KADZAMA
TECHNOLOGY FOR SUCCESS

CRUSHER AND WINNOWER FOR COCOA BEANS

OPERATING MANUAL



Professional cocoa bean crushing and winnowing equipment

Welcome

Kadzama Company thanks you for purchasing our crusher and winnower for cocoa beans. This operating manual is an integral part of this equipment and its main purpose is to ensure its safe use for the entire service life from unpacking to disposal.

Kadzama strongly recommends that everyone who is allowed to interact with this equipment carefully studies this document. We also ask you to note that each user must have constant access to these instructions. If your manual has been damaged during usage, rendering it unusable, or if it has been lost, please request a copy via official email at support@kadzama.com or download it from kadzama.com.

Kadzama is the developer of this equipment and therefore may make changes to the design of the crusher and winnower for cocoa beans and the user manual if necessary, which may result in some discrepancies between the equipment itself and the images shown in this manual.

Contents

1. Main information.....4
1.1 General information.....4
1.2 Symbols used.....4
1.3 Content and purpose.....4
1.4 Protection of the manual.....5
1.5 Personnel qualifications.....5
2. Safety measures.....6
2.1 General safety requirements.....6
2.2 Intended use.....6
2.3 Electrical safety.....6
2.4 Mechanical safety.....6
2.5 Maintenance safety.....7
3. Crusher and winnower for cocoa beans description.....8
3.1 Operating principle.....8
3.2 Appearance and structural elements.....8
3.3 Identification plate.....10
3.4 Operating environment and electrical protection.....10
4. Technical specifications.....11
5. Delivery and transportation.....12
5.1 Packaging.....12
5.2 Transportation.....12
5.3 Unloading and unpacking.....12
5.4 Storage.....12
6. Installation and connection.....14
6.1 Installation.....14
6.2 Required working area.....14
6.3 Operational preparation.....14
6.4 Pre-start inspection.....14
6.5 Initial cleaning before first use.....15
6.6 Electrical connection.....15
7. Operating section.....17
7.1 Control element identifiers.....17
7.2 Usage.....26
7.3 First start and subsequent operation.....27
7.4 Separator mode operation.....27
8. Cleaning and sanitation after use.....29
8.1 General requirements.....29
8.2 Cleaning frequency.....29
8.3 Cleaning procedure.....29
8.4 Dust bag and airflow system.....29
8.5 Drying and reassembly.....29
9. Maintenance and repair.....31
9.1 General information.....31
9.2 Routine inspection.....31
9.3 Troubleshooting.....31
9.4 Blades replacement.....32
10. Disposal.....33
11. Warranty.....34

1. Main information

1.1 General information

For simplicity and ease of use, all information in this manual is divided into topics and located in the section to which it relates. However, if you have difficulty understanding or interpreting the statements in this manual, please contact Kadzama's technical support service for clarification.

Everyone who will be allowed to interact with this machine must read and understand the information contained in this manual.

1.2 Symbols used

The following symbols are used throughout this manual:



Attention. These messages are designed to draw attention, especially in processes that require it. Failure to comply with this requirement may endanger the life and health of the user and cause damage to individual parts of the equipment or the equipment as a whole.



Warning. These messages are used to draw attention to processes in which incorrect use may result in damage to the equipment or its individual parts.



Environment. These messages are intended to draw the user's attention to processes, actions or consequences that may harm the environment.



Notes. These messages contain explanations, notes and recommendations that will be useful to the user during operation and are of a recommendatory nature.

1.3 Content and purpose

- The purpose of this manual is to provide all users interacting with this equipment with the necessary and sufficient information for its correct use, maintenance and safe application for themselves and those around them.
- This manual complies with the EU and international requirements and standards and contains all the necessary instructions to ensure the highest level of use of the relevant equipment.
- The following requirements must be observed:
  - Every operator, technician or other person authorised to interact with this equipment is required to carefully study these instructions.
  - The person responsible for occupational safety in the workplace must ensure that all personnel authorized to interact with this equipment have read these instructions and understand the basic principles of operation of this equipment.

– All rules and recommendations contained in these instructions must be observed throughout the entire period of operation of the equipment, from transport to disposal.

1.4 Protection of the manual

This manual is an integral part of the equipment and therefore all safety requirements contained in this manual apply to it.

The following rules must be observed with regard to the manual itself:

- Store in a place protected from open flames and moisture.
- Store in a place accessible to personnel authorised to interact with the equipment.
- Do not use this manual with dirty hands.
- Do not make any changes to the text or images in this manual.
- Do not tear or crumple the pages of this manual.

1.5 Personnel qualifications

Mechanical maintenance



ATTENTION

Only qualified and trained personnel may operate the equipment. Any maintenance must also be performed only by qualified personnel.

Every person authorized to operate or perform maintenance must read and understand the information contained in this manual.

Electrical service

An electrical maintenance specialist must have a general knowledge of electrical circuits, as well as knowledge of the specific circuits and components used in the equipment. Furthermore, such a specialist must be certified to operate the equipment.

The technician must disable the equipment's safety device before servicing. Any person authorized to work on this equipment may begin work only after all electrical controllers and components are in their designated locations and in working order.



ATTENTION

Any action not described in this manual may only be performed by a specialist authorized by the manufacturer.

2. Safety measures

Safety measures contain essential health and safety requirements of the EU Machinery Directive 2006/42/EC and the new Machinery Regulation (EU) 2023/1230, as well as the principles of EN ISO 12100 and EN 60204-1.

2.1 General safety requirements

This machine has been designed and manufactured in accordance with applicable European safety requirements. Safe operation depends on correct installation, proper use, regular maintenance, and compliance with the instructions contained in this manual.

Before operating the crusher and winnower for cocoa beans, carefully read and understand this manual.

The manufacturer shall not be liable for injuries, equipment damage, or product loss resulting from improper installation, unauthorized modifications, misuse, or failure to follow these instructions.

The machine shall be operated only by personnel who:

- have read and understood this manual;
- are trained in the safe operation of the equipment;
- are physically and mentally capable of operating industrial machinery.

Children and unauthorized persons must not operate or have access to the machine.

2.2 Intended use

The Crusher and Winnower for Cocoa Beans is designed to crush cocoa beans into nib fractions of approximately 1–4 mm and separate cocoa husks from the nibs by controlled airflow. It is intended for professional food-processing use.

The machine is designed for professional food production only.

Do not use the equipment for: explosive, flammable, or hazardous materials, metal, glass, stone, or other non-food materials; frozen products; any application not specified by the manufacturer.

Any use other than the intended purpose is considered improper use.

2.3 Electrical safety

- Connect only to a power supply matching the machine specifications: 220 V / 50 Hz for the model described in this manual.
- Protective grounding is mandatory. Operation without the protective earth conductor is prohibited.
- Do not operate with damaged cables, plugs, switches or electrical enclosures.
- Do not operate with wet hands.
- Prevent water and other liquids from entering ventilation openings, the control panel, switch box or motor area.
- Before cleaning, inspection or maintenance, switch the machine off and disconnect it from the electrical supply.

2.4 Mechanical safety

- Moving parts may cause injury. No loose clothing, scarves, jewelry or loose gloves can be used as they may become caught in rotating parts. Long hair must be securely tied back.

- Do not use crusher and winnower for cocoa beans at ambient temperatures below 10 °C and above 40 °C, and relative humidity above 80%.
- When transporting crusher and winnower for cocoa beans at sub-zero temperatures, prior to first use it should be kept at room temperature for at least 1 hour.
- Never insert hands, tools or foreign objects into the loading hopper or crushing unit during operation.
- Do not leave crusher and winnower for cocoa beans switched on without supervision for a long time.
- Do not operate crusher and winnower for cocoa beans with wet hands.
- Do not allow liquids through the vents of crusher and winnower for cocoa beans.

2.5 Maintenance safety

Maintenance shall be performed only with the machine disconnected from the electrical supply.

If abnormal noise, vibration, smoke, overheating, or unusual odor occurs, stop the machine immediately, disconnect the power supply, identify and eliminate the cause before restarting.

Do not wash the machine using high-pressure water, steam or immerse electrical components in water. Do not modify, weld, drill, or alter any mechanical or electrical components without written approval from the manufacturer.

3. Crusher and winnower for cocoa beans description

3.1 Operating principle

Cocoa beans are loaded through the upper hopper into the crushing unit. Rotating blades break the beans into nibs and husk fragments. The crushed material then enters the separation channel, where adjustable airflow removes lighter husk particles while heavier nibs are directed to the nibs outlet. Product dust is captured in the filtration and collection bag.

