# CDD-2



# OPTIMA HONEY EXTRACTOR USER'S MANUAL Fi 500 i 600

Read the user manual before use and follow the instructions below. Producer cannot be held responsible for any damages caused by improper use.

#### Rules of use

- **1.** Honey extractor is designed to extract honey from honey frames
- **2.** Before using, honey extractor should be washed carefully with hot water and small amount of detergents (allowed for use in food industry) or by use of a pressure washer. Remember to protect electronic parts and bearings from water!!!



## Electrical safety

- **1.** Electric installation needs to be equipped with residual current device and is designed to trip on a leakage current of 30 mA. Overcurrent protection needs to be checked periodically.
- **2.** If the power cord is damaged and needs to be exchanged it has to be done through our distribution point or by authorised point of repair in order to avoid danger. The honey extractor cannot be used if the power cord is damaged.
- **3.** Before turning the device on, make sure that the programmer is switched off. Switch should be set to '0'.
- **4.** Make sure that the power supply is in line with the honey extractor power supply
- **5.** Take extra care whilst plugging a power cord Hands have to be dry. Place on a dry surface
- 6. The EMERGENCY STOP button should be switched off when starting. (the button needs to pop out when switched off) Pressing the EMERGENCY button results in the immediate stop of centrifugation.
- **7.** Keep the honey extractor lid closed during centrifugation. Opening the lid whilst spinning is strictly forbidden.
- **8.** Honey extractor must not be moved during the spinning process.
- **9.** Protect the motor and steering against moisture (also during storage).
- **10.** Do not pull power cord, keep the power cord away from heat sources, sharp edges and keep it in good condition.



#### HEALTH & SAFETY

1. This device is not designed to be used by persons (including children) with limited physical, sensual or psychological abilities or by persons who do not have experience or

knowledge of the device unless it is done under supervision and according to the user manual passed by persons responsible for their safety. Keep away from children.

- **2.** In case of device damage the repair needs to be carried out by the authorised point in order to avoid danger.
- **3.** It is not allowed to carry out any maintenance works when the honey extractor is in use.
- **4.** All casings need to be firmly attached to the device during work.
- **5.** In case of any potential danger press the STOP button immediately. The honey extractor can be restarted once the danger has been eliminated.
- **6.** For indoor use only! The device is not designed to be used outdoors.
- 7. Fan belt should remain loose. It must not be strained.
- **8.** The device should not be switched on and be stored in the temperature below  $0^{\circ}$  C.

Honey extractor should not be switched on when the temperature is below 5° C. Before switching the honey extractor on, in case when it was moved from the place with lower temperature to the place with higher temperature, wait until the temperature has balanced.



Repairing the device whilst in operation is STRICTLY FORBIDDEN



Detaching the covers during use FORBIDDEN!

#### **Work Place**

Working area should be kept clean and tidy The proper lighting should be provided.

#### Storage

Once honey extracting has finished, wash the honey extractor and dry it thoroughly.

Before every season the technical check-up needs to be performed. If any fault found, contact the appropriate provider.

#### Honey Extractor Maintenance



#### **IMPORTANT!**

Unplug the extractor from the power source prior to commencing any maintanance work.

After the honey extracting has finished, honey extractor should be washed carefully with hot water and small amount of detergents (allowed for use in food industry) or by use of a pressure washer. During the duration of washing pay special care not to wet the motor and the controller (they may be covered with a water-proof cloth during washing). Whilst washing, make sure not to wet the bearings which are located under the drum. To avoid wetting the bearings, cover the slot inside the drum where the axis of the basket is located. Once completed, rinse the honey extractor with clean water and dry it thoroughly.

#### **UTILIZATION:**



The device needs to be utilized in the point designed for that purpose. The consumer has the right to return the used equipment to the network of electrical distributors, at least free of charge and directly, if the device returned is of proper type and performs the same function as the newly purchased equipment.

