

OPERATING AND INSTALLATION MANUAL

STATIONARY ELECTRICAL WATER HEATERS



OKCE 100 S/2,2 kW
OKCE 125 S/2,2 kW

OKCE 160 S/2,2 kW
OKCE 160 S/3-6 kW
OKCE 200 S/2,2 kW
OKCE 200 S/3-6 kW
OKCE 250 S/2,2 kW
OKCE 250 S/3-6 kW

OKCE 300 S/1 MPa
OKCE 400 S/1 MPa
OKCE 500 S/1 MPa
OKCE 750 S/1 MPa
OKCE 1000 S/1 MPa

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CAREFULLY READ THIS MANUAL BEFORE INSTALLING THE WATER HEATER!

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. With this guide, we will introduce you to the use, construction, maintenance and other information on electrical water heaters.



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 heater 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

OKCE line water heaters use only electricity for heating. Their nominal performance provides sufficient amount of hot water for flat units, premises, restaurants, and similar establishments.

1.2 PRODUCT DESCRIPTION

The heater tank is welded from a steel sheet; it is entirely coated with hot water resistant enamel. For additional corrosion protection a magnesium anode is mounted in the upper part of the heater to adjust the electric potential inside the tank, reducing the risk of corrosion. All types have the outlets of hot and cold water and a circulation opening welded to them. The receptacle is insulated with 40-65 mm polyurethane foam. The heater shield consists of a steel, powder-paint coated, sheet; the connecting parts are metal coated.

In 100-125 litre heaters, a flange is welded onto the upper bottom of the receptacle to which the lid of the flange is screwed. A sealing ring is inserted between the flange lid and the flange.

Thermowells for placing a heating element and regulation and safety thermostat sensors and capillary thermometer are located in the flange lid. Electric wiring is placed underneath the plastic removable cover. Under the plastic cover in 160-250 litre heaters, there is a cleaning and revision opening ended with a flange on the side of the heater; a heating unit of different power can be mounted in the opening. The heater is to be placed on the ground.

Tanks between 100 and 250 litres are tested with the pressure of 0.9 MPa; 300 litre tanks are tested with 1.5 MPa.

1.3 DESIGN AND GENERAL HEATER DIMENSIONS

OKCE 100 S/2.2 kW; OKCE 125 S/2.2 kW;

