

# OPERATING AND INSTALLATION MANUAL

## WATER HEATERS STATIONARY ELECTRICAL



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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# CONTENTS

1	TECHNICAL SPECIFICATION OF PRODUCT .....	4
1.1	FUNCTION DESCRIPTION .....	4
1.2	PRODUCT DESCRIPTION .....	4
1.3	CONSTRUCTION AND GENERAL HEATER DIMENSIONS.....	5
1.4	TECHNICAL PARAMETERS.....	8
2	OPERATION AND FITTING INSTRUCTIONS.....	9
2.1	OPERATING CONDITIONS .....	9
2.2	ELECTRIC INSTALLATION.....	10
2.2.1	GENERAL INFORMATION FOR ELECTRIC INSTALLATION .....	10
2.2.2	WIRING FOR: OKCE 100 S/2,2 kW, OKCE 125 S/2,2 kW .....	10
2.2.3	WIRING 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	11
2.2.4	WIRING FOR: OKCE 300 S/1MPa, OKCE 400 S/1 MPa , OKCE 500 S/1MPa, OKCE 750 S/1MPa, OKCE 1000 S/1MPa.....	15
2.3	PLUMBING FIXTURE.....	16
2.4	FURTHER INFORMATION .....	17
2.5	PUTTING THE HEATER INTO OPERATION .....	18
2.6	HEATER CLEANING AND ANODE ROD EXCHANGE.....	19
2.7	SPARE PARTS.....	19
3	SERVICING OF THERMOSTAT.....	20
3.1	SERVICING.....	20
3.1.1	SERVICE DEVICES OF HEATERS .....	20
3.1.2	TEMPERATURE SETTING .....	20
3.2	FUNCTIONAL DEFECTS.....	21
4	IMPORTANT NOTICES.....	21
4.1	INSTALLATION REGULATIONS.....	21
4.2	DISPOSAL OF PACKAGING MATERIAL AND FUNCTIONLESS PRODUCT .....	22
5	ASSEMBLY GUIDE FOR ZIP-FASTENER INSULATION .....	23

## READ CAREFULLY THE BELOW INSTRUCTIONS PRIOR TO THE INSTALLATION THE 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%.

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

### Meaning of pictograms used in Manual



**Important information for heater users.**



**Recommendations of manufacturer, observance of which will ensure trouble-free operation and long service life of the product.**



**CAUTION!**

**Important notice to be observed.**

# 1 TECHNICAL SPECIFICATION OF PRODUCT

## 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, lowering the risk of corrosion. All types have the outlets of hot and cold water and a circulation opening welded to them. The tank is insulated with 65 mm of polyurethane foam. The heater shield consists of a steel, powder-paint coated, sheet; the connecting parts are metal coated. For heaters 100 – 125 l is a flange welded onto the upper bottom of the receptacle with a flange lid screwed to it. A sealing ring is inserted between the flange lid and the flange.

Thermo wells for the safety thermostat sensors and capillar thermometer installation are placed in the flange lid. Wiring is placed under the plastic removable cover. Under a plastic cover on the side of the heater, there is a cleaning and revision opening ended with a flange; various performance heating units may be mounted into 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 CONSTRUCTION AND GENERAL HEATER DIMENSIONS

