

ELECTRIC STORAGE WATER HEATER

USER'S MANUAL Service book

83/b Srednyaya Street, Odessa
free fixed phone hot line
0 800 50 13 90
tel.: +38 (048)731-22-26
tel.: +38 (048)777-13-90
fax: +38 (048)777-13-93
e-mail: service@novatec.ua
www.novatec.ua

Dear Customer!

Congratulations on the purchase of a modern, reliable, highly efficient electric domestic water heater!

If properly installed, operated and appropriately maintained, the electric water heater will remain serviceable for many years.

For safe, efficient and durable use of the electric water heater, carefully read this manual and follow its recommendations prior to any operations on water heater.

ATTENTION!

- When buying electric water heater, ensure that the service book is properly filled in by the selling organization.
- When buying, be sure to check the marketable condition of the electric water heater and its completeness.
- After selling the electric heater to the customer, the manufacturer does not accept any claims as to completeness and mechanical damage.
- The customer is responsible for observing the installation, connection and operating procedures.

Table of Contents

1.	General data	3
2.	Warnings	4
3.	Mounting dimensions	5
4.	Technical features	7
5.	Completeness	8
6.	Safety requirements	8
7.	Configuration and operation concept	9
8.	Installation and connection	12
8.1	Wall mounting	12
8.2	Connection to water supply system	13
8.3	Electric connection	14
9.	Commissioning	15
10.	Maintenance	15
11.	Possible failures and recovery measures	16
12.	Storing and Transportation Rules	17
13.	Water heater acceptance and purchase certificate	17
	WARRANTIES	

1. General Data

“WHP” electric water heater is designed for water heating in domestic conditions to reach the preset temperature and further maintain the temperature in an automatic mode.

Model		Article	Volume, l	Description	Drawing
1.	Standard 50	NT-S 50	50	Vertical electric water heaters	Fig. 1
2.	Standard 80	NT-S 80	80		
3.	Standard 100	NT-S 100	100		
4.	Standard Plus 35	STANDARD PLUS 35	35	Vertical electric water heaters	Fig. 2
5.	Standard Plus 50	STANDARD PLUS 50	50		
6.	Standard Plus 80	STANDARD PLUS 80	80		
7.	Standard Plus 100	STANDARD PLUS 100	100	Universal electric water heaters (can be installed both in vertical and horizontal position)	Fig. 2
8.	Universal 80	NT-U 80	80		
9.	Universal 100	NT-U 100	100	Electric water heaters vertical design with heat exchanger indirect heating	Fig. 3.1
10.	Combi Left 80	NT-CBL 80	80		
11.	Combi Left 100	NT-CBL 100	100	Electric water heaters vertical design with heat exchanger indirect heating	Fig. 3.2
12.	Combi Right 80	NT-CBR 80	80		
13.	Combi Right 100	NT-CBR 100	100	Vertical electric water heaters with dry THEs (tubular heating elements)	Fig. 4
14.	Direct Dry 50	NT-DD 50	50		
15.	Direct Dry 80	NT-DD 80	80		
16.	Direct Dry 100	NT-DD 100	100		

2. WARNINGS

This device is not intended for use by persons (including children) with physical, sensory or mental disability, or by persons lacking experience or knowledge, unless they have received from a person in charge of their safety adequate supervision or preliminary instructions on how to use the device. Children should be supervised to ensure that they do not play with the appliance. This unit can be used by children of not less than 8 years and people with reduced physical, sensory or mental capabilities or without experience or knowledge if they are properly supervised or if the instructions for using the device safely have been given and if the risks are taking into account. Children must not play with the device. Cleaning and maintenance must not be done by children without supervision.

1. **CAUTION!** Heavy item, handle with care:

1.1 Install the appliance in a room which is protected from frost. If the appliance is damaged because the safety valve has been blocked, it is not covered by guarantee.

1.2 Make sure that the wall on which the appliance is mounted can support the weight of the appliance when filled with water.

1.3 If the appliance is to be fitted in a room or location where the ambient temperature is higher than 35°C, provide sufficient ventilation.

1.4 If the water heater is installed above living space, fit a retaining tank with drain to the sewer system. Place the water heater in a place with easy access.

1.5 Installation of a vertical or horizontal wall mounted device: To allow the replacement of the heating element leave a free space of 300mm between the tube ends and the wall or fixed furniture.

1.6 Switch off the power before removing the cover, to avoid any risk of injury or electric shock.

1.7 The installation must be equipped, upstream of the appliance, with a bipolar cut-out device (fuse, breaker switch) respecting local regulations.

1.8 If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or the after sales service.

1.9 Operate regularly the discharge of safety valve to prevent scaling and check that it is not blocked.

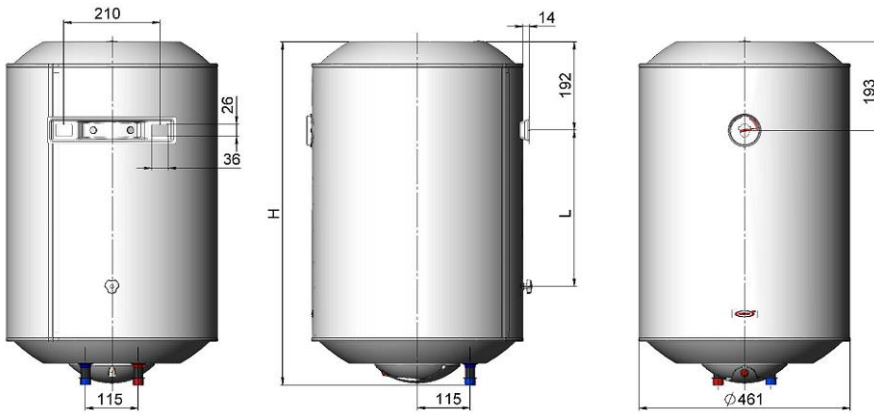
1.10 Hydraulic accessories should not be located between the safety valve and the cold water inlet. A pressure reducer (not supplied) is required when the water supply pressure exceeds 5 bar (0,5MPa) and will be fitted on the main supply.

1.11 Connect the safety valve to an unpressurised outlet pipe in a frost free location, with a continuous slope to evacuate water during heating up or draining the water heater.

