Instructions Manual

Settling tank with vertical sieve

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This manual covers following devices (codes):

W2081, W2081A, W2082A, W2084

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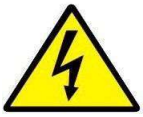
1. General safety instructions

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. Intended use

A four-chamber settling tank/separator for filtering honey. Thanks to the use of five removable strainers with two different mesh diameters, it is possible to filter honey more effectively. The device is adapted for operation with a honey pump. Additionally, it can be equipped with a float switch.



1.2. Electrical safety

(Heating system)

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 is in „0" position before plugging the unit in.
4. Make sure that the nominal voltage of the device and power source are compatible.
5. Carefully insert the plug into the mains socket. Make sure your hands and the floor surface in the room are dry!
9. Do not pull the power cord.
Keep the power cord away from heat sources and sharp edges to ensure its good condition.

1.3. Operation safety

(Heating system)

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.

2. Vertical sieve operation

The device is used to filter the extracted honey. It has 4 chambers separated by vertically mounted sieves. The strainers are removable and therefore easy to keep clean. They are made of perforated metal sheet with different mesh sizes.
The device is equipped with a ball valve ending in a connector to which a pump can be connected by means of a hose. Outside diameter of the connection port ø50.

The set includes a cover

The device is available in a heated or unheated version with a length of 1000 or 1500 mm

Technical specifications – heated version	
length 1000 mm	**length 1500 mm**
- power 440 W	- power 520 W
- stainless steel 0H18N9	- stainless steel 0H18N9
- ball valve 6/4	- ball valve 6/4
- H/W/L -350/510/1100	- H/W/L -350/510/1600
- power supply 230V	- power supply 230V
- weight 37kg	- weight48kg

Technical specifications – unheated version	
length 1000 mm	**length 1500 mm**
- stainless steel 0H18N9	- stainless steel 0H18N9
- ball valve 6/4	- ball valve 6/4
- H/W/L -350/480/1070	- H/W/L -350/480/1570
- weight 22kg	- weight 33kg

2.1. Work principles

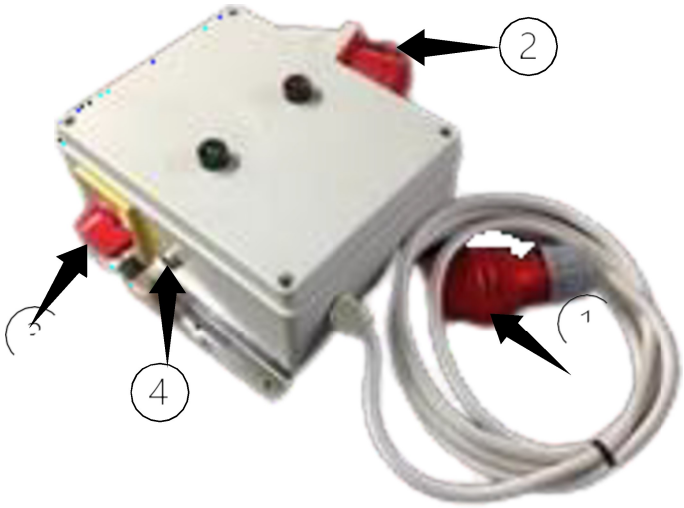
1. Place the sieve on the place intended for it.
2. Place the vertical screens in the following order: from the valve side 2 ø1 mesh screens, then 1 ø3 mesh screen and finally 2 ø3 mesh screens.
3. Connect the device to the 230V network
4. The extracted honey should be poured into the chamber on the opposite side of the valve, as in the picture

5. During honey filtration do not leave the device unattended - if the sieve is clogged, honey will flow out.
6. Set the controller to the maximum temperature of 42ºC.
7. Drain the filtered honey through the ball valve
8. The hose from the pump can be connected to the valve.
9. After completing work with the device, disconnect it from the mains (230V) and proceed to clean the device according to the instructions provided in the point 5 of this instructions manual.

3. Additional features:

- **mechanical floating switch**

- **electronic floating switch**



1.Power cord 400V/230V
2.Power cord socket
3.Main switch 0-1
4. Floating switch socket.