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

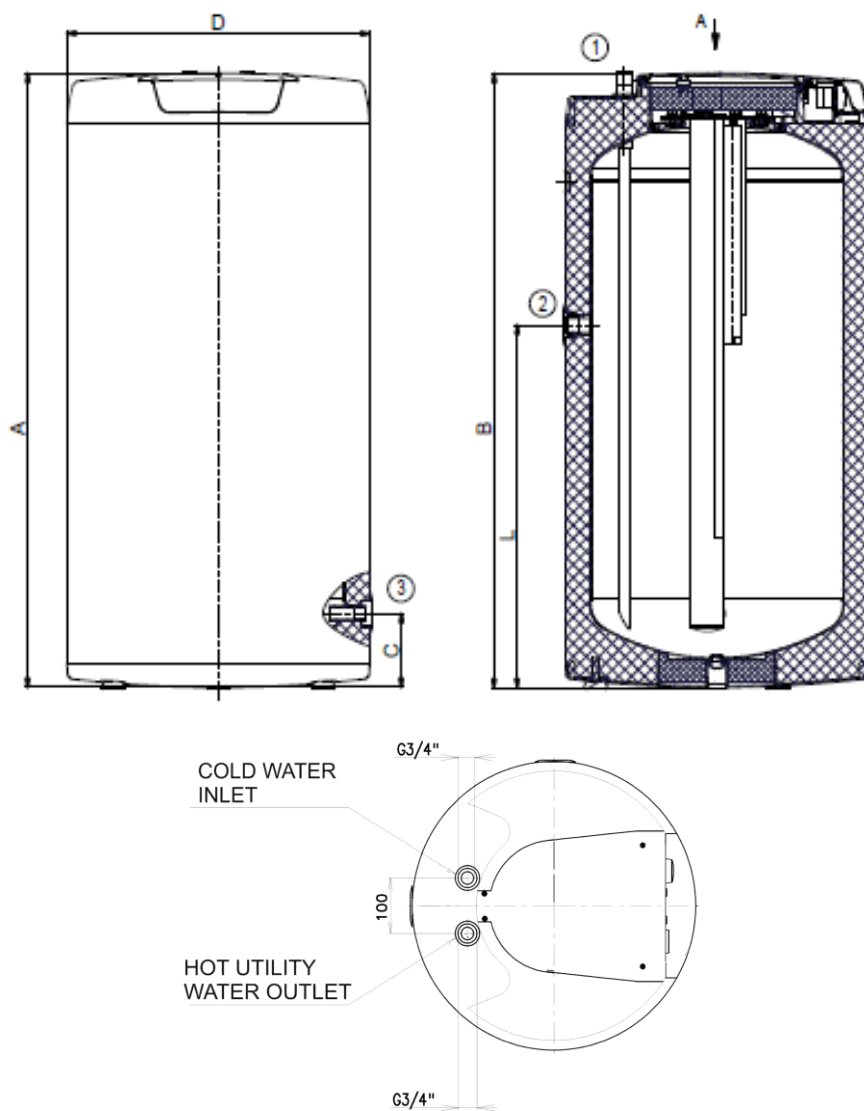


Figure 1

TYPE	OKCE 100 S/2,2 kW	OKCE 125 S/2,2 kW
A	885	1050
B	885	1050
C	126	126
D	524	54
L	520	620

①	3/4" vnější
②	3/4" vnitřní
③	1/2" vnitřní

OKCE 160 S/2,2 kW, OKCE 200 S/2,2 kW, OKCE 250 S/2,2 kW

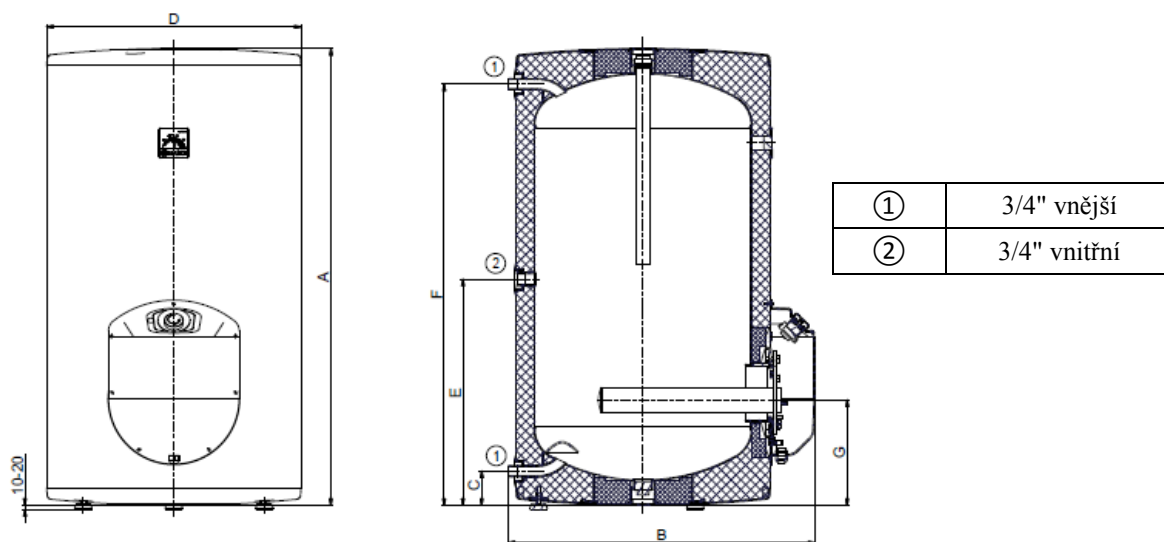


Figure 2

TYPE	OKCE 160 S/2,2 kW	OKCE 200 S/2,2 kW	OKCE 250 S/2,2 kW
A	1047	1357	1537
B	966	1279	1459
C	519	859	1059
D	168	168	168
E	79	79	79
F	242	242	242

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

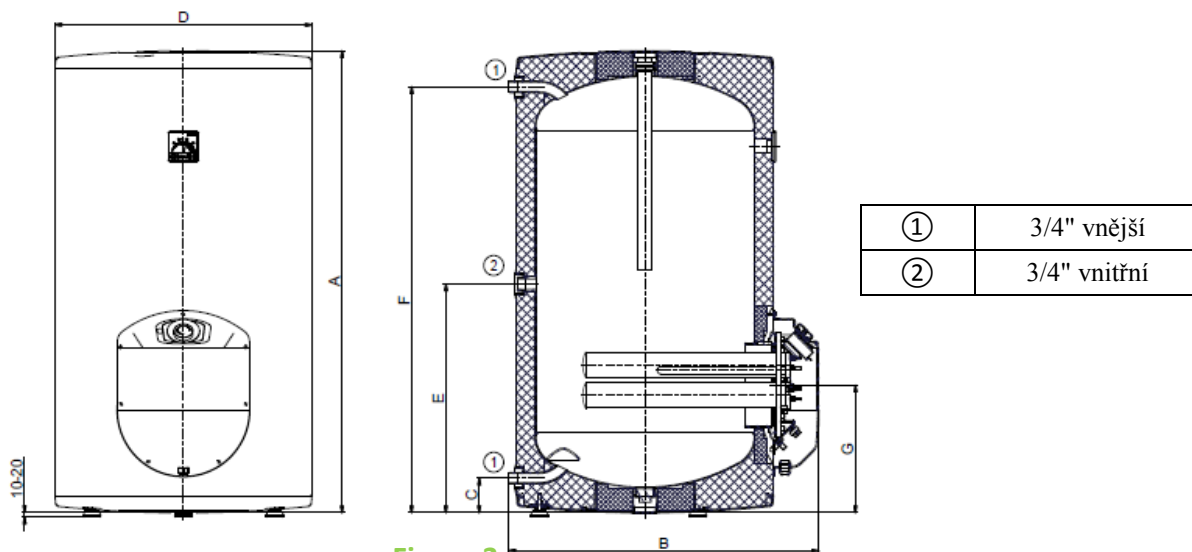
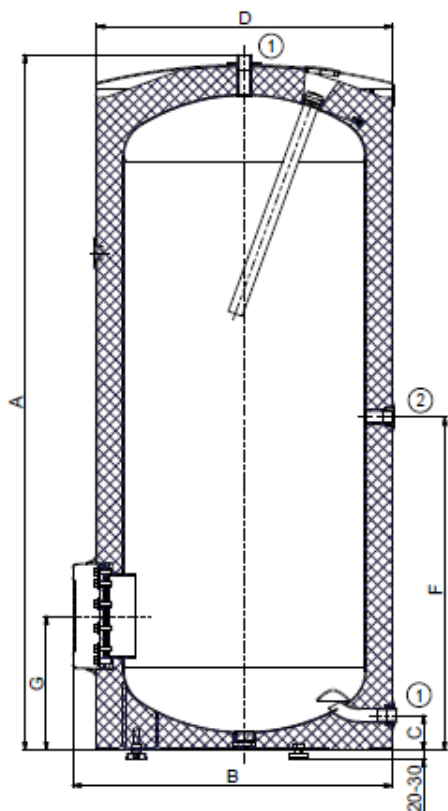