1.13 Do not dispose your water heater in the garbage, but hand it to a place assigned for this purpose (collection point) where it can be recycled.

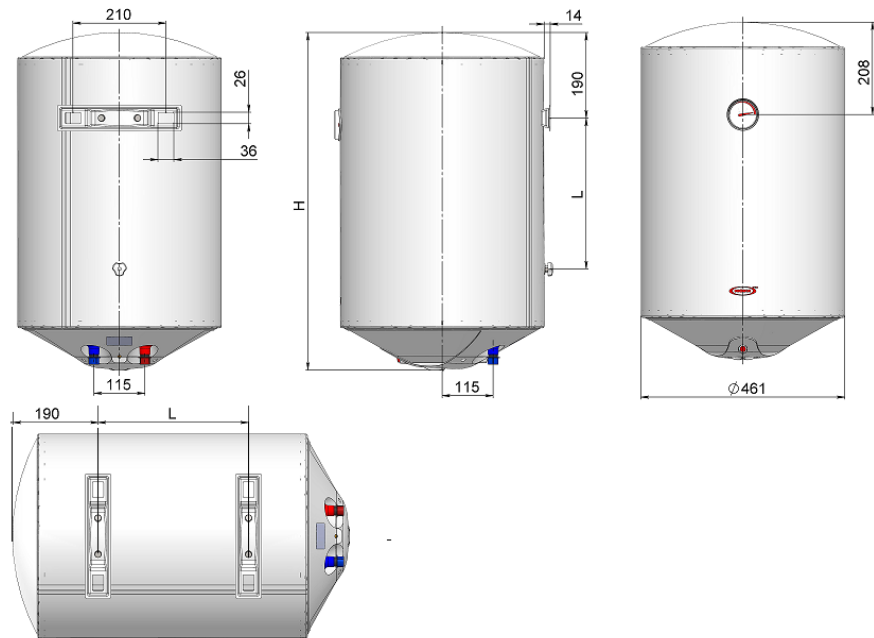


3. Mounting dimensions



Volume, l	H, mm	L, mm
50	567	158
80	748	340
100	929	520

Fig. 1. Mounting dimensions of Standard



Volume, l	H, mm	L, mm
35	434	106
50	580	158
80	761	340
100	942	520

Fig. 2. Mounting dimensions:

