



ELDOM INVEST Ltd.

Production and trading with household appliances

www.eldominvest.com

export@eldominvest.com

ELECTRIC HOUSEHOLD STORAGE WATER HEATERS

750 and 1000 l

TECHNICAL SPECIFICATION ASSEMBLY AND OPERATION MANUAL

**ATTENTION! Read carefully this manual before installing
and using the water heater!**

TECHNICAL CHARACTERISTICS, ASSEMBLY AND OPERATION MANUAL OF ELECTRIC HOUSEHOLD STORAGE WATER HEATERS 750 AND 1000 L.

DEAR USERS,

The water heaters of this product range are intended for premise floor mounting. They provide hot water to larger than one-family house consumers.

The water heaters of each model are manufactured in several modifications – without, with one or with two heat exchangers, with or without temperature indicator, with total power of the electrical heaters of 9 or 12 kW. The water containers and heat exchangers are produced of highly alloyed chrome-nickel or enamel steel (letter “E” in model number). The water containers of enameled steel have additional anti-corrosion protection with special-alloy anodes.

The water in the water heaters with heat exchangers can be warmed in several ways:

- by electricity
- by alternative source by means of the heat exchangers (local/central heating, solar collectors or etc.)
- combination of electricity and heat exchangers.

When combining the heating modes properly in any season, considerable savings of electricity can be realized.

TECHNICAL SPECIFICATION AND CONSTRUCTION

Depending on the modification, in the water heaters up to 2 heat exchangers, temperature-reading indicator for the hot water and pipe outlets (sockets 1/2”) are built in for mounting of additional thermostats for directing the flow of the heat transfer medium through the heat exchangers. The presence of one heat exchanger in the water heater is marked with letter “S” in the model number, and with “S2” – the presence of two heat exchangers.

All water heaters are completed with electrical heaters and suitable temperature regulating and protective sets. Their thermal insulation is of foamy polyurethane mixture. The cover of the water heaters is non-metal (reinforced PVC material). In order to facilitate their transportation the water heaters are fixed to individual transportation pallets.

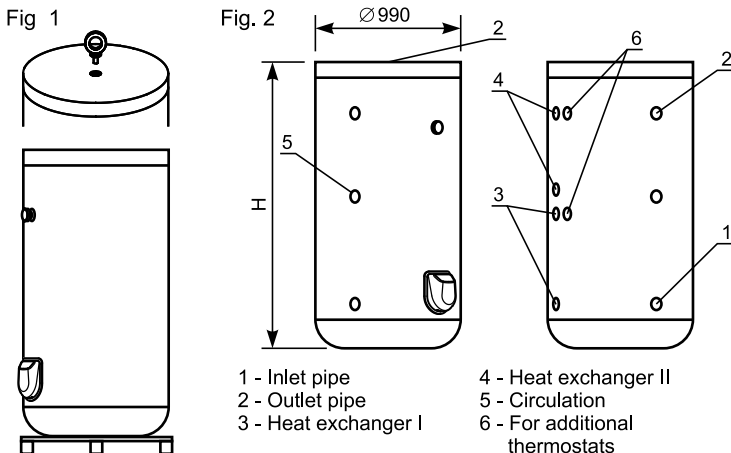
MOUNTING THE WATER HEATERS

The water heater is only to be mounted in a premise of normal fire safety, with a siphon of the sewerage installation in the floor and to be provided of temperature getting below 4°C. The surface, on which the water heater shall be placed, should be leveled.

When mounting the water heater, first of all, the transportation pallet should be removed. The water heater is lifted by means of suitable facility for the ring mounted in its upper part. Unscrew the bolts, with which the pallet is fixed, remove the pallet and place the water heater on the intended place, as it should be fixed to the floor by the openings of the straps, to which the pallet was fixed.

Models and modifications	72351, 72351S, 72351S2 72351C, 72351CS, 72351CS2	72352, 72352S, 72352S2 72352C, 72352CS, 72352CS2
Rated capacity [l]	750	1000
Diameter [mm]	1050	1050
Height [mm]	1740	2170
Weight with package (2 heat exchangers) [kg]	240	291
Diameter of the pipes (water-main/heat exchanger)	1" / 1"	
Rated pressure [MPa]	0.6	
Heating time from 12°C to 65°C [h]	5.1/3.85	6.9/5.15
MIX 37 °C with electrical heaters [l]	1890	2520
Heat exchanging surface S1 [m²]	2.09	2.96
Heat exchanging surface S2 [m²]	1.23	2.09
Hot water flow with 40 °C when heating with two heat exchangers and 85 °C temperature of the thermofoam [l/h]	2900	4400
Rated power [W]	9000 12000 ("C" modifications)	
Rated voltage [V]	400V 3N~	
Dimensions with package [mm]	1200x1200x1900	1200x1200x2330

The table shows the approximate values of the parameters



WARNING! When performing the operations of removing the transportation pallet and mounting of the water heater, the personnel that execute this activity should undertake all necessary accident-protective measures

CONNECTING TO THE WATER SUPPLY NETWORK AND HEATING INSTALLATION

The pipes for cold water (inlet pipe) and hot water (outlet pipe) of the water heater are marked with blue and red rings and labels with the relevant notice. We recommend a closing valve to be mounted on the cold water main that feeds the water heater, which shall ease the maintenance operations.

