



Przedsiębiorstwo Pszczelarskie Tomasz Łysoń

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IMPORTANT!

Prior to operating the device please refer to the manual and act according to the guidelines contained therein. The manufacturer cannot be held accountable for the damages cause by misusing the device or its improper handling.



ELECTRIC SAFETY

- The device should be connected to a socket with earthing with the voltage specified on the nominal plate.
- Electric installation must be equipped with RCD having the nominal activation current below 30 mA. The operation of the over-current circuit breaker must be checked periodically .
- Check the state of a supply cable periodically. If the supply cable gets damaged, it must be replaced. In order to avoid the threat, it must be performed by a guarantor or by a specialised servicing centre or by an authorised person. Do not operate the honey extractor when a supply or connecting cable are damaged.
- The following equipment is not intended to be used by persons with limited physical, sensory or mental capabilities (including children) or persons inexperienced or unfamiliar with that type of equipment unless the usage occurs under supervision or in line with the equipment operating manual provided by safety supervising persons. One must make sure that children do not play with the device
- In case of any damage to the device, in order to avoid the danger, the repairs may be performed solely by a specialist servicing centre or a qualified person.



SAFETY OF OPERATION

- The device is intended for honey decrystallization.
- The floor on which it is placed must be dry!
- Prior to operation, the lid must be closed.
- The decrystallization machine must not be displaced in the course of the decrystallization process.
- It is forbidden to perform any maintenance works when the device is under operation.
- In case of any danger, the device must be switched off immediately
- Restarting the device may occur once the danger has been eliminated.
- Do not operate the device in the vicinity of flammable materials.
- Do not switch on the device when there no honey in a tank
- The device can be activated indoors only. The device is not adjusted for outdoors operation.
- Protect the controller against humidity. (also during storage).



NOTE!

It is forbidden to pull the power supply cable. Keep the supply cable away from heat sources, sharp edges and its good technical state must be taken care of.

Honey decrystallization:

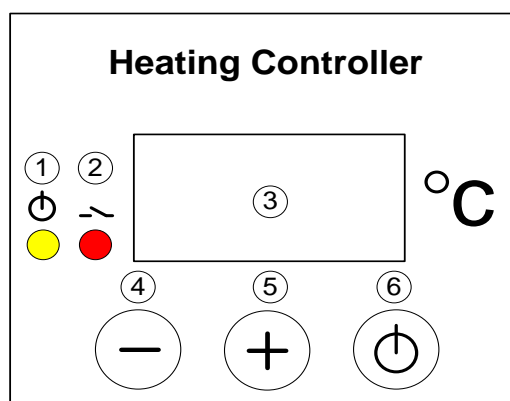
Honey decrystallization should be performed in the maximum temperature of 35°- 40 °C

(it is important not to overheat the honey, as, similar to the pollen, it loses its properties with the temperature exceeding 40°C). Fresh honey remains dense and transparent. After some time it gets crystallized naturally.

Heating the honey to the temperature of 40 degrees C and maintaining the temperature for some days makes the honey change from crystallized state to liquid state.

Manual for MHC-01 temperature controller

The device is equipped with HC-01 temperature controller (regulator)



Setting up the controller

1. Prior to plugging in the device to the mains, one must make sure that the controller is switched off.
2. Switch (0/1) on the control panel shall be in "0" position
3. Once plugged in to the mains, Switch (0/1) shall be moved from "0" position to "1" position
4. Controller should be programmed in line with individual needs
5. In order to enter the programming mode (Prog), buttons "+" and "-" must be pressed at the same time during controller start-up.

Starting work with a controller

1 – signalling the work state

Indicator lights up – temperature regulator switched on, indicator dimmed – temperature regulator switched off (controller operates as an ordinary thermometer), indicator flashes – temperature regulator switched on and initial heating in progress

2 – signalling the activation of heating transmitter

Indicator lights up – transmitter contacts closed (heating on), indicator dimmed – contacts opened (heating off)

3 – display

Working mode – default mode, selected after controller power supply switched on. The display shows the measured temperature, readings specified in °C.

Setting mode – selected when button "+" or "-" has been pressed. The display shows the preset temperature. Readings specified in °C. Reading flashes and returns to measured temperature after a while.

Working time setting mode (Pro.) – activated when "ON/OFF" button is pressed and held. The display shows working time, counting it from activation, after which the thermostat gets switched off. Readings specified in hours.

Display brightness setting mode (d.br.) – activated when "ON/OFF" button is pressed and held for a longer time. The display shows the currently set brightness on all its segments. When the setting limit values are reached, the segments start to flash.

