

# **C-02 / 230V**



## **HONEY CREAMING MACHINE**

**With C-02 automatic controller  
230V**

**(50l, 70l, 100l, 150l, 200l)**

## IMPORTANT

**Read this user's manual before use and follow the given instructions.**

**Producer cannot be held responsible for any damages caused by improper use..**



## ELECTRICAL SAFETY

1. The device must be plugged into the grounded socket with a voltage specified on the rating label.
2. Electricity supply must be fitted with a residual current device with a rated tripping current not exceeding 30mA .The operation of the over-current protection needs to be checked periodically
3. Check the condition of the cord periodically.
4. If the supply cord is damaged and needs to be replaced, this function should be performed at the guarantor or by special service or by a qualified person in order to avoid danger. Do not use the device if the power cord is damaged.
5. This device is not designed to be used by persons (including children) with limited physical, sensual or psychological abilities or persons who do not have experience or knowledge of the device unless it is done under supervision and according to the user manual passed by persons responsible for their safety.
6. Keep away from children!
7. Should any hazard arise, press the emergency button immediately. Once the danger has been eliminated, the device can be restarted
8. Do not use this unit near flammable materials
9. It is forbidden to carry out any maintenance during operation.
10. All covers must be securely affixed to the device.
11. For indoor use only! Not to be used outdoors!



### ATTENTION!

Lid opening sensor cannot be treated as a safety ensuring device. It is strictly forbidden to interfere in any way in the stirrer's operation if the controller is switched on.



## BEZPIECZEŃSTWO UŻYTKOWANIA

1. Place on dry surfaces only!
2. Prior to commencing work, make sure that the „STOP” emergency button is switched off. It should be turned so that it pops out.
3. Pressing the “EMERGENCY STOP” button will result in the immediate stop of the creaming machine.
4. The creaming machine cover should be closed while mixing.

5. Do not move or adjust the creaming machine whilst in use.
6. Protect your engine and controller against moisture (also while storing)

**Pulling the cord is strictly forbidden. Keep the cord away from sources of heat, sharp edges and ensure it is in good condition**



**Removing covers while in use strictly forbidden!**



**Repairing while in motion prohibited!**

## CREAMING MACHINE MAINTENANCE



### IMPORTANT!

**Unplug the device before performing any maintenance**

Prior to first use, clean and rinse the device thoroughly. Wash the device with hot water and small amount of detergent (food contact certified). The device should be washed with an anti-static cloth. Protect the electronic components from getting wet. Rinse thoroughly with clean water after washing and leave to dry. Having completed the creaming process, wash and dry the device.

Store the creaming machine in a dry place.

Do not perform any maintenance of any elements by the use of chemicals.

## HONEY CREAMING:

Fresh honey is thick and clear. After some time it gets crystallised naturally.

The proper crystallization temperature is 16-18 ° C.

At higher temperatures, the crystallization process occurs more slowly and crystals are larger.

Heating the honey up to **40°C** and maintaining it at that level for several days causes the transition of honey from solid (crystallized) to liquid.

Creaming is a quick and easy method of creamed honey's production. It is done by adding the crystallised honey onto the fresh, clear and fluid one, in order to begin a controlled, small-grained (creamed) crystallisation.

The creaming process should be performed repeatedly on the following basis: stirring – 15 minutes ; standstill – 1 hour

The creaming device has a special mechanical stirrer, which allows you to carry out the process of recrystallization, after which honey obtains chocolate cream-like consistency.

This process involves a cyclic aeration and intensive honey stirring for a few nights, until the desired consistency is obtained. That consistency is maintained over many months if the honey is kept at the same, appropriate level of temperature.

Mixing is performed several times a day for about 10-15 minutes.

"Creaming" is to produce many small nucleation and prevent the growth of existing crystals of honey. It is mechanical "grinding" of honey crystals.

**IMPORTANT!**

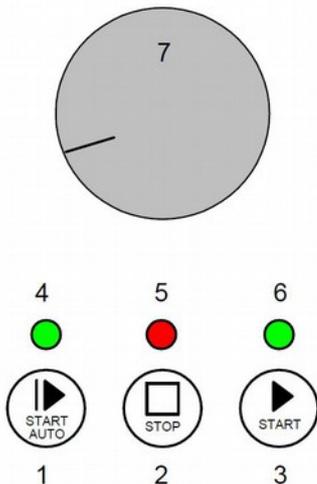
This process should be performed gradually, that means one should not fill the entire device with honey, but to dose small amounts of honey regularly.

**C-02 CREAMING MACHINE DRIVER**

The controller's performance comes down to a cyclic switching on and switching off the creaming machine's engine, as per pre-set user defined settings.

The cyclical mixer's turn-off means that for every 15 minutes of stirring, there is 1 hour of stand-by. (optimal parameters for the creaming process)

The controller also enables mixing in continuous mode - working continuously until you stop, e.g. by pressing the stop button.



