

OPERATING and INSTALLATION MANUAL

INDIRECT WATER TANKS

OKC 300 NTR/1MPa
OKC 400 NTR/1MPa
OKC 500 NTR/1MPa
OKC 750 NTR/1MPa
OKC 1000 NTR/1MPa

OKC 300 NTRR/1MPa
OKC 400 NTRR/1MPa
OKC 500 NTRR/1MPa
OKC 750 NTRR/1MPa
OKC 1000 NTRR/1MPa

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PRIOR TO THE INSTALLATION OF THE TANK, READ CAREFULLY THIS MANUAL!

Dear Customer,

The Works Cooperative of Dražice – Machine Plant, Ltd., would like to thank you for your decision to use a product of our brand. The present instructions will introduce you to the use, construction, maintenance and other information regarding electrical water tanks.



The manufacturer reserves the right for engineering modification of the product. The product is designed for permanent contact with drinkable water.

It is recommended to use the product in indoor environment with air temperatures from +2°C to 45°C and a relative humidity up to 80%. 80%.

Product's reliability and safety is proven by tests implemented by the Engineering Test Institute in Brno.

Meaning of pictograms used in the Manual



Important information for tank users.



Abiding by the recommendations of the manufacturer serves to ensure trouble-free operation and the long service life of the product.



Caution!

Important notice to be observed.

1 PRODUCT TECHNICAL SPECIFICATION

1.1 FUNCTION DESCRIPTION

Indirect stationary NTR and NTRR series tanks are used to prepare HUW in combination with another hot water supply, mostly gas boiler. The NTRR types combine two sources of heating water (gas boiler + a solar system or a heat pump). Their nominal performance provides sufficient amount of hot water for large flat units, premises, restaurants, and similar establishments.

In case of higher HUW consumption tanks heat water continuously and operate in a manner that is similar to that of instantaneous tanks.

1.2 PRODUCT DESCRIPTION

The tank receptacle is welded of steel plate and, as a unit, enamelled to resist hot water. There is an additional protection against corrosion in form of magnesium anode mounted in the upper part of the receptacle, and another anode in the 300 l receptacle in the flange lid that adjusts electrical potential of the receptacle's inside, thus reducing the effects of corrosion. Inside the receptacle, hot and cold water and circulation pipes; a thermostat well; and either one or two spiral steel pipe heat exchangers (enamelled on the outside) are all welded on.



The pipe heat exchanger is only intended for the heating circuit.

On the side of the tank there is a cleaning and revision hole ended with a 110 mm clearance flange with eight M8 screws spacing of which is 150 mm – 300 to 500 litres, of 180 mm clearance ten screws spacing 225 mm - 750 and 1,000 litres; the hole can be fitted with a heating unit of different power equipped with a service and safety thermostat. NTRR series tanks are equipped with a G 1 ½ " aperture for screwing in an additional heater. This variant is used if the tank is connected in a solar system, or in a system with heat pump in order to finish heating water to the desired temperature in the upper part of the tank. The receptacle is insulated with 50-80 mm of polyurethane freon-free foam. The shell of the tank is of steel plate coated with powder dye (in 400-500 L types only; others are plastic); connecting pieces are metal coated.

1.3 TECHNICAL DATA

1.3.1 TECHNICAL DATA OF TANKS WITH SINGLE EXCHANGER

MODEL		OKC 300 NTR/1MPa	OKC 400 NTR/1MPa	OKC 500 NTR/1MPa	OKC 750 NTR/1MPa	OKC 1000 NTR/1MPa
Tank capacity	L	300	385	485	750	975
Diameter	mm	670	700	700	910	1010
Weight	Kg	108	123	173	253	337
Hot water operating pressure	MPa	1	1	1	1	1
Heating water operating pressure	MPa	1.6	1.6	1.6	1.6	1.6
Max. heating water temperature	°C	110	110	110	110	110
Max hot water temperature	°C	95	95	95	95	95
Exchanger heat surface	m ²	1.5	1.8	1.9	3.7	4.5
Output at temperature drop 80/60°C	kW	35	57	65	99	110
Power number pursuant to DIN 4708	NI	8	15.2	19.1	30.5	38.8
Permanent power of hot water*	l/h	1100	1395	1590	2440	2715
Heating time of hot water* by exchanger at heat drop 80/60 °C	min	24	20	23	24	26
Static loss	W	83	114	127		

* hot water 45 °C

Table 1

1.3.2 TECHNICAL DATA FOR TANKS WITH TWO EXCHANGERS

MODEL		OKC 300	OKC 400	OKC 500	OKC 750	OKC 1000
		NTRR/1MPa	NTRR/1MPa	NTRR/1MPa	NTRR/1MPa	NTRR/1MPa
Tank capacity	L	295	380	470	750	995
Diameter	mm	670	700	700	910	1010
Weight	Kg	124	144	183	245	315
Hot water operating pressure	MPa	1	1	1	1	1
Heating water operating pressure	MPa	1.6	1.6	1.6	1.6	1.6
Max. heating water temperature	°C	110	110	110	110	110
Max hot water temperature	°C	95	95	95	95	95
Upper exchanger heat delivery surface	m ²	1	1.05	1.3	1.17	1.12
Lower exchanger heat delivery surface	m ²	1.5	1.8	1.9	1.93	2.45
Bottom/top exchanger output at temperature drop 80/60 °C	kW	35/27	57/31	65/40	60/33	76/32
Power number of upper exchanger pursuant to DIN 4708	NL	2.9	3.4	5.9	6.2	7.1
Power number of bottom exchanger pursuant to DIN 4708	NL	4.2	15.2	19.1	21	26
Permanent power of bottom exchanger hot water*	l/h	1100	1395	1590	1460	1490
Permanent power of upper exchanger hot water	l/h	670	740	970	815	780
Heating time of hot water by (bottom/upper) exchanger at heat drop 80/60 °C	min	24/16	20/14	23/16	37/28	43/37
Static loss	W	83	113	137		

* hot water 45 °C

Table 2

1.3.3 POWER DATA

Type	Heating water supply temperature	NL power coefficient at				Permanent power of heating water								Flow in 10min		Heating water flow	Losses in 24h
		t _{sv} = 10°C		t _{tv} = 45°C		t _{sv} = 10°C				t _{tv} = 60°C				t _{sv} = 10°C	t _{tv} = 45°C		
		t _{sp} = 50°C		t _{sp} = 60°C		t _{tv} = 45°C		t _{tv} = 60°C		SV	HV	SV	HV	l/10min	l/10min		
°C	HV	SV	HV	SV	SV	kW	HV	kW	SV	kW	HV	kW	l/10min	l/10min	m ³ /h	kWh	
OKC 300 NTRR/1MPa	50	1,1	1,8	-	-	431	17,1	259	10,4	-	-	-	-	111	-	2,7/2,7	
	60	1,3	2,2	1,6	2,6	594	24	348	14,1	446	18	261	10,6	127	152		
	70	1,7	2,7	2	3,3	818	33,6	468	19,1	614	25,2	351	14,3	145	174		
	80	2,1	3,4	2,5	4,1	1086	44,2	629	25,9	815	33,2	472	19,4	166	199		
	90	2,7	4,4	3,2	5,3	1299	52,6	757	30,6	974	39,5	568	23	161	217		
OKC 400 NTRR/1MPa	50	3,2	5,3	-	-	493	19,6	305	12,2	-	-	-	-	221	-	3,0/3,0	
	60	3,7	6	4,4	7,2	679	27,4	410	16,6	509	20,6	308	12,4	243	292		
	70	4,2	6,9	5	8,2	935	38,4	551	22,5	701	28,8	413	16,9	268	321		
	80	4,8	7,8	5,7	9,4	1241	50,5	740	30,5	931	37,9	555	22,9	294	353		
	90	5,8	9,6	7	11,5	1485	60,1	891	26	1114	45,1	668	19,5	316	379		
OKC 500 NTRR/1MPa	50	3,8	6,2	-	-	583	23,5	395	15,9	-	-	-	-	332	-	3,0/3,0	
	60	4,7	7,8	5,7	9,3	790	32	531	21,5	593	24	399	16,1	360	432		
	70	5,9	9,7	7,1	11,7	1070	43,5	715	29,2	803	32,6	536	21,9	390	468		
	80	7,4	12,2	8,9	14,7	1430	58	962	39,6	1073	43,5	722	29,7	423	507		
	90	9	14,8	10,8	17,8	1720	70	1157	46,8	1290	52,5	868	35,1	450	540		

