OPERATING INSTRUCTIONS AND INSTALLATION

HOT WATER TANKS STATIONARY

OKC 160 NTR/BP
OKC 200 NTR/BP
OKC 200 NTRR/BP
OKC 300 NTR/BP
OKC 300 NTRR/BP
OKC 500 NTR/BP
OKC 500 NTRR/BP

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DRAŽICE
ČLEN SKUPINY NIBE

CONTENTS

READ THIS MANUAL CAREFULLY BEFORE INSTALLING THE STORAGE TANK!

Dear customer

Družstevní závody Dražice - strojírna s.r.o. would like to thank you for choosing to use our brand's product. These regulations will familiarize you with the use, construction, maintenance and other information about electric water storage tanks.

The product is not intended for use by

a) by persons (including children) with reduced physical, sensory or mental capabilities or
b) with insufficient knowledge and experience, unless they are supervised by a responsible person or have not been properly trained.

The manufacturer reserves the right to make technical changes to the product. The product is designed for permanent contact with drinking water.

We recommend using the product indoors at an air temperature of +2 °C to ++ 45 °C and relative humidity of max. 80%.

The function and safety of the product have been tested by the Engineering Test Institute in Brno.

The publisher, Družstevní závody Dražice - strojírna s.r.o., Dražice 69, Benátky nad Jizerou, 294 71, Czech Republic, hereby declares that the packaging complies with the requirements of Sections 3 and 4 of Act No. 477/2001 Coll. on packaging and on amendments to certain acts, as amended.

Made in the Czech Republic.

Meaning of pictograms used in the instructions

Important information for users of the container.

Manufacturer's recommendations, compliance with which will ensure trouble-free operation and long service life of the product.

CAUTION!
Important warning that must be observed.

1 TECHNICAL SPECIFICATIONS OF THE PRODUCT

1.1 FUNCTION DESCRIPTION

The OKC 160-500 NTR(R)/BP series of water tanks, thanks to their design and wide range of variants, enable economical preparation of domestic hot water (DHW) using various energy sources. Their rated output guarantees a sufficient amount of DHW for residential units, commercial premises, restaurants, and similar facilities. Electricity, various types of central heating boilers, renewable energy sources (heat pumps, solar collectors) and combinations thereof can be selected for DHW heating.

Domestic water heating with thermal energy via an exchanger

The shut-off valves on the exchanger must be open to ensure the flow of heating water from the hot water heating system. It is recommended to install a vent valve together with the shut-off valve on the inlet to the exchanger, which can be used to vent the exchanger as needed (especially at the beginning of the heating season). The heating time of the exchanger depends on the temperature and flow rate of the water in the hot water heating system.

1.2 OPERATING AND INSTALLATION INSTRUCTIONS FOR TYPES: **OKC 160 NTR/BP, OKC 200 NTR/BP, OKC 200 NTRR/BP**

1.2.1 PRODUCT DESCRIPTION

The storage tank is welded from steel sheet, the exchangers are made of steel pipe and the whole unit is enamelled with hot water resistant enamel. As additional protection against corrosion, a magnesium anode is installed in the upper part of the storage tank, which regulates the electrical potential inside the tank and thus reduces the risk of corrosion. Hot and cold water outlets and a circulation opening are welded to the tank. On the side of the tanks, under a plastic cover, there is a cleaning and inspection opening with a flange, into which an electric heating unit of various outputs can be installed. The 200 l tank has a G 6/4" opening, into which a TJ G 6/4" series heating element can be installed. This is used when the tank is connected to a solar system or a heat pump system to heat the water in the upper part of the tank to the desired temperature. The tank is placed on the floor next to or near the heat source. Both the tank and the heat exchangers are tested at 1.5 times the operating pressure. The temperature indicator is located on the heater casing. The tank is insulated with 42 mm of polyurethane foam. The heater casing is made of powder-coated sheet steel.

The NTR version has one exchanger located in the lower part of the tank and one heating water source is used for heating.

The NTRR version is equipped with two exchangers for any combination of two heating water sources; both exchangers can be connected in series. The NTR/BP and NTRR/BP types do not have a heating element. The tank cannot be used for continuous hot water heating in the exchanger.

