

Type of device: WATER STORAGE TANK

CAPACITIES AVAILABLE: 80, 100, 120, 140, 160, 200, 250, 300, 400, 500, 600, 750, 1000

PRODUCT ID: ZasobnikPion



## 1. PRODUCT DESCRIPTION

A vertical water storage tank is a device for independent operation. The device is designed to heat domestic hot water, which can be used for a long time thanks to a thick insulating layer. Depending on the model, the device has one, two or three holes for an electric heater, which is the only source of power/heating for the tank.

**THE TANK DOES NOT REQUIRE MAGNESIUM ANODE**

## 2. CONSTRUCTION:

Tank body - made of black steel. The steel thickness presented below is dedicated to a given product capacity.

CAPACITY [L]	Lower and upper bottom	Tank body
	steel sheet thickness [mm]	steel sheet thickness [mm]
80	4	3
100	4	3
120	4	3
140	4	3
160	4	3
180	4	3
200	4	3
250	4	3
300	4	3
400	4	4
500	4	4
600	4	4
750	4	4
1000	4	4

The internal anti-corrosion layer - the tank is covered EPIDIAN - food grade epoxy resin atested by National Institute of Public Health NIH - National Research Institute.

The externam thermal insulation - it is made of cloased polyurethane foam PUR of about 5,5 centimeters thickness being the integral part of the tank. The external values of the buffer are enhanced by ecological leather, which can be removed when needed.

### 3. INSTALLATION SAFETY

The process of installation must be prepared by an installer with appropriate qualifications and in compliance with Occupational Health and Safety Rules. Before starting the installation, please read this user manual. The product should be installed in accordance with the intended use recommended by the Manufacturer. The installation cost is the responsibility of the Buyer/User. The manufacturer is not responsible for device defects resulting from incorrect installation of the tank or by a person who does not have installation qualifications.

Installing the tank in places exposed to: low temperature/ freezing, high temperature/ steam/ explosion and other substances that accelerate corrosion or oxidation (e.g. chlorine, ammonia) is prohibited, and its effects release the Manufacturer from liability for the tank.

If the tank is installed in a non-standard place, the surface of which is exposed to rapid destruction in contact with water, the User is obliged to appropriately protect the surface against possible secondary damage. IT IS PROHIBITED TO USE THE TANK WITHOUT AN OPERATING SAFETY VALVE - regular inspection of the valve is recommended. You must also not prevent dripping from the safety valve (do not seal the valve, but specify the cause and replace it with a functional valve if necessary).

If the tank is installed in a closed heating system, an expansion vessel with a capacity of not less than 5% of the tank capacity should be installed, while if the tank is installed in an open system, the so-called expansion tank with a capacity of not less than 5% of the heater capacity should be installed.

### 4. INSTALLATION

The tank should be placed on a durable surface in a vertical position (the only permissible form). It is necessary to install the tank in such a place that the user has easy access to the safety valve in the event of a failure of the device, the heat source or the safety valve itself. The distance from the tank cover to the ceiling should not be less than 30 cm. Do not interfere with the connections, e.g. by bending them. In accordance with Journal of Law 2015 point: 1422 each connector must be insulated. The appropriate water intake for the buffer is the water supply network, the water quality must meet the standards of Council Directive 98/83/EC of November 3, 1998. ref. Quality of water intended for human consumption and the corresponding legislation of the Republic of Poland (Journal of Laws of 2017, item 2294). There is a risk of discoloration of the water or a foreign odor if the device is connected to its own water intake, for which the Manufacturer is not responsible.

The installation begins with filling the tank with water by opening the valve at the utility water inlet and opening (completely until the air is released, i.e. until the water

flows out in a continuous stream) at the water outlet from the tank. When the tank is filled with water, close the valve and make sure that all connections are tight - tighten them if necessary. The installer is obliged to install a safety valve. The tank works on the principle of gravity, and consequently the inlet of the hot heating medium into the buffer must be located higher than the outlet from the boiler.

There are many options for connecting the buffer in the heating system, including combining several heat sources, e.g. a boiler/ furnace (gas, coal, wood, pellets, eco-pea), solar system, heat pump, fireplace. One of the simplest configurations is the scheme:

furnace => buffer => water conditioner => heaters

The permissible temperature for the buffer operation is maximum 70 degrees Celsius, the maximum working pressure of the buffer is 0.6 MPa.