Table 1

HV - upper exchanger SV tsv - cold water temperature
 SV - bottom exchanger ttv – hot water temperature
 tsp – medium temperature of tank

Type	Heating water supply temperature	Power coefficient NL at		Permanent heating water power				Flow in 10min		Heating water flow	Losses in 24h		
		t _{sv} = 10°C		t _{tv} = 45°C		t _{sv} = 10°C		t _{tv} = 60°C				t _{sv} = 10°C	t _{tv} = 45°C
		t _{sp} = 50°C		t _{sp} = 60°C		t _{tv} = 45°C		t _{tv} = 60°C				t _{sp} = 50°C	t _{sp} = 60°C
°C				l/h	kW	l/h	kW	l/10min	l/10min	m ³ /h	kWh		
OKC 300 NTR/1MPa	60	4,3	-	617	25,1	-	-	290	-	2,7			
	70	5,3	8,4	888	36,1	622	26,8	322	403				
	80	5,3	8,4	1100	47,4	816	39,8	358	448				
	90	5,3	8,4	1451	59	1015	52,5	398	497				
OKC 400 NTR/1MPa	60	6,8	-	738	29,9	-	-	399	-	3			
	70	10,1	12,8	990	43,2	745	32,1	443	554				
	80	10,1	15,2	1394	56,7	976	47,6	492	615				
	90	10,1	15,2	1733	70,4	1212	62,7	547	684				
OKC 500 NTR/1MPa	60	11,3	-	842	34,2	-	-	500	-	3			
	70	15,2	15,8	1210	49,2	847	36,7	556	694				
	80	15,2	19,1	1584	64,4	1109	54,2	617	771				
	90	15,2	19,1	1965	79,9	1376	71,2	686	858				
OKC 750 NTR/1MPa	60	12,9	-	1279	52	-	-	817	-	5			
	70	15,4	25,6	1828	74	1364	56	848	1060				
	80	18,3	30,5	2437	99	2065	84	880	1100				
	90	21	35	3046	124	2719	111	928	1160				
OKC 1000 NTR/1MPa	60	16,6	-	1424	58	-	-	862	-	6			
	70	19,7	32,8	2034	83	1518	62	908	1135				
	80	23,3	38,8	2712	110	2298	94	957	1197				
	90	27	45	3390	138	3026	123	1003	1254				

Table 2

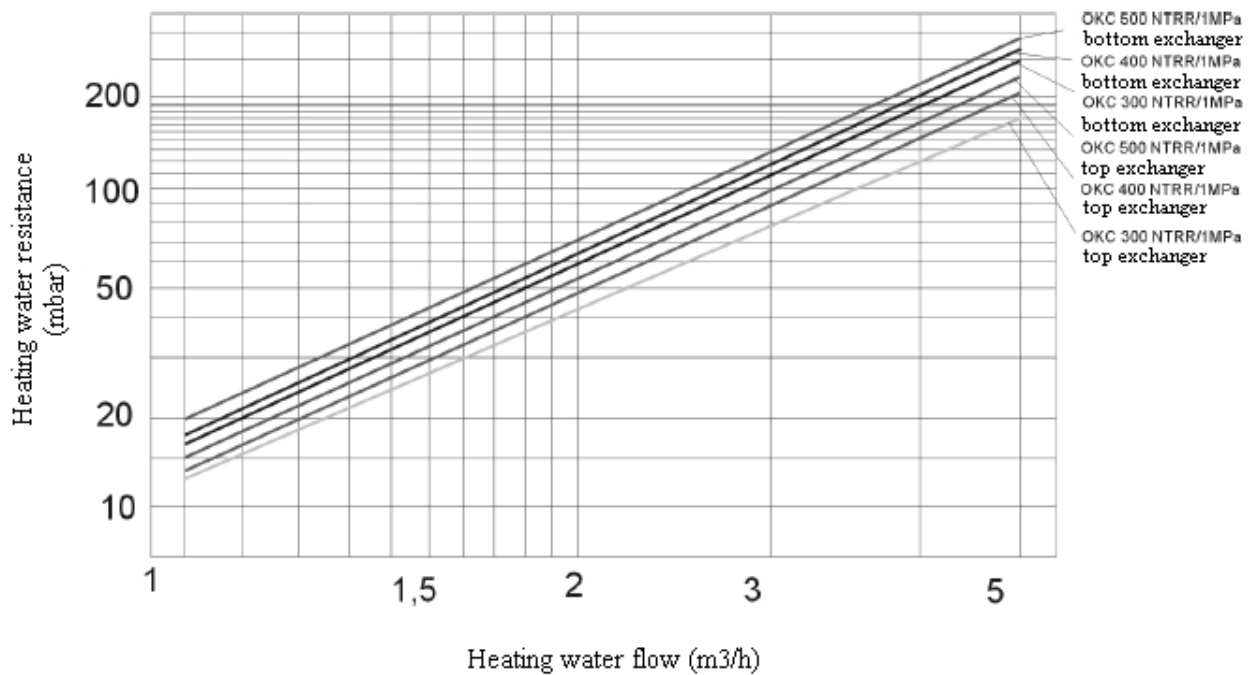
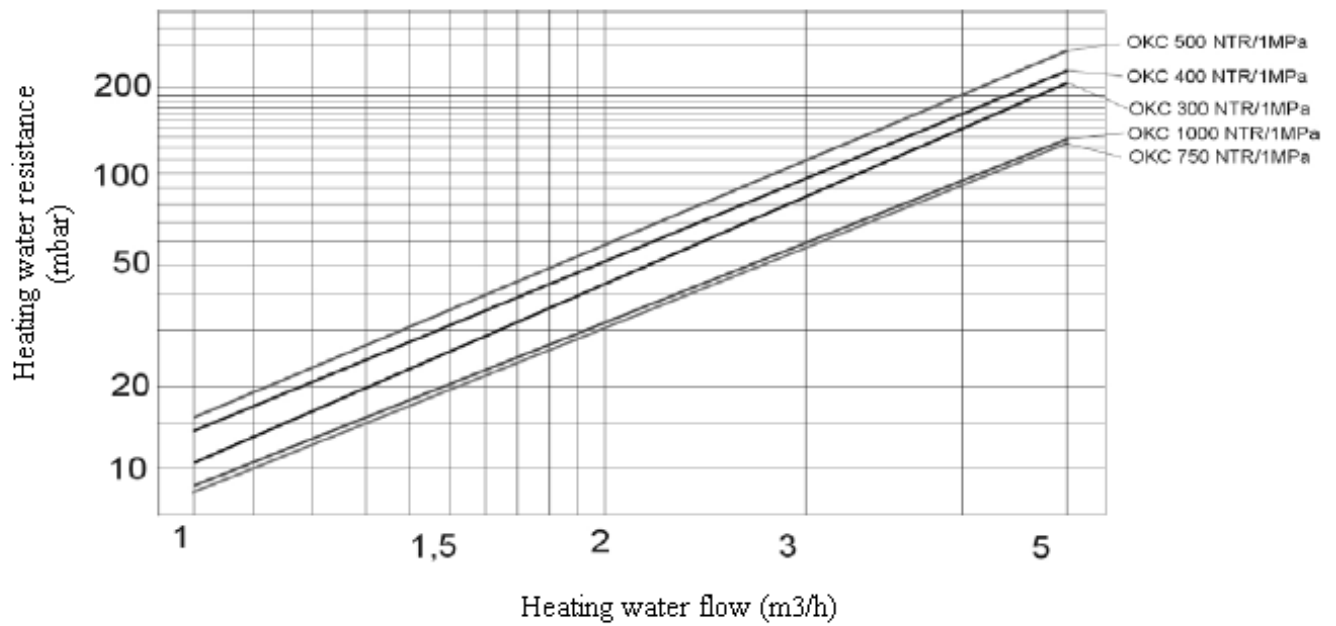
HV - upper exchanger SV tsv - cold water temperature
 SV - bottom exchanger ttv – hot water temperature
 tsp – medium temperature of tank