The modes specified below are accessible once the relevant code have been entered.

Calibration mode (CAL.) code L-1 – activated when the "ON/OFF" button has been pressed and held for a longer time. The display shows the measured temperature including the calibration. Readings specified in °C.

Preliminary heating time setting mode (P.tl.) code L-2 – activated when "ON/OFF" button is pressed and held for a longer time. The display shows the working time, counting it from the activation, for which the controller performs preliminary heating maintaining the preliminary heating temperature programmed by the manufacturer. Reading "OFF" means deactivation of the preliminary heating function. Readings specified in minutes. When preliminary heating activated, the controller displays marking "HC2" during start-up.

Preliminary heating temperature setting mode (P.tE.) code L-3 – activated when the "ON/OFF" button is pressed and held for a longer time. The display shows the value of preset temperature for preliminary heating. Readings P ... specified in °C.

Preset temperature limit setting mode (L.t.h.) code L-4 – activated when "ON/OFF" button is pressed and held for a

longer time. The display shows maximum value of preset temperature that can be set. Readings L ... are specified in °C.

4 – button „-“ value decreasing

Working mode – pressing the button will decrease the preset temperature value. During preliminary heating, the option to change the setting for preset temperature is blocked.

Working time setting mode – pressing the button will decrease the time after which the thermostat will get switched off.

Display brightness setting mode – pressing the button will decrease the brightness of the display.

Calibration mode – pressing the button will decrease the value of the temperature to be transferred, calibrating the measurement duct in this way.

Preliminary heating time setting mode – pressing the button will decrease the time after which the thermostat will switch from preliminary heating phase to proper heating phase.

Preliminary heating temperature setting mode – pressing the button will decrease the value of preset temperature that will be maintained during preliminary heating.

Preset temperature limit setting mode – pressing the button will decrease the value of maximum preset temperature that will be to set.

5 – button „+“ value increasing

Working mode – pressing the button will increase the value of preset temperature. During preliminary heating, the preset temperature setting changes is blocked.

Working time setting mode – pressing the button will increase the time after which the thermostat gets switched off.

Display brightness setting mode – pressing the button will increase the brightness of the display

Calibration mode – pressing the button will increase the value of the transferred temperature, calibrating the measuring duct in this way.

Preliminary heating time setting mode – pressing the button will increase the time after which thermostat switches from preliminary heating phase to proper heating phase.

Preliminary heating temperature setting mode pressing the button will increase the value of preset temperature which will be maintained during preliminary heating.

Preset temperature limit setting mode – pressing the button will increase the value of maximum preset temperature that can be set

6 – „ON/OFF“ button

Short-time pressing of the button will activate (ON) and deactivate (OFF) the regulator interchangeably. At deactivated state (OFF) the regulator act as a thermometer. At activated state (ON), the regulator shall activate and deactivate the outlet to control the heater in order to maintain the temperature set by the user.

Longer pressing and holding of the button and subsequent button releasing will activate the working time setting mode, signalled with (Pro.) notice. In this mode, by means of "+" and "-" buttons, the user has a possibility to define the time after which the controller gets deactivated, i.e. switches to the OFF state. Exit from the mode and setting approval occurs once the "ON/OFF" button is shortly pressed.

Longer pressing and holding of the button and its subsequent releasing will activate the display brightness setting mode – signalled with (d.br) notice.

In this mode, by means of "+" and "-" buttons the user has the possibility to set the brightness of the display segments. Exit from the mode and confirming the setting occurs when the

“ON/OFF” button is pressed shortly. Longer pressing and holding of the button and subsequent releasing of the button will activate the calibration mode, signalled by the (CAL) notice. In this mode by means of “+” and “-“ buttons, the user has a possibility to adjust the temperature readings to the real temperature. Exist from the mode and confirming the calibration settings occurs when the “ON/OFF” button is pressed shortly.

NOTE – the controllers supplied have been calibrated already.

Longer pressing and holding of the button and subsequent its releasing shall activate the preliminary heating time setting mode, signalled by (P.tl) notice. In this mode by means of “+” and “-“ buttons the user has a possibility to define the time after which the controller gets switched from preliminary heating phase to proper heating phase. Deactivation of preliminary heating is signalled by the “OFF” notice. Exist from the mode and setting confirmation occurs when the “ON/OFF” button is pressed shortly.