It is important to use a dialectical connector that does not conduct electricity at the junction between the cold and hot water connectors of the tank and the installation cables. This solution eliminates contact of iron with copper, thus extending the life of the tank and preventing electrolysis (a phenomenon that is particularly active in water with an acidic pH (level <7)).

If the User decides to install an electric heater, it must be connected through a socket with a grounding pin and must be protected by a residual current circuit breaker. The device works properly when the entire heating installation has been properly constructed and secured.

## 5. USER MANUAL

**Important!** You must not use the tank without filling it with water and without properly working safety valve.

The device maintenance process must be carried out in accordance with current Occupational Health and Safety rules.

After installing the tank but before using it, rinse the tank by filling the tank with water, heating it to a temperature of 50 degrees Celsius, and then releasing the water through the tap at the furthest point in the installation, and then repeating the process one more time.

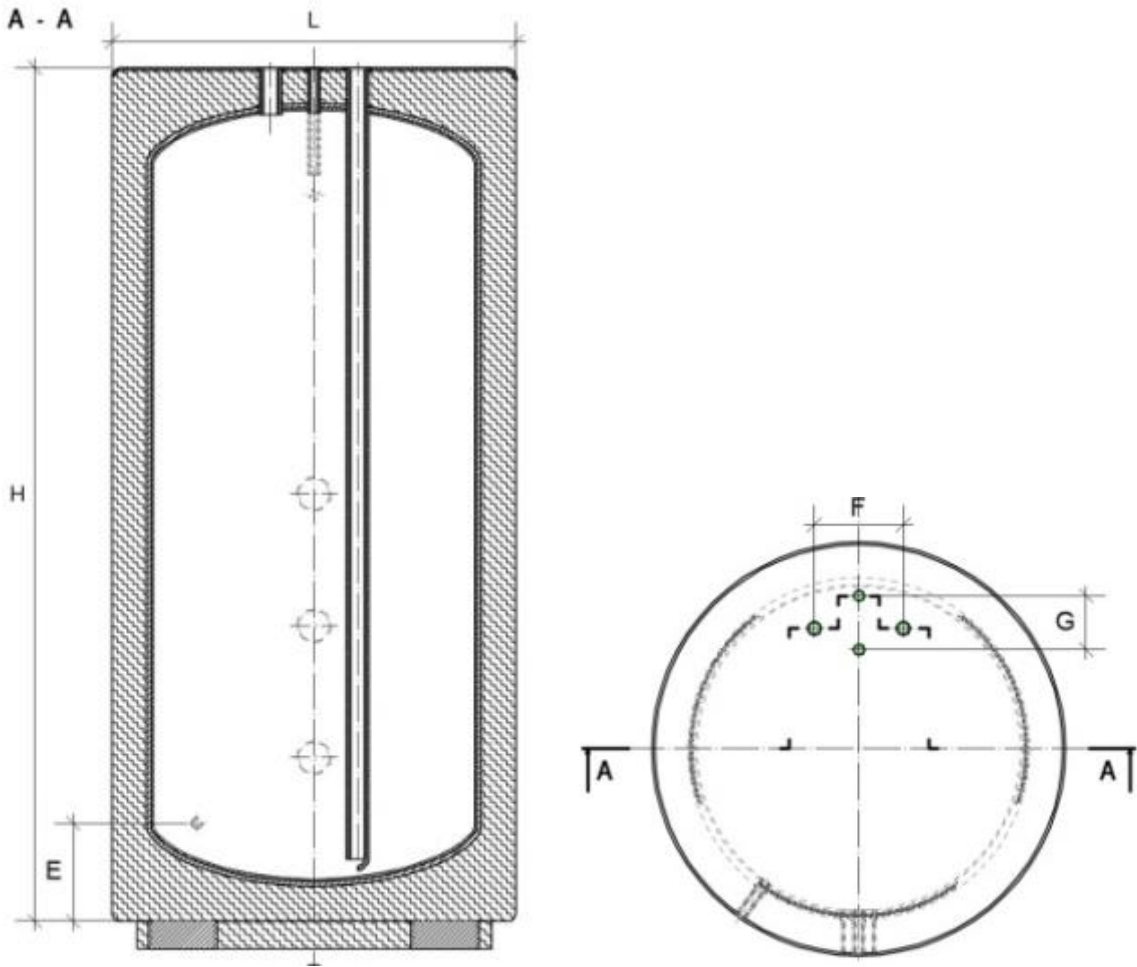
Once a month, you should heat the tank - heat water to 70 degrees Celsius to remove bacteria which may occur.