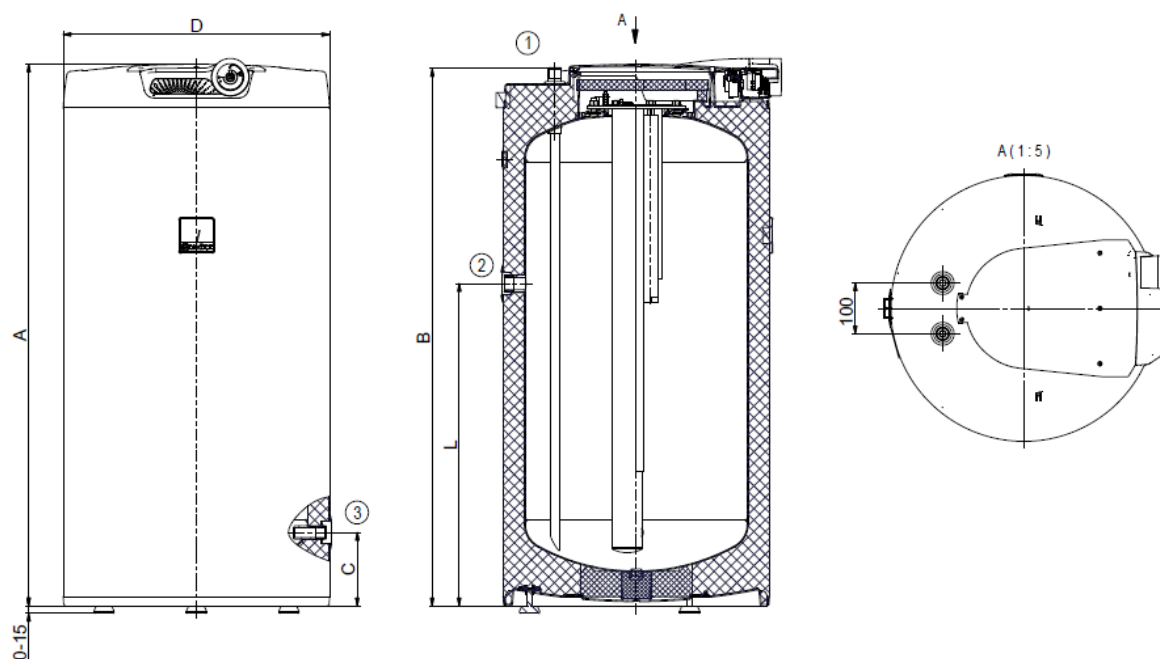


Figure 1

TYP	OKCE 100 S/2,2 kW	OKCE 125 S/2,2 kW
A	902	1067
B	893	1058
C	144	144
D	524	524
L	535	635

①	3/4" outer
②	3/4" inner
③	1/2" inner

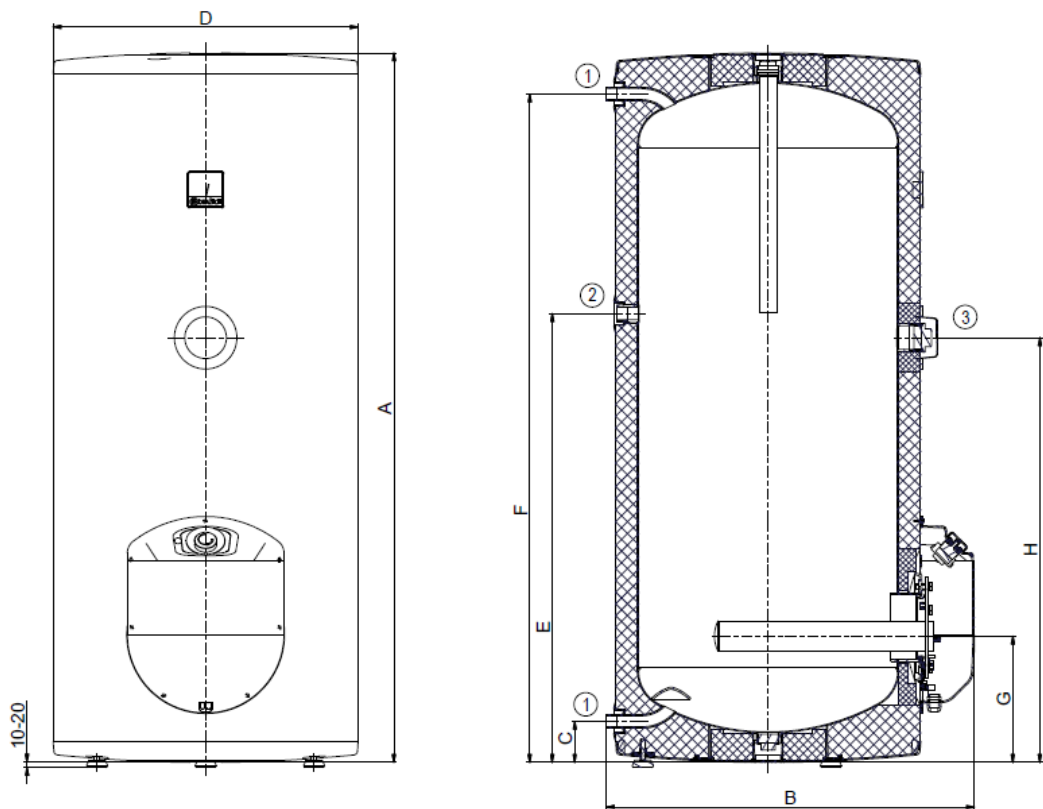
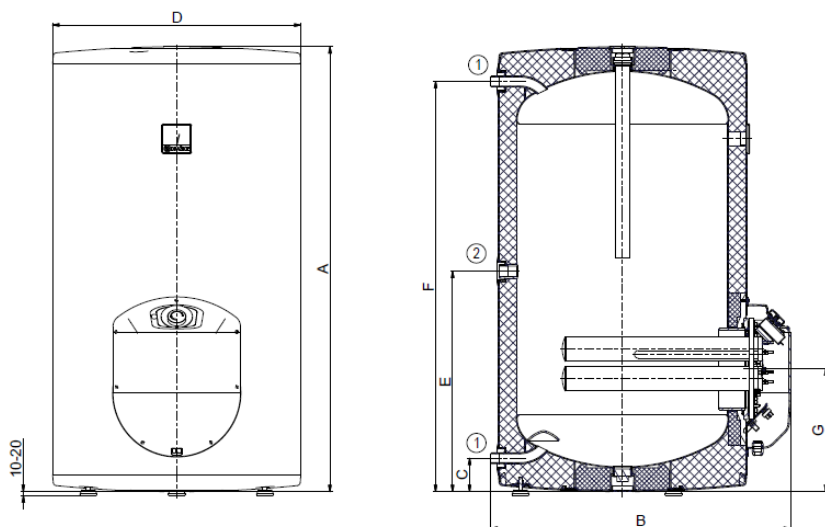


Figure 2

TYP	OKCE 160 S/2,2 kW	OKCE 200 S/2,2 kW	OKCE 250 S/2,2 kW
A	1047	1357	1537
B	705	705	705
C	79	79	79
D	584	584	584
E	519	859	1059
F	966	1279	1459
G	242	242	242
H	524	813	813

①	3/4" outer
②	3/4" inner
③	6/4" inner

OKCE 160 S/3-6 kW



OKCE 200 S/3-6 kW, OKCE 250 S/3-6 kW

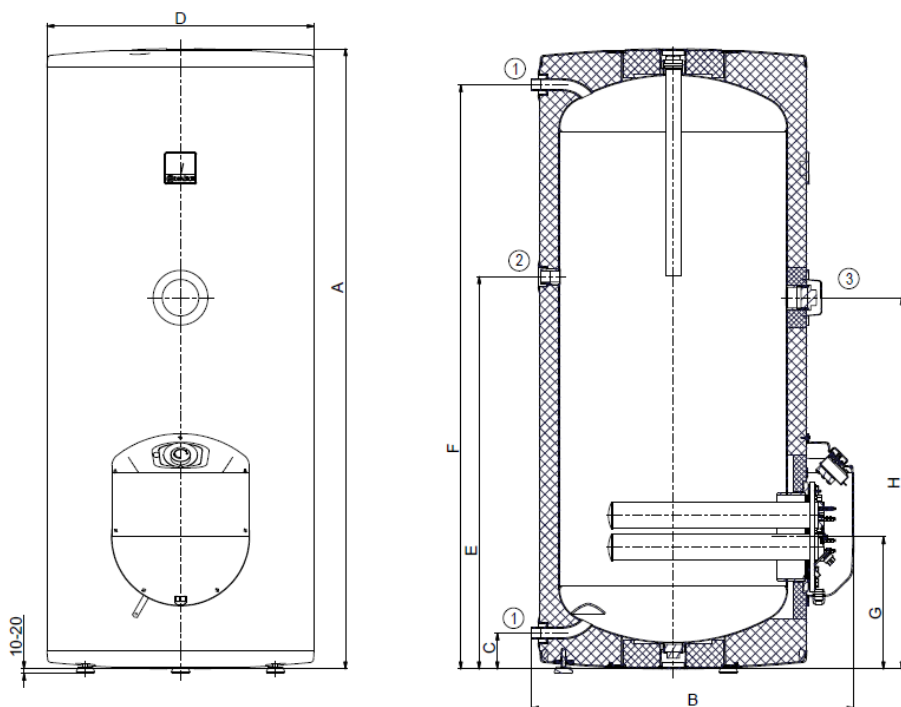


Figure 3

TYP	OKCE 160 S/3-6 kW	OKCE 200 S/3-6 kW	OKCE 250 S/3-6 kW
A	1047	1357	1537
B	705	705	705
C	79	79	79
D	584	584	584
E	518	859	1059
F	965	1279	1459
G	289	289	289
H	-	813	813

