

**INSTRUCTION, USE AND
MAINTENANCE HAND - BOOK**



Machine: DUPLICATING UNIT Type: JELLY.17.00



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INDEX

- 1. GENERAL NOTES**
- 2. DESCRIPTION OF THE UNIT AND ITS USE**
- 3. TECHNICAL SPECIFICATIONS**
- 4. IMPORTANT WARNINGS**
- 5. INSTRUCTIONS FOR USE**
- 6. MAINTENANCE**
- 7. WARNINGS**
- 8. WASTE DISPOSAL**
- 9. MALFUNCTION CAUSES-REMEDIES**
- 10. ELECTRICAL CIRCUIT**
- 11. DRAWING AND SPARE PARTS**
- 12. STANDARDS**

The present instruction hand-book informs about the basic requirements for SAFETY AND HEALTH OF THE USERS. These requirements are stated by the MACHINE DIRECTION 2006/42 CE

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1. GENERAL NOTES

Please read this booklet carefully. It contains important information about safe installation, use and maintenance. Keep this booklet in a convenient place for further reference.

- 1.1 Check the general condition of the unit after removing the packaging. When in doubt do not operate the unit and contact a qualified service repair person authorized by **OMEK SNC**.
- 1.2 Before connection, check to see that the identification plate indicates the correct voltage for the electrical supply system. Installation must be carried out in compliance with all applicable safety standards and in accordance with the manufacturer's instructions. The manufacturer will not be held responsible for damage to objects and/or harm to people caused by improper installation. The unit is safe only when connected correctly to ground via an appropriate device in accordance with safety standards. This fundamental requirement must be satisfied. If in doubt, request a thorough inspection of the system by a professionally qualified technician. The manufacturer will not be held responsible for damage caused by an improperly grounded system.
- 1.3 This unit should only be used as intended by the manufacturer. Any other use must be considered inappropriate and consequently dangerous. The manufacturer will not be held responsible for damage caused by improper, erroneous or unreasonable use.
- 1.4 Switch-off and unplug the unit from the electrical outlets before servicing.
- 1.5 Carefully follow cleaning instructions as in the manufacturer's manual.
- 1.6 In cases of breakdown or unit malfunction, turn the unit off and do not try to repair it. Contact only qualified and authorized **OMEK SNC** agents. Any subsequent repairs made to the unit must be carried out by the manufacturer or by an authorized agent using original **OMEK SNC** replacement parts only. Not following the above procedure could jeopardize the safety on the unit. Connection to the electrical distribution system must be made by using only plugs that conform to safety standards.
- 1.7 Check that the electrical supply system is adequate for the maximum power consumption/rating as indicated on the identification plate. When in doubt, contact a professionally qualified technician. The technician must check that the system cables are adequate for the current drawn by the equipment. The use of adapters, multiple plugs and extension cords is not advisable. If absolutely necessary, use devices that conform to safety standards, being careful not to exceed the limit values indicated on the device itself.

2. DESCRIPTION OF THE UNIT AND ITS USE

The JELLY.17 is a device for automatically liquefying and maintaining reversible duplicating material at the correct temperature for duplication. This kind of material is used to duplicate models to obtain exact copies mostly, but not necessarily, in a different material from the original. This procedure is normally used in dental and acoustic laboratories as well as in modelling and other applications where the duplication of the original model is required.

To this purpose, the duplicating material must first be melted at about 92°C and then cooled down to about 50°C which is the appropriate working temperature. In order to accomplish this, the JELLY.17 is equipped with:

- a new developed electronic board which permits, if desired delayed, the start of the cycle to automatically liquefy the duplicating material, cooling it down and then keeping it at the defined working temperature;
- electric heating elements to melt and keep the material at the defined temperature;
- a stirring system to accelerate the melting process and to maintain an even heat distribution throughout the duplicating material as well as to avoid burning it by remaining into contact with the heated surfaces of the container;
- a fan which accelerates the cooling down phase from the melting to the working temperature.