Vertical position: Standard Plus, Universal

Horizontal position: Universal

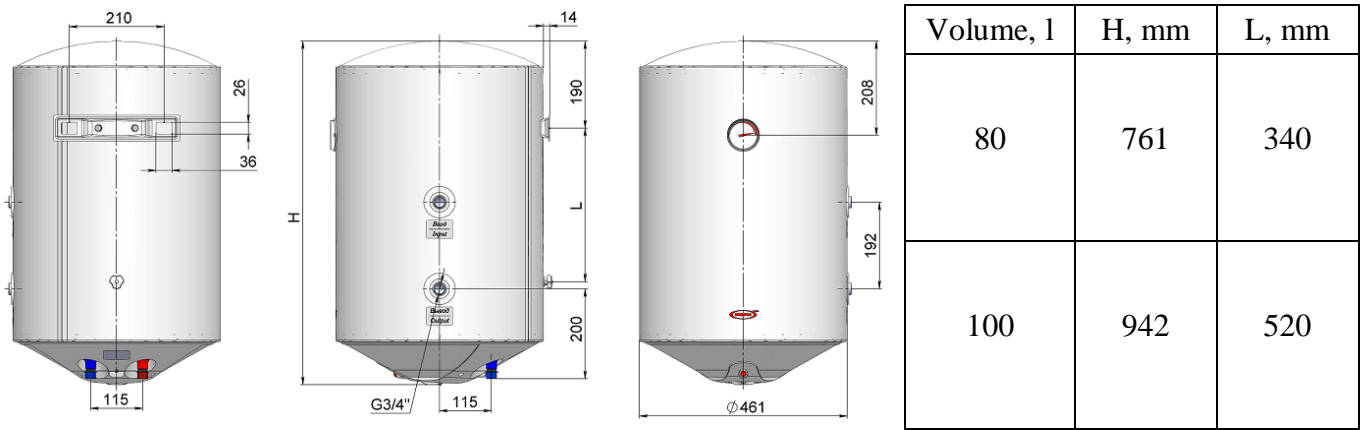


Fig. 3.1 Mounting dimensions of Combi Right

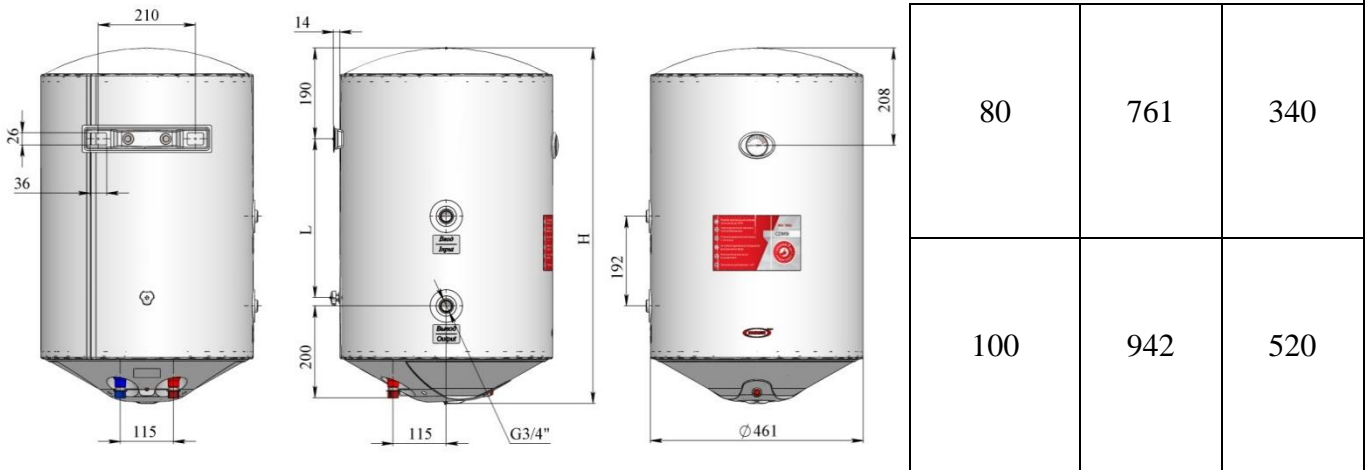


Fig. 3.2 Mounting dimensions of Combi Left

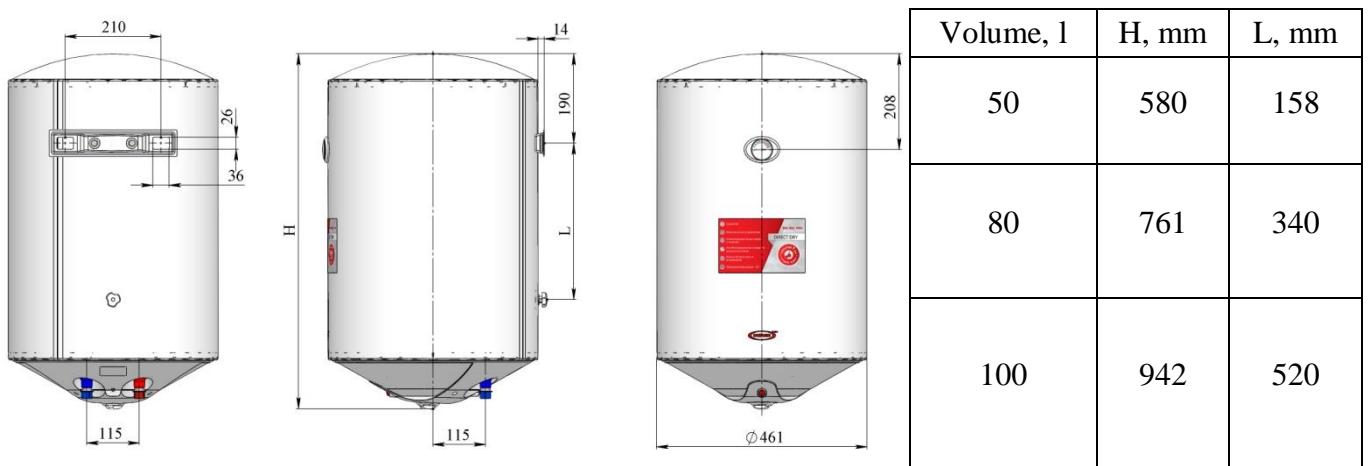


Fig. 4. Mounting dimensions of Direct dry

4. Technical features

Model	Standard			Standard Plus , Goldheat			Universal, Universal Goldheat			Combi Left , Combi Right			Direct Dry				
	50	80	100	35	50	80	100	80	100	80	100	50	80	100			
Volume, l	50	80	100	35	50	80	100	80	100	80	100	50	80	100			
Nominal pressure, MPa	0.6																
Electric power, kWt	2.0			2.0											2*0.8=1.6		
Voltage, V	230																
Time for heating from 15 ° to 65, °C	160	206	258	75	108	170	215	170	215	170	215	120	195	240			
Protection class	1																
Vessel anticorrosion protection	Enameled vessel / magnesium anode																
Protection level	IP24																
Standard Plusimum heating temperature, C	77																
Weight, kg	17	21	26	12	17	21	26	21	26	21	26	17	21	26			
The surface area of heat exchanger, m2	-													0,25			

5. Completeness

- | | |
|------------------------------------|--------|
| 1. Electric water heater | 1 pcs. |
| 2. Safety valve | 1 pcs. |
| 3. User's manual with service book | 1 pcs. |
| 4. Package | 1 pcs. |

6. Safety Requirements

Electric water heater has got Class 1 electric shock protection level.

Despite the fact that the water heater is safe in use, it is necessary to strictly follow the rules outlined in this manual and heed common sense to avoid accidents.

ATTENTION! Children shall know and understand the main rules of water heater operation as well as safety rules.

ATTENTION! Class 1 protection electric water heater shall be connected only to the GROUNDED electric main.

ATTENTION! Before use, check the integrity of the electric cable isolation.

ATTENTION! Installation, maintenance and repair shall be performed only by a qualified specialist according to this user's manual requirements. Authorized service centers shall be considered.

ATTENTION! If any electric water heater failure occurs, the heater shall be disconnected from the electric mains and a troubleshooting specialist shall be advised.

ATTENTION! The quality of all the water heaters is 100% checked at the production plant before being offered for sale. The inner vessel may have some water remaining after the check.

PROHIBITED! Using of a water heater with a damaged electric cable.

PROHIBITED! Using of socket adapters, extensions and temporary electric lines for connection.

PROHIBITED! A slight leakage of water through the safety valve may occur when using the electric water heater; this is normal. Do not try to block the safety valve.

PROHIBITED! Reduction of the inner diameter of the hot water inlet tube.

PROHIBITED! Installation of the electric water heater in the premises saturated with aggressive vapors, with sudden temperature and humidity drops, and in dusted and dirty premises.

The manufacturer shall not be held liable for any damage to health and property if it is caused by violation of installation and operation rules.

