



USER MANUAL

Honey extractor HE-48 (radial) user manual



These operating instructions are in English, the original is in Estonian





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USER MANUAL

Manufacturer of HE-48 honey extractor: Asteni Mesindus OÜ

Manufacturer 's address: Allikunurga, Türi-Alliku, Türi vald, 72232 Järvamaa

Name of product: Honey extractor HE-48 radial / 230V

Phone no.: 5251236

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1 Safety instructions and warnings

Read the instruction manual carefully before using honey extractor HE-48.

It contains important information on the use, safety, installation, transport, cleaning and maintenance of the honey extractor HE-48.

This protects the device and ensures your safety.

Keep this manual for future reference.

Electrical safety is only ensured if honey extractor HE-48 is connected to a grounded mains supply in accordance with the instructions and fitted with a fault current circuit breaker.

The mains to which the honey extractor HE-48 is connected must be installed by competent persons and comply with all legal requirements and regulations.

The manufacturer and the distributor shall not be liable for any damage caused by incorrect connection and/or installation of the appliance or by the use of incorrect fuses.

The HE-48 honey extractor meets the specified safety requirements.

Improper use may damage the HE-48 honey extractor and endanger the user.

In the event of a fault or malfunction, stop operation, disconnect the appliance from the mains and only then determine the cause of the fault.

In the event of a serious product defect, please contact the manufacturer.

It is forbidden to use the device without reading the instruction manual first.

Only persons authorised by Asten Honey Production & Technology may carry out repairs and maintenance on the equipment.





1.1 Technical safety

Before installation, make sure there is no visible damage to the HE-48 honey extractor.

Do not install and put into service the damaged HE-48 honey extractor.

Do not install in a room where there is a risk of freezing.

Temperature fluctuations can have a negative impact on electronics.

Possible accessories and equipment may only be used with the machine if approved in writing by the manufacturer.

If non-authorised parts are fitted to and/or on the machine, the warranty will be invalidated.

Use only the spare parts provided or recommended by the manufacturer to avoid damage to the HE-48 honey extractor and the associated risks.

Welding work on the HE-48 honey extractor is only permitted after disconnection of the mains supply. The controller must be disconnected from the HE-48 honey extractor.

With remote control.

The product may start to rotate unstably due to the different composition of honey in the frames. To avoid this, stop the machine and reposition the frames to re-balance the machine.

It is permissible to fix the product to the floor using appropriate fixings, but a clearance of ~10mm must be left between the legs of the honey extractor and the fixings to allow room for movement.

HE-48 honey extractor is equipped with an automatic lid locking system – if the lid is off, the device will not work. It is not possible to open the lid when the lid is closed and the machine is running.

It is strictly forbidden to tamper with or otherwise modify the locking system of the lid!

Only insert frames intended for this purpose into the honey extractor, insertion of other objects is strictly prohibited!





1.2 Notes

Asteni Mesindus OÜ has the right to modify the constructions and the firmware of HE-48 honey extractor.

This manual is the translated version of the original manual for HE-48 honey extractor.

2 Introduction

Thank you for purchasing HE-48 honey extractor.

To make the best use of the honey extractor, please first read the user manual carefully. Keep this manual for future reference.

Be sure to read the instruction manual before using the HE-48 honey extractor, and only people who are familiar with the instructions and are aware of the potential hazards should use the equipment!

HE-48 honey extractor is a fully automatic adjustable speed radial honey extractor with 4 sectors for professional use.

HE-48 honey extractor can accommodate Langstroth 48 and Farrer 56 frames. Estonian frames are also suitable. The device is powered by a reduction gear motor under the base of the extractor - power 230V, motor 0.37kw.

All parts are made of stainless steel, lids are made of transparent plastic.

HE-48 honey extractor is equipped with 3 programs that can be selected from the control panel, in addition there is the possibility of manually adjusting the rotation.

The device is equipped with an electronic lid locking system.