3. TECHNICAL SPECIFICATIONS

- Steel housing with baked-enamel finish
- Container, stirrer and lid made by non oxydable steel AISI 304
- Container capacity 6 kg of liquefied duplicating material
- Heating power consumption 400 Watt
- Overall max power consumption 600 Watt
- 0,12 HP motor with worm gear reduction drive
- electronic board
- Fuse for electronic board protection
- Fuse for overall protection
- Fuse for motor protection
- Motor-thermo protector
- Safety micro switch on the lid
- Fan for accelerated cooling
- Voltage 230 Volt 50 Hz / 115 Volt 60 Hz , single phase
- Dimensions (width x depth x height): 37 x 35 x 43 cm
- Weight approx. 21 Kg

4. IMPORTANT WARNINGS

- 4.1 The device should be turned off at any time that the tank is emptied. New work can be set up by following the steps described in chapter 5.
- 4.2 Take care that the liquefied duplicating material always remains over the minimum level of 1/3 of the container to avoid the risk of forming a film of carbonised material on the walls, that is very difficult to be removed. Furthermore there is the possibility to overheat the heating element.
- 4.3 When adding solid duplicating material (always cut in small pieces) to the liquefied material, the melting cycle must be restarted by pressing the key.
- 4.4 Make sure to completely empty the tank before turning off the unit.
- 4.5 If the motor get blocked for whatever reason, the fuse for the motor protection (32) burns out and stops the power supply to the motor. Disconnect the power supply and after identifying and solving the cause (solidified gelatine, foreign object that blocks the stirrer), substitute the fuse and switch on the power.

In case the fuse burn out occurs often contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.


- 4.6 If the motor temperature rise too much the motor-thermostat protector stops both: the motor and the heating elements. The beep signal sounds for 30 seconds and the message "motor overheated" appears on the display. Once the motor temperature returns to an acceptable level the equipment starts working again from the same point it stopped. In case of motor overheating it is advisable to contact an authorised technician, or send the unit back to OMEC SNC.
- 4.7 During the melting cycle always fill the container for at least half of its height, since otherwise the heating element may burn the veil of gel located on the walls of the container itself.
- 4.8 The tap must be pushed and finally rotated. It is advisable to rotate it always completely, especially during the melting phase and in case of stops between one casting and the other longer than 1 minute to avoid the gel to become solid in the tap.
Furthermore if the tap is not screwed the pressure caused by the melted material inside the container could push and open the tap leaking the melted material.



5. INSTRUCTIONS FOR USE




- 5.1 Check to see that the main voltage corresponds to the power requirements for the unit as shown on the identification plate. Then insert the lead into the plug of the unit and the other end in the main socket. The display shows "OFF".
- 5.2 Fill the stainless steel container with duplicating material in small to medium sized pieces. Once the gel starts to liquefy it will be possible to add further material always in pieces until the maximum level is reached. It is advisable to remain approx. 2 cm below the upper end of the tank to avoid overflowing.





ATTENTION: addition of duplicating material must be always done before reaching the melting temperature.




- 5.3 Close the container (if this is not done, the motor will not start).
- 5.4 Press the "O/I" key to turn the device on. At this point it is in standby mode and the measured temperature appears on the display.
- 5.5 **PROGRAMMING**
Programming can be effected only with the device in standby. If the program doesn't need to be changed, the following steps (5.5.1 - 5.5.7) can be omitted.




5.5.1 To programm the equipment press the key  and keep it pressed for approx. 3 sec.






5.5.2 The first temperature required T1 is the melting temperature. The value can be modified by preessing the keys  to reduce it or  to increase it.


5.5.3 Once the desired value is reached press again the key  to confirm and to pass to the programming of the temperature T2 the working temperature. The value can be modified by pressing the keys  to reduce it or  to increase it.







5.5.4 Once the desired value is reached press again the key  to confirm and to pass to the programming of the clock. If necessary regulate the right time by pressing the key  to reduce the value or the key  to increase the value of, in order, hours - minutes - day. To confirm and to pass from hours to minutes and from minutes to day press each time the key .

5.5.5 Once the programming of the date is finished press again the key  to confirm and to pass to the programming of the automatic start. For this feature the values requested are in order day - hour - minute. The values can be modified by pressing the keys  to reduce them or  to increase them. If this feature is not desired just put the values on "----".

5.5.6 Press the key  to confirm and to pass to the programming of the device "check the age of the duplicating material". The value programmed in this section defines after how many hours the equipment informs you that the duplicating material must be changed. Practically the equipment counts the hours when the duplicating material is at a temperature over 36° and when it reaches the given value the information "change material" appears on the display. To define the maximum age of the gel in hours press the key  to reduce the value or the key  to increase the value. If the feature is not desired put the value on "OFF".
Note: To speed up the increase or the reduction of the value keep the desired key pressed

5.5.7 Once the desired value is reached press again the key  to confirm and to pass to the programming of the language on the display. Press the key  or  to scroll the possible languages. Once the desired language is reached press again the key  to confirm.
Note: It is possible to end the programming in every moment by pressing the key "on/off". In this case the equipment goes back to the standby position and memorized only the values that have been confirmed by pressing the key .

