Manual

Cutting Mill SM 300



Translation

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Retsch GmbH
Retsch-Allee 1-5
42781 Haan
Germany

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1 Notes on the Manual

This operating manual is a technical guide on how to operate the device safely and it contains all the information required for the areas specified in the table of contents. This technical documentation is a reference and instruction manual. The individual chapters are complete in themselves.
Familiarity (of the respective target groups defined according to area) with the relevant chapters is a precondition for the safe and appropriate use of the device.
This operating manual does not contain any repair instructions. If faults arise or repairs are necessary, please contact your supplier or get in touch with Retsch GmbH directly.
Application technology information relating to samples to be processed is not included but can be read on the Internet on the respective device's page at www.retsch.com.

Changes

Subject to technical changes.

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1.1 Explanations of the Safety Instructions

In this Operating Manual we give you the following safety warnings

Serious injury may result from failing to heed these safety warnings. We give you the following warnings and corresponding content.

WARNING

Type of danger / personal injury
Source of danger

– Possible consequences if the dangers are not observed.

• **Instructions on how the dangers are to be avoided.**

We also use the following signal word box in the text or in the instructions on action to be taken:
WARNING

Moderate or mild injury may result from failing to heed these safety warnings. We give you the following warnings and corresponding content.

CAUTION

Type of danger / personal injury
Source of danger

– Possible consequences if the dangers are not observed.

• **Instructions on how the dangers are to be avoided.**

We also use the following signal word box in the text or in the instructions on action to be taken:
CAUTION

In the event of possible **property damage** we inform you with the word “Instructions” and the corresponding content.

NOTICE

Nature of the property damage
Source of property damage

– Possible consequences if the instructions are not observed.

• **Instructions on how the dangers are to be avoided.**

We also use the following signal word in the text or in the instructions on action to be taken:
NOTICE

1.2 General Safety Instructions

CAUTION

Read the Operating Manual
Non-observance of these operating instructions

– The non-observance of these operating instructions can result in personal injuries.
- **Read the operating manual before using the device.**
- **We use the adjacent symbol to draw attention to the necessity of knowing the contents of this operating manual.**



Target group : All persons concerned with the machine in any form
This machine is a modern, high performance product from Retsch GmbH and complies with the state of the art. Operational safety is given if the machine is handled for the intended purpose and attention is given to this technical documentation.

You, as the owner/managing operator of the machine, must ensure that the people entrusted with working on the machine:
- have noted and understood all the regulations regarding safety,
- are familiar before starting work with all the operating instructions and specifications for the target group relevant for them,
- have easy access always to the technical documentation for this machine,
- and that new personnel before starting work on the machine are familiarised with the safe handling of the machine and its use for its intended purpose, either by verbal instructions from a competent person and/or by means of this technical documentation.

Improper operation can result in personal injuries and material damage. You are responsible for your own safety and that of your employees.
Make sure that no unauthorised person has access to the machine.

CAUTION

Changes to the machine

– Changes to the machine may lead to personal injury.
- **Do not make any change to the machine and use spare parts and accessories that have been approved by Retsch exclusively.**

NOTICE

Changes to the machine

– The conformity declared by Retsch with the European Directives will lose its validity.
– You lose all warranty claims.
- **Do not make any change to the machine and use spare parts and accessories that have been approved by Retsch exclusively.**

1.3 Repairs

This operating manual does not contain any repair instructions. For your own safety, repairs may only be carried out by Retsch GmbH or an authorized representative or by Retsch service engineers.

In that case please inform:

The Retsch representative in your country
Your supplier
Retsch GmbH directly

Your Service Address:

2 Confirmation

This operating manual contains essential instructions for operating and maintaining the device which must be strictly observed. It is essential that they be read by the operator and by the qualified staff responsible for the device before the device is commissioned. This operating manual must be available and accessible at the place of use at all times.
The user of the device herewith confirms to the managing operator (owner) that (s)he has received sufficient instructions about the operation and maintenance of the system. The user has received the operating manual, has read and taken note of its contents and consequently has all the information required for safe operation and is sufficiently familiar with the device.
As the owner/managing operator you should for your own protection have your employees confirm that they have received the instructions about the operation of the machine.

I have read and taken note of the contents of all chapters in this operating manual as well as all safety instructions and warnings.

User
Surname, first name (block letters)
Position in the company
Signature

Service technician or operator
Surname, first name (block letters)
Position in the company
Place, date and signature

3 Packaging, Transport and Installation

3.1 Packaging

The packaging has been adapted to the mode of transport. It complies with the generally applicable packaging guidelines.

NOTICE

Storage of packaging

– In the event of a complaint or return, your warranty claims may be endangered if the packaging is inadequate or the machine has not been secured correctly.

• **Please keep the packaging for the duration of the warranty period.**

3.2 Transport

NOTICE

Transport

– Mechanical or electronic components may be damaged.

• **The machine may not be knocked, shaken or thrown during transport.**

3.3 Temperature fluctuations and condensed water

NOTICE

Temperature fluctuations

The machine may be subject to strong temperature fluctuations during transport (e.g. aircraft transport)

– The resultant condensed water may damage electronic components.

• **Protect the machine from condensed water.**

3.4 Conditions for the Installation Site

Ambient temperature: 5°C to 40°C

NOTICE

Ambient temperature

– Electronic and mechanical components may be damaged and the performance data alter to an unknown extent.