3.2 Appearance and structural elements

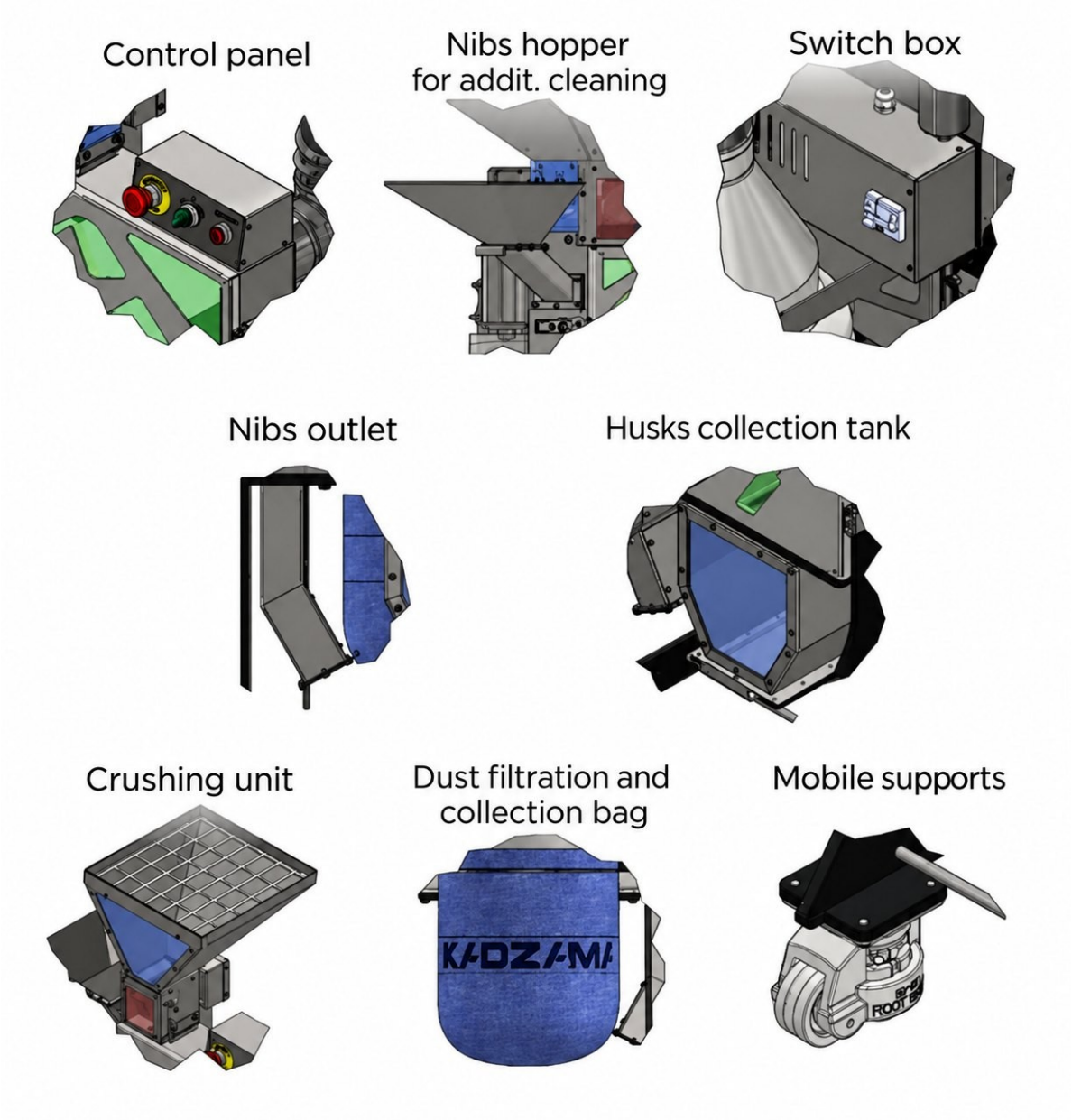


Figure 1. Main structural elements and service components.

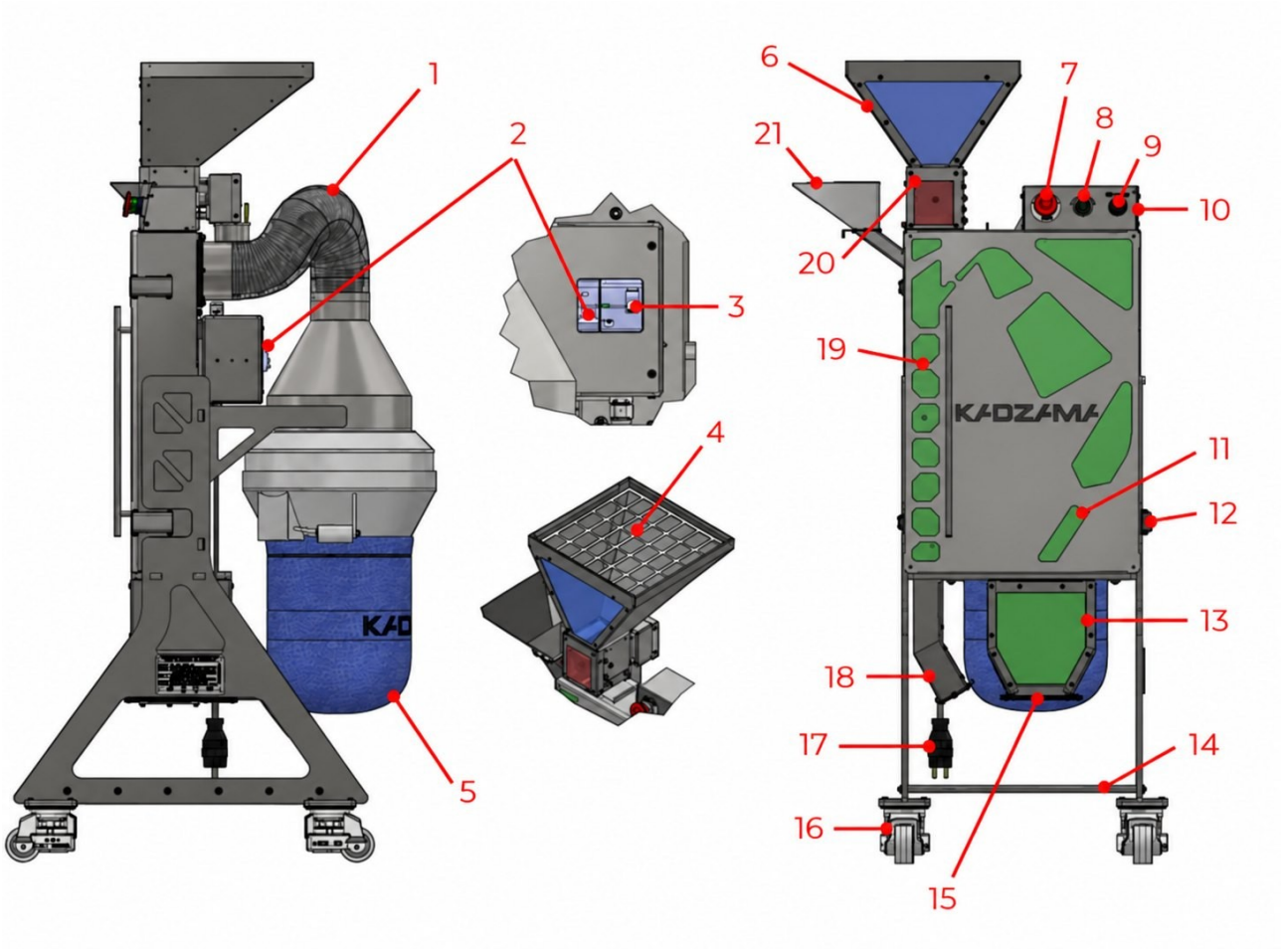


Figure 2. Numbered component layout.