1.2.2 CONSTRUCTION AND BASIC DIMENSIONS

OKC 160 NTR/BP

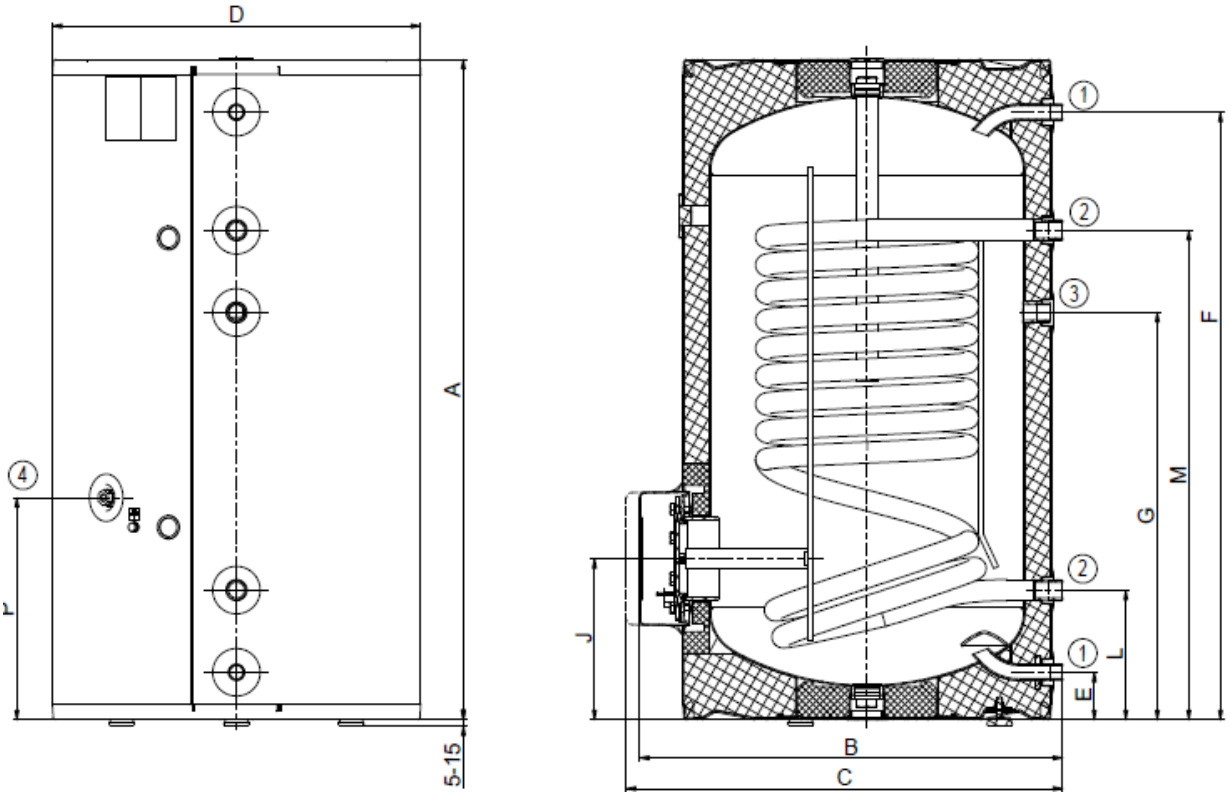


Figure 1

	OKC 160 NTR/BP
A	1045
B	660
C	710
D	584
E	75
F	962
G	645
J	255
L	205
M	775
P	350

Table 1

①	3/4" external
②	1" external
③	3/4" internal
④	1/2" internal

OKC 200 NTRR/BP

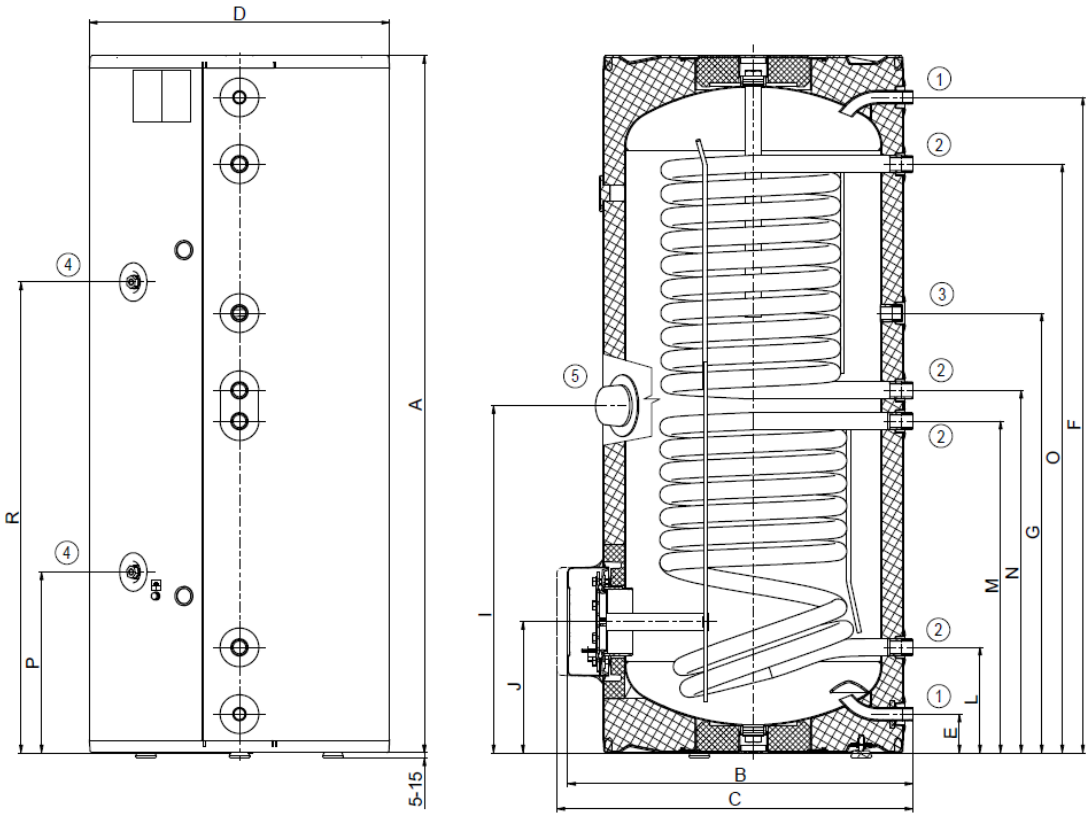


Image 2

	OKC 200 NTRR/BP
A	135
B	660
C	710
D	584
E	75
F	1275
G	855
I	675
J	255
L	205
M	645
N	705
O	1145
P	350
R	915

Table 2

①	3/4" external
②	1" external
③	3/4" internal
④	1/2" internal
⑤	6/4" internal

OKC 200 NTR/BP

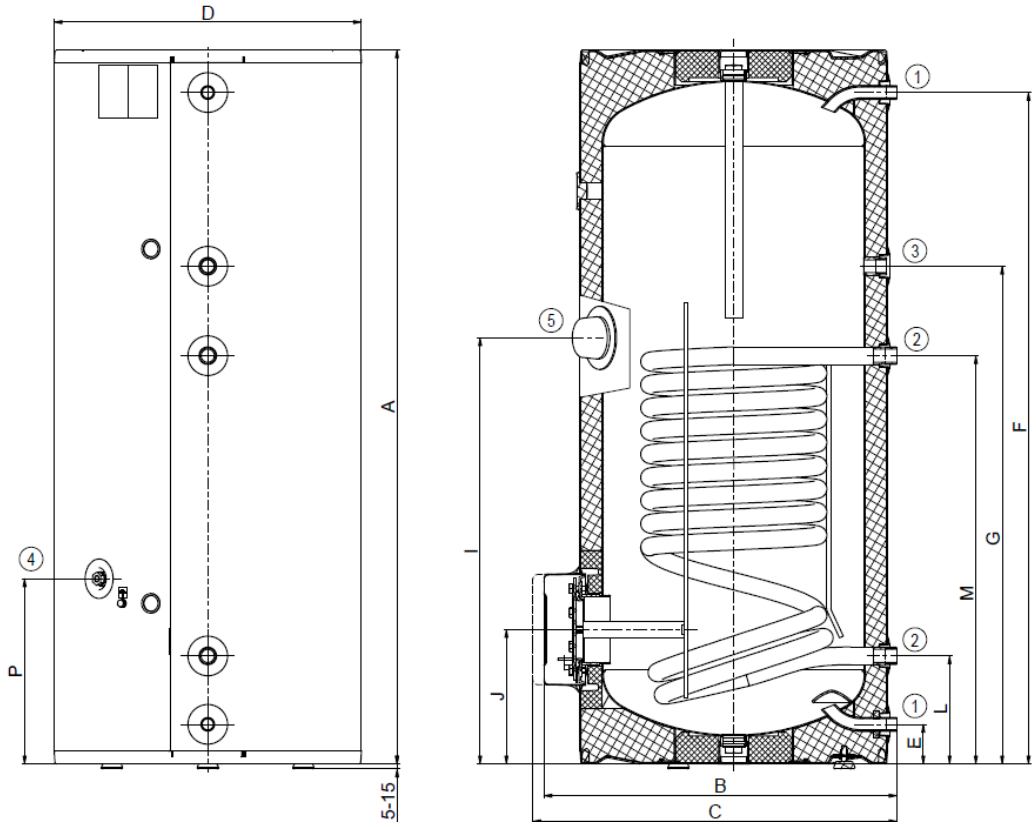


Image 3

	OKC 200 NTR/BP
A	1355
B	660
C	710
D	584
E	75
F	1275
G	945
I	810
J	255
L	205
M	775
P	350

①	3/4" external
②	1" external
③	3/4" internal
④	1/2" internal
⑤	6/4" internal

Table 3

1.2.3 TECHNICAL PARAMETERS

MODEL		OKC 160 NTR/BP	OKC 200 NTR/BP	OKC 200 NTRR/BP
VOLUME	l	148	208	200
WEIGHT WITHOUT WATER	kg	76	92	103
MAXIMUM OPERATING PRESSURE IN THE CONTAINER	bar		6	
MAXIMUM OPERATING PRESSURE IN THE EXCHANGER	bar		10	
MAXIMUM HEATING WATER TEMPERATURE	°C		110	
MAXIMUM OPERATING TEMPERATURE IN THE CONTAINER	°C		80	
HEATING AREA OF THE UPPER HEAT EXCHANGER	m^2	-	-	1
HEATING AREA OF THE LOWER EXCHANGER	m^2	1,1	1,19	0,96
PERFORMANCE OF THE UPPER / LOWER HEAT EXCHANGER AT A HEATING WATER TEMPERATURE OF 80 °C AND A FLOW RATE OF 720 l/h	kW	-/27	-/27	24/22
CONTINUOUS HOT WATER OUTPUT [1] UPPER / LOWER EXCHANGER	l/h	-/990	- /990	650/670 *1080
HEATING TIME WITH UPPER / LOWER HEAT EXCHANGER FROM 10 °C TO 60 °C	min	-/19	-/27	14/16
ENERGY EFFICIENCY CLASS			C	
STATIC LOSSES	W	75	82	82

