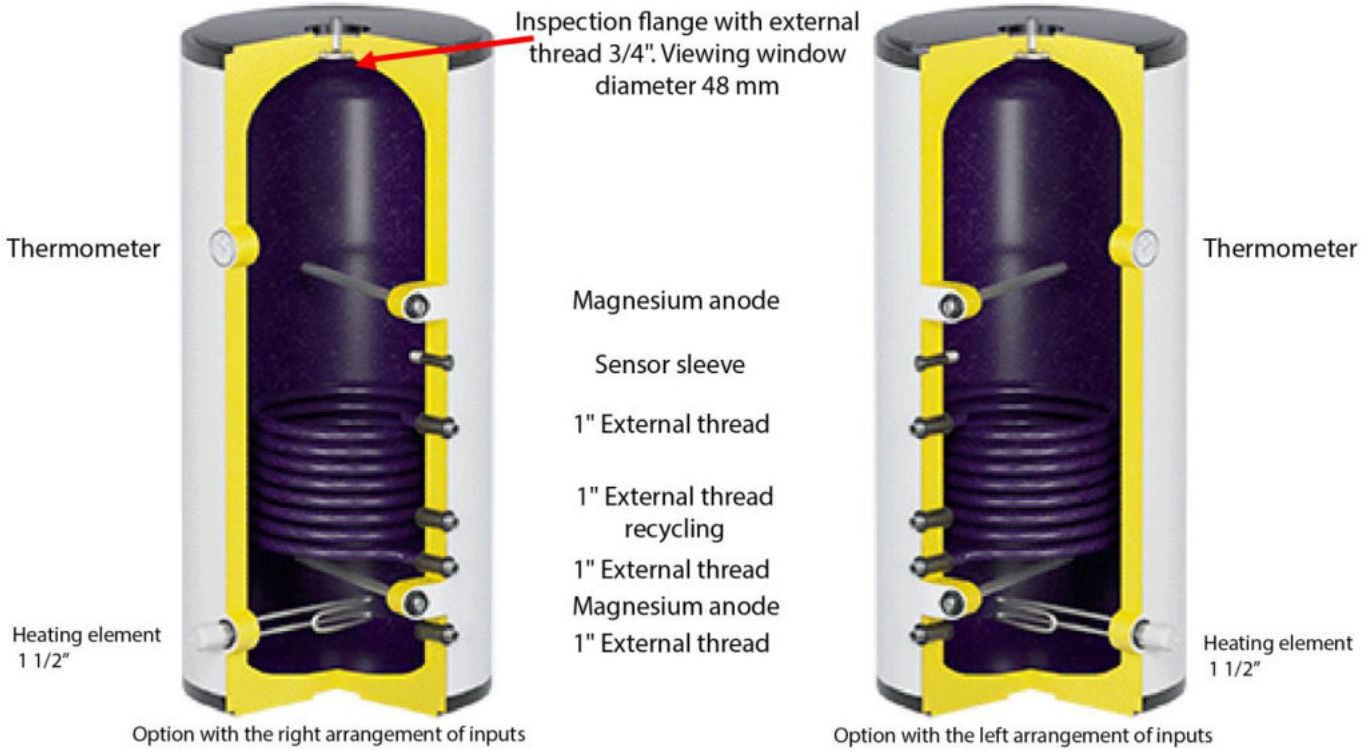
S-TANK

Data sheet for the Tank of «PW» Series 120 150 200 Liters for hot water systems. WALL-FLOOR TANK INDIRECT HEATING

Scheme of the tank of the "PW" series



PWR - with the right connection

PWL - with the left connection

Scope of application: - Accumulation and accumulation of heated sanitary water

Product material: - Carbon steel with enameled coating.

