

Instructions Manual

Spinning wax melter



LYSON

Przedsiębiorstwo Pszczelarskie Łyson

Spółka z o.o.

34-124 Klecza Górna, st.Pszczela 2, Poland

www.lyson.eu, e-mail; lyson@lyson.com.pl

Tel. +48 33/875-99-40, +48 33/870-64-02

This manual covers following devices (codes):

W4805

Instrukcja obsługi

1. General safety rules
 - 1.1. Intended use
 - 1.2. Electrical safety
 - 1.3. Operation safety
2. Instructions of use
 - 2.1. Preparation for use
 - 2.2. Operation instructions
 - 2.3. Controller
3. Product description
 - 3.1. Design
 - 3.2. Technical specifications
 - 3.3. Basket demounting instructions
4. Storage
5. Maintenance and Cleaning
6. Waste disposal and environmental protection
7. Warranty

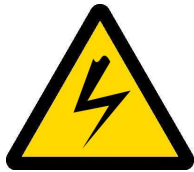


1. General safety instructions

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

1. The melter is designed to recover wax from hive combs.
2. Clean the device before the first use and after finishing work according to the instructions in the "Cleaning and Maintenance" section. Use only cleaning agents approved for food industry.



1.2. 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 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 device 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.



1.3. 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. This device is not a toy, and shouldn't be used as one. Children should not to play with it.

2. In the event of damage to the device, to avoid any health and safety risks, repairs should be carried out only by qualified personnel.
3. Never carry out any maintenance or repairs during operation or if the device is plugged in!
4. All covers must be firmly attached to the device during operation
5. 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.
6. During the wax melting process, watch out for hot parts of the melter, steam and hot debris left over from the melting process.



Never carry out any repairs during operation



Do not remove covers during operation



**UWAGA!
GORĄCA
POWIERZCHNIA**

WARNING!!!

The melter heats up to 80°C (175°F)
(Drum, cover, water tank)

2. Instructions of use



Warning!!!

Before connecting the melter to the power supply, check the water level in the melter.

2.1. Preparation for use

1. Set the device up in a designated, clean, dry and well lit room.
2. Fix the device to the ground (recommended) to avoid its displacement during the melting process..

2.2. Operation instructions

1. The melter is designed to recover wax from hive combs.
2. Clean the device before the first use and after finishing work according to the instructions in the "**Cleaning and Maintenance**" section.
3. Before start:
 - Check water level in expansion tank "4" fig.1
 - water should cover the float switch (if the level falls below the float switch the heater is automatically switched off)
 - place a container under the open drain valve for the melted wax.
 - put approx. 15 kg of wax from the frames in the basket of the melter, make sure the wax is evenly distributed in the melter's basket and close the cover.
 - insert the plug into the socket and switch the control switch on the controller casing from position "0" to "1", but do not start spinning



- wait until steam starts to form in the drum of the melter and wax starts to drip from the drain valve
- using the "+" button on the control unit start the melter by slowly increasing the rotation speed of the basket, back of the speed if strong vibrations occur.
- wait until no more wax comes out of the melter's drain valve
- stop the melter using the "STOP" button
- turn off the device to clean the basket
- if the melting basket is very dirty, remove it, see point 3.3.
- after the basket has been cleaned, switch the controller back on
- put another batch of wax, in the basket and after heating the melter up again, start the spinning



Warning!!! When melting combs with frames, place them evenly in the basket to prevent vibration of the melter

2.3. Controller



The SDD-2DP controller allows for individual selection of characteristics – adapting to power supply conditions and to parameters of the connected motor. It allows adjusting of three parameters responsible for minimum motor speed limit (parameter L), maximum motor speed limit (parameter H) and acceleration time (parameter A).

Work characteristics are configured as follows:

Configuration „L0” - low speed for speed index 1

Configuration „L9” - medium speed for speed index 1

Configuration „LJ” - high speed for speed index 1

Configuration „H0” - low speed for speed index 10

Configuration „H9” - medium speed for speed index 10

Configuration „HJ” - high speed for speed index 10

Configuration „A0” – slow acceleration (long acceleration time)

Configuration „A9” – medium acceleration (medium acceleration time)

Configuration „AJ” – fast acceleration (short acceleration time)

Additionally, in further steps another parameters can be adjusted:

t – defining the basket acceleration time range,
F - (frequency of pulsing the power module)
enabling to optimise the system operation.