The instructions for use state:

- Brief description of the device and its components
- Instructions for starting work with the equipment
- Safety precautions

Dimensions of the device:

- Extractor shell diameter 950mm / total width 1020mm
- Extractor shell height 750mm / total height 1030mm
- Height of the ball valve from the floor is 250mm

Frames suitable for the device:

- Estonian frame: 448x270x25 – 25 pc.
- Langstroth frame: 482x232x35 – 48 pc.
- Farrer frame: 482x159x35 – 56 pc.

2.1 Concept and purpose of the manual

HE48 honey extractor is made for the beekeeper to extract honey from frames. The product is not intended for any other use. The HE48 honey extractor is equipped with an ESM-3711-HN thermal controller, which can be controlled from the panel at the foot of the HE48 frame.

The aim of the user manual is to make the user of the product aware of the functionalities and capabilities of the HE48 honey extractor.

The product comes with: HE48 honey extractor, user and safety manual, ESM-3711-HN manual in English.

Additionally: Fully automatic remote control and bottom heating





3 First deployment and operational process

HE48 honey extractor must be properly installed and connected before use. The HE48 honey extractor must be positioned in such a way that there is free space around the unit for working. The workplace in which HE48 honey extractor is installed must comply with the applicable safety rules and requirements.

It is also advisable to wash the inside of the product with warm water or, if necessary, with detergents authorised by the food industry.

3.1 Installation of HE48 honey extractor in the workspace

It is recommended that HE48 honey extractor is fixed to the floor with concrete anchors and M6 bolts from 6 points through the base plates on the legs of the extractor frame. The bolts should not be tightened too tight. There must be room for slight movement.



Mounting holes in the legs M8 hole





If it is not possible to fix the legs of the extractor to the floor (risk of damaging the floor), a rubber mat can be used under the legs of the extractor to keep it more stable on the floor.

Another way to increase the stability of the honey extractor is to keep the honey level in the honey extractor as high as possible, which gives the honey extractor weight and stability.

If, however, the frames with uneven weights are incorrectly positioned on the extractor, the extractor will inevitably have to be stopped and the **frames repositioned so that the weight of the frames is evenly distributed on the extractor!**

When attaching the honey extractor to the floor, be sure not to tighten the mounting bolts rigidly all the way to the floor, leave the mounting bolts untightened by approx. 5-10mm. Bolts that are not fully tightened give faster information when the weight of the frames is unbalanced in the honey extractor; in the case of a honey extractor rigidly attached to the floor there is a serious risk that, if the weight of the frames is unbalanced, the centrifugal force could crush the shaft, the chassis or any other part of the extractor.





3.2 Installation of the guide plate of HE48 honey extractor

After placing the HE-48 honey extractor in the workspace, fix the guide plate in the desired position. There is a metal plate, or carrier, on the back of the plate to hold the plate in place. Mark the places of the screws in the desired position from the holes in the plate carrier. Place the screws in the desired position and hang the HE-48 honey extractor plate in the desired position.

The length of the grey plug (PIN10) coming out of the plate should be observed.

The cord must not remain too tight.

The cord should not interfere with movement in the work area or create a hazard.



Guide plate carrier for wall mounting





3.3 Connecting the HE48 honey extractor guide plate and the appliance plugs

After installing the guide plate in the desired location.

Interconnect the grey plugs (PIN10)

The opposite side of the plug is at the lower end of the HE-48 honey extractor right frame leg. The opposite side of the guide plate comes out of the plate.

After connecting the plugs, the locks on the plug must be securely locked.



Connection position of the plug



Connected plug





Connected and locked plug

3.4 Starting the guide plate and heating of the base

After installing the plate and connecting the plugs, the HE48 honey extractor can be started.

Plug in the power supply to start working (230V)*.

Turn the **"TOIDE"** switch on the control panel to the **"I"** position to start the HE48 honey extractor control panel, and to the **"O"** position to turn off the control panel (see picture "example of a control panel")

To switch on the main heating of the appliance, turn the **"KÜTE"** button on the right side of the control panel to the **"I"** position. To switch off, switch to the **"O"** position.