NL Power Factor

Based on DIN, the expression of a normal flat is introduced for apartment houses in the FRG. The flat has 4 rooms; there are 3.5 occupants living in there, and it is equipped with a bath tub, wash basin and a sink. Flats of other sizes, number of occupants and different equipment are converted to normal flats using the relations given in the standard (NL). The situation in our apartment houses, massively built until the recent past, is similar.

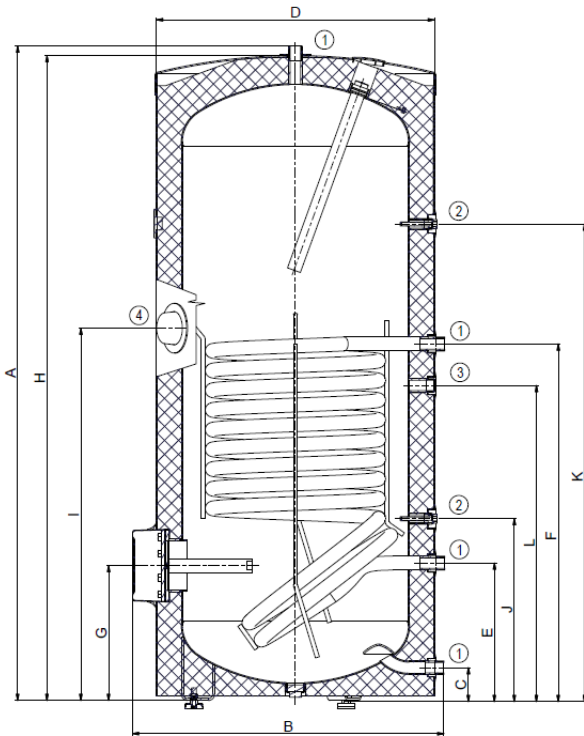
Flats intended for 3 to 4 people are equipped identically with normal German flats. Smaller flats tend to have smaller bathtub or a shower; larger, so-called two-generation flats tend to have an extra hand basin. Apartment buildings with luxury flats and high standard equipment, with higher number of fittings, or fittings equipped with high standard drain armatures, both hot water and heat energy needs must be adjusted.

1.3.4 PRESSURE LOSSES



1.4 DESIGN AND BASIC DIMENSIONS OF TANK

OKC 300 NTR/1MPa

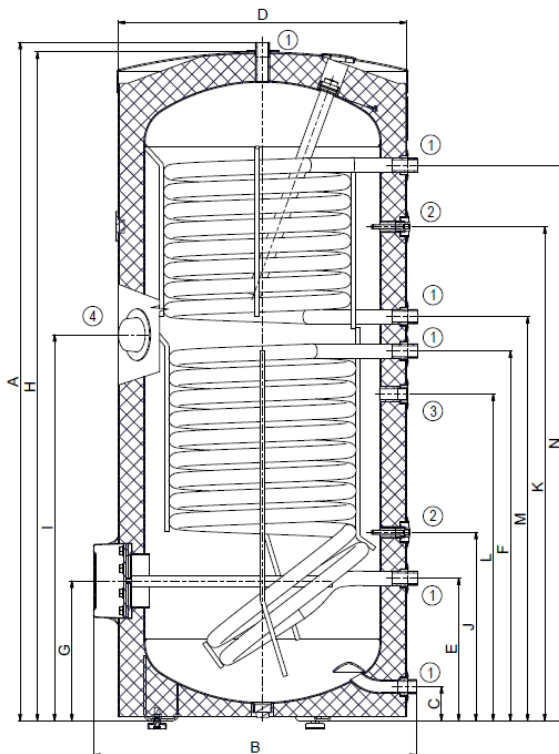


A	1577
B	751
C	79
D	670
E	331
F	859
G	325
H	1554
I	897
J	438
K	1148
L	759

①	1"
②	1/2"
③	3/4"
④	6/4"

Figure 1

OKC 300 NTRR/1MPa



A	1577
B	751
C	79
D	670
E	331
F	859
G	325
H	1554
I	897
J	438
K	1148
L	759
M	939
N	1291

①	1"
②	1/2"
③	3/4"
④	6/4"