7. Configuration and Operation Concept

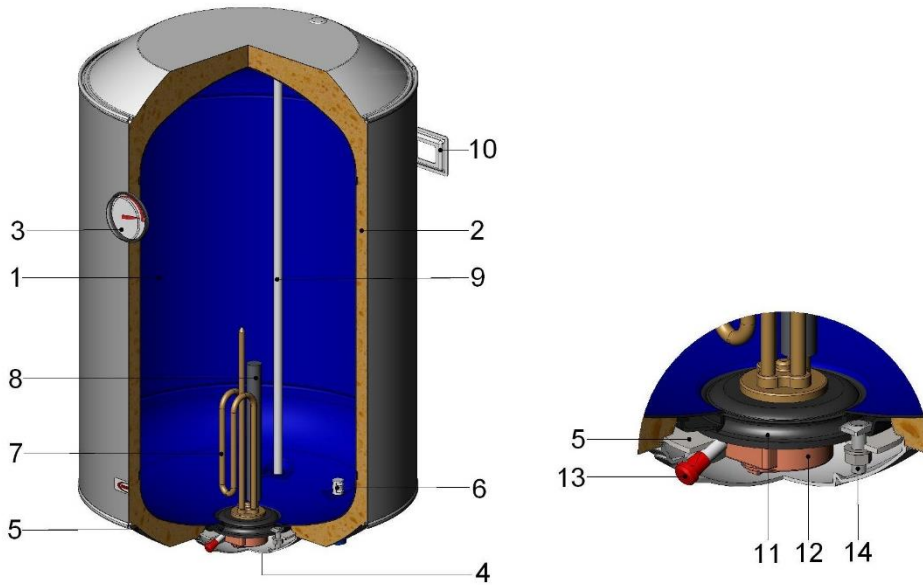


Fig. 5. Model Standard

- | | |
|--|-------------------------------------|
| 1. <i>Inner vessel</i> | 9 <i>HWI (hot water inlet) tube</i> |
| 2. <i>Thermal insulation</i> | 10 <i>Mounting bracket</i> |
| 3. <i>Temperature indicator</i> | 11 <i>Neck O-ring</i> |
| 4. <i>Electric group lid</i> | 12 <i>Thermostat</i> |
| 5. <i>Steel flange</i> | 11. <i>Indicator light</i> |
| 6. <i>Cold water supply tube with
ANTIMIX system</i> | 12. <i>Bolt, nut, washer</i> |
| 7. <i>Heating element (HE)</i> | |
| 8. <i>Magnesium anode</i> | |