①	3/4" outer
②	3/4" inner
③	6/4" inner

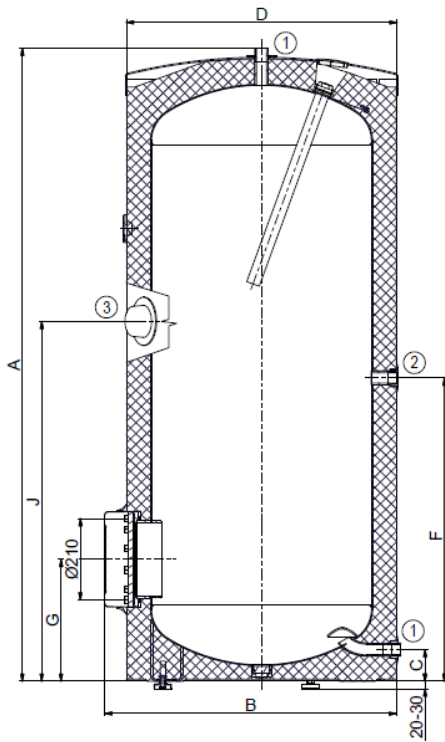


Figure 4

A	1578
B	724
C	79
D	650
F	756
G	304
J	897

①	3/4" outer
②	3/4" inner
③	6/4" inner

OKCE 400 S/1 MPa; OKCE 500 S/1 MPa

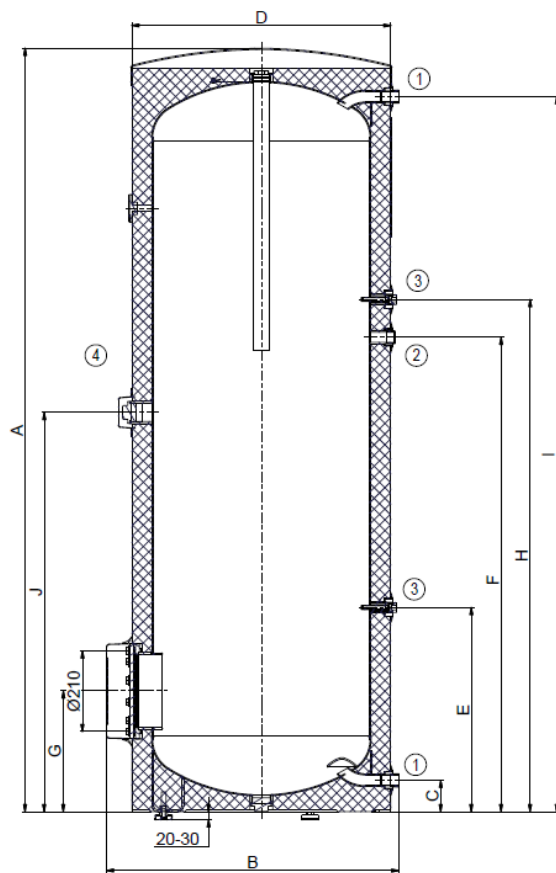


Figure 5

	OKCE 400 S/1MPa	OKCE 500 S/1MPa
A	1920	1924
B	734	779
C	79	55
D	650	700
E	514	380
F	1194	1264
G	304	287
H	1289	1409
I	1798	1790
J	1005	1040

①	3/4" outer
②	3/4" inner
③	1/2" inner Thermowell for sensor
④	6/4" inner

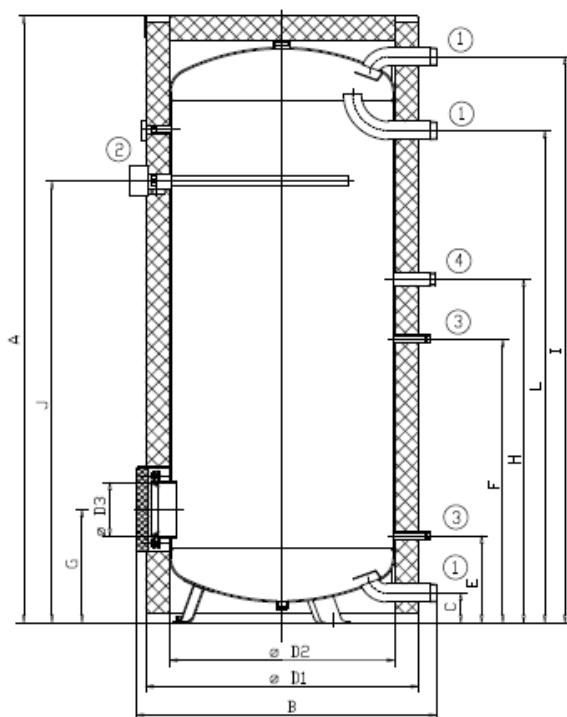


Figure 6

	OKCE 750 S/1MPa	OKCE 1000 S/1MPa
A	2030	2050
B	1030	1130
C	100	100
D1	910	1010
D2	750	850
D3	225	225
E	292	300
F	947	955
G	382	390
H	1147	1155
I	1893	1910
J	1477	1515
L	1642	1650

①	2" outer
②	5/4" inner
③	1/2" inner
④	5/4" outer

1.4 TECHNICAL PARAMETERS

MODEL	OKCE 100 S/2,2kW	OKCE 125 S/2,2 kW	OKCE 160 S/2,2 kW	OKCE 200 S/2,2 kW	OKCE 250 S/2,2 kW
			OKCE 160 S/3,6 kW	OKCE 200 S/3- 6 kW	OKCE 250 S/3- 6 kW
Capacity [l]	100	125	160	220	259
WEIGHT [kg]	42	49	58	72	80
			67	81	89
TANK OPERATING PRESSURE [MPa]	0,6				
MAX HEATING WATER TEMPERATURE (°C)	90				
HEATING TIME FRTO 10°C to 60°C [h]	2,9	3,6	4,2	5,8	6,8
			3,1-1,6	4,3-2,1	4,9-2,5
LOAD PROFILE	M	L	L	XL	XL
DAILY ELECTRICITY CONSUMPTION [kWh]	6,23	12,12	11,96	19,74/19,67	19,23
MIXED WATER V40 [l]	133,17	156,44	235,47	309,66	418,23

Table 1

MODEL	OKCE 300 S/1MPa	OKCE 400 S/1MPa	OKCE 500 S/1MPa	OKCE 750 S/1MPa	OKCE 1000 S/1MPa
Capacity [l]	314	395	455	750	1000
WEIGHT [kg]	82	103	121	162	211
TANK OPERATING PRESSURE [MPa]	1				
MAX HEATING WATER TEMPERATURE (°C)	90				
HEATING TIME FRTO 10°C to 60°C [h]	depending on selected power input of in-built heating unit				
LOAD PROFILE	XL	XXL	XXL		
DAILY ELECTRICITY CONSUMPTION [kWh]	20,09	25,6	25,58		
MIXED WATER V40 [l]	419,08	521,89	640,08		

Table 2

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 legally acknowledged national regulations and standards, also conditions for connection defined in local electric and water works have to be adhered to, as well as the installation and operation manual.

The temperature at the place of heater 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.



If water is strongly calcareous we recommend that any of the common decalcifying devices was installed with the appliance, or that the thermostat was set to the minimum operating temperature of 55°C (setting to position “ECO”) - Figure 19. For proper operation, drinkable water of adequate quality shall be used. To avoid potential sediments we recommend that the device was installed together with a water filter.

2.2 ELECTRICAL INSTALLATION

2.2.1 ELECTRIC INSTALLATION FOR: OKCE 100 S/2.2 KW; OKCE 125 S/2.2 KW;

Perform the connection according to the scheme. Factory connection must not be changed! (Obrázek 8). In the electric wiring casing remove the partition corresponding with the input wire diameter of $\phi 8$ or $\phi 10$ (Figure 7). The degree of protection of electric parts of the heater is IP 44. Power input of electric element is 2,200 W.

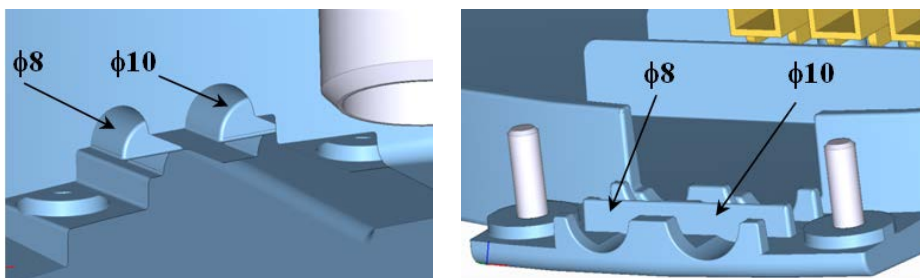


Figure 7

Connection, repairs, and wiring inspections may only be implemented by a company (person) authorised to such activity.