• **Do not exceed or fall below the permitted temperature range of the machine (5°C to 40°C / ambient temperature).**

Atmospheric humidity:
Maximum relative humidity 80% at temperatures up to 31°C, decreasing linearly up to 50% relative humidity at 40°C

NOTICE

Atmospheric humidity

– Electronic and mechanical components may be damaged and the performance data alter to an unknown extent.
• **Do not exceed the admissible range for atmospheric humidity.**

3.5 Removing the Transportation Aid

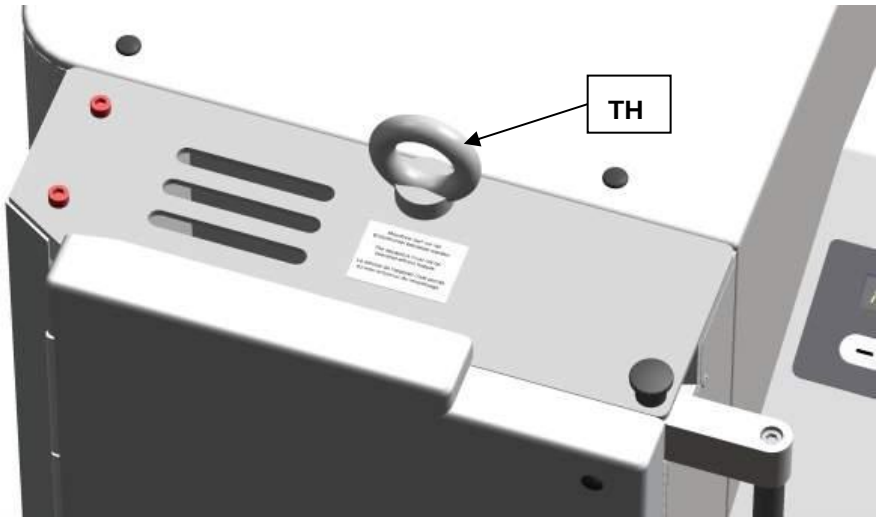


Fig. 1: Removing Transport Aid

Lift the device only by the transport aid (TH). The weight of the device is approx. 160 kg.
Choose a safe lifting sling that is approved for this weight.
Keep the eye bolt (TH) for transport again at a later date.
The eye bolt must be removed before the hopper is assembled.

3.6 Mounting the Feed Hopper

WARNING 1.W0004

Risk of injury to skin and hands
Fast rotating cutting blade

– There is a risk of injuring hands, fingers and skin.
• **Never operate the device without a feed hopper.**

NOTICE

Transport safeguard

– Components may be damaged.

• **Operate the machine only without the transport safeguard or transport the machine only with transport safeguard.**

3.6.1 Removing the Transport Safeguard

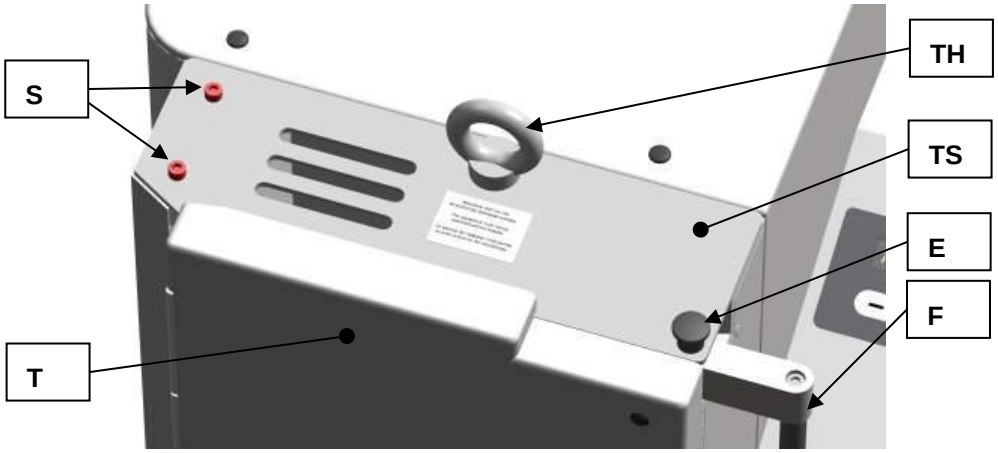


Fig. 2: Removing the Transport Safeguard

- Remove the transport aid (TH).
- Unlock the grinding chamber door by pulling the mini detent pin (E) upwards and pressing the handle of the door latch (F) backwards.
- Open the grinding chamber door (T).
- Remove the two locking screws (S).

NOTE

Keep the transport safeguard (TS) for transport at a later date.

