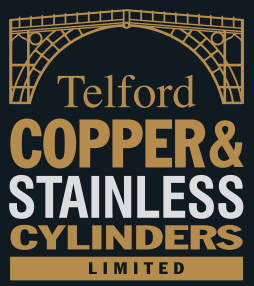




# Tristor™ MF

## Installation Guide

Tel **01952 257963** Fax **01952 253452**

Furrows Business Park, Haybridge Road
Wellington, Telford, Shropshire TF1 2FE
www.telford-group.com





## The Benchmark Scheme

Telford Copper and Stainless Cylinders is a licensed member of the Benchmark Scheme which aims to improve the standard of installation and commissioning of domestic heating and hot water systems in the UK and to encourage regular servicing to optimise safety, efficiency and performance.

Benchmark places responsibilities on both manufacturers and installers. The purpose is to ensure that customers are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturers instructions by competent persons and that it meets the requirements of the appropriate Building Regulations. The Benchmark Checklist can be used to demonstrate compliance with Building Regulations and should be provided to the customer for future reference.

Installers are required to carry out the installation, commissioning and servicing work in accordance with the Benchmark Code of Practice which is available from the Heating and Hotwater Industry Council who manage and promote the Scheme. Visit www.centralheating.co.uk for more information.

### The HWA Charter Statemant requires that all members adhere to the following:

- To supply fit for purpose products clearly and honestly described
- To supply products that meet, or exceed appropriate standards and building and water regulations
- To provide pre and post sales technical support
- To provide clear and concise warranty details to customers

Visit: www.hotwater.org.uk

For term and condition please
refer to our website: www.telford-group.com

hot water association
DEVELOPING HOT WATER

benchmark

| | Date | Parts Replaced | Installer Registration Number |
|---|---|---|---|
| Installed and Commissioned | | | |
| First Annual Service | | | |
| Second 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 | | | |

**THE INSTALLER MUST SIGN THE BENCHMARK CHECKLISTS AND FILL IN THE APPROPRIATE INSTALLATION INFORMATION. COMPLETING THE COMMISSIONING AND USER INSTRUCTIONS IS A REQUIREMENT OF ADL1 OF THE BUILDING REGULATIONS. FAILURE TO DO SO MAY INVALIDATE THE WARRANTY ON THIS PRODUCT.**

## All Electrical Instalation Must be to IEE Standards

## NOTES



# Installation of Tristor MF

At the time of commissioning, complete all relevant sections of the Benchmark Checklist located on the inside back pages of this document.

1. Fit Tristor onto a level floor
2. Fit 3bar pressure reducing valve to Tristor MF, if Tristors are regulated on apartment level fit check valve as good practice to all Tristors.
3. Fit stop cock valve to mains cold feed.
4. Fit stop cock valve to hot water supply.
5. Tristor can only fill with electric on to open valve. Do not operate with electric off.
6. Once electric is on fill Tristor to water indent line inside expansion can (pour inhibitor in to expansion tank before filling). After filling open hot taps to remove air.
7. Always use plumber past on compression fittings not p.t.f.e tape.
8. Once filled to indent line remove filling loop and fit 2x 1/2″caps one to service valve and one to expansion can.
9. Over fill box must be wired to a 3amp fuse switched spur.
10. Each immersion heater must be wired to a 13 amp switched fuse spur, also fit 16 amp mcb into consumer unit type B for each immersion.
11. Always fit lid after filling and inspection to stop condensation forming inside Tristor.
12. Always stay with Tristor when filling, do not rely on over fill float as power suppy can be interrupted during building construction on site.
13. Check fittings as they may come loose in transit and when adding pipe work.
14. Check stats are set to 70/75°c on both top and bottom immersion heaters.
15. Telford Copper Cylinders do not recommend fitting timer controls to thermal stores, stats will control water heaters.
16. Fit water softener in hard water areas.

***Servicing:***
After servicing, complete the relevant Service Interval Record section of the Benchmark Checklist located on the inside back pages of this document.

## All Electrical Instalation Must be to IEE Standards

Telford Copper Cylinders do not recommend fitting timer controls to thermal stores stats with control water heaters.