# HONEY EXTRACTOR USER'S MANUAL

- General guidelines
- **1.** Place the honey extractor in the designated place.
- **2.** Fix the honey extractor to the surface in order to avoid unnecessary movement.
  - · Terms of use:
- **1.** Honey extractor is designed to extract honey from honey frames.
- 2. Before using, honey extractor should be washed carefully with hot water and small amount of detergents (allowed for use in food industry) or by use of a pressure washer. (see Maintenace section)
- **3.** Frames arrangement:

Place the honey frames (prepared beforehand) in the basket of the honey extractor paying special attention to their correct arrangement. Honey extractor should be selected accordingly to the frame type:

- In cassette honey extractor pay special attention to correct frames arrangement which should fit into the cassette.
- In radial honey extractor upper beams of frames should rest on the upper and lower basket rods;
   Failing that ( too short or too long beams) may result in extractor or/and frame damage.



Fig. 1 Correct frame arrangement in the radial basket

basket



radial honey extractors

cassette honey extractors



Fig. 2 Correct frames arrangement in the cassette basket

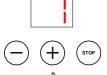
Improper frame arrangement may cause damages not covered by warranty!

- 4. Before commencing work:
  - make sure that frames are correctly arranged in the basket of the honey extractor to avoid damages (see point 5 – honey extractor user manual)
  - check if the emergency stop button is not pressed
  - insert the plug into the socket, followed by turning the knob on the control panel from position "0" to position "1". Then proceed to honey extractor powering according to the honey extractor controller user manual – see Automatic Controller section.
- **5.** First phase of the spinning should be performed slowly, in order to avoid possible breaking of honeycombs. Special attention should be paid to so called "young honey frames".

- **6.** Spinning basket should not be blocked by the honey accumulated in the drum. If that happens, stop the honey extractor in order to avoid its damage. Once honey has dripped down to a container, the spinning can be restarted.
- 7. Place the honey containers under the drain valves.
- **8.** During the spinning the drain valves should be left open so that the extracted honey can flow freely.



Warning!!! Frames can only be rearranged when the basket has fully stopped!



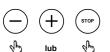
**Spinning start –** press "+" button



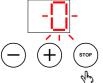
Speed change – to change spinning speed press "+" or "-" until required level is reached. Adjustment range is between 0 (stopped) and 10 (highest speed)



√μ Inp √μ



**Stopping** - press STOP button or press "-" button until "0" is displayed.



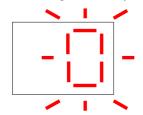


Controller configuration - press STOP button during the controller's start-up procedure. Keep the button pressed down until "Pr" message is displayed. To change parameter's values use "+" and "-" buttons and pres STOP to confirm

#### **Controller Operation**

After powering on the controller performs a sequence of self-diagnosis signalled by flickering of the "0" digit.

Fig.1 Start-up sequence - autodiagnosis



**START-UP SEQUENCE** 

If any fault is found, an apropriate error code will be displayed, and the controller will be blocked until the fault is removed

Fig. 2 Autodiagnosis – error code display

E1 - (Error) - Controller's microprocessor internal fault

E2 - (Error) – Power circuit fault

E3 - (Error) - Short circuit / pressing the (–) button

E4 - (Error) - Short circuit/ pressing the (+) button

E5 - (Error) - zwarcie na linii / wciśnięcie przycisku (STOP)

E6 - (Warning) - Controller's default settings loaded



#### **2 FAULTS FOUND**



### **LAST ERROR'S CODE: E4**

After completion of self-diagnosis sequence, the controller



SPINNING - INDEX 6

goes into normal operation mode, waiting to be started. The display shows "0" digit. In order to start the honey extractor, make sure that safety switch "EMERGENCY STOP" (large, red button located at the top of the controller cover) is not pressed. Then press the "0/1" button and set it to "1". Start the extractor by pressing "PLUS" button .

The first pressing of the "PLUS" button will launch the starting procedure. The controller will start with more power, and gradually reduce it over time to the level set in the first setting's step.

Fig.3 Spining - speed setting

Press + or – buttons to adjust speed to required level. To stop press the – button until display shows "0"

CDD-2 controller is fitted with an Auto Stop function which stops the extractor after 15 minutes of user's inactivity (since any of the buttons has been used)

There are 3 power presets available (P0, P1, P2). Each preset consists of individual speed, acceleration and frequency characteristics. Each preset can be optimized by the user to reflect changing environment or power souce conditions, but factory settings suggest selecting presets according to the table below.