5.6 Press the  key to start the cycle.

The heating cycle (phase 1) starts, the LEDs  and  light on indicating that both heating elements are working. The stirrer commences to turn. The measured temperature appears on the display for the entire cycle. Phase 2, which consists of cooling until reaching working temperature T2, starts when melting temperature T1 is reached. The LEDs  and  go off. The cooling process can be accelerated at any time by pressing the  key which turns on the cooling fan. The corresponding LED then lights. The fan always (and only) operates during the cooling phase. Once the  key is pushed the equipment will keep it in memory and will always cool with the fan.

In case this situation must be changed the fan key must be pressed again and deactivated. The fan stays on until the start of phase 3 which maintains the working (maintaining) temperature T2 indefinitely.

- 5.7 During the maintaining phase the stirrer turns 20 sec than stops 40 sec continuously. In this way the temperature of the duplicating material is kept uniform. When the temperature falls under the defined value the lower heating element heats again for the time necessary to increase the temperature to the defined value and than stops again. During the heating period the ▲ key lights up and the stirrer turns continuously.
- 5.8 The cycle can be stopped at any time pressing either the ◆ key or the "O/I" key.
Attention: Remember to discharge the remaining duplicating material!
- 5.9 The device stops when the lid is lifted. Replacing the lid restarts the device in the same phase it was before. While the lid is open the display indicates the reason of the stop. In addition during the first 30 sec. the equipment beeps.
- 5.10 If there is a power failure during a cycle when the power returns the equipment starts again from the same point it was when the power went off. Before starting again the electronic control check the temperature of the duplicating material and in case this is below the pre-set minimum safe temperature (about 36°C), the cycle is interrupted, "- - -" appears on the display and an intermittent acoustic alarm sounds for max 30 sec. This is to avoid an overload of the stirrer motor. Remove the solidified duplicating material and restart the cycle from the beginning.
- 5.11 If the motor temperature rise too much the motor-thermostat protector stops both: the motor and the heating elements. The beep signal sounds for 30 seconds and the message "Motor overheated" appears on the display. Once the motor temperature returns to an acceptable level the equipment starts working again from the same point it stopped. In case of often motor overheating contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.

6. MAINTENANCE

- 6.1 To clean the container, unscrew the stirrer nut (23) and take out the stirrer (22). Clean the container with a damp cloth being careful not to damage the thermostat bulb (9).
If water is used, always use very little quantity and dry the container immediately. This is to avoid the much less viscous water from seeping into the gaskets of the thermostat bulb and of the stainless steel shaft (19).
By no means pour water into the stainless steel shaft (19), nor on the upper part of the unit.
- 6.2 For further maintenance refer to OMEC SNC or to a from OMEC SNC expressly authorised technician.

7. WARNINGS

- 7.1 Never fill the container up to the top and never allows the duplicating material to boil because the fluid gel could filter down into the stirrer shaft damaging the inner parts.

It could also overflow the container entering into the interior of the device from around the lip of the container causing damage, or, in the worst case it could cause a short circuit.

- 7.2 If the motor temperature rise too much the motor-thermostat protector stops both: the motor and the heating elements. The beep signal sounds for 30 seconds and the message "Motor overheated" appears on the display. Once the motor temperature returns to an acceptable level the equipment starts working again from the same point it stopped. In case of often motor overheating contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.
- 7.3 The tap must be pushed and finally rotated. It is advisable to rotate it always completely, especially during the melting phase and in case of stops between one casting and the other longer than 1 minute to avoid the gel to become solid in the tap. Furthermore if the tap is not screwed the pressure caused by the melted material inside the container could push and open the tap leaking the melted material.
- 7.4 Do not try to disconnect the safety microswitch as it is dangerous to put hands or foreign objects into the container while the stirrer is moving.
- 7.5 Switch-off and unplug the unit from the electrical outlets before servicing.

8. WASTE DISPOSAL

Depending from the duplicating material used follow the indications of the supplier and of the local responsible authorities.

As defined by the WEEE directive, this cross-out trashbin label means that end-users in EU countries should not dispose of electronic and electrical equipment or accessories in household waste. End-users in EU countries should contact their local equipment supplier representative or service center for information about the waste collection system in their country

9. MALFUNCTION CAUSES-REMEDIES

- 9.1 The device does not come on.
 - 9.1.1 Check that the plugs are well pushed in and that the lead is in a good working condition. Have a qualified technician check that there is voltage at the plug.
 - 9.1.2 Check that the fuse for general protection (31) is in proper working order.
 - 9.1.3 Check that the fuse of the elektronik board (F1 in electrical scheme) is in proper working order.
- 9.2 The stirrer does not turn.
 - 9.2.1 The display shows "Verify lid position": check that the lid is closed correctly
 - 9.2.2 The display doesn't show any message: Check that the motor protection fuse (32) is in proper working order.
 - 9.2.3 The display shows "Motor overheated": see 4.6
- 9.3 The device comes on but the heating phases are not regular or the displayed temperature is significantly different from the actual values

9.3.1 Contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.

9.4 Heating is too slow or does not happen at all.

9.4.1 It may depends from the heating elements or from the relays that control the switching. Contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.