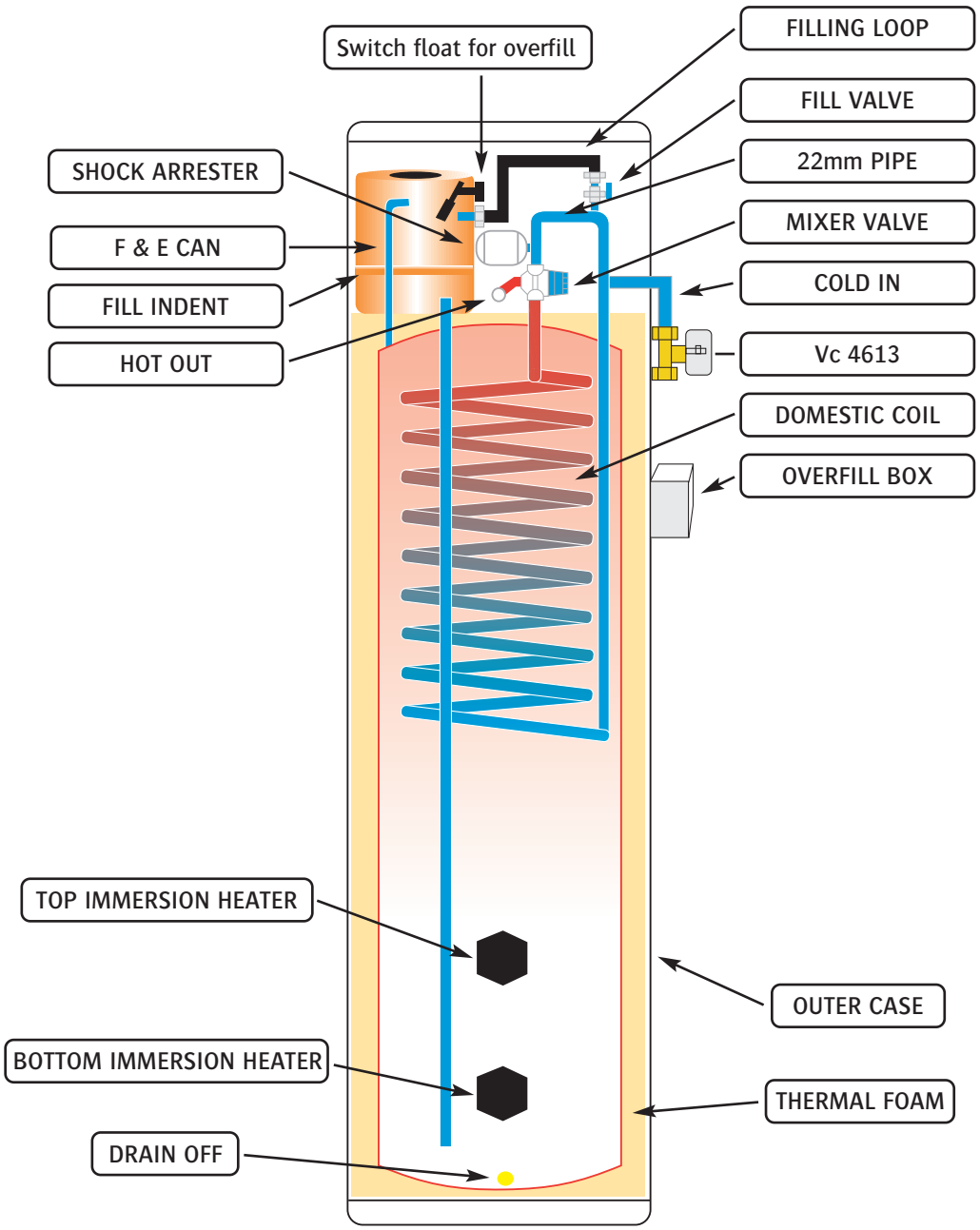
**Telford Copper Cylinders do not hold responsibility for errors or omissions.**

**Failure to install and commission the appliance to the Manufacturers instructions may invalidate the warranty.**

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

Claims made against our Guarantee must be supported with evidence of purchase and the product serial number, along with a copy of the completed Benchmark booklet and service record.
Your Statutory rights are not affected by this guarantee.

## DIAGRAM OF TRISTOR MF






# SERVICE RECORD

It is recommended that your hot water system is serviced regularly and that the appropriate Service Record is completed.

# SERVICE PROVIDER

Before completing the appropriate Service Record below, please ensure you have carried out the service as described in the manufacturer's instructions.

**SERVICE 1** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 2** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 3** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 4** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 5** Date
Engineer Name
Company Name
Telephone Number
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Signature

**SERVICE 6** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 7** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 8** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 9** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

**SERVICE 10** Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

## UNVENTED SYSTEMS ONLY

| | | | | |
|---|---|---|---|---|
| Where is the pressure reducing valve situated (if fitted)? | | | | |
| What is the pressure reducing valve setting? | | | | bar |
| Has a combined temperature and pressure relief valve and expansion valve been fitted and discharge tested? | Yes ☐ | | No ☐ | |
| The tundish and discharge pipework have been connected and terminated to Part G of the Building Regulations | | | Yes ☐ | |
| Are all energy sources fitted with a cut out device? | Yes ☐ | | No ☐ | |
| Has the expansion vessel or internal air space been checked? | Yes ☐ | | No ☐ | |

