MANUAL

Body heater

LYSON

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The following manual encompasses the device bearing the following code:

W3012

Manual

1. GENERAL SAFETY

OPERATIONAL PRINCIPLES FOR THE DEVICE

Prior to device usage initiation, refer to the following manual and act according the guidelines contained therein. The manufacturer shall not be held accountable for any damages caused by improper usage of the device or its improper handling

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1.1. Operating principles

1. The heater is intended to heat up the bodies with the frames before spinning and uncapping
2. Prior to starting work, the temperature regulator should be set for required temperature value and time.

1.2. ELECTRICAL SAFETY

1. Power supply electric installation must be equipped with RCD with nominal tripping current In below 30 mA. Functioning of overcurrent circuit breaker must be checked periodically.
2. Do not operate the pre-heater when the power supply cable is damaged!
3. Prior to connecting the device to the mains, make sure that controller is off. A switch on the controlling panel should be in “0” position
4. While connecting to the mains, be careful. Hands must be dry! The floor on which the device is placed must be dry too!
5. Do not displace the pre-heater containing honey while in operation
6. Protect the controller against humidity (also during the storage).
7. It is forbidden to pull the power supply cable. The power supply cable must be kept away from any heat sources, sharp edges and its proper state must be secured.

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1.3. OPERATIONAL SAFETY

1. 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. Make sure that children do not play with the device.

2. The floor on which the device has been positioned must be levelled off, solid and dry!
3. Prior to starting work with the device, the bodies must be covered (e.g. by means of a roof).
4. Do not displace the heater while in operation .
5. It is forbidden to perform any maintenance works when the device is in operation .
6. In case of any danger, the device must be switched off immediately.
7. The device may be reactivated once the danger has been eliminated.
8. Do not use the device in the vicinity of any flammable materials.
9. Do not switch on the heater without the bodies with frames or without jars for de-cristalization.
10. The device must not be switched on and stored with the ambient temperature below 0º C. Prior to the device activation, when it has been brought from a room with lower temperature to a room with higher temperature, wait until the device has reached the ambient temperature.
11. The device may be activated indoors only. The device is not suitable to be operated outdoors.

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2.MANUAL

2.1. Operating principles

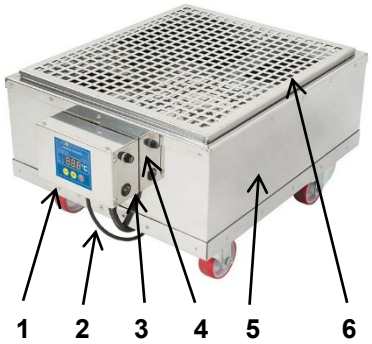
1. The heater is intended for heating up the bodies with the frames or de-crystalization.
2. Prior to start-up, one must:

Plug the device into a socket, switch on the controller's box must be moved from „0" position to „1" position

3. DEVICE CHARACTERISTICS

3.1. Device description

The heater is made of stainless steel and is intended to heat up the bodies in non-heated workshops. The heater is adjusted to the bodies made by: Dadant, Langstroth, WL 12-frame ones. When the adapting inlet is used, the bodies type Ostrowska or Wielkopolska can be used. The bodies requiring heating up before uncapping or spinning shall be placed on the heater for several hours. Warm air goes through forced air flow and flows between the frames heating them up, which ameliorates spinning and uncapping

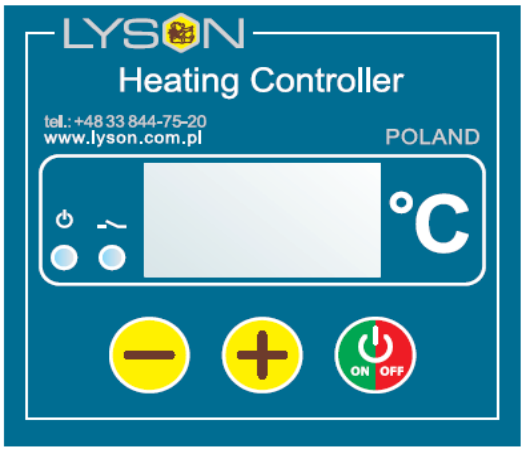


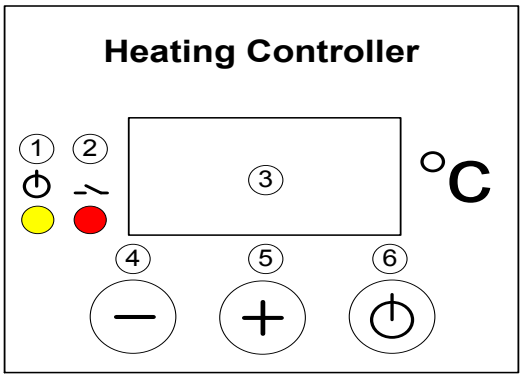
Device components :

1) Temperature regulator HC-01
2) Power supply cable 230V
3) Main switch 0-1
4) 5A fuse holder
5) Stainless steel body
6) Stainless steel shelf, perforated , for de-crystalization of jars with honey

3.2. Controller description

HC-01 temperature regulator has been mounted in the device.





3.2.1. Controller's set-up

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

3.2.2. Starting work with the 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.tI.) 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.

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)

3.2.3. Controller's error report

HC1 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 reactivation

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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

3.2.4. Controller's technical parameters

CONTROLLER'S TECHNICAL 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:	bi-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
Outlet switching durability	230VAC
Maximum switching frequency AC1	600 cycles/h
Environmental conditions	
Temperature of the regulator under operation:	0°C…55°C
Ambient temperature of the regulator under storage:	0°C…60°C
Air humidity for the regulator under operation:	Max 65% at 25 °C

3.2.5. Technical data:

-power supply 230V

-power 150W

-temperature range 30-55º C

-load capacity approx. 150 kg.

-the body made of sandwich panel reinforced by stainless steel plate, with removable stainless steel drawer and stainless steel shelf for jars

-body with the dimensions 650x470x260 mm, dedicated for beehives made by Dadant, Langstroth, WL 12-frame type

-once the reduction flange has been used, the heater can be adjusted for the beehives types: WL 10-frame, Ostrowskie.

4. DEVICE STORAGE

After the termination of operations, the device must be washed thoroughly and dried.
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 0º C.
The heater cannot be switched on when the ambient temperature has dropped below 5ºC.
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

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5. MAINTENANCE AND CLEANING

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

The heater shall be washed thoroughly prior to its first usage and after its operations. While washing, take special precautions not to dampen the controller (it may be covered with a water-resistant material).
After washing, dry the device carefully.
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

6. 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

7. GUARANTEE

Product purchased from “Łysoń’ company are encompassed by the manufacturer’s guarantee.

The guarantee duration equals 2 years.

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

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