9.5 The gear motor is noisy.

9.5.1 Contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.

9.6 The tap leaks or does not stay shut.

9.6.1 The tap is not completely screwed or the gasket of the tap piston could be worn out.

9.7 Rapid cooling does not work.

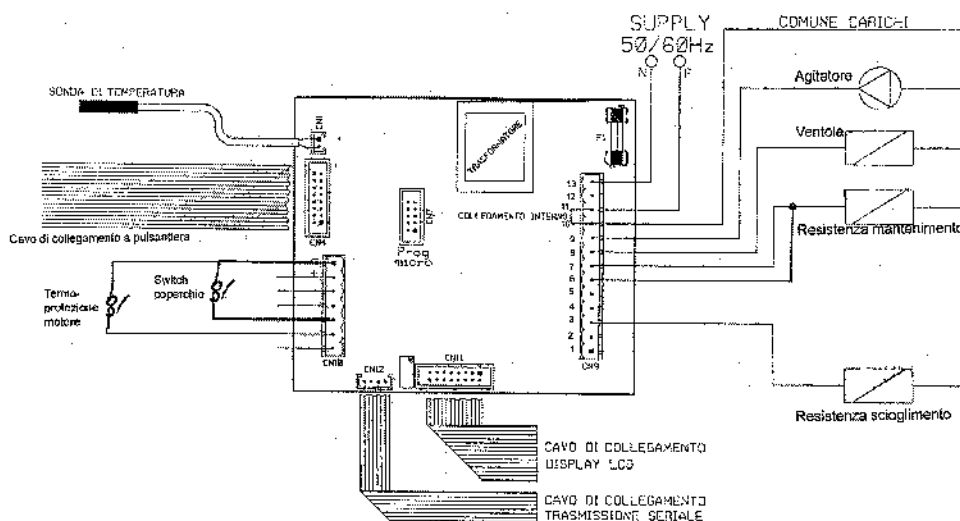
9.7.1 Check that the option "forced cooling" is activated. In this case during the cooling period from the melting temperature to the working temperature the LED ✕ lights on. If the light is off press the ✕ key and activate it. If even pressing the cooling key the LED doesn't light on or the fan doesn't work contact a from OMEC SNC authorised technician, or send the unit back to OMEC SNC.

9.8 The display shows wrong characters

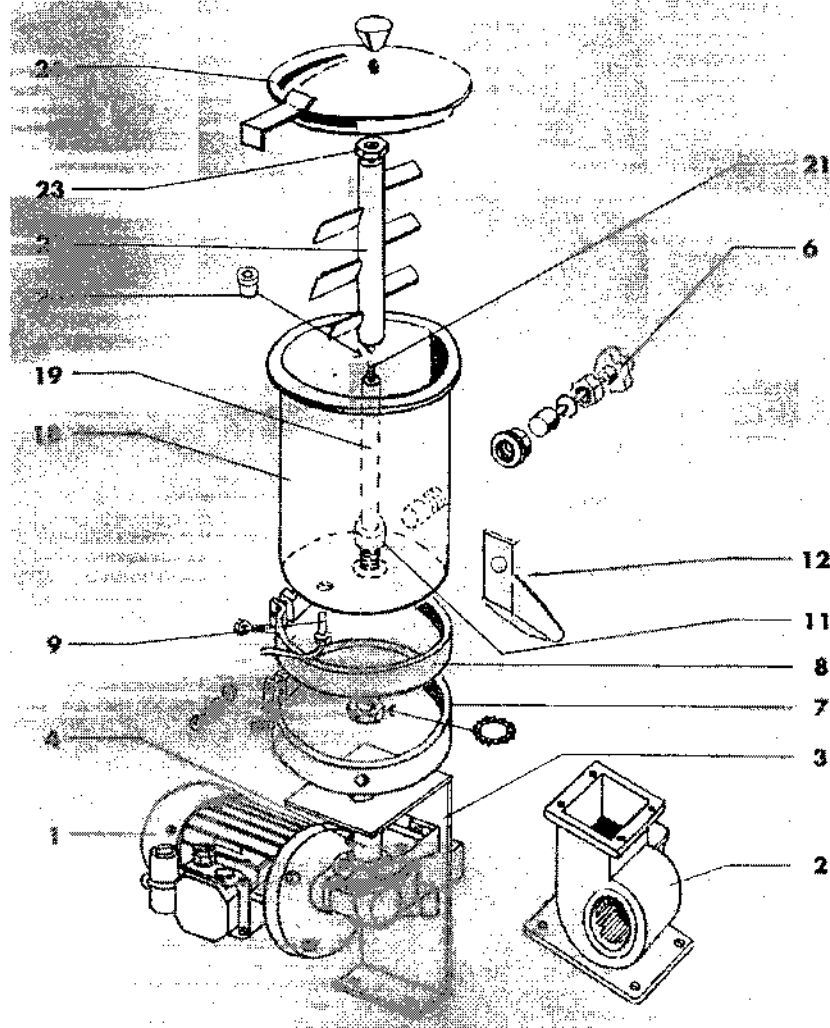
9.8.1 If the unit works correctly but the display shows wrong or missing characters just disconnect shortly the power and connect it again. In this way the display is resetted and should go back to the normal functioning.