Configuration „t0” – long acceleration time range (90s – 900s)

Configuration „t1” - short acceleration time range (10s – 100s)

Configuration „F0” – low pulsing frequency

The last step of the controller configuration is to define the parameter value: P – enabling power saving mode (Auto OFF).

Configuration „P0” – power saving mode (Auto OFF) disabled

Configuration „P1” - power saving mode (Auto OFF) enabled

Change the current controller configuration in the configuration menu. The sequence of changing the configuration shown below:

Press the **STOP** button when the device starts up (digit "0" flashes on the display) and then release the button when "Pr" message appears.

Use the **plus** and **minus** keys to set the minimum speed limit ("L0" ... "LJ"). Confirm the setting by pressing the **STOP** button.

Set the maximum speed limit ("H0" ... "HJ") using the **plus** and **minus** keys. Confirm the setting by pressing the **STOP** button.

Set the acceleration speed ("A0" ... "AJ") using the **plus** and **minus** buttons. Confirm the setting by pressing the **STOP** button.

Use the **plus** and **minus** keys to set the range of acceleration ("t0" or "t1"). Confirm the setting by pressing the **STOP** button.

Use the **plus** and **minus** keys to set the pulsing frequency ("F0" ... "F2")
Use the **plus** and **minus** keys to switch the Auto OFF ("P0" or "P1") on/off

Confirm the setting with the **STOP** button. This configuration is now stored in the controller's memory.

Test the settings and, if necessary, adjust configuration sequence again.

Controllers operation

After switching on the power supply, the controller performs a self-diagnostic sequence indicated by flashing "0" digit.

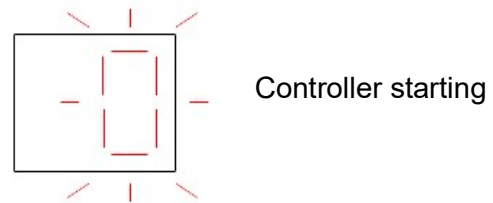


Fig.1 Start/self-diagnostic sequence

The detection of an error during the self-diagnostic procedure is indicated as shown below. The "d2" message means that 2 errors have been detected, "E4" is the code of the last error recorded. The list of errors follows immediately after the displaying of the device type and the operation of the controller is blocked. Further operation is not possible without removing the cause of the error(s).

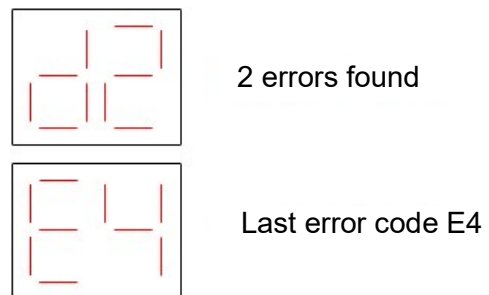
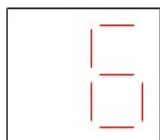


Fig.2 Error codes display

- E1 - (Error) - controller's internal fault
- E2 - (Error) - controller's power supply circuit fault
- E3 - (Error) - short circuit / button (-) stuck
- E4 - (Error) - short-circuit / button (+) stuck
- E5 - (Error) - short-circuit / button (STOP) stuck
- E6 - (Warning) - controller's configuration settings lost

After the self-diagnostic sequence, the controller enters normal operation mode – waiting for start-up. The display shows "0" indicating current speed of the basket "0". Start the basket rotation by pressing the **plus** button.

The first pressing of the **plus** key (moving from index 0 to index 1) will start the "start-up" procedure. The controller starts with an adequately increased power, and after some time it gradually decreases the power to the level appropriate for the first setting step. The controller enters its normal mode of operation, indicating the currently selected speed index as below.

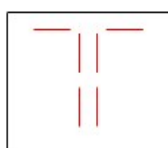


Spinning – speed 6

Fig.3 Speed setting 6

Subsequent pressing / holding the **plus** or **minus** button changes the rotation speed. Press the **minus** button (until the 0 value is shown) or press the **STOP** button to stop the basket.

The detection of opening the cover or engaging the emergency stop button stops the rotation of the basket, the display will show a flashing symbol as below.



