

Polymerization unit for acrylic plastics **POLY MAX**



USER MANUAL

USER MANUAL

CONTENT

	3
1. INTRODUCTION	4
2. SAFETY INSTRUCTIONS	5
3. DESCRIPTION OF THE UNIT	6
4. INSTALLATION AND INITIAL START-UP	7
5. PRACTICAL USE	7
DESCRIPTION OF BUTTONS	7
DESCRIPTION OF INDICATION	7
PARAMETERS AND PROGRAMMING	8
DESCRIPTION OF PARAMETERS IN ORDER OF THEIR APPEARANCE	8
WAY OF USE	9
THERMAL PROTECTION	10
6. TECHNICAL DATA	11
7. MAINTENANCE	11
8. SCOPE OF DELIVERY	12
WARRANTY	

1. INTRODUCTION

Thank you for having purchased the polymerization unit for acrylic plastics **POLY MAX** which, we are sure will all meet all your needs and will satisfy your high demands.

This device has been designed according to the requirements of latest industrial standards and we guarantee that you will use it many years as your closest assistant.

However, inappropriate use may damage the equipment and be harmful to personnel. Please observe the relevant safety instructions and read the Operating Instructions carefully.

We wish you pleasant and fruitful work with the polymerization unit for acrylic plastics **POLY MAX**.

SYMBOLS:



This symbol indicates that there is high dangerous tension under the bonnet which it is put on. Switch off the furnace before removing the marked cover.



Symbol for HOT SURFACE;
ATTENTION: HOT SURFACE! DO NOT TOUCH!



This symbol indicates that the machine complies with the requirements of the Directives for Low Tension and Electromagnetic Compatibility as well as for the Standards harmonized with them.

2. SAFETY INSTRUCTIONS

The following instructions must be observed in order to avoid personnel injury or equipment failure.

- The device must not be run by an operator who is not acquainted with these instructions;
- Before turning on the plug in the net contact check if the voltage in the electrical network correspond to the working tension. In case of discrepancy, consult a specialist;
- On no account do not alter the device;
- The notices and stickers must be kept in good condition so that they are easily readable; they should not be removed!
- In case of longer works at maximum operation temperature the lid of the unit may heat up to 90°C. Therefore, it must not be touched – not even for a short moment.
- At all processing steps which are executed under pressure please wait with the opening of the lid until the compressed air has completely escaped from the pressure pot.
- Please do not bend over the unit while opening the lid. Due to the escape of the hot steam, there is danger of burns.
- Before cleaning and maintenance of the unit or the changing of parts the plug has to be disconnected.
- The machine must not function in case of being damaged and in position to injure the staff or a third person;
- Keep the power cable out of heat, oil and coarse objects; do not catch the device by the cable when you move it.
- Switch off the unit and pull out the plug of the power supply cable from the socket before each cleaning or upkeep.
- Spare parts which are not specified by the manufacturer cannot be used!
- Keep from falling and hitting;
- To accomplish its functions the device must be heated so bear in mind the possible dangers of explosion or emissions of toxic or combustible gas as a result of the heating of materials in the device itself. Therefore, the machine is recommended to be placed in a suitable ventilated spot in the premises.

CAUTION!

If the machine is used by any means not indicated by the manufacturer, the provided protection can become useless!

3. DESCRIPTION OF THE UNIT

This device is used for polymerization of acrylic plastics and stuffing of investments. It is designed to work in dental laboratories.

It has two working temperature zones, which mean that the device can heat at two stages.

This unit can work without heating. You can start different working mode by pressing the AIR button. This way pressure air will enter into the vessel and will stay there for preliminary adjusted time. This mode is useful for preliminary dry pressing of some flasks.



1. Front panel;
2. Power switch;
3. Manometer;
4. Cover;
5. Handle for opening / closing;



6. Safety valve;
7. Nozzle for air;
8. RF Filter;
9. Pressure reducing valve;
10. Fuses;
11. Nozzle for exit water;

4. INSTALATION AND INITIAL START-UP

UNPACKING

- Carefully remove modules from packages;
- Make sure that the mains voltage is ~230VAC and the contact is reliably grounded;
- Place the device so that the plug is accessible.

CONNECTIONS

- Connect the main air to the terminal with label INPUT AIR on the rear panel. The joining orifice is $\varnothing 6$ sized. The maximum pressure in the mains should not be higher than 6 Bar.
- Connect hose $\varnothing 8$ to the outlet socket OUT and lead it to the sewage system or to outside container for collection of the resting liquid. This orifice is placed on the right-side lid of the device.

ATTENTION!

Do not sink this hose in any liquid, because this might destroy the unit!

- The safety valve is also taken out on the rear panel. Put the unit in such a position so if this valve is activated you are able to avoid the damage of another part. Do not put it on combustibles.

5. PRACTICAL USE

DESCRIPTION OF BUTTONS



PROG

- puts the number of the program which is to be performed into programming mode.
- exits from program mode and save current changes in parameters

ESC cancels all changes.

RUN starts the chosen program when the indicator of the button flashes in green;

STOP stops the program at any moment;

L, R moves the cursor Left or Right in program mode;

+, -

- selects the desired program for execution;
- changes values of parameters in program mode;

OK accepts programmed value and goes to the next parameter in program mode;

DESCRIPTION OF INDICATION

This unit has 2 LINE LCD display.

The LINE 1 shows following information:

The left sector shows the number of the chosen program for execution or the program for editing of parameters;

The middle sector shows the program name.