3.6.2 Mounting the Feed Hopper

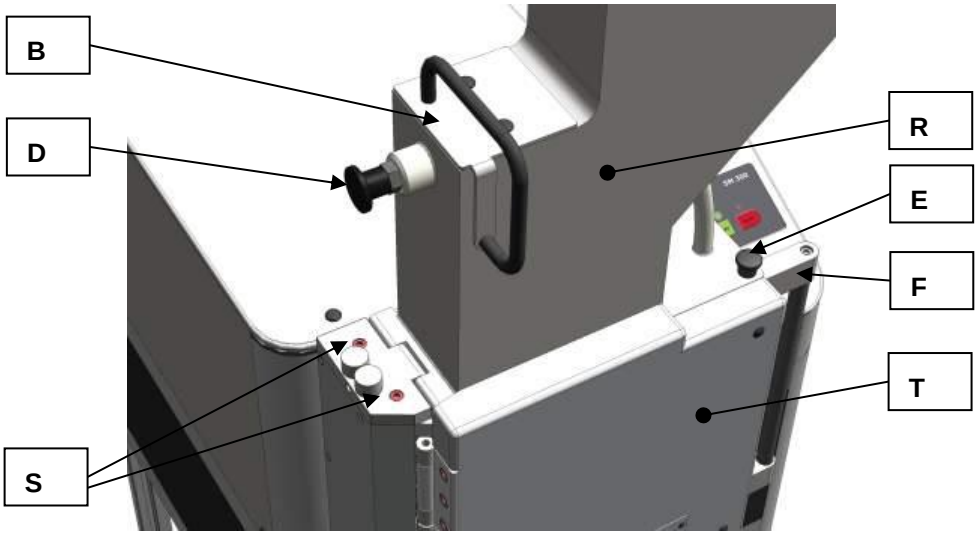


Fig. 3: Mounting the Feed Hopper

- Push the handle on the door latch (F) backwards.
- Open the grinding chamber door (T).
- Pull the plunger (B) into the upper latching position.
- Place the feed hopper (R) on the device. (see diagram)

⚠ CAUTION

Until the feed hopper (R) is secured by the two socket-head screws, there is a risk of it falling out of the device.

- Release the detent pin bolt (D) on the plunger (B).
- Push the plunger downwards.
- Screw the two provided socket-head screws (S) through the hinge on the feed hopper into the enclosure.
- At first, tighten the screws only slightly.
- Close the grinding chamber door.
- Pull the handle on the door catch (F) forwards until the mini detent pin (E) engages.
- Adjust the feed hopper until the plunger can be moved upwards and downwards easily without jamming.
- Tighten the two socket-head screws securely. (10Nm)
- Check again if the plunger moves upwards and downwards easily without jamming.
- Put the two protective caps (SK) onto the screws (S).

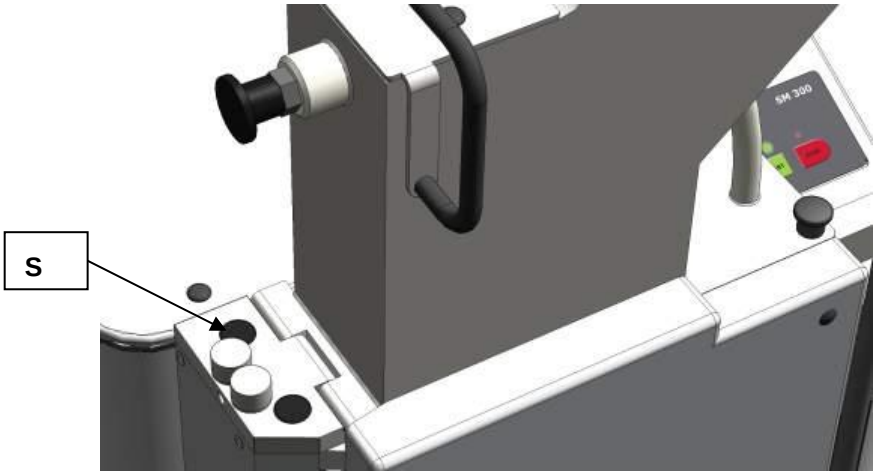


Fig. 4: Putting on the Protective Caps

NOTE

When new, the grinding chamber door and the handle on the door latch are somewhat difficult to move.

3.7 Installation of the Device

Installation height: maximum 2000 m above sea level

NOTE

Installation

– Depending on the operating status of the mill, there may be slight vibrations.

- **Place the mill on an even, flat and balanced supporting surface only. The supporting surface must be stable and must not vibrate.**

NOTICE

Installation of the machine

– It must be possible to disconnet the machine from the mains at any time.

• **Install the machine such that the connection for the mains cable is easily accessible.**

3.8 Height adjustment and alignment of the support structure

The height of two wheels on the support structure can be changed to compensate for an uneven surface and for the optimal alignment of the machine.

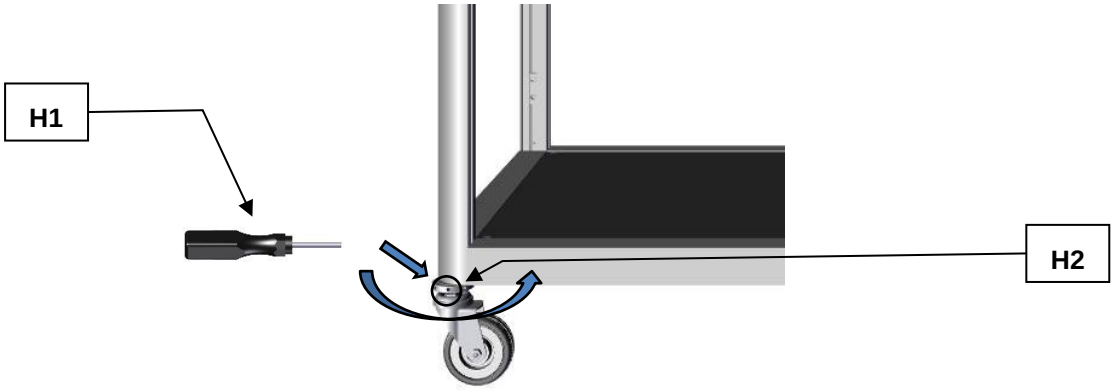


Fig. 5: Adjusting the height of the support structure

No.	Designation
H1	Locking pin
H2	Adjusting nut

Proceed as follows to adjust the height of the support structure:

- Place the supplied locking pin (**H1**) into an opening of the adjusting nut (**H2**) on the back wheel of the support structure.
- Use the locking pin (**H1**) as a lever and alter the height of the support structure by means of horizontal lever movements until the desired height has been reached.
- Repeat the process with the other wheel until the support structure has been aligned almost horizontally.