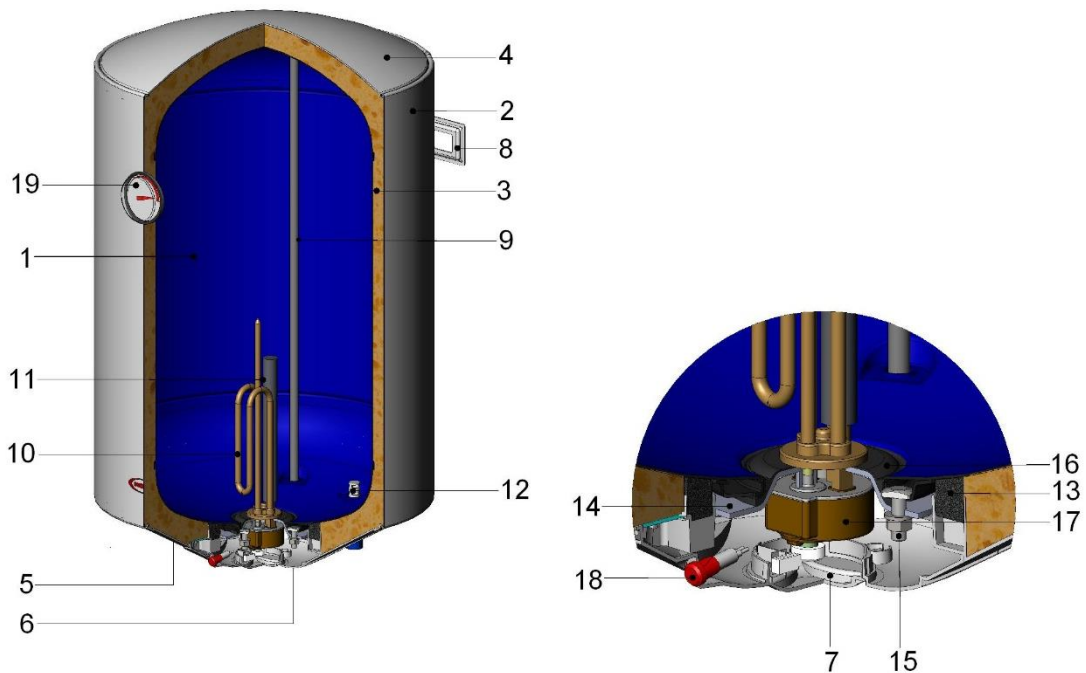


Fig. 6. Models Standard Plus, Goldheat

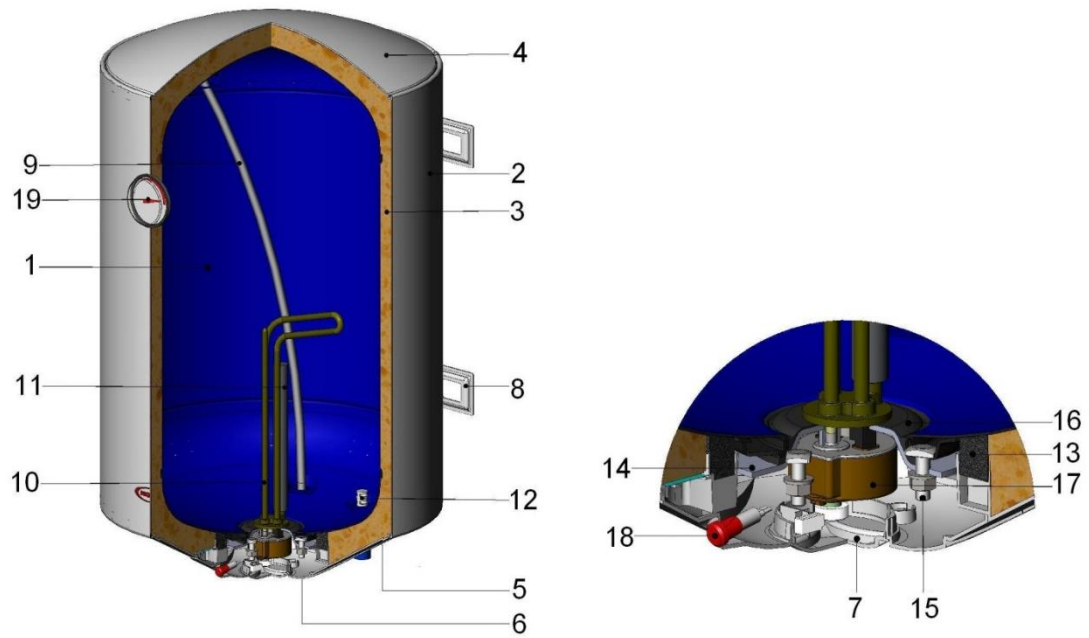


Fig. 7. Models Universal, Universal Goldheat

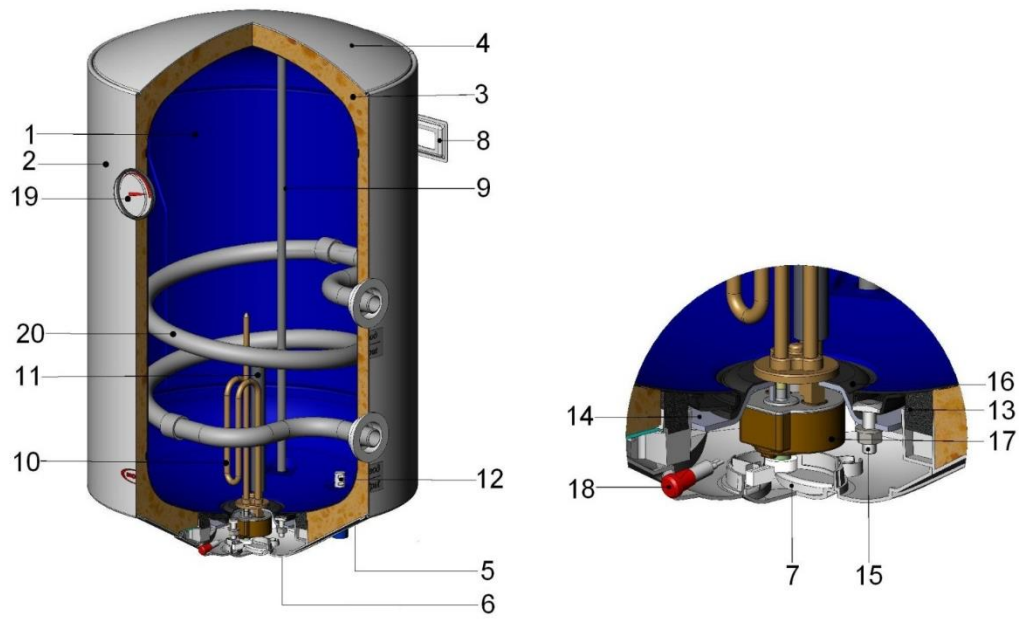


Fig. 8. Model Combi Right (Left – mirrored)

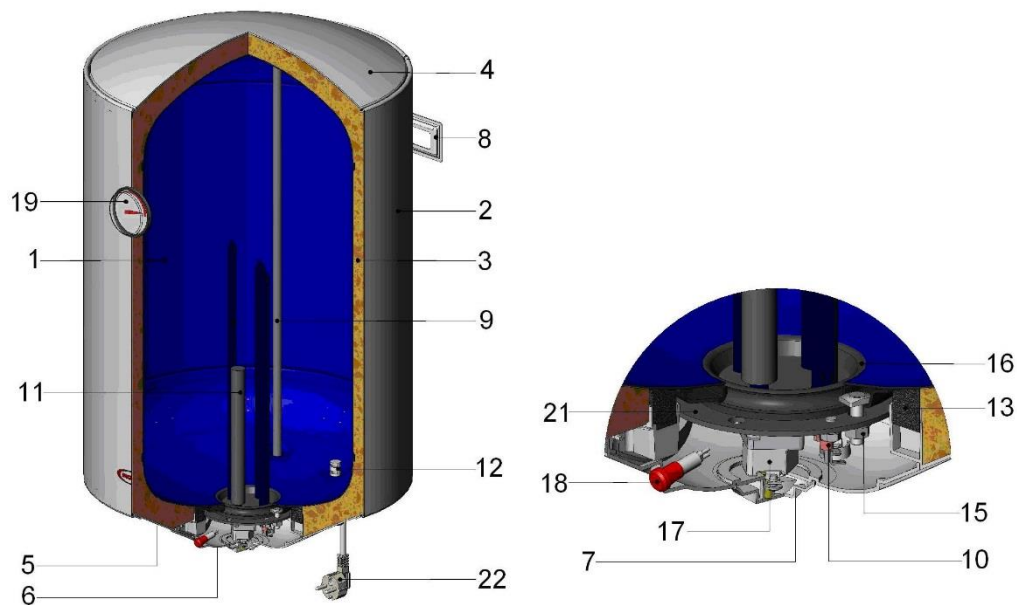


Fig. 9. Model Direct Dry

- | | |
|---|---------------------------|
| 1. Inner vessel | 13. Neck O-ring |
| 2. Shell | 14. Steel flange |
| 3. Thermal insulation | 15. Bolt, nut, washer |
| 4. Upper lid | 16. Electric group O-ring |
| 5. Bottom lid | 17. Thermostat |
| 6. Electric group lid | 18. Indicator light |
| 7. Thermostat control flywheel | 19. Temperature indicator |
| 8. Mounting bracket | 20. Heat exchanger |
| 9. HWI (hot water inlet) tube | 21. Flange unit |
| 10. Heating element (HE) | 22. Power cable |
| 11. Magnesium anode | |
| 12. Cold water supply tube with
ANTIMIX system | |

The models Standard, Standard Plus, Goldheat, Combi, Direct Dry, Digital are designed to be installed only vertically.

The models Universal, Universal Goldheat have design features that enable them to operate both vertically and horizontally.

The design of the heater provides filling of the tank with water and its heating in an automatic mode.

The water in the water heater is preheated to the preset temperature. When opening a hot water tap to the water heater, cold water starts flowing from below through the cold water supply tube. The cold water replaces the previously heated water through the hot water inlet tube coming from the top of the device. Thus, the hot water is supplied to the user, and the water heater is filled with cold water from the bottom. The heating element starts heating water to the preset temperature again.

The unique ANTIMIX system prevents mixing of cold and hot water layers. This device significantly increases the hot water utilization ratio and completely excludes abrupt temperature changes.

The internal water heater vessel is made of high quality steel, can withstand significant mechanical procedures. For corrosion protection, the steel covered with a layer of titanium enamel with a high content of titanium and chromium, which ensures complete protection even from hard faucet water. Today it is the most reliable, durable, environmentally-friendly and hygienic surface.

Tight, ecologically-clean polyurethane thermal insulation that contains no freon gives the product thermos properties and provides Standard Plusimum operation efficiency.

Dual protection adjustable thermostat accurately maintains the preset temperature of hot water and automatically blocks the heater in case of overheating.

The safety lid protects the heating unit from accidental damage. All lids are made of modern high-polymer materials. It provides for easy removal of dust and moisture from the surface and eliminates the possibility of electric shock. The safety valve prevents water leakage to the pipeline and serves to discharge excess water pressure in the tank.