The right sector shows the current temperature in the vessel.

The LINE 2 shows following information:

The left side displays information of the current stage;

On the right the estimated time to the program end is displayed.

PARAMETERS AND PROGRAMMING

In order to change the value of a parameter it is necessary to do the following steps:

- Select the program for changes;
- Press button **PROG**. You will see a screen where you can change the program name. The cursor blinks in current position. You can change the cursor's position by **L** and **R** buttons. You can change the current symbol by **+** and **-** buttons.
PROGRAM NAME is the first parameter which is shown when you enter in PROGRAM mode.
- Press button **OK** in order to choose the parameter which you want to edit.
- By buttons **+** and **-** you can change the value of current parameter.

There are two possible ways of leaving the programming mode after you have finished with the changes in the parameters' value:

FIRST EXIT: press button **ESC**. This will **CANCEL** all the changes that are made in the parameters' value in the program.

SECOND EXIT: press button **PROG**. This will **SAVE** all the changes that are made in the parameters' value permanent.

DESCRIPTION OF PARAMETERS IN ORDER OF THEIR APPEARANCE

PROGRAM NAME	This is a parameter for setting the name for current program. Accepts 8 characters;
TEMP 2	Working temperature for base zone, Accepts values from 40°C to 125°C;
TIME 2	Time duration for base zone; Accepts values from 1 min to 99 min;
TEMP 1	Working temperature for preheating zone, Accepts values from 39°C to (TEMP2-1°C); If this temperature is set to 39°C, the preheating zone does not execute;
TIME 1	Time duration for preheating zone; Accepts values from 0 min to 99 min;
COOL TIME	Time duration for free cooling under pressure; Accepts values from 0 min to 99 min;
FINAL UNLOAD	To have liquid inside or not to have at the end of working cycle; can be programmed to YES/NO;

WAY OF USE

Put a flask in the device. Pour as much liquid as needed to fill the vessel but below the upper hole. Close the lid. Start the process by pressing the button **RUN**.

The process can be stopped any time by pressing the button **STOP**.

In case you need to drain the liquid manually, this can be made by pressing the button **WATER**. Having emptied the device, you must press the same button again so that the electromagnet valve is closed.

If the difference between set temperature and temperature in the bowl is less than 10°C, to be able to start a working cycle you must press and hold the **RUN** button for several seconds. The unit will start after issuing a beep.

ATTENTION!

Do not open the lid of device before the temperature is beneath 80°C because water is boiling and there is a risk of burns.

Take care of silicone sealing ring that is under the lid. If it is dry, wet it with water before closing the lid to protect it from accidental damage.

THERMAL PROTECTION

This device is equipped with thermal protection. If the temperature in the vessel exceeds 150°C a special component will stop heating.

To restore the normal working, you need to:

- unplug the device from the socket;
- remove the left side cover;
- resume normal work by pressing the red button which is on thermal protection component;

6. TECHNICAL DATA

	~230 V, ±10%, 50/60Hz
1. Electrical supply	2550 W
2. Power consumption	II
3. Category of overvoltage	6.8L
4. Effective volume of the chamber	Φ230 h165 mm
5. Interior dimensions	6 Bar
6. Maximum operating pressure	40°C - 125°C
7. Limits set for the working temperature	2
8. Operating temperature zones	1min – 99min
9. Limits set for the time	390 mm
7. Overall dimensions:	440 mm
7.1. Width	330 mm
7.2. Length	28 kg
7.3. Height	18°C - 30°C
8. Model Weight	2
9. Working temperature	
10. Level of environment pollution	
11. The device is designed for usage in normal dental premises up to 2000 m altitude above sea level.	
13. The maximum relative humidity of the air must be 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity for temperature up to 40°C.	

7. MAINTENANCE

- Avoid positioning of the apparatus in the immediate vicinity of heat sources (radiators);
- Do not leave objects on the body of the apparatus;
- Clean with a slightly moist cloth.
- Change the safety locks with the announced values only, namely:

12,5A/250V; slow (class T)

- No repair activity by a service technician who is not authorized by the manufacturer is allowed!
- The lifting and carrying should be made only with the both hands from below as the furnace stand on end.
- No carrying and transportation in another state except for vertical position is allowed!

8. SCOPE OF DELIVERY

1. Polymerization Unit POLY MAX	1 pc
2. Drain hose-pipe	1 pc
3. Spare fuses	
T 12,5A/250V	2 pcs
4. User manual	1 pc

PRODUCER: "VOP" Ltd.
 2140 IZ "Microelectronica"
 Botevgrad, Bulgaria
 Tel. 0723 66303
 Tel. 0723 66304

“VOP” Ltd.
Microelectronica
2140 Botevgrad
Tel. 0723 66303
Tel. 0723 66304

Polymerization unit POLY MAX

WARRANTY SHEET

“VOP” Ltd. warrants the consumer for proper operation of all parts and materials in this product during a period of **12 months** since the day of its purchase.

During this period VOP Ltd. or its authorized persons will repair on its own account all defects which have occur during the normal operation of the machine.

Defects caused by improper transportation, storage and manipulation of the product or due to malfunction of the electrical mains supply are repaired on the account of the customer.

This warranty shall become void if attempts are made to repair the product by persons not authorized by the producer.

Serial Number _____

Invoice number _____

Date _____



MANAGER of “VOP” Ltd

CLIENT:

Serial Number _____

Invoice number _____

Date _____

Voucher Manufacturer