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PFEUFFER

Operating Instructions

Pellet mill

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Revision 3/18.01.2021
Translation of the original operating instructions

These Operating Instructions are a constituent part of the pellet mill and must be available to all operating personnel at all times. They are intended for the operating company of the system, the operating personnel and the specialists who are responsible for the transport, assembly, installation, operation, maintenance, cleaning, disassembly and disposal.

The Pfeuffer GmbH has prepared and reviewed these Operating Instructions with the greatest care. However, no guarantee is made for its completeness or accuracy.

Subject to technical modifications.

Translation

If the system is being supplied or subsequently sold to countries of the EEA, the Operating Instructions must be translated into the language of the country of use accordingly.
If there are any discrepancies with the translated text, then use the original Operating Instructions (German version) or contact the manufacturer.

Operating Instructions in electronic format

PDFs of the original Operating Instructions (German version) and translations of the original Operating Instructions can be requested by e-mail: doku@pfeuffer.com
Ensure the correct type designation and serial number is stated!

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(DIN ISO 16016)

1 Introduction

1.1 Intendend use

The pellet mill is used for sample preparation and is ideal for the pre- and fine grinding of feeding stuff in form of pellets, grist, cake and granulate.
The ground material is intended for further quality control (determination of the parameters moisture, protein, oil content, etc.), e. g. by a suitable NIR analysis device.

The pellet mill is designed as a portable machine with a CEE power plug for dry interiors. The pellet mill may not be used as a production machine or put into continuous operation!

Private use of the pellet mill is prohibited.

NOTE	The pellet mill was designed solely for the aforementioned purpose. Using it for any other purpose or modifying it without the written consent of the Pfeuffer GmbH is not considered to be in compliance with the intended use. The Pfeuffer GmbH shall not be liable for the resulting damage. Damage caused by such an unintended use is at the sole risk of the operator. The pellet mill is allowed to be operated only if it is ensured that all the safety devices are functional. **The pellet mill is not suitable for the grinding of** • **liquid and sticky products** • **objects made of metal, stone, concrete, plastic or other foreign components** • **foodstuffs intended for human consumption.** The samples to be used for the correct operation of the pellet mill are provided by the operator. The operator bears sole responsibility for the proper handling of these materials and the associated dangers. Hazard notes and instructions for disposal must be provided by the operator.

Intended use includes also the compliance with the Instruction Manual and User´s Guide as well as the maintenance and servicing conditions, as specified in these Operating Instructions.

These Operating Instructions do not relieve the operating company of the obligation to develop and to apply independent health and/or safety regulations or safe working processes which are aimed at the requirements of the overall machine, as well as the obligation to monitor their compliance.

1.2 Declaration of conformity

EC/EU Declaration of conformity

In terms of the EC/EU directives
- machinery 2006/42/EC and
- electromagnetic compatibility (EMC) 2014/30/EU

Manufacturer: **Pfeuffer GmbH**
Flugplatzstraße 70
97318 Kitzingen
GERMANY

Person authorized to compile technical documents: Lothar Pfeuffer, General Manager

Product: **Pellet mill** Serial number: _____

The product mentioned above fulfils the requirements of the following applicable directives and standards:

Directive / Standard	Title
2006/42/EG	EC-directive: machinery
DIN EN ISO 12100:2010	Machine safety – General principles for design – Risk assessment and risk reduction
DIN EN 60204-1:2006	Machine safety; electrical equipment of machines; part 1: General requirements
2014/30/EU	EU-directive: electromagnetic compatibility
DIN EN 61000-6-2:2006	Electromagnetic compatibility – Part 6-2: Generic standards - Immunity standard for industrial environments
DIN EN 61000-6-3:2007	Electromagnetic compatibility – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments

This declaration shall become null and void should any alterations be made to the pellet mill without our approval.

Kitzingen, _____ _____

Lothar Pfeuffer, General Manager

1.3 Design characteristics of hazard warnings

The Pfeuffer GmbH Operating Instructions contain information which must be observed for the sake of your personal safety and to avoid damage to property. Information concerning your personal safety is shown by means of a triangle.

Note the following categories of hazard warnings and explanation of symbols:

Pictogram	SIGNAL WORD
	Type of hazard and its source. Possible result of its disregard. ⇨ Measure to ward off the hazard.

	DANGER
	warns against a very dangerous situation that results in death or serious injuries.

	WARNING
	warns against a dangerous situation that can potentially result in death or serious injuries.

	CAUTION
	warns against a potentially dangerous situation that results in minor or moderate injuries.

NOTE	warns against situations that are dangerous for the product and/or the environment.

1.4 Pictograms in the Operating Instructions

	Remarks of special importance and/or additional information		Warning
	Follow the Operating Instructions		Warning – Electrical Voltage
	Pull the mains plug		Warning – Hand injuries
	Unlock before maintenance and cleaning		Warning – Counter-rotating rollers

	Use protective clothing		Earth conductor
	Use eye protection		Recycling marking – Supply refuse for recycling
	Danger to eyes from flying parts		Do not bind in

1.5 Abbreviations in electrical engineering

Color abbreviations for the individual strands (conductors) of a cable according to DIN IEC 60757:

Color	Color abbreviations	Color	Color abbreviations
Black	BK	Violet	VT
Brown	BN	Gray	GY
Red	RD	White	WH
Orange	OG	Pink	PK
Yellow	YE	Turquoise	TQ
Green	GN	Green-yellow	GNYE
Blue	BU		