[1] Hot water 45 °C
[2] These data do not apply to NTR/BP types that do not have a body
* Exchangers connected in series

Table 4

1.3 OPERATING AND INSTALLATION INSTRUCTIONS FOR TYPES:

OKC 300 NTR/BP,

OKC 500 NTR/BP, OKC 300 NTRR/BP, OKC 500 NTRR/BP

1.3.1 PRODUCT DESCRIPTION

The storage tank is welded from sheet steel, the exchangers are made of steel tubing and the entire unit is coated with hot water resistant enamel. As additional protection against corrosion, a magnesium anode is installed in the upper part of the storage tank, which regulates the electrical potential inside the tank and thus reduces the risk of corrosion. Hot and cold water outlets and a circulation opening are welded to the tank. On the side of the tanks, under a plastic cover, there is a cleaning and inspection opening with a flange, into which a heating unit of various outputs can be installed. The tank has a G6/4" opening into which a TJ G 6/4" series heating element can be installed. This is used when the tank is connected to a solar system or a heat pump system to heat the water in the upper part of the tank to the required temperature. The tank is placed on the floor next to or near the heat source. The tank and heat exchangers are tested at 1.5 times the operating pressure. The temperature indicator is located on the heater casing. The tank is insulated with 50 mm of polyurethane foam. The tank is covered with a plastic casing (hardened polystyrene).

The NTR version has one exchanger located in the lower part of the tank and one heating water source is used for heating.

The NTRR version is equipped with two exchangers for any combination of two heating water sources; both exchangers can be connected in series. The NTR/BP and NTRR/BP types do not have a heating element. The tank cannot be used for continuous hot water heating in the exchanger.