Description: - The tank is designed to accumulate hot water from various heat sources. The tank of the "PW" series improves the flexibility of hot water systems, allowing you to accumulate a constant volume of hot water, use DHW recirculation to increase the comfort of use. And the ability to connect an electric heater to a 1 1/2" female hole at the bottom of the tank makes the tank more versatile. The tank can work together with the following heat sources:

Solid fuel boiler	Biomass boiler	Pellet boiler Fireplace with water jacket
Gas boiler	Electric boiler	Solar collector

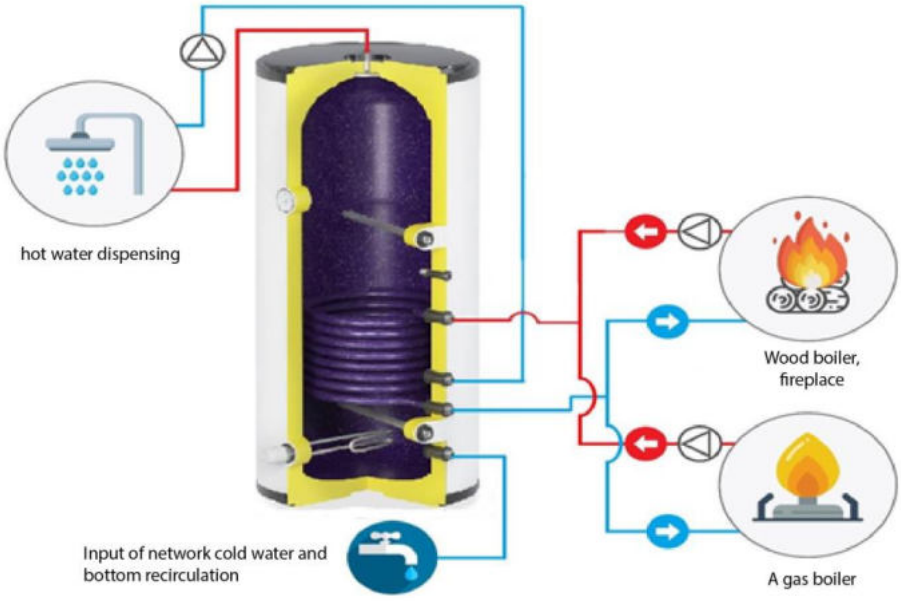
Tank insulation

Rigid polyurethane foam insulation with an average thickness of 40 mm (thermal conductivity coefficient 0.028 W / m * S)

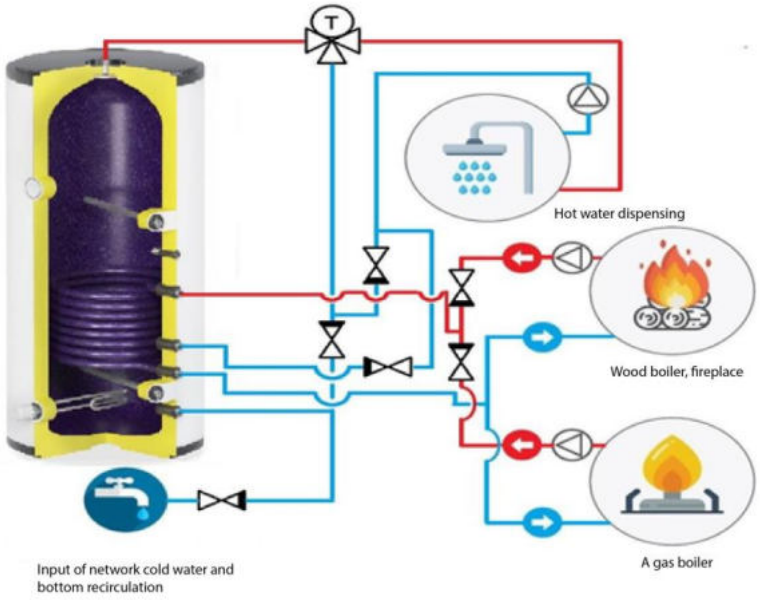
Optionally available:

- **Order a boiler with exits to the left side (PWL designation) and right side (PWR** designation)
- **Order heating element 2-6 kW (in the standard version, heating element is not included)**