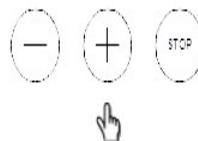
Cover open or
Emergency button
engaged

Fig.4 Cover open or EMG STOP button pressed

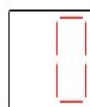
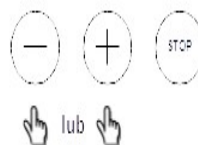
SDD-2DP controller is equipped with an Auto OFF function – switching off the motor rotation after a time of about 15 minutes counting from the last use of a button



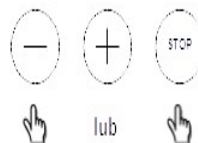
Press “plus” button to start basket rotation



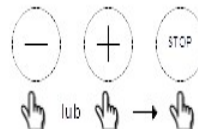
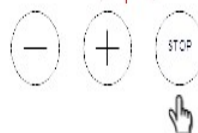
Use plus or minus to adjust speed. Range of speeds spreads from 0 to 10. Value 10 indicates top speed



To stop the basket press “STOP” button or decrease the speed to “0” using “minus” button



Controller configuration – while digit “0” flashing on the display press the “STOP” button. Release the button when the “Pr” message appears. Adjust values using “plus” and “minus” buttons. Press “STOP” to confirm.



3. Product description

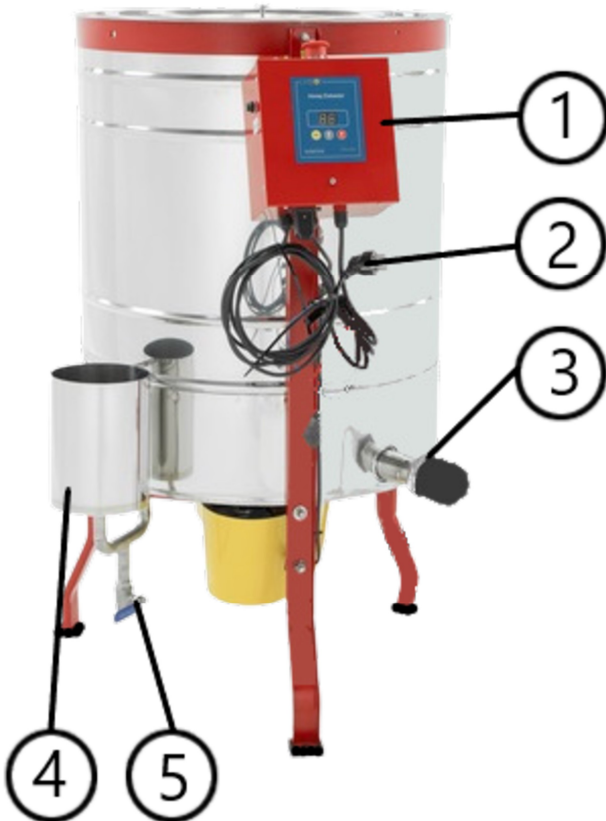
The melter is a device designed to recover wax from fragmented hive combs (recommended) or whole frames put in a perforated basket. The drum, at the bottom of which there is a heater element immersed in water, generates steam and heats up the device to the appropriate temperature enabling effective wax extraction. The melter is equipped with an external tank with a low water level protection which prevents the heater from malfunction. After reaching the right temperature the melter allows for quick melting procedure of about 20 minutes.

3.1. Design

Elements:

1. controller
2. power cord
3. heating unit
4. water tank
5. drain valve
6. basket removing handles
7. perforated basket
8. basket fixing nut

Zdj.1



Zdj.2



3.2. Technical specifications

Materials:

drum, perforated basket with mesh Ø3, cover – OH18N9 – acid resistant stainless steel
legs, rim, control housing – powder coated steel

Controller: SDD-2DP

Power supply: 230V/50Hz

Water capacity: 35L.

Heater power: 2800W

Motor power: 250W

Drain valve: flap 6/4"

Height: 1110mm.

Basket height/diameter: 480/505mm.

Ground to valve height: 370mm.

Dimensions: D900xW900xH1110mm.

Net weight: 41kg



3.3. Basket demounting

- switch off the device control unit with the main switch from position "1" to "0"
- remove the cover of the melter and wait until the water stops evaporating and the basket cools down
- fixing knob of the basket "8" fig.2 has a nut M20LH, unscrew it clockwise
- after unscrewing the knob, remove the basket using the handles "6" fig.2
- once the basket has been cleaned, assemble it in the reverse order
- check the tightness of the basket
- start the next melting process

4. 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 5°C.

An additional technical check should be carried out periodically, and if any defects are found, please contact the manufacturer.

5. Cleaning and maintenance



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.

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

LYSON