Expert connection must be confirmed on the warranty certificate.

The heater is connected to the 230 V/50 Hz electric network using a fixed moving conductor with a switch that turns off all network poles and the circuit breaker (protector).

Wiring diagram:

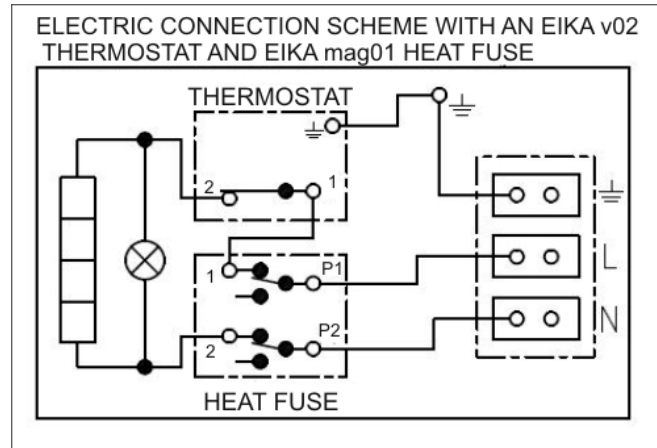


Figure 8

Flange lid fastening - 8 x M10

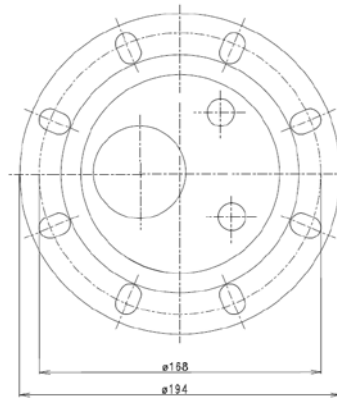


Figure 9

2.2.2 ELECTRIC INSTALLATION FOR: OKCE 160 S/2,2 KW, OKCE 160 S/3-6 KW, OKCE 200 S/2,2 KW, OKCE 200 S/3-6 KW, OKCE 250 S/2,2 KW, OKCE 250 S/3-6 KW, OKCE 300 S/1 MPA ,OKCE 400 S/1 MPA, OKCE 500 S/1 MPA

Water heater is equipped with universal electrical heating unit with either fixed or optional power of heating elements (apart from OKCE 300 S/1 MPa). The heating unit consists of a flange to which one or three thermowells for ceramic heating units are welded, and a thermowell for regulation sensors (see Figure 9, Figure 10, Figure 11). A unit is attached by either 8 M 10 screws with a 168 mm clearance or 12 M 12 screws with a 210 mm clearance. In the wiring plastic cover, there is a thermostat and a safety fuse; heater operation control light; and a lead-in wire bushing.



The sensors must be inserted all the way in; first the thermostat and then the safety fuse.

The performance of heating unit may be adjusted based on either required heating time or connecting possibilities of electric energy distribution in the place of use.

Parameters of an electric heating unit for: OKCE 160 S/2,2 kW, OKCE 160 S/3-6 kW, OKCE 200 S/2,2 kW, OKCE 200 S/3-6 kW, OKCE 250 S/2,2 kW, OKCE 250 S/3-6 kW

Type	Performance (kW)	Voltage (V/Hz)	Build-up length l (mm)	IP Protection	Weight (kg)	Mounting
TPK 168 - 8/2.2 kW	2,2	1 PE-N ~ 230 V/50 Hz	405	IP 44	5	8 x M10

Table 3

For: OKCE 300 S/1 MPa – the heating element has to be additionally purchased

Type	Performance (kW)	Voltage (V/Hz)	Build-up length l (mm)	IP Protection	Weight (kg)	Mounting
TPK 210 - 12/2.2 kW	2,2	1 PE-N ~ 230 V/50 Hz	440	IP 44	9	12 x M12
TPK 210 - 12/3-6 kW	3 - 4 - 6	3 PE-N ~ 400 V/50 Hz	440	IP 44	15	12 x M12
TPK 210 - 12/5-9 kW	5 - 7 - 9	3 PE-N ~ 400 V/50 Hz	550	IP 44	18	12 x M12
TPK 210 - 12/8-12 kW	8 - 10 - 12	3 PE-N ~ 400 V/50 Hz	550	IP 44	18	12 x M12

Table 4

After the heater is connected to electric network, the heating element starts heating water. The element is turned on and off by a thermostat. The thermostat may be set from 5°C to 74°C. We recommend that the sanitary water temperature is set to the maximum of 60°C. This temperature ensures optimum operation of the heater since thermal losses are reduced, and electricity saved. After reaching the temperature set, the thermostat switches off the electric circuit and thus discontinues water heating. The control light signals if the element is in operation (light is on) or if it is off (the light goes out).



If the tank is out of service for longer time, the thermostat can be set to the “snowflake” symbol in winter period to avoid its freezing, or the power supply to the heater can be switched off.



Connection, repairs, and wiring inspections may only be implemented by company (person) authorised to such activity. Qualified installation must be acknowledged in the warranty certificate.

Installations in bathrooms, laundry rooms, rest rooms and showers must be in compliance with applicable standard.

Adhere to the protection against electric shock injury according to applicable standard.

The heater is connected to the electric network using a solid moving conductor with a switch that turns off all network poles and the circuit breaker (protector).

The degree of protection of electric parts of the heater is IP 44.

Heating unit - flanges

OKCE 160 S/2.2 kW; OKCE 200 S/2.2 kW;
OKCE 250 S/2.2 kW

TPK 168-8/2.2 kW

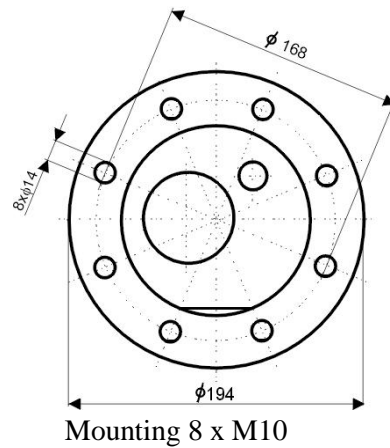


Figure 10

OKCE 300 S/1 MPa

TPK 210-12/2.2 kW

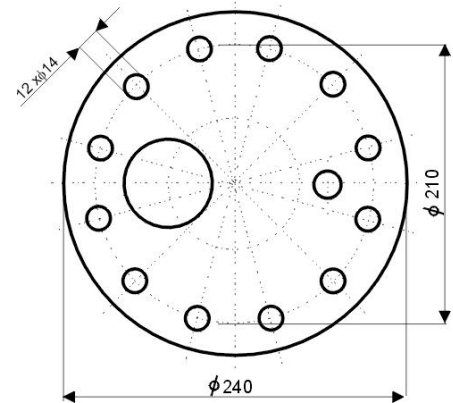
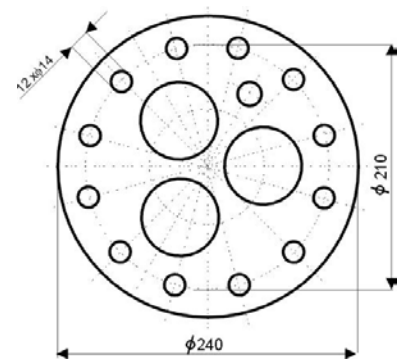