Figure 2

OKC 400 NTR/1MPa, OKC 500 NTR/1MPa

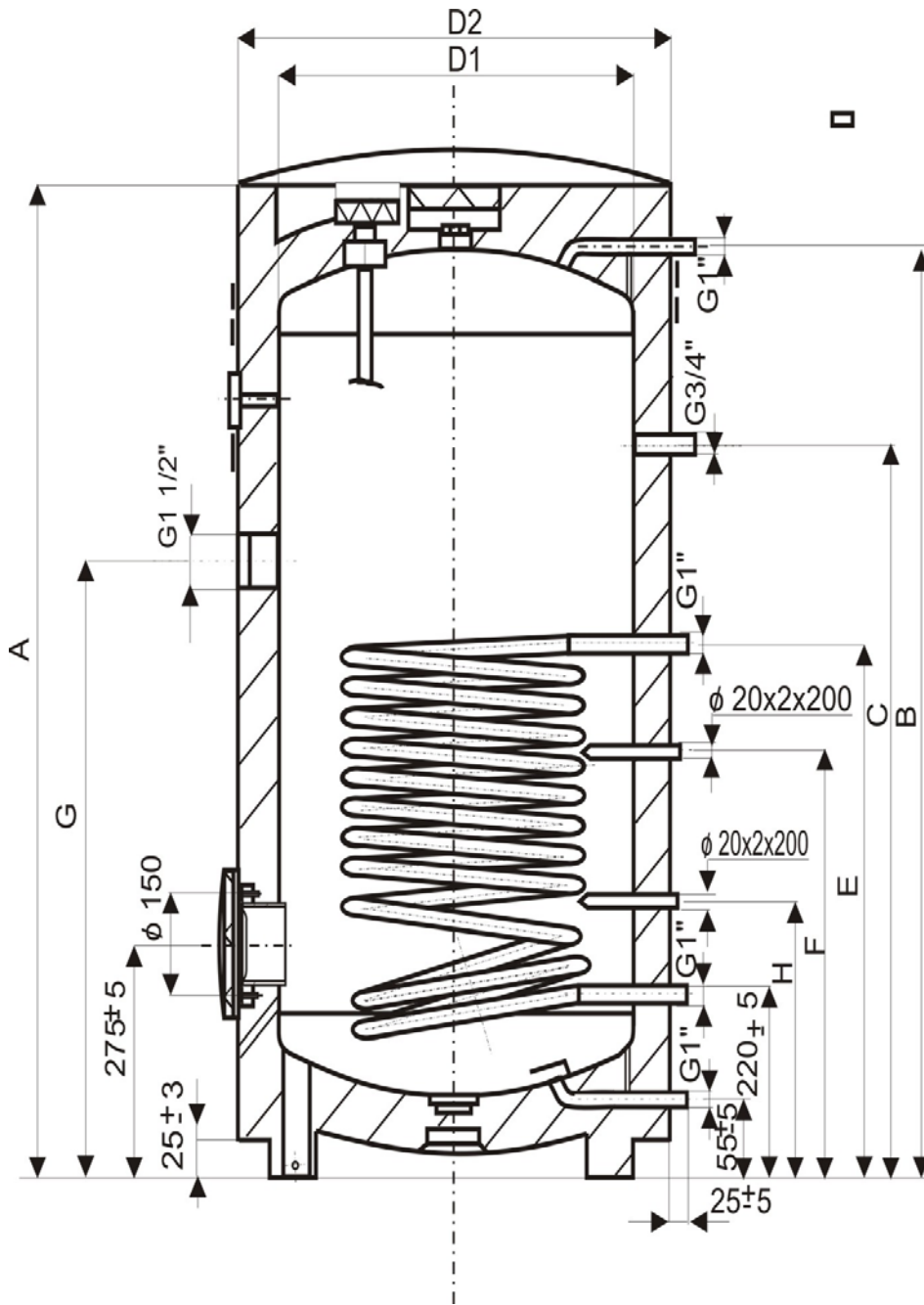


Figure 3

	OKC 400 NTR/1MPa	OKC 500 NTR/1MPa
A	1591	1921
B	1523	1853
C	1111	1264
D1	597	597
D2	700	700
E	909	965
F	684	695
G	957	1040
H	369	388

OKC 400 NTRR/1MPa, OKC 500 NTRR/1MPa

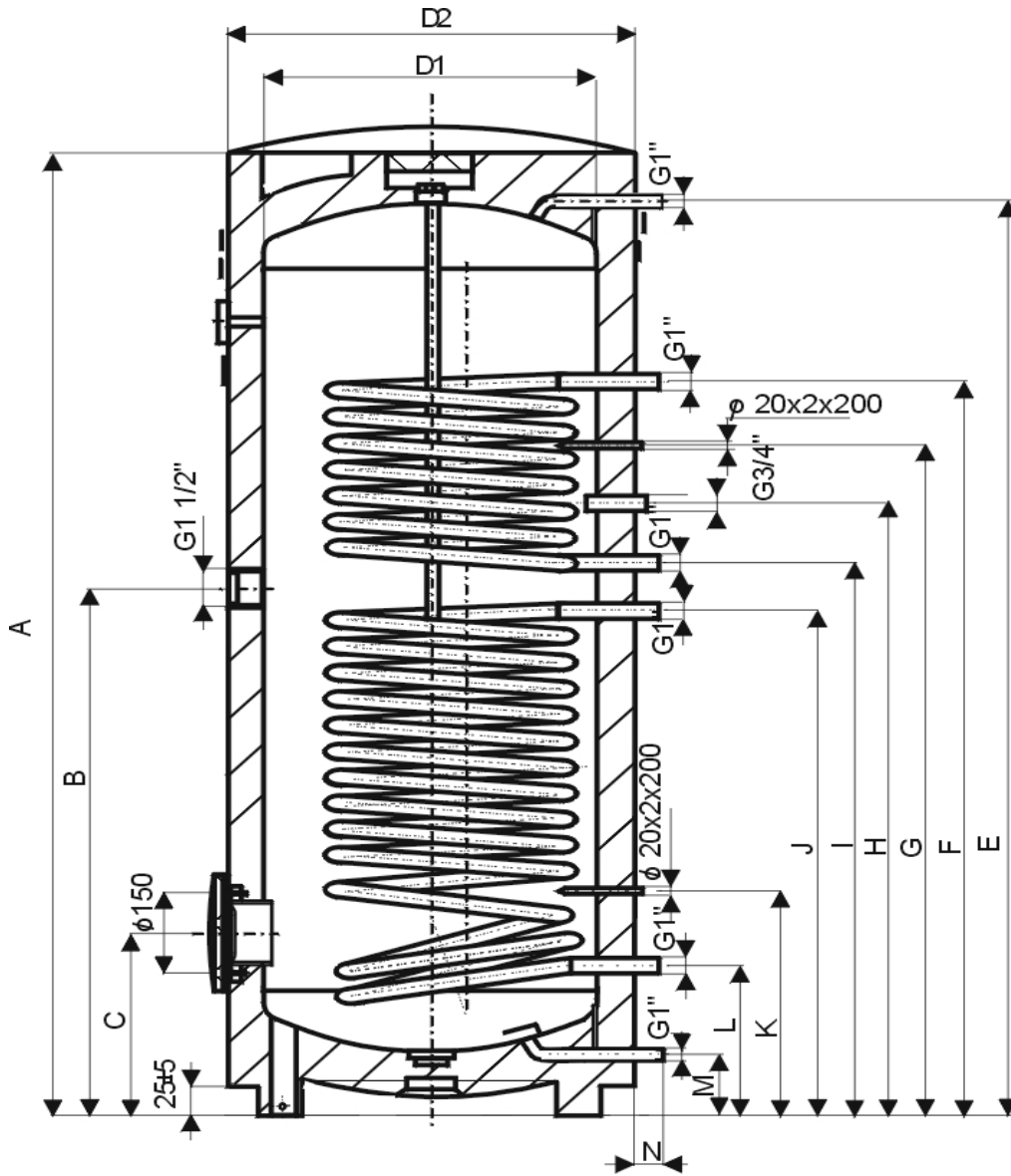


Figure 4

	OKC 400 NTRR/1MPa	OKC 500 NTRR/1MPa
A	1631	1961
B	957	1040
C	275	275
D1	597	597
D2	700	700
E	1523	1853
F	1354	1604
G	1223	1409
H	1111	1264
I	1006	1114
J	909	965
K	369	380
L	220	220
M	55	55
N	25	25

