



Before the first using your electric storage water heater, carefully read this operation manual and pay special attention to paragraphs marked with "ATTENTION" symbol.

DEAR CLIENT!

Thank you for your purchasing "THERMEX" electric water heater.

Electric water heaters are designed and manufactured in strict compliance with international standards that ensure reliability and safe operation.

The present manual covers models **H_O (pro)** and **H_U (pro)**. Model of your water heater is indicated in section "Product warranty" and on the nameplate attached to the heater case.

APPLICATION

Electric water heater (here in after EWH) is designed to provide with hot water for welfare and industrial facilities that have cold water supply main with appropriate characteristics. EWH shall be operated in closed heated spaces and is not designed for continuous flowing mode.

MAIN TECHNICAL CHARACTERISTICS

Maximum cold water line pressure – **0.8 MPa**.

Minimum cold water line pressure – **0.05 MPa**.

Power supply parameters - single-phase, voltage **230 V ± 10%** and frequency **50 Hz ± 1%**.

Tubular heating element (THE) power - **1,5 KW**.

Thread diameter of hot and cold water connecting pipes - **1/2"**.

Heater protection class - **IPX4**.

Volume, (l)	Heating time for $\Delta T = 45^{\circ}\text{C}$, (1,5 KW)	Dimensions (width, height, depth) mm	
		H_O (pro)	H_U (pro)
10	20 m	366 x 345 x 304	366 x 345 x 304
15	30 m	406 x 385 x 335	406 x 385 x 335
30	1 h 05 m	476 x 455 x 408	476 x 455 x 408

SCOPE OF SUPPLY

Water heater	1 pcs.
Safety valve of GP type.....	1 pcs.
Operation manual.....	1 pcs.
Packaging	1 pcs.
EWH installation kit.....	1 pcs.

Fig. 01

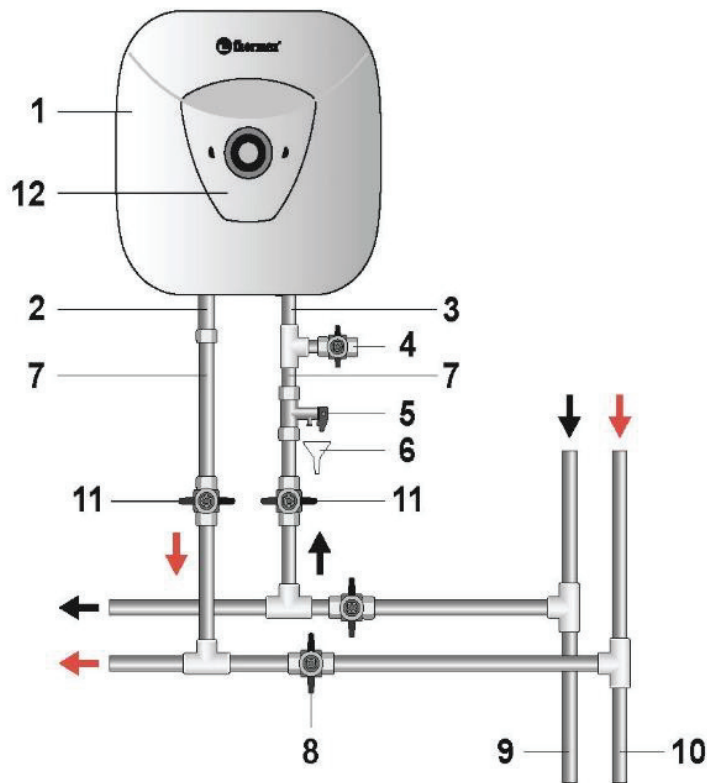
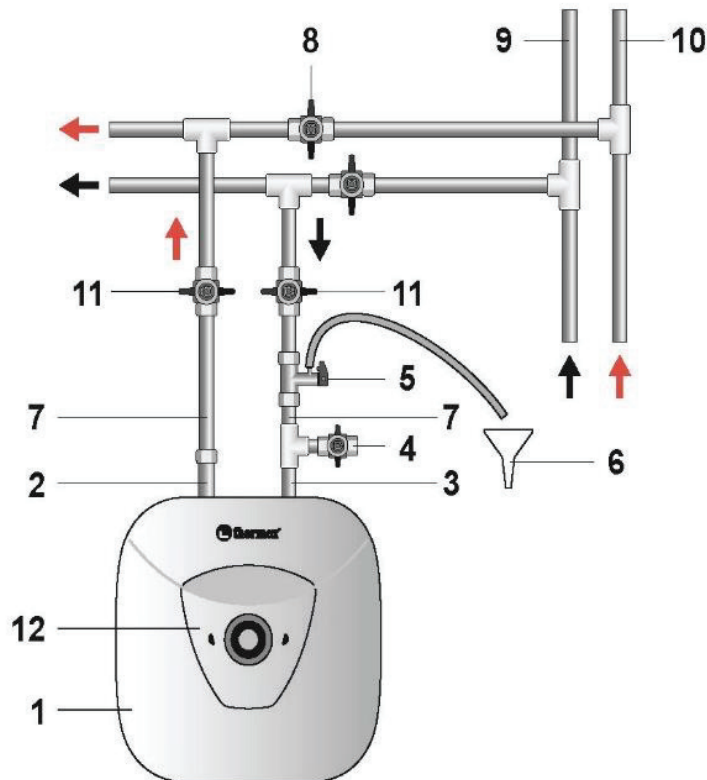