1.3.2 CONSTRUCTION AND BASIC DIMENSIONS OF THE TANK

OKC 300 NTRR/BP

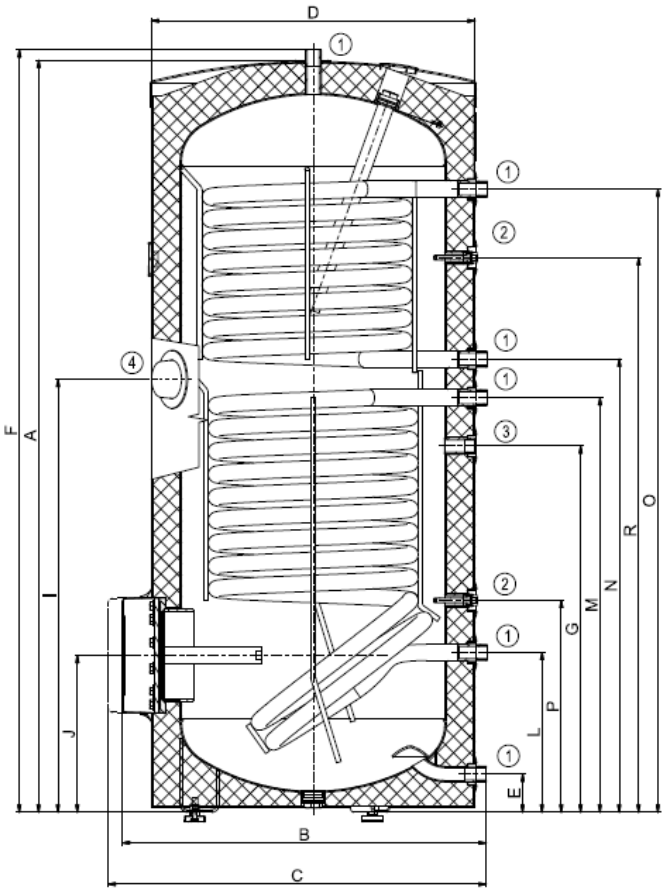


Figure 4

	OKC 300 NTRR/BP
A	1558
B	750
C	810
D	670
E	77
F	1579
G	760
I	895
J	325
L	330
M	858
N	939
O	1291
P	438
R	1148

Table 5

①	1" external
②	1/2" internal
③	3/4" internal
④	6/4" internal

OKC 300 NTR/BP

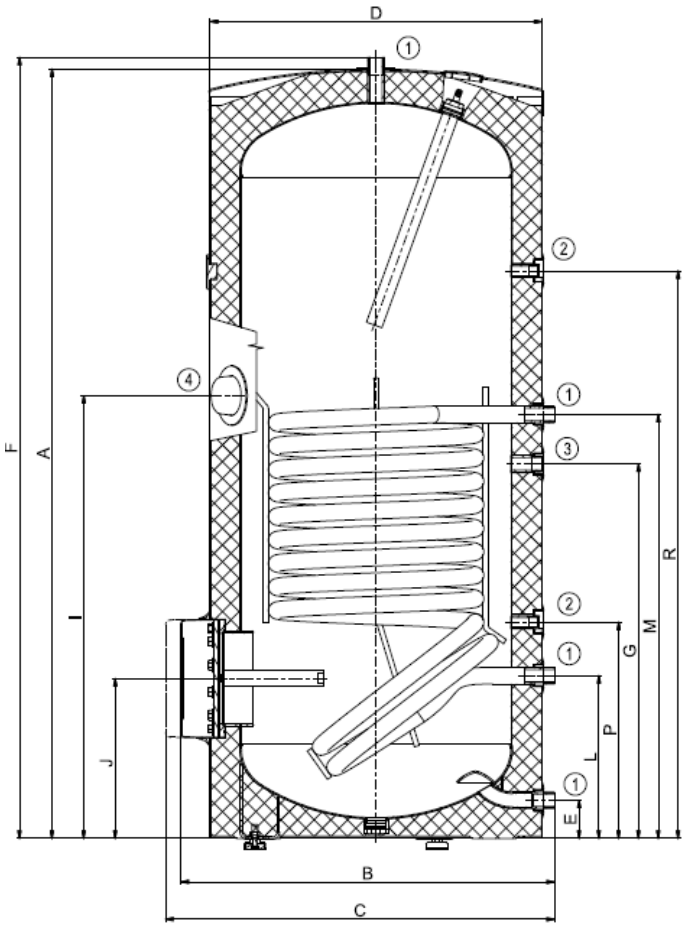


Image 5

	OKC 300 NTR/BP
A	1558
B	750
C	810
D	670
E	77
F	1579
G	760
I	895
J	325
L	330
M	858
P	438
R	1148

Table 6

①	1" external
②	1/2" internal
③	3/4" internal
④	6/4" internal

OKC 500 NTRR/BP

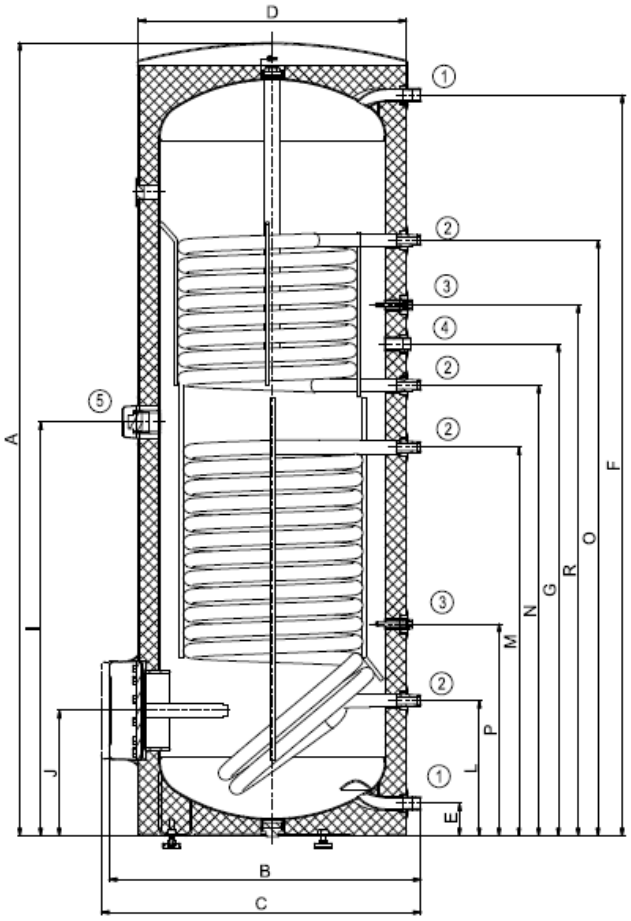


Image 6

	OKC 500 NTRR/BP
A	1924
B	800
C	860
D	700
E	55
F	1790
G	1264
I	1040
J	288
L	220
M	965
N	1114
O	1604
P	380
R	1409

Table 7

①	1" external
②	3/4" external
③	1/2" internal
④	3/4" internal
⑤	6/4" internal

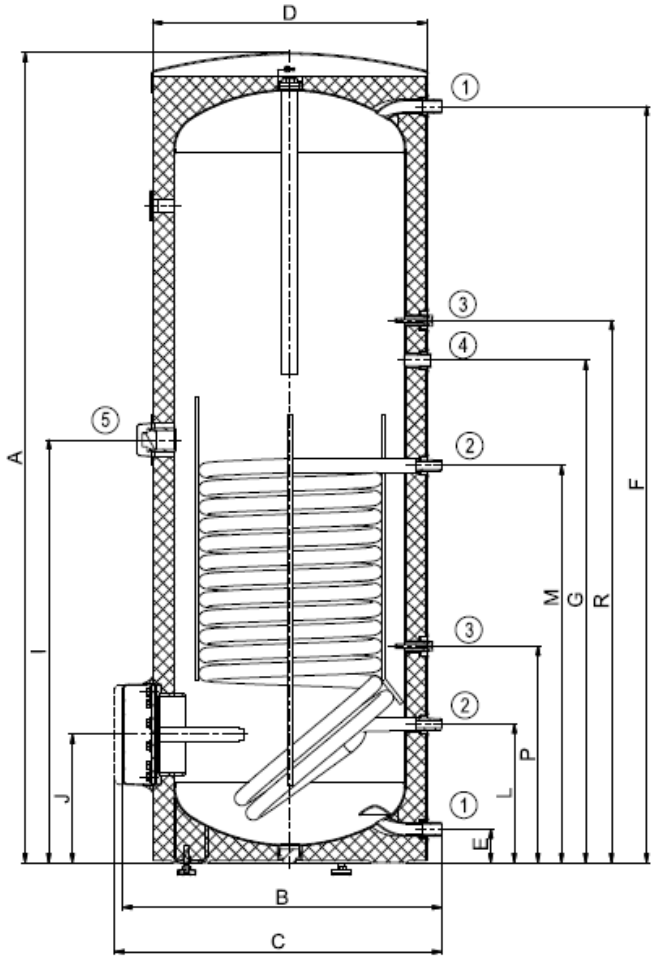


Image 7

	OKC 500 NTR/BP
A	1924
B	800
C	860
D	700
E	55
F	1790
G	1264
I	1040
J	288
L	220
M	965
P	380
R	1409

Table 8

①	1" external
②	3/4" external
③	1/2" internal
④	3/4" internal
⑤	6/4" internal

1.3.3 TECHNICAL PARAMETERS

MODEL		OKC 300 NTR/BP	OKC 300 NTRR/BP	OKC 500 NTR/BP	OKC 500 NTRR/BP
VOLUME	l	296	285	447	433
WEIGHT WITHOUT WATER	kg	108	126	149	158
MAXIMUM OPERATING PRESSURE IN THE CONTAINER	bar		10		
MAXIMUM OPERATING PRESSURE IN THE EXCHANGER	bar		10		
MAX. HEATING WATER TEMPERATURE	°C		110		
MAX. OPERATING TEMPERATURE IN THE CONTAINER	°C		80		
HEATING AREA OF UPPER EXCHANGER	m^2	-	1	-	1,4
HEATING AREA OF THE LOWER EXCHANGER	m^2	1,5	1,5	2	2
PERFORMANCE OF UPPER/LOWER EXCHANGER AT HEATING WATER TEMPERATURE 80 °C AND FLOW RATE 720 l/h *	kW	-/35	24/35	-/58	37/58
CONTINUOUS HOT WATER OUTPUT [1] UPPER / LOWER HEAT EXCHANGER	l/h	- /1100	670/1100	- /1448	908/1448
HEATING TIME WITH UPPER / LOWER HEAT EXCHANGER FROM 10 °C TO 60 °C	min	-/30	16/24	-/26	26/27
ENERGY EFFICIENCY CLASS			C		
STATIC LOSS	W	83	83	110	111

[1] Hot water 45 °C
[2] These data do not apply to NTR/BP types that do not have a body
* value derived by calculation

Table 9

2 OPERATING AND INSTALLATION INFORMATION

2.1 OPERATING CONDITIONS

The tank must be used exclusively in accordance with the conditions specified on the rating plate and the electrical connection instructions. Each separately shut-off heater must be equipped with a shut-off valve, test tap or plug on the cold water inlet for checking the function of the non-return valve, a non-return valve and a safety valve. Heaters over 200 liters must also be equipped with a pressure gauge. In addition to the legally recognized national regulations and standards, the connection conditions specified by the local electrical and water utilities must also be observed, as well as the installation and operating instructions.

The temperature at the installation site of the tank must be above +2 °C, and the room must not freeze. The appliance must be installed in a suitable location, i.e., the appliance must be easily accessible for any necessary maintenance, repair, or replacement.

In the case of very hard water, we recommend that you install a standard water softener (water filter) upstream of the tank or set the thermostat to a maximum operating temperature of 60 °C (set to "60"). For proper operation, it is essential to use drinking water of the appropriate quality.