ⓘ When aligning the support structure, a backwards tilt of approx. 1-2° is recommended for an ideal operating function.

ⓘ We recommend using a spirit level to check the ideal incline of the support structure.

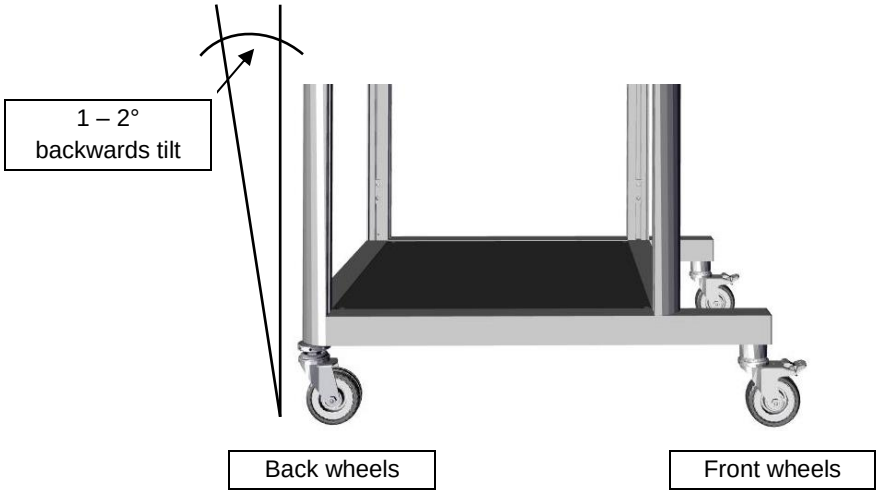


Fig. 6: Optimal alignment

3.9 Electrical Connection

⚠ WARNING

When connecting the power cable to the mains supply, use an external fusethat complies with the regulations applicable to the place of installation .

- Please check the type plate for details on the necessary voltage and frequency for the device.
- Make sure the levels agree with the existing mains power supply.
- Use the supplied connection cable to connect the device to the mains power supply.

NOTICE

Electrical connection

– Mechanical or electronic components may be damaged.

• **Please observe the information on the type plate.**

3.10 Type Plate Description

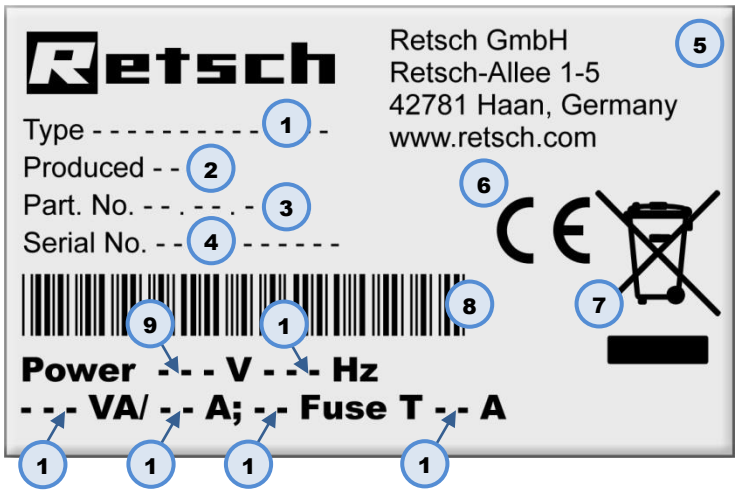


Fig. 7: Type plate lettering

1 Device designation
2 Year of production
3 Part number
4 Serial number
5 Manufacturer's address
6 CE marking
7 Disposal label
8 Bar code
9 Power version
10 Mains frequency
11 Capacity
12 Amperage
13 Number of fuses
14 Fuse type and fuse strength

In the case of questions please provide the device designation (1) or the part number (3) and the serial number (4) of the device.

4 Technical Data

4.1 Use of the Device for the Intended Purpose

Target group: Users, managing operators (owners)
Machine type designation: SM 300

The heavy-duty SM 300 cutting mill serves to grind flexible, hard-ductile and fibrous products and product mixtures in batches or continuously. The SM 300 is not designed for grinding wet or moist materials. The special shape of the cutting tools in conjunction with the drive enable fast, efficient grinding without adversely affecting the material being processed.

The following are the special characteristics
The new heavy-duty SM 300 cutting mill is convincing in difficult size reduction tasks where other cutting mills fail. The high torque of the new 3 KW drive with additional auxiliary flywheel mass allows a particularly effective preliminary size reduction of heterogeneous material mixes, such as waste or electronic components. Analytical fineness is usually attained in one step. The cutting mill is used successfully for a great variety of other materials also, whereby the grinding stock is warmed up only to a low degree during the grinding process so that the mill is also suitable for grinding temperature-sensitive materials.
A further innovation is the cutting mill's broad, freely selectable speed range from 100 to 3,000 rpm. The large selection of sieves, hoppers and collecting vessels allow the mill to be adapted to individual tasks.