Schematic diagram of the operation of the tank of the "PW" series



Scheme with anti-burn valve and tank recirculation



Specifications

		120	150	200
Tank parameters	Units.			
The volume of the tank with maintenance	l	110	157	211
Tank height	mm	770	980	1250
Tank diameter without insulation	mm	505	505	505
Diameter of the tank with insulation thickness:				
Heat insulation:				
Polyurethane foam thickness	mm	40	40	40
The diameter of the tank with insulation	mm	585	585	585
Tank weight	kg	48	55	65
Overall dimensions in the package D * W * H	mm	600*600*1230	600*600*1230	600*600*1500
The diameter of the connection of the upper				
DHW disassembly pipe (external thread)	"	3\4	3\4	3\4
The diameter of the nozzle for installation				
heating element (internal thread)	"	1 1/2	1 1/2	1 1/2
Power & Performance				
Recommended maximum power				
electric heating element	Kw	3--6	3--6	3--6
Heating time of the tank 8 to 50 degrees				
from a heating element with a capacity of 3/6 kW	min	146/73	146/73	195/98
from a boiler with a capacity of				
18 kW	min	24	24	32
24 kW	min			24
32 kW	min			
40 kW	min			
Tank capacity in the 1st hour of operation				
at maximum power for maintenance and				
and heating the tank to 50 degrees, on				
45-degree tank outlet*	l/h	603	603	769
* - subject to the operation of recirculation				
Heat exchanger				
Maintenance area	m2	0,8	0,8	1
Maintenance power	Kw	**19,2**	**19,2**	**24**
Pressures and temperatures				
Heat exchanger volume	Liters	4,2	4,2	5,3
Maximum maintenance temperature	With	95	95	95
Maximum tank temperature	With	80	80	80
Maximum maintenance pressure	Bar	6	6	6
Maximum tank pressure	Bar	6	6	6
Corrosion protection of the tank				
Magnesium anode size	mm	450*22-2pcs	450*22-2pcs	450*22-2pcs
Active Titanium Anode Control Unit		G2/Gn	G2/Gn	G2/Gn
The length of the active titanium anode	mm	400/200	400/200	600/200

1. Description

1.1 The tank of the "PW" series is intended for use in HOT WATER SUPPLY systems!

1.2 The tank of the "PW" series is designed for operating temperature using water in the range from +2 to +80 degrees Celsius.

1.3 All models of this series have the following design features:

A) The lower support of the tank is made on the principle of an annular support with adjustable legs for floor installation, as well as a side bracket for wall mounting. The choice of hardware and fastening of the wall bracket should be carried out taking into account the load-bearing capacity of the wall, as well as the weight of the water-filled tank on which the tank will be installed, for preventing it from falling.

In case of improper selection of fasteners (hardware) or insufficient strength of the wall, which led to the fall of the tank and other damage caused by the fall of the tank, it is not a warranty case and the manufacturer is not responsible for the damage caused.

B) All tanks are equipped with inlet and outlet fittings made of thick-walled pipe with an enamel coating.

1. Placement, installation, operation

2.1 Installation of the tank should begin with familiarization with the technical passport and instructions for the installation and operation of tanks, (read on the www.s-tank.ru)

2.2 The location of the tank must be chosen so that:

- in the event of a leak in the tank, water could go into the sewer ladder and thereby be removed from the room without hindrance;

- protect it from shocks, industrial vibration, exposure to precipitation (installed only indoors). Any impact or mechanical impact can lead to a violation of the thermal insulation material, as well as to a violation of the integrity of the inner coating of the tank, its tightness and, as a result, premature tank failure!

When starting installation, it must be remembered that it is necessary to provide free access to the tank for connection, maintenance or dismantling.

2.3 Installation of the tank is carried out by qualified specialists and persons who have acertificate or a license to perform work related to the installation of heating systems! Confirmation of installation in the warranty card is required.

2.4. Rinse with water before use!

2.4.1 The tank must be grounded, for this purpose, in the upper part of the tank, under the flange bolt, you can connect a grounding bus and use it to connect the grounding to the tank. The resistance of the grounding bus should be no more than 4 ohms. Access to the grounding bus is provided by the customer.

2.5. Acceptance of the goods in terms of quality, completeness and quantity of commodity units in the package is made by the Buyer within two calendar days from the date of receipt of the goods, but no later than 14 (fourteen) calendar days from the date of transfer of the goods.