If an undesirable factor occurs - e.g. the risk of freezing water inside the tank, in this case water from the tank should be immediately removed. The appearance of fire in the close contact with the tank may cause it to burn.

In case of steam appearance at the hot water outlet, immediately open the water outlet/faucet and check the temperature of the heat source - reduce or turn off the heat source. If the device is connected to the electrical network, remove the plug from the power socket and find the cause of excessive temperature with the manufacturer of the heat source. The above situation may result in loss of health or life.

**ATTENTION!** The tank requires a flow of utility water of at least 20% of its capacity for 24 hours of operation. Precipitation of sediments and discoloration of water caused by lack of tank operation, the so-called the temporary stagnation of the hot water circuit is not subject to complaint.

TECHNICAL DRAWING



SYMBOL	CAPACITY	DIAMETER [L]	LENGHT [H]	DIAM. [G]	DIAM. [F]	DIAM. [E]
ZasobnikPion80	80 L	490 mm	945 mm	70 mm	153 mm	175 mm
ZasobnikPion100	100 L	490 mm	1060 mm	70 mm	153 mm	200 mm
ZasobnikPion120	120 L	490 mm	1180 mm	70 mm	153 mm	200 mm
ZasobnikPion140	140 L	490 mm	1295 mm	70 mm	153 mm	200 mm
ZasobnikPion160	160 L	490 mm	1560 mm	70 mm	153 mm	200 mm
ZasobnikPion180	180 L	490 mm	1760 mm	70 mm	153 mm	200 mm
ZasobnikPion200	200 L	630 mm	1240 mm	85 mm	160 mm	170 mm
ZasobnikPion250	250 L	630 mm	1490 mm	85 mm	160 mm	170 mm
ZasobnikPion300	300 L	630 mm	1740 mm	85 mm	160 mm	170 mm
ZasobnikPion400	400 L	830 mm	1420 mm	85 mm	160 mm	270 mm
ZasobnikPion500	500 L	830 mm	1520 mm	85 mm	160 mm	270 mm
ZasobnikPion600	600 L	680 mm	1920 mm	85 mm	160 mm	200 mm
ZasobnikPion750	750 L	830 mm	1920 mm	85 mm	160 mm	270 mm
ZasobnikPion1000	1000 L	1000 mm	1590 mm	85 mm	160 mm	370mm