OKC 750 NTR/1MPa, OKC 1000 NTR/1MPa

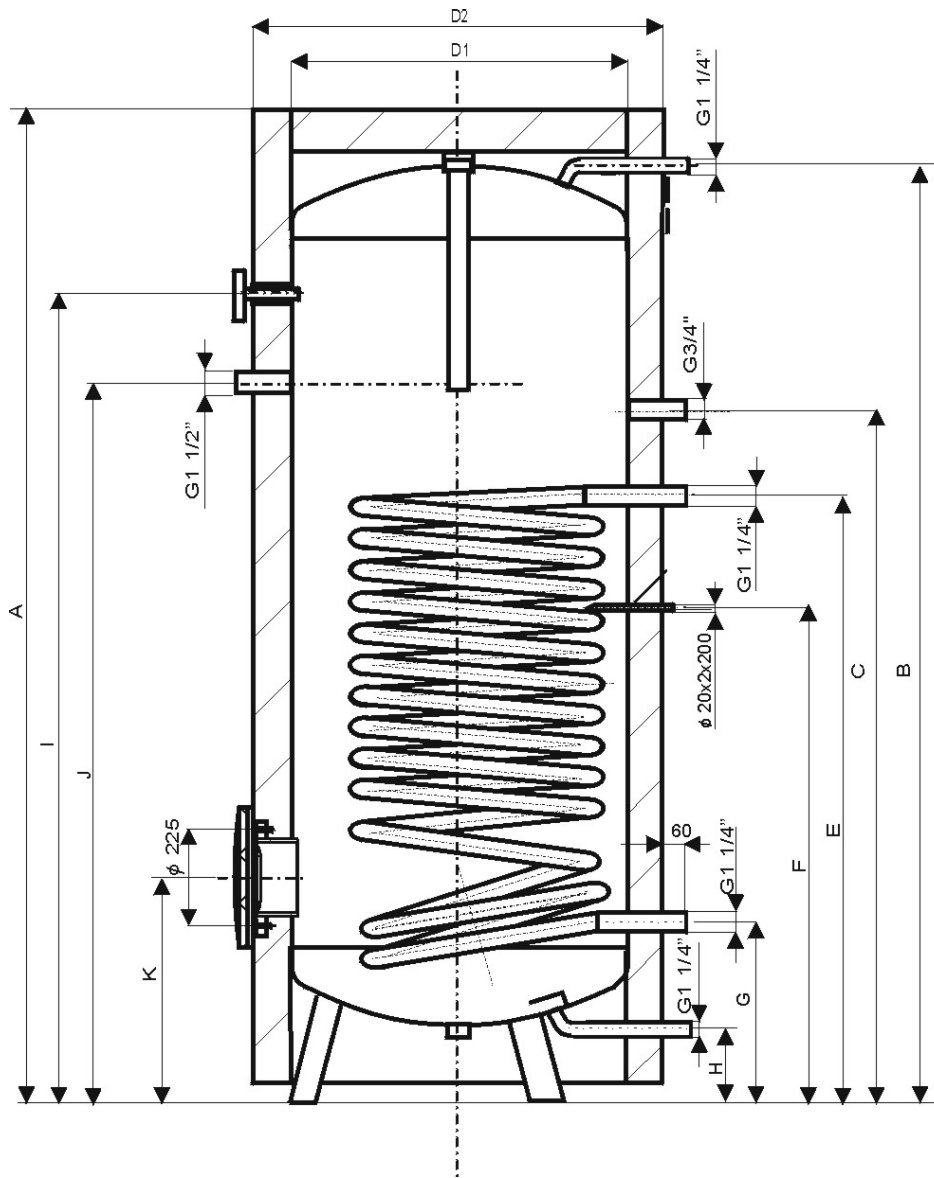


Figure 5

	OKC 750 NTR/1MPa	OKC 1000 NTR/1MPa
A	1998	2025
B	1887	1905
C	1417	1490
D1	750	850
D2	910	1010
E	1314	1324
F	1079	1087
G	288	295
H	99	103
I	1643	1672
J	1005	1025
K	375	385

OKC 750 NTRR/1MPa, OKC 1000 NTRR/1MPa

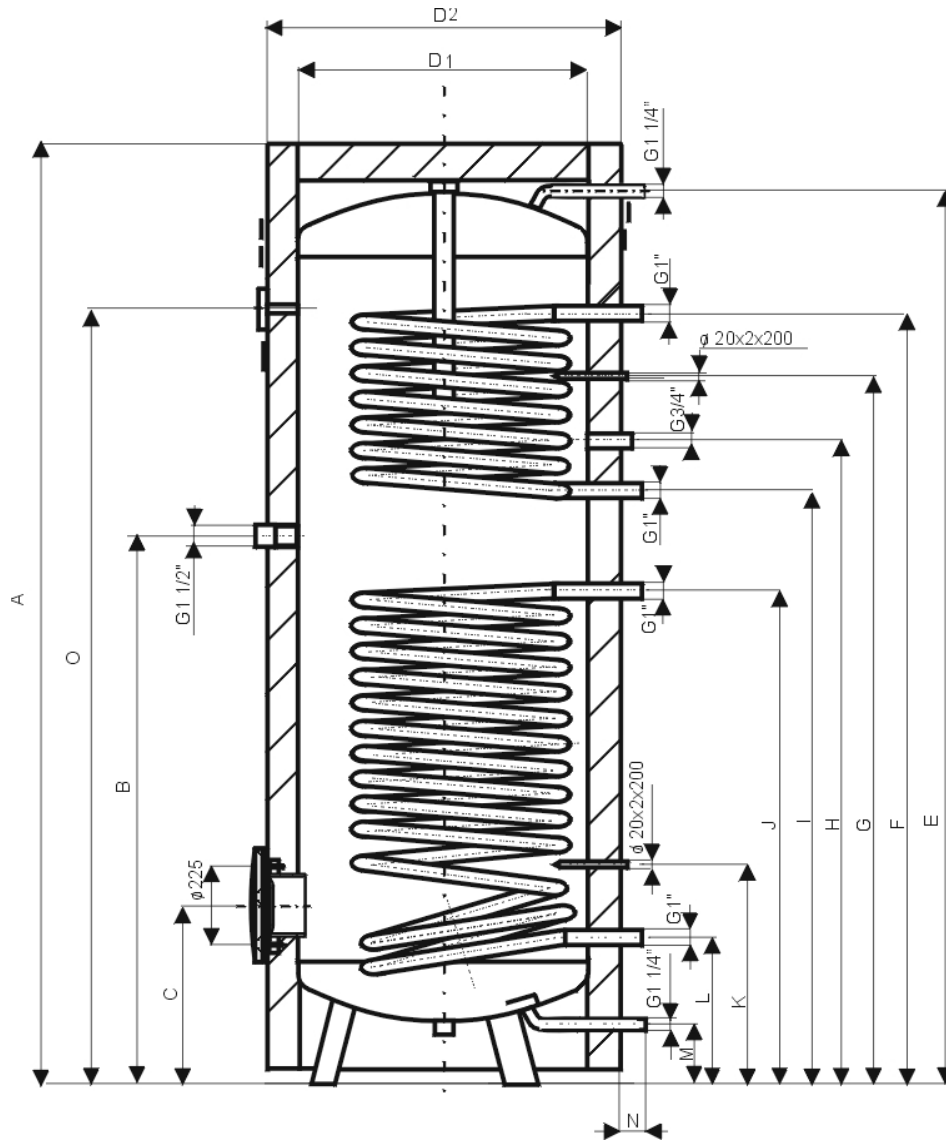


Figure 6

	OKC 750 NTRR/1MPa	OKC 1000 NTRR/1MPa
A	1998	2025
B	957	1040
C	378	387
D1	750	850
D2	910	1010
E	1887	1905
F	1467	1423
G	1375	1375
H	1242	1243
I	1151	1153
J	830	884
K	402	411
L	297	297
M	99	103
N	55	45
O	1643	1672

2 OPERATION AND FITTING INSTRUCTIONS

2.1 OPERATING CONDITIONS



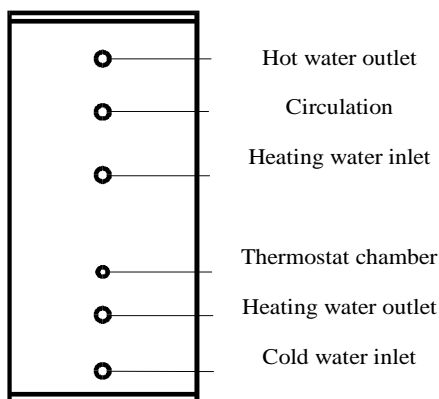
The tank shall only be used in accordance with the conditions specified on the power plate and in instructions for electric wiring. Besides the legally recognized national regulations and standards, the conditions of connection prescribed by the local electrical and water enterprises must be observed, as well as the fitting and user manual.

The temperature at the place of the tank installation must be higher than +2°C; and the room must not freeze. The appliance has to be mounted at a convenient place; it means that the appliance must be easily available for potential necessary maintenance, repair or replacement, as the case may be.

2.2 CONNECTION OF TANK TO HOT WATER DISTRIBUTION SYSTEM

Tank water inputs and outputs scheme

OKC 300 NTR/1MPa, OKC 400 NTR/1MPa,
OKC 500 NTR/1MPa
OKC 750 NTR/1MPa, OKC 1000 NTR/1MPa



OKC 300 NTRR/1MPa, OKC 400 NTRR/1MPa,
OKC 500 NTRR/1MPa,
OKC 750 NTRR/1MPa, OKC 1000 NTRR/1MPa

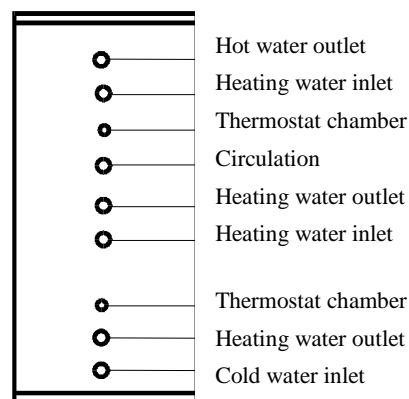


Figure 7



T fixtures with discharge valve for potential drain of water from the tank have to be mounted on the cold water inlet of the tank.