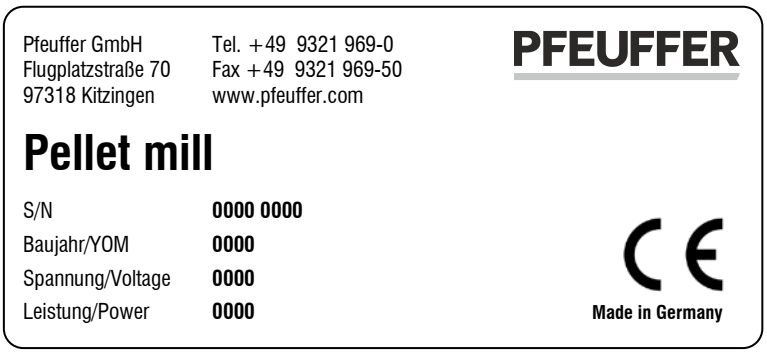
Conductor designations according to DIN VDE 0293-308:

L	Live conductor, phase (outer conductor)	Color abbreviations
L1	Outer conductor 1	BN
L2	Outer conductor 2	BK
L3	Outer conductor 3	GY
N	Neutral conductor	BU
PE	Protective earth conductor	GNYE

1.6 Identification

The information provided in these Operating Instructions applies only for the machine whose type designation is specified on the title page. The identification plate with the type designation is located on the side of the housing. Correct information of type designation, serial number and year of manufacture is important for all queries. This ensures fast processing.

Example of a Pfeuffer GmbH identification plate:



2 Safety

NOTE **It is strictly prohibited to deactivate the safety devices or modify their mode of effect.**

2.1 Installed safety systems

The installed safety systems must be checked with corresponding test methods at regular testing intervals; refer to the following table:

Test intervals			Test methods		
d	=	daily	**VI**	=	visual inspection
w	=	weekly	**FT**	=	functional test
m	=	monthly	**M**	=	measurement
¼ y	=	quarterly			
½ y	=	half-yearly			
y	=	yearly			

DANGER

Manipulated and disabled safety equipment!

Severe Injuries!

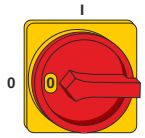
⇨ The pellet mill should not be operated!

⇨ Pull the mains plug!

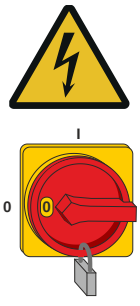
2.1.1 Mains disconnector

Test	
Interval	Method
y	**FT**

The main switch **ON/OFF (I/0)** with motor protection switch is the mains disconnector, and also serves as the EMERGENCY OFF function. It is located on the right side of the device.



⇨ In an emergency, disconnet the pellet mill from the electrical power supply using the main switch position **0/OFF**.



DANGER

Risk of fatal injury from unauthorized or uncontrolled restarting!

⇨ Lock the main switch using a padlock to prevent it from being switched back on.

⇨ Before switching on again, make sure that all safety devices are installed and in working order and that there are no hazards for persons.

2.1.2 Motor protection switch

Test	
Interval	Method
See DGUV regulation 3	

In the event of overload tripping, the motor protection switch (EATON, type PKZM0) automatically switches off the main circuit.

NOTE If the motor protection switch trips, first disconnect the CEE mains plug and rectify the cause of the fault. Then plug in the CEE mains plug again and switch on the main switch.

2.1.3 Protective cover and safety switch

Test	
Interval	Method
m	**VI, FT**

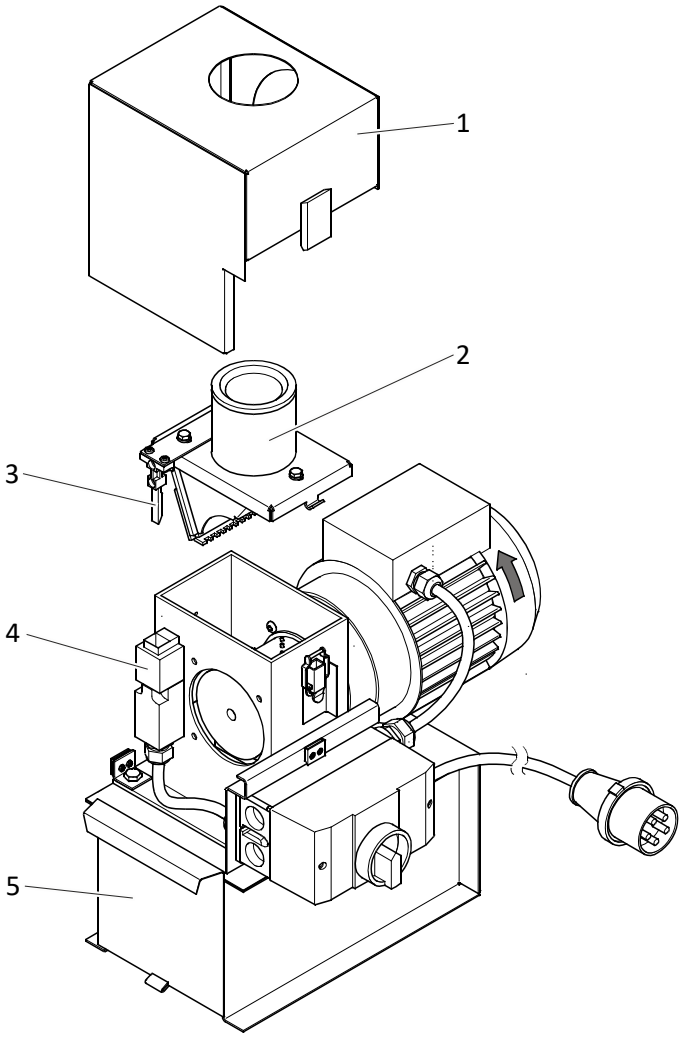
The pellet mill is protected from intervention in the machine by the complete housing and a protective cover with safety switch. A lamella grille prevents access from below into the milling chamber (without drawer).