We recommend on the cold water main that feeds the water heater to be mounted a safety assembly, which is in compliance with the requirements of DIN4807, section 5, shown on fig. 3, containing:

Installation variant in accordance with DIN 4807, Section 5

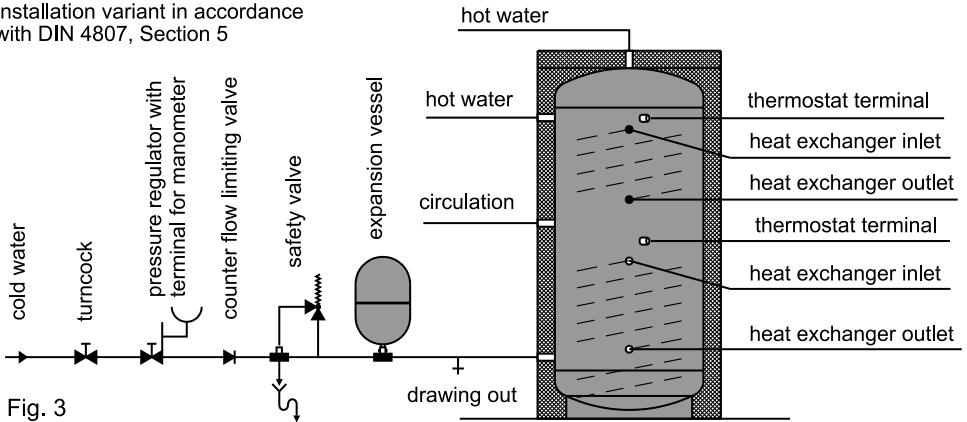


Fig. 3

- Pressure regulator (pressure control valve) with manometer. It is intended to protect the water heater from overpressure of the water supply network. The regulator should be adjusted at permissible pressure of 0.4 MPa (4 bar).
- Counter flow limiting valve (non-return valve). It should be mounted after pressure regulator and before the safety valve. It is intended to limit water from the water heater, at its widening while heating and to return in the cold water main.
- ***IT IS COMPULSORY to the inlet pipe of the water heater to be mounted a safety valve that provides the pressure of the water in the water container not to rise over the stated rated pressure. IT IS FORBIDDEN between the safety valve and the water heater a turncock to be mounted!*** It is normal if during the water heating through the opening of the safety valve water begins to drip. You may place a suitable pipe underneath, which to be connected to the siphon on the floor or to a special-purpose draining system. The pipe should have permanent inclination downwards, its two ends should be opened to the atmosphere and to be situated in protected against freezing environment.
- Drain cock. It is mounted on a branch of the pipeline between the inlet pipe of the water heater and the non-return valve. It serves for emptying of the water container in case of maintenance, repair or in case of probability of decreasing of the temperature in the premise under 0°C. A special-purpose system should be foreseen for draining of the outflow water till the system in the premise for draining of the wastewaters. To drain the water you can also interrupt access of water to the water heater and open hot water cock of the mixing tap, and lift up the lever of the mixing valve. Thus from the opening of the valve the water shall begin to flow from the water container and shall continue until its exhaustion.
- Widening container. It should have capacity, conformable with the capacity of the system. It is mounted on a branch of the cold-water pipeline between the inlet pipe of the water heater and the safety valve. It is intended to take the quantity of water, which has widen during the heating of the water in the system, as thus in the opening of the safety valve there won't be water dripping during the normal operation of the water heater. Suitable are the containers of REFLEX, for water heater 750 l – models DIT5120 or DT Junior 100 and for water heater of 1000 l - DIT5180 or DT Junior 200. Use of other types of widening containers is admitted, if they are in compliance with the working pressure, the heating temperature and the capacity of the water container, recommended and mounted by the experts of the company that executes the design and installation of the water heater.