Figure 3

TYPE	OKCE 160 S/3-6 kW	OKCE 200 S/3-6 kW	OKCE 250 S/3-6 kW
A	1052	1362	1542
B	969	1281	1465
C	526	861	1065
D	227	227	227
E	82	82	82
F	297	297	297

## OKCE 300 S/1 MPa

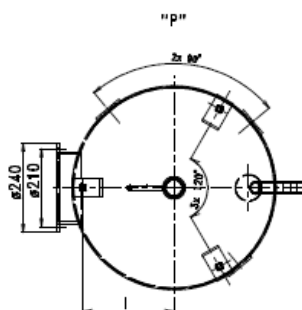
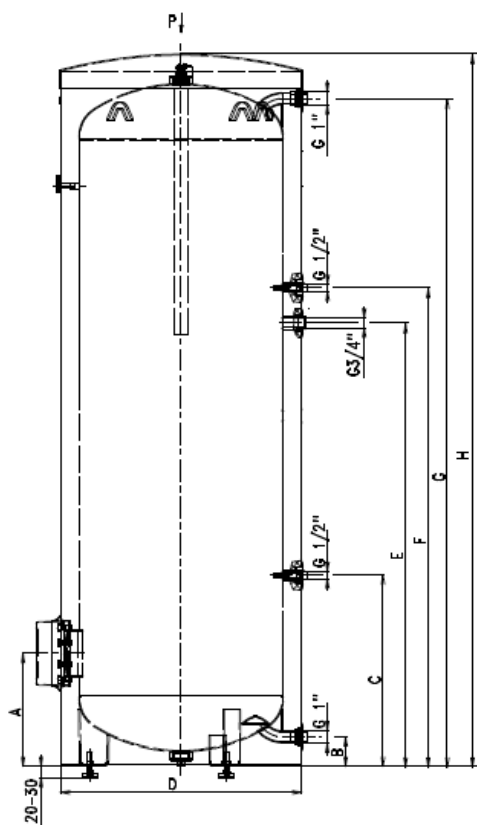


A	1578
B	724
C	79
D	650
F	756
G	304

①	3/4" vnější
②	3/4" vnitřní

### Figure 4

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



	OKCE 400 S/1MPa	OKCE 500 S/1MPa
A	304	292
B	79	65
C	514	385
D	650	700
E	1194	1269
F	1289	1414
G	1790	1790
H	1920	1924
I	245	273

### Figure 5

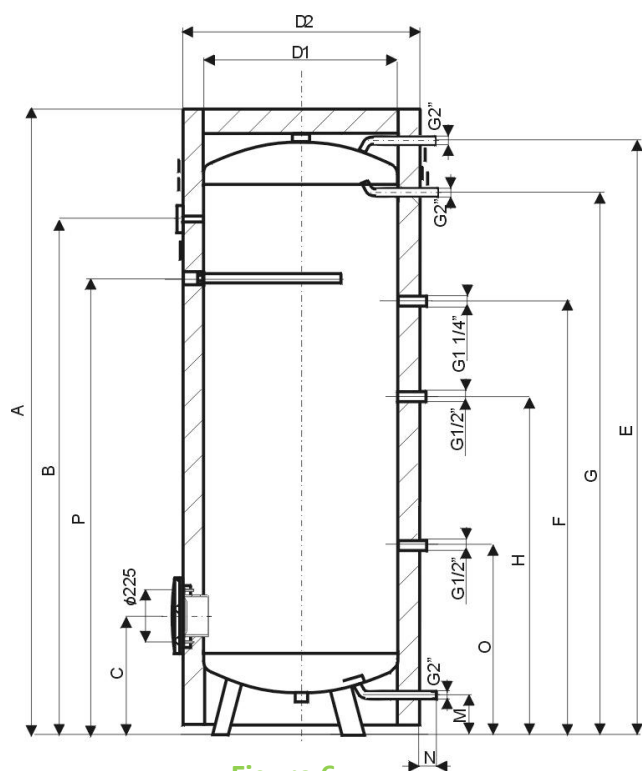


Figure 6

	OKCE 750 S/1MPa	OKCE 1000 S/1MPa
A	1998	2025
B	1643	1671
C	378	386
D1	750	850
D2	910	1010
E	1908	1911
F	1143	1154
G	1638	1646
H	943	951
M	88	92
N	45	45
O	288	296
P	1473	1511