– fast, gradual size reduction by 18 cutting plates spaced in a helical pattern along the circumference of the rotor
– parallel section rotor
– cutting tools which are made of high-quality materials and can be reused over and over again
– high level of operating convenience due to central lock and operator panel
– consistent operational reliability in all user-relevant equipment components
– versatility in use due to variant designs and a large number of accessories
– powerful size reduction thanks to the 3-KW motor's high torque
– perfect adaptation to the material being ground thanks to the variable speed from 100 to 3,000 rpm
– optimised cutting effect due to the double-acting cutting bars
– very fast cleaning thanks to hinged enclosure with smooth surfaces and push-fit rotor
– defined final fineness due to bottom sieves with aperture sizes 0.25 - 20 mm

NOTICE

Area of use of the machine

– This machine is a laboratory machine designed for 8-hour single-shift operation.
• **This machine may not be used as a production machine nor is it intended for continuous operation.**

4.2 Emissions

CAUTION

Damage to hearing
The level of noise can be high depending on the type of material, the knife used, the speed set and the duration of the grinding process.



- Noise that is excessive in terms of level and duration can cause impaired or permanently damaged hearing.

• **Ensure suitable sound-proofing measures or wear hearing protection.**

Noise measurement according to DIN 45635-31-01-KL3.
Emissions at 1-m spacing:
approx. 66 dB (A) at idle speed

During size reduction depending on the sample:
approx. 75 to 92 dB (A) with peaks up to 98 dB (A)

4.3 Degree of Protection

– IP20

4.4 Motor rotation speed

The motor speed is 100 - 3000 min^{-1} and can be adjusted in increments of 100 min^{-1}.

4.5 Receptacle Volume

The capacity is < 5 l.

4.6 Rated Power

– 200-240 V: 3000W, 16A

4.7 Dimensions and Weight

When closed: (including base frame and standard hopper)
Height: 1691 mm
Width: 795 - 1090 mm
Depth: 765 mm
Weight: approx. 160 kg