2.6. The replacement period of the magnesium anode is no later than 6 months from the start of operation. Inspection of the magnesium anode

– at least 1 time in 3 months (if the anode has lost more than 10 mm of its diameter in at least one place, it must be replaced immediately). Checking the operability of the Titanium anode at least once a year by a service engineer with a note in the passport (it does not require replacement in case of proper operation). Check and replace the anodes with a note in the passport (date of inspection, test result). When installing the tank, keep in mind that the anode is installed in the upper part of the tank from the outside, so make the installation, so that in the future, when replacing the anode, this procedure was fast and convenient!!

2.7. You can not start operating the tank without filling it with water.

2.8. It is impossible to operate the tank without a working safety valve, The pressure of the valve operation should not exceed the maximum operating pressure of the tank (see technical characteristics of the tank). The condition of the safety valve must be checked every 90 days - by turning the handle (wrench) left or right so that water flows from the side outlet to the outside. Then set the collar to its original position. If water does not flow when turning the wrench, then the valve is faulty. When, after turning the winch and after returning to its previous position, there is a continuous leakage of water, the valve plug is contaminated. Flush the valve several times, opening the outflow by turning the wrench. To avoid uncontrolled outflow of water, it is necessary to install a hose to drain water into the sewer. Attention - the possibility of hot water flowing. Water flows excessively from the safety valve as a result of:

1) the pressure of the incoming water is higher than the permissible value,

2) short-term, sudden pressure surges of incoming water - is not a warranty case and cannot be replaced. The company is not responsible for the poor performance of the safety valve caused by improper installation of the valve and errors in the system, for example, the absence of a pressure reducing valve in the cold-water supply system.

2.9. Do not shut off the dripping of water from the safety valve - do not plug the hole in the safety valve. If water leaks out of the valve all the time, it means that the pressure in the water supply system too high or the safety valve is faulty. The outlet of the drain valve should be directed downwards. It is recommended to put a funnel under the valve to drain the water. You can install a drain hose and direct it to the sewer to remove the water that occurs when the safety valve is opened. The hose must withstand a temperature of +95 degrees Celsius with an internal diameter of at least 9 mm, a maximum length of 1.2 m, a plane for drainage with a downward slope (min. 3%), indoors, in which temperature does not fall below 0 degrees Celsius. The hose should be protected from mechanical damage, and its outlet should be visible (for verification valve operation). It is forbidden to install shut-off valves (taps, check valves, etc.) between the safety valve (with a relief valve) and the boiler.

2.9.1 The DHW system must be equipped with an expansion tank with a volume of 10% of the volume of the entire system. It is forbidden to install shut-off valves (valves, check valves, etc.) between the expansion tank and the boiler.

2.10. The tank should not be placed in close proximity to an open fire, or come into contact with the insulation of the boiler itself, the installing organization during the installation of the heating system with the tank must ensure compliance with fire safety standards during operation!

2.11. Immediately turn off the tank if steam comes out of the mixer (this should be reported to the service center)

2.12. Constant operation of the tank with a maximum temperature causes accelerated wear of the tank and, as a result, untimely failure of the anode and the tank itself. Therefore, unless absolutely necessary, do not overestimate the temperature of the water in the tank. The comfortable and economical temperature range of the water in the tank (according to European standards) is considered to be from +40 to +50 degrees Celsius (the lower the temperature in the tank, the lower the rate of cooling of the water). the less money you spend on heating water). And only once every 2 weeks it is possible to increase the temperature (up to +65 degrees) in the tank for 1-2 hours to prevent the formation of Legionella bacteria. Also, the absence or periodic shutdown of DHW recycling can significantly save energy, and therefore your money. Another tip regarding the pressure in the tank is that there is no need to keep a pressure of 4-5-6 bar in the tank, for comfortable water use in an ordinary 2-3 storey building Hot water in the tank should not be more than 3 bar. Anything above is a waste of energy to maintain this pressure.