The replaceable magnesium anode provides additional protection against corrosion.

The entire electric unit including TH, thermostat and replaceable magnesium anode is assembled on a steel flange that is fixed to the vessel with five powerful bolts.

The manufacturer has got the right to make any changes to the device structure without prior notice.

8. Installation and Connection

ATTENTION! The quality of all the water heaters is 100% checked at the production plant before being offered for sale. The inner vessel may have some water remaining after the check.

To install the electric water heater you can use paid services of service center professionals. You can also use the services of any other qualified professionals. However, in this case the manufacturer is not liable for any damage caused by incorrect installation and failure to observe the recommendations of this manual.

8.1. Wall Mounting

The electric water heater shall be installed in premises that comply to the following requirements:
temperature from +5°C to + 45°C;
humidity not exceeding 80%;
atmospheric pressure from 78 to 106 kPa.

The electric heater shall not be installed in rooms saturated with aggressive vapors, with sudden changes of temperature, humidity and in dusty or dirty areas.

The electric water heater shall be fastened to the bearing wall or another surface that ensures reliable mounting. To reduce heat loss along the length of the pipeline, the electric water heater shall be placed as close to the point of water intake as possible. To facilitate access to electrical parts, additional place shall be left (about 0.5 m). Brackets for wall mounting shall withstand the weight, which is three times greater than the weight of the electric water heater filled with water.

The water heater shall be fastened with two hooks or pins using a bracket.

It is advised to use steel mounting 7-8 mm in diameter with plastic dowels 12mm in diameter and at least 80mm in length for attachment to a concrete or brick wall. In case of mounting to a shell or foam wall, the steel hooks shall be screwed to the wooden plugs 20-25mm in diameter previously punched into the wall.

Useful tip: If the distance from the electrical water heater to the hot water intake point exceeds 2 m, the piping shall be insulated.

ATTENTION! When connecting water heaters in a horizontal position, the cold water supply nozzle (marked with a blue ring) must be located below and the hot water intake nozzle (indicated with a red ring) – above (Fig. 10).

8.2. Connection to water supply system

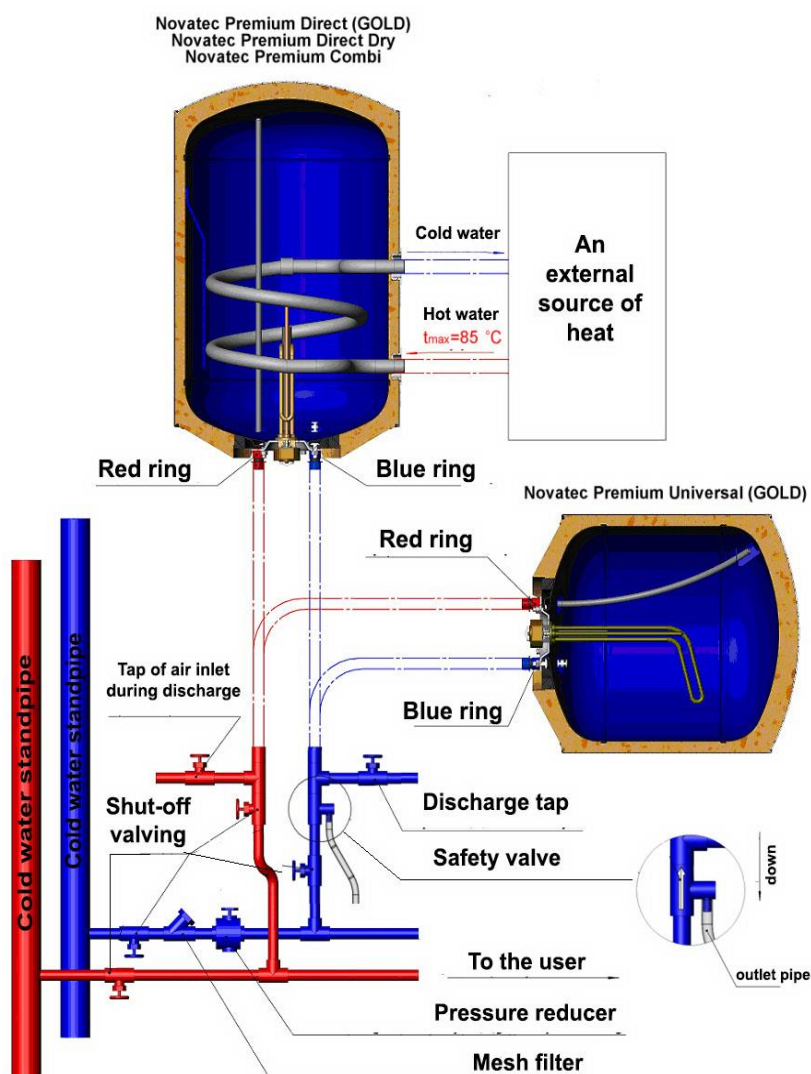
Before connecting the electric water heater, it is necessary to ensure that no foreign bodies are in the tubes. A water drain valve is screwed onto the cold water input (blue gripes), and then - a safety valve with nominal pressure of 0.6 MPa (supplied). To avoid breakage when tightening the valve, great effort shall not be applied.

ATTENTION! Water can drip from the safety valve outlet tube; this tube shall always be open to atmosphere. The tube shall be constantly sloped to the bottom and located in conditions that exclude water freezing. Sludge shall be regularly removed from the safety valve and it is necessary to ensure it is not locked.

The cold water input shall be necessarily equipped with a mesh prefilter. If the water pressure in the line exceeds 0.5 MPa, a reducer, which lowers pressure, shall be installed.

The reducer and the filter are not supplied.

Useful advice: To reduce water hardness, it is recommended to use a softening filter. This will extend the life of both the electric water heater and other appliances that use water.



Vertical models: Standard, Standard Plus, Goldheat, Combi, Direct Dry, Digital Dry, Universal, Universal Goldheat

Horizontal models: Universal, Universal Goldheat

Fig. 10. Connection water heaters to water supply system

8.3. Electrical connection

ATTENTION! The electric water heater shall be filled with water prior to being powered! Before operation, ensure that the power main complies with the following requirements:

- voltage of 230 V;
- power frequency of 50 Hz.