4.8 Required Floor Space

1090 mm x 765 mm - no safety spacing needed

5 Operating the Device

5.1 Views of the Instrument

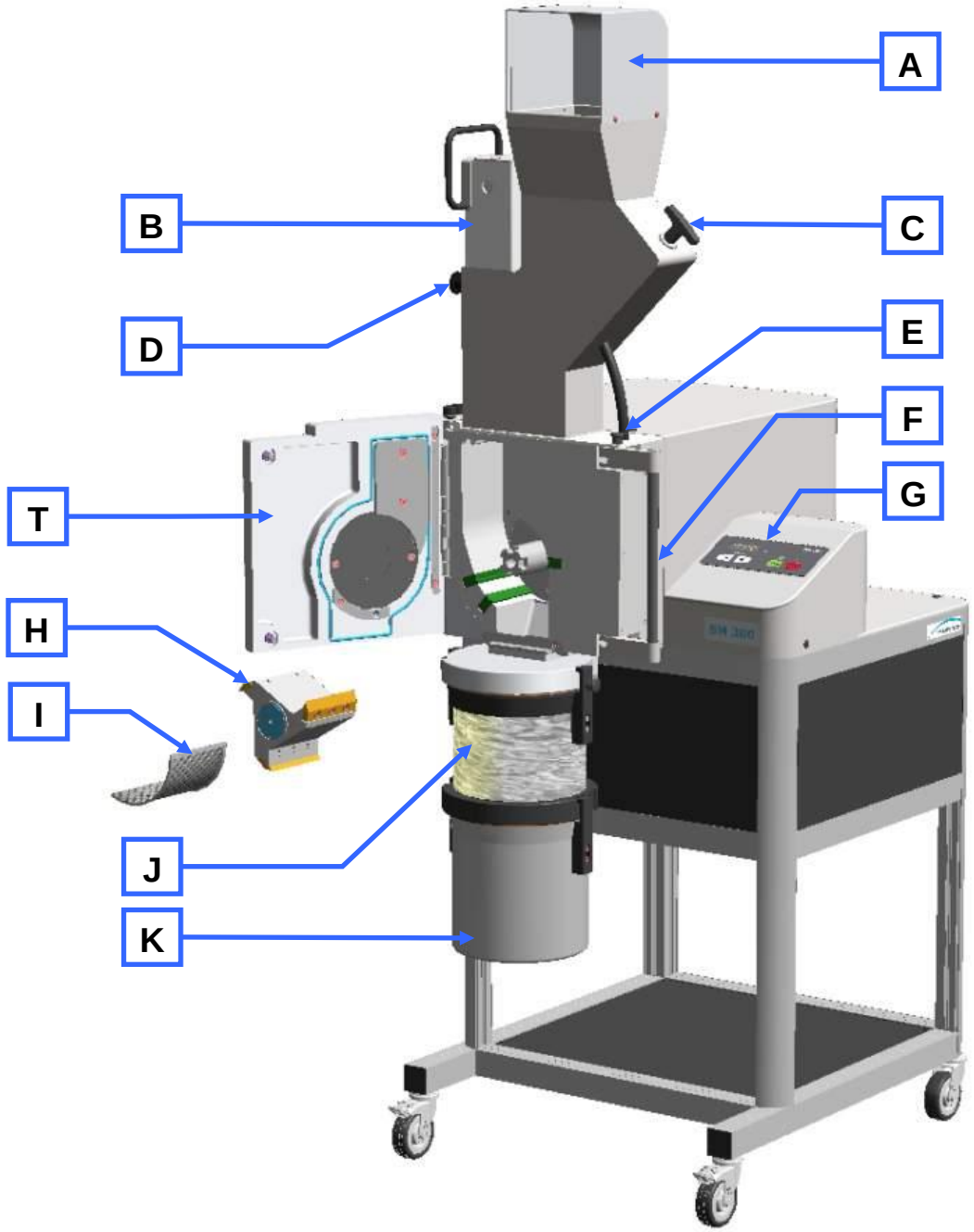


Fig. 8: Front view

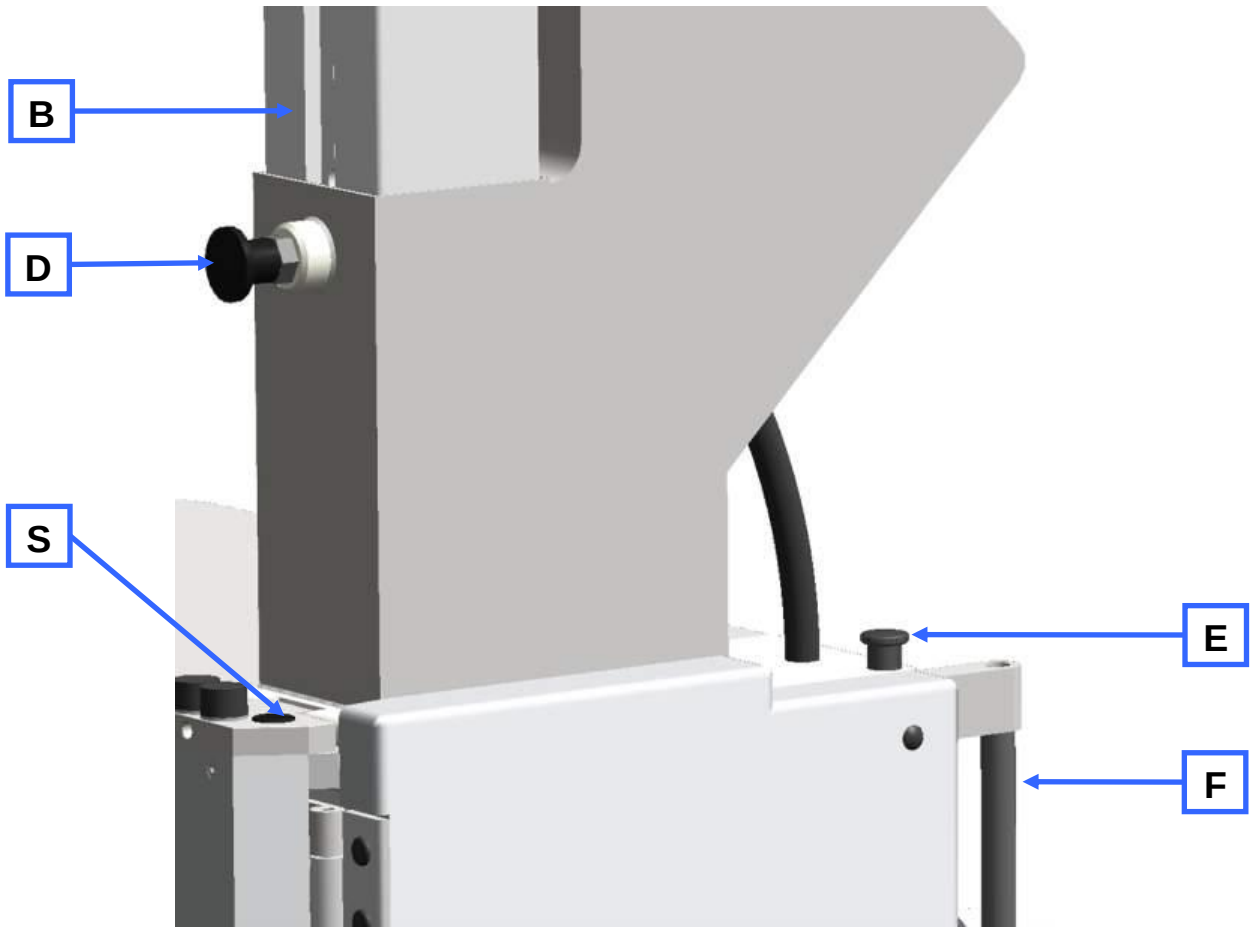


Fig. 9: Front view from the left (detail)