⚠ WARNING

Risk of crushing! Injuries to hands and fingers!

Risk of entanglement! Risk of injury from moving components!

- ⇨ Do not reach into the working area of the moving parts during operation.
- ⇨ Never open protective covers during operation.
- ⇨ Wear work protective clothing with low tear resistance in the danger area.



Item	Designation
1	Protective cover
2	Filling
3	Actuator pin
4	Safety switch
5	Drawer (Louvred grille to milling chamber)

Figure 1: Protective covers

2.2 Operating and danger areas

Operating area

Make sure the installation height is sufficient (according to the stature of the operating personnel). A suitable base (e. g. table) is required for this.

Danger area

The entire area one meter around the pellet mill is a danger area during maintenance and repair work. Keep the area around the pellet mill clear of objects.

2.3 Operating and maintenance personnel

Operating and maintenance personnel are people who are responsible for transport, assembly, installation, operation, setup and cleaning of the pellet mill, and for eliminating malfunctions.

1. The pellet mill is only allowed to be operated by authorized and instructed people.
2. The responsibilities for operating the pellet mill must be clearly defined and complied with so that no unclear competencies arise with regard to the aspect of safety.
3. The switch-off procedures specified in the operating instructions must be complied with during all work (operation, maintenance, repair, etc.), see **chapter 2.9.**
4. The operator must refrain from any working method that impairs safety on the pellet mill.
5. The owner must ensure that only authorized people work on the pellet mill.
6. The owner is obliged to report immediately to the owner any changes that take place on the pellet mill which impair safety.
7. The operating personnel must be provided by the owner with appropriate protective equipment in accordance with legal requirements and the material to be processed.
8. The owner must issue regular instructions regarding the use of personal protective equipment, and must check such equipment is being used.

2.4 Safety measures (to be carried out by the owner)

It should be noted that the owner is responsible for the following aspects with regard to the operating and maintenance personnel

- ⇨ Providing instruction in the protective devices for the pellet mill
- ⇨ Monitoring compliance with the safety measures.

The frequency of the function tests described in **chapter 8.4** must be complied with.

The work described in these operating instructions is configured in such a way that

- ⇨ it is explained in the chapters Function and Operation for the operating personnel
- ⇨ it is explained in the chapters Delivery**,** Transport and storage, Installation and commissioning, Maintenance and cleaning, Malfunctions – causes and rectification and Dismantling and disposal for a **specialist operator**.

The chapters Delivery, Transport and storage, Installation and commissioning, Maintenance and cleaning, Malfunctions – causes and rectification and Dismantling and disposal are **only intended for specialist operators**. Work described in this chapter is only to be carried out by **specialist operators**.

Instructed person

A person who has been instructed and, if necessary, trained by a **specialist operator** regarding the tasks assigned to him/her and the possible dangers in the event of incorrect conduct, and who has also been instructed regarding the necessary protective devices and protective measures.

Specialist operator

An individual who, due to his/her relevant specialist training and/or experience, is capable of recognizing risks and avoiding dangers that may occur during use of the product.
(Definition according to DIN EN 82079-1:2013-06)

2.5 Obligations of the operator

The operator must ensure that all employees who handle the machine have read and understood the operating instructions.

In the European Economic Area (EEA), national implementation of the framework directive 89/391/EEC and corresponding individual directives, in particular the directive 2009/104/EC "concerning the minimum health and safety requirements for the use of work equipment by workers at work", as amended, are to be observed and adhered to.

In addition, he/she must comply with the local legal requirements on:

- ⇨ Safety of personnel (accident prevention regulations)
- ⇨ Accident prevention regulation DGUV Regulation 3 (previously BGV A 3) "Electrical systems and equipment" (DGUV = Association of German Statutory Accident Insurance)
- ⇨ Safety of work equipment (protective equipment and maintenance)
- ⇨ Permitted noise load (depending on the site and time of day)
- ⇨ Product disposal (waste legislation)
- ⇨ Material disposal (waste legislation)
- ⇨ Cleaning (cleaning agents and disposal)
- ⇨ Hazardous substances (in Germany, the technical rules for hazardous substances – TRGS 555 apply)
- ⇨ Environmental protection regulations.

Electrical connections

The power connection must be made in Germany according to DIN VDE 0100 (international IEC 60364).

Illuminance

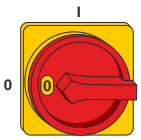
The owner must ensure that there is adequate and homogeneous illumination in all areas.

At least 300 lux is recommended (maintained illuminance).

In Germany, ASR A3.4 applies (technical rules for workplaces - lighting).

2.6 General safety notes

The safety equipment and safety notes described in these operating instructions must be complied with.



- ⇨ Disconnect the pellet mill from the electrical power supply in the event of malfunctions and during maintenance and cleaning work:
- ⇨ Switch off the pellet mill via the main switch (position **0/OFF**).
- ⇨ Disconnect the power cable from the electrical power supply.

- ⇨ Never touch the mains cable with moist hands.
- ⇨ Do not allow the pellet mill to get wet during transport, storage, cleaning and operation.
- ⇨ Make sure that the pellet mill is only operated when in correct working order.
- ⇨ Only use genuine spare parts and accessories (see **chapters 10**).

2.7 Safety tests

Pfeuffer GmbH carried out the following safety tests at the factory:

Testing and checking according to DIN EN 60204-1:

- Check that the electrical equipment is in compliance with the technical documentation.
- Continuous connection of the protective earth system
- Insulation resistance tests
- Voltage tests
- Protection against residual voltages
- Function tests

The functions of the electrical equipment, in particular those relating to safety and protective measures, have been tested.