Water heaters is supplied directly to thermostat terminals (Fig. 11) with the help of a three-core cable. The intersection of copper wire shall be at least 1.5 mm², of aluminum wire – 2.5 mm². Grounding is connected to the terminal marked with.

Be sure to install a double pole automatic switch-fuse (16 A) with the distance between the contacts of at least 3 mm for disconnection of the electric water heater from the electric mains.

The power cord and double pole automatic switch-fuse are not supplied.

Useful tip: Pay special attention when connecting wires to the terminals of the thermostat. Careless connection with rigid connecting wires can break the contact between the thermostat and the heating element (THE).

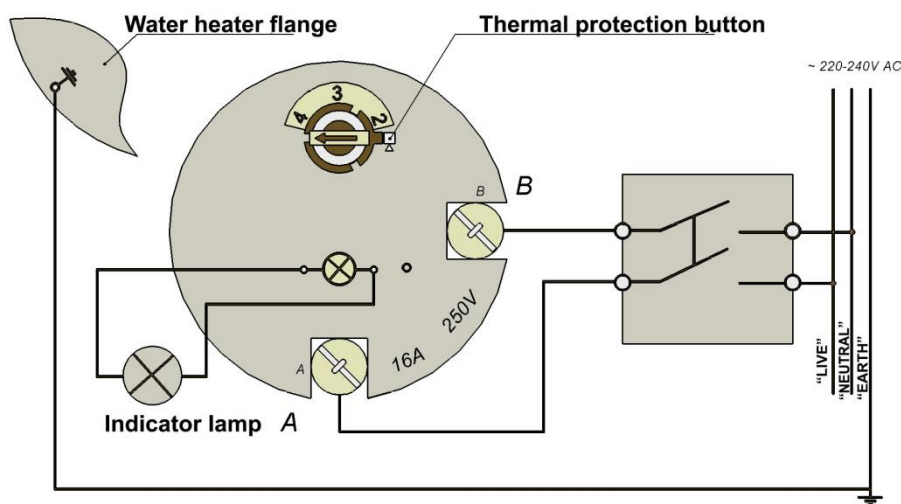


Fig.11. Connection of Standard, Standard Plus, Goldheat, Combi, Universal, Universal Goldheat water heaters to a power main

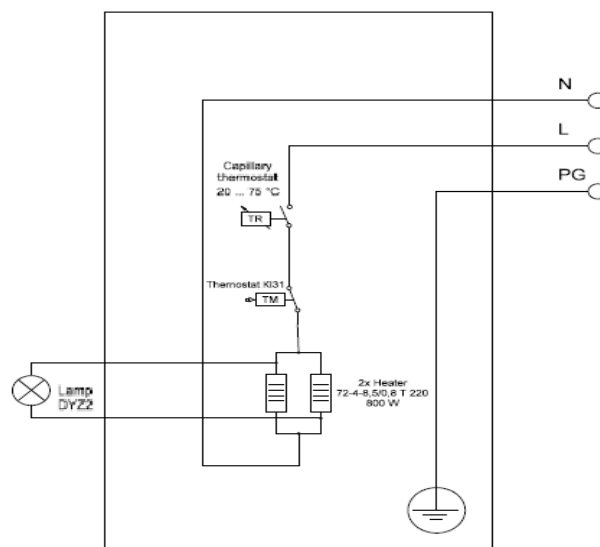


Fig.12. Connection of Direct Dry water heater to a power main

9. Commissioning

ATTENTION! When using the water heater, the requirements of p. 5. Safety Requirements shall be followed.

Fill in the electric water heater with water by opening the cold water supply valve and the hot water faucet for air removal. The central hot water pipe shall be closed to avoid ingress of water to the standpipe. Immediately shut off the hot water faucet as soon as water starts running out of it. Inspect the vessel and ensure there are not leaks.

ATTENTION! Water drops can naturally appear on the safety valve during heating.

ATTENTION! The cold water supply tube may heat up during operation.

Useful tip: If there is no hot water running, first check that connection to water supply system or electric mains complies with the requirements of the relevant sections of this manual.

ATTENTION! When using the water heater, the requirements of p. 5. Safety Requirements shall be followed.

9.1. Working sequence of Standard, Standard Plus, Goldheat, Combi, Direct Dry, Universal, Universal Goldheat models

Switch the automatic fuse breaker from "O" to "I" position. Herewith, the indicator light shall come on indicating the start of water heating.

A flywheel on the electric group lid allows for easy adjustment of the required temperature of water heating:

- To reduce temperature in models Standard Plus, Goldheat, Combi, Universal, Universal Gold turn the flywheel clockwise, to increase – counterclockwise (as shown graphically on the heating level indicator).
- To reduce temperature in models Direct Dry turn the flywheel counterclockwise, to increase - clockwise.

The Standard Plusimum setting temperature for thermostat is in the range from 65°C to 75°C

The adjustable thermostat of dual protection accurately maintains the preset temperature of hot water and automatically blocks the heater in case of overheating.

The indicator light shows the mode of water heating (Fig. 5, 6, 7, 8, 9).

The temperature indicator shows the dynamics of temperature change. Indicator calibration is conditional. When reaching the preset temperature, the red light goes off.

Further work of the electric water heater is in automatic mode.

10. Maintenance

ATTENTION! Before performing any handling, repair or maintenance work, disconnect the water heater from the mains!

To increase service life of the electric water heater and to get the right for the warranty service, a preventive maintenance shall be performed at least once a year.

Preventive maintenance is carried out only by manufacturer's authorized service center at the buyer's expense, which is a relevant entry in the service book.

Preventive maintenance includes: inspection of the electrical terminals, thermostat, heating element (HE); descaling of the heating element (HE); replacement of the magnesium anode.

Before carrying out the maintenance work, the water heater shall be emptied. For the purpose, open the taps designated of Fig.10 as "tap for the inlet of air during discharge" and "tap for draining." Thus, the air will

flow through the hot water inlet tube to the heater, and the will drain by gravity. After the water is totally drained, further maintenance can be performed.

Service life of electric water heater is 7 years.

11. Possible Failures and Recovery Measures

ATTENTION! Before starting any failure-recovery procedures, ensure the failure is not caused by lack of electric power or water.