## THERMAL STORES ONLY

| | | |
|---|---|---|
| What store temperature is achievable? | | $^0C$ |
| What is the maximum hot water temperature? | | $^0C$ |

## ALL INSTALLATIONS

| | |
|---|---|
| The hot water system complies with the appropriate Building Regulations | Yes ☐ |
| The system has been installed and commissioned in accordance with the manufacturer's instructions | Yes ☐ |
| The system controls have been demonstrated to and understood by the customer | Yes ☐ |
| The manufacturer's literature, including Benchmark Checklist and Service Record, has been explained and left with the customer | Yes ☐ |

Commissioning Engineer's Signature

Customer's Signature

*(To confirm satisfactory demonstration and receipt of manufacturer's literature)*

*All installations in England and Wales must be notified to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme.

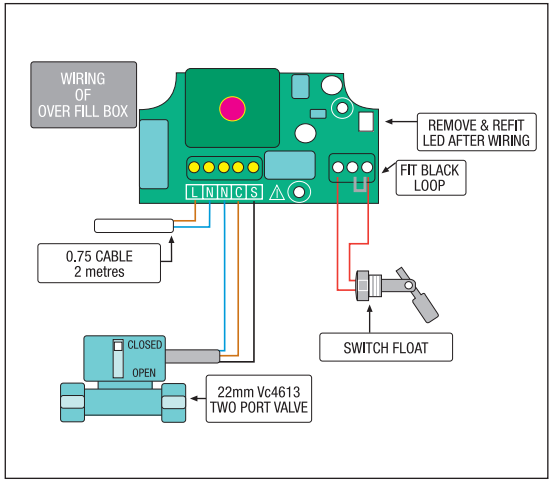
A Building Regulations Compliance Certificate will then be issued to the customer.

Please ensure that the installer has fully completed the Benchmark Checklist on the inside back pages of the installation instructions supplied with the product and that you have signed it to say that you have received a full and clear explanation of its operation. The installer is legally required to complete a commissioning checklist as a means of complying with the appropriate Building Regulations (England and Wales).

benchmark COLLECTIVE MARK
THE MARK OF QUALITY FOR THE INSTALLATION, COMMISSIONING AND SERVICING OF DOMESTIC HEATING AND HOT WATER SYSTEMS





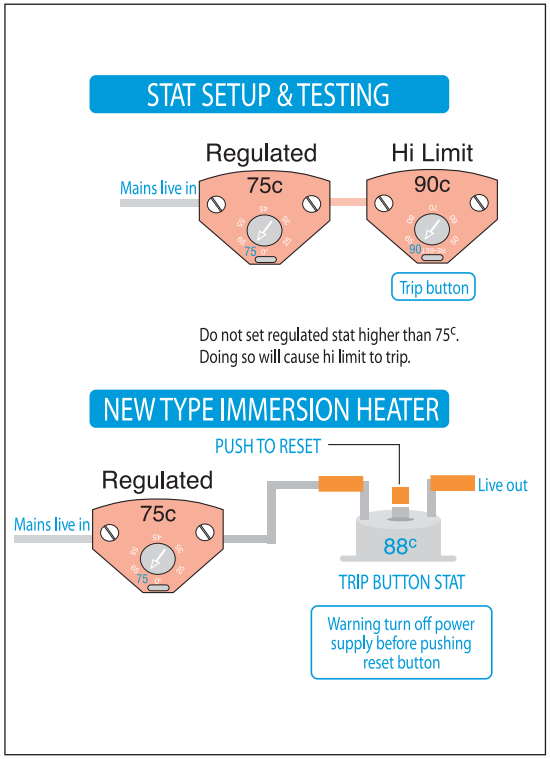



## ELECTRICAL INSTALLATION

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 Tariff/Supply Agreements in place (no timer controls are supplied with the spacesaver unit).

**NOTE:** Telford Copper Cylinders does not recommend the use of timers with Thermal Store Units. We strongly advise leaving the units to run from a constant supply managed by internal thermostats, this will ensure the unit is always at temperature and ready to deliver hot water.

**ALL ELECTRICAL WORK TO BE CARRIED OUT BY AN ELECTRICIAN**




## ELEMENT TEST

- Turn off power supply at consumer unit and remove fuse from fuse spur.
- Set multimetre to 200 ohms put prob on neutral and the other prob on live on immersion heater.
- The reading should be 17.5 to 19.5 tested ok if 15 to 14 ohms the element has too much resistance immersion heater will need changing.