2.13. Proper protection of the boiler interacting with the tank ensures that the heat exchanger of the tank is properly protected.

2.14. Every 12 months, it is necessary to carry out prophylaxis by flushing the tank from sediment.

2.15. In order to extend the life of the tank and ensure the effective functioning of the safety valve, filters that exclude contamination should be used.

2.16. The water heater must be connected directly to the water supply network with a pressure of no more than 0.5 MPa **(about 5 bar),** and the minimum pressure cannot be less than **0.1** MPa - 1 bar. A safety valve must be installed on the cold-water supply pipe. The outflow hole of the safety valve must be permanently open - connected to the atmosphere. No device (e.g., check valve, shut-off valve) can be installed between the safety valve and the water heater, but a tee with a drain valve can be installed. When the pressure in the water supply system exceeds 0.6 MPa, its must be lowered by means of a pressure reducing valve.

2.17. All maintenance and installation work should be carried out in accordance with applicable safety regulations.

2.18. CAUSES OF MALFUNCTIONS

Malfunction	Reason	Troubleshooting
The safety valve does not open (also when trying to purge)	-The safety valve is clogged	-Clean the valve or replace
The safety valve passes through	- The safety valve is dirty or damaged. - Too much water pressure.	- Clean the safety valve. - Use a pressure reducer.
The water in the water heater has become dirty	- A lot of sediment in the tank. - The magnesium anode is worn.	- Clean the tank from sediment. - Replace the magnesium anode. (non-warranty case)

Depending on the volume of your DHW circuit, it is necessary to install an expansion tank (10% of the volume of the circuit) and a safety group (6 bar) on this circuit, since the system is closed!!

3. Tank selection

3.1 The choice of the tank is carried out individually according to the parameters of the heating system or hot water, or according to the project documentation. Also, before choosing a water heater, you should check the quality of the network cold water in your home for the content of chemicals in it, given below in the passport. If the chemical composition does not match, then it is necessary to install equipment for water treatment and water purification before installing the tank. Also, before installation, make sure that the resistance of the grounding bus in your home does not exceed 4 ohms, this will make the lives of your loved ones safer, and protect your tank from the negative effects of stray currents.

3.2 The manufacturer reserves the right to technical changes in accordance with the design documentation.

4. Warranty obligations

4.1 The manufacturer guarantees the compliance of the S-TANK tanks of the "PW" series with safety requirements, provided that the consumer complies with the rules of transportation, storage, installation and operation. The warranty period is 5 years from the date of sale by the manufacturer with a magnesium anode and 10 years with an active titanium anode (with a one-time purchase and installation of a titanium anode and tank). These warranty obligations will come into force when registering the product with the manufacturer within two months from the date of purchase.

Registration of the product is carried out by sending the necessary information to the manufacturer's mail

s-tank.garan@mail.ru, the list of required documents is specified in the instructions for installation and operation http://s-tank.by/wp-content/uploads/Instrukcziya-po-montazhu-i-ekspluataczii-bakov-S-TANK-2.pdf in the absence of registration of the product, the warranty period is 1 (one) year from the date of sale.

4.2 The procedure for fulfilling warranty obligations. If warranty claims are justified, customer service "S-TANK WATER HEATERS" decides how the identified deficiencies can be eliminated - by repairing or replacing the faulty device. The warranty period specified in the warranty card does not change. In case of replacement of a faulty device with a new one, the warranty period is not extended, and a replacement note is made in the warranty card.

4.3 The warranty does not apply to defects caused by the fault of the consumer as a result of violation of the installation and operating instructions, the requirements of the technical passport, as well as in the presence of mechanical damage.

4.4. For faults found during the warranty period, contact the manufacturer/importer. Free repair of malfunctions caused by the fault of the manufacturer will be carried out within the period specified in the current legislation, from the date of confirmation by the manufacturer / importer that the case is under warranty.

CAUTION – Do not dismantle the tank in the event of a complaint before obtaining permission from the manufacturer or importer. In cases of dismantling, without the consent of the manufacturer, this complaint case will not be considered, and this appeal will be recognized as non-warranty.