Longer pressing and holding of the button and its subsequent releasing will activate the preliminary heating temperature setting mode, signalled by (P.tE.) notice. In this mode by means of “+” and “-“ buttons the user has a possibility to define the preset temperature that shall be maintained during preliminary heating. Exit from the mode and setting conformation occurs when the “ON/OFF” button is pressed shortly. Longer pressing and holding of the button and its subsequent releasing will activate the preset temperature limit setting mode, signalled by (L.t.h.) notice. In this mode by means of “+” and “-“ buttons the user has the possibility to set the upper limit of the preset temperature settings. Exit from the mode and setting confirmation occurs after the “ON/OFF” button is pressed shortly

NOTE – all controller settings and working state (activated or deactivated) are stored in the non-volatile memory.

Entering the access codes

During controller start-up (displayed controller’s name, software version, settings), press and hold the “+” and “-“ buttons. Once “---“ has been displayed on the screen, buttons may be released and the relevant code can be set. The code shall be confirmed by the “ON/OFF” button.

CODE	ACCESS LEVEL
Any	L-0
157	L-1
314	L-2
628	L-3
942	L-4

Working time setting mode (code L-0)

Display brightness setting mode (code L-0)

Calibration mode (code L-1)

Preliminary heating time setting mode (code L-2)

Preliminary heating temperature setting mode (code L-3)

Preset temperature limit setting mode (code L-4)

Controller error report

MHC1 controller has been equipped with advanced mechanisms for error detection. Detection of any error activates emergency work stoppage and triggers error report screen. Error report screen is displayed in a continuous manner. It is

therefore necessary to disconnect power supply, remove the error source and controller reconnection

ERROR	ERROR DESCRIPTION
(E-0) CPU STATUS	Damaging the main processing unit.
(E-3) T < Tmin	Too low temperature measured by T1 sensor.
(E-4) T > Tmax	Too high temperature measured by T1 sensor.
(E-5) button -	“-“ button damage/pressing
(E-6) button +	“+“ button damage /pressing
(E-7) button ON/OFF	“ON/OFF” button damage/pressing

Controller’s technical parameters

CONTROLLER’S TECHNOLOGICAL PARAMETERS (STATE FOR FW: 0.1)	
Temperature measurement range*:	-50°C ... +250°C
Temperature readout resolution:	0,1°C
Temperature measurement accuracy:	± 1,5 °C
Minimal value of preset temperature:	30°C
Maximum value of preset temperature:	Set up in the range: 45°C ... 95°C
Setting range for automatic deactivation:	1 ... 96 hours
Setting range for preliminary heating temperature:	30°C ... 40°C
Setting range for preliminary heating time:	0 ... 60 minutes
Regulation type:	b--state
Controller’s electrical parameters	
Power supply for the controller board:	12VDC ±10%, Min. 200mA
Power supply of dedicated feeder:	100...240VAC 50/60Hz
Measurement input for temperature measurement	PT1000
Outlet type:	Relay, contact NO
Output load:	AC1 - 9A 230V
Maximum power of the heater attached:	2000W 230VAC

Power supply for the controller board:	
Power supply of dedicated feeder:	
Measurement input for temperature measurement	PT1000
Outlet type:	Relay, contact NO
Output load:	AC1 - 9A 230V

The guarantee duration equals 24 months.

A receipt or a VAT invoice is issued for each product purchased.

Detailed guarantee terms and conditions, see www.lyson.com.pl

Maintenance of the decrystallization machine



IMPORTANT!

Prior to the first use, the device must be washed and dried thoroughly.

Prior to the maintenance, the plug must be taken out from the mains!

The device shall be washed with hot water with added agents permissible to be used in food industry. The device shall be washed with soft flannel fabrics, remember to protect any electrical elements. Once cleaned, rinse with pure water and dry.

The device is to be stored in a dry room.

None of the device components can be maintained with chemical agents.

Prior to the device start-up, in case when it has been transferred from the room with lower temperature to the room with higher temperature, one must wait until it has reached the ambient temperature. To be stored in dry rooms with temperatures over 0° C

Prior to every season, an additional inspection must be performed for technical issues and in case any fault has been detected, a service point must be contacted

Recycling

Worn-out product must be removed as waste only within selective waste collection organised by the Network of Communal Electric and Electronic Waste Collecting Points. A customer is entitled to return the used equipment to the electrical equipment distributor network, at least free of charge and directly, if the device to be returned is of proper type and serves the same purpose as the newly purchased device.

Guarantee

Product purchased from "Łysoń" company are encompassed by the manufacturer's guarantee.