

- EPO.D1 - 4*
- EPO.D1 - 5*
- EPO.D1 - 6*

Electric Instantaneous Water Heater

Amicus

Operating And Installation Instructions



Please, read and follow the installation and operating instructions carefully, to ensure the long life and reliable operation of this appliance.

Kospel S.A. may make minor changes if necessary, in the appliance, that will not be shown in the operating instruction, so long as the main features of the heater remain the same.

KOSPEL S.A. 75-136 KOSZALIN UL. OLCHOWA 1

Description

This appliance must not be installed in a place which is exposed to the dangers of frost or explosion.

The EPO.D provides hot water wherever it is required whether it is in the home, in a workshop, a public facility or in a laboratory. It is compatible with most taps available in the market. This pressure type heater has to be installed with inlet and outlet pipes at the top of the heater. The temperature of the heated water depends on the rate of flow and the power of its heating coils. The higher the rate of flow, the lower temperature of the water. Turning the hot water tap on, automatically switches the heater on which heats the water in accordance with the following technical specifications.

The heater features:

- covered (insulated) heating coils that assure maximum safety;
- materials resistant to corrosion and chemically inactive towards water (copper, brass and stainless steel).

Technical data

EPO.D1 Water Heater		4	5	6
Rated Power	kW	4	5	6
Power Consumption	kW	2+2	2,5+2,5	3+3
Rated Voltage		230V~ or 400V 2N~		
Rated current	A	17,4 (8,7)*	21,7 (10,9)*	26,1 (13,0)*
Supply Water Pressure	MPa	0,12 ÷ 0,6		
Switching Point	l/min	1,2	1,5	1,8
Efficiency at $\Delta t=30^{\circ}\text{C}$	l/min	1,9	2,4	2,9
Overall dimensions	mm	229 x 221 x 90		
Weight	kg	~2,4		
Fuse rated current	A	20 (10)*	25 (16)*	32 (16)*
Connecting wires section	mm ²	3 x 2,5 (4 x 1,5)*		3 x 4 (4 x 2,5)*
The maximum allowed network impedance	Ω		0,32 ()*	0,29 ()*
Inlet and outlet pipes section		G 1/2"		
Protection degree		IP 24		

()* - if the appliance is supplied from 400V 2N~

Installation

Picture 1 View

This appliance should be installed and started-up by a professional person.

This heater must be installed with the outlet and inlet pipes at the top.

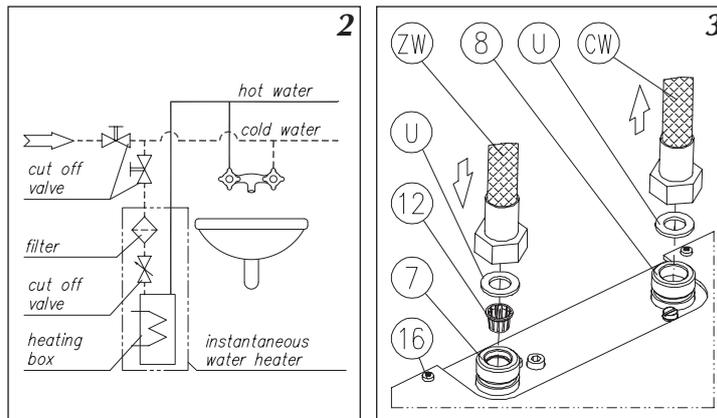
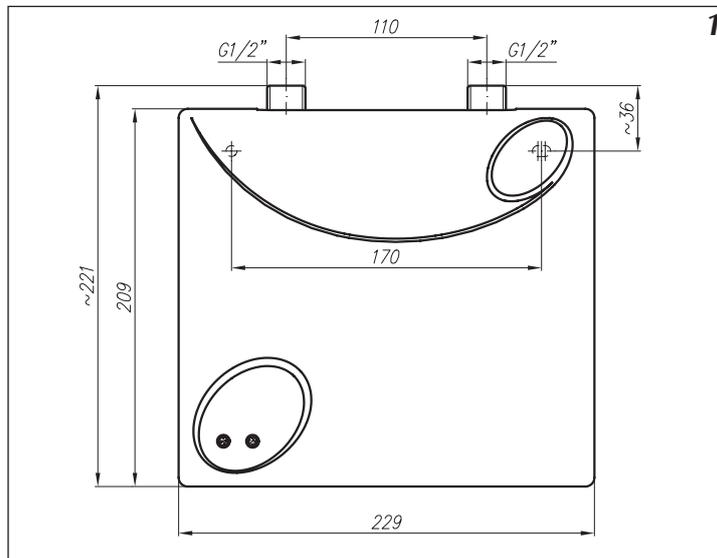
Electric and water supplies have to be cut off during any installation work.