Fig. 10: Rear view

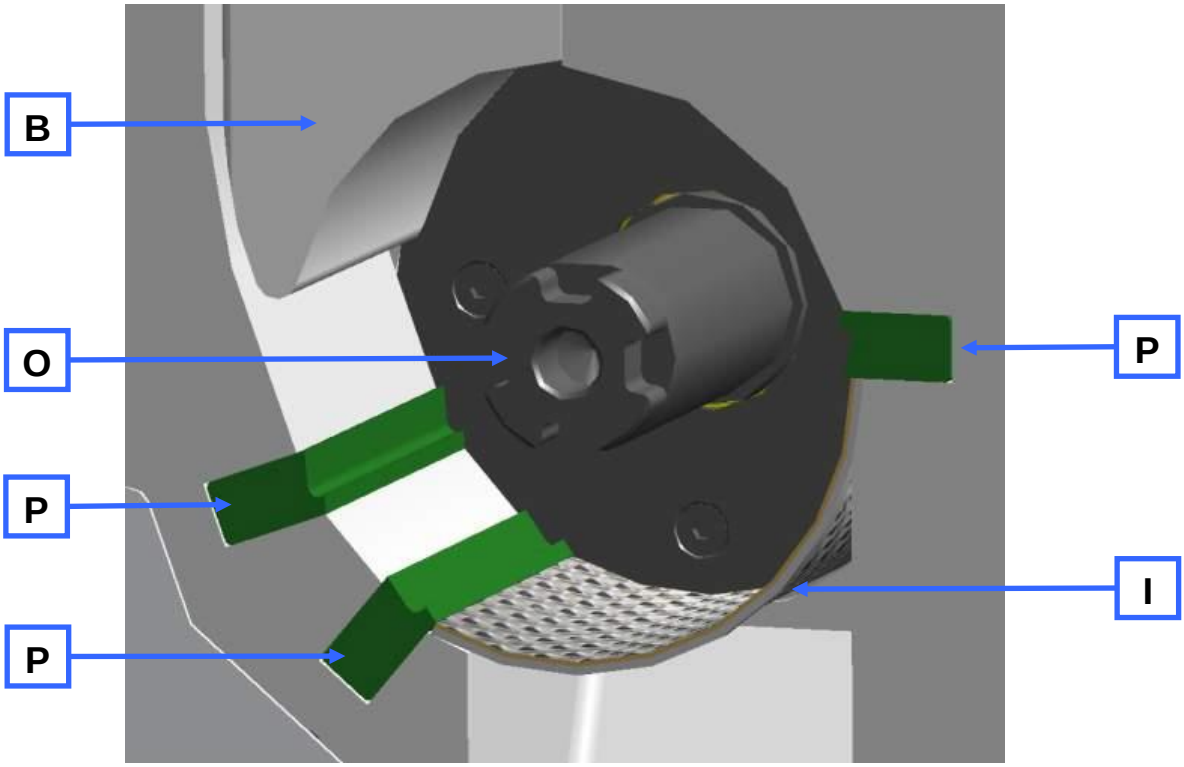


Fig. 11: View of grinding chamber

5.2 Operating elements and displays

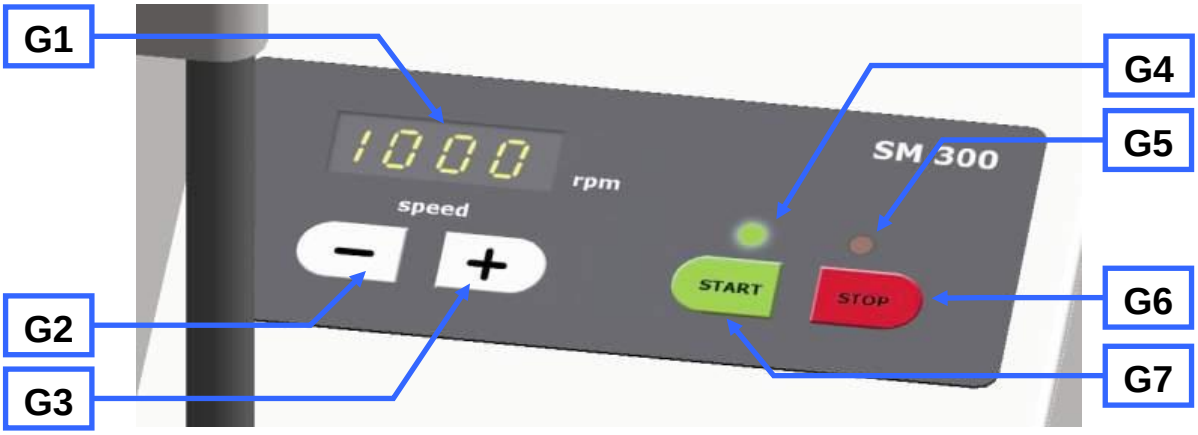


Fig. 12: View of the control panel and the display

5.3 Overview table of the parts of the device

Element	Description	Function
A	Safety guard for the feed hopper	Prevents contact with the feed hopper
B	Plunger	Releases the material feed chute in pulled state. Pushes grinding material onto the rotor.
C	Metering plunger	Pushes the grinding material into the feed chute area of the fill plunger – Extended: grinding material can be loaded. – Inserted: grinding material remains in the area of the fill plunger.

D	Locking pin	Prevents, blocks or releases the fill plunger. – Extended: free movement of the fill plunger is possible – Released: fill plunger engages in the uppermost position
E	Mini locking pin	Engages the door lock
F	Door lock grip	Enables the door to be opened
G	Control panel	Starts and stops the device, adjusts the speed
H	Parallel section rotor	Grinding tool
I	Bottom sieve	Influences the ultimate fineness of the grinding material through the size and type of perforation
J	Ring filter	Air outlet and filter for material to be ground
K	Collecting receiver	Collects ground material
L	On/off switch (main switch)	Disconnects and connects the device to the mains. – ON = LED (red) STOP lights up – OFF = all LEDs are extinguished
M	16A socket	Power supply
N	Housing fan	Cools the housing area
O	Rotor shaft	Accommodates the grinding tool
P	Cutting bars	Counterpart to grinding tool
R	Feed hopper	Feeding the grinding material
S	Feed hopper fixing screws	Safety bolts for the feed hopper
T	Grinding area door	Closes the grinding area

5.4 Opening and Closing of the Device

The motor must come to a complete stop before the mill housing can be opened.