Each independently closing tank must be provided on the hot water inlet with a test valve, back valve, safety valve and manometer.

2.3 PLUMBING FIXTURE



Every hot sanitary water pressure tank shall be equipped with membrane spring loaded with safety valve. Nominal clearance of safety valves is defined by standard. Tanks are not equipped with a safety valve. Safety valve shall be easily accessible, fitted as close as possible to the tank. The inlet pipes must have at least the same clearance as the safety valve. Safety valve is placed high enough to secure dripping water drain by gravity. We recommend mounting the safety valve onto a branch pipe. Easier exchange without the necessity of draining water from the tank. Safety valves with fixed pressure settings from the manufacturer are used for the assembly. The starting pressure of the safety valve must be identical to the maximum allowed pressure of the tank, and at least 20 % higher than the maximum pressure in the water main (Table 5). If the water main pressure exceeds such value, a reduction valve must be added to the system. No closing armature may be mounted between the tank and the safety valve. During assembly, follow the guide provided by the safety equipment manufacturer.



It is necessary to check the safety valve each time before putting it into operation. It is checked by manual moving of the membrane from the seat, turning the make-and-break device button always in the direction of the arrow. After being turned, the button must click back into a notch. Proper function of the make-and-break device results in water draining through the safety valve outlet pipe. In regular operation, such a check needs to be carried out at least once a month, and after each shutdown of the tank longer than 5 days. Water may be dripping off the drain pipe of the safety valve; the pipe must be open into the air, pointed down; environment temperatures must not drop below zero. When draining the tank, use the recommended drain valve. First of all, close water inlet in the tank.

Find necessary pressure values in the below Table 5. For proper safety valve operation, a backflow valve shall be mounted on the inlet pipes, preventing spontaneous tank draining of the tank and hot water penetration back into the water main. We recommend that the hot water distribution from the tank is as short as possible in order to reduce heat losses. At least one demountable joint must be mounted between the tank and every supply pipe. Adequate piping and fittings with sufficiently dimensioned maximum temperature and pressure values must be used.

SAFETY VALVE START-UP PRESSURE [MPa]	ACCEPTABLE OPERATING OVER- PRESSURE OF THE WATERTANK [MPa]	MAXIMUM PRESSURE IN COLD WATER PIPES [MPa]
0.6	0.6	up to 0.48
0.7	0.7	up to 0.56
1	1	up to 0.8

Table 5

2.4 CONNECTION OF TANK TO HOT WATER DISTRIBUTION SYSTEM

The tank is placed on the floor next to the heating source or in its proximity. The heating circuit is connected to marked tank exchanger inputs and outputs, and bleeder valve is installed at the highest point. It is necessary to install a filter into the circuit in order to protect pumps, three-way valve, backflow flaps and the exchanger from sedimentation. It is recommended to flush the heating circuit before the assembly. All wiring connections must be properly insulated from heat. Should the system work with priority heating of hot sanitary water using a three-way valve, always follow the installation instructions of the three-way valve's manufacturer.

OKC 300-1000 NTR

heated by gas boiler with two pumps

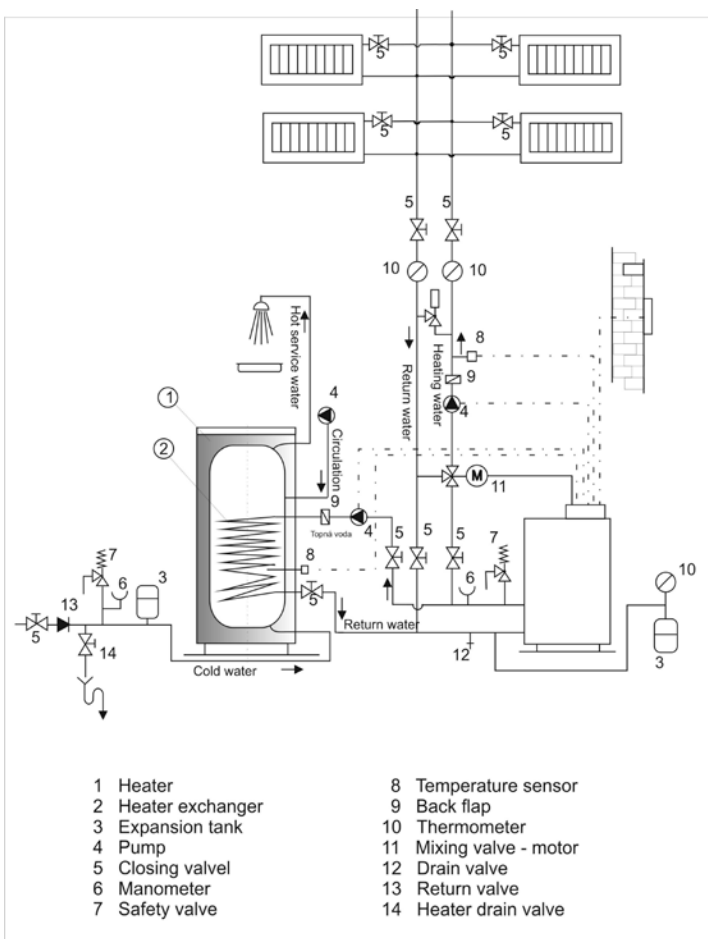


Figure 1

OKC 300-1000 NTRR

heated by gas boiler and solar collectors, controlled by three-way valve

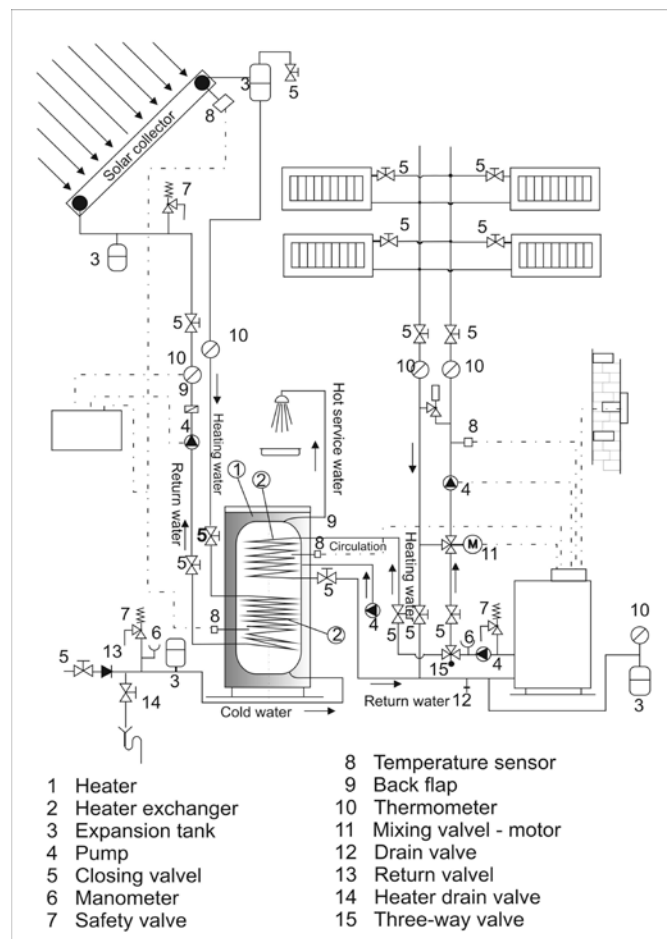


Figure 2

Example of group connection of tanks by Tichellman method for equal washing of HUW from all tanks