## 1.4 TECHNICAL PARAMETERS

TYPE	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
OPERATING PRESSURE OF ACCUMULATOR [MPa]			0,6		
MAX TEMPERATURE OF HSW [°C]			90		
HEATING TIME FROM 10°C TO 60°C [h]	2,6	3,3	4,2	5,8	6,8
			2,8 – 1,4	3,9 – 1,9	4,6 – 2,3
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	362,16/309,66	418,23

Table 1



	OKCE 300 S/1MPa	OKCE 400 S/1MPa	OKCE 500 S/1MPa	OKCE 750 S/1MPa	OKCE 1000 S/1MPa
<b>CAPACITY [l]</b>	314	395	455	750	1000
<b>WEIGHT [kg]</b>	82	103	121	162	211
<b>OPERATING PRESSURE OF ACCUMULATOR [MPa]</b>			1		
<b>MAX TEMPERATURE OF HSW [°C]</b>			90		
<b>HEATING TIME FROM 10°C TO 60°C [h]</b>	depending on the power of built-in heating unit				
<b>LOAD PROFILE</b>	XL	XXL	XXL	XXL	XXL
<b>DAILY ELECTRICITY CONSUMPTION [kWh]</b>	20,09	25,6	25,58		
<b>MIXED WATER V40 [l]</b>	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 60°C (setting to position "60") - (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 ELECTRIC INSTALLATION

### 2.2.1 GENERAL INFORMATION FOR ELECTRIC INSTALLATION

Perform the connection according to the scheme. Factory connection must not be changed! (Figure 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 45. Power input of electric element is 2000 W.

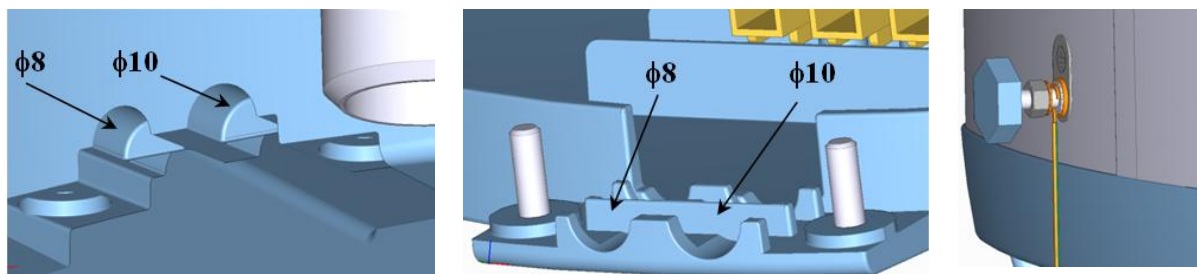


Figure 7

### 2.2.2 WIRING FOR: OKCE 100 S/2,2 KW, OKCE 125 S/2,2 KW

Wiring scheme is attached to the heater wiring on the cover.

Connect, repair and control wiring can be performed only company authorized for this activity.

Professional involvement must be confirmed by the warranty.

The heater is connected to the power supply 230 V/50 Hz movable fixed wire which is equipped with all-pole disconnecting switch network and circuit breaker (protector).

**Wiring scheme:**

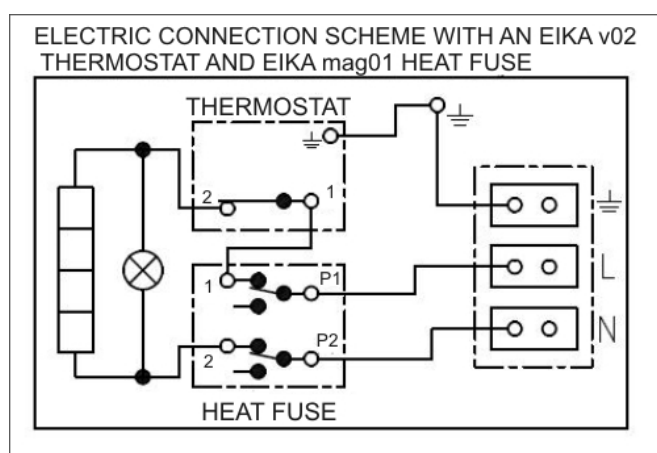


Figure 8

Mounting - 8 x M10

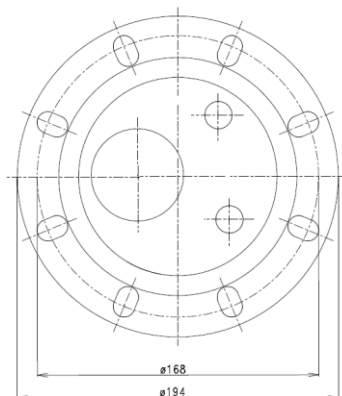


Figure 9

### 2.2.3 WIRING 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 a universal electric heating unit with either a set or adjustable heating elements' performance (except OKCE 300 S/1 MPA). A heating unit consists of a flange, to which one or three wells for ceramic heating elements and one thermowell are welded (viz. Figure 10, Figure 11, Figure 12). 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
<b>TPK 168 - 8/2,2 kW</b>	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
<b>TPK 210 - 12/2,2 kW</b>	2,2	1 PE-N ~ 230 V/50 Hz	440	IP 44	9	12 x M12
<b>TPK 210 - 12/3-6 kW</b>	3 - 4 - 6	3 PE-N ~ 400 V/50 Hz	440	IP 44	15	12 x M12
<b>TPK 210 - 12/5-9 kW</b>	5 - 7 - 9	3 PE-N ~ 400 V/50 Hz	550	IP 44	18	12 x M12
<b>TPK 210 - 12/8-12 kW</b>	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. Thermostat can be set as per your need within the range from 5°C to 74°C. We recommend setting service water to maximum temperature of 60°C. This temperature ensures an optimal operation of the heater, reduces heat losses and saves electricity. 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).



