

**ELECTRIC WATER HEATERS**

Capacity (lt)	8	20	40	50	80	100	120	150	200
Power (W)*	1200	1200	1200	1200	1200	1500	1500	1500	1500
Current intensity (A)*	5.2	5.2	5.2	5.2	5.2	6.5	6.5	6.5	6.5
Operation voltage 50/60 Hz (V)	230								
Wire gauge (mm²)	4								
Max. Operational pressure (bar)	10								
Thermostat (°C)	40-80								
Insulation	Expanded polyurethane								
Weight empty (kg)	6	11	15	18	20	25	30	49	59
Test pressure (bar)	20								
Max. Operational temperature (°C)	90								

\* These values can be adjusted upon request according to the country of destination local regulations

**ELECTROBOILERS**

Capacity (lt)	60	80	100	120	150	200
Weight empty (kg)	19	21	26	31	52	63

Our company preserves the right to change the specifications of the products and their accessories without prior notice

- The company guarantees the smooth operation of the **electric water heaters** that produces, for **three (3) years** from the purchase date.
- The products are produced from certified raw materials and according to strict quality specifications.
- The **electrical parts** are covered by guarantee for **one (1) year**.
- The **starting point of the validity** of the guarantee can be proved with the **document proving the purchase**.
- In case of non smooth operation of the device, the company undertakes to make sure that the electric water heaters operates smoothly, repairing or replacing the faulty part, if the defect is a manufacturing one.
- The repairs take place at the manufacturing site, where the purchaser has to transfer the products to, **and the transportation cost burdens the purchaser**.
- In case the purchaser wishes to have the device **repaired at his place**, he/she is burdened with **the transportation and labor costs**.
- Each piece holds a safety valve for the hydraulic pressure relief of the water mains, in case this pressure is higher than the ones which ensure the smooth and safe operation of the valve (s. also instructions referring to the hydraulic connection). In case of high pressure the valve opens, leading to water leakage in the surrounding ambient. The electric water heater should **necessarily** be placed in a place where there are drainage traps or drains.
- The company holds no responsibility for damages which can be caused by leakage due to the valve opening or wear of the hot or cold water piping or for any other cause.
- The company holds no responsibility for any damage which is due to misuse of the device, faulty connection by non authorized technicians or the connection does not comply with the instructions of use and maintenance which accompany the device.
- The company is not responsible for any possible damage due to lack of water.
- After any repair, the guarantee validity period is not renewed.
- The guarantee does not grant to the purchase any right of any kind of compensation, apart from the restoration of the smooth operation of the device.
- The guarantee is valid only if the water is of **low or medium corrosivity**, that is:

$$\text{Corrosivity Index (C.I.): } \frac{0,5 < \text{C.I.} < 3}{c(\text{Cl}^-) + c(\text{NO}_3^-) + 2c(\text{SO}_4^{2-})} \quad * \text{C.I.} = c(\text{HCO}_3^-) \text{ and } c(\text{HCO}_3^-) \geq 2,0 \text{ mmol/l.}$$

Langelier Saturation Index: LSI > 0,1

In this case, the magnesium should be replaced at least once **every two years**.

If C.I. > 3, the warranty is valid for 2 years, given that the magnesium is replaced yearly.

- If the mains water is of 3 to 5 German degrees hardness (or 54-90mg/lit CaCO<sub>3</sub>) it is recommendable to place a demineralization device in order for the mineral deposits to be avoided. If the mains water is of more than 5 German degrees hardness (90mg/lit CaCO<sub>3</sub>) the demineralization device is obligatory.
- The warranty is not valid in case the installation with regard to the water mains pressure is not realized in compliance with the hydraulic connection instructions which accompany the device.

Purchase date: ..... / ..... / .....

We thank you a lot for having purchased our product

V4 - 05/14



**TECHNICAL MANUAL AND WARRANTY**

**TRIMO Electric Water Heaters & Electroboilers**

Installation, maintenance & use instructions

## INSTALLATION INSTRUCTIONS - OPERATION

### GENERAL INFORMATION

The appliance should be installed as close as possible to the hot water taps in order to minimize piping heat loss. Leave at least a 50cm space in front of the electrical cover to facilitate service work and access to electrical parts.

### ELECTRIC WATER HEATERS

#### HYDRAULIC CONNECTION

The water heater is supplied through a ½" 10 safety valve, which is necessary for proper operation and is placed inside the electrical cover. In case there is a non-return valve or pressure is >8 bar at the water mains a 8lt/10bar expansion tank should be installed at "cold" for electric water heaters of up to 80lt capacity and a 12lt/10bar for electric water heaters of 100lt and 120lt. What is more, an extra safety valve (8 bar) should be placed at "cold" (recommendable in case of water taps at the balcony) for the expansion relief, in case there is no other possible relief point.

**ATTENTION! Do not modify the supplied safety valve or replace it with one of different specifications. In this case, the water heater is out of safety regulations, while, if is found out that the valve has been changed, the water heater is out of guarantee and our company is not liable for appliance's faulty operation.**

Use a spanner for the connection of this valve. Screw first the valve at the cold water pipe (BLUE) and then connect to the water supply with a flexible pipe. Connect hot water outlet pipe (RED) to the consumption circuit by means of a flexible pipe. The water heater should not come in contact with copper fitting. To connect it to a copper pipe installation, use brass or plastic connection fittings.