- Stop the device by pressing the STOP button (G6).
- Pull the mini detent pin (E) upwards.
- Press the handle on the door catch (F) backwards.
- Press the door lock (**F1**) upwards and open the grinding chamber door.

NOTE

Do not close the grinding chamber door if the feed hopper is folded out to the side. That would damage the device.

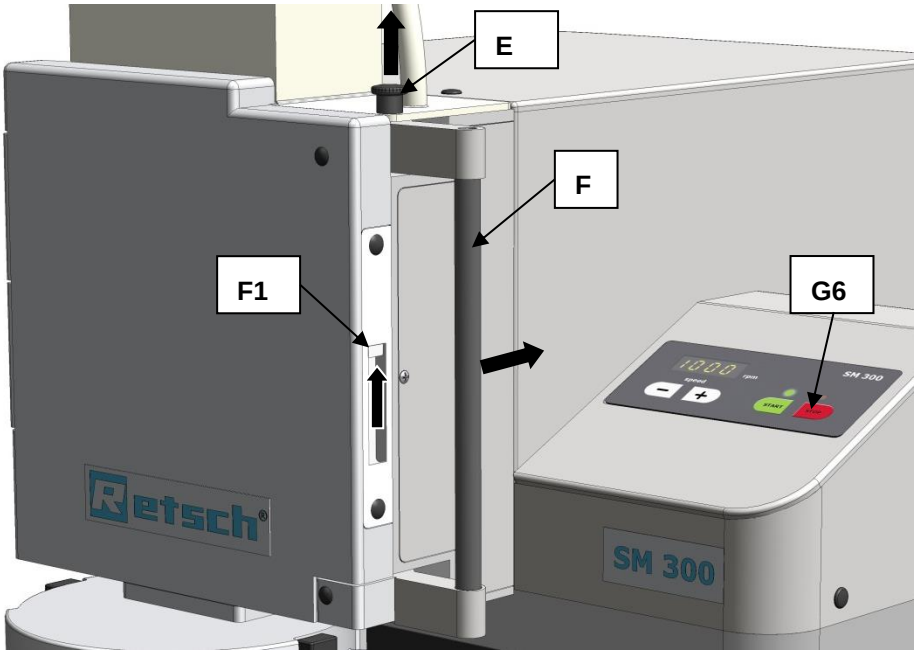


Fig. 13: Opening the grinding chamber door

5.5 Mounting the bottom sieve

- Select the appropriate bottom sieve.
- Open the mill housing and slide the bottom sieve (**I**) of your choice into the device.

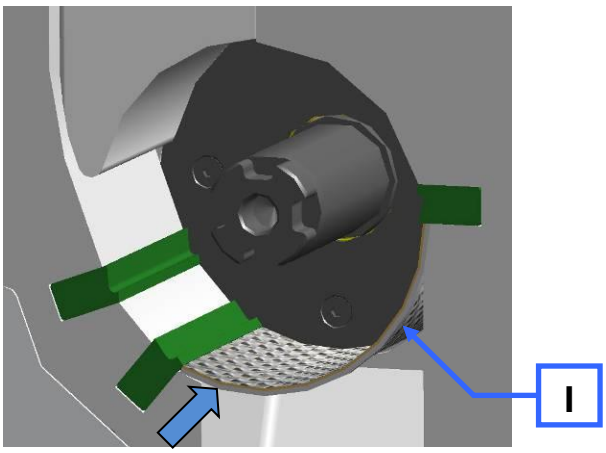


Fig. 14: Inserting the bottom sieve

NOTICE
Bottom sieves with trapezoidal perforation have a direction arrow, which indicates the direction of rotation of the rotor (counterclockwise). When inserting a bottom sieve with trapezoidal perforation, ensure that the direction arrow corresponds the direction of rotation of the rotor.

5.6 Replacing the rotor

CAUTION

Injuries in the form of cuts

Sharp cutting edges on the rotors and cutting bars

– The sharp cutting edges on the rotors and cutting bars can injure hands.

- **Wear protective gloves when replacing the cutting rotors and cleaning the grinding chamber.**
- **Use the rotor extraction tool when handling the cutting rotors**.

NOTE

Wear or damage of the device

Operation without grinding set

– During operation of the device without grinding set, excessive wear or damage to the device may occur.

- **Operate the device only with a grinding set mounted.**

NOTE

Damage to mechanical components

Blockages typical of cutting mills

– When coarse, solid material is fed in for grinding, the high feeding capacity of the standard rotor can cause blockages that are typical of the cutting mills.

- **If blockages occur, switch off the mill immediately and remove the clogging material.**

It is necessary to check whether the cutting gap is larger than 0.3 mm before each grinding operation using the parallel section rotor.

- Open the grinding area door.
- Pull the rotor (H) approx. 10 mm out of the grinding area until it can be freely rotated.