4.5. To submit a complaint to the service center of the importer / seller, it is necessary to indicate the following data: order number and serial number of the product (located on the information sticker), date of purchase (receipt, invoice), description of the malfunction, The exact address of the installation and the contact phone number of the operator. As well as photos and videos of the malfunction, photos and videos of the 360-degree tank and the entire boiler room where the tank is operated. Also, in the process of determining the causes, the manufacturer may request additional information.

4.6. The condition for the warranty repair of the tank is the provision by the user of a sales receipt, invoice and warranty card - correctly filled in completely, with the mark of the seller and the mounting organization and not containing any corrections. The warranty card must be kept during the entire period of operation of the equipment.

4.7. It is forbidden to install the tank without a working safety valve. In order to comply with the warranty, proof of purchase of the relevant safety valve and a safety valve warranty card are required.

4.8. The installation and commissioning of the tank that is the subject of the warranty must be done by a qualified specialist in accordance with the rules established by law, as well as installation instructions and operation. (Read on www.s-tank.ru)

4.9. Protect the tank from direct sunlight.

4.10. The tank should be installed in areas not affected by the weather (rain, snow, etc.)

4.11. To connect the tank, do not use plastic pipes that are not adapted to work at a temperature of 100 degrees Celsius and a pressure of 1.0 MPa.

4.12. The tank should be installed in such a way as to allow easy access to it for maintenance

4.13. The manufacturer is not responsible for any inconvenience or costs associated with structural changes to the building/premises necessary for the introduction or removal, installation or dismantling of the tank (e.g. narrow doors or corridors) - the request for coverage of costs will be rejected by the manufacturer.If the installation of the water heater is to be carried out in an unusual place (for example, in the attic, in rooms with a floor sensitive to water, warehouses, etc.), it is necessary to protect the room from possible ingress of water and consider the possibility of installing devices designed to collect and drain this water in order to avoid damage.

4.14. All mechanical damage to the tank leads to the loss of warranty.

4.15. The safety valve must be installed directly in front of the tank on the cold-water supply pipe. Use only valves with appropriate specifications adapted for capacitive water heaters. The safety valve should be used in accordance with the operating instructions of the valve.

4.16. It is strictly forbidden to install additional devices (e.g., shut-off valve, check valve, etc.) between the safety valve and the water heater. It is only recommended to install a tee to drain the water from the tank.

4.17. Do not install the tank in rooms where the ambient temperature may drop below 0 degrees Celsius.

4.18. The warranty does not apply if:

- The heating circuit (heat exchanger) was not filled with a solution of distilled water or a specially prepared solution for closed circuits with the appropriate certificate.

- the hot water system and the tank were not grounded (this is necessary to prevent the influence of parasitic (wandering) currents on the metal and, as a result, the occurrence and acceleration of corrosion);

- if the tank was used in the heating system and hot water supply system not equipped with an appropriate safety group to relieve excess pressure;

- in the case of using the tank in aggressive environments;

- in case of poor-quality installation;

- in the absence of an expansion tank for a closed heating system and hot water supply, the required volume (10% of the system volume).

-

- The quality of sanitary hot water in the tank must comply with the following standards:

Electrical conductivity mc/cm *)	**>450**	**-**
pH	**<6**	**0**
	6-8+	**+**
	>8	**-**
Chlorides (mg/l)	**>50**	**-**
Sulphur compounds (mg/l)	**<50+**	**+**
	50-200 0	**0**
	>200	**-**
Nitrogen compounds (mg/l)	**<100**	**+**
Carbon dioxide (mg/l)	**<5 +**	**+**
	5-20 0	**0**
	>20	**-**
Oxygen (mg/l)	**<1 +**	**+**
	1-8 0	**0**
	>8	**-**
Amon (mg/l)	**<2 +**	**+**
	2-20 0	**0**
	>20	**-**
Iron and manganese (mg/l)	**>0.2**	**0**
Sulphur compounds (mg/l)	**<5**	**-**
Chlorine (mg/l)	**<0.5**	**+**

*) at 20 degrees Celsius

+ - resistant material

0 - destruction may occur if several substances reach the value of '' 0 ''

- - Not recommended for use.