Figure 1

OKCE 160 S/3-6 kW, OKCE 200 S/3-6 kW,
OKCE 250 S/3-6 kW, OKCE 300 S/1 MPa

TPK 210-12/3-6 kW

OKCE 300 S/1 MPa ,OKCE 400 S/1 MPa, OKCE 500 S/1 MPa
TPK 210-12/5-9 kW
TPK 210-12/8-12 kW



Fastening 12 x M12

Figure 12

Wiring scheme

Notice: Factory connection must not be changed!

Heating unit 2.2 kW

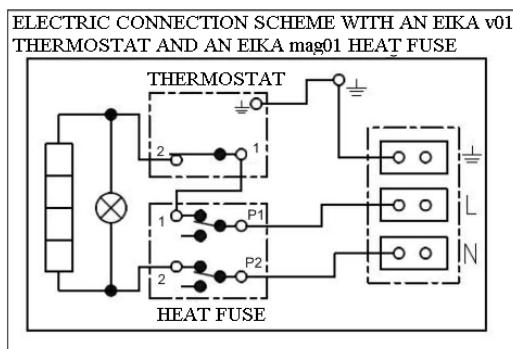


Figure 2

Cover of wiring with control

Thermostat Heater run indicator lamp

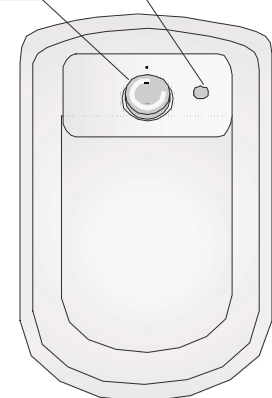


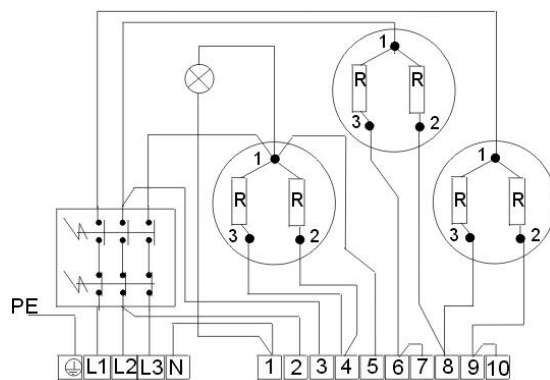
Figure 14

Heating unit 3-6 kW

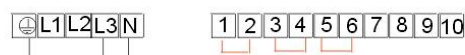
The 3-6 kW heating unit allows 4 types of connection based on either required time of heating or possibilities of electric network in the place of use.

TPK 3-6 kW R ~ 1 kW

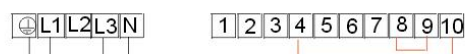
To achieve chosen performance of the heating unit, connect the inlet conductor to L1, L2, L3, and N terminal board, and interconnect the clips on the 1-10 terminal board in accordance with the following schemes:



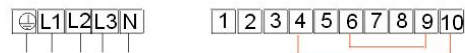
3 kW 1 PE - N AC 230 V / 50 Hz



3 kW 2 PE - N AC 400 V / 50 Hz



4 kW 3 PE - N AC 400 V / 50 Hz



6 kW 3 PE - N AC 400 V / 50 Hz



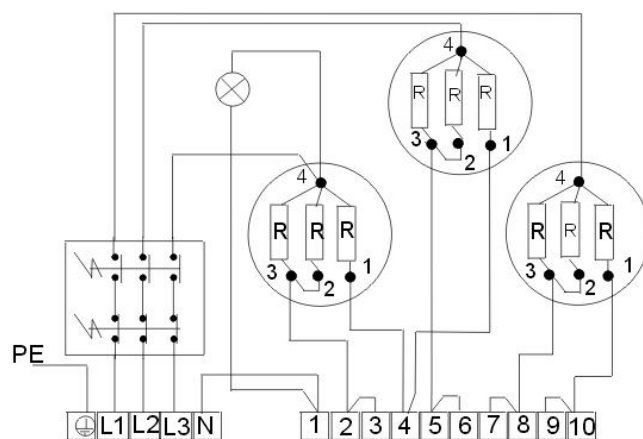
OKCE 300 S/1 MPa , OKCE 400 S/1 MPa, OKCE 500 S/1 MPa

TPK 210-12/5-9 kW

TPK 210-12/8-12 kW

TPK 5-9 kW R ~ 1 kW

TPK 8-12 kW R ~ 1,33 kW

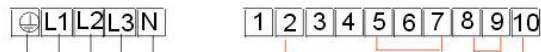


TPK 5-9 kW

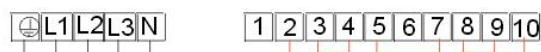
5 kW 3 PE - N AC 400 V / 50 Hz



7 kW 3 PE - N AC 400 V / 50 Hz



9 kW 3 PE - N AC 400 V / 50 Hz



TPK 8-12 kW

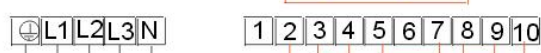
8 kW 3 PE - N AC 400 V / 50 Hz



10,5 kW 3 PE - N AC 400 V / 50 Hz



12 kW 3 PE - N AC 400 V / 50 Hz



2.2.3 ELECTRIC INSTALLATION ONLY FOR: OKCE 300 S/1MPA, OKCE 400 S/1MPA , OKCE 500 S/1MPA, OKCE 750 S/1MPA, OKCE 1000 S/1MPA

Heating units use

Capacity	Flange size	Time of heating from 10°C to 60°C (hours)							
L	mm	8	6	5	4	3	2,5	2	1,5
750	Flange Ø150	RDU 18-6	RDW 18-7,5	RDW 18-10	RSW 18-12	RSW-18-15			
	Flange Ø225		SE 377-8	SE 378-9.5	SE 377-11	SE 378-14	SE 377-16	SE 378-19	
1000	Flange Ø150	RDW 18-7.5	RDW 18-10	RSW 18-12	RSW 18-15				
	Flange Ø225	SE 377-8	SE 378-9.5	SE 377-11	SE 378-14	SE 377-16	SE 378-19		

Capacity	Flange size	Time of heating from 10°C to 60°C (hours)							
L	Mm	8	6	5	4	3	2,5	2	1,5
300	Flange Ø210	RDU 18- 2,5	RDU 18- 3	RDU 18-3,8	RDU 18-5	RDU 18-6	RDW 18-7,5	RDW 18-10	
400	Flange Ø210	RDU 18- 3	RDU 18-3,8	RDU 18-5	RDU 18-6	RDW 18-7,5	RDW 18-10	RSW 18-12	RSW 18-15
500	Flange Ø210	RDU 18-3,8	RDU 18-5	RDU 18-6	RDW 18-7,5	RDW 18-10	RSW 18-12	RSW 18-15	

Table 5

Electrical heating units REU, RDU and RSW can be by reduction flange 210/150 mounted in heaters of 300, 400 and 500 litre capacity.