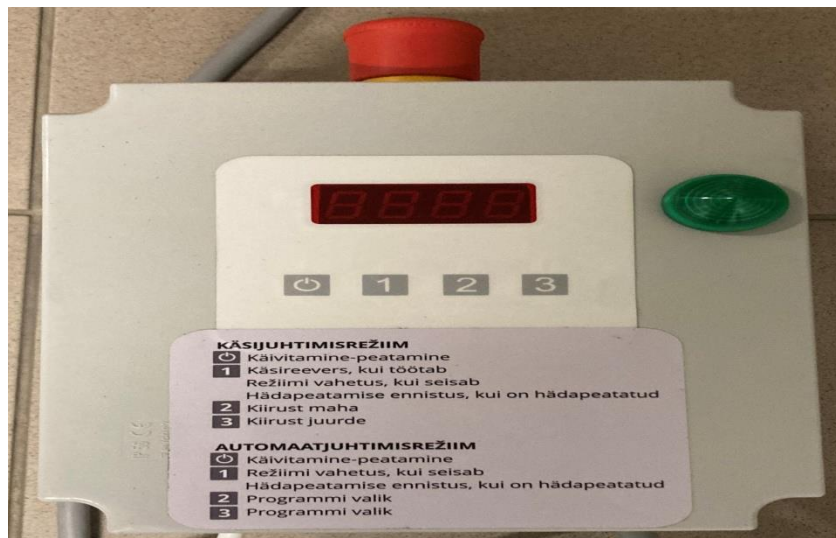


Example of a control panel



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When the base heater is switched on, the **GREEN** indicator light on the top of the plate, in the right-hand corner, lights up. This indicates that the base heating is switched on.



Green indicator light for base heating ON THE RIGHT

To control the base heating temperature, use the ESM-3711 Temperature Controller located at the lower end of the extractor foot on the left side of the frame. To use the controller, see the chapter "**Operating instructions for the temperature controller ESM-3711 HN**"



Base heating temperature controller ESM 3711

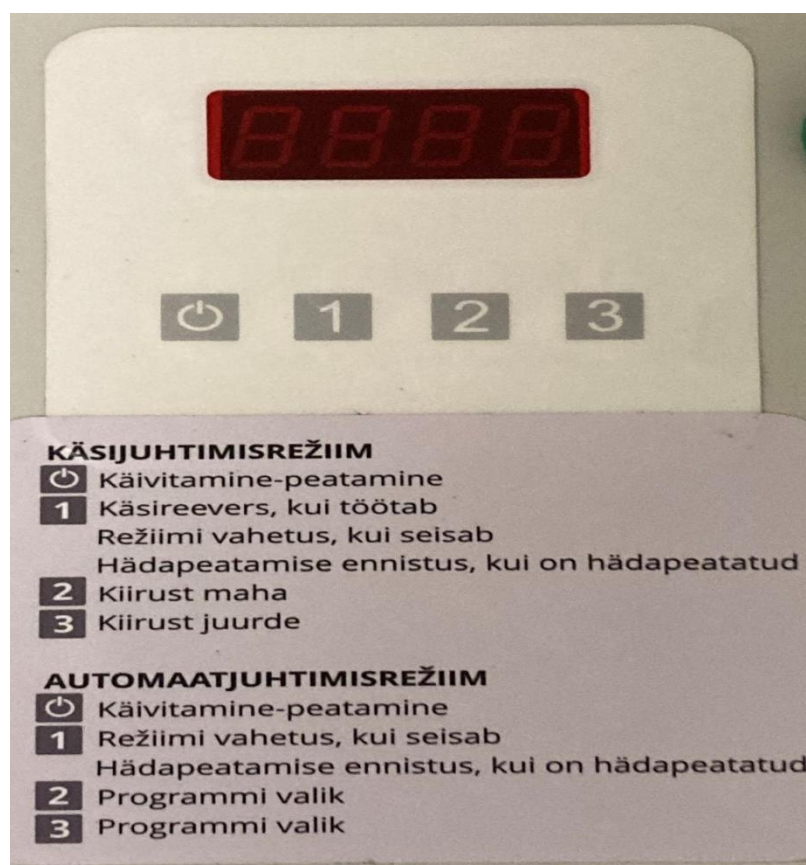




3.5 Using control modes

HE48 honey extractor is equipped with 3 automatic programmes. HE48 honey extractor works in two modes “KÄSIJUHTIMISREŽIIM” (*manual control*) and “AUTOMAATJUHTIMISREŽIIM” (*automatic control*).