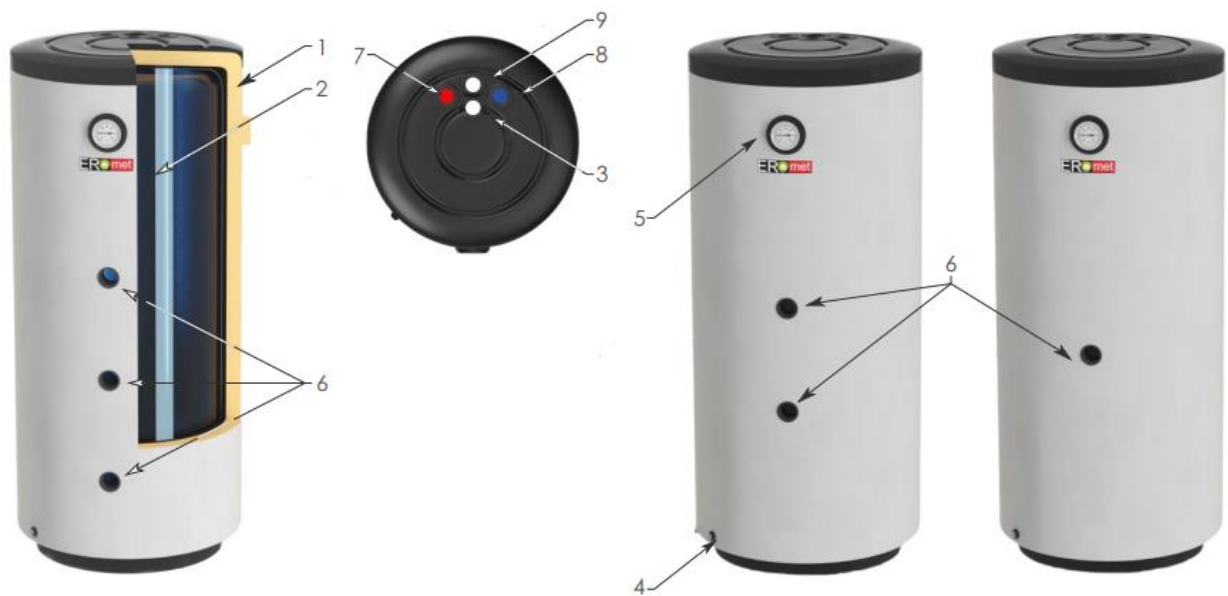
## TECHNICAL DATA

Technical Parameters		Jedn.	ZasobnikPion 80L	ZasobnikPion 100L	ZasobnikPion 120L	ZasobnikPion 140L	ZasobnikPion 160L	ZasobnikPion 180L	ZasobnikPion 200L	ZasobnikPion 250L	ZasobnikPion 300L	ZasobnikPion 400L	ZasobnikPion 500L	ZasobnikPion 600L	ZasobnikPion 750L	ZasobnikPion 1000L
Epidian - food grade epoxy resin- Anti-corrosion coating																
THERMAL INSULATION - Closed polyurethane foam PUR																
Nominal capacity	[L]		80	100	120	140	160	180	200	250	300	400	500	600	750	1000
Real capacity	[L]		98	112	127	141	175	200	241	299	355	572	617	592	796	1076
Energy accumulated in the tank. Assumptions for the temperatures: domestic water 42°C; set in the tank 70°C		[L]	179	205	232	258	320	365	439	546	647	1043	1125	1079	1451	1962
Surface	[m <sup>2</sup> ]		1,5	1,6	1,8	1,9	2,2	2,5	2,9	3,3	3,7	5,0	5,2	4,5	6,1	6,4
Weight	[kg]		33	37	41	45	53	60	67	77	88	116	123	111	147	154
Water tank maximum working temperature and pressure		[°C / Bar]	70°C / 6 Bar													
Downtime loss (S) in watt [W] for storage capacity in liters [L]	[W]		25	26	27	28	30	32	34	36	39	46	47	46	51	57
Heat losses depending on the capacity (V)	[kWh/24h]		0,61	0,63	0,66	0,68	0,73	0,76	0,81	0,87	0,93	1,09	1,12	1,11	1,23	1,37
Energy class			A+	A+	A+	A+	A+	A+	A	A	A	B	B	B	B	B
Dimentions																
H			945	1060	1180	1295	1560	1760	1240	1490	1740	1420	1520	1920	1920	1590
L			ø490	ø490	ø490	ø490	ø490	ø490	ø630	ø630	ø630	ø830	ø830	ø830	ø680	ø1000
Connector - 5/4" or 6/4"		G	70	70	70	70	70	70	85	85	85	85	85	85	85	85
		F	153	153	153	153	153	153	160	160	160	160	160	160	160	160
Drain - (1/2" for 80L - 140L; 3/4" for 160L - 1000L)		E	175	200	200	200	200	200	170	170	170	270	270	200	270	370

\*The manufacturer reserves the right to the technical modifaions/improvements in the product.

THE TANK DOES NOT REQUIRE MAGNESIUM ANODE

## SCHEMA - VERTICAL BUFFER



## LEGEND

1. POLYURETHANE FOAM THERMAL INSULATION
2. ANTI-CORROSION LAYER
3. CAPILLARY TUBE
4. DRAIN  $\frac{3}{4}$ "
5. THERMOMETER  $\frac{1}{2}$ "
6. ELECTRIC HEATER WITH THERMOSTAT  $\frac{5}{4}$ "
7. DOMESTIC WATER INTAKE  $\frac{3}{4}$ "
8. DOMESTIC WATER SUPPLY
9. WATER CIRCULATION  $\frac{1}{2}$ "