The safety valve design allows for equalization of pressure in the water heater and the cold water line with a difference around 0.1 MPa if the pressure of water in the water heater rises during heating. For this reason, perhaps, the water supply pipe will periodically heat up. Also, when the water in the central line is cut off, a slight discharge of water heater is possible.

ATTENTION! Before performing any handling, repair or maintenance work, disconnect the water heater from the mains and water supply system!

Standard, Standard Plus, Goldheat, Combi, Direct Dry, Universal, Universal Goldheat

Failure description	Possible reason	Recovery measure
1 . Water in EWH is heated but the indicator light is off	The indicator light is not connected	Connect the light
	The indicator light is faulty	Replace the light
2. Water in EWH is not heated, the indicator light is off	Thermal protection has been activated	Press the thermal protection button (Fig. 11)
	Thermostat handle is in “OFF” position	Turn the handle to switch on the HE
	EWH thermostat is not powered	Power the thermostat
3. The indicator light won't come on	Faulty light connection	Perform a correct connection of the indicator light to special terminals
	Hot water leak to the water pipeline	Eliminate the leak
4. EWH water is heated but the signal light is not on	Faulty thermostat installation	Remove the thermostat and install it in a proper way
	Faulty HE	Replace the HE
5. Water leak in the point of electric unit connection	HE tightness is broken	Replace the HE

	Integrity of the O-ring is broken	Replace the O-ring
6. Decreased hot water supply from the EWH. Cold water pressure remained unchanged	Safety valve is clogged	Remove the valve and rinse it with water
7. Decreased water heating time	The HE is covered with scale	Descale the HE

12. Storing and Transportation Rules

12.1 Water heaters shall be packed in accordance with the design documentation. Conservation validity is 12 months.

Water heaters shall be wrapped in a polyethylene film and packaged in boxes made of corrugated cardboard.

12.2 Water heaters can be transported by any type of closed transport (rail cars, containers, closed cars) with prevention of mechanical damage to the device and in compliance with the rules for transportation of goods relevant for this mode of transportation.

12.3 Unpacking of the water heaters after low temperature transportation shall be performed after leaving them overnight at $(20 \pm 5)^{\circ}\text{C}$.

13. Water Heater Acceptance and Purchase Certificate

The products described in this manual are subject to changes at any time to be in accordance with technology and standards. The devices comply with Low Voltage Directive: 2014/35/ , EMC Directive : 2014/30/EU , RoHs Directive : 2011/65/EU, Ecodesign Directive 2009/125/EU

QC Inspector Foreman _____

To be filled during purchase
Commercial organization's name
Commercial organization's address
Commercial organization's telephone
Date of sale _____
Checked and sold (seller's signature and stamp)
<hr style="width: 20%; margin: auto;"/> <i>Stamp here</i>

I have learnt the terms of warranty

External defects and damage are absent

_____ (customer's signature)

Manufacturer (Seller) guarantees compliance of the product with the aforementioned regulatory documents subject to consumer rules set out in the operational documents.

Date of production: see label

Shelf life 1 year from the production date.

The shelf life is calculated from the date of manufacture of the product and till the date specified by the manufacturer.

Product warranty period is 1 year from the sale date.

The warranty is repealed in the following cases:

- Failure to comply with the rules of product installation and operation;
- Lack of properly filled service book (only original service book is valid, with designation of the date and place of sale, seller's signature and stamp of the trading company). In case of absence or correction of the sale date or stamp of the trading organization, the warranty period is calculated from the production date indicated on the manufacturer's identification plate on the product housing;
- Absence of manufacturer's identification plate on the product frame or its damage;
- Damage caused by freezing water;
- Damage caused by exceeding of the nominal pressure of water;
- Mechanical damage or traces of influence of chemically aggressive substances;
- Technical changes to the product;
- Use of non-genuine spare parts and consumables;
- Unauthorized replacement of original parts;
- Use of the product for irrelevant purposes.

The Customer is responsible for compliance with the rules of installation and connection.

If during the warranty period the product was operated with violation of the rules or the consumer did not follow recommendations of the company that performs the product warranty services, the repair is performed at the customer's expense.

The additional warranty is 4 years from the date of the expiration of the warranty service life.

The additional warranty for electrical parts is 1 year from the date of the expiration of the warranty period operation.

The additional warranty is as follows: no later than 12 months after the sale date specified in this service book the Customer can contact the official service center and call a specialist for preventive maintenance. Preventive maintenance is carried out by the Customer, which is a relevant mark in the service book. Timely preventive maintenance automatically suggests prolongation of the warranty period for water holding vessel (inner tank) for another year. Thus, it gives the right for four additional warranty years in case of timely, annual preventive maintenance. Additional warranty does not cover electrical components.

(name of manufacturer's authorized person (seller))

(signature)

Stamp here

Form No.1-Warrantor

Manufacturer (seller)

LLC "Hidroprom"

(name of enterprise, organization)

83/b Srednyaya Street, Odessa, Ukraine, 65005

(legal address)

N _____

WARRANTY CARD

Filled by the Manufacturer (Seller)

EWH accumulator domestic electric water

(name of product according to regulatory document, brand)

Manufacturer number see the label

Production date see the label

(name of manufacturer's authorized person (seller))

(signature)

Filled by the Seller

Seller

(name of the company, organization, legal address)

Date of sale

(year, month, day)

Price

(name of manufacturer's authorized person (seller))

(signature)

Stamp here

Coupon No.1

for preventive maintenance during
12 month after the expiration of warranty service life.
Preventive measures by_____

Date of preventive works

«__»_____20__

Coupon No.2

for preventive maintenance during
12 month after the expiration of warranty service life.
Preventive measures by_____

Date of preventive works

«__»_____20__

Coupon No.3

for preventive maintenance during
12 month after the expiration of warranty service life.
Preventive measures by_____

Date of preventive works

«__»_____20__

Coupon No.4

for preventive maintenance during
12 month after the expiration of warranty service life.
Preventive measures by_____

Date of preventive works

«__»_____20__

Coupon No.5

for preventive maintenance during
12 month after the expiration of warranty service life.
Preventive measures by_____

Date of preventive works

«__»_____20__

Coupon No.4

for preventive maintenance during
12 month after the expiration of warranty service life.
Preventive measures by_____

Date of preventive works

«__»_____20__