The control modes can be controlled and operated from the 4 buttons on the numeric keypad on the panel in front of the electric shield.



Number board to control the modes.





3.6 Using automatic control mode

Program speed cannot be changed in automatic control mode.

The manual reversing function cannot be used in automatic control mode.

In automatic control mode, 3 programs are programmed:

Pr-1 program:

Duration 10 minutes, the machine will accumulate speed for up to 4 minutes and then run at 42Hz until the end of the programme. Used when spinning Farrer frames.

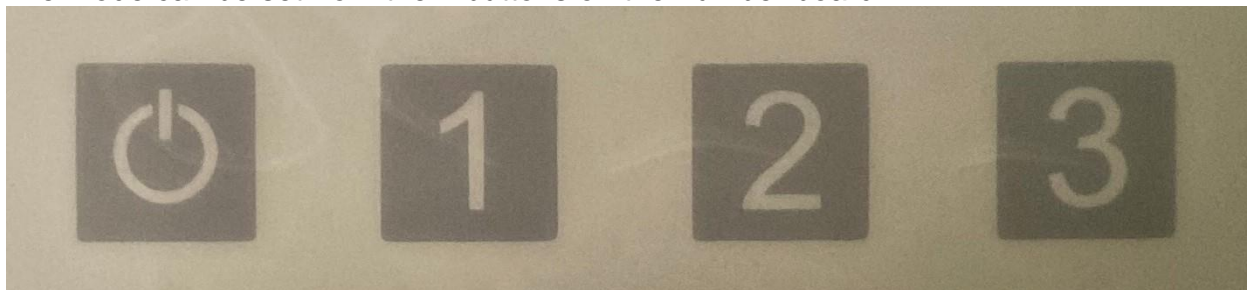
Pr-2 program:

Running time 15 minutes, the device accumulates speed for up to 8 minutes and then runs at 42Hz until the end of the programme. Used when spinning Langstroth frames.

Pr-3 program:

Running time 20 minutes, the device accumulates speed for up to 13 minutes and then runs at 42Hz until the end of the programme. Used when spinning honey that is tough (leaf honey, heather honey). When spinning high frames, eg Estonian frame.

The mode can be set from the 4 buttons on the number board.



Configuration buttons

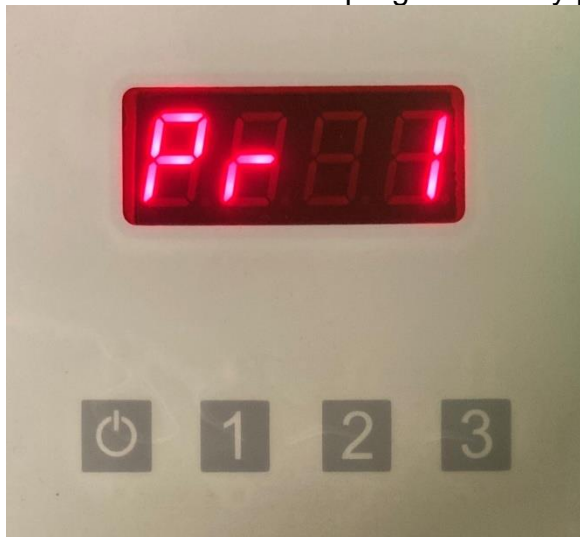
- Start - Pause button (*a circle with a dash*)
- The number 1 button can be used to switch from automatic mode to manual mode
- The number 2(down) and 3(up) buttons allow you to choose between three programmes
- After using the emergency stop button on the shield, press No. 1 on the number board (the program will return to the initial setting).





When you select a programme, Pr 1, Pr 2, Pr 3 will appear on the number screen.

You can move between programmes by pressing buttons 2(down) or 3(up).



Program display

When the desired automatic program is selected, press the first button (*circle with a dash*)

After that, 009 will appear on the number display and the device will start operating.

