Instructions manual

Disc dehydrator 70 kg.

LYSON

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The manual covers following devices (codes):

W4024

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1. General safety instructions

Before first use read the manual carefully and follow the instructions contained therein. The manufacturer is not liable for damage caused by equipment used inappropriately or by incorrect handling.

1.1. Electrical safety

1. The electrical supply system must be fitted with a residual-current circuit breaker with rated tripping current not higher than 30mA. Performance of the circuit breaker should be checked periodically.
2. Periodically check the condition of the power cord. Replace the power cord if damaged. Replacing the power cord can only be performed by the manufacturer or by qualified personnel. Do not use the device if the power cord is damaged!
3. Make sure that the main switch (7) is in „0” position before plugging the unit in.
4. Connect the device to a socket with voltage specified on the rating plate of the product.
5. Carefully connect the plug into the mains socket. Make sure your hands and the floor surface in the room are dry!
6. The cover must be closed during operation! Do not open the cover during dehydration process.
7. Do not move the Pollen Cleaner during operation.
8. Protect the motor and the control unit against moisture (also during storage).
9. Do not pull the power cord. Keep the power cord away from heat sources and sharp edges to ensure its good condition.

1.2. Operation safety

1. The device is not intended for use by persons (including children) with limited physical, sensory or mental abilities, or by inexperienced users, unless under supervision or with instructions given by an accountable party.
2. This device is not a toy, and shouldn’t be used as one. Children should not to play with it.
3. In the event of damage to the device, to avoid any health and safety risks, repairs should be carried out only by qualified personnel.
4. Never carry out any maintenance or repairs during operation or if the device is plugged in!
5. All covers must be firmly attached to the device during operation
6. In case of any danger, use the safety switch immediately. The device can be restarted after the hazard has been eliminated.
7. For indoor use only. The device is not suitable for outdoor use.
8. Do not use or store the device at the ambient temperature below freezing. If the device has been moved from a cold room to a room with a higher temperature, before switching on wait until it reaches room temperature.

Never carry out any repairs during operation

Do not remove covers during operation

2. Product description

Honey needs to be dehydrated if the water content of the honey exceeds 18-20%. A high water content in honey lowers its shelf life and also influences its delamination and fermentation even during storage at low temperatures.
This device is designed to remove the excess water from honey by evaporating it. Warm air is forced through the device, which keeps the internal microclimate dry and as a consequence favours the evaporation of water from honey.
The device is powered by 230V.
Pour liquid honey into the device, preferably at a temperature of about 40°C, to the MAX level marker inside the device.
Systematically check the water content in the honey with a refractometer.
After the dehydration process is completed, the honey should be poured out of the device through a flap valve (9).

2.1. Design:

1- controller
2- safety switch
3- temperature controller
4- START button (left button unactive)
5- STOP button
6- disk rotation speed adjustment knob
7- main switch
8- 230V power cord
9- flap valve 6/4”
10- electric drive system
11- vent
12- main cover
13- cover gas strut
14- intake air filter
15- heater fan
16- heater
17- air intake
18- discs
19- temperature sensor
20- warm air intake hole
21- 10A automatic fuse

2.2. Technical specifications:

- power supply – 230V/50Hz
- power rating – 1,65kW
  -motor – 370 W/900 rpm.
  -heater – 1200W
  -fan – 55W
- disc diameter – Ø530mm
- flap valve – 6/4”
- capacity – approx 2% in 6 h.
- materials used – acid resistant stainless steel

Dimensions:

- height – 1220mm.
- weight – 750mm.
- length– 950mm.
- weight -84kg.

3. Instructions for use

3.1 General instructions – preparation for use

1. Set the device up in a designated, clean, dry and well lit room.
1. Keep a free space around the device for better handling.
2. Once the dehydrator is set up, lock the coaster wheels to prevent the device from moving.
3. Provide easy access to the power source.
4. Closely follow the instructions of use.