No.	Component	No.	Component
1	Polyurethane air duct	12	Lid hinges
2	Automatic switch	13	Husk collection tank
3	Residual current circuit breaker (RCCB)	14	Grid for gastronorm container
4	Protective mesh	15	Husk unloading slider
5	Dust filtration and collection bag	16	Mobile supports
6	Cocoa bean loading tank / hopper	17	220 V power plug
7	Emergency stop button	18	Nibs outlet
8	Blade rotation direction switch	19	Separation channel
9	ON/OFF control	20	Nibs hopper for additional cleaning
10	Control panel	21	Crushing unit
11	Husk discharge channel		

3.3 Identification plate

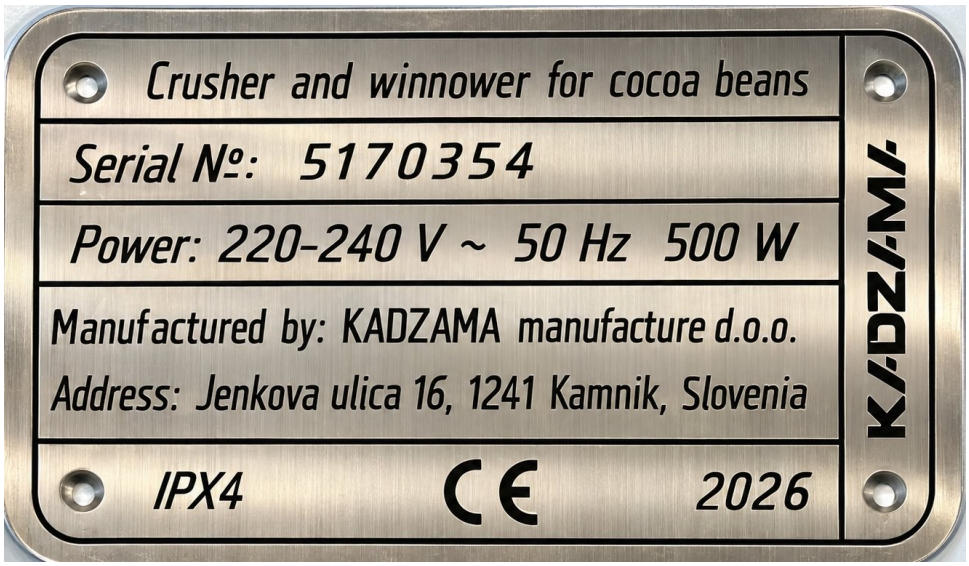


Figure 3. Identification plate.

Line	Content
1	Product name
2	Model and serial number
3	Voltage and power
4	Manufacturer information
5	Place of manufacture information
6	Safety and compliance markings, year of manufacture

3.4 Operating environment and electrical protection

The equipment includes an automatic switch and a residual current circuit breaker (RCCB/RCD). The equipment is also protected by a fuse complying with IEC 60269 for overload and short-circuit protection. Before commissioning, verify that the identification plate and electrical markings correspond to the available supply.

The operating area shall provide:

- Indoor use only.
- Ambient temperature: 10–40 °C.
- Relative humidity: maximum 80%.
- Protect from rain, splashing water, condensation, corrosive vapours, excessive dust and direct sunlight.
- Provide adequate lighting, ventilation and access for cleaning and maintenance.



ATTENTION

Any worker permitted to work on this equipment must ensure that there is no open flame or explosives in the immediate vicinity of the equipment.

4. Technical specifications

Parameter	Value
Overall dimensions	630 × 560 × 1230 mm
Weight	74 kg
Productive capacity	Up to 100 kg/h
Loading capacity	5 kg
Supply	220 V ~ 50 Hz
Power supply system	Single-phase
Power	0.5 kW
Material	Stainless steel AISI 304
Package dimensions	800 × 600 × 1450 mm
Package weight	93 kg
Warranty period	1 year

5. Delivery and transportation

5.1 Packaging

General instructions and information with labels written on the package must be read before moving the equipment. The crusher and winnower for cocoa beans is shipped partially assembled in a cardboard box.

5.2 Transportation

Equipment must be transported using a vehicle capable of lifting the load. After loading the equipment into the vehicle, ensure it is adequately secured to prevent movement or fall during transportation.

The crusher and winnower for cocoa beans must be transported safely. Whilst transporting with other equipment, ensure that it will not damage the crusher and winnower for cocoa beans during transit.



ATTENTION

The manufacturer's warranty does not cover damage that may occur during shipping. To avoid any conflict, the customer must follow the instructions regarding unpacking on the adhesive. The instruction comes with the parcel and it's preliminarily sent to the customer.

The check-list must be completed and submitted in order to activate the warranty coverage.

5.3 Unloading and unpacking

1. Inspect the outer packaging for visible damage before unloading.
2. Use handling equipment suitable for the packaged weight and dimensions.
3. Keep bystanders clear of the unloading area and wear appropriate PPE, including safety footwear.
4. Place the machine on firm, level ground before removing transport restraints.
5. Remove packaging carefully without damaging electrical cables, ducts, controls or covers.
6. Check the machine for dents, loose parts, damaged wheels, cracked covers, damaged plugs/cables and displaced internal components.
7. Do not connect the machine to power if transport damage is suspected; contact KADZAMA first.

5.4 Storage

Store the crusher and winnower for cocoa beans on a flat surface with ample space. During storage turn off the equipment using the on/off button and unplug the main power cable.

The equipment must be stored indoors in a clean, dry, and well-ventilated area.

Recommended storage conditions:

- ambient temperature: +5 °C to +40 °C;
- relative humidity: up to 80%, non-condensing;
- no exposure to rain, water splashes, condensation, or direct sunlight;
- no exposure to corrosive vapors, aggressive chemicals, conductive dust, or explosive atmospheres;
- no strong vibration, mechanical shocks, or risk of falling objects.

During storage, the equipment should be protected from dust and accidental damage. Use the original packaging, protective cover, or other suitable protective material where possible.

Do not place heavy objects on the equipment or its removable parts.

If the equipment has been stored or transported at temperatures below 0 °C, keep it at room temperature for at least 1 hour before connecting it to the electrical supply to prevent condensation inside electrical components.

For long-term storage, it is recommended to periodically inspect the equipment for cleanliness, corrosion, mechanical damage, and the condition of cables, seals, and removable parts.

6. Installation and connection

6.1 Installation

Install the crusher and winnower for cocoa beans indoors on a stable, level, and load-bearing surface with sufficient space for safe operation, cleaning, maintenance, and ventilation. Before placing the machine, ensure that the frame, components, or parts will not be damaged during installation.

If any damage is detected, notify the manufacturer immediately.

Do not connect or operate the crusher and winnower for cocoa beans until it has been correctly positioned, assembled, inspected, and all protective components have been installed.

6.2 Required working area

The surface on which the crusher and winnower for cocoa beans will be placed must be sufficiently strong and suitable for the machine's weight. The customer is responsible for ensuring that the surface meets these requirements. The floor where it is installed must be reasonably level. To prepare the required work area and installation space, the overall equipment dimensions are specified in Section 4. It should be positioned away from other equipment.

6.3 Operational preparation

After installing the equipment and before connecting it to the electrical network, make sure there are no objects inside, and clean any elements contaminated during the installation process.

Follow the steps before start:

- Remove the packaging.
- Set crusher and winnower for cocoa beans on a flat hard surface, providing easy access to controls.
- Make sure that the distance between the body and the nearest objects is at least 10 cm; make sure the air vents are not blocked.
- Make sure that the power cable:
  - Does not touch moving parts of the device;
  - Is not pressed by any objects;
  - Is not located under the device;
  - Does not come into contact with the motor or other components that may become warm during operation.

6.4 Pre-start inspection

1. Confirm that the machine is upright, stable and free from transport damage.
2. Check that all covers, latches, ducts, the husk collection tank and dust bag are correctly fitted.
3. Install the protective mesh in the bean loading hopper.
4. Confirm that the crushing unit is empty and no tools, stones, packaging or foreign objects are present.
5. Check the power cable and plug for damage.
6. Check that the emergency stop is released.
7. Verify the automatic switch and RCCB/RCD are accessible and in the correct initial position.

6.5 Initial cleaning before first use

1. Disconnect the machine from power.
2. Remove accessible food-contact components intended for routine cleaning.
3. Clean product-contact surfaces with warm potable water and a food-safe, non-abrasive detergent where appropriate.
4. Do not direct water into the control panel, switch box, motor, ventilation openings or electrical components.
5. Rinse food-contact parts where required and dry them completely.
6. Reassemble all components and verify that no cleaning tools or foreign objects remain inside.