fig. 02



Figures 1 - 2:

1 - THE, 2 - Hot water outlet pipe, 3 - Cold water inlet pipe, 4 - Drain valve, 5 - Relief valve, 6 - Drainage in the sewers, 7 - Supply line, 8 - Shut off valve during EWH operation, 9 - Cold water main pipe, 10 - Hot water main pipe, 11 - Cut-off valve, 12 - Protective cover.

DESCRIPTION AND PRINCIPLE OF OPERATION

EWH consists of the housing, removable flange, safety valve and protective cover.

The outer casing of EWH consists of steel tank heat insulated with impact-resistant plastic and two threaded pipes for cold water inlet (with blue ring) and hot water outlet (with red ring).

Inner tank has a special bio-glass-porcelain coating reliably protecting the inner surface against chemical corrosion.

Tubular heating element (here in after THE), thermostat and magnesium anode are mounted on the removable flange.

THE is used to heat water and thermostat provides with possibility of heating temperature regulation up to +75°C. Water temperature adjustment in the inner tank is made by thermostat control unit, located on the protective cover of the water heater. The thermostat also has temperature switch - safety-protection device against EWH overheating, which disconnects THE from power supply when water temperature exceeds 95°C. (In the course of operation EWH casing can heat).

In models H_O (pro) and H_U (pro) EWH power switch is mounted on the protective cover. Near there are two signal lamps «Power» and «Heating». Signal lamp «Power» is lit when EWH turning on. Signal lamp «Heating» is lit when water heating and turns off when reaching the set temperature. Magnesium anode is designed to neutralize effects of electrochemical corrosion on the inner tank.

Relief valve performs functions of return valve, preventing the ingress of water from water heater into water supply in cases of pressure drop in the latter and in cases of pressure increase in the tank when strong heating of water, as well as function of safety valve, relieving excess pressure in the tank when strong heating of water. During water heater operation water may leak out of the exhaust outlet pipe of the safety valve to relieve excessive pressure, which is made for the purpose of water heater safety. This outlet pipe shall remain open to the atmosphere and be installed constantly down and in a non-freezing environment.

Drainage of water from the safety valve exhaust pipe into the drain shall be provided with installation of the corresponding EWH drainage.

It is required regularly (at least once a month) to discharge a small amount of water through the exhaust pipe of the safety valve into the drain to remove lime deposits and to test the operating functionality of the valve. Handle is intended to open the valve. It is necessary to control when operating water heater this handle to be in position closing water draining from the tank.

SPECIFYING SECURITY MEASURES

Electrical safety and corrosion protection of EWH are guaranteed only if there is an effective earthing in accordance with applicable electric installation rules and regulations.

When installing and operating EWH the following is not allowed:

- To power EWH if EWH is not filled with water.
- To remove the protective cover when the power is on.
- Use EWH without grounding.
- To connect EWH to water supply with pressure exceeding 0.8 MPa.
- To connect EWH to the water supply without safety valve.
- To drain water from EWH with power switched on.
- To use spare parts not recommended by the manufacturer.
- To use water from the EWH for cooking.
- To use water containing impurities (sand, small stones), which might lead to EWH and safety valve breakdown.
- To modify design and installation dimensions of EWH brackets. .

Attention should be paid to children so that they do not play with EWH. EWH is not intended for use by persons (including children) with limited physical, sensory or mental capabilities, or by persons who do not know how to use the EWH, except for cases when this happens under the supervision or instructions by persons responsible for safety of the EWH.

INSTALLATION AND CONNECTION

All installation, plumbing and electrical works must be performed by qualified personnel entitled to carry out relevant works.

