

# ELECTRIC HEATING ELEMENT WITH TEMPERATURE CONTROL

## 150W, 250W, 300W, 600W, 900W, 1200W

### Intended use

The electric heating element with a temperature control is intended to heat water in a bathroom radiator (stand-alone water radiator or connected to a central heating system). The device is intended for domestic use.

### Technical characteristics

The device consists of a 150W, 250W, 300W, 600W, 900W or 1200W heating element, an electronic thermostat that provides temperature control of the water in the heater, and a power cord with a universal plug. The illumination of an indicator light indicates the operation of the heater. The device is equipped with a single-use (non-resettable) thermal protection placed in the plug of the heating element, which will activate when the thermal fuse exceeds 90°C. In order to restore the device to full functionality, the intervention of a qualified manufacturer's service is necessary.

The device meets the safety requirements according to the standards PN-EN 60335 and PN-EN 55014.

### Technical Data

|                               | unit            | GL02        |      |      |      |      |       |
|-------------------------------|-----------------|-------------|------|------|------|------|-------|
| Power                         | W               | 150W        | 250W | 300W | 600W | 900W | 1200W |
| Voltage Rating                | V~              | 230V/50Hz   |      |      |      |      |       |
| Rated current                 | A               | 0,65        | 1,09 | 1,3  | 2,6  | 3,9  | 5,2   |
| Work environment              |                 | WATER       |      |      |      |      |       |
| Temperature control range     | °C              | 13 – 65 ± 3 |      |      |      |      |       |
| Connection cable with plug    | mm <sup>2</sup> | 3 x 0,75    |      |      |      |      |       |
| Length of connecting cable    | mm              | 1500 spiral |      |      |      |      |       |
| Spigot diameter (thread)      | inch            | ½"          |      |      |      |      |       |
| Protection class              |                 | I           |      |      |      |      |       |
| Protection degree             |                 | IP 44       |      |      |      |      |       |
| Weight                        | kg              | 0,41        | 0,37 | 0,39 | 0,41 | 0,43 | 0,44  |
| Heating element length (L) ** | mm              | 305         | 190  | 255  | 305  | 350  | 365   |

\*\* measured from the face of the heater head

Install the device according to applicable regulations, standards and manufacturer's recommendations. Any incorrect and unintended use is prohibited.

### Placement and installation

- The heater should be installed in a water radiator (stand-alone or connected to the central heating system), the design (structure and dimensions) of which allows its installation and has a suitable place for the installation of the heater;
- The heater should be installed in rooms where the temperature is not lower than 5°C and higher than 40°C;
- Safety requirements determine the permissible location and distance from wet places, including from the sink, shower, bathtub (the electric heater can be installed only in the III protection zone, that is, at a distance of at least 60 cm from wet zones). It is unacceptable to install heaters in radiators that are installed over the bathtub or in the shower room;
- The heater must not be installed in tanks made of stainless steel.

### Installation requirements

- The heating and electrical installation should be made in accordance with applicable regulations, have an effective protective circuit, an overcurrent and residual current circuit breaker (30mA);
- The heater casing must not be obstructed, covered or thermally insulated;
- It is unacceptable to weight down the housing of the regulator with any objects;
- The design of the heater should allow collision-free installation of the heating element in the heater;
- The heating element must not touch the internal parts of the heater;
- Diameter of the connection spigot, should be in accordance with the dimensions of the thread of the heating element (reduction is allowed);
- Depth (length) of the connection stub (socket), must be shorter than the length of the dead zone of the heating element (25mm);
- Install in the lower part of the radiator in a vertical position (with the heating element upwards) only in the place intended for this purpose by the manufacturer of the radiator preserving space for proper circulation of the heating factor;

### Installation and use

- The heater is an electric heating device and is only a subassembly of the radiator;
- All assembly and disassembly work must be carried out with the power supply disconnected;
- The power of the heater installed in the radiator must not be greater than the heating power of the radiator, specified at parameters (75/65/20)°C. The heater's heating power is specified by the radiator manufacturer for the parameters of water temperature  $t = 75^{\circ}\text{C}$  (supply),  $t = 65^{\circ}\text{C}$  (return) and air temperature  $t = 20^{\circ}\text{C}$ ;
- The radiator connected to the central heating system in which the electric heater is to be installed must be equipped with shut-off valves to allow installation/removal of the heater without interfering with the entire central heating system;
- The radiator connected to the central heating system with the heater installed must not be completely cut off from the central heating system, (both valves must not be closed at the same time - the water, which will expand under the influence of increased temperature, must be able to increase its volume);
- In the radiator not connected to the central heating system, leave 5-8% free space (water, which will expand under the influence of increased temperature, must be able to increase in volume); - The heater should be sealed with the supplied rubber washer (recommended) or other available means to seal the installation site;
- The position of the casing, should provide easy access to the knob (in case of unfavorable position of the heater, you can additionally seal, for example, with Teflon tape)
- The heater should be tightened "with feeling" with a suitable wrench (do not screw behind the housing); **Do not turn the thermostat by 180° relative to the heating element.**
- After installation of the heater, the radiator should be filled with water, vent the installation, and then check the tightness of the hydraulic connection in the place of installation of the heater;
- If the connection is not tight, drain the heater, reseal the connection, and then repeat the steps;
- Connect to electricity only after the radiator is filled with water, the heating element is completely immersed in water and vented;
- Do not switch on without water (can cause permanent damage to the heating element) - Set the required water temperature with the dial;
- Do not bend the heating element;
- During installation, avoid flooding the casing of the electrical module, as this may cause a short circuit in the electrical system or electric shock.