6.6 Electrical connection

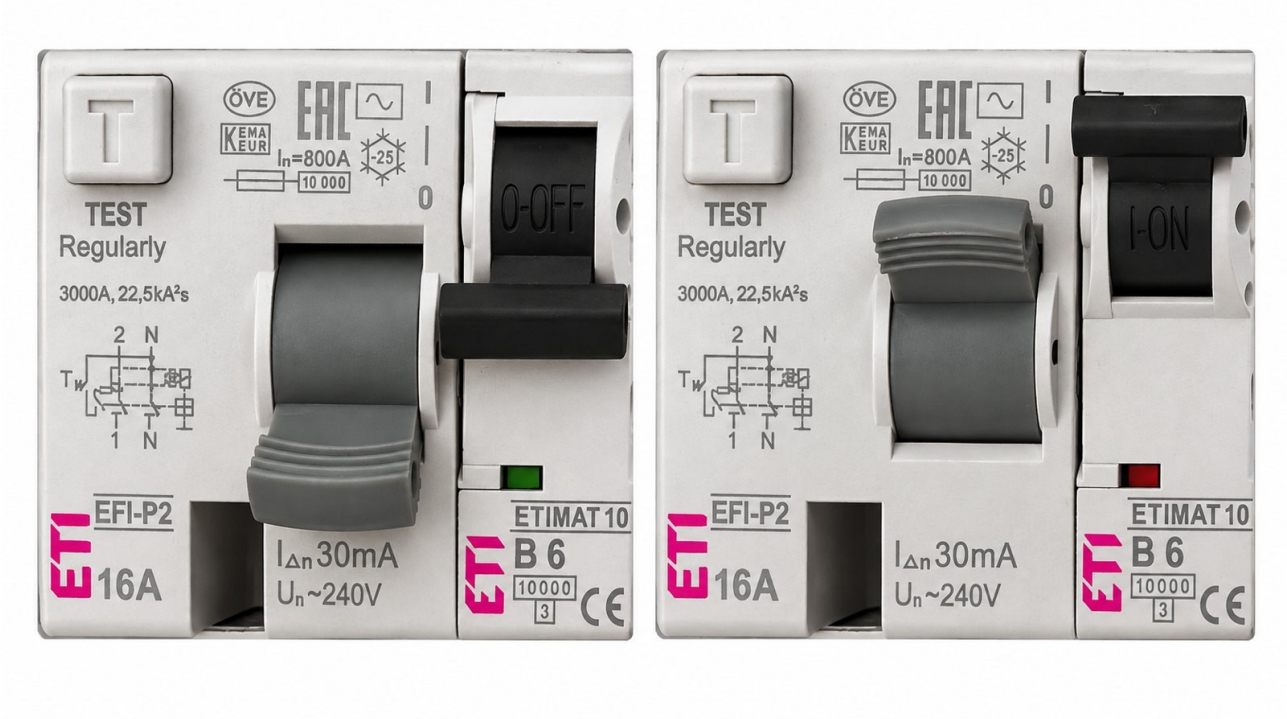


Figure 4. Electrical protection devices: RCD (left) and circuit breaker (right).

Before starting the crusher, make sure that both electrical protection devices are switched to the ON position. The levers must be moved upwards.

- **Right-hand device – Circuit Breaker (MCB).** Provides protection against overloads and short circuits. To operate the Crusher, move the lever upwards to the ON position.
- **Left-hand device – Residual Current Device (RCD).** Provides additional protection against electrical leakage and electric shock. Make sure that its lever is also in the ON position before starting the machine.

In the event of an electrical fault, leakage current, overload, or short circuit, the corresponding protection device may trip automatically and disconnect the power supply.



ATTENTION

If either protection device trips repeatedly, do not repeatedly reset it or continue operating the Crusher. Switch off and disconnect the machine from the power supply and contact qualified technical personnel or KADZAMA Service to determine the cause of the fault.

The TEST button on the RCD is intended for checking the operation of the protective device and is not used to start the Crusher.



WARNING

Operation of the crusher and winnower for cocoa beans without a PE protective conductor is prohibited.



NOTE

It is recommended to connect the crusher and winnower for cocoa beans to a separate power line from the distribution board.

7. Operating section

7.1 Control element identifiers

1. Emergency stop button

Immediately stops operation in an emergency.

1 Emergency Stop Button

The red Emergency Stop button immediately stops the Crusher in case of an emergency. When pressed, it cuts off the power supply to the machine.



To release the Emergency Stop button:

1. Make sure the reason for the emergency stop has been eliminated and it is safe to restart the machine.
2. Turn the red button **clockwise** (in the direction of the arrow) until it pops out and returns to its original position.

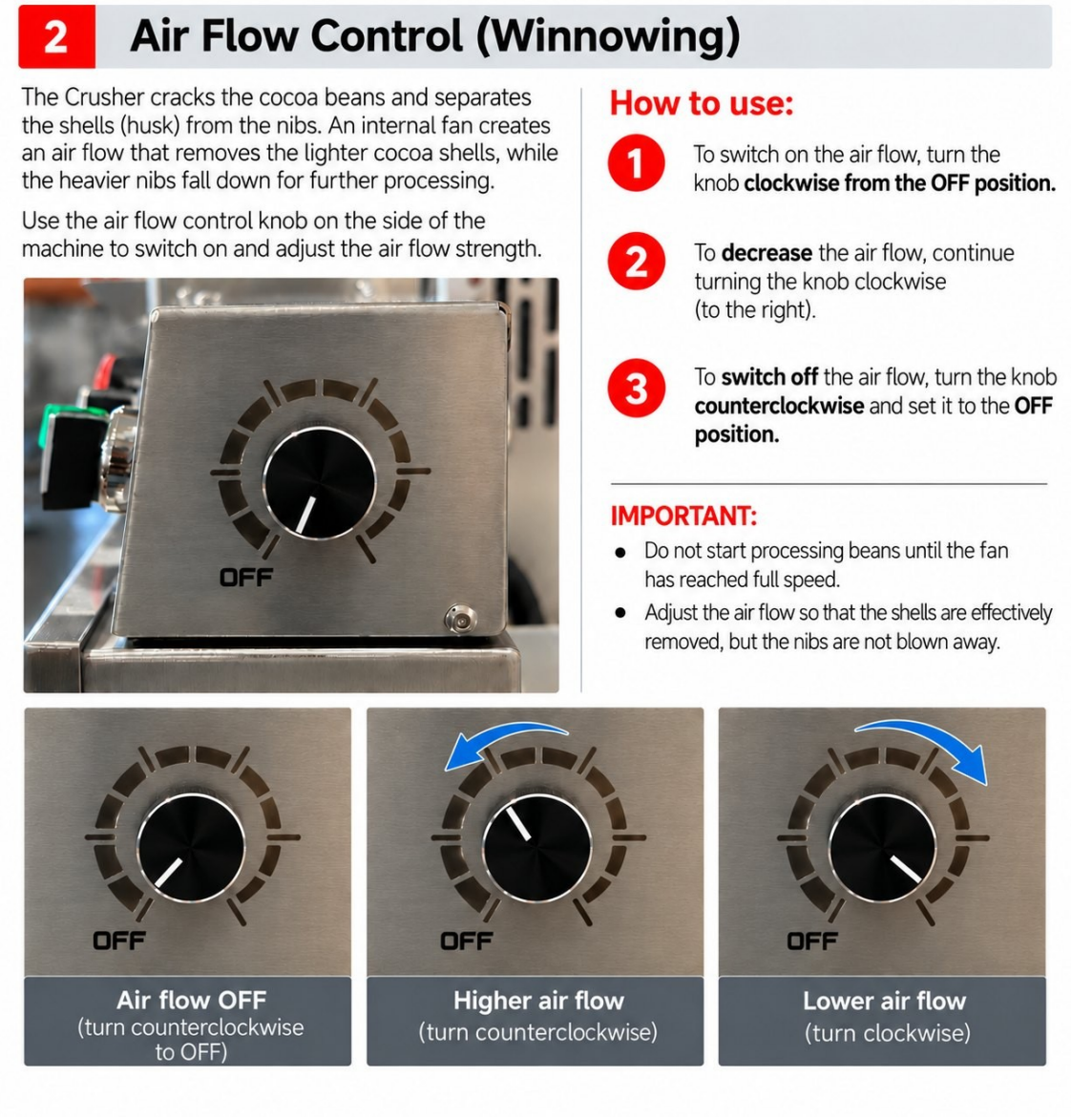




IMPORTANT:

- Use the Emergency Stop button only in case of an emergency.
- Do not use it for normal machine stopping.
- After releasing the button, the machine will not start automatically. Follow the normal start-up procedure.

2. Airflow power regulator



During operation, the airflow goes through the air duct located at the rear of the crusher.

The air duct is equipped with a filter bag at the bottom. The filter collects the husks and fine particles while allowing the air to pass through.