Electrical heating units REU, RDU and RSW can be by reduction flange 225/150 mounted in heaters of 750 and 1,000 litre capacity.

Type	Performance	Connection	Element lenght (mm)	Weight (kg)
REU 18 - 2,5	2,5	1 PE-N AC 230 V / 50 Hz	450	3
RDU 18 - 2,5	2,5	3 PE-N AC 400 V / 50 Hz	450	3,3
RDU 18 - 3	3	3 PE-N AC 400 V / 50 Hz	450	3,4
RDU 18 - 3,8	3,8	3 PE-N AC 400 V / 50 Hz	450	3,5
RDU 18 - 5	5	3 PE-N AC 400 V / 50 Hz	450	3,5
RDU 18 - 6	6	3 PE-N AC 400 V / 50 Hz	450	3,5
RDW 18 - 7,5	7,5	3 PE-N AC 400 V / 50 Hz	450	3,7
RDW 18 - 10	10	3 PE-N AC 400 V / 50 Hz	450	4
RSW 18 - 12	12	3 PE-N AC 400 V / 50 Hz	530	4
RSW 18 - 15	15	3 PE-N AC 400 V / 50 Hz	630	4,2
SE 377*	8,0-11-16	3 PE-N AC 400 V / 50 Hz	610	8
SE 378*	9,5-14-19	3 PE-N AC 400 V / 50 Hz	610	11,5

*Only for 750 and 1000 litre boilers.

Table 6

Capacity	Time of heating from 10°C to 60°C (hours)									
I	8	6	4,5	3,5	3	2,5	2,1	1,8	1,6	1,4
300	TPK 210/2,2	TPK 210/3-6	TPK 210/3-6	TPK 210/5-9	TPK 210/3-6	TPK 210/5-9	TPK 210/8-12	TPK 210/5-9	TPK 210/8-12	TPK 210/8-12
Connection	2,2 kW	3 kW	4 kW	5 kW	6 kW	7 kW	8 kW	9 kW	10 kW	12 kW

Table 7

Capacity	Time of heating from 10°C to 60°C (hours)									
I	11,3	8	6	4,7	4	3,4	3	2,6	2,4	2
400	TPK 210/2,2	TPK 210/3-6	TPK 210/3-6	TPK 210/5-9	TPK 210/3-6	TPK 210/5-9	TPK 210/8-12	TPK 210/5-9	TPK 210/8-12	TPK 210/8-12
Connection	2,2 kW	3 kW	4 kW	5 kW	6 kW	7 kW	8 kW	9 kW	10 kW	12 kW

Table 8

Capacity	Time of heating from 10°C to 60°C (hours)									
L	14,1	9,8	7,5	6	5	4,2	3,7	3,3	3	2,5
500	TPK 210/2.2	TPK 210/3-6	TPK 210/3-6	TPK 210/5-9	TPK 210/3-6	TPK 210/5-9	TPK 210/8-12	TPK 210/5-9	TPK 210/8-12	TPK 210/8-12
Connection	2.2 kW	3 kW	4 kW	5 kW	6 kW	7 kW	8 kW	9 kW	10 kW	12 kW

Table 9

Reduction flange 210 / 150

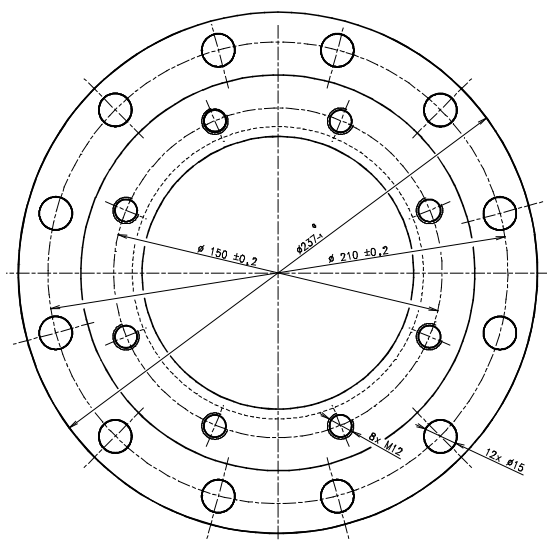


Figure 15

Reduction flange 225 / 150

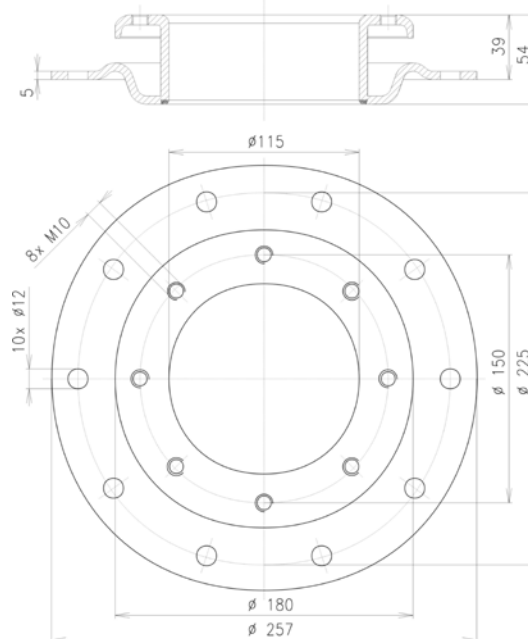


Figure 16

2.2.4 PLUMBING FIXTURE



Power water connects to pipes with 3/4" thread in the bottom part of the heater. Blue - cold water supply, red – hot water outlet. For potential disconnection of the heater, the service water inlets and outlets must be provided with screw coupling Js 3/4". The safety valve is mounted on the cold water inlet identified with a blue ring.



Each hot service water pressure heater must have a safety valve with a membrane spring. Nominal clearance of safety valves is defined by standard. **300 l heaters are supplied without the safety valve.** The safety valve must be easily accessible, as close to the heater as possible. 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. This allows easier exchange without having to drain the water from the heater. 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 heater pressure, and at least 20 % higher than the maximum pressure in the water main (Table 10). If the water main pressure exceeds such value, a reduction valve must be added to the system. **No stop valves can be put between the heater 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 common operation, such a check needs to be implemented at least once a month, and after each heater shutdown for more 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 heater, use the recommended drain valve. First, close the water supply into the heater.