## Startup and setup

The indicator diode informs the user about the operation status of the heater. The temperature setting is adjusted manually using the knob in the MIN - MAX range (13-65 °C). The controller maintains the set temperature of water in the heater (below the set temperature, the controller turns on the heating device, and turns it off when the set temperature is reached). The heater is not equipped with a room temperature controller.

## Warnings and requirements

- All assembly and disassembly work must be carried out with the power supply disconnected;
- It is forbidden to use the device if the installation does not have a protective circuit;
- It is forbidden to use a faulty device;
- It is forbidden to disassemble and make unauthorized changes or repairs to the device;
- The housing (electronic thermostat) must not be flooded;
- **It is forbidden to turn on the module to the electric power supply if the radiator is empty or the heating element is not completely immersed in water;**
- It is forbidden to install the heating module in appliances with another heat source, exceeding the maximum temperature of the thermostat;
- It is forbidden to clean the heating elements with strong chemicals or sharp tools;
- If the heater malfunctions or the power cord / plug is damaged, unplug the power cord from the socket and contact the Seller or the Manufacturer (the heater is not suitable for use);
- The power cord must not touch the hot parts of the heater or radiator;
- It is required to clean the heating elements periodically from accumulated sediment. The frequency of cleaning depends on the hardness of the water present in the installation;
- It is advisable that the operation of the device periodically check and verify the correct operation of the heater and the plug with a protective pin;
- To completely disconnect the power supply, remove the plug from the socket;
- Do not switch on without water - the condition for proper and long-term operation of the heater is complete immersion of the heating element in water (check that the tank into which the heater is installed is completely filled with water and the entire heating element is immersed in it), it is permissible to briefly switch on the cold heater in the open air for a period of no more than 2 seconds;
- If the electric heater is not used for a long period of time, disconnect the power supply by removing the plug from the power socket.

Exploitation contrary to the instructions (for purposes other than those intended by the manufacturer) and the performance of repairs by persons not authorized to do so may result in failure and void the warranty.

The equipment is not a toy and is not intended for use by persons (including children) with limited physical, sensory or mental abilities, or persons without experience or familiarity with the equipment, unless under supervision or in accordance with the instructions for use of the equipment, provided by persons responsible for their safety. Children should be watched to ensure that they do not play with the equipment.

## Maintenance

Any maintenance of the device should be carried out with the power supply disconnected. Dirty external surfaces should be cleaned with a damp cloth with mild cleaning agents for this purpose. Do not clean the heater with strong chemicals or with sharp tools. Absolutely avoid getting the casing wet.

## Free repair is not covered by damage:

- Mechanical;
- Caused by unauthorized chemicals;
- Caused by using, transporting, storing, or cleaning the heating element contrary to the operating instructions;
- Caused by handling the heating element in violation of generally accepted rules for the use of electric heating elements;

- Caused by contamination of the heating element with limescale or removal of limescale with chemicals not intended for this purpose;
- Resulting from the operation of the heating element in environments other than water, such as acid, air, etc., (the use of transformer oil or glycol-based antifreeze is permissible);
- Arising as a result of fortuitous cases, alterations, changes, repairs made in any way by an entity that is not the Guarantor;
- Detection of interference in any part of the heating element, e.g. opening of the thermostat box, etc.;
- Incomplete immersion of the heating element in water (cannot work in air).

### Additional information

The product must not be treated as household waste. By ensuring proper disposal, you are helping to protect the environment. For more detailed information on recycling of this product, please contact your local government representative, waste disposal service provider or the store where you purchased the product.

The manufacturer reserves the right to make technical changes to the products offered.

### Recommended appropriate selection of the heater to the heating power of the radiator

| heater selection for the radiator for parameters 75/65/20 |            |             |             |              |             |
|-----------------------------------------------------------|------------|-------------|-------------|--------------|-------------|
| heating power of the radiator                             | below 300W | 300W - 600W | 600W - 900W | 900W - 1200W | above 1200W |
| heater power                                              | 150W       | 300W        | 600W        | 900W         | 1200W       |

the power of the electric heater installed in the radiator may not be greater than the heating power of the radiator given at the parameters 75/65/20°C



This symbol, placed on the equipment and/or accompanying documentation, indicates that used electrical and electronic equipment must not be disposed of with other waste. The product should be returned to a designated waste collection point, where it will be accepted without charge