Rys 1. Creaming machine control panel

**1. KEYS DESCRIPTION**

- 2.
3. **Creaming cycle START button**  
Pressing this button will launch the creaming cycle. The mixer will work over 15 minute cycle of turning over, followed by 60 minutes of standstill. Total time of the whole cycle is approximately 48 hours. Once completed, the device goes into **STOP** mode.
4. **STOP the process button**  
Pressing this button will result in the controller going into STOP mode. Working in creaming mode and continuous mode will be disabled.
5. **CONTINUOUS WORK START Button**  
Pressing this button results in switching on the engine which powers the stirrer. The stirrer continues to work until the „STOP” button is pressed.
6. **LED indicating CREAMING CYCLE in progress**
7. **LED indicating STOP mode .**

8. **LED indicating the continuous mode on.**
9. **Stirrer speed control knob**  
Rotational speed of the mixer can be increased or reduced using the knob.
10. Turning the knob clockwise increases the speed of stirrer, whereas turning it counter-clockwise reduces it.

**Manning the driver**

After powering on, the controller executes the boot sequence - performing some basic diagnostic tests confirming the correctness of operation. Error detection is indicated by lighting up the right combination of LEDs 5, 6, 7. If no error is found, the **STOP** mode will be enabled, ready to use.

Manning the driver comes down to starting a creaming machine in the creaming cycle or the continuous mode and to set the desired mixer's speed.

**STOP** button enables you to stop the stirrer or disable the executed cycle.

The restarted cycle will start working from the beginning, meaning the full 48 hour cycle.

Detection of the safety loop, i.e.: opening the lid of creaming machine will immediately turn the engine off and, depending on the mode entered, stop the creaming cycle ( along with the suspension of time calculation) or stop the continuous work mode.

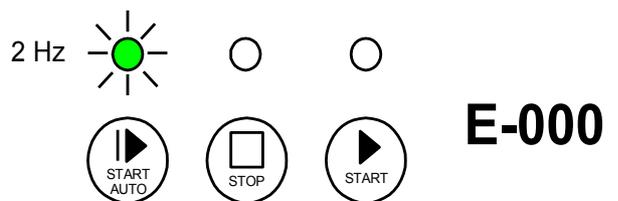
Releasing the safety such as re-closing the cover results in the return to the mode prior to safety loop activation, which means carrying on the creaming cycle, or continuous operation or STOP mode.

**If the „STOP” button is pressed while the safety loop is in use (which is indicated by blinking „5” LED), provided that the safety has been released , the driver will not carry on working, but will enter the „STOP” mode.**

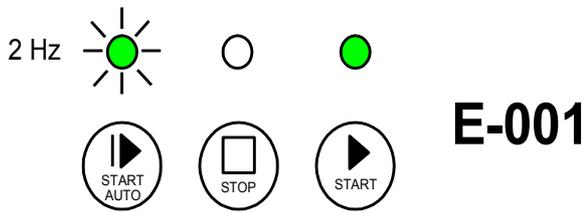
C-02 controller has been equipped with sophisticated diagnostic procedures – making it safer and more user-friendly

**Errors' signalling**

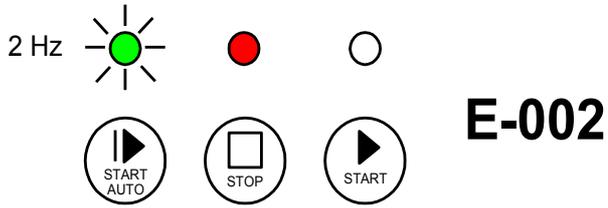
- 1 errors are signalled by a correspondent LCD diodes' combination 4, 5, 6
- 2 error detection results in the immediate stop of the stirrer
- 3 restarting can be made after powering off and troubleshooting performed
- 4 turning the device off cancels the error stored in the memory module



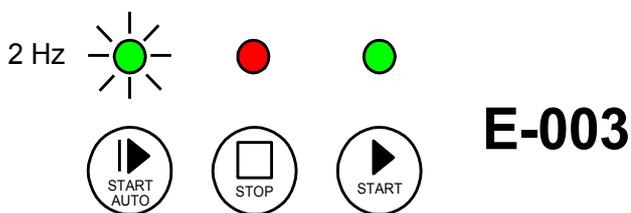
Rys 2. Error – Internal controller's malfunction



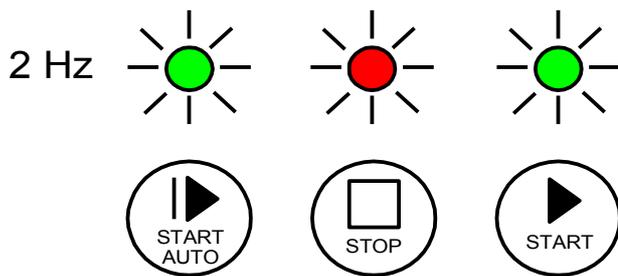
**Rys 3. Error – pressed or locked “START” button.**



**Rys 4. Error -pressed or locked STOP button.**



**Rys 5. Error – pressed or locked “Continuous work mode” button..**



**Rys 6. Diagnostics message: Controller's boot-up sequence suspended due to opening of the lid.**

**Working area**

Proper light should be provided and the area should be kept clean and tidy.

**Storing**

Once creaming process has completed, clean and dry the device thoroughly.

**Periodical technical check-ups need to be performed.**