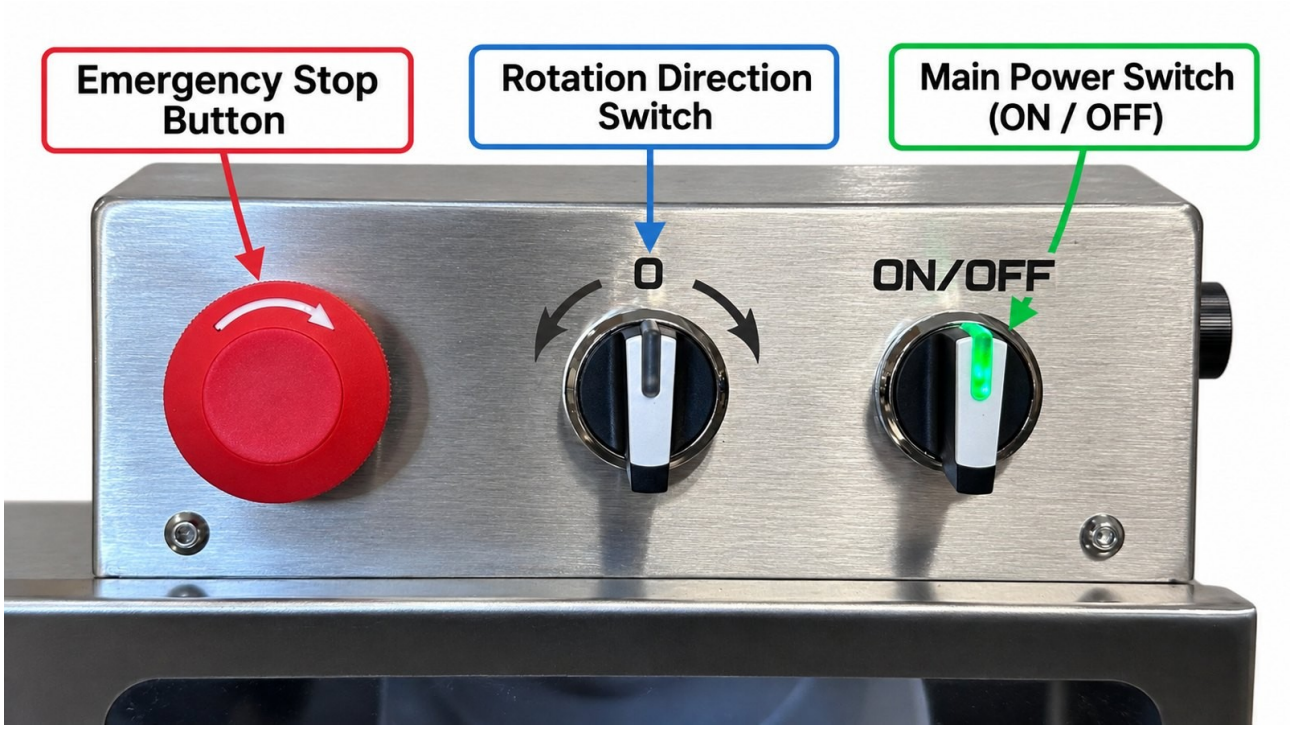
The filter must be checked and cleaned regularly during operation:

- Periodically shake the filter bag to prevent excessive accumulation of husks and dust and to maintain sufficient airflow.
- When necessary, remove the filter and empty the collected material.
- Do not allow the filter bag to become excessively full or clogged, as this can reduce the airflow and decrease the efficiency of husk separation.
- Inspect the filter regularly for contamination, wear, or damage.
- When the filter becomes heavily contaminated and can no longer be effectively cleaned, replace it with a new filter.

ATTENTION

Always switch off the Crusher and wait until the fan has completely stopped before removing, emptying, cleaning, or replacing the filter.

3. Front panel



Main Power Switch (ON / OFF). The switch on the right-hand side is used to switch the Crusher ON and OFF. Turn the switch to ON to start the machine and to OFF to stop it during normal operation.

Blade Rotation Direction Switch. The central switch controls the direction of rotation of the crushing blades. During normal operation, use the standard rotation direction.

The reverse direction should be used if cocoa beans, nibs, shells, or other material becomes jammed between the blades during crushing. Briefly reversing the blade rotation can help release the jammed material and allow it to fall out.

> **ATTENTION**
>
> Do not change the direction of rotation while the blades are still moving. First set the switch to the 0 (OFF) position and wait until the blades have come to a complete stop. Only then select the opposite direction.

4. Fuse inspection and replacement

The crusher is equipped with a replaceable fuse located inside the fuse holder on the side of the machine. The fuses comply with the IEC 60269 standard, providing protection against overloads and short circuits.



If the crusher unexpectedly switches off or does not start, the fuse should be checked before further operation.

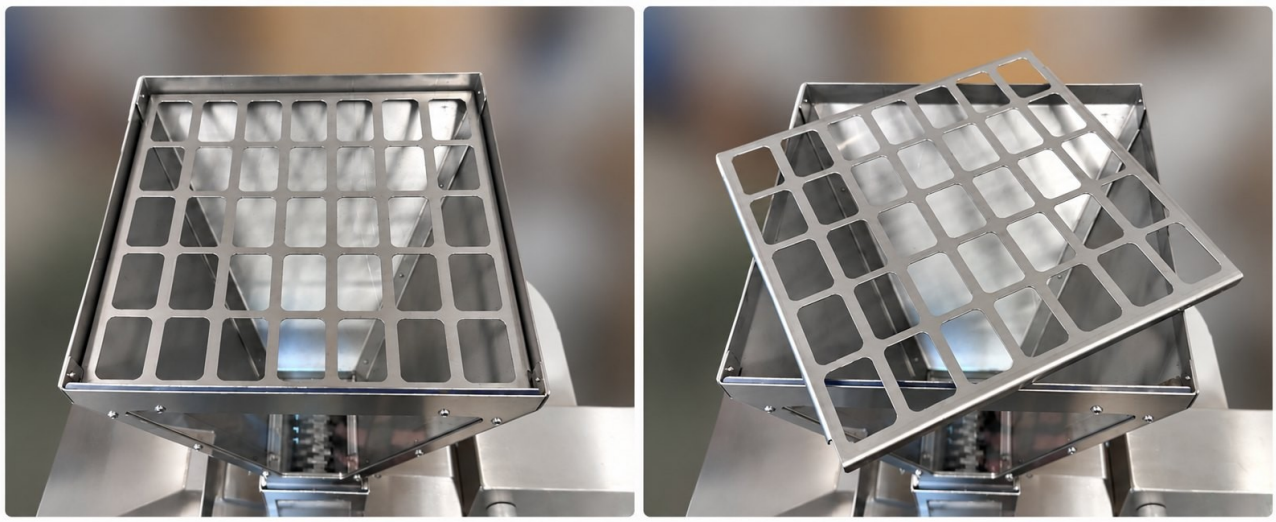
To inspect or replace the fuse:

1. Switch off the crusher and disconnect it from the power supply.
2. Press the fuse holder cap inward and turn it clockwise to release it.
3. Carefully pull out the fuse holder together with the fuse.
4. Inspect the fuse. If it is blown or damaged, replace it with a new fuse of exactly the same type and electrical rating.
5. Insert the fuse holder back into its socket and secure the cap correctly before reconnecting the machine to the power supply.

ATTENTION

Never bypass the fuse or replace it with a fuse of a different rating. If the replacement fuse blows again, do not continue operating the Crusher. Disconnect the machine and contact KADZAMA Service or qualified electrical personnel to determine the cause.