When shutting the heater out for an extended period, in winter you can set the thermostat to the snowflake sign preventing the water from freezing, or turn off the inlet of electricity to the heater.



Connection, repairs, and wiring inspections may only be implemented by company (person) authorised to such activity. Expert connection must be confirmed on the warranty certificate.

Installations in bathrooms, laundromats, rest rooms and showers must follow the applicable standards.

Respect rules of protection against electrical injuries in accordance with current regulations.

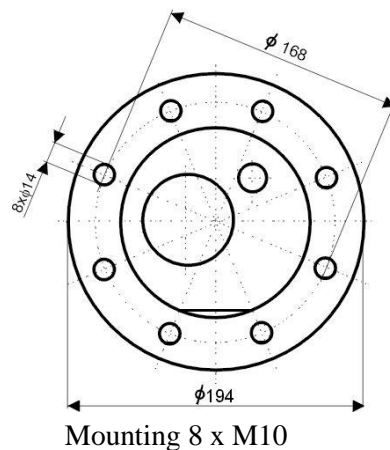
The heater is connected to the electric network using a solid moving conductor with a switch that turns off all network poles and the circuit breaker (protector).

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**

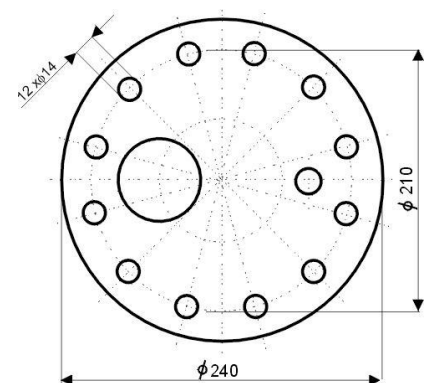
TPK 168-8/2,2 kW



**Figure 10**

**OKCE 300 S/1 MPa**

TPK 210-12/2,2 kW



**Figure 11**

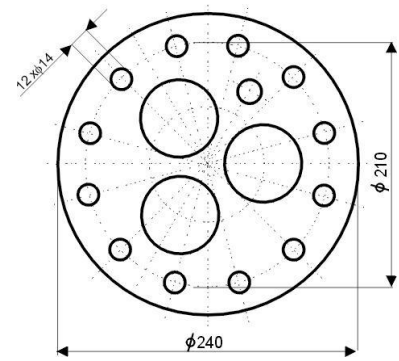
**OKCE 160 S/3-6 kW, OKCE 200 S/3-6 kW,  
OKCE 250 S/3-6 kW, OKCE 300 S/1 MPa**

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



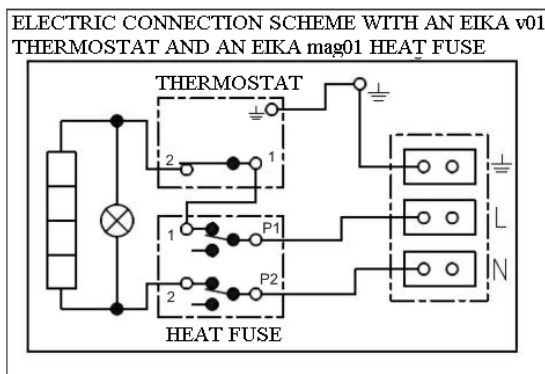
Mounting 12 x M12

**Figure 12**

## Wiring scheme

**Notice:** Factory connection must not be changed!

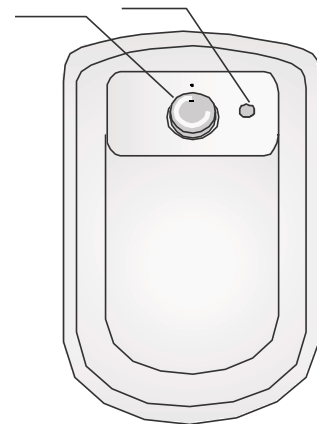
### Heating unit 2.2 kW



**Figure 13**

### Cover of wiring with control

Thermostat Heater operation control light



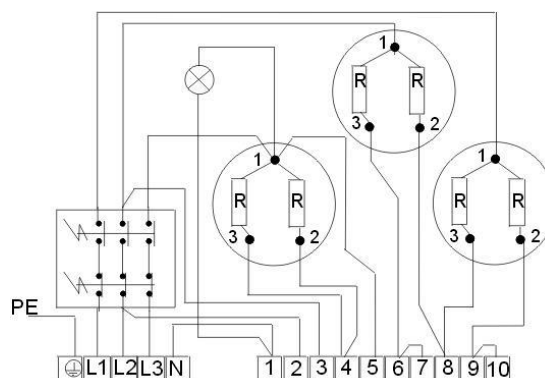
**Figure 14**

## 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**  $R \sim 1 \text{ kW}$

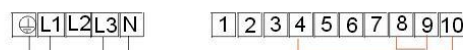
To achieve chosen performance of the heating unit, connect the inlet conductor to L1, L2, L3, and N terminal board and interconnect the clips on the 1-10 terminal board in accordance with the following schemes:



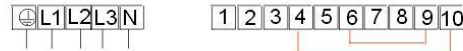
**3 kW** 1 PE - N AC 230 V / 50 Hz



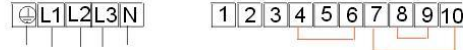
**3 kW** 2 PE - N AC 400 V / 50 Hz



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



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



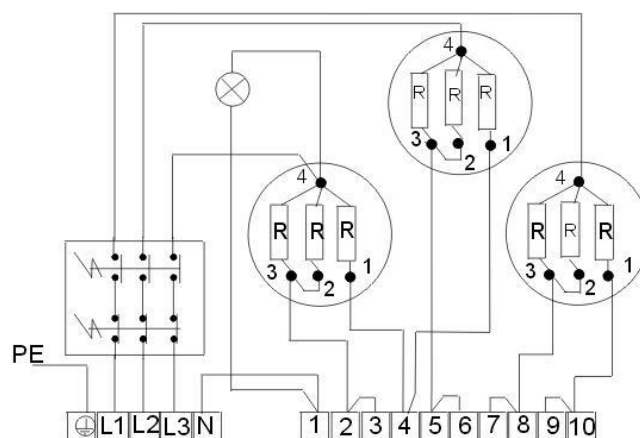
## OKCE 300 S/1 MPa, OKCE 400 S/1 MPa, OKCE 500 S/1 MPa

TPK 210-12/5-9 kW

TPK 210-12/8-12 kW

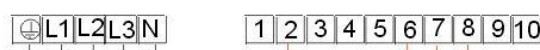
**TPK 5-9 kW**  $R \sim 1 \text{ kW}$

**TPK 8-12 kW**  $R \sim 1.33 \text{ kW}$



### TPK 5-9 kW

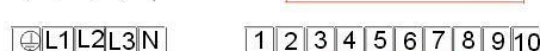
**5 kW** 3 PE - N AC 400 V / 50 Hz



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



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

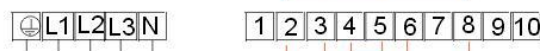


### TPK 8-12 kW

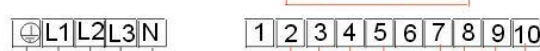
**8 kW** 3 PE - N AC 400 V / 50 Hz



**10.5 kW** 3 PE - N AC 400 V / 50 Hz



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



## 2.2.4 WIRING FOR: OKCE 300 S/1MPA, OKCE 400 S/1 MPA , OKCE 500 S/1MPA, OKCE 750 S/1MPA, OKCE 1000 S/1MPA

Heating units use

Capacity	Flanges 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	Flanges 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**

Electric heating units REU, RDU a RSW with the reduction flange 210/150 can be assembled in heaters with volume 300, 400 a 500 litres.

Electric heating units REU, RDU a RSW with the reduction flange 225/150 can be assembled in heaters with volume 750 a1000 litres.

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
RDW 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)									
l	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
Wiring	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)									
l	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
Wiring	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)									
I	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
Wiring	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

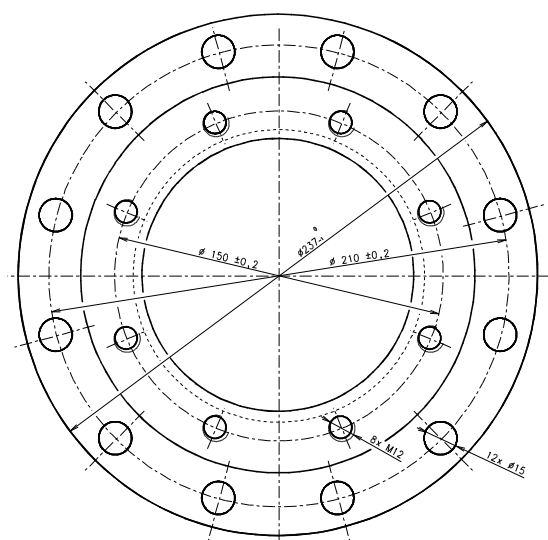


Figure 15

Reduction flange 225 / 150

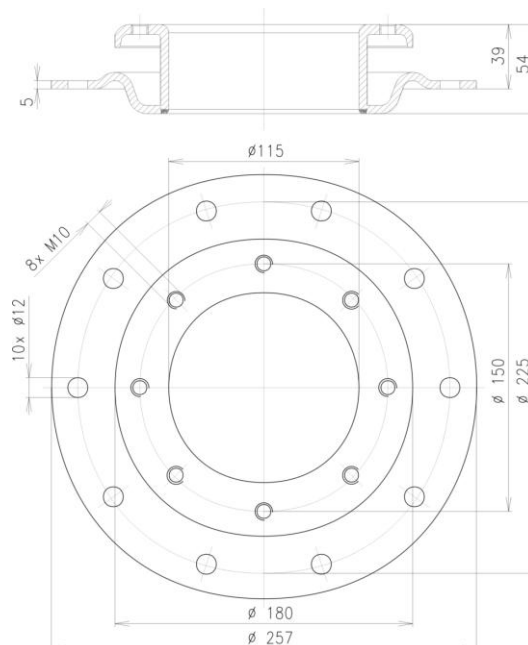


Figure 16

## 2.3 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 membrane spring loaded with a safety valve. Nominal clearance of safety valves is defined by standard. **300 l heaters are not equipped with a safety valve.** The safety valve must be easily accessible, as close to the heater as possible. The input pipes must have at least the same clearance as the safety valve. The safety valve is placed high enough to secure dripping water drain by gravity. We recommend mounting the safety valve onto the branch led above the heater. 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. Starting pressure of a safety valve must be identical with 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 the assembly, follow the guide provided by the safety equipment manufacturer.