2.8 Residual dangers in connection with the pellet mill

- ⇨ During all work on electrically operated components, pay attention to dangers from electrical current!
- ⇨ Pay attention to the risk of injury from ejection of ground material or other parts!
- ⇨ Wear eye protection during operation!
- ⇨ Pay attention to the risk of injury from moving parts when you are in the danger area of the pellet mill!
- ⇨ Pay attention to the risk of injury from falling down of the pellet mill when lifting!
- ⇨ Wear personal protective equipment during maintenance and cleaning work in the danger area!

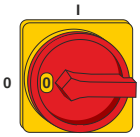
2.9 Switch-off procedure

DANGER

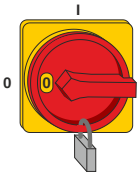
Touching live parts can be fatal!

It is essential to comply with the following switch-off procedure prior to cleaning, maintenance or repair work (only by specialist personnel):

⇨ Establish a voltage-free state on active parts of electrical systems and equipment. Ensure this for the entire duration of the work!



⇨ In an emergency, disconnet the pellet mill from the electrical power supply using the main switch position **0/OFF**.



DANGER

Risk of fatal injury from unauthorized or uncontrolled restarting!

⇨ Secure the main switch with a padlock to prevent it from being switched on again.

⇨ Disconnect the mains cable from the electrical power supply.

⇨ The mains cable must be able to be kept under the direct supervision of the person in the danger area.

⇨ During cleaning, make sure that no water, steam or dust can penetrate the electronics area. This can lead to a short circuit.

⇨ Before switching on again, make sure that all safety devices are installed and in working order and that there are no hazards for persons.

3 Technical data

Pellet mill	Laboratory mill
Products	Foodstuff in the form of pellets, grist, cake and granules
Milling capacity (One run)	3 kg
Drawer capacity	max. 5 litre

3.1 Dimensions and weight

Dimensions with hopper	356x438x556 mm
Weight	approx. 25 kg

3.2 Power supply

Operating voltage	3 AC 400 V
Frequency	50 Hz ±1 %
Power consumption	0.55 kW
Number of phases	3 Ph / N / PE
protective conductor	PE (GNYE)
Installation regulation	Configured according to VDE

3.3 General data

Ambient temperature storage and transport	-20 °C to +60 °C
Ambient temperature in operation	-20 °C to +40 °C
Atmospheric humidity	20 % to 80 %, non-condensing
Noise level	$L_{pA} < 70\ dB_{(A)}$
Motor	Protection IP54 according to DIN EN 60529

4 Delivery, transport and storage

The Delivery, transport and storage chapter is only intended for **specialists**.

4.1 Scope of delivery

The standard scope of delivery to the owner comprises:

1. Pellet mill
2. Operating Instructions

4.2 Transport and packaging

Systems, machines and devices from Pfeuffer GmbH are carefully tested and packaged prior to dispatch, however it is not possible to exclude the risk of damage during transport.

Incoming check

Check for completeness with reference to the delivery note.

In case of damage

Check the delivery for damage (visual inspection).

In case of complaints

If the delivery suffered damage in transit:

⇨ Keep the packaging (to allow it to be checked subsequently by the forwarding company, or for sending back).

⇨ Immediately inform the supplier or Pfeuffer GmbH.

4.3 Intermediate storage

The freight packaging of the pellet mill and the accessory/replacement parts is configured for a storage duration of up to six months from delivery.

⇨ Do not place any heavy objects on the packaging.

Storage conditions

Enclosed, dry room with a room temperature between min. -20 °C and max. +60 °C.

4.4 Transport to the installation site (by the customer)

The transport is only allowed to be untertaken by specialist personnel according to the local conditions and any information indicated on the packaging material.

Unpacking

To avoid damage to the housing and other components,

- ⇨ open the packaging
- ⇨ remove the accessory box
- ⇨ remove the packaging elements
- ⇨ lift the pellet mill out of the box by the handle of the drawer and the motor as shown in **Figure 2.**
- ⇨ keep the original packaging in case you need to send the equipment back.

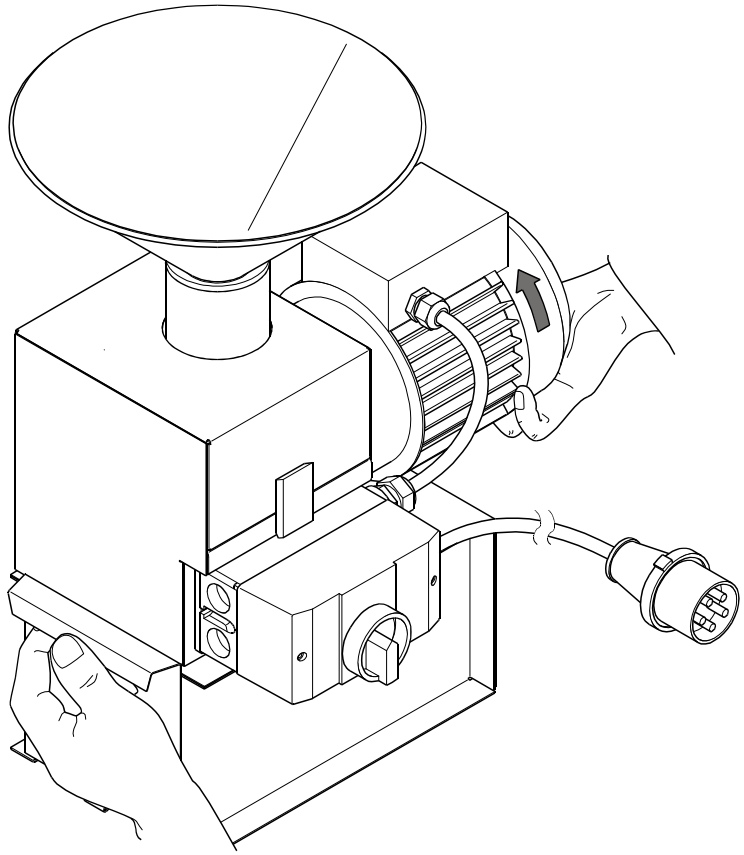


Figure 2: Transport

Packaging for return delivery

- ⇨ If possible, use the original packaging and the original packaging material. If neither is available any longer, request new packaging from Pfeuffer GmbH.