Attention: Do NOT switch off the unit by pressing either the key "O/I" or ✕ as in this way the cycle would be interrupted and it should be started again from the beginning.

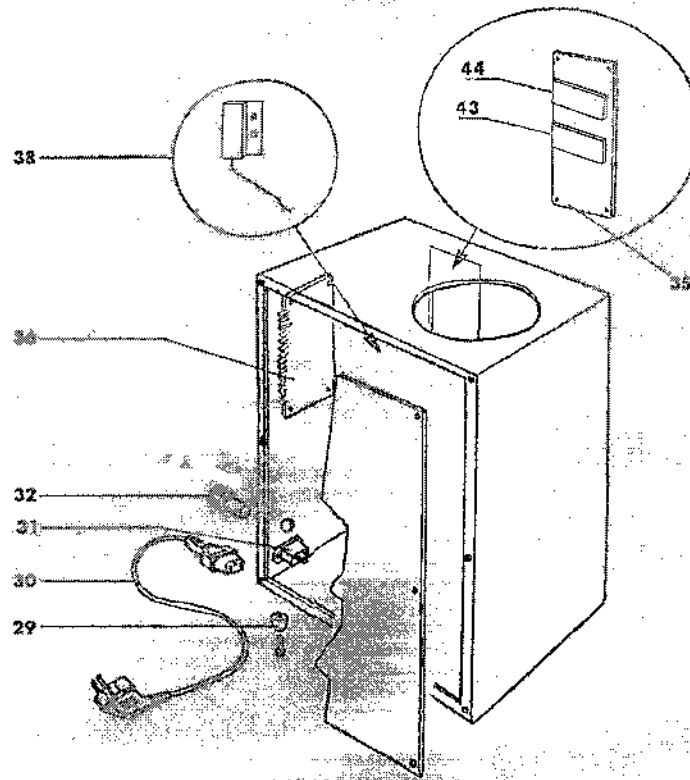
10. ELECTRICAL CIRCUIT



11. DRAWING AND SPARE PARTS



Pos.	Part Nr.	Description
1	EMR007	Motor
2	EMA002	Fan
3	LMR002	Motor plate
4	ERR001	Motor shaft connection
6	LRX010	Tap body
7	EHE001	Heating element 1 with hole
8	EHE002	Heating element 2
9	ESES03	Thermostat bulb
11	MANT01	Teflon ring
12	CBS001	Conveyor
18	LCX001	Stainless steel 6 ltr. tank
19	LTF001	Stainless steel tube
20	LRA002	Upper bearing
21	LAF002	Stainless steel shaft
22	LAA002	Stainless steel stirrer
23	MDAA01	Stirrer nut
24	LCXPRI	Stainless steel lid



Pos.	Part Nr.	Description
29	CPP003	Foot
30	EWA011	Lead
31	EFS005	Plug with fuse holder (main fuse)
32	EFP002	Fuse holder (motor fuse)
35	CTAPR1	Front panel
36	ESE003	Electronic board
38	EMJ003	Safety microswitch
43	ESET03	Keyboard
44	ESED03	Display

12. STANDARDS

The OMEC DUPLICATING UNIT TYPE JELLY.17.00 is manufactured in accordance with Machine Directive:

- 2006/42/EC

with the following Standards:

- EC 88/642
- 2014/30/UE EMC (Electro-magnetic Compatibility)
- 2014/35/UE (Low Voltage)
- UNI EN 60204-1
- UNI EN 60204/1-A1

and with the following CEI (Italian Electro-technical Commission):

- CT2-3 1998 - BOOKLET (Electric Revolving Machines)