5. Protective safety grid on the crusher unit

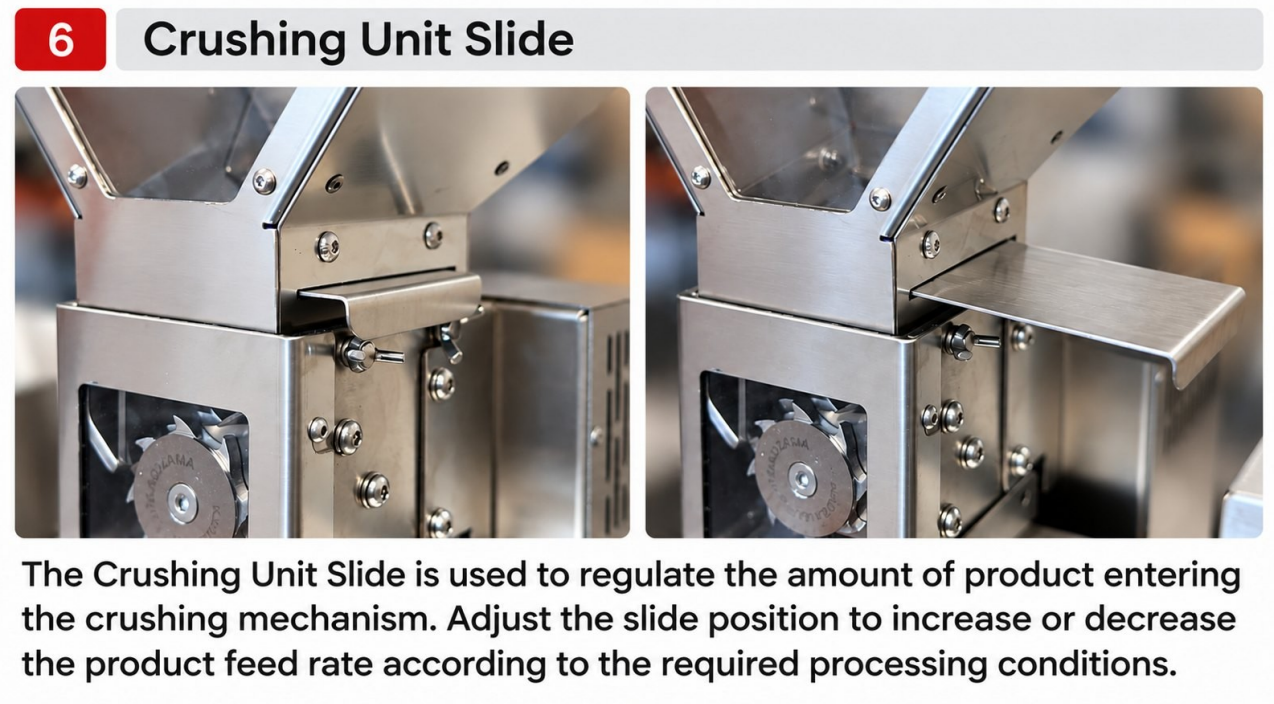


The crusher is equipped with a removable protective safety grid installed on the top of the crushing unit.

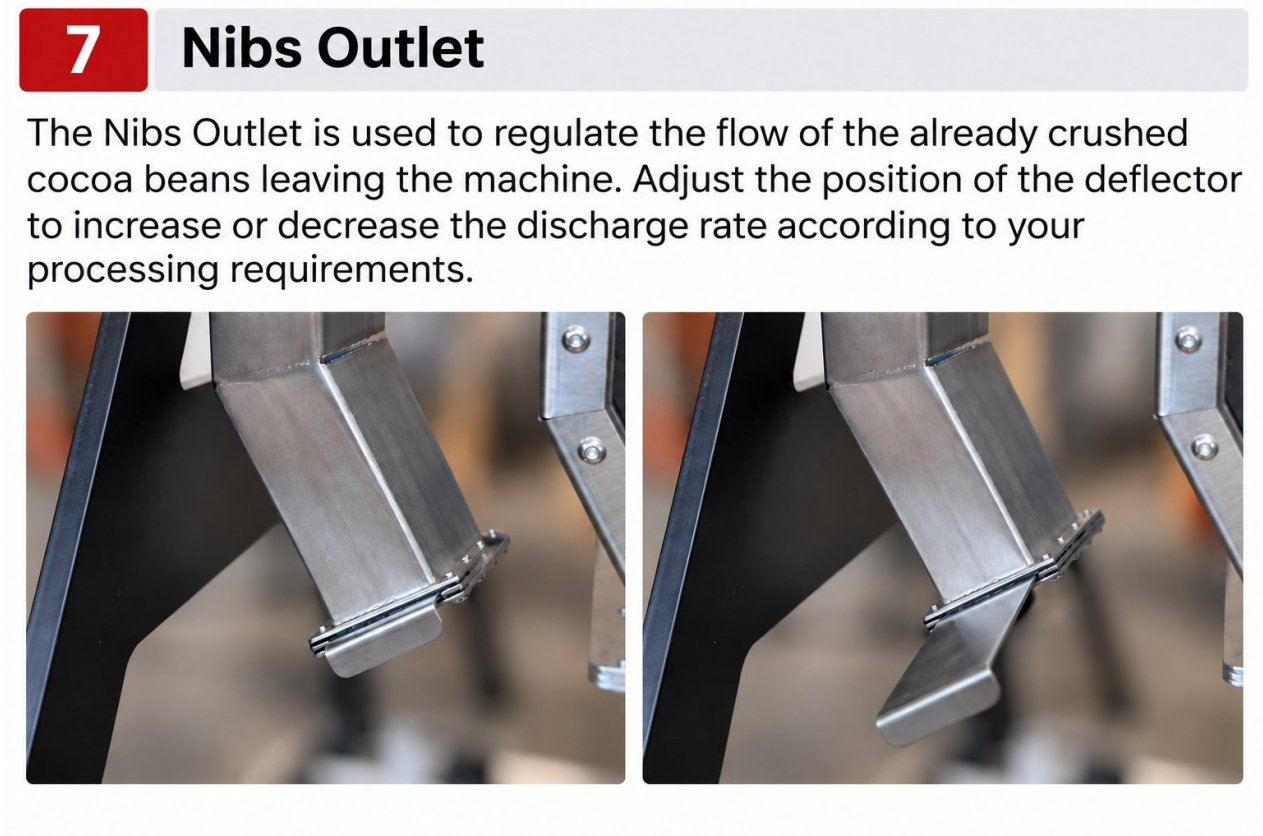
The grid is designed to prevent hands, foreign objects, tools, clothing, or other items from accidentally entering the crushing area and coming into contact with the rotating blades.

The grid may only be removed for cleaning, inspection, or maintenance when the Crusher is completely switched off, disconnected from the power supply, and the blades have come to a complete stop.

6. Crushing unit slide



7. Nibs outlet



- **ON/OFF control:** starts and stops the machine.
- **Airflow power regulator:** adjusts fan power from 1 to 10.
- **Feed and purity adjustment slides:** regulate product flow and separation quality.

Before every batch, place a suitable container on the lower grid at the nibs outlet, confirm that the husk discharge shutter is closed, and verify that the protective mesh is installed in the bean hopper.

8. Husks collection tank



The **Husk Collection Tank is a container for collecting cocoa bean husks.**
It can be cleaned in two ways:

1. **Open the slide** to empty the husks.
2. **Unscrew and remove** the tank, then empty it manually.

9. Additional hopper for cocoa nibs



The **Additional Hopper** is used to process already peeled and crushed cocoa beans.

If some husk remains in the product, you can feed it into this hopper again to remove the remaining husk using the air flow.

This step separates the husk more effectively without further crushing.

10. Adjustable wheels



The crusher is equipped with adjustable support feet with built-in wheels for easy mobility.

1. **Working position** – Lower the support feet so the crusher rests on the rubber bases.
2. **Transport position** – Turn the red knob to raise the support feet, lifting the rubber bases and engaging the wheels to move the crusher.

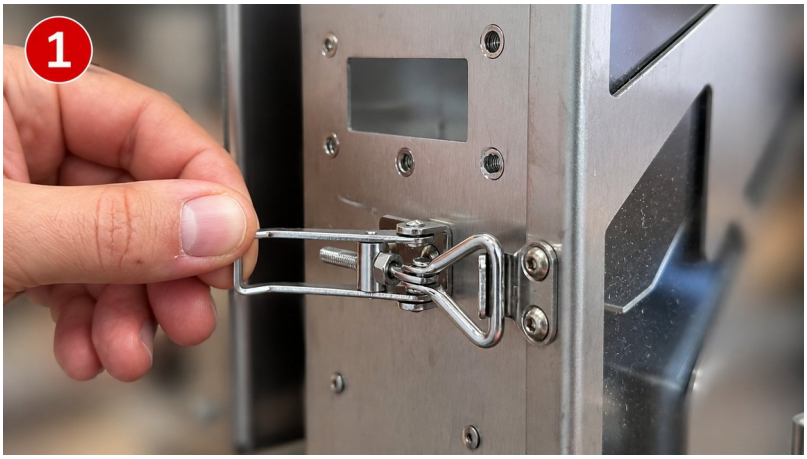
11. Airflow adjustment slide — service setting

The internal airflow can be fine-tuned using the adjustable slide located behind the front panel.