5 Installation and commissioning

The installation and commissioning chapter is only intended for **specialists**.

5.1 Installation

⇨ Carefully unpack the pellet mill (see **chapter 4.4**).

⇨ Place the pellet mill level on a solid table with a smooth and clean surface.

⇨ Ensure an ergonomic installation height (table height 70 to 90 cm), depending on the size of the operating personnel.

⇨ The feed hopper should not be situated directly near the face of the operator. Sufficient horizontal and vertical distance must be maintained!

⇨ Do not set up the pellet mill close to apparatus/devices that are sensitive to vibration and dust.

⇨ Remove loose parts from the surroundings of the pellet mill. Cleaning see **chapter 8.1.**

⇨ Make sure there is an adequate distance to all sides so that no heat buildup can occur.

⇨ Avoid exposure to direct sunlight and extreme ambient conditions.

5.2 Commissioning

To commission the pellet mill, the rotational direction of the motor must be checked and, if required, changed.

⚠ WARNING

Expulsion of feedstuff particles or objects due to wrong rotational directional of the motor!

Danger of eye injuries!

⇨ Wear eye protection during operation!

⇨ Ensure that there is no sample material or other material in the filling or in the grinding mill!

⇨ Connect the CEE plug of the mains cable to a suitably earthed CEE socked with protective earth conductor.

⇨ Switch on the pellet mill for a test run.

NOTE

The rotational direction of the motor must be in accordance with the direction of the rotational direction arrow, which is situated on the fan casing of the motor (clockwise).

In case of a wrong rotational direction, an electrical specialist must change the pin assignment of the electrical socket

During the test run, there should be no contact between the grinding pins and milling comb. No grinding noise should be heard. If there is a grinding noise, adjust the milling comb see **chapter 8.3.2.**

6 Function

6.1 Overview

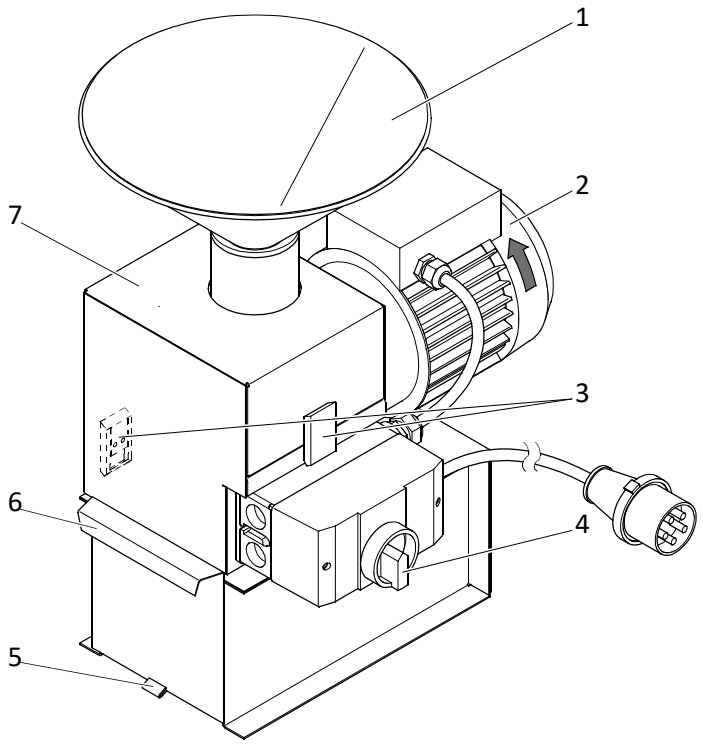


Figure 3: Overview

Item	Designation
1	Feed hopper
2	Drive motor
3	Latches
4	Main switch ON/OFF
5	Notch
6	Drawer
7	Protective cover

6.2 Sequence of functions

The sample material to be ground is fed into the hopper and falls into the grinding mill through the filling. The sample material is ground in the grinding mill between the grinding pins of the rotating pin roller and the stationary milling comb. The grist falls through a safety mesh into the drawer.

If finer grist is required, another grinding mill is available. Article number see **chapter 10.**

For precise information about operation, refer to **chapter 7.**

7 Operation

The pellet mill is only allowed to be operated by personnel who have been qualified and trained in its operation.

⚠ WARNING

Risk of crushing! Injuries to hands and fingers!

Risk of entanglement! Risk of injury from moving components!

- ⇨ Do not reach into the working area of the moving parts during operation.
- ⇨ Do not insert long, pointed objects into the hopper.
- ⇨ Never open protective covers during operation.
- ⇨ Wear work protective clothing with low tear resistance in the danger area.

⚠ WARNING

Expulsion of feedstuff particles!

Danger of eye injuries!

- ⇨ Wear eye protection during operation!

- ⇨ Attach the hopper.
- ⇨ Ensure that there is no old grist in the drawer.
- ⇨ Insert and latch the drawer.
- ⇨ Switch on the pellet mill at the main switch position **ON/I**.
- ⇨ Feed in the sample materila through the hopper.
- ⇨ Switch off the main switch position **OFF/0** of the pellet mill after the grinding procedure.
- ⇨ Unlatch the drawer and pull it out. The grist can now be collected.