- Pr-1 = 009
- Pr-2 = 014
- Pr-3 = 019



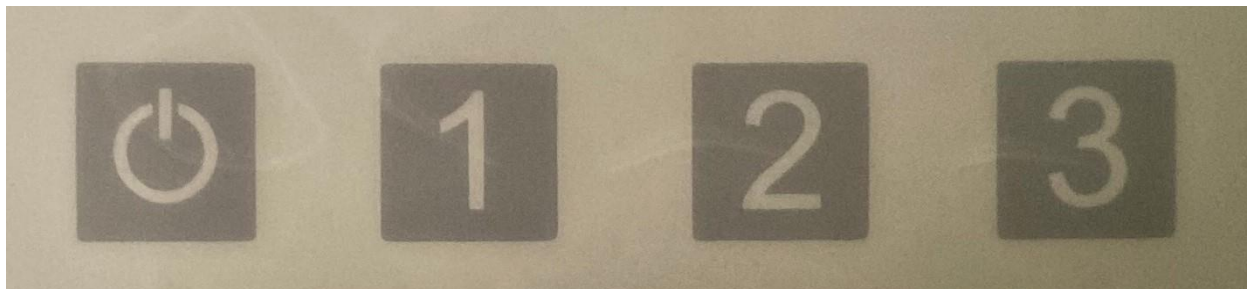
Number display before starting the program





3.7 Using manual control mode

The mode can be set from the 4 buttons on the number board

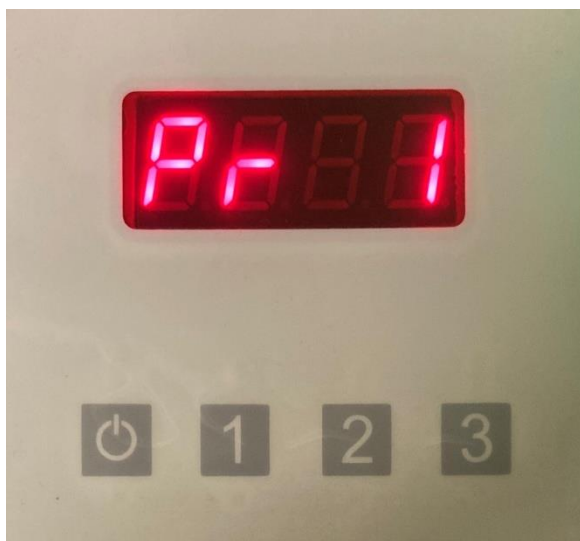


Configuration buttons

- The first button starts and stops the program (the circle with a dash)
- The number 2(down) and 3(up) buttons allow you to choose between three programmes and speeds
- The number 1 button allows you to select the speed of spinning.
- After using the emergency stop button on the panel, press No. 1 on the number board (the program returns to the initial setting)

When you select a programme, Pr 1, Pr 2, Pr 3 will appear on the number screen.

You can move between programmes by pressing buttons 2(down) or 3(up)



Program display





It is possible to change the speed of the manual programme.

When the manual program is selected, the display will show _09.

By pressing 2, the speed slows down and you can set the initial speed.

Pressing the number 3 will increase the speed.

The speed range is 01 to 09



Program speed display

When the appropriate program and the appropriate speed for the program have been selected, press the first button (circle with a dash) and the HE48 honey extractor will start working. Pressing the same button again will stop the program.

Use a manual control program when the honey is very tough or partially crystallized.

3.8 Using the reverse function in manual mode

Manual reverse function - Program must be running!

Activated by pressing button 1.

Allows adjustment of the extractor rotation directions if necessary.





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Before you press button 1, the display will show the reading. There is a dash in the top left-hand corner of the screen.



Display reading before pressing number 1

After pressing the number 1 button, the device slows down and two dashes appear on the left side of the screen. The device starts to rotate the other way round.