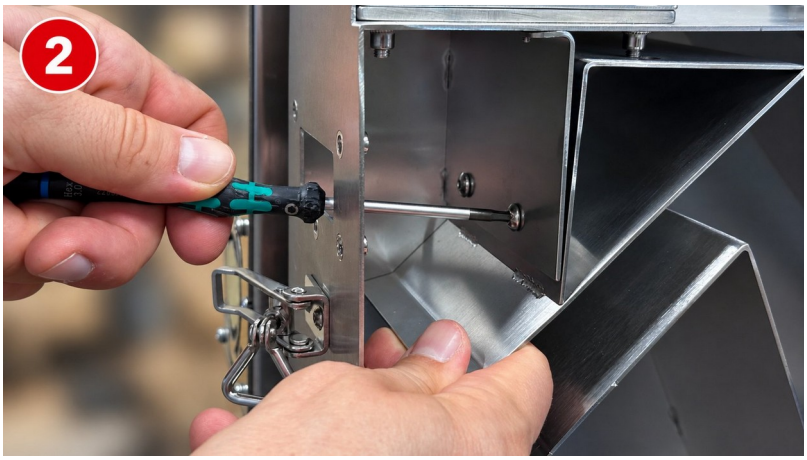
> **ATTENTION**
>
> This adjustment is intended for service purposes only. The airflow is correctly preset at the factory for optimal operation. Do not change this setting unless necessary and only after consultation with the KADZAMA Service Center.

To adjust the airflow:

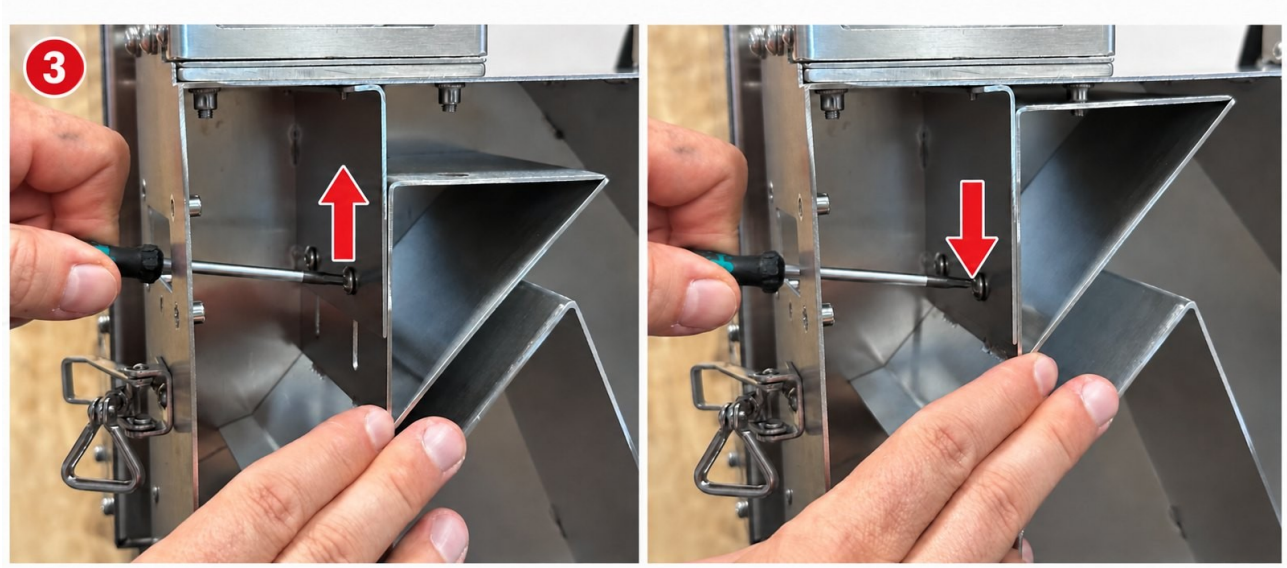
1. Open the service panel to access the internal airflow adjustment mechanism.



2. Insert a screwdriver from the side and loosen the fixing screw of the adjustment slide.



3. Carefully move the slide up or down to increase or decrease the airflow as instructed by KADZAMA Service.



4. Tighten the fixing screw securely after adjustment.
5. Close and secure the front panel before operating the crusher.

WARNING

Do not adjust the internal airflow setting while the machine is running.

7.2 Usage

7.2.1 Perform the following steps before starting the device

1. Locate the circuit breaker and residual current device (RCD) on the rear panel of the device.
2. Ensure the circuit breaker is in the "OFF" position.
3. Switch the circuit breaker to the "ON" position to supply electricity to the device.
4. Check the RCD's status. Ensure it is in the "ON" position. If the RCD has tripped and is in the "OFF" position, switch it back to "ON".

5. Press the test button on the RCD to ensure it is functioning properly. The RCD should trip and disconnect the power. Then, switch the RCD back to the "ON" position.
6. Check the emergency stop button on the front panel of the device. If it is pressed, rotate it clockwise to disable the emergency mode.

7.2.2 Start and operation

1. Start the device using the rotary switch: turn it counterclockwise to switch on.
2. Start the fan using the rotary regulator on the side of the control panel by turning it clockwise. During operation, you can adjust the fan speed (from 1 to 10) to achieve the desired cleanliness of the crushed product.
3. Place a suitable collection container at the nibs outlet.
4. Install the protective mesh in the loading hopper for cocoa beans.
5. Load cocoa beans into the hopper. Do not exceed the stated maximum load of 5 kg.
6. Ensure the husk discharge shutter is closed.
7. Adjust the feed window by moving the slide in the crushing unit to increase separation speed.
8. To improve nib quality, repeat the separation process without grinding. For this, remove the baffle on the left side of the separator and install the funnel for reprocessing nibs without grinding.
9. If stones or other foreign objects enter the grinding unit, the blades will jam, and the crusher will stop. To unblock the blades, turn the rotation direction switch clockwise to the right. The blades will rotate in reverse. Set the switch to the middle position to stop blade rotation. Then remove the stone and resume work.
10. To prevent the motor reducer from overheating, take a 15-minute break after every two hours of continuous operation.
11. To turn off the device, perform the following steps:
    - Rotate the rotary switch clockwise to turn off the device.
    - Switch the circuit breaker on the rear panel of the device to the "OFF" position.
    - Ensure the RCD is in the "OFF" position.

7.3 First start and subsequent operation

1. Before starting the machine, make sure that the circuit breaker (MCB) and residual current device (RCD) are in the ON position.
2. Turn the start button to the left to power on the device.
3. Ensure that all shutters are in the correct position: the husk discharge shutter is closed, and the nib feed shutter is open.
4. In case of an emergency stop, press the stop button.
5. After an emergency stop or power failure, the crusher will not restart automatically.

7.4 Separator mode operation

During separation mode, you may disable grinding:

- Remove the protective plate.
- Install the hopper.
- Adjust the airflow.
- To increase separation speed, adjust the feed window using the shutter in the grinding unit.
- To improve nib purity, adjust the discharge shutter for nib output.
- Fill the hopper.



ATTENTION

Remember to clean the hopper of husks.

8. Cleaning and sanitation after use

8.1 General requirements

Clean the machine after production to prevent accumulation of cocoa particles, husks, fats, dust, allergens and foreign matter. Cleaning shall be carried out only by trained personnel with the machine switched off and disconnected from power.



WARNING

ELECTRIC SHOCK HAZARD. Never wash the control panel, switch box, motor or other electrical components with running water. Do not use a pressure washer or immerse electrical parts.

8.2 Cleaning frequency

- After completion of production.
- Before processing a product where cross-contact or flavour transfer must be avoided.
- Whenever excessive husk or dust accumulation is visible.
- After a jam or foreign-object incident.
- Before returning to service after storage, maintenance or repair.

8.3 Cleaning procedure

1. Switch off, disconnect power and wait for all moving parts to stop.
2. Empty remaining cocoa beans, nibs and husks.
3. Remove the lower hopper/collection components intended for routine removal.
4. Open the two tension locks on the left side of the housing and lift the separator chamber cover.
5. Open the service door and remove loose husk, nib and dust residues from internal accessible areas.
6. Wipe the housing with a damp cloth.
7. Clean the separator chamber and removable food-contact components using suitable food-safe cleaning agents.
8. Prevent water or cleaning solution from entering the electrical panel.
9. Dry all components completely before reassembly.

8.4 Dust bag and airflow system

- Inspect the dust filtration and collection bag regularly and empty it before it becomes excessively full.
- Keep the polyurethane air duct free from blockage, collapse and accumulated product dust.
- Inspect the fan/air filter regularly and replace it as required.
- Do not operate the airflow system with damaged or incorrectly fitted filtration components.

8.5 Drying and reassembly

- Allow cleaned parts to dry completely in a clean area.

- Reinstall the lower hopper, separator cover, husk collection tank, dust bag, ducts, protective mesh and all removable components.
- Close and secure all latches and covers.
- Confirm that no cloths, brushes, tools or foreign objects remain inside.
- Reconnect power only after the machine is fully assembled and dry.