Find necessary pressure values in the below Table 10. For proper safety valve operation, a backflow valve shall be mounted on the inlet pipes, preventing spontaneous heater draining and hot water penetrating back into the water main. We recommend that the hot water distribution from the heater was as short as possible to minimise 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.

Water heaters must be provided with a discharge valve mounted on the cold service water inlet to the heater for potential disassembly or repair.

When assembling the security equipment, follow the standard.

SAFETY VALVE START-UP PRESSURE [MPa]	ALLOWABLE OPERATING OVERPRESSUR E OF WATER HEATER [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 10

2.3 FURTHER INFORMATION



300-1000 litre capacity heaters are screwed onto the bottom wooden palette with M12 screws. When the heater is released from the palette and prior to its putting into operation, 3 adjustable legs supplied as the product accessories have to be installed. With these legs, the heater may be positioned vertically to the base, within 10 mm.

2.4 FIRST COMMISSIONING

After connecting the heater to the water main, electrical power system, and after checking the safety valve (following the instructions attached to the valve), the heater can be put into operation.

Procedure:

- a) check the water main and wiring; Check proper placement of thermostat sensors. The sensors in the well must be inserted all the way in; first the operating and then the safety thermostat;
- b) open the hot water valve on the combination faucet;
- c) open the cold water inlet valve to the heater;
- d) when the water starts flowing through the hot water valve, the filling of the heater is finished and the valve needs to be closed;
- e) if a flange lid leak is discovered, the flange lid bolts need to be tightened;
- f) fasten the electric installation cover;
- g) when the heater starts operate, flush the tank until the cloud disappears;
- h) make sure to fill in properly the warranty certificate.

Cold Water Inlet Scheme

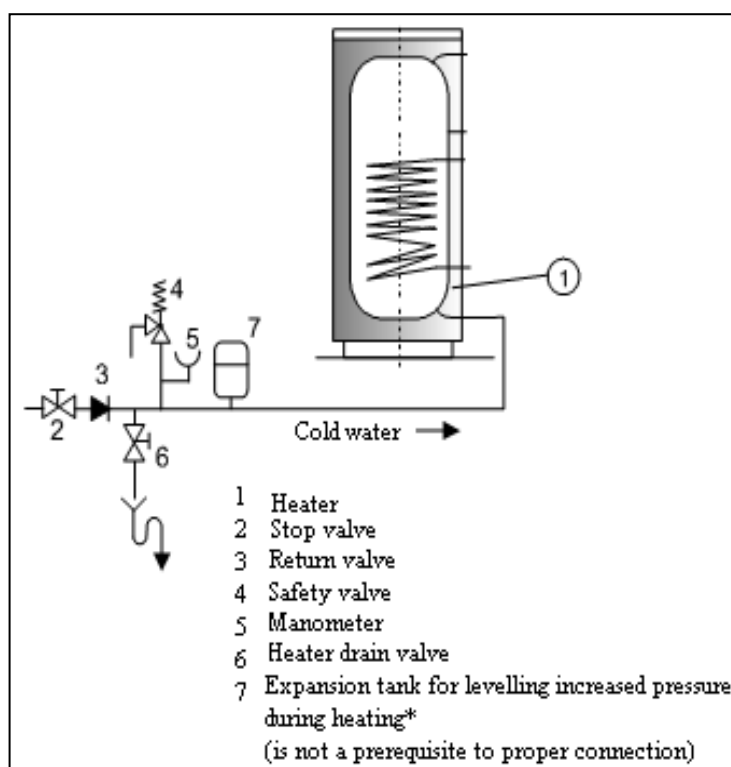


Figure 17

2.5 HEATER CLEANING AND ANODE ROD EXCHANGE

Repetitive water heating causes limestone sediment on both the enamelled tank walls and chiefly the flange lid. 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 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. Have a company in charge of service affairs deal with the cleaning and exchanging of the anode. When draining water from the heater, the combination faucet valve for hot water must be open, preventing the occurrence of under-pressure in the heater tank which would stop water from draining.



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 70°C. It is also possible to make use of another way of disinfecting HSW.

2.6 SPARE PARTS

- | | | |
|-------------------------------|-------------------------------------|-----------------------------|
| - flange lid | - flange lid seal | - set of M12 (or M10) bolts |
| - thermostat and thermal fuse | -magnesium anode | - insulation flange lid |
| - control lights with wires | - control button for the thermostat | - capillary thermometer |
| - heating element | | |

When ordering spare parts, give part name, type, and type number from the heater label.

3 OPERATION OF THERMOSTAT

3.1 SERVICING

3.1.1 OPERATION DEVICES OF THE OKCE 100-125 S/2.2 kW HEATER

Thermostat's control panel

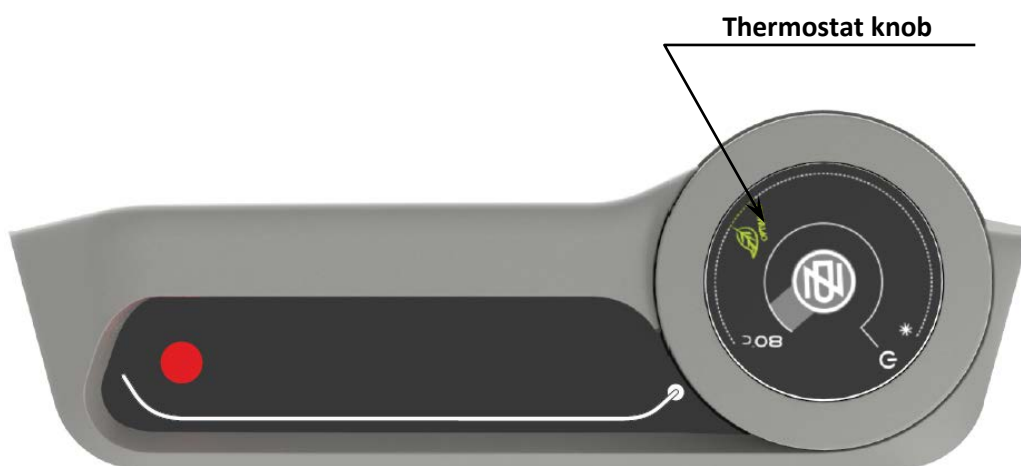


Figure 18

3.1.2 TEMPERATURE SETTING

Water temperature is set by turning the thermostat knob. The desired symbol is adjusted against the fixed point on the control panel (Figure 9).