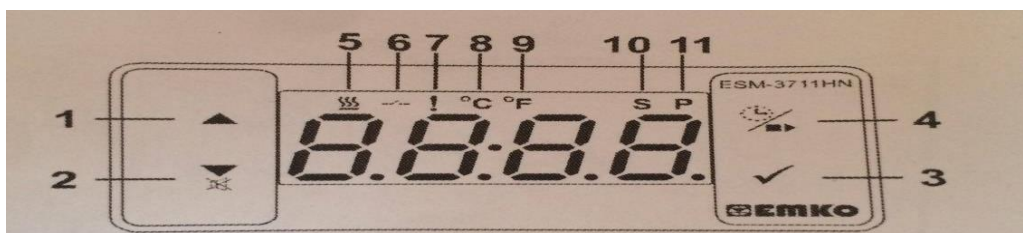


2 dashes indicating reversal activation





4 Operating instructions for the temperature controller ESM-3711 HN



Button definitions:

Figure 2. Illustrative photo of the temperature controller buttons

1 Increase value button. This button is used to increase the value of the preset value.

2 Decrease value button. This button is used to decrease the preset value.

3 Change value button. Pressing this button will display the parameter change mode.

Once the parameters have been changed, it will be necessary to press this button again to save the parameters set. Press and hold for 5 seconds to enter programming mode.

Attention! In programming mode, there is a very high risk of messing up the settings and therefore disrupting the regular operation of the temperature controller. Use the programming mode only if you are fully familiar with the operation of the temperature controller and are able to change the settings!

4 Warming sign.

Definitions of LEDs:

5 Warming LED. Indicates that the heating mode is on.

6 Output LED.

7 Alarm LED

8 Celcius LED. Indicates that the device is running in C mode.

9 Fahrenheit LED. Indicates that the device is running in F mode.

10 Change mode. Indicates that the device is in parameter change mod.

11 Program LED. Flashes when the device is in programming mode.





If the temperature controller is not switched on, no lights are on or flashing:



Figure 3. Temperature controller switched off

When the controller is switched on, numbers appear on the screen showing the currently reached temperature:



Figure 4. Temperature controller switched on

From the picture we can see that the current temperature is 27 degrees, and to see what our set temperature is for the controller to reach, or if we want to change the existing parameters, we click on the tick in the bottom right corner. The set parameters will then appear on the screen (usually set by the manufacturer to 40c in the factory settings), and next to the C symbol on the top bar of the screen will appear the letter S, which stands for "Set", indicating that the device is in parameter change mode:





Figure 5.

Parameter change mode, also indicated by the "S" on the top bar.

From the figure, we can conclude that the currently set temperature/parameter is 40c.

To increase the parameters, press the upper arrow (top left corner of the Temp.

Controller) and to decrease the parameters, press the lower arrow (bottom left corner).

Press the tick again to confirm the changes.

Once you have set the parameters and clicked the tick again, the current temperature will reappear on the screen. If you want to make sure that the parameters you have set are still correct, press the tick again and the display will return to the parameter change mode.

Once you have set the parameters and clicked the tick again, the current temperature will reappear on the screen. If you want to make sure that the parameters you have set are still in place, press the tick again and the display will return to parameter change mode.

If you have any questions or problems, please contact the manufacturer – Asteni Mesindus OÜ / +372 525 1236 / info@asten.ee





5 Technical specifications

- Power supply 230V
- Length of power cable 3m
- Length of the cable connecting the device to the shield 2m
- Temp. Controller ESM-3711 HN
- Base insulation up to 55C `
- Base heating power 320W
- Engine power 0.37kW
- Total power 0.69kW
- Number of frames to be inserted Langstroth 48pc. / Farrer 56pc.
- Electronic lid closing mechanism
- Stainless steel ball valve 1 ¼
- Portable remote control
- Work programs 3
- Operating modes 2 (automatic and manual mode)
- Extractor diameter 950mm / total width 1020mm
- Extractor case height 750mm / total height 1030mm
- The height of the ball valve from the floor 250 mm
- Container made of stainless steel AISI304 thickness 0.8mm
- Extractor frame made of metal
- Extractor frame is painted with an abrasion-resistant powder coating.
- Weight 70kg
- Noise level 35dB
- Maximum rotational speed 42Hz

Frame dimensions suitable for HE48 honey extractor:
(Measurements may vary)

- Estonian frame: 448x270x25 – 25pc.
- Langstroth frame: 482x232x35 / 48pc.
- Farrer frame: 482x159x35 / 56pc.