Diagram 2 Domestic water system

Diagram 3 Water connection

- 7 - inlet - cold water
- 8 - outlet - hot water
- 12 - filter
- 16 - screw
- U - gasket
- ZW - cold water feed
- CW - hot water outflow

No filter[12] on water supply (picture 3) can damage the heater.



1 Recommendations

- as an economy measure the heater should be installed close to the most frequently used tap;
- the appliance can be connected to a cold water supply pipe only;
- a non-return valve cannot be installed on the supply pipe;
- inlet and outlet pipes should not be made of plastic;
- the heater works in conjunction with taps and mixers without a thermostat.

Assembly

1. Bring the domestic water and the electricity supply, observing normal safety standards, to the point where the heater is to be mounted. Diagram No.2 shows how to connect the heater with the water installation.
2. Remove the heater's outer case; undo the screws [16], slide the case off starting from the top.
3. Fix the heater on supplied hooks after inserting the electric wires through the entry access [14].
4. Connect cold water [ZW] to the inlet pipe[7] inserting a filter in between[12]; connect hot water outlet[8] to a pipe [CW] (picture 3).
5. Flood the heater with cold water and check connections for leaks.

- The appliance is set at single phase supply (it is equipped with a bridge[M1] connecting terminal clamps U and V).The single phase electric connection should be made according to the diagram 4a

Diagram 4 Electric connection

a - electric connection to the 1-phase installation

b - electric connection to the 3-phase installation

F - circuit breaker

M1 - a bridge connecting clamps U and V

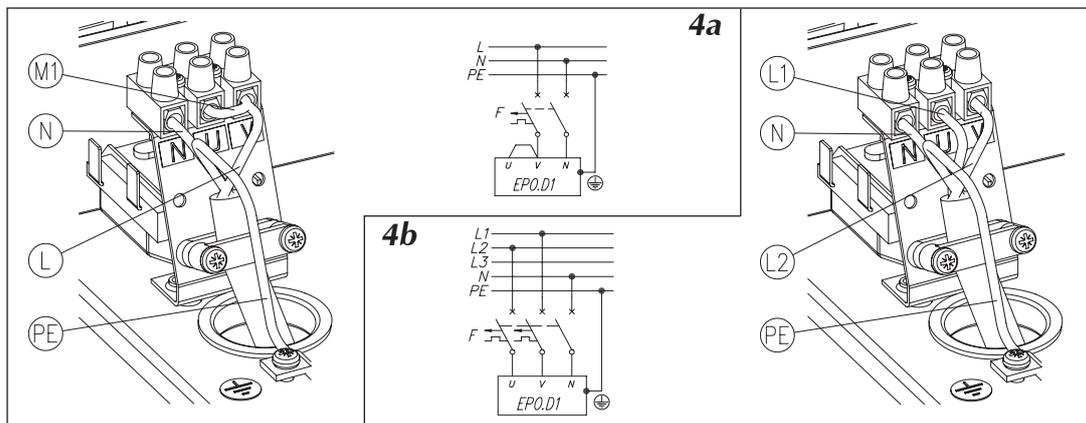
L - live wire

N - neutral wire

PE - earth wire

L1 - live wire 1

L2 - live wire 2



- Connection to a three phase installation should be made in accordance with the diagram 4b
In this case the appliance is supplied from two phases. First, you have to take off the bridge M1.
- Fixing the outer case: slide the case into position on the base. Start from the bottom, and push into place, then secure with screws.
- Make sure that the appliance has no access through the entry for electric wires at the back base to live parts.

If the appliance is supplied from two phases, the bridge M1 (connecting terminal clamps U and V) installed by Kospel has to be taken off.

Initial start-up

The recommended maintenance needs to be repeated each time after a decay of water.