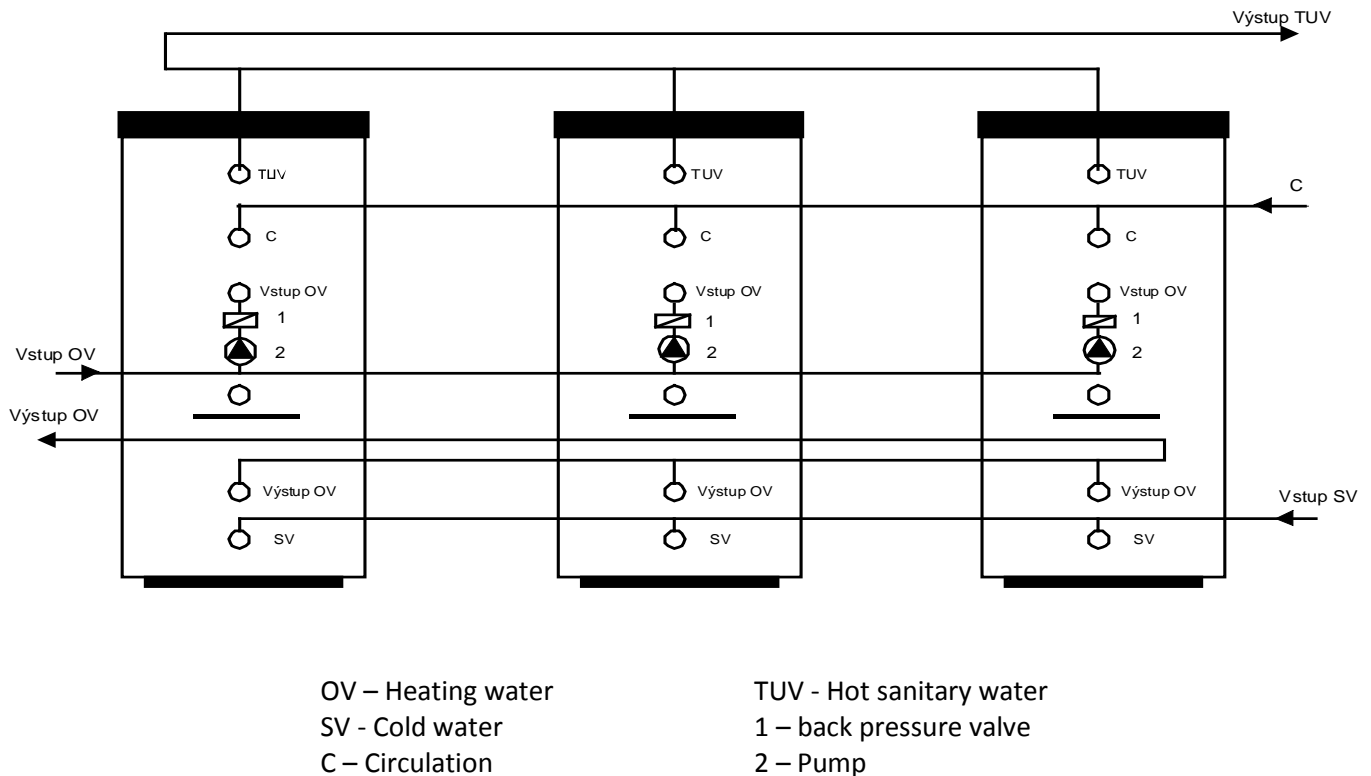


Figure 10

2.5 FIRST COMMISSIONING



Before opening the power supply, the tank must be filled with water. The process of first heating must be executed by licensed professional who has to check it. Hot water drain pipe might be hot, as well as parts of safety plumbing.



During the heating process the pressurised connection water that increases its volume due to heating must drip off the safety valve. In non-pressurised connection water drips off the overflow combination faucet. When heating is finished, the set temperature and the actual temperature of consumed water must be more-or-less the same. Once the tank is connected to water supply system and power supply, and the safety valve tested (accordingly with the manual attached to the valve), the tank can be put in operation.

Before first putting into service or after a longer shutdown the heater exchanger has to be rinsed out, flushed and bled yet before heating is activated. Before heating starts, the tank and hot-water exchangers must be completely filled with water and the system properly flushed and vented. First heating of the tank has to be watched.

Putting the tank in operation:

1. Check both water and electric installation; for combined tanks, check also the installation to the hot water heating system. Check proper placement of operating and safety thermostat sensors. The sensors must be inserted all the way in; first the operating and then the safety thermostat.
2. Open the hot water valve on the combination faucet.
3. Open the cold water inlet valve to the tank.
4. Once water starts draining through the hot water valve, filling of the tank is completed and the valve can be closed.
5. In case of leakage (of flange lid), we recommend that the flange lid bolts are fastened.
6. Screw down the electric installation guard.
7. When hot sanitary water is heated by electric energy, switch on the power supply (the valve on the heating water inlet to the heating insert must be closed in combined tanks).
8. When sanitary water is heated with electric energy from the hot water heating system, turn off electricity and open the valves on the heating water inlet and outlet, possibly de-aerate the exchanger.
9. Once the operation restarts, keep flushing the tank until the cloud disappears.
10. Make sure to fill in properly the warranty certificate.

2.6 PUTTING OUT OF SERVICE, DISCHARGE



If the hot water tank is put out of service or is not used for longer time, it has to be emptied and disconnected from power supply at all poles. The switch for the supply lead or the fuse cut-outs have to be shut off.

In locations that are permanently exposed to frost, hot water tank shall be emptied prior to the beginning of cold season, if the appliance is not used for several days, and if power supply is disconnected.



Drainage of service water shall be performed after closing the shut-off valve in the cold water supply piping (through the discharge valve for safety valve combination), and with simultaneous opening of all hot water valves of connected fittings (water can be also drained through safety valve; for that purpose, the safety valve is turned to the "Check" position).

Hot water may outflow during the drainage! If there is a risk of frost, be aware that not only the water in the hot water tank and the water in the hot water piping may freeze, but also the water in the entire cold water supply piping. It is therefore purposeful to discharge all plumbing and pipes where water flows all the way to the section of the house water meter (connection of the house to the water main) that is no longer threatened by frost. When the tank is to be used again, it has to be filled with water and one needs to make sure that the water flowing out at the **hot water valves did not contain any bubbles.**

2.7 INSPECTION, MAINTENANCE & CARE FOR THE APPLIANCE



During the heating process the water that increases its volume during the heating must visibly drip off the safety valve outlet (in non-pressurised connection this water drips off the combination faucet valve). In full heating (about 74°C) the volumetric water gain is approx. 3.5 % of the tank capacity. The function of the safety valve has to be checked regularly. If the safety valve control knob is lifted or turned to the “Control” position, the water must flow out easily, without any obstacles, from the safety valve element to the outfall line. In regular operation, such a check needs to be carried out at least once a month, and after each shutdown of the tank longer than 5 days.

Caution! In doing so, the cold water supply pipe and the connection fitting of the tank may get heated! If the hot water tank is not in run, or hot water is not consumed, no water may drip off the safety valve. If water drips, then the water pressure in the supply piping is either too high (if higher than 5.5 bars, a pressure control valve has to be fitted), or the safety valve is defective. Please call a specialised plumber immediately!