Tanks with a capacity of 300 liters are screwed to the bottom wooden pallet from below with M12 screws. After removing the tank from the pallet and before putting it into operation, it is necessary to install 3 screw feet supplied as accessories with the product. The three adjustable feet can be used to ensure that the tank is vertical within a range of 10 mm.

2.2 ADDITIONAL ELECTRICAL INSTALLATION

The water tank can be equipped with an **electric heating** unit (TJ, TPK or R) with fixed heating element power. The possibility of installing heating elements is specified in the heating element application table, see catalog or www.dzd.cz

2.3 WATER INSTALLATION

Pressurized water is connected to pipes with a 3/4" thread. Blue - cold water inlet, red - hot water outlet. In case of disconnection of the tank, it is necessary to install Js 3/4" screw fittings on the service water inlets and outlets. The safety valve is installed on the cold water inlet marked with a blue ring.

Each pressurized hot water tank must be equipped with a diaphragm spring-loaded safety valve. The nominal clearance of safety valves is determined according to the standard. The safety valve must be easily accessible, as close to the tank as possible. The inlet pipe must have at least the same clearance as the safety valve. The safety valve must be positioned high enough to ensure that any overflowing water can drain away by gravity. We recommend installing the safety valve on a branch pipe. This makes replacement easier without having to drain the water from the tank. Safety valves with a factory-set pressure are used for installation. The trigger pressure of the safety valve must be the same as the max. allowed pressure of the tank and at least 20% higher than the max. pressure in the water supply system (Table 10Table 10). If the pressure in the water supply system exceeds this value, a pressure reducing valve must be installed in the system. **No shut-off valve may be installed between the storage tank and the safety valve.** Follow the safety device manufacturer's instructions during installation.

The safety valve must be checked before each start-up. The check is performed by manually moving the diaphragm away from the seat by turning the knob of the tear-off device in the direction of the arrow. After turning, the knob must snap back into the notch. The correct function of the tear-off device is indicated by water draining through the drain pipe of the safety valve. In normal operation, this check must be performed at least once a month and after each shutdown of the tank for more than 5 days. Water may drip from the safety valve through the drain pipe. The pipe must be freely open to the atmosphere, positioned vertically downwards and in an environment where the temperature does not fall below freezing. Use the recommended drain valve to drain the tank. First, shut off the water supply to the tank.

The required pressures can be found in the following table -Table 10Table 10 . For the safety valve to function properly, a check valve must be installed on the inlet pipe to prevent the tank from emptying spontaneously and hot water from flowing back into the water supply system. We recommend that the hot water distribution from the tank be as short as possible to reduce heat loss. At least one detachable connection must be installed between the tank and each supply pipe.

It is necessary to use appropriate pipes and fittings with sufficiently dimensioned maximum temperature and pressure values.

The tanks must be equipped with a drain valve on the cold water supply to the tank for possible dismantling or repair.

When installing the safety device, follow the standard

SAFETY VALVE TRIP PRESSURE [MPa]	PERMISSIBLE OPERATING OVERPRESSURE OF THE WATER TANK [MPa]	MAXIMUM PRESSURE IN THE COLD WATER PIPE [MPa]
0.6	0.6	**up to** 0.48

Table 10

2.4 PRESSURE LOSSES

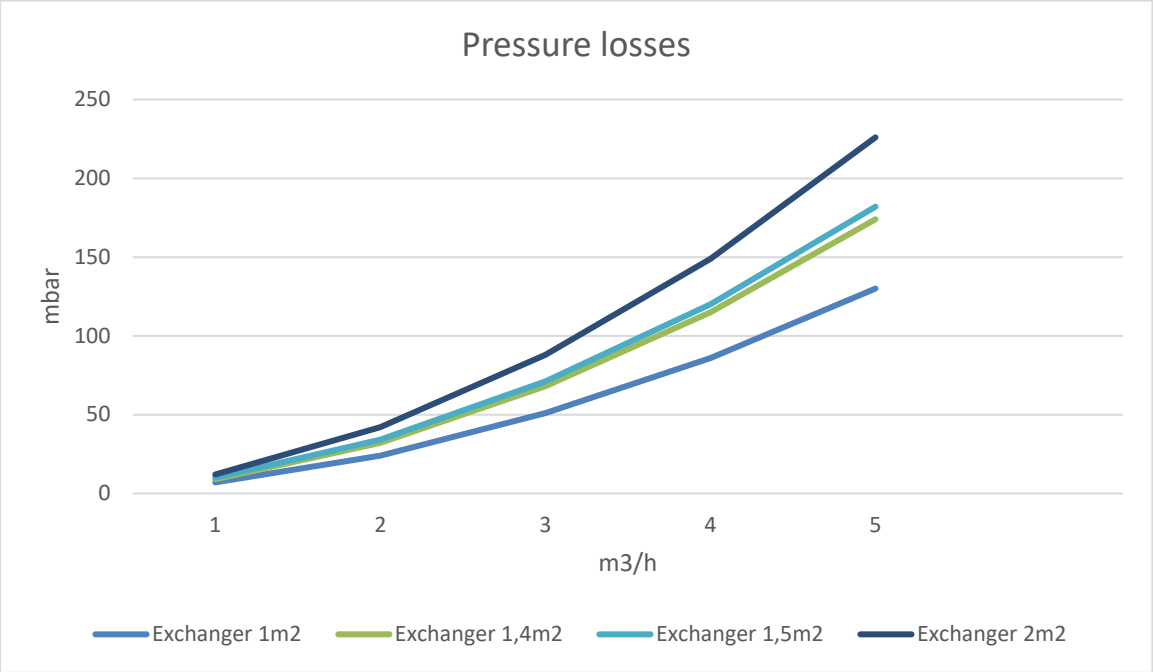


Figure 8

Type	Pressure loss mbar tHV = 60 °C				
	Heating water quantity m3/h				
	1	2	3	4	5
Exchanger 1 m²	7	24	51	86	130
Exchanger 1,4 m²	9	32	68	115	174
Exchanger 1,5 m²	10	34	71	120	182
Exchanger 2 m²	12	42	88	149	226