9. Maintenance and repair

9.1 General information

Before commencing any maintenance work, the crusher and winnower for cocoa beans must be disconnected from the electrical supply and all necessary safety precautions must be taken.

At the beginning and the end of each maintenance, dust and other trash should be removed with a vacuum cleaner. Suitable solvents can be used if necessary.

After maintenance or repair involving safety-related, electrical or mechanical components, the machine must be inspected by qualified personnel before being returned to service.

9.2 Routine inspection

Routine inspection supports safe operation and stable separation quality. The operator may perform cleaning and visual checks described in this manual. Repairs and internal electrical or mechanical work must be performed by qualified personnel.

Frequency	Check
Before each use	Power cable/plug, emergency stop, guards and protective mesh, hoppers, shutters, ducts, dust bag, wheel stability, absence of foreign objects.
During operation	Abnormal noise or vibration, product flow, nib purity, husk accumulation, dust collection, motor overheating, airflow consistency.
After each use	Cleanliness of separator chamber, crushing area, hoppers, nibs outlet, husk tank and dust system.
Regularly	Condition of fan/air filter; replace as required. Inspect fasteners, latches, ducts, wheels and accessible electrical components for damage.

9.3 Troubleshooting

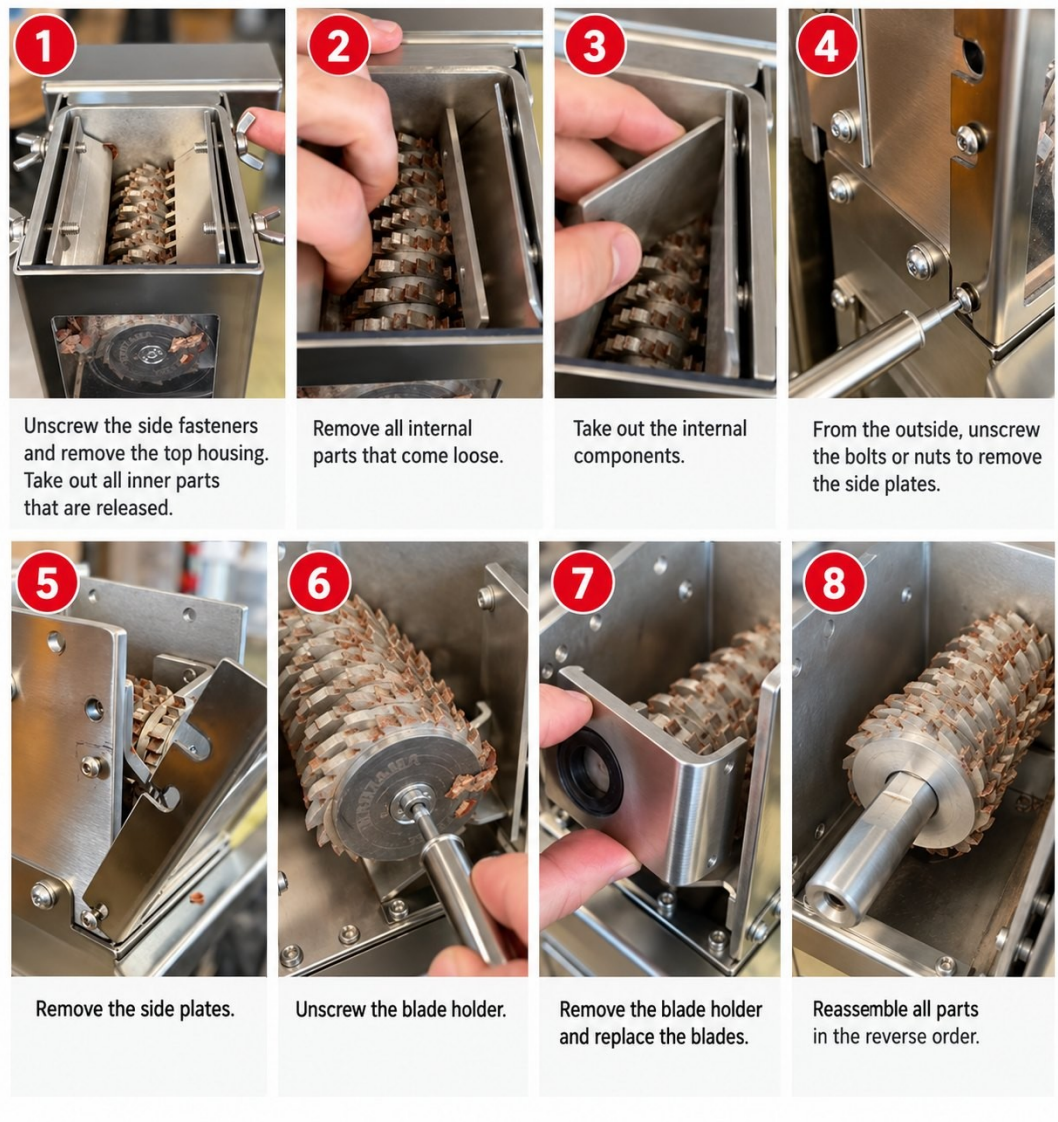
Problem	Possible cause / action
Machine does not start	Check the power connection, automatic switch, RCCB/RCD, emergency stop and ON/OFF control. Confirm that the supply is 220 V / 50 Hz and grounding is present.
RCCB/RCD trips	Stop use. Check for moisture, damaged cable/plug or an electrical fault. Do not bypass the protective device; contact qualified service personnel.
Blades jam	Stop feeding. Use the reverse function only as described to release the jam, then disconnect power and remove the foreign object. Inspect the crushing unit before restart.
Poor husk separation	Adjust airflow gradually and check feed/purity shutters. Inspect for a blocked duct, full dust bag or contaminated air filter.
Too many nibs in husk stream	Airflow may be too high or separator settings too aggressive. Reduce airflow and readjust shutters.

Problem	Possible cause / action
Too much husk in nibs	Airflow may be too low or feed too fast. Increase airflow gradually and/or reduce feed rate.
Abnormal noise/vibration	Stop immediately. Check for foreign objects, loose components or damage. Do not continue operation until the cause is identified.
Motor/reducer overheats	Stop and allow the machine to cool. Confirm compliance with the required 15-minute break after every two hours of continuous operation and check ventilation.

9.4 Blades replacement

The blades should be inspected periodically for signs of wear. When the blades become noticeably dull or no longer crush the cocoa beans effectively, they should be replaced.

Blade wear is not covered by the warranty, as it is considered normal wear and tear. Regular inspection and timely replacement of the blades are part of the routine maintenance of the Crusher & Winnower.



You can also watch a step-by-step video showing how to replace the blades using the link: https://youtu.be/71lG7DFvzEw

10. Disposal



ENVIRONMENT

All components of this equipment must be disposed of in accordance with the applicable laws of the country in which it is disposed of. All electronic and electrical materials must be separated, and all rubber and plastic components must be disposed of separately.

11. Warranty

Kadzama provides a 1-year warranty for this equipment model. This warranty covers failure of the electrical or mechanical components included in it, when used properly and in accordance with all instructions contained in this manual. During the warranty period KADZAMA will repair or replace any component found to be defective due to manufacturing or material defects, free of charge.

The manufacturer is not responsible for damage that occurs during transportation after the equipment has been handed over to the carrier, subject to the applicable delivery terms.

For this reason, additional cargo transport insurance is arranged for the shipment to provide protection against possible loss or damage occurring in transit. Upon receipt of the equipment, the customer must carefully inspect the shipment before accepting it from the carrier and the checklist provided by the manufacturer must be completed and submitted in order to activate the warranty coverage.

This warranty does not cover defects or damage resulting from:

- improper installation or commissioning;
- operation contrary to this Operating Manual;
- inadequate cleaning or maintenance;
- normal wear of consumable and wear parts;
- mechanical damage, impact, corrosion, or chemical attack;
- modifications or repairs performed without prior written approval from KADZAMA;
- use of non-original spare parts or accessories;
- damage caused by improper electrical connection or unstable power supply.

Any warranty repair or replacement shall be carried out by KADZAMA or an authorised service representative. In cases where repairs must be performed at the service center, the manufacturer covers the cost of transporting the equipment during the warranty period. Cleaning of equipment or its parts is not covered by the warranty.

This manufacturer's commercial warranty is provided by KADZAMA Slovenia, and is governed by the applicable laws of the Republic of Slovenia, including the Consumer Protection Act (ZVPot-1) where applicable. This warranty does not affect any mandatory statutory rights that the purchaser may have under the applicable legislation.