Before filling the water container with water the circulation socket and the sockets of the additional thermostats should be tapped tightly (at pressure at least 1.6 MPa) in proper method, if they won't be used,

The filling of the water container with water is executed by opening the hot water turncock of the furthest to the water heater mixing tap, the cold water turncock before the water heater should be opened and you should wait till the flowing of dense and thick jet of water from the outlet of the mixing tap, after which the hot water turncock of the mixing tap is closed. The actions of p. 10 of section “Important rules” should be fulfilled.

The outlets of the heat exchangers are marked with black rings and labels with the relevant notices. They should be connected to the installation of the alternative thermal source only by the persons that have prepared and executed the respective design for heating of water in the water heater by the alternative thermal source. As a heat transfer medium should serve water with contents and parameter values with deviations of the permissible norms determined by the regulations related to the water legislation. The temperature of the heat transfer medium should not to exceed 85°C and its circle should be mounted a control device with such temperature adjustment so that to prevent the activation of the safety thermal switch of the water heater.

***IT IS FORBIDDEN** the circulation of the heat transfer agent through out the heat exchanger when the water container is empty.*

The connection of the water heater to the water supply network and the alternative thermal source shall be only executed by competent persons in compliance and observing the project prepared by them.

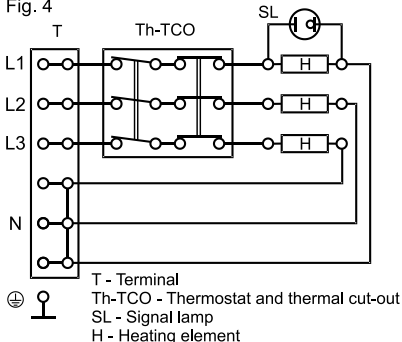
CONNECTING TO THE POWER SUPPLY NETWORK

The water heater has a protection degree against electric power damages - “Class I”.

The water heater is connected to three-phase electrical installation 400V 3N~ in accordance with the scheme in Fig.4.

The section of each of the conductors of the feeder (phase, neutral and protective) should be at least 2.5 mm² for electricity power of 9 kW and 4 to 6 mm² for electricity power of 12 kW. The protective conductor should be **OBLIGATORY** connected to the terminal or the stud marked with the sign for protective connection. In each of the electricity circuits, on each phase there should be a cutout of 16A for electricity power of 9 kW and 25A for electricity power of 12 kW. In order to mount the feeder to the input electric terminals of the water heater it is necessary to remove the plastic cover. After the connection is completed it should be mounted back on its place. It is necessary during the electrical connection to be paid particular attention the conductors of the internal electric and protective couplings

Fig. 4



of the water heater to be protected from disconnection and the capillary tubes of the thermostats and thermal switches – from folding and breaking.

WARNING! IT IS OBLIGATORY in the electrical circuit, intended for the water heater, to be mounted such device, which under the conditions of overvoltage category III provides fully disconnection to all poles. The conductors from the current circuit between the device and the water heater should not be interrupted by other switch or safety device.

The connection of the water heater to the power supply network is executed only by qualified and competent persons.

USING THE WATER HEATER

Before beginning the use the water heater you have to be sure that the water container is full of water. CHECK!

The turning on of the water heater in operation mode is made by switching of outer device in on position, at which a signal light turns on, which is situated on the plastic cover, the heaters turn on and the heating of the water begins. After the water temperature reaches the temperature set by the thermostat, the signal light turns off and turns on again after cooling of the water till certain value. In the water heaters with temperature indicators approximate temperature of the water in the water container can be read.

The turning off of the water heater from operation mode is executed by the outer device.

The use of the opportunities of the water in the water heater to be heated by alternative thermal source is executed in accordance with the instructions of the company that has performed the relevant design and installation services.

MAINTENANCE AND PREVENTIVE MAINTENANCE

In the regions with highly limy water, we recommend every 1 - 2 years an expert of our company service depots to execute cleaning of the water container and the containers from the accumulated lime. This service is not a subject of the warranty maintenance.

For the water heaters with enameled water container it is necessary after 3-year period an expert of the company services to execute an inspection and evaluation of the fitness of the anodes of the anti-corrosion protection. If necessary the anodes should be replaced.


IMPORTANT RULES

1. The water heater should be mounted and used only in premises that are of normal fire safety, provided against temperature drop under 4°C and having constructed wastewater installation in the floor, which can take the water that have flown by the water container during the preventive maintenance and repairing.
2. ***WARNING!*** *This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.*
3. When connecting the water heater to the water and power supply network it is obligatory the proper installation of the combination valve and the proper connection of the conductor of the protection circuit of the electricity installation.
4. The water heater should be connected to the water and power supply network only by qualified and competent persons.
5. Connecting the water heater and the functionality test are not warranty liability of the manufacturer or the seller and are not subject to warranty service.
6. The mounted and properly connected to the water and electricity supply network water heater should be entered into use by testing its functionality. The person, who

have performed the installation and functionality testing should filled in the determined sections in the warranty card and warranty talon by entering the company that he represents, the date, his name and signature. The installation of the water heater, the connection to the water and power supply network and the functionality test are not subject of the warranty of the manufacturer.