Table 11

2.5 EXAMPLES OF STORAGE TANK CONNECTIONS

Connecting the storage tank to the heating circuit

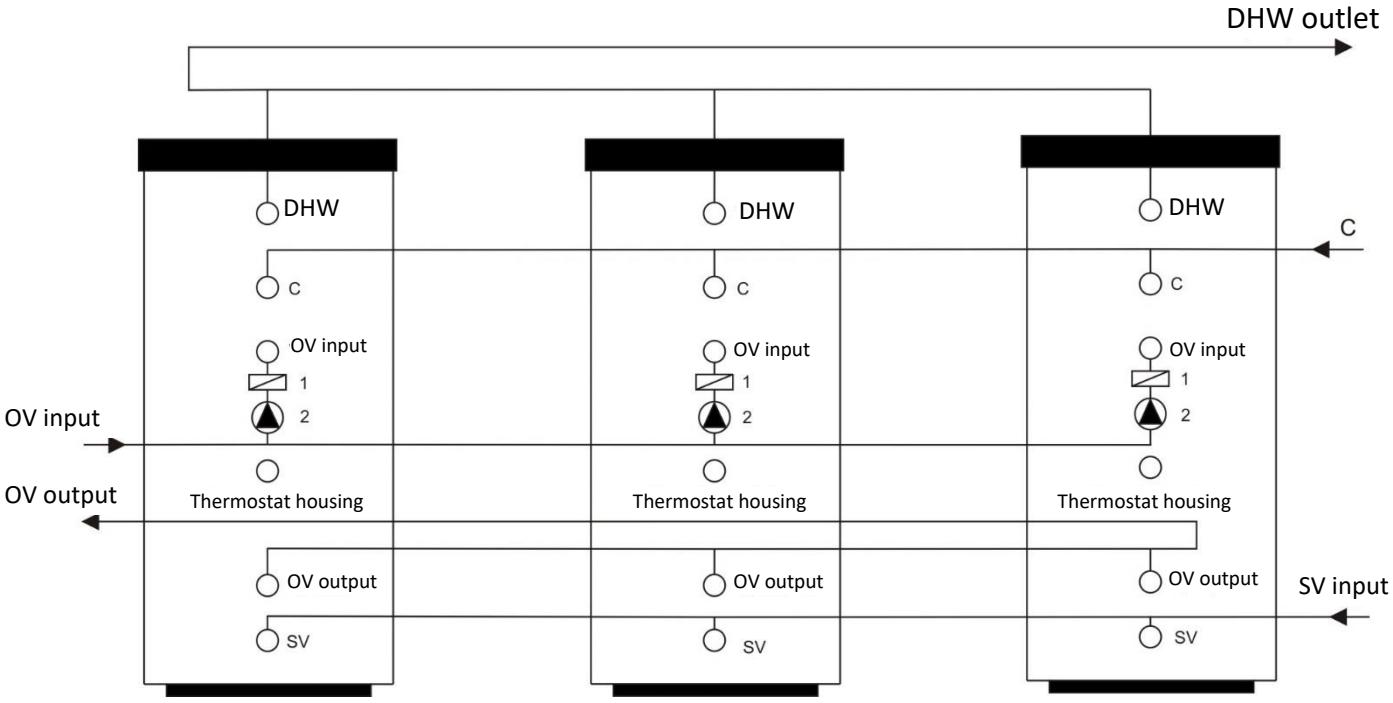
The storage tank is placed on the floor next to or near the heat source. The heating circuit is connected to the marked inputs and outputs of the storage tank exchanger and a vent valve is installed at the highest point. To protect the pumps, three-way valve, check valves and prevent clogging of the exchanger, a filter must be installed in the circuit. We recommend flushing the heating circuit before installation. Insulate all connecting pipes properly.

If the system will operate with priority DHW (domestic hot water) heating using a three-way valve, always follow the three-way valve manufacturer's instructions during installation.

Connecting the tank to the DHW distribution system

Cold water is connected to the inlet marked with a blue ring or the inscription "DHW INLET." Hot water is connected to the outlet marked with a red ring or the inscription "DHW OUTLET." If the DHW distribution system is equipped with a circulation circuit, it is connected to the outlet marked "CIRCULATION." In case the tank needs to be drained, a "T" fitting with a drain valve must be installed on the DHW inlet. Each separately closable tank must be equipped with a shut-off valve, a test tap, a safety valve with a non-return valve, and a pressure gauge on the cold water inlet.

Example of group connection of tanks using the Tichelmann method for even DHW consumption from all tanks