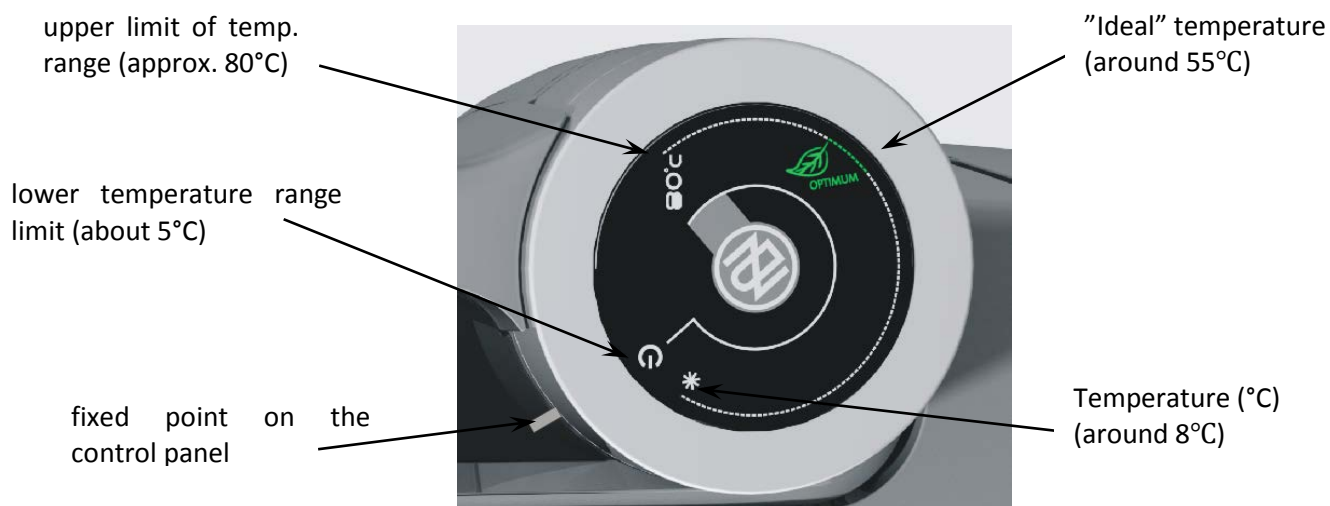


Figure 19



Adjusting the thermostat knob to the left backstop does not mean permanent shutoff of the heating element.

When the heater is in use without blocking the daily rate, we do not recommend the temperature to be set above 55°C. Select the "ECO" symbol as the maximum.

3.2 MOST FREQUENT FUNCTION FAILURES AND THEIR CAUSES

FAILURE SYMPTOM	INDICATOR	SOLUTION
Water is cold	<ul style="list-style-type: none">• Light on	<ul style="list-style-type: none">• Heating element failure• Some elements are not heating
Water is not warm enough	<ul style="list-style-type: none">• Light on	<ul style="list-style-type: none">• failure of any of the units• failure of one of the heating coils in the element
Water is cold	<ul style="list-style-type: none">• Light off	<ul style="list-style-type: none">• Thermostat failure• The safety thermostat shut off the power supply.• Electric supply outside the heater interrupted
Temperature of water is not corresponding with the temperature set on the control	<ul style="list-style-type: none">• Light on	<ul style="list-style-type: none">• Thermostat failure

Table 11



Do not attempt to repair the failure yourselves. Seek either expert or service help. It does not take much for an expert to remove the defect. When making a repair appointment, report the type and serial number you find on the performance plate of your water heater.

4 IMPORTANT NOTICES

4.1 INSTALLATION REGULATIONS



Without a proof issued by a professional company about performed electrical and plumbing fixture the warranty shall be void.

It is necessary to check the protective magnesium anode periodically and replace it if necessary.

No stop valves can be put between the heater and the safety valve.

If the overpressure in the eater main exceeds 0.48 MPa, a reduction valve must be mounted before the safety valve.

All outlets of hot water must be equipped with combination faucets.

Before the first filling of water heater it is recommended to tighten the nuts of the flange joint of the tank.

It is not allowed to handle the thermostat, aside from temperature resetting with a control button.

All electric installation handling, setting, and regulation feature exchange, may only be implemented by a service company.



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

4.2 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 boiler packages to a waste disposal place determined by the town. When the operation terminates, disassemble and transport the discarded and unserviceable heater to a waste recycling centre (collecting yard), or contact the manufacturer.



5 ASSEMBLY GUIDE FOR ZIP-FASTENER INSULATION

(only applies to heaters of 750 and 1,000 litre capacity)

Insulation can be mounted by two people only; by 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. The insulation is then inserted around the boiler (heater), respecting the pre-pressed insulation openings. By slight tension in the direction of the arrows both sides of the zip insulation (as indicated in Fig. 20) are drawn together 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 21). On closing, no foam may penetrate in the zip closure.

Once the insulation shell is properly fitted, and the zip closure closed, the upper foam lid is mounted and a foil cover or a plastic lid, as the case may be, drawn over. Alternatively, outlet caps can be glued on the connecting points (as indicated in Figure 22).

The insulation must be stored in dry areas only.

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

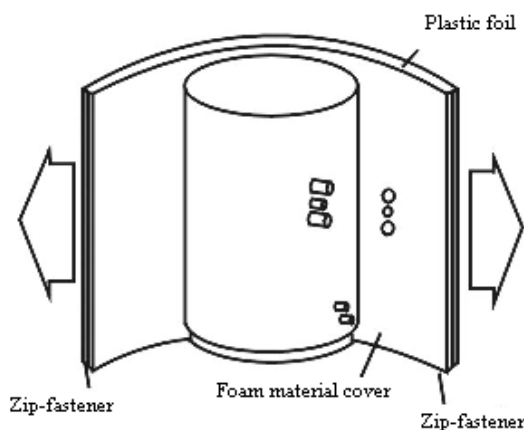


Figure 20

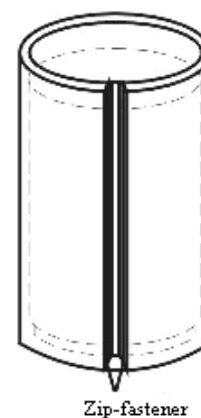


Figure 21

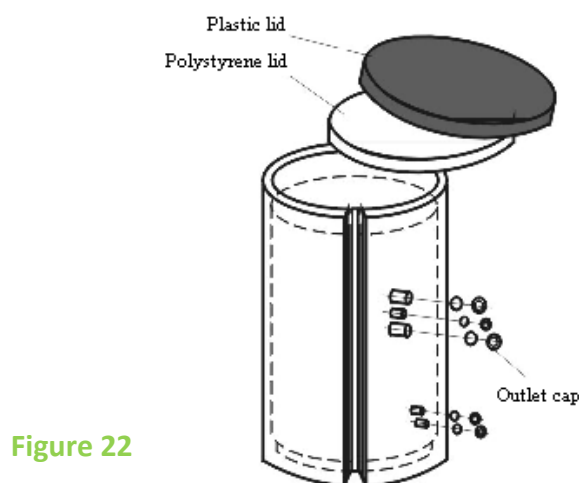


Figure 22

2-5-2016