Glassware Dryer

PE-2010

Data Sheet

Operating manual

Version 2.0e dated 17.05.2017

Part number:

1.75.10.0246

Saint Petersburg

2017

1. General

The present data sheet combined with operating manual is intended for familiarising the user with the principle of operation, construction and rules of operation of the glassware dryer (hereinafter referred to as “the device”).

Due to continuous improvement of the device, minor modifications not worsening the technical specification of the device can be made to the design.

Never proceed to operation of the device without getting familiarised with this operating manual.

To avoid mechanical damage of the device, violation of the integrity of galvanic and paint coatings, please observe storage and transportation rules.

Repair of the device shall only be performed at the manufacturer’s plant.

2. Purpose

The device is intended for fast drying the laboratory glassware and small accessories in a warm air stream in the continuous mode or within the set time interval.

3. Technical Specification

Supply voltage, V ..... 220±20
Rated frequency, Hz ..... 50±2
Maximum power consumption, W 1500
Maximum temperature of the air outflow, °C:
- in the “PLASTIC” mode..... 50±5
- in the “GLASS” mode ..... 75±5

Timer setting resolution, min. 5
Time countdown reading resolution, ... 1
Maximum timer setting time, min 90
Overall dimensions (W x D x H), mm.....550x281x515
Weight, kg, not more than 17

4. Operating conditions:

Ambient air temperature, °C..... 5÷45
Relative air humidity, %.....up to 90

In terms of resistance to climatic effects, the design of the device corresponds to UHL 4.2 as per GOST 15150 standard.

5. Scope of supply

Glassware Dryer .....1 pc.
Mains cable.....1 pc.
Spare air filter ..... 2 pcs.
Data sheet .....1 pc.

6. Construction

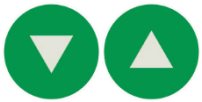
The device consists of a cabinet combined with the air duct and tubes serving for delivery of warm air and placement of chemical glassware. On the underside, the blown-over tray for drying small objects is fastened to the front portion of the cabinet.

Figure 1

The device cabinet accommodates the fan and the heater. The air is drawn in from behind through a special dust-catching air filter. The plug for connection of the power cord with integrated fuse holder is placed in the lower part of the right side panel. The control panel is placed on the left side (Figure 1).

The device control panel (Figure 1) accommodates control and indication elements (Table 1).

Table 1

	“POWER” switch for control of the voltage supply to all elements of the device.
	Outflow air heating indicator.
	Button for switching the outflow air heating modes.
	Set and current drying time indicator.
	Drying time setting buttons.
	Drying on/off button.
Buzzer	Sound signal generated at the end of the drying process or in case of error in the device operation.

The device includes three modes of outflow air heating:

- “**G**LASS” mode: the air is heated up to approximately 75°C;
- “**P**LASTIC” mode: the air is heated up to 50°C;
- “**A**MBIENT” mode: blowing with ambient-temperature air without heating;

These modes are displayed on the indicator by letters “**G**”, “**P**” and “**A**” respectively.

7. Working procedure

1. Connect the device to the electric mains.
2. Place the washed glassware to the tubes and into the tray.
3. Turn on the device power with the “POWER” switch.
4. Repeatedly press the button to set the required drying mode displayed on the “MODE” heating mode indicator.
5. Set the time required for drying on the “TIME” indicator using the buttons and .

   Note: if the drying time is set to zero, after the start of the device it will be working in the continuous mode; to stop the drying process, press the button START STOP again.
6. Press the button START STOP, the drying process will start. In this case, the “MODE” indicator will be flashing, and the “TIME” indicator will display drying countdown.
7. During operation in the “PLASTIC” and “GLASS” mode, 1 minute before expiration of the drying time the air heating will stop, and the glassware will still be blown with ambient-temperature air.
8. After expiration of the set drying time, the air supply stops, the device returns to its original state and to the mode and time parameters set prior to the start of the process, and then three short sound signals are generated. The device is ready to repeat the operating cycle.
9. After completion of working with the device, it is recommended to turn the power off with the “POWER” switch.