Power preset	recomendation	
P0	Low speed – recomended for above avarage voltage	
P1	Nominal speed – Nominal voltage	
P2	High spped – recomended for below avarage voltage (	

#### Power preset selection

Change of the current configuration of the controller is carried out by change of parameters.

- Press STOP whilst booting the device (there is a blinking "0" digit on the LCD, release the button after thr "Pr" messeage has appeared.
- 2. Set required power setting by using + or button ("P0" ... "P2").
- 3. Confirm your settings by pressing STOP button
- 4. Press both + and buttons during controllers start-up until "Pr" message is displayed.
- 5. Use + and buttons to set the bottom speed limit ("L0" ... "LJ").
- Confirm by pressing STOP.
- 7. Use + and buttons to set the top speed limit ("H0" ... "HJ")
- 8. Confirm by pressing STOP.
- 9. Use + and buttons to set the acceleration rate ("A0" ... "AH").
- 10. Confirm by pressing **STOP**.
- 11. Use + and buttons to set the spin frequency("F0" ... "F2")
- 12. Confirm by pressing **STOP**. At this point your setting will be stored in the controllers memory

Test your settings and correct your settings if necessary.

\*(parameters A,B, C, D, E, F, G, H, I, J mean the subsequent numeration 0, 11, 12, 13, 14, 15, 16, 17, 18,

## Controller's work parameters configuration

CDD-X controller is used in diagonal and radial honey extractors and has the ability to control the characteristics of adjustments— adjusting to the conditions of power supply and motor parameters. The characteristic's setup is based on setting 3 parameters: 1st responsible for lower limit of basket's rotating velocity (parameter L), upper limit of basket's rotating velocity(parameter H) and accelleration time ( parameter A). Only currently selected profile's settings can be changed.

Configuration "L0" - low spinning velocity for speed index 1

Configuration "L9" medium spinning velocity for speed index 1

Configuration "LJ" - high spinning velocity for speed index 1

Configuration "H0" - low spinning velocity for speed index 10

Configuration "H9" - medium spinning velocity for speed index 10

Configuration "HJ" - high spinning velocity for speed index 10

Configuration "A0" - low engine's dynamics (long acceleration time

Configuration "A9" - medium engine's dynamics ( medium acceleration time)

Configuration "AH" - high engine's dynamics ( short acceleration time)

Additionaly, in the last step of configuration, the "F" parameter is defined – responsible for the type of regulation which also means defining the basket acceleration time.

Configuration "F0" - low frequency

Configuration "F1" - medium frequency

Configuration "F2" - high frequency

#### **Technical Parameters**

CDD-2 controller consists of Processing unit and Power supply-executive unit both connected by special ribbon cable.

PROCESSING UNIT				
Speed steps:	10			
Regulation type:	PWM			
Display:	LED, 7-segments			
Bottom speed limit steps(L):	20			
High speed limit steps(H):	20			
Acceleration rate steps (A):	18			
Power profiles:	3			
Min acceleration time:	15 sekund *			
L0 / HJ / AH				
Max acceleration time:	100 sekund *			
L0 / HJ / A0				
Power supply-executive unit CDD-2				
Voltage (alternating current):	13VAC (± 10%)			
Recomended invertor power:	100VA			
Voltage (direct current):	11,5 – 14,5VDC			
Max. continuous current:	6A			
Max. peak current:	10A (cycle 5 / 60 seconds)			

Environmental conditions				
Work environment ambient temperature:	0°C45°C			
Storage temperature:	0°C50°C			
Work environment humidity:	Max 65% for 25°C			
Storage humidity:	Lowwest possible			

 $<sup>\</sup>ensuremath{^*}$  - actual acceleration rate depends on both power supply and level of basket's load.

Factory presets					
Profil	P0	P1	P2		
Parameter <b>L</b>	<b>L</b> B	<b>L</b> C	<b>L</b> D		
Parameter <b>H</b>	HF	<b>H</b> G	HH		
Parameter <b>A</b>	<b>A</b> G	<b>A</b> G	<b>A</b> G		
Parameter <b>F</b>	<b>F</b> 2	<b>F</b> 2	<b>F</b> 2		