Electric Redistiller
REL 5

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INTENDED USE

Redistiller is designed for purification of water from dissolved mineral salts and gases by means of double distillation. The redistiller is used in chemical and pharmaceutical laboratories. The quality of received distilled water meets the standards of the Polish Pharmacopoeia V. The device has a certificate of approval for use in public health care institutions, issued by Centralny Ośrodek Techniki Medycznej (Centre for Medical Technology).

CONSTRUCTION

The redistiller is a stand-alone apparatus designed for continuous operation. It consists of boilers of the first and second stage of distillation separated by a set of condensers. All components in direct contact with water or steam are made of brass or copper and covered with pure tin, while components in direct contact with distillate, distillate steam and redistillate are silver plated. The redistiller is equipped with a water flow regulator that maintains the volume flow of the supply water at the level that the rated output is obtained at the smallest consumption. It is also equipped with the following safety devices protecting against damage to the apparatus if the following problems with inlet of supply water occur:

- A pressure sensor that deactivates heating resistors if supply water pressure drops below permissible value when the redistiller is operating properly,
- Float level sensor that switches off heating resistors if water level in the boilers drops below the limits,

For distillation, treated water can be used from the water supply network.

TECHNICAL DATA

	REL 5
Device Protection Class	I
Distillate capacity	approx. 4.5 dm^3/h
Water consumption	150 dm^3/h
Power input	7.5 kW
Supply voltage	400 V 3N~
Weight	24 kg

PRINCIPLE OF OPERATION

Water from a supply tube, pre-heated during the flow through the set of condensers, flows in the boiler of the first stage of distillation to a specified level and its excess is discharged to the outside. Under the heat supplied by the heating resistors, the water boils and the resulting water steam enters the condenser where, after cooling, it condenses and flows as a distillate to the boiler of the second stage of distillation. There it is again evaporated and then condensed in the set of condensers, and finally flows out as a redistillate.

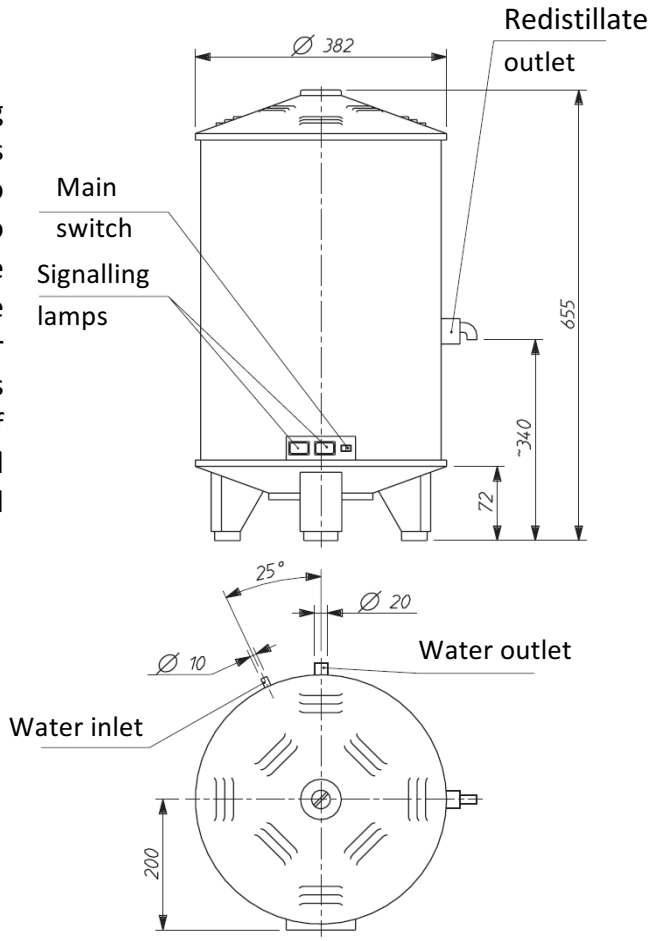

Fig. 1. Redistiller external dimensions