Notes:

1. Drying can be stopped at any time by pressing the button START STOP. In this case, the device returns to its origin state and to the initially set drying time.
2. Air heating mode can be changed without interruption of the drying process using the button .
3. When the device is turned off, the current air heating mode and drying time settings are stored in the nonvolatile memory and will be set automatically when the device is turn on next time.

8. Maintenance and troubleshooting

1. Keep the device clean and remove any dirt and residual moisture from its surface as appropriate.
2. The air filter needs to be replaced regularly depending on the degree of clogging. To get access to the filter, unscrew six screws and remove the perforated plate.
3. The list of possible faults of the device is provided in Table 2.

Table 2

Fault signs	Possible cause	Corrective action
The indicators do not light after the device is turned on	No supply voltage in the AC outlet	Apply voltage to the mains
	Poor contact in the AC outlet or in the plug for connection of the power cord	Ensure proper connection of the power cord to the AC outlet or to the plug of the device.
	The supply-line fuse is blown-out	Replace the fuse (refer to clause 4 of this section)
The supplied air is not heated during operation in “G” mode or “P” mode	The heating element is broken	Contact the service center
After start of the drying process in “G” mode or “P” mode, triple sound signal is generated, the drying process stops, and “E1” or “E2” error code is displayed on the time indicator.	“E1”: the temperature sensor is broken	Stop operation of the device and contact the service center
	“E2”: the electric heater control element is broken	

4. The service fuse (2) and reserve fuse (1) are located in the plug assembly for connection of the power cord (Figure 2) on the right side of the device. Prior to checking or replacing the fuse, disconnect the power cord from the AC outlet.

Figure 2

9. Safety Requirements

As regards the degree of protection of a human against electric shock, the device is referred to class I as per GOST 12.2.007.0 standard.

Prior to connecting the device to the power mains, make sure that it is free of visible mechanical damages.

The device shall be only connected to the earthing loop by means of a three-pole socket and plug with earthing contact.

It is strictly prohibited to:

- work with the unearthed device;
- use electric adapters without earth contact to connect the device to the mains;
- use the water/gas-supply or sewerage networks, hot-liquid pipelines, earthing connectors of lightning dischargers, etc. as the earthing system.

10. Storage Rules

The glassware dryer shall be stored indoors in the manufacturer's package under the C-group conditions as per GOST 15150: at the temperature of -40°C to +50°C and relative humidity not exceeding 98 %.

The atmosphere of the room in which the device is stored shall be free of dust, vapors of acids, alkalis and other corrosive substances.

The device requires careful handling during operation, transportation and storage.

11. Transportation Rules

The device in the manufacturer’s package can be transported by any roofed vehicles, in the heated air-tight aircraft compartments provided that provisions of section 10 are observed.

12. Warranty

The guaranteed service life is 12 months from the date of shipment to the consumer as determined in the bill of lading or, in the absence of the latter, from the date of manufacture of the product.

The warranty maintenance shall be only performed by the service centers authorised by the manufacturer.

Within the guaranteed service life, according to the claim properly completed by the buyer, the device shall be repaired or replaced free of charge provided that the consumer observes transportation, storage, assembly and operation rules.

13. Claims Information

In case of revealing any faults within the guaranteed service life or incompleteness when unpacking the product, the consumer shall send the claim report to the manufacturer's address:

ECROSKHIM LTD.
22, 17th Line of Vasilyevsky Island, building “I”, Suite 406, Saint Petersburg, 199178
Phones: +7 (812) 322-96-00, 322-9898, 448-7610
Fax: +7 (812) 448-7600
Email: info@ecohim.ru URL: www.ecohim.ru

The claim shall not be submitted:

- on expiration of the warranty period;
- if the consumer has broken the operation, storage and transportation rules provided in the operating documentation.

14. Acceptance Information

PE-2010 glassware dryer, serial number **2K01P** _____ has been verified in accordance with the technical specifications TU 3613-006-56278322-2011, statutory requirements of national standards and technical documentation in force, and recognised to be ready for service.

Date of manufacture _____

Stamp of the Technical Control Department

Inspector _____