Before putting the safety valve into operation it always needs to be checked by manual removal of the membrane from the valve seat and 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 can drip from the safety valve through the drain pipe; the pipe must be freely open to the atmosphere, placed vertically and shall be in an environment free of temperatures below freezing. When draining the heater, use a recommended drain valve. First, close water supply into the heater.

Please find necessary pressure values in the table (Table 10). For proper safety valve operation, a backflow valve must be mounted on the input 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.

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 STARTING PRESSURE [MPa]	ADMISSIBLE OPERATING WATER HEATER PRESSURE [MPa]	MAX PRESSURE IN THE COLD WATER PIPE [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

## 2.4 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.

## 2.5 PUTTING THE HEATER INTO OPERATION

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 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 commencing operation, flush the heater until the cloudiness in the water is gone.
- h) Make sure to fill in properly the warranty certificate.

### Cold Water Inlet Scheme

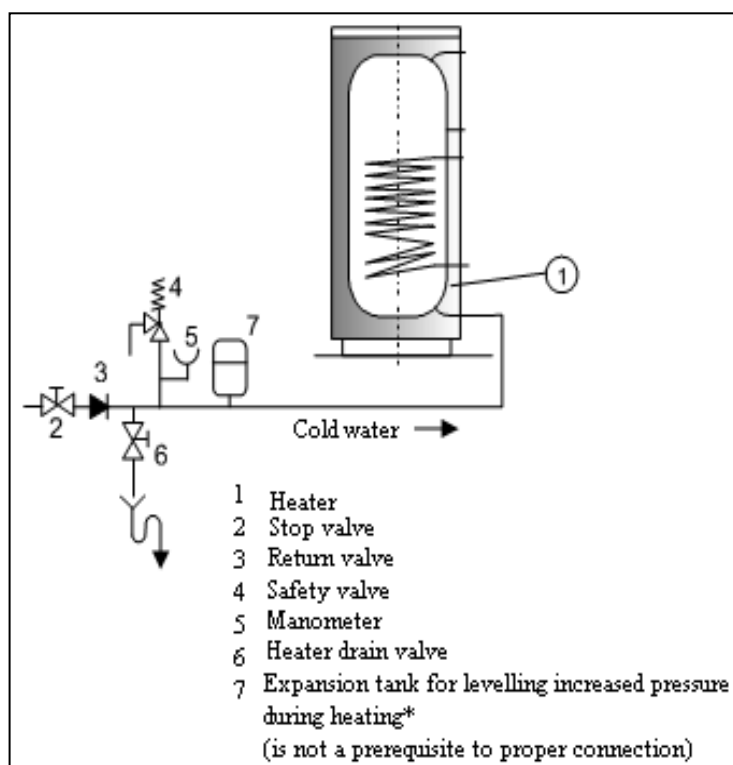


Figure 17

## 2.6 HEATER CLEANING AND ANODE ROD EXCHANGE

Repetitive water heating causes limestone sediment on both the tank walls and chiefly the flange lid. The sedimentation depends on the hardness of water heated, its temperature, and amount of hot water consumed.



**We recommend checking and cleaning the tank from scale, if necessary, inspection and possible replacement of 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 the company in charge of service affairs clean and exchange the anode. When discharging water from the heater, the mixing valve of the hot water tap must be open in order to avoid creating underpressure that would prevent water discharge.



**To prevent formation of bacteria (e.g. *Legionella pneumophila*) within stack heating it is recommended, if absolutely necessary, to increase the temperature of HSW periodically for a transitional period of time to at least 70°C. It is also possible to make use of another way of HSW disinfecting.**

## 2.7 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 SERVICING OF THERMOSTAT

### 3.1 SERVICING

#### 3.1.1 SERVICE DEVICES OF HEATERS

Service devices of heaters of 100, 125 l capacity are located under the transparent guard of the control panel (Figure 18).