1. Floating switch cable "4" PIN
2. Honey level probes

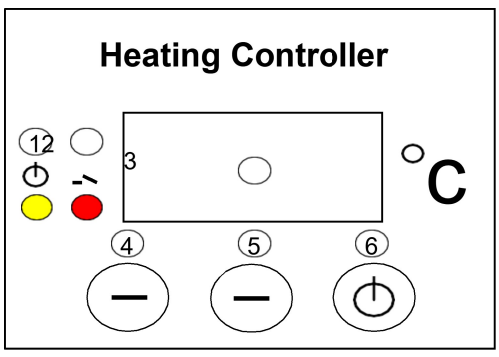
Installation of an electrical float switch

- Place the triangular piece with the probe in the right-hand corner, next to the controller
- Align and mark the holes for drilling
- Drill the holes - ø6.8mm drill bit recommended
- Thread the drilled holes with the M8 tapping tool
- Screw in the screws - recommended M8x16mm A2 allen
- Mount the control that directs the operation of the probe
- We attach the control to the wall of the screen - recommended from the side of the temperature regulator, so as to have easy access to the power supply socket of the pump
- we mark holes for drilling, ø3 drill bit recommended
- we thread the holes with a M4 tapping tool and screw in the M4x16 screws
- connect the sensor cable "1" to socket "4" and the pump to socket "2".

Install the sieve pump, plug the pump into the socket located in the level sensor controller housing. Plug the level sensor controller into the mains power socket. Switch on one of the operating directions on the pump.

4. MHC-01 temperature controller

The unit is fitted with temperature controller MHC-01



4.1. Setting up

1. Ensure that the controller switched off before plugging the power cord in.
2. The main switch on the control panel should be in position "0"
3. When the unit is plugged on Switch (0/1) on the control panel is switched from position "0" to position "1"
4. Set up the controller to suit your specific requirements
5. Longer press and hold the button and then release it to activate the operating time setting mode (indicated by the displayed “Pro.” message on the screen). In this mode, use the "+" and "-" buttons to define the time after which the controller will automatically switch off, and. enter the OFF state. Press the „ON/OFF” button to exit the OFF state.

4.2. Starting work with the controller

1 – state indicator

If the indicator light is on – the temperature regulator is active. If the indicator light is off – the temperature regulator is inactive (the controller works as a thermometer). If the indicator blinking – the temperature regulator is on and the pre-heating process is in progress

2 – heating relay status

If the indicator light is on – the relay is engaged (heating on), if the indicator is not lit – the relay is disengaged (heating off)

3 – display

Operation mode – default mode, automatically selected when the controller is powered on. The display indicates the measured temperature. The indications are given in °C.
Setting mode – selected by pressing the + or – button. The display indicates the set temperature. The value is displayed in °C. The value displayed flashes and after a while returns to the measured temperature display mode.
Run time setting mode (Pro.) - activated by pressing the "ON/OFF" button. The display indicates the operating time, counting from the moment of switching on, after which the thermostat will automatically switch off. The indication is given in hours.
Display brightness setting mode (d.br.) - activated by holding down the "ON/OFF" button. The display, with all segments lit, shows the currently set brightness. Reaching the setting limit is signalled by flashing.
The following modes are available after entering the appropriate code.
Calibration mode (CAL.) code L-1 – activated by holding down the "ON/OFF" button. The display shows the calibrated temperature (temperature measured taking calibration into account). The indication is given in °C.
Pre-heating time setting mode (P.tI.) code L-2 – activated by holding down the "ON/OFF" button. The display indicates the operating time, counting from the moment of switching on, for which the controller performs the preheating, maintaining the preheating temperature programmed by the manufacturer. The message "OFF" indicates that the preheating function is deactivated. The indication is given in minutes. If preheating is activated, the controller will display "HC2" at start-up.
Preheat temperature setting mode (P.tE.) code L-3 – activated by holding down the "ON/OFF". The display shows the preheating set temperature value. P... indicated

in °C.

Preset temperature limit setting mode (L.t.h.) code L-4 – activated by holding down the "ON/OFF" button. The display shows the maximum value of the preset temperature that can be set. The L... indication is given in °C.

4 – button "-" decrease value

Operating mode – Pressing the button will decrease the set temperature value. During pre-heating the possibility of changing the set temperature is blocked.

Run time setting mode – pressing the button will decrease the time after which the thermostat automatically switches 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 indicated temperature, and thus calibrating the measurement.

Pre-heating time setting mode – pressing the button will decrease the time after which the thermostat automatically switches from the preheating phase to the heating phase.

Preheat temperature setting mode – pressing the button will decrease the value of the desired temperature to be maintained during preheating.

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

5 - "+" increase value

Operating mode – Pressing the button will increase the set temperature value. During pre-heating the possibility of changing the set temperature is blocked.

Run time setting mode – pressing the button will increase the time after which the thermostat will automatically switch 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 indicated temperature and thus calibrating the measurement.

Pre-heating time setting mode – pressing the button will increase the time after which the thermostat automatically switches from the preheating phase to the heating phase.

Preheat temperature setting mode – pressing the button will increase the preset temperature to be maintained during preheating.