ARRANGEMENT AND INSTALLATION

EWH installation shall be performed in accordance with marking on the housing and the following table:

Labeling	Volume	Arrangement
H_O (pro)	10 - 30 l	O – vertical, pipes down
H_U (pro)		U – vertical, pipes up

It is recommended to install EWH as close as possible to the place of hot water using to reduce heat loss in the pipes.



When drilling (making) holes in the wall, regard is to be had to cables, ducts and pipes in the wall. When choosing the place of installation total weight of EWH filled with water shall be taken into account. Walls and floor with low carrying capacity should be strengthened accordingly.

All models H_0 (pro), H_U (pro) are supplied with EWH mounting kit. The kit consists of a special bracket and anchors. The bracket shall be secured to the wall using anchors and then install EWH thereon.

To perform maintenance and servicing of EWH the distance from the protective cover to the nearest surface in the direction of removable flange axis shall be at least 0.5 m.

In order to avoid damage of the user's and/or third parties' property in the event of a faulty hot water system, it is required to install EWH in spaces with waterproofing and drainage to the sewers, and in no case to place under items exposed to the water under EWH. When placed in unprotected areas a protective plate (not supplied) with drainage into sewers shall be installed under the EWH.

In case of placing EWH in hard-to-reach places in order to perform maintenance and warranty service (mezzanine floors, niches, ceiling voids, etc.), installation and dismantling of EWH is carried out by the user on his own or for his own account.

CONNECTION TO WATER SUPPLY

Cold water shall be supplied to EWH using standard domestic water filter (for example, mud trap and bowl filter).

Install pressure relief valve at the cold water inlet tube with the blue ring, with 3.5-4 revolution, ensuring junction tightness with any sealing material (flax, FUM tape, etc.).

Connection to water supply system shall be made in accordance with Figure 2 for model H_U (pro) (pipes up) and in accordance with Figure 1 - for models H_0 (pro) using copper, plastic pipes or special flexible sanitary-engineering piping. Do not use used flexible pipes. When mounting excessive efforts are not allowed to avoid damage to EWH pipes, bioglass porcelaneous inner tank coating.

After having connected open the EWH cold water inlet valve and hot water faucet mixer. When complete filling of EWH, water will constantly flow from tap faucet. Close the hot water tap on faucet mixer.

When connecting EWH in places not provided with water mains it is allowed to supply water to EWH from auxiliary tank using pumping station, or from the tank placed at a height of not less than 5 meters from the top of EWH.

Note: for ease of maintenance during EWH operation it is recommended to install drain valve (4) (not in the scope of EWH supply) in accordance with the drawing. If water pressure in the main exceeds 0.8 MPa, at the inlet before the safety valve it is required to install relevant reducing valve (not in the scope of EWH supply).

CONNECTION TO POWER SUPPLY



Before switching on power supply, make sure that EWH is filled with water!

Before connecting of water heater to power supply, make sure that its settings correspond to specifications of the heater.

Water heater shall be earthed to ensure its safe operation.

Power outlet shall have grounding contact with earthing wire and be in a place protected from moisture, or meet requirements not less than IPX4.

OPERATION AND MAINTENANCE

OPERATION

In the course of EWH operation user can adjust heating water temperature using temperature adjustment knob located on the protective cover.

When water temperature exceeds the value of the +95° C temperature switch is actuated shutting down the EWH. To bring device back into operation, press until clicking the release pin under the EWH protective cover.

The indicator lamp indicates EWH modes on and off in the course of operation.

MAINTENANCE

Maintenance and timely replacement of magnesium anode are obligatory conditions for long-term operation of EWH. Failure to comply with these requirements is grounds for release from the warranty service. Maintenance and replacement of magnesium anode are not part of the warranty of the manufacturer.

When performing maintenance condition of magnesium anode and scale on TÈH are checked. At the same time residue that may accumulate in the bottom of the EWH is removed.

Magnesium anode must be replaced at least once in 2 years. If water contains high levels of chemical contaminants, the magnesium anode must be replaced more often. Scaling at THE can result in its malfunction, that is not a warranty case, and its replacement is not included in the warranty of the manufacturer and the seller. If there is scale on THE, then it can be removed by using scale removing means or mechanically. When removing residuals from EWH do not apply excessive force and do not use abrasive cleaners not to damage the protective coating of the inner tank.

Importance of the first maintenance is that by intensity of scale and residues, magnesium anode consumption terms for next maintenance services can be decided and, consequently, service life can be extended. In case of non-observance of the above requirements EWH service life reduces, increases the

probability of EWH breakdown and validity of warranty expires.