## Diagnostics on TRISTOR STORE MF
## Warning all electrical work to be carried out by an electrician to IEE Standard

**WATER NOT FILLING THERMAL STORE**
**Check stop cock valve is open and water runs from taps.**

1. Check **OVER FILL** fuse spur switch is switched on and fuse has not blown.
2. Check consumer unit has not tripped.
3. Check service valve is open on filling loop (close after filling store to indent line in F & E CAN and remove filling loop and replace 2 x 1/2" blank caps on can and service valve.
4. Check continuity on float wires (by lifting float up and down, and testing with multimetre for open & closed circuit). If test fails change float switch.
5. Check grey 2 port vc valve is open. When the white lifter on the side of the valve points towards the brass body the valve is open. When the white lifter points towards the actuator head the valve is closed.
   Check water level has not reached float if in closed position. If over filled up to float inside can then down drain to fill indent line to power vc4613 open.
6. Check terminal S on PCB board. No voltage when float is in low position. 240 volts when float is in high position. Float is fitted inside can, replace lid after to stop condensation roaming inside the body. When 240 volts at terminal S this will close valve.
7. If all above is ok change vc4613 valve.

**NO WATER PASSING THROUGH HOT TAPS**

8. Check stop cock valve is open.
9. Check grey 2 port valve is open. When the white lifter on the side of the valve points towards the brass body the valve is open. When the white lifter points towards the plastic actuator head the valve is closed. If in closed position see **water not filling thermal store** above.
10. Check filters on all domestic taps in bathroom and kitchen.
11. Check mixer valve inside the top of Tristor is not blocked if not blocked replace mixer valve.

**NO HOT WATER AT TAPS**

12. Check top and bottom immersion heater fused spur switches are switched on at wall, and fuse has not blown **(before switching immersion heater on check the thermal store has been filled with water by looking inside can for water level) see No. 3 if F&E can needs filling.**
13. Check consumer unit has not tripped.
14. Check Hi limit reset button has not tripped inside immersion heater see page immersion stats for picture.
15. Check top and bottom immersion heater regulated stats are set at 70/75°C. The regulated stat is the one with the mains in coming brown wire connected to it (see page immersion stats).
16. Check temperature reading of the top immersion heater brass body is at 68-75°C. (If no temperature, check 240v at immersion cables if there is 240v change stats. (only to be tested by electrician) **WARNING HIGH VOLTAGE TURN OFF POWER AT CONSUMER UNIT.**
17. Remove top lid to inspect water level reaches the FILL INDENT LINE. Low water level will stop internal domestic coil from heating the water to hot taps. If water level is low open service valve on filling loop and fill to indent line.
18. Check hot & cold on mixer valve. Cold in connected to **C** hot in connected to **H**. If in correct position and all above have been checked replace mixer valve **(remember which way hot and cold-ports connect to pipe work).**



# MAINS PRESSURE HOT WATER STORAGE SYSTEM COMMISSIONING CHECKLIST

The Commissioning Checklist is to be completed in full by the competent person who commissioned the storage system as a means of demonstrating compliance with the appropriate Building Regulations and then handed to the customer to keep for future reference. Failure to install and commission this equipment to the manufacturer's instructions may invalidate the warranty but does not affect statutory rights.

Customer Name _____ Telephone Number _____

Address _____

Cylinder Make and Model _____

Cylinder Serial Number |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Commissioned by *(print name)* _____ Registered Operative ID Number _____

Company Name _____ Telephone Number _____

Company Address _____

_____ Commissioning Date _____

**To be completed by the customer on receipt of a Building Regulations Compliance Certificate*:**

Building Regulations Notification Number *(if applicable)* _____

**ALL SYSTEMS PRIMARY SETTINGS (indirect heating only)**

| | | | |
|---|---|---|---|
| Is the primary circuit a sealed or open vented system? | Sealed ☐ | Open ☐ | |
| What is the maximum primary flow temperature? | | | °C |

**ALL SYSTEMS**

| | | | | |
|---|---|---|---|---|
| What is the incoming static cold water pressure at the inlet to the system? | | | | bar |
| Has a strainer been cleaned of installation debris (if fitted)? | Yes ☐ | No ☐ | | |
| Is the installation in a hard water area (above 200ppm)? | Yes ☐ | No ☐ | | |
| If yes, has a water scale reducer been fitted? | Yes ☐ | No ☐ | | |
| What type of scale reducer has been fitted? | | | | |
| What is the hot water thermostat set temperature? | | | | °C |
| What is the maximum hot water flow rate at set thermostat temperature (measured at high flow outlet)? | | | | l/min |
| Time and temperature controls have been fitted in compliance with Part L of the Building Regulations? | | | Yes ☐ | |
| Type of control system (if applicable) | Y Plan ☐ | S Plan ☐ | Other ☐ | |
| Is the cylinder solar (or other renewable) compatible? | Yes ☐ | No ☐ | | |
| What is the hot water temperature at the nearest outlet? | | | | °C |
| All appropriate pipes have been insulated up to 1 metre or the point where they become concealed | | | Yes ☐ | |