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

6 - "ON/OFF" button

Briefly pressing the button alternately turns the regulator on (ON) and off (OFF). In the OFF state, the regulator acts as a thermometer. In the ON state, the controller will turn the heater control output on and off to maintain the temperature set by the user.

Longer pressing and holding the button will activate the run time setting mode, indicated by the displayed message (Pro.). In this mode, using the "+" and "-" buttons, the user can define the time after which the controller will automatically switch off, i.e. go into the OFF state. Exiting this mode and confirming the settings is done by short pressing the "ON/OFF" button.

Longer pressing and holding the button starts the display brightness setting mode – indicated by the message (d.br.). In this mode, using the "+" and "-" buttons, the user can set the brightness of the display segments. Exiting this mode and confirming the settings is done by short pressing the "ON/OFF" button.

Longer pressing and holding the button activates the calibration mode which is indicated by a displayed message (CAL.). In this mode, using the "+" and "- " buttons, the user can adjust the temperature readings to the actual temperature value. Exiting this mode and confirming the calibration settings is done by short pressing the "ON/OFF" button.

Note – the controllers supplied are already calibrated.

Longer pressing and holding the button will activate the mode of preheating time setting indicated by the displayed message (P.tI.). In this mode, using the "+" and "- " buttons, the user can define the time after which the controller will automatically switch from the preheating phase to the actual heating phase. Switching off the preheating is indicated with "OFF" message. To leave this mode and confirm the settings press the "ON/OFF" button.

Longer pressing and holding the button will start the mode of setting the preheating temperature indicated by the displayed message (P.tE.). In this mode, using the "+" and "- " buttons, the user can define the desired temperature to be maintained during pre-heating. To exit this mode and confirm the settings press the "ON/OFF" button.

Longer pressing and holding the button will activate the mode of setting the preset temperature limit, signalled by the displayed message (L.t.h.). In this mode, using the "+" and "- " buttons, the user can set the upper limit of the desired temperature setting. To exit this mode and confirm the settings press the "ON/OFF" button.

Note – all settings and operating status (on or off) of the controller are stored in the controller's memory.

Access codes

During start-up of the controller (displayed controller's name, software version, settings values) press and hold the "-"and "+" buttons. After displaying "- - - " buttons may be released and the appropriate code may be entered. The code is confirmed with the "ON/OFF" button.

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

Run time setting mode (code L-0)
Display brightness setting mode (code L-0)
Calibration mode (code L-1)
Pre-heating time setting mode (code L-2)
Preheat temperature setting mode (code L-3)
Preset temperature limit setting mode (code L-4)

4.3. Error codes

The HC1 controller features advanced error detection algorithms. The detection of any error triggers an emergency stop action and brings up the error report screen. The error report screen is displayed continuously. It is therefore necessary to turn off the power, remove the source of the error and turn the controller back on.

Error Code	Description
(E-0) CPU STATUS	Internal controller fault
(E-3) T < Tmin	T1 measured temperature too low
(E-4) T > Tmax	T1 measured temperature too high.
(E-5) Button -	pressed/faulty „-„ button
(E-6) Button+	pressed/faulty „+„ button
(E-7) Button ON/OFF	pressed/faulty „ON/OFF” button

The error report screen is displayed continuously. It is therefore necessary to turn off the power, remove the source of the error and turn the controller back on.

4.4. Controller specifications

Controller specifications (FOR FW: 0.1 version)	
Temperature measurement range	-50°C ... +250°C
Temperature read-out resolution:	0,1°C
Measurement accuracy:	± 1,5 °C
Minimum set temperature value:	30°C
Maximum set temperature value:	Range: 45°C ... 95°C
Run time setting range:	1 … 96 h
Preheating temperature range:	30°C ... 40°C
Preheating time range:	0 … 60 minutes
Type of adjustment:	Two state

Electrical parameters

PCB power supply : PSU voltage	12VDC ±10%, Min. 200mA 100…240VAC 50/60Hz
Temperature measurement interface	PT1000
Type of interface:	relay, connector NO
Max interface load:	AC1 - 9A 230V
Max heater unit power:	2000W 230VAC

Environmental parameters

Controller’s work temperature:	0°C…55°C
Controller’s storage temperature:	0°C…60°C
Humidity parameters (work):	Max 65% at 25 °C

5. Cleaning and maintenance

IMPORTANT!!!

Unplug the device before commencing any maintenance or cleaning procedures!

Before first use and after finishing work the equipment must be thoroughly cleaned and dried.
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).
No parts of the device require chemical conservation.
An additional technical check should be carried out before the start of the pollen harvesting season, and if any defects are found, please contact the manufacturer.
Store the device in a dry and frost-free room.
Do not use the device when the ambient temperature is below 5ºC.

6. 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.

7. 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