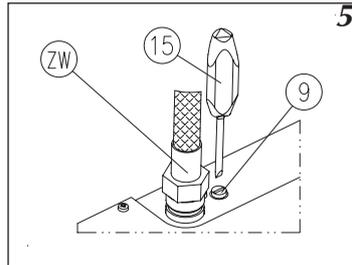
If the water installation is not vented the appliance may be damaged.

1. Cut off electric supply.
2. Open the hot water tap to vent the installation (15-30 seconds).
3. Switch power supply on.

Flow regulation

Picture 5 Flow regulation

- 9 - regulating valve
- 15 - spanner
- ZW - cold water inlet



By the term "flow regulation" we mean the setting of the water temperature to a comfortable level, by means of limiting/opening the rate of flow.

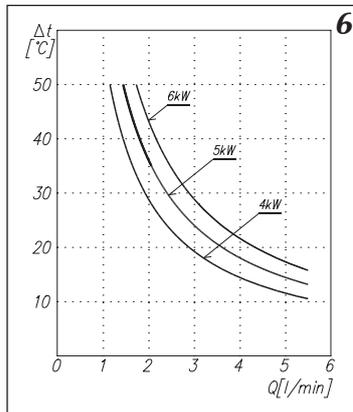
For this purpose carry out the following steps:

- set the hot water tap at maximum flow,
- insert the spanner [15] into the regulation valve [9],
- set optimum flow (check if the temperature is comfortable for you) using the spanner
- take the spanner [15] out of the regulation valve [9],
- close water flow using the tap.

Operating

Chart 6 Characteristics

Use the attached spray-head to raise the comfort of use.



The appliance has a differential pressure switch [2] (picture 8). It switches heating when there is a proper water flow through the heater.

There are two indicators (LEDs) on the case:

- green - power supply,
- red - heating.

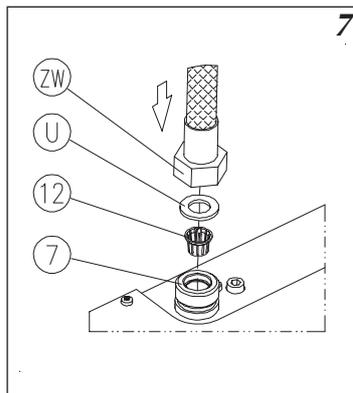
The characteristics (picture 6) shows dependence between temperature rise and flow rate per minute.

Maintenance

Picture 7 Filter cleaning

- [7] - water inlet - cold water
- [12] - filter
- [ZW] - cold water connection
- [U] - gasket

We recommend always cleaning the filter after any repairs to the water installation or if there are any impurities in the water, or as a part of its regular annual service check.

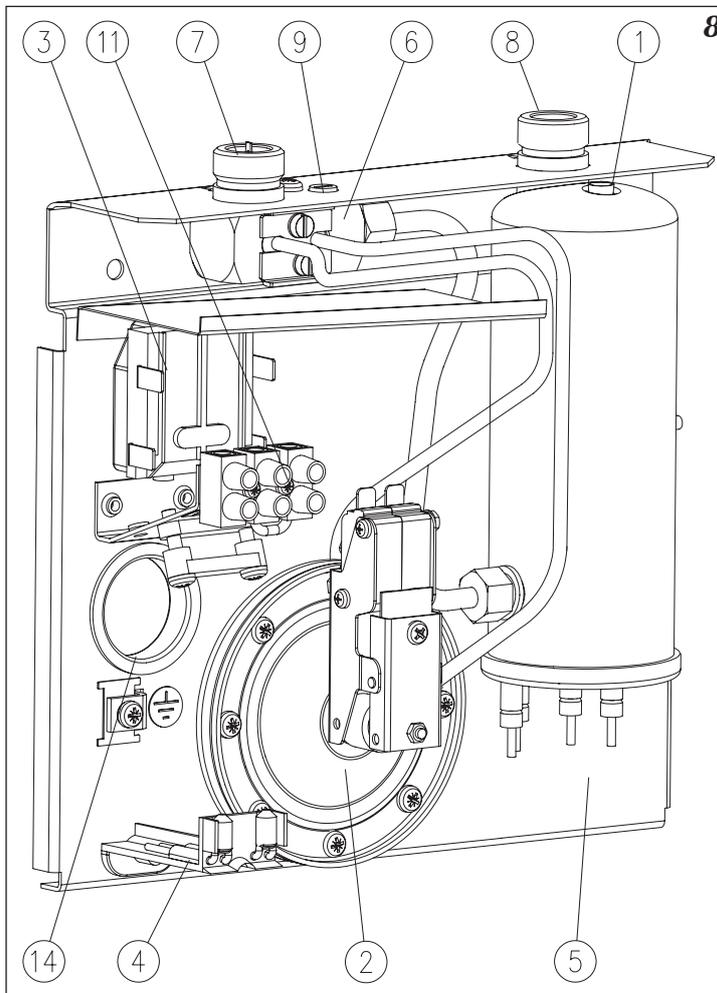


To ensure the long and faultless work of this appliance, you should clean the filter [12] from time to time. To clean it, do the following:

1. Cut off water and electric supplies.
2. Undo the fittings on the inlet pipe [7].
3. Take the filter out [12] of the fittings at the cold water inlet.
4. Clean the filter [12].
5. Install the filter [12] in the former position.
6. Connect cold water supply pipe [ZW] with the inlet pipe [7].
7. Open cold water pipe on water supply - check connections for leaks.
8. Vent the installation and the heater according to START-UP instructions.

Diagram 8 Construction

- [1] - heat exchanger
- [2] - differential pressure switch
- [3] - safety temperature limiter
- [4] - indicators
- [5] - back base
- [6] - orifice
- [7] - water inlet - cold water
- [8] - water outlet - hot water
- [9] - flow regulating valve
- [11] - terminals
- [14] - entry access for electric wire

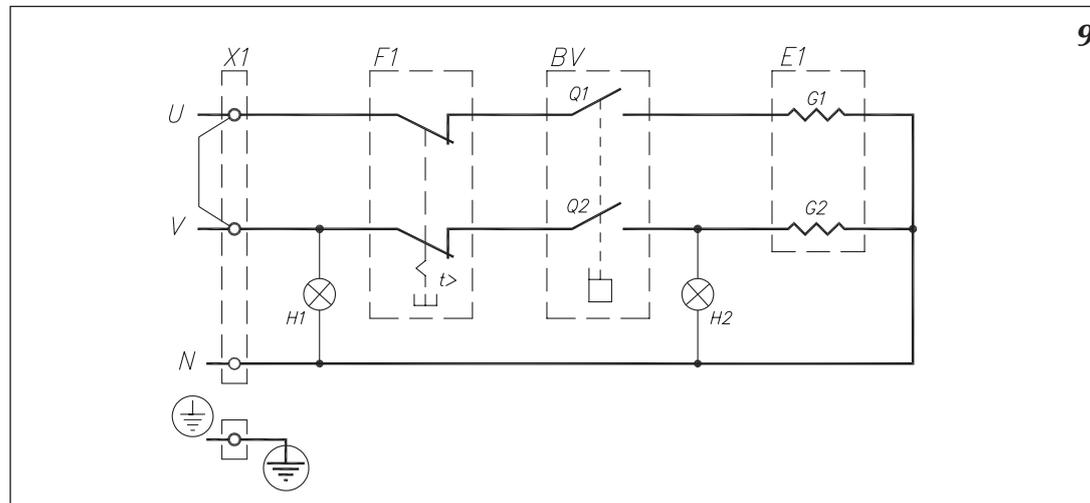


This heater has an overheating protection:

- its over-temperature cut-out goes off (shuts off power supply) when the temperature in the heating box [1] goes over 95°C. Once the cut-out gets off, further operation is not possible.

Diagram 9 Wiring diagram

- E1 - heating box
- BV - differential pressure switch
- F1 - safety limiter
- X1 - terminals
- A1 - indicator board
- H1 - power supply indicator
- H2 - heating indicator



Faults

If you notice any of the following signs of improper work, follow the instructions below:

- the light indicators on the case are off
- no or insufficient heating
- a fault in the power supplies (for instance a fuse)
- a failure of the power supplies (for instance a fuse)
- rate of flow through the heater is too small (the filter might be blocked with impurities or the flow regulating valve is set improperly)
- no bridge M1 (picture 4a, 4b), in case the heater works on one phase.

The above failures are not covered by the guarantee.

In case the heater does not work properly and there is some cause other than the above given, please contact the nearest service branch.

Set contents

EPO.D1	- 1 piece
Gasket	- 2 piece
Filter	- 1 piece
Fixing screw with a pin	- 2 pieces
Spanner for regulation	- 1 piece

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.



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boilers.