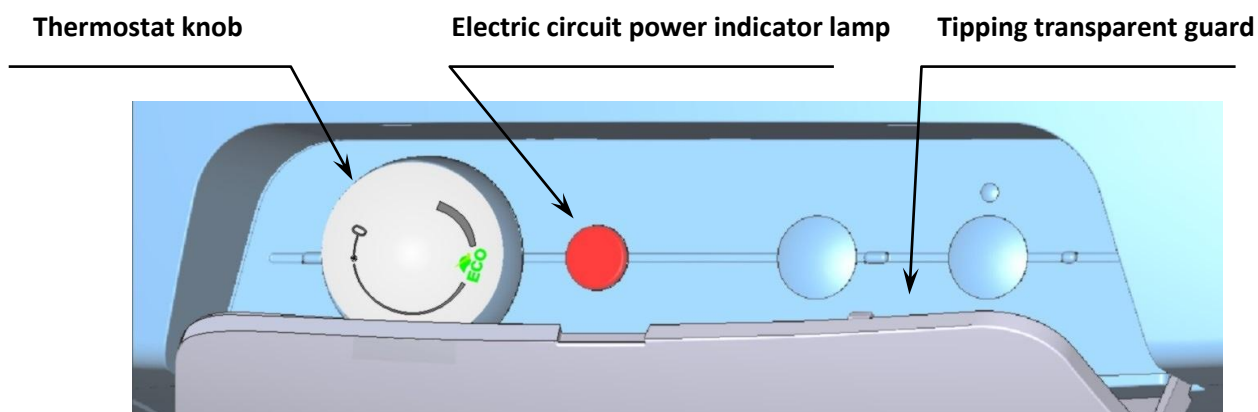


Figure 18

#### 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 19).

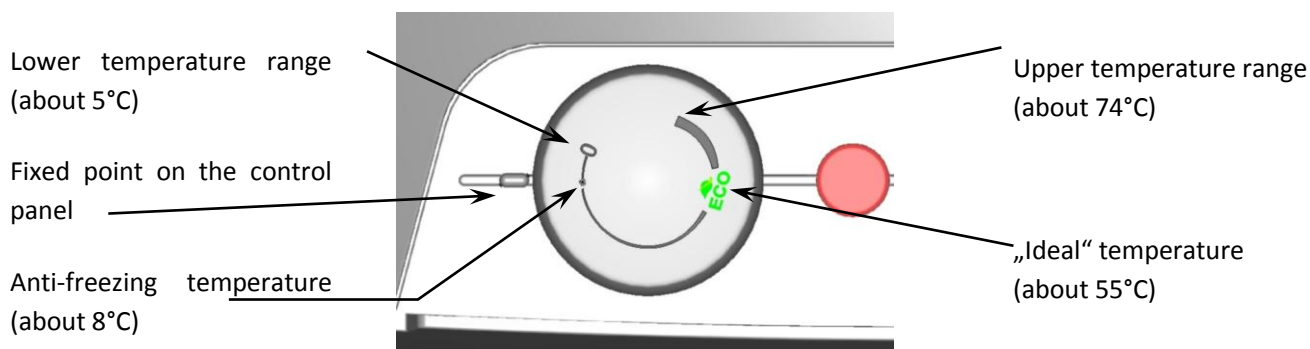


Figure 19



Adjusting the thermostat selector to the left backstop does not mean permanent shut off 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. The maximum value to select is „ECO“.

## 3.2 FUNCTIONAL DEFECTS

DEFECT	CONTROL LIGHT	FAILURE
Water in the tank is cold	<ul style="list-style-type: none"><li>• is on</li></ul>	<ul style="list-style-type: none"><li>• Heating element failure</li><li>• Some elements are not heating</li></ul>
Water in the tank is not warm enough	<ul style="list-style-type: none"><li>• is on</li></ul>	<ul style="list-style-type: none"><li>• Failure of one of the elements</li><li>• Failure of one of the heating coils in the element</li></ul>
Water in the tank is cold	<ul style="list-style-type: none"><li>• is not on</li></ul>	<ul style="list-style-type: none"><li>• Thermostat failure</li><li>• The safety fuse turned off electricity supply</li><li>• Power supply outside the heater discontinued</li></ul>
Water in the tank does not correspond with temperature set	<ul style="list-style-type: none"><li>• is on</li></ul>	<ul style="list-style-type: none"><li>• Thermostat failure</li></ul>

Table 11



Do not try 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



Check and exchange the Mg anode regularly.

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

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

All outlets of hot water must be equipped with a combination faucet.

Before filling the heater with water for the first time, it is recommended to fasten the flange connection nuts 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 FUNCTIONLESS PRODUCT

A service fee for providing return and recovery of packaging in which the water heater 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 concerns heaters with the capacity of 750 and 1000 litres)

Two people are enough to implement the insulation assembly; three people are required for larger boilers; the assembly must be implemented in areas with the temperature of 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. Pull gently in the direction of the arrows to put the two zip insulation sides together (Figure 19) so that the insulation does not draw down and the openings in the insulation fit the boiler inputs and outputs. It must be secured that, before closing, both halves of the zip-fastener are not further than 20 mm (Figure 20). No foam must get into the zip-fastener on closing.

After the insulation coat is properly mounted and the zip-fastener closed, insert the top lid mad of foam material and cover it with either a foil cover or a plastic lid. It is also possible to glue the outlet caps to connection places (Figure 21).

The insulation must be stored in dry areas only.

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

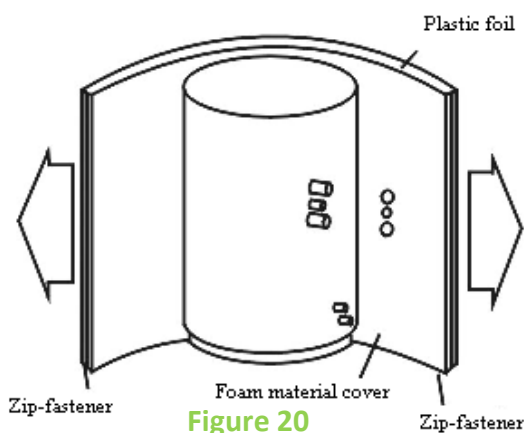


Figure 20

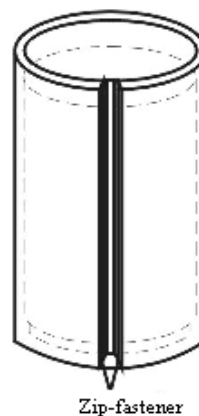


Figure 21

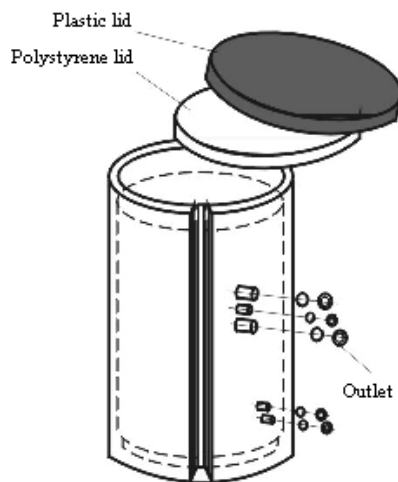


Figure 22

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