

MANUAL TANK 500 - 2000 L



LYSON

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1. General safety principles for the device usage

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

1.1. ELECTRIC SAFETY



The device must be plugged in to the socket with grounding, with the voltage specified on the product nominal plate

Power supply electric installation must be equipped with RCD with nominal tripping current I_n below 30 mA. Functioning of overcurrent circuit breaker must be checked periodically.

Periodically check the power supply cable. If non-detachable power supply cable gets damaged and must be replaced, it must be performed at a guarantor's or by a specialised repair centre or by a qualified person in order to avoid any threat. Do not operate the device when the power supply cable is damaged

Prior to device activation, one must make sure that controlling is switched off. Switch on the panel shall be in "0" position

One must make sure that device nominal voltage and power supply nominal voltage are compliant.

When connecting to the mains, take adequate precautions.

Hand must be dry!

Base on which the tank has been placed should be dry !



1.2. USAGE SAFETY

a) 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 (power supply cable)

b) In case of damaging and in order to avoid the danger, the repair may be solely performed by a specialist repairing centre or a qualified person.

c) Do not use the device in the vicinity of flammable materials.

d) It is forbidden to perform any maintenance works when the device is in operation

e) In case of any threat the tank must be switched off immediately. Restart of the device may occur once the threat has been eliminated.

f) The device may be activated inside only. The device is not adjusted to operate outdoors

g) Controlling unit must be protected against humidity (also during storage)

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

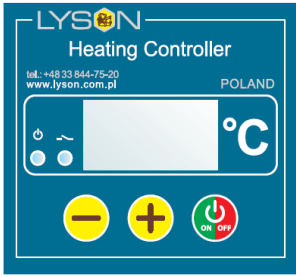
2. Product characteristics

The device is intended to stir (standardise) honey. The tanks are made of stainless and acid-resistant steel plate. The tank bottom is conically-shaped, which allows to achieve its full emptying. Tanks :

W852P, W852MP, W853P, W853MP, W854P, W854MP are equipped with heating mantles as well as an emergency switch.

The device possesses a ball valve finished with a connector, to which a hose may be attached. External diameter of the connector - $\varnothing 60$.

The devices with the capacity of 1000 l and 2000 l are equipped with honey level indicator and a temperature regulator – 2 pcs., which allows to heat the tank in its lower part, its upper part or entire device at the same time



HC-01 controller



Stirrer



Engine with a transmission



Fig. 2000 I Tank



Level indicator



Discharge valve

Integrated stand

3. Technical parameters of the tanks

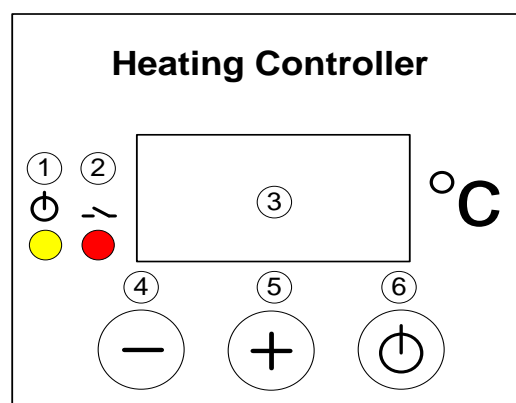
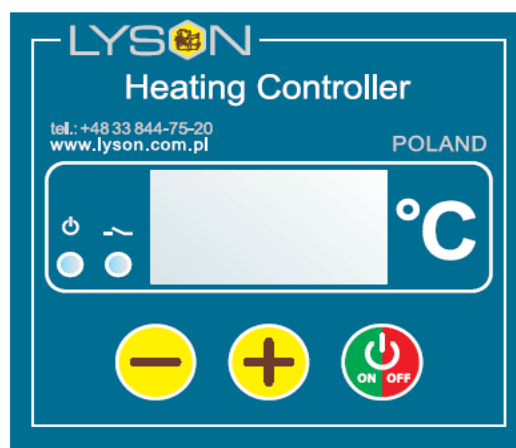
Technical parameters		
mixer 500 L	mixer 1000 L	mixer 2000 L
dimensions - Ø900 (external) x 1900	dimensions - Ø10330 (external) x 2265	dimensions - Ø1430 (external) x 2350
Power supply - 400 V	Power supply - 400 V	
weight – 160 kg	weight – 225 kg	Weight – 390 kg
Engine power - 0,55 kW	Engine power - 1,1 kW	Engine power - 2,2 kW
Power of the heating cable - 1,6 kW	Power of the heating cable - 2 x 1,25 kW	Power of the heating cable - 2 x 1,6 kW
Execution – stainless acid- resistant steel	Execution – stainless acid- resistant steel	Execution – stainless acid- resistant steel
2" ball valve	2" ball valve	2" ball valve
connector Ø60	connector Ø60	Connector Ø60

3.1. Operation principle

- The tank is to be placed in the place intended for the purpose, well levelled.
- Fill the tank with honey.
- Connect to the mains 400V
- Set up the controller to maximum temperature of 55°C, according to the description contained in chapter 3.
- Discharge the stirred honey through a ball valve.
- A hose may be connected to the valve connector.
- Once the device operation has terminated, it must be disconnected from the mains and its cleaning may start, in line with the description contained in the chapter **MAINTENANCE**.

4. Handling the controller

HC-01 temperature regulator has been mounted on the device



4.1. 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.

4.2. 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.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.t.E.) 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. Exist 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.



Fig. 1 HC-01 temperature regulator

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)**

4.3. Controller 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 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

4.4. Controller's technical parameters

CONTROLLER'S TECHNOLOGICAL PARAMETRES (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 parametres	
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	> 3 x 10 ⁴ for 10A 230VAC
Maximum switching frequency AC1	600 cycles/h
Environmental conditions	
Temperature of the regulator in operation:	0°C...55°C
Ambient temperature for stored regulator:	0°C...60°C
Air humidity for the regulator in operation:	Max 65% at 25 °C

5. Maintenance



IMPORTANT!

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

Prior to the first use, the tank shall be cleaned and dried thoroughly. While cleaning, one must not forget to protect electrical elements. To be protected and stored in a dry place. The tanks shall be cleaned with the agents recommended by the Łysoń company catalogue.

Prior to the device activation (tanks with a heating mantle), in case when it has been transferred from a room with lower temperature to a room with a higher temperature, one must wait until the device has reached the ambient temperature. To be stored in dry rooms with the temperature over 0° C.

The device should not be activated when the ambient temperature drops below 5°C.

Prior to each season additional technical inspection must be performed and in case any fault has been detected, service centre 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

The device is encompassed by a 24-month guarantee of the manufacturer.