- damage caused by improper transportation;

- intentional damage or damage resulting from negligence;

- mechanical damage or damage resulting from the effects of atmospheric conditions (for example, frost) and actions arising from exceeding the permissible working pressure specified in the technical passport;

- malfunctions caused by the use of fittings that are incompatible with current standards;

- in cases where shut-off valves are installed between the safety valve and the boiler.

- in cases of installation of shut-off valves between the expansion tank and the boiler.

- accidents caused by the installation or operation of faulty or damaged safety valves;

- damage resulting from improper use;

- damage resulting from non-compliance with the rules contained in the Instructions for the installation and operation of tanks and the Technical Passport;

- damage resulting from fire, flood, lightning, power surges or other cases;

- accidents that occurred as a result of the use of non-original spare parts, such as a heating element unit, a magnesium anode, a titanium anode, a thermostat, a thermometer, gaskets, etc.;

- cases of electrochemical corrosion;

- damage resulting from the lack of replacement of the magnesium anode or the frequency of checking the operability of the titanium anode within the time specified in the technical passport;

- cases in which there is a difference in temperature between the water flowing from the tap and the readings on the thermometer up to 12 degrees Celsius (this may be affected, in particular, by hysteresis thermostat, the distance between the tank and the point of consumption, low temperature in the room in which the water heater is installed);

- cases associated with the natural formation of stone;

- damage resulting from the lack of periodic cleaning of the tank from accumulated and sediment;

- In cases of improper selection of fasteners (hardware) or insufficient strength of the wall, which led to the fall of the tank and other damage caused by the fall of the tank, the factory is not a warranty case is not responsible for the damage caused.

- in cases of dismantling the tank without the consent of the manufacturer in the event of a complaint

4.19. The method of repairing the tank is determined by the manufacturer.

Prohibited! Without the consent of the manufacturer, make structural changes to all tanks, as well as carry out repair work during the warranty period. In case of violation of this paragraph, the tank is automatically removed from warranty service by the manufacturer.

4.20. The free repair does not include: adjustment of the tank, replacement of the magnesium anode, replacement of the seal or other parts that naturally wear out during operation.

4.21. These manufacturer's warranty conditions are the only ones. Noother warranties will be accepted unless instructed in writing by the manufacturer.

4.22. For matters not regulated by these terms, the provisions of the Civil Code shall apply.

5. Storage conditions:

Store the goods before commissioning in a dry, heated room at a temperature not lower than 20 ° C and a relative humidity of not more than 65%.

Complete set of the standard product:

1. Tank-1pcs
2. Non-removable thermal insulation -1 piece
3. Top decorative cover-1pc
4. Bottom decorative cover-1sht
5. Thermometer-1pc
6. Lower legs for floor installation-4pcs
7. Side leg for vertical adjustment-1pc
8. Side bracket-1pc
9. Wall bracket-1pc
10. Anker-2pcs
11. Passport for the product-1 piece
12. Magnesium anode-1pc
13. Titanium anode with power supply (optional on request)-1pc, if titanium anode is installed, magnesium anode then not installed.

The manufacturer notifies you that damage to the primer and enamel coating may form on the outer and inner metal surfaces of the tank due to the fact that the product in the process production was heat treated at temperatures above 850 °C. This causes the formation of oxides (iron oxide, etc.) on the outer and inner surfaces of the tank, which can subsequently peel off and peel off from the surface together with the primer coating and enamel. This does not affect the performance of the tank and does not reduce the warranty period and service life of the product.

Sale date _____

_____

Signature of Seller

_____

_____

Name and address of the trading organization

_____

_____

Seal.

Name and address of the mounting organization

_____

_____

Seal.

Magnesium anode replacement table

Date of replacement	No. and date of the check, invoice	Anode model	Organization Making a replacement	NAME	Signature

Titanium anode inspection table

Date of inspection	No. and date of the check, invoice	Anode model	An organization that produces Check	NAME	Signature

Manufacturer:

LLC "S-TANK WATER HEATHERS", RB, Minsk region

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