NOTE	To avoid carryover of grist, the pellet mill should be cleaned every time the sample material is changed, see **chapter 8.1.1.** If there is sample material that is not ground remaining in the grinding mill, clean and remove any residue. If finer grist is required, another grinding mill is available, article no. see **chapter 10.**

8 Maintenance and cleaning

The Maintenance and cleaning chapter is only intended for **specialists**.

NOTE Inappropriate operation will invalidate the warranty.

To ensure trouble-free operation, it is essential for the pellet mill to be cleaned and maintained at regular intervals.

DANGER

Touching live parts can be fatal!

It is essential to comply with the switch-off procedure before cleaning, maintenance or repair work! (See **chapter 2.9**)

WARNING

Open grinding mill!

Risk of crushing! Injuries to hands and fingers!

Risk of entanglement! Risk of injury from moving components!

- ⇨ During cleaning, maintenance or repair work, pay attention to all rotating and moving components.
- ⇨ Wear work protective clothing with low tear resistance in the danger area..
- ⇨ During all work that is required, wear personal protective equipment according to the company health and safety regulations.
- ⇨ Pay attention to local statutory accident prevention regulations!

The times for carrying out cleaning and maintenance work are based on one-shift working (8 hour/day, 22 days/month, 12 months/year).

d	=	Daily	**¼ y**	=	Every three months
w	=	Weekly	**½ y**	=	Every six months
m	=	Monthly	**y**	=	Every year

8.1 Cleaning

NOTE Do not use any sharp objects or tools for cleaning. Only use objects that are expressly intended for this purpose.

During cleaning work, wear personal protective equipment according to the company health and safety regulations.

During cleaning, make sure that no water, steam or dust can penetrate the electronics area.

Cleaning	Rectification	Interval
Housing surface	With a clean, dry and lint-free cloth. Clean with a damp cloth in case of heavy contamination.	**w**
Stand area and surroundings	With a clean, dry and lint-free cloth. Clean with a damp cloth in case of heavy contamination.	**w**
Motor Cooling fins	With a clean, dry and lint-free cloth.	**m**

Pfeuffer GmbH recommends a complete cleaning before a longer standstill in order to keep the pellet mill ready for use.

8.1.1 Cleaning the grinding mill

Carry out the following steps for cleaning and monitoring of the pellet mill:

⚠ WARNING

Open grinding mill!

Risk of crushing! Injuries to hands and fingers!

Risk of entanglement! Risk of injury from moving components!

Severe injuries, if a body part, long hair or clothing gets caught in the pin roller!

⇨ It is essential to comply with the switch-off procedure! (see **chapter 2.9**).

⇨ Release both latches on the protective cover.

⇨ Remove protective cover.

⇨ Open both spring locks at the filling.

⇨ Remove the filling. Do not tilt the actuator pin while doing so!

⇨ Clean the grinding mill and filling with a brush

⇨ Remove residue from the protective mesh with a brush

⇨ Clean the drawer and the housing parts with a clean, dry and lint-free cloth.

⇨ Check the completeness of the grinding pins on the pin roller and check the milling comb for damage.If necessary, the pin roller and milling comb must be replaced by specialised personnel see **chapter 8.3.1** and **8.3.2.**

⇨ Check electric cables for damage. If necessary, the electric cables must be replaced by specialised personnel or contact Pfeuffer GmbH.

⇨ Insert filling. While doing so, plug the actuator pin into the safety switch carefully without tilting

⇨ Close both spring locks on the filling.

⇨ Put the protective cover in place.

⇨ Close both latches on the protective cover.

⇨ The pellet mill is ready to operate.

8.2 Maintenance

NOTE	The Pfeuffer GmbH expressly points out that the exchange of spare and wear parts requires some experience! This work should be performed only by a **qualified person**. The operator must be ensured that a test according to DIN VDE 0701-0702 is carried out before the pellet mill is put back into operation.

Maintenance is a part of servicing and refers to the scheduled cleaning, replacing operating supplies or consumables, checking and replacement of wearing parts. The aim of maintenance is to maintain the full functionality of the device over its lifetime.

The pellet mill should therefore be checked for wear and tear at regular intervals. The inspection intervals depend on the frequency of use and the ambient conditions to which the pellet mill is exposed. Only through regular checks (visual inspection) can damage to the device caused during use be detected early and reliably. Pfeuffer GmbH therefore recommend that this check will be carried out at least once a year.

If you are unsure whether your device is still completely ready for use, Pfeuffer GmbH's professional service team will be pleased to assist you.

NOTE	Keep all screws and removed small parts carefully. Metallic housing parts must be connected to the protective earth conductor. In this connection, make sure that • all original parts are reinstalled in the location intended for them. No excessively long screws are used, since these can cause short circuits or damage components inside the housing. • all grounding cables are reconnected and all screws are firmly tightened.

⚠ WARNING

Open grinding mill!

Risk of crushing! Injuries to hands and fingers!

Risk of entanglement! Risk of injury from moving components!

Severe injuries, if a body part, long hair or clothing gets caught in the pin roller!

⇨ It is essential to comply with the switch-off procedure! (see **chapter 2.9**).

⚠ WARNING

Incorrect assembly of pin roller and milling comb!

Damage to property or expulsion of parts (grinding pins) if the pin roller hits the milling comb due to rotational movement!

⇨ Align the milling comb according to the grinding pins

⇨ Turn the pin roller by hand to check it. There should be no contact between the grinding pins and milling comb. There should be no grinding noise

➢ If contact or grinding noise is found while checking, open the grinding mill again, loosen the milling comb and adjust over both the slotted holes. Screw on the milling comb again, close the grinding mill and check once again.