**A drainage pipe should also be installed, apart from cold and hot water piping.** The pipe must be placed downwards and be fully protected against frost. It is also necessary to install a ball valve at the cold water supply.

If the water of the supply network is of 3 to 5 German degrees hardness (or: 54-90 mg/lit CaCO<sub>3</sub>) the installation of a water softener device for the prevention of minerals deposits. If the water hardness is more than 5 German degrees (90 mg/lit CaCO<sub>3</sub>), the installation of the aforementioned device is mandatory.

#### ELECTRICAL CONNECTION

**ATTENTION! The electrical connection of the water heater must be carried out by an authorized electrician. There should be a protection relay for the protection from electric shocks.**

It should be controlled whether the circuit characteristics are in accordance with the data mentioned on the device label (line voltage 230V/50Hz). The electrical connection to the stable electric lines network should be carried out with the use of a bipolar switch with gap of at least 3mm and corresponding fuse (always in accordance with the technical specifications table). Remove electrical cover by unscrewing the relevant screws to access the electrical parts. Connect power supply to the thermostat's terminals by means of proper gauged wire. The wiring diagram is shown in Diagram B and is also printed on the inner cover surface. Connect line to N and neutral to L. Connect earth wiring to the flange screw with the earth symbol. Adjust the automatic safety thermostat with a screwdriver, spinning the notch of the thermostat to reach the desired temperature (up to 60°C for the vertical models and up to 80°C for the horizontal and floor-type ones).

### ELECTROBOILERS

**S. above. What is more, the following should be foreseen at the connection circuit of the burner to the electric water heater:**

- Isolation valves of the electric water heaters
- Automatic air bleeds at the upper points of the tubes, which should be perfectly insulated.
- Connection tubes of suitable angle, so as for the air not to be entrapped in the circuit
- For the heat exchanger connections union pieces should be used.

**The following steps must be followed for the connection of the electric water heaters heat exchangers to the central heating burner:**

1. Place the 0,5bar BSP union piece to the inlet and outlet of the heat exchanger
2. Place ball valve of suitable section
3. At both outlet and inlet of the central heating burner place automatic air bleeds min. 20cm higher than the inlet of the heat exchanger.
4. Place insulation of min. 9mm thickness to all connection tubes.
5. Adjust the automated filling valve at 0,5bar above the static height (e.g for 15m height the automatic filling should be set at 2bar).
6. Fill the system with water and check for leaks.

### STARTING AND OPERATION

Open main water supply valve to fill the appliance and simultaneously open a hot water tap to purge the appliance of air, that is until the water begins to come out in full flow from the hot water consumption switch supply.

**ATTENTION: The heating element is to operate only provided that the device is full of water and the thermostat has been suitably set.**

In order for the appliance to operate, we switch on the bipolar switch, supplying the heating element with power.

## MAINTENANCE INSTRUCTIONS

**In order to service, repair or clean, you should shut down the water heater by switching off the main current (switch off double-pole switch).**

#### DRAINING THE WATER HEATER

For vertical and horizontal models:

1. Close the central supply point of the water mains.
2. Make sure that the hot water tap is closed.
3. Disconnect the cold water connection point and remove the safety valve.
4. Adjust a discharge pipe to the cold water pipe.
5. Open the hot water tap.

For floor-standing models

1. Disconnect cold and hot water connections and remove safety valve.
2. Set a rubber hose at the outer of the cold water inlet pipe.
3. Blow from the hot water pipe until siphon is made and starts draining. After that, the water flows freely until the water heater is completely drained.

#### THERMOSTAT - HEATING ELEMENT REPLACEMENT

All electrical components carry the CE marking according to EN 60335-1 and EN60335-2-21 standards.

**ATTENTION! Must be carried out by an authorized electrician.**

To remove the clipped thermostat, pull it out. To work on the electrical heating element you should first drain the appliance. The electrical heating element is fixed on the flange. In order to replace it, you should first remove the flange loosing the respective nuts. When you replace, make sure that sealing gasket, thermostat and electrical heating element are placed in their proper locations. It is recommended that the sealing gasket should be replaced each time you disassemble the water heater.

**ATTENTION! Use only genuine parts from our company to ensure safe operation of the appliance.**

#### THERMO-ELECTRICAL FUSE RESTORATION

If the water is overheated, the thermal safety switch will switch off both lines (line and neutral) of the electrical circuit.

#### PERIODIC MAINTENANCE

The magnesium anode should be checked every two years and replaced if required after disconnecting power and emptying the appliance.

**Possible damages due to anode wear is not covered by warranty.**

#### ATTENTION!

- Do not consume hot water when the heating element is on.
- The hot water consumption taps should not drip, as this causes both power waste and irregular temperature increase with possibility of steam release and pressure increase at the appliance.
- If the water is not out-flowing hot, check that the water and electrical connections are made according to the respective paragraph's instructions.
- If the connections are OK, it's possible that the thermo-electrical fuse has been triggered, and should thus be fixed (s.above).

## ELECTRIC WATER HEATERS & ELECTROBOILERS GLASS

### Drawing A

#### DESCRIPTION

Water tank

Hot water outlet (RED)

Steel pressed neck for the heating element

Protective cover for the electrical section

Insulation

External housing with modern designed side panels

Thermometer

Cold water inlet (BLUE)

Operation indication light

### Drawing B

#### HEATING ELEMENT

**ELECTRIC PARTS (Heating element - Thermostat)**