3.2 Operation instructions

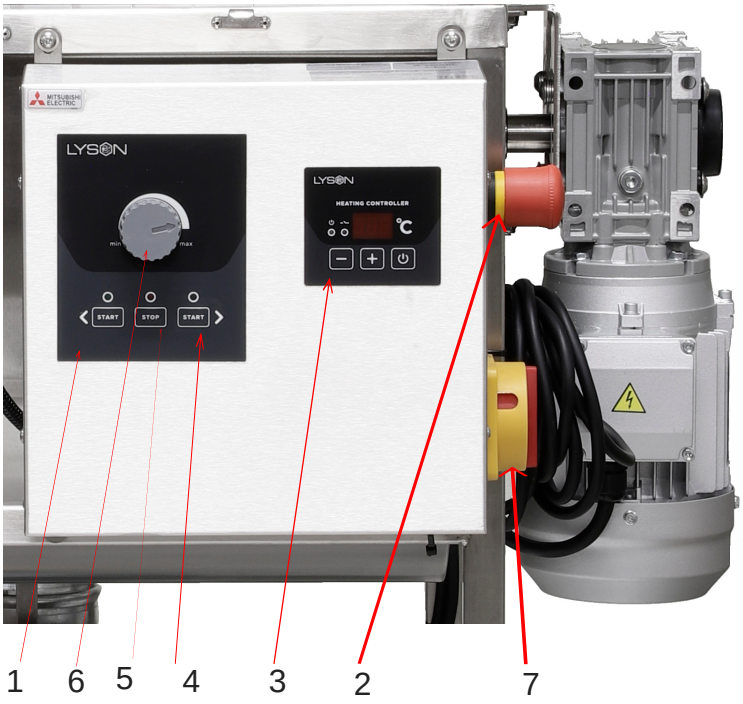
1. The device is intended for honey dehydration
2. The dehydration process is accelerated by rotating discs inside the device.
3. The device has to be cleaned before the first use and after finishing work according to the instructions in the "Cleaning and Maintenance" section.
4. Before start:

- plug the power cord (8) into the socket,
- pour honey to the MAX level marker.
- Set the adjustment knob (6) to the minimum, make sure the safety button (2) is in OFF position and switch the dehydrator on with the main switch (7).
- Set the desired temperature with the temperature controller (3).
- Start the dehydrator with the START button (4) and set the disc rotation speed with the adjustment knob (6).
- check honey dehydration process with a refractometer. After obtaining the desired level of water content in the honey, stop the process by pressing the STOP button (5) or, if necessary, by an emergency safety switch (2).
- Drain the honey through the flap valve (9).

Important!!! The machine must be completely drained and cleaned after finishing work

4. Control panel

The dehydrator is equipped with a simple controller (1) which gives the possibility of infinite disc rotation speed between 0 and 9 rpm with adjustment knob (6) and a temperature regulator (3) controlling the temperature inside the device. The controller is also equipped with the main switch (7), safety switch (2) and 10A automatic fuse (21).

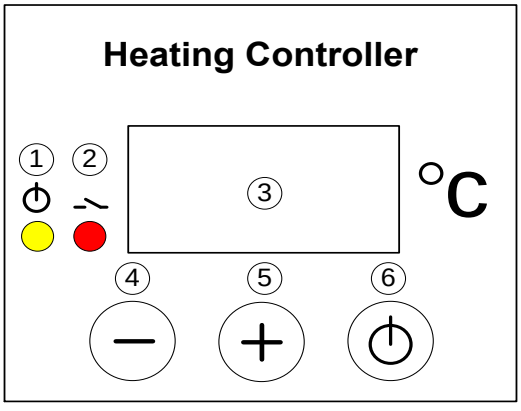


Description

1-control panel
2-safety switch
3-temperature regulator
4-START button (left button unactive)
5-STOP button
6-disc rotation speed adjustment knob
7-main switch

4.1. Temperature regulator operation

The device is equipped with MHC-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.

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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 loner 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.

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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: Power supply of dedicated feeder:	12VDC ±10%, Min. 200mA 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

5. Storage

Clean and dry the unit thoroughly after use.
If the device has been moved from a cold room to a room with a higher temperature, before switching on wait until it reaches the ambient temperature and all condensation water evaporates.

Store the device in a dry and frost-free room.
Do not use the device when the ambient temperature is below 5ºC.
An additional technical check should be carried out periodically, and if any defects are found, please contact the manufacturer.

6. Cleaning and maintenance

IMPORTANT!!!

Unplug the device before commencing any maintenance or cleaning procedures!

Make that no honey is left in the machine after finishing work.

While cleaning ensure the safety of all electrical components like motors and controller panels (for the time of washing cover them with waterproof fabric or plastic film).

Make sure no water gets into the air intake system, which could lead to damaging its electrical components.
Wash the device with hot water with the addition of detergents (approved for use in the food industry).
Rinse thoroughly and dry before storing.

7. Waste disposal and environmental protection

The used product must be disposed in accordance with the local regulations. Return the device to a collection point from where it can be submitted for environmentally compatible recycling.
The consumer has the right to return used equipment directly to the manufacturer's distribution network, free of charge, while replacing it with a new unit as long as the used device is of the same kind and same application as the newly purchased device.

8.Warranty

The product purchased from the Lyson Company is covered by a manufacturer's warranty. The warranty period is 24 months from the date of purchase.
All purchased products come with receipts or VAT invoices.

Warranty details at:

www.lyson.com.pl