8.2.1 Changing pin roller

If the grinding mill is defective or too badly worn out, the pin roller and the milling comb can be replaced.

If finer grist is required, another grinding mill, consisting of a pin roller of 2 mm and a milling comb of 2 mm, can be retrofitted. Article number see **chapter 10.**

⇨ Release both latches on the protective cover.

⇨ Remove the protective cover.

⇨ Open both spring locks on the filling.

⇨ Remove the filling. While doing so, do not tilt the actuator pin.

⇨ Loosen the four screws on the cover panel.

⇨ Remove cover panel.

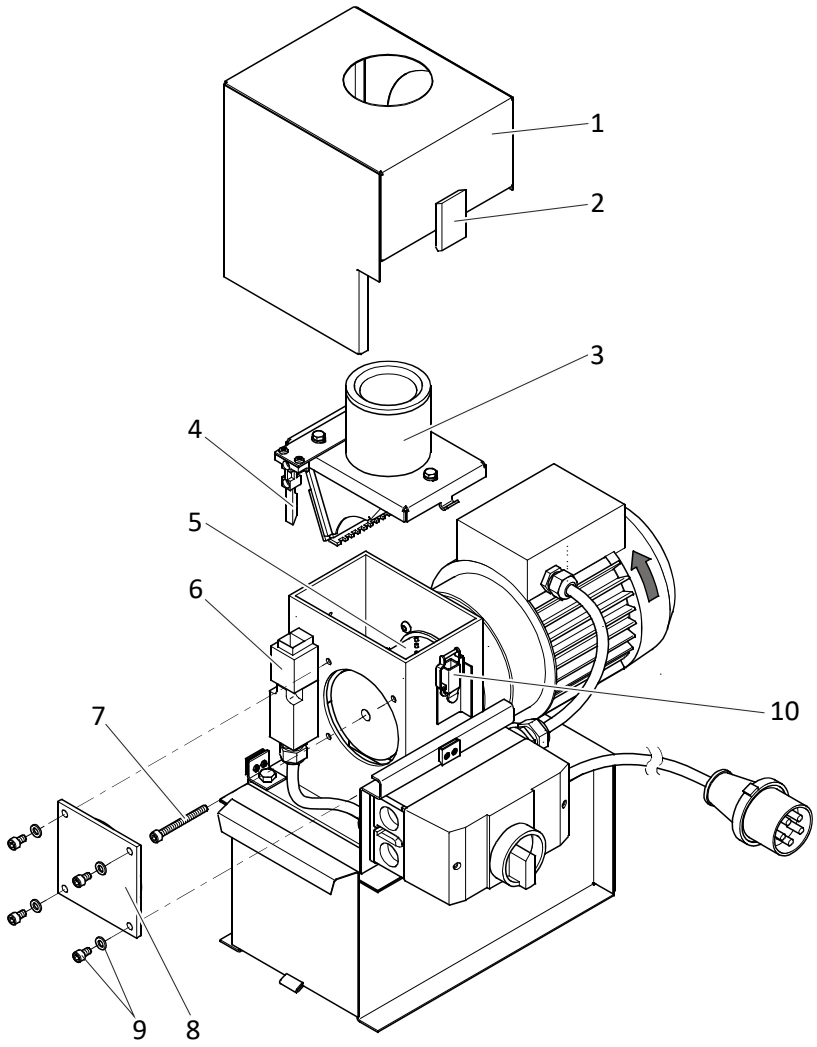


Figure 4: Change pin roller

Item	Designation	Item	Designation
1	Protection cover	6	Safety switch
2	Latches	7	Hexagon socket cylinder head screw M6x60 mm
3	Filling with milling comb	8	Cover panel
4	Actuator pin	9	Hexagon socket cylinder head screw M6x10 mm and washer
5	Pin roller	10	Spring lock

⇨ Unscrew the pin roller from the drive shaft by loosening the cylinder screw M6x60.

⇨ ERemove the pressing disc at the front end of the pin roller.

⇨ Remove the pin roller from the drive shaft. If the pin roller is stuck, use an extractor tool for this purpose. Article number see **chapter 10.**

⇨ Remove the notch from the pin roller. Use a plastic hammer to loosen the notch from the pin roller.

⇨ Insert a new pin roller over the notch. The locating pin must be fixed in the hole of the pin roller in doing so.

⇨ Slide the pin roller on to the drive shaft.

⇨ Mount the pressing disc and screw it on.

⇨ Insert the filling. While doing so, plug in the actuator pin carefully into the safety switch without tilting.

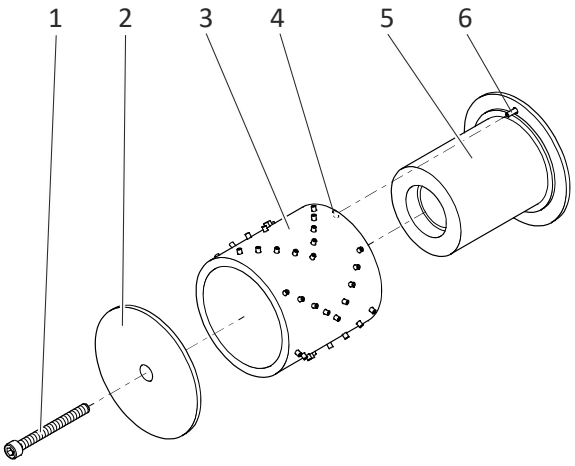


Figure 5: Dismount pin roller

Item	Designation
1	Hexagon socket cylinder head screw M6x60 mm
2	Pressing disc
3	Pin roller
4	Hole for locating pin
5	Notch for pin roller
6	Locating pin

⇨ Reattach all screws and components in reverse order.