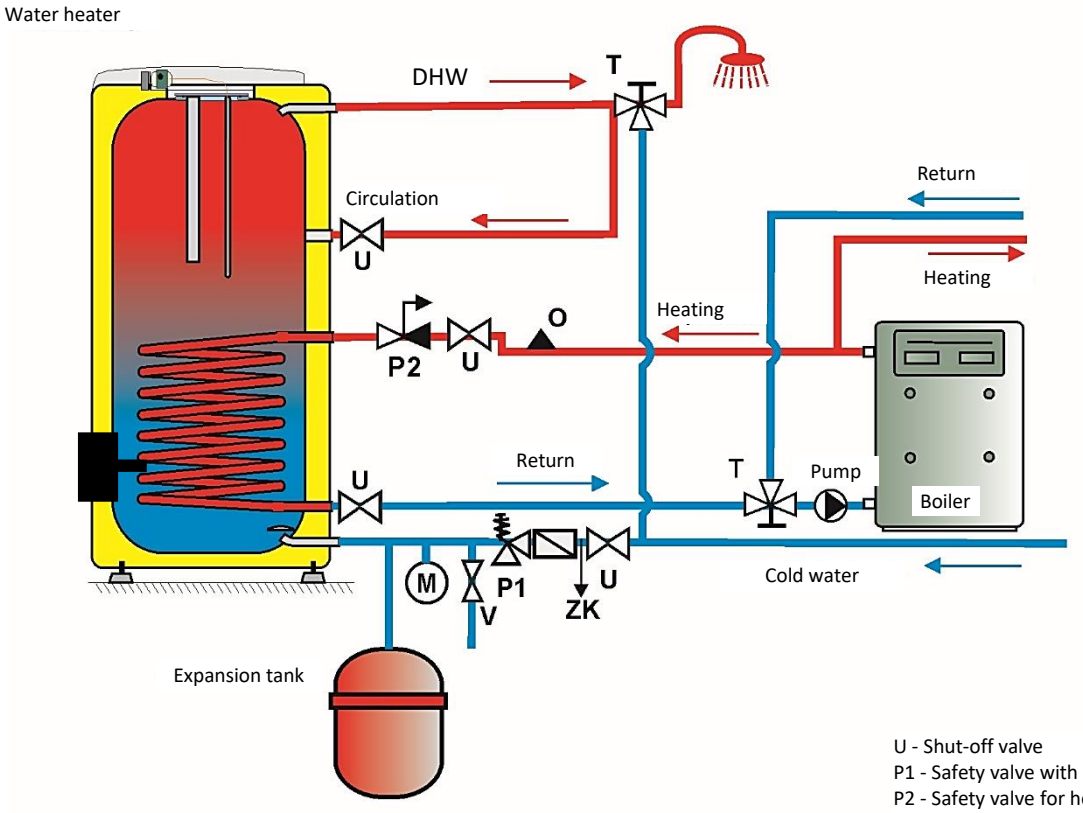


OV - heating water
SV - cold water
C - circulation

DHW - domestic hot water
1 - check valve
2 - pump

Figure 9

OKC 160-300 NTR
gas boiler heating with two pumps



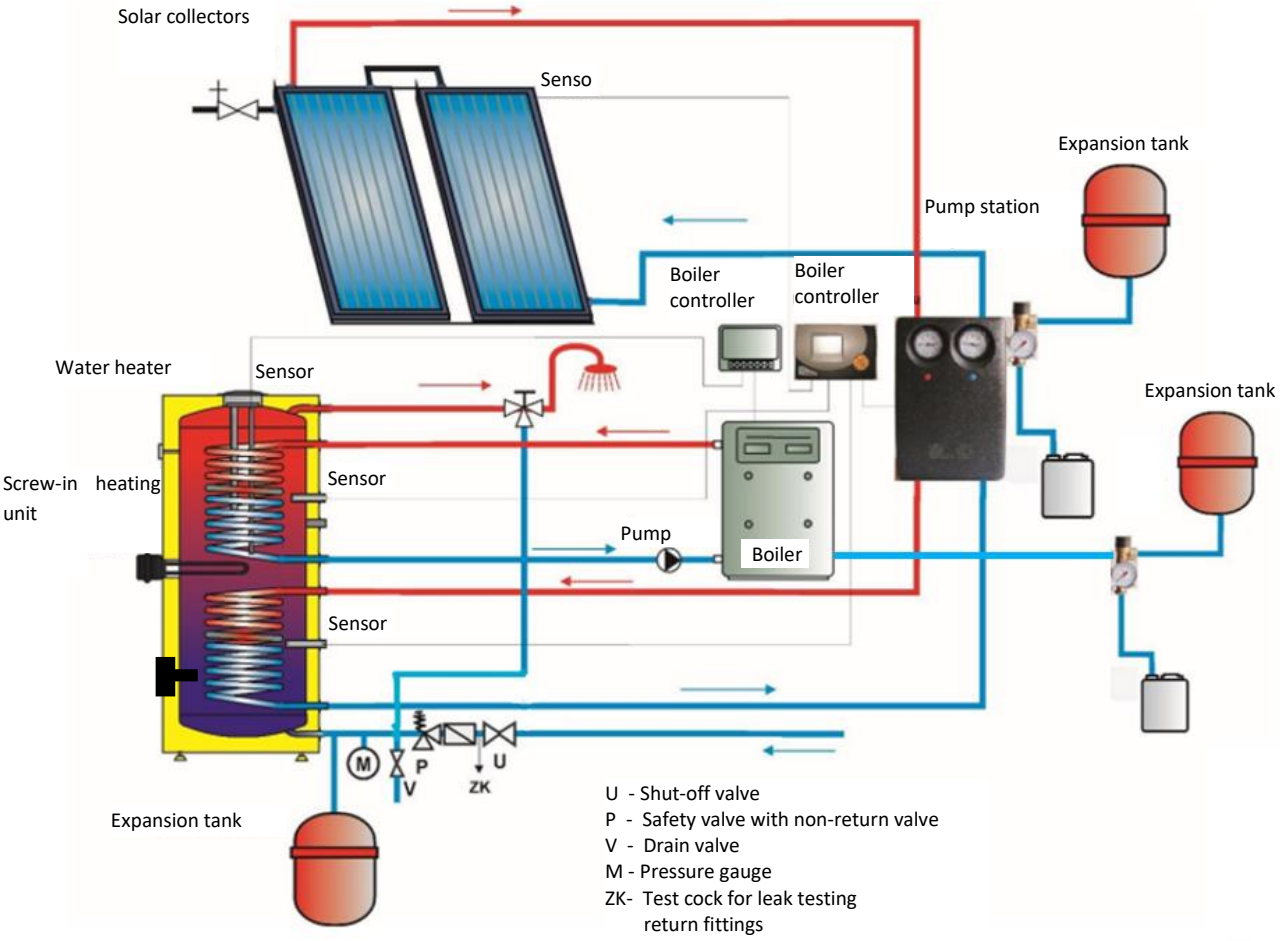
U - Shut-off valve
P1 - Safety valve with non-return valve
P2 - Safety valve for heating circuit
V - Drain valve
M - Pressure gauge
T - Three-way valve
O - Air vent valve
ZK- Test cock for leak testing
Backflow preventers

***The use of an expansion vessel is not a prerequisite for correct connection, but only a possible solution**

Figure 10

OKC 200-300 NTRR
heating by a gas boiler controlled by a three-way valve and solar collectors

Two heating water sources



Note: If an electric heating element is added, safety valves must be added to both heat exchangers

Image 11

Connection of heat exchangers in series

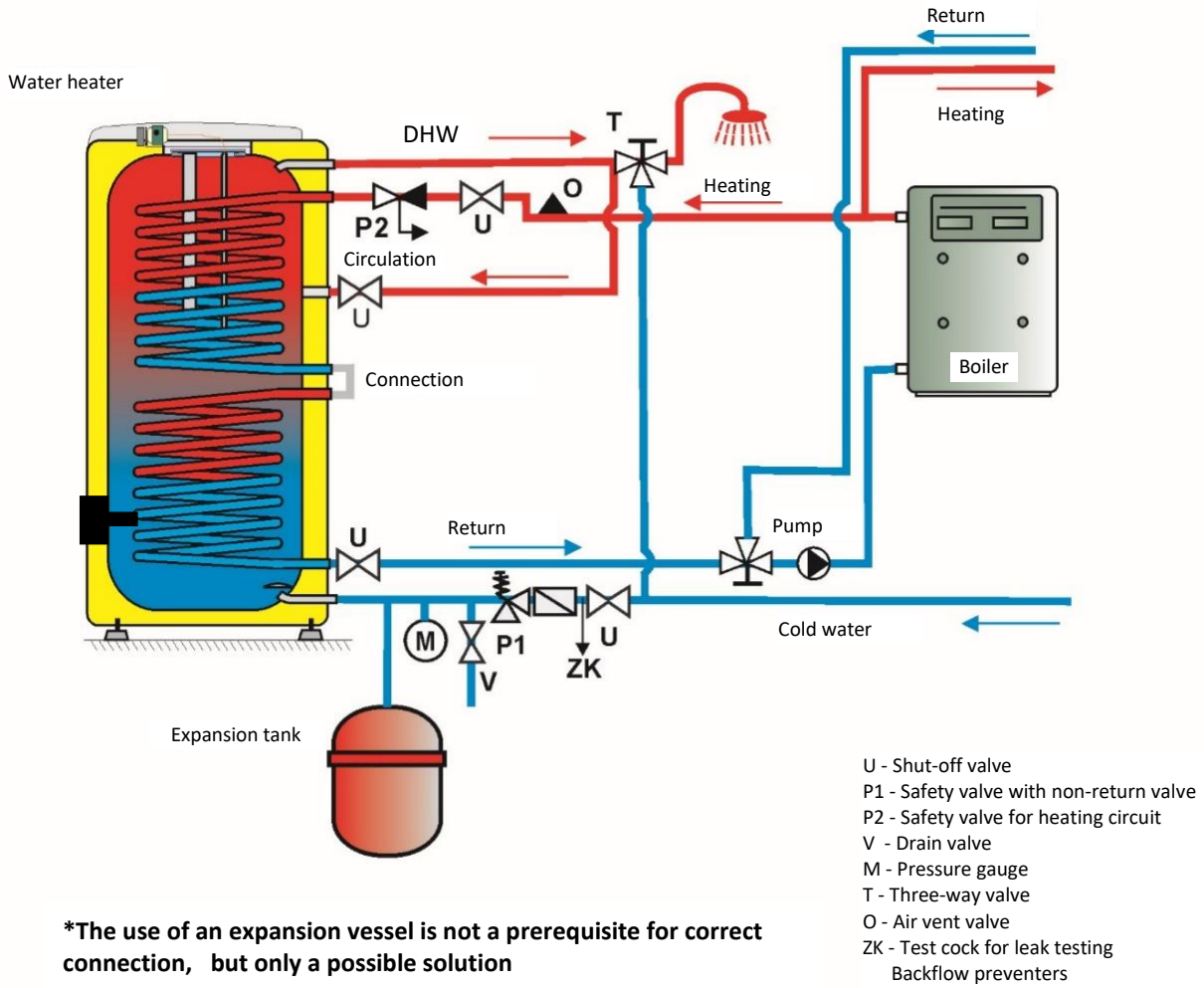


Figure 12

Heaters with a capacity greater than 200 liters must be equipped with a combined temperature and pressure safety device on the hot water outlet pipe in accordance with ČSN EN 1490, or a temperature safety device equipped with a water temperature sensor located in the heater, or another safety valve DN 20 with an opening pressure equal to the maximum operating pressure of the heater tank. This safety valve does not replace the safety valve on the cold water supply. No shut-off valve, backflow valve or filter may be installed between the safety valve and the heater.