6 Transporting the device

Do not transport hot, working device. Allow the device to cool down beforehand.

Disconnect the power cord from the mains.

Disconnect the shield wire from the appliance (PIN10).

Dismantle the device from the floor fixings.

The honey-filled appliance must not be transported, it must be drained of honey beforehand.

If the device is to be transported over long distances, it must be secured by safety straps. Avoid contact of the straps with electrical shields, as this may cause damage to electrical systems.

The device must not be transported in a sideways position. Must stand on its feet.

DO NOT lift the appliance from the tap!

7 Maintenance and cleaning of the device

Be sure to disconnect the device from the mains power supply before servicing!

It is also advisable to wash the inside of the product with warm water or, if necessary, with detergents approved for use in the food industry before use, as dust or other dirt may be present in the appliance container. Care should be taken to ensure that moisture does not get into the electrical components –HE48 honey extractor control panel, plug and temp. controller.

General washing of the appliance can be carried out as required.





8 Safety precautions

Before using the product, carefully read the safety precautions below to ensure correct and safe use of the product and to prevent damage and injury to you or others.

It is the responsibility of the person in charge of the equipment to ensure that all users understand and comply with this manual.

To ensure that users of the product can consult the instructions quickly, keep the instructions close to the product.

Use the product only in the place where it is intended. Indoors, at a stable temperature and level surface.

Place the device in a safe place where there is no risk of tipping over and safe access to the device.

Fix the frame of the appliance to the floor.

Fix the guide plate to the wall.

HE48 honey extractor is equipped with an automatic lid lock. When the unit starts frying, the lid automatically closes and reopens at the end of frying.



Lid lock

Tampering with or removal of the lid securing mechanism is prohibited.





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Honey extractor HE48 to be used only for extracting honey from honey frames,
Only honey or hot water for washing purposes is allowed in the HE48 honey extractor.
In the event of a fault or malfunction, stop operation, disconnect the appliance from the mains and only then determine the cause of the fault.
In the event of a serious product defect, please contact the manufacturer.
It is forbidden to use the product without first reading the instruction manual..

Producer responsibility

It is the responsibility of Asteni Mesindus OÜ to ensure that the honey extractor HE48 is completely safe when used correctly and that it is accompanied by instructions for use and safety.



8.1 Safety symbols



Rotating parts / risk of being trapped



Electrical risk / electrical components

Rotating parts / risk of being trapped – The sign indicates that there are rapidly rotating parts of the appliance which, if touched, may present a risk to parts of the body which may be caught in the impeller.

Electrical risk / electrical components – sign refers to the control panel and the engine which contains a considerable amount of electronics. Any dismantling/assembly of the control unit/motor while the unit is connected to the mains is strictly prohibited!

The guide plate is not waterproof, so pay strict attention that the plate is not exposed to moisture or direct water!



9. WARRANTY

Asteni Mesindus OÜ warrants the equipment it manufactures and sells against possible defects in construction, workmanship and mechanical defects. After the expiry of the warranty period, no reference to a defect during the warranty period shall be valid unless made in writing.

9.1 DURATION AND START OF THE WARRANTY

The guarantee is given for the following period;

- Electronics inside the control panel (frequency converters, contactors, temperature controllers) - 2 years (24 months)
- Motors and reducers on the device – 2 years (24 months)
- Device construction details and welds - 5 years (60 months)

The guarantee starts from the moment the goods are handed over to the customer and the instrument of delivery and receipt is signed.

Warranty applies to the first buyer/user of the equipment sold.

The customer ordering the warranty repair must prove the validity of the warranty period of the appliance (by means of an acceptance report or the serial number on the CE marking).

9.2 WARRANTY INCLUDES

The warranty covers the costs incurred during the warranty period for the repair of structural, manufacturing and mechanical defects in the equipment identified by Asteni Mesindus OÜ.