To perform maintenance and replace magnesium anode follow steps:

- Turn off EWH power.
- Cool hot water or discharge it through the mixer.
- Cut off supply of cold water into EWH.
- Put a rubber hose on the cold water supply inlet pipe or discharge valve and direct the second end to the drain.
- Unscrew the relief valve or open drain valve.
- Open a hot water faucet on the mixer and drain water from EWH.
- Remove the protective cover, disconnect wires, unscrew and remove from the casing the removable flange.
- Replace the magnesium anode, clean the THE if necessary from scale and remove residue.
- To assemble, fill EWH with water and power on.

When conducting EWH maintenance by forces of special organization the appropriate mark shall be made in the warranty card. When replacing the magnesium anode independently by the consumer magnesium anode purchase receipt shall be attached to present manual.

POSSIBLE FAULTS AND REMEDIES

Fault	Possible cause	How to fix
Hot water pressure from EWH decreased. Cold water pressure keeps at the level.	Clogged inlet safety valve	Remove the valve and clean it in water
Heating time increased	THE is covered with a layer of sludge	Remove the flange and clean the THE
	Supply voltage decreased	Contact power main operation service
Frequent tripping of thermal switch	The set temperature is close to the limit	Turn the thermostat control to decrease temperature (-)
	Thermostat tube is covered with sludge	Remove the flange and gently clean the pipe from the sludge

<p>Powered EWH does not heat water. No backlights of indicator lamps.</p>	<p>Thermal switch tripped or not on.</p>	<p>Disconnect EWH from the mains, remove EWH protective cover, press the safety button until you hear a click, place the cover and turn on power.</p>
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These faults are not defects of EWH and shall be fixed by the consumer or by a specialized organization at his own expense.

DISPOSAL

When complying with the rules of EWH installation, operation and maintenance and when water quality complying with current standard the manufacturer sets EWH lifespan of 7 years.

When disposing of the EWH comply with local environmental laws and guidelines.

The manufacturer reserves the right to make changes to the design and specifications of the heater without prior notice.

MANUFACTURER'S WARRANTY

The manufacturer sets 2 years as the period of warranty for water heater.

If there is no or corrected date of sale and shop stamp, the warranty period is calculated from the date of EWH manufacture. Claims within the warranty period are accepted only on presentation of the warranty card with marks of the seller, and the identification plate on the casing of the EWH. EWH serial number consists of thirteen digits. The third and fourth digits of the serial number are year of manufacture, the fifth and sixth digits - month of release, the seventh and eighth digits - day of EWH release. Claims within the warranty period are accepted only on presentation of the guarantee card with marks of the seller, and the identification plate on the casing of the EWH.

The warranty shall apply to EWH only. Malfunction of relief valve or power line cord shall not entail replacement of EWH. Responsibility for compliance with principles of installation and connection shall be borne by the buyer (in case of connection by his own) or by the installer carrying out connection.

Recurring maintenance and timely replacement of magnesium anode are compulsory conditions for long operation of EWH and survival of warranty obligations of the manufacturer.

The first replacement of magnesium anode shall be not later than 25 months from the date of EWH installation (in case of no mark of installation in warranty certificate with the seal in installation company, the term is calculated from the date of manufacture). Later magnesium anode shall be replaced at least once a year. Anode replacement shall be provided with mark and seal of servicing company in the warranty certificate.

When installing and operating EWH, the consumer is obliged to comply with requirements ensuring trouble-free operation of the appliance during the warranty

period:

- Implement security measures and rules of installation, connection, operation and maintenance contained in this manual.
- Avoid mechanical damage from negligent storage, transportation and installation.
- Avoid water freezing in EWH.
- Use for heating in EWH water without mechanical and chemical admixtures (see cl.5).
- Operate the EWH with properly operating relief valve supplied with EWH (see cl.5).

The manufacturer shall not be liable for defects due to violations of principles of installation, operation and maintenance of EWH set forth herein, including in cases where these defects have arisen due to invalid parameters of mains (electricity and water), where EWH is operated, and due to the intervention of a third party. Manufacturer's warranty does not cover claims for appearance of EWH.

Repairs, replacement of parts and components within the warranty period do not extend the warranty period for EWH in general. The warranty period for replaced or repaired parts is one month.

INFORMATION ON THE MANUFACTURER

Manufacturer:

THERMEX heating Technology (Jiangmen) CO., Ltd

No. 51, Jianshedonglu, Taoyuan town, Heshan City, Guangdong Province, PRC



All models have been certified and comply with requirements of European Directives 2006/95/EC, 2004/108/EC.