If water contains too many minerals, an expert has to come to remove the scale that forms inside the tank, as well as free sediments. This has to be performed after one or two years of operation. The cleaning is carried out through the hole in the flange – dismantle the flange lid and clean the tank. A new sealing has to be used for re-fitting. Since the inside of the tank has special enamel, which must not get in contact with the scale removing agent – do not work with decalcification pump. Remove the lime layer with a timber and suck it off, or wipe it off with a clout. After that, the appliance must be rinsed thoroughly and the heating process is checked the same as during the initial putting in operation. Do not use any abrasive cleaning agents (such as liquid sand, chemicals - acid, alkaline) or dye thinners (such as cellulose thinner, trichlor, and the like) to clean the outer shell of the tank. For cleaning use a wet clout and add a few drops of liquid cleaning agent for household applications. Repeated heating causes lime scale settling on the receptacle walls and mostly on the lid of the flange. Lime scale settling depends on hardness of heated water, its temperature and on the volume of hot water used.

We recommend checking and cleaning the tank from lime scale and eventual replacement of the anode rod after two years of operation. The anode life is theoretically calculated for two years of operation; however, it changes with water hardness and chemical composition in the place of use. Based on such an inspection, the next term of anode rod exchange may be determined. If the anode is only blocked with sediments clean its surface and, if used up, mount a new one. Have a company in charge of service affairs deal with the cleaning and exchanging of the anode.

When draining water from the tank, the combination faucet valve for hot water must be open, preventing the occurrence of under-pressure in the tank receptacle which would stop water from draining.

PROCEDURE OF EXCHANGING ANODE ROD IN UPPER HEATER PART

1. Turn off control voltage to the tank
2. Drain water from 1/5 of the tank.
PROCEDURE: Close water inlet in the tank
Open the hot water valve on the combination faucet.
Open the drain tap of the tank
3. Anode is screwed in under the plastic cover in the upper lid of the tank
4. Unscrew the anode using adequate wrench
5. Pull the anode out and follow reversed steps to install a new one
6. During the fitting, make sure the grounding cable (300-1,000 l) is connected properly; this is the condition of the anode's proper functioning
7. Fill the tank with water

PROCEDURE OF EXCHANGING ANODE ROD IN SIDE FLANGE

1. Turn off control voltage to the tank
2. Drain water from the tank.
PROCEDURE: Close water inlet in the tank
Open the hot water valve on the combination faucet.
Open the drain tap of the tank
3. One anode is screwed in under the plastic cover in the upper lid of the tank, and the other one is screwed in on the side flange
4. Unscrew the anode using adequate wrench
5. Pull the anode out and follow reversed steps to install a new one
6. Fill the tank with water

2.8 SPARE PARTS

- magnesium anode
- contact thermometer

When ordering spare parts always state the name of the part, the type and type number from the tank's plate.

3 IMPORTANT NOTICES

3.1 IMPORTANT NOTICES

- **Without a confirmation of both electric installation and assembly by expert company, the warranty certificate is invalid.**
- Check and exchange the Mg anode regularly.
- **No closing armature may be mounted between the tank and the safety valve.**
- All hot water outputs must have a combination faucet.
- Prior to the first filling the tank with water we recommend that the receptacle's flange connection nuts are tightened.
- It is not allowed to handle the thermostat, aside from temperature resetting with a control button.
- All electric installation handling, adjustment and replacement of the regulation elements shall only be performed by an authorised service company.
- **The thermal fuse must not be turned off!** In case of thermostat defect, the thermal fuse interrupts electric power supply to the heating element if the water temperature in the tank exceeds 90 °C.
- As an exception, the thermal fuse may also switch off due to water overheating caused by overheating the hot water heating system boiler.
- **We recommend that the tank is only operated on one energy source.** In case a solar system is connected to the bottom exchanger, it is necessary to connect a TJ 6/4" line element in the coupling above the heater for potential additional heating.



Do not attempt to remove potential defect by yourselves. Seek either expert or service help. It does not take much for an expert to remove the defect. When organizing repair state the model designation and serial number that is to be found on the power plate of your water tank.



To prevent the occurrence of bacteria (e.g. Legionella pneumophila) within stack heating it is recommended, if absolutely necessary, to increase the temperature of hot service water (HSW) periodically for a transitional period of time to at least 74°C. It is also possible to make use of another way of disinfecting HSW.

3.2 INSTALLATION REGULATIONS



Both the electric and water installation must follow and meet the requirements and regulations relevant in the country of use!

3.3 DISPOSAL OF PACKAGING MATERIAL AND NON-FUNCTIONING PRODUCT

A service fee for providing return and recovery of packaging material has been paid for the packaging in which the product was delivered. The service fee was paid pursuant to Act No 477/2001 Coll., as amended, at EKO-KOM a.s. The client number of the company is F06020274. Take the water tank packages to a waste disposal place determined by the municipality. When the operation terminates, disassemble and transport the discarded and unserviceable heater to a waste recycling centre (collecting yard), or contact the manufacturer.



4 FITTING INSTRUCTIONS FOR INSULATION WITH ZIP CLOSURE (FOR 750 AND 1000 LITRES)

Insulation can be mounted by two people only; three for bigger boilers. It can be performed in areas where temperature reaches at least 18°C.

If the insulation includes tank bottom insulation, the latter must be mounted first. Consequently, the insulation is inserted around the boiler; pre-pressed insulation openings must be respected.

By slight pulling in the direction of the arrows, both sides of the zip insulation draw up (see Figure 11) so that the insulation does not draw down, and the holes in the insulation overlap the inputs and outputs on the boiler.

It has to be ensured that both halves of the zip closure aren't distant by more than 20 mm from one another before closing (see Figure 12). No foam shall get into the zip-fastener on closing.

After the insulation coat is properly mounted and the zip closure closed properly, insert the top lid made of foam material and cover it with either a foil cover or a plastic lid. Alternatively, outlet caps can be glued on the connecting points (as indicated in Figure 13). The insulation may only be stored in dry storage places.

We take no responsibility for damages caused by not respecting this guide.

Figure 11

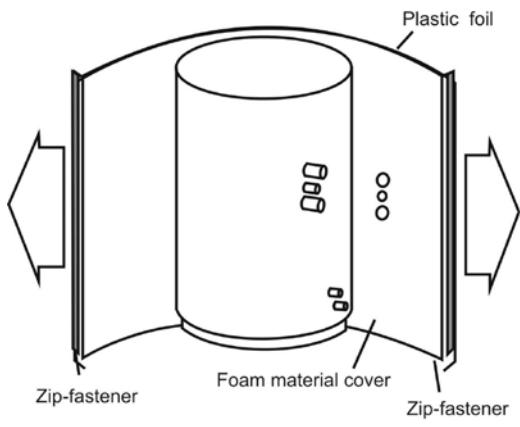


Figure 12

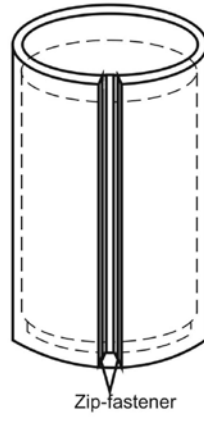
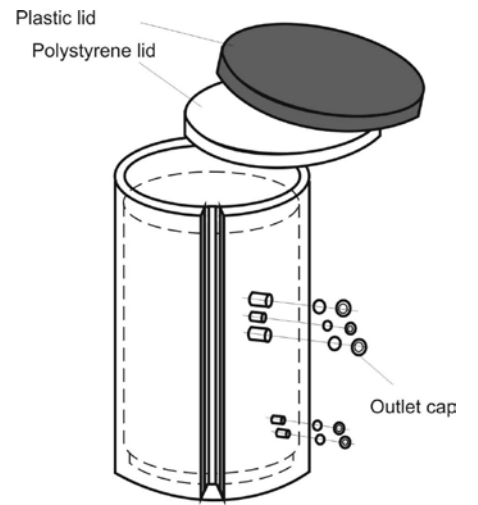


Figure 13



18-1-2016