7. The connection of the water heater with heat exchangers to alternative thermal sources is executed by qualified and competent persons by companies having such subject of activity, which is in compliance with the project prepared by them. The persons that have executed the relevant design and installation services bare the responsibility for the exploitation features of the water heater at its operation with alternative thermal sources and for possible defects.
8. Qualified persons within the meaning of the present manual are the persons of the enclosed "List of the service depots..." and any other possible representatives of companies with the same subject of activity in contractual relations with merchants of household water heaters.
9. **WARNING!** Do not switch on the water heater in operation mode, if there is any possibility the water in the water container to be frozen! If there is any possibility of ambient temperature below 0°C in the premise, the water of the water heater ***MUST*** be drawn out – see the "Connection to the water supply network and heating installation". ***WARNING! IT IS FORBIDDEN the circulation of the water transfer medium through the heat exchanger if the water container is empty.***
10. In order to provide safety and flawless operation of the water heater under pressure the combination valve should be blown out from time to time – its cap is turned or the lever is uplifted (depending on the modification) ad awaits for 15-30s until thick and strong stream of water flows. It is necessary this operation to be executed after installation of the water heater not more seldom than once in every 14 days, as well as after each interruption of the water supply! *If there is no flow of the combination valve this means some kind of defect. In such case you should immediately unplug the water heater from the electricity supply and to refer to the nearest authorized by the manufacturer service depot.*
11. When blowing out the combination valve and when drawing out of the water from the water heater, all necessary measures for prevention of possible damages by the outflow water.
12. The rules for preventive maintenance, replacing of the anode and removing the accumulated limestone is necessary to be observed also after the expiration of the warranty term of the water heater.
13. This appliance is marked according to the European directive on Waste Electrical and Electronic Equipment (WEEE).

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The symbol  on the product, or on the documents accompanying the product, indicates that this appliance may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

Disposal must be carried out in accordance with local environmental regulations for waste disposal.

For more detailed information about treatment, recovery and recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

GUARANTEE CONDITIONS

The water heaters guarantee period is determined by the importer for every country (market).

The water heaters guarantee shall be acknowledged only when:

- The water heater has been installed in compliance with the requirements of the present manual.
- The water heater shall be used as intended only.

The guarantee includes a free of charge repair of all factory defects that may occur during the guarantee period. The repair shall be performed by the service offices authorized by the seller.

The warranty is not valid for defects resulting from:

- Improper transportation
- Improper storage
- Improper use
- Contents and parameters of the water exceeding the standard European norms of the quality of drinking water and particularly if the content of chlorides exceeds 250 mg/l and electrical conductivity of the water is below 100 $\mu\text{S}/\text{cm}$ and over 2000 $\mu\text{S}/\text{cm}$ regarding the water heaters with an enameled water tank and electrical conductivity of the water is over 600 $\mu\text{S}/\text{cm}$ regarding the water heaters with a chrome-nickel steel water tank.
- Higher voltage used than the indicated in the Installation and Operation Manual
- Deformation of the water tank as a result of freezing of the water
- Natural elements, calamities and other force majeure circumstances
- Non-observance of the instructions in the Installation and Operation Manual
- In cases of unauthorized fixing of eventual defects

In the above mentioned cases the defects are eliminated ^{against payment}.

OBSERVING THE REQUIREMENTS OF THE PRESENT MANUAL IS A PREREQUISITE FOR SAFE OPERATION OF THE PRODUCT YOU HAVE PURCHASED AND IS ONE OF THE WARRANTY CONDITIONS.

ANY MODIFICATIONS OR RECONSTRUCTIONS OF THE WATER HEATER STRUCTURE BY THE BUYER ARE FORBIDDEN. IN CASE SUCH MODIFICATIONS OR RECONSTRUCTIONS HAVE BEEN ASCERTAINED, THE WARRANTY OBLIGATIONS OF THE MANUFACTURER AND THE SELLER ARE CANCELLED AND HE DOES NOT BARE ANY RESPONSIBILITY ABOUT THE SAFETY OF THE APPLIANCE.

IF NECESSARY, REFER TO THE LISTED COMPANY SERVICE DEPOTS, AUTHORIZED BY THE MANUFACTURER.

THE MANUFACTURER RESERVES THE RIGHT OF NON-NOTIFIED CONSTRUCTION CHANGES, WHICH DO NOT DETERIORATE THE SAFETY OF THE PRODUCT.