Operation of the high limit thermostat is automatic and factory set at 85°C. This is required for both heaters.

For lighter use applications such as shower only dwellings, lower control temperatures should be used, but 65°C should be regarded as the minimum setting in these circumstances.

## USER CONTROLS

Once the unit is correctly set and tested, the user is not required to make any adjustments. The controls should generally be pre-set by the installer.

The only adjustment that may be made is to the electrical heaters and is subject to the supply provided. A competent person, who fully understands the effects these changes to the cylinder may make, must undertake any adjustments.

**The installer must sign the benchmark Logbook and fill in the appropriate installation information. Failure to complete the commissioning and user instruction requirements of Part L1 of the building regulations may invalidate the warranty on this product. Telford Copper Cylinders Ltd is part of the Telford Consumer Products group of companies. Customer support is provided on 01952 257963.**

## SERVICE

The unit should be serviced every 12 months and a competent service engineer should.

1. Check water pressure - maximum 3.0bar
2. Check operation of all service valves
3. Check the 'charge' in the potable water expansion vessel - min 2.0bar required
4. Check operation of the blend valve and test that the water temperature (hot flow mix) is at 51°C when the store temperature is operating at 75°C
5. Check operation of the immersion heater thermostats and settings, and that the high limit protection operates correctly.
6. Check all joints for leaks and tighten or correct as necessary.
7. Complete the service record at the back of the commissioning booklet provided to comply with manufacturers guarantee and Benchmark requirements.

## USER INSTRUCTIONS

### GENERAL:

The unit installed is a Tristor mains pressure unit with blended hot water supply. It is designed to use predominantly low tariff electricity but with a boost switch during normal tariff periods, when extra demand is required. It is designed to store water at 75°C and should be maintained at this level at all times. There are no adjustments required to any controls. These are carried out upon installation. The unit has been designed with both performance and safety as a priority.

### USAGE:

Under normal circumstances the unit will provide water pre-set at 51°C. It is set at this temperature to prevent scalding. The blending valve has a fail-safe to cold feature as a further safety device. The delivery of hot water from the cylinder is not infinite and consideration must be given to the consumption and demands placed upon the unit.

### CLIMATE CHANGES:

Although the cylinder is insulated to the highest standard, during cold water weather conditions the use of the boost switch may be more frequent. This is because the temperature of the cold water entering the property is lower, and therefore more energy is taken from the store to heat it to the required temperatures before blending.

### REGULAR CHECK AND HEADER TANK LEVEL MAINTENANCE

The store is provided with a flexible Filling Loop, which must be detached once filled, and an Automatic Level Sensor, which warns when the level in the feed and expansion tank has risen. If the level in the F&E should rise, it activates the motorised valve, which in turn closes the domestic cold water supply to the cylinder. At this point the cylinder will need immediate attention to determine why the F&E level has risen.

If the level in the feed and expansion tank should have dropped between services, the flexible filling loop should be attached and the valve opened to let water slowly into the header tank. This should be filled to the line indicated on the side of the unit's header section. The Filling Loop should then be disconnected and capped. The feed and expansion tank should also be capped to prevent overflow upon expansion.