8.2.2 Changing milling comb

⇨ Loosen both latches on the protective cover.

⇨ Remove protective cover.

⇨ Open both spring locks on the filling.

⇨ Remove filling. Do not tilt actuator pin while doing so!

⇨ Loosen the two hexagonal screws on the milling comb with an open-ended spanner SW10.

⇨ Remove the milling comb.

⇨ Mount and screw new milling comb.

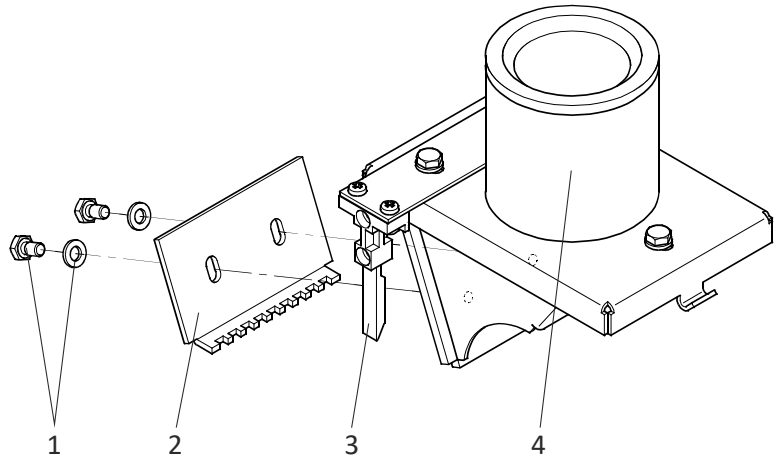


Figure 6: Change milling comb

Item	Designation
1	Hexagonal screws and washers
2	Milling comb with slotted holes
3	Actuator pin
4	Filling

⇨ Reattach all screws and components in reverse order.

8.3 Inspection interval and function test

Sub-assembly	Interval in one-shift working				
Normal function text	**w**	**m**	**¼ y**	**½ y**	**y**
Mains isolating device – main switch **ON/OFF**		**X**			
Labels and warning notes in place and legible (by visual inspection)					**X**
Check if wires are tight					**X**
Check whether all the plug, screw and clamped connections are tight and if necessary, re-tighten them			**X**		
Check protective covers for defects					**X**
Functional test of the drive motor				**X**	
Electrical test according to VDE	See DGUV regulation 3				

8.4 General maintenance instructions

Inspections	Interval
Correct and firm seating of the entire machine	**½ y**
Correct and secure position of the gear motor and the torque transfer elements as well as the torque transmission elements for wear and tear.	**½ y**
Correct and firm fit of the protective covers	**m**

8.5 Checks

At the end of the work, check the following:

⇨ The work carried out is complete.

⇨ Check the wiring in the housing for kinks, chafing or charred points.

⇨ Damage on the covers or insulation.

⇨ Check that no tools have been left in or on the machine.

⇨ All subassemblies function correctly in setup or manual mode.

⇨ All subassemblies function correctly in setup or manual mode.

NOTE	Following cleaning, maintenance or exchanging wearing parts, check that all safety devices are functioning correctly.

9 Malfunctions – causes and rectification

The information provided in this chapter about possible malfunctions is structured to be understood by specialists in electrical, electronic or mechanical maintenance.

Appropriate tools and test instruments must be provided to these personnel.

If the specified measures do not prove successful, contact Pfeuffer GmbH.

Problem	Cause	Rectification
The pellet mill shows no function.	No mains voltage.	Have a **qualified electrician** check and switch on the mains voltage.
	The main switch ON/OFF is in the OFF position.	Turn the main switch to the ON position.
Sample material is not ground and remains in the hopper.	Sample material is jammed in the grinding chamber.	Turn the main switch to the OFF position and disconnect the mains plug. Remove large product residues from the feed hopper and clean the grinding chamber if necessary, see **chapter 8.1.1.**

10 Spare parts and accessories

NOTE

We wish to point out expressly that replacement and accessory parts not supplied by us will not have been tested and approved by us either.

Installing and/or using such products can thus result in the design properties of the pellet mill being negatively impaired.

Pfeuffer GmbH cannot be held liable for damage attributable to the use of non-genuine parts and non-genuine accessories.

Standard parts can be obtained from the dealer.

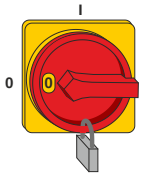
Repair and replacement work on the motor should only be carried out by a **specialist**.

If you have any questions, please contact Pfeuffer GmbH.

Spare part	Article number
Pin roller 3 mm	2360 0030
Milling comb for pin roller 3 mm	On request
Grinding mill consisting of pin roller 2 mm and milling comb for pin roller 2 mm	On request
Latch for protective cover	3131 1520
Spring lock for filling	3131 15010
Feed hopper	3361 0100

Spare part	Article number
Drawer with notch	3341 0010
Extractor tool for pin roller	On request
Motor	3251 1530

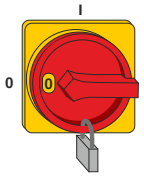
11 Emergency



⇨ In an emergency, switch off the pellet mill via the main switch in position **0/OFF** and disconnect all connections to the electrical power supply.

12 Demontage und Entsorgung

Dismantling is only allowed to be carried out by **specialists**.



⇨ Before you start dismantling, switch off the pellet mill via the main switch in position **0/OFF** and disconnect all connections to the electrical power supply.

The pellet mill must be disposed of in accordance with the applicable local environmental regulations (waste electrical and electronic equipment directive 2012/19/EU).

Special waste

Oil, cleaning agents, contaminated cleaning tools (brush, rags, etc.) must be disposed of according to the local regulations and in accordance with the notes in the manufacturers' safety data sheets.