2.6 FIRST START-UP

After connecting the tank to the water supply and the electrical network and after testing the safety valve (according to the instructions supplied with the valve), the tank can be put into operation. The tank must be filled with water before connecting the power supply. The initial heating process must be carried out and checked by a licensed professional. The drain pipe and parts of the safety valve may be hot.

Procedure:

a) Check the water and electrical installations. Check the correct position of the operating thermostat sensors. 1) The sensors must be inserted as deeply as possible into the well – as far as the capillaries allow, first the operating thermostat, then the safety thermostat.

b) Open the hot water valve of the mixing tap.

c) open the valve of the cold water supply pipe to the tank;

d) as soon as water starts to flow through the hot water valve, the tank is full and the valve must be closed;

e) if the flange cover is leaking, tighten the flange cover screws; tighten the screws crosswise against each other. Tightening torque 15 Nm;

f) Screw on the electrical installation cover.

g) When heating domestic water **with electricity**, switch on the electrical power (for combination tanks, the valve at the heating water inlet to the heating element must be closed).

h) When heating domestic water **with thermal energy** from a hot water heating system, switch off the electrical power and open the valves at the heating water inlet and outlet, or vent the exchanger if necessary.

i) When starting operation, flush the tank until the cloudiness disappears.

j) Fill out the warranty card properly.

2.7 CLEANING THE STORAGE TANK AND REPLACING THE ANODE ROD

Repeated heating of water causes limescale to build up on the walls of the enamel container, especially on the flange cover. The amount of limescale depends on the hardness of the water being heated, its temperature, and the amount of hot water used.

We recommend checking the container for limescale and cleaning it if necessary after two years of operation, as well as checking and replacing the anode rod if necessary.

The service life of the anode is theoretically calculated at two years of operation, but this varies depending on the hardness and chemical composition of the water at the place of use. Based on this inspection, it is possible to determine when the anode rod needs to be replaced. Have the anode cleaned and replaced by a company that provides servicing. When draining water from the tank, the hot water mixing valve must be open to prevent a vacuum from forming in the tank, which would prevent water from flowing out.

To prevent the formation of bacteria (e.g. Legionella pneumophila), it is recommended that the DHW temperature be periodically increased to at least 70 °C for a temporary period in absolutely necessary cases for storage heaters. Other methods of DHW disinfection are also possible.

PROCEDURE FOR REPLACING THE ANODE ROD IN THE UPPER PART OF THE HEATER

1. Switch off the control voltage to the tank
2. Drain 1/5 of the water from the tank.
   PROCEDURE: Close the valve at the water inlet to the tank
   Open the hot water valve on the mixing tap
   Open the tank drain cock
3. The anode is screwed under the plastic cover in the upper lid of the tank
4. Unscrew the anode using a suitable wrench
5. Remove the anode and follow the reverse procedure when installing a new anode
6. When installing, ensure that the grounding cable (300-500 l) is connected correctly, as this is essential for the proper functioning of the anode
7. Fill the tank with water

PROCEDURE FOR REPLACING THE ANODE ROD IN THE SIDE FLANGE

1. Switch off the control voltage to the tank
2. Drain the water from the tank.
   PROCEDURE: Close the valve at the water inlet to the tank
   Open the hot water valve on the mixing tap
   Open the tank drain cock
3. One anode is screwed under the plastic cover in the upper lid of the tank and the other anode is screwed onto the side flange
4. Unscrew the anode using a suitable wrench
5. Remove the anode and follow the reverse procedure when installing a new anode
6. Fill the tank with water

List of heaters with anode in the side flange:
OKC 200 NTR/BP
OKC 200 NTRR/BP
OKC 300 NTR/BP
OKC 300 NTRR/BP
OKC 500 NTR/BP
OKC 500 NTRR/BP

2.8 SPARE PARTS

- flange cover
- flange cover gasket
- flange insulation cover
- thermostat and thermal fuse
- magnesium anode
- thermostat control knob
- indicator lights with wires
- temperature indicator
- set of M12 (or M10) screws

When ordering spare parts, please specify the part name, type, and type number from the tank label.

3 IMPORTANT NOTICE

3.1 INSTALLATION INSTRUCTIONS

The warranty is invalid without confirmation from a professional company that the electrical and water installations have been carried out correctly.

The protective magnesium anode must be checked regularly and replaced if necessary.

No shut-off valve may be installed between the reservoir and the safety valve.

If the water pressure in the water supply system exceeds 0.48 MPa, a pressure reducing valve must be installed upstream of the safety valve.

All hot water outlets must be equipped with a mixing valve.

Before filling the tank with water for the first time, we recommend tightening the flange connection nuts on the tank. Tighten the screws crosswise against each other. Tightening torque 15 Nm.

Any manipulation of the thermostat other than adjusting the temperature with the control knob is not permitted.

All handling of the electrical installation, adjustment and replacement of control elements must be carried out by a service company.

It is not permitted to disable the thermal fuse! In the event of a thermostat failure, the thermal fuse will interrupt the power supply to the heating element if the water temperature in the tank rises to approximately 95 °C.

In exceptional cases, the thermal fuse may also switch off if the water overheats due to the boiler in the hot water heating system overheating (in the case of a combination tank).

We recommend operating the tank with one type of energy.

If you do not use the heater (hot water tank) for more than 24 hours, or if the building with the heater is unattended, shut off the cold water supply to the heater.

The heater (hot water tank) must be used exclusively in accordance with the conditions specified on the rating plate and the electrical connection instructions.

Due to transport and thermal expansion, excess enamel may fall off the bottom of the tank in heaters with an exchanger. This phenomenon is completely normal and does not affect the quality or service life of the heater. The layer of enamel remaining on the tank is decisive. DZD has many years of experience with this phenomenon and it is not a reason for complaint.

Electrical and water installations must comply with the requirements and regulations of the country of use!

3.2 TRANSPORT AND STORAGE INSTRUCTIONS

The device must be transported and stored in a dry environment, protected from the weather, at temperatures between -15 and +50 °C. When loading and unloading, follow the instructions on the packaging.

Due to transport and thermal expansion, excess enamel may fall off the bottom of the container in heaters with an exchanger. This phenomenon is completely normal and does not affect the quality or service life of the heater. The layer of enamel remaining on the container is decisive. DZD has many years of experience with this phenomenon and it is not a reason for complaint.

3.3 DISPOSAL OF PACKAGING ND NON-FUNCTIONAL PRODUCTS

A service fee for the return and recycling of packaging material has been paid for the packaging in which the product was delivered. The service fee was paid in accordance with Act No. 477/2001 Coll. as amended by EKO-KOM a.s. The company's client number is F06020274. Dispose of the water tank packaging at the waste disposal site designated by your municipality. After the end of operation, dismantle the discarded and unusable product and take it to a waste recycling center (collection yard) or contact the manufacturer.

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