The aforementioned faults will be corrected by a person authorised by Asteni Mesindus OÜ or by an authorised maintenance company by putting the equipment back into working order.

Parts and components replaced under warranty are the property of Asteni Mesindus OÜ and are subject to return.





9.3 CARRYING OUT WARRANTY WORK

The fixed equipment is repaired at the customer's premises on working days at. 8.00 - 16.30. If the customer requests the warranty repair to be carried out outside normal working hours, the customer shall reimburse the additional costs incurred.

In the case of equipment expertise, easily transportable and easily disconnectable equipment must be delivered by the Buyer at his own expense to the Asteni Mesindus OÜ factory (e.g. containers and wheeled equipment).

In the case of larger and more technically complex equipment, the transport and disconnection of the equipment must be agreed in writing in advance with Asteni Mesindus OÜ (e.g. line parts and sealing machines).

When the technician arrives on site, free access to the equipment must be prepared for the technician.

Repaired equipment is collected by the customer or returned to the customer at the customer's expense.

9.4 LIABILITY AND LIMITATIONS OF THE WARRANTY

This warranty is valid provided that the equipment has been used under normal conditions and that the instructions for use have been carefully followed. If the above conditions are fulfilled, Asteni Mesindus OÜ is responsible.

The warranty does not cover losses that may be caused by a defect in the equipment, including damage to property, personal injury, damage to other objects, loss of profit, damaged output and other consequential losses.

Warranty repair does not include routine maintenance of the equipment and does not reimburse the costs arising from non-compliance with the instructions for use and maintenance of the equipment.





9.5 WARRANTY DOES NOT COVER DEFECTS CAUSED BY:

Incorrect transportation, improper lifting or moving of the equipment and failure to comply with the installation instructions for the equipment (unless carried out by persons authorised by Asteni Mesindus OÜ).

Due to the user's negligence or non-compliance with the instructions or handling conditions.

Overloading of the equipment.

Use of the equipment for purposes other than those for which it is intended.

Insertion of unsuitable frames into the equipment.

Conditions independent of Asteni Mesindus OÜ:

- $\pm 5\%$ of voltage fluctuations, at 230V
- Lightning strikes
- Fire
- Flooding
- Vandalism
- Incorrect connections between the appliance and the power cable
- Defective fuses
- Excessively long and inadequate extension leads
- High water hardness
- Damage caused by repairs, maintenance or structural modifications to the equipment carried out by unauthorised maintenance companies.
- Improper installation or placement of the equipment at the place of use, not in accordance with the instructions for installation and use or otherwise incorrect.
- Improper storage conditions of equipment by the user (excessive humidity and negative temperature in the storage room).





9.6 MINOR FAULTS, ADJUSTMENTS, OPERATING INSTRUCTIONS AND EQUIPMENT ACCESSORIES

Warranty does not cover:

Repairing surface scratches that are insignificant to the operation of the device,

Adjustments mentioned in the normal instructions for use of the equipment, on-site instruction, cleaning and maintenance measures.

Work resulting from the non-observance of, or failure to explain, precautionary or installation rules at the place of installation.

Parts that are likely to break as a result of use or normal wear and tear are not covered by the normal warranty:

- warning lights
- switches
- moving plastic parts
- heating elements
- seals
- clamps
- springs
- hose fittings
- bearings
- bearing supports
- hoses
- plastic lids





9.7 ACTION TO BE TAKEN IN THE EVENT OF AN ERROR

In the event of a defect occurring during the warranty period, the customer must immediately notify Asteni Mesindus OÜ IN WRITING.

When reporting a fault, you must specify the type of equipment (make, model). Proof of the validity of the guarantee (acceptance of delivery, model code on the CE marking) must be provided.

Describe, as precisely as possible, the nature of the error and the conditions in which and/or under which it occurs.

For its part, Asteni Mesindus OÜ will clarify whether the device and the described defect are covered by the warranty and will provide the customer with feedback on the repair method and time within 2 (two) working days.

9.8 DATA PROTECTION

Personal data will be used only for the purposes of contractual procedures and possible warranty operations in accordance with the requirements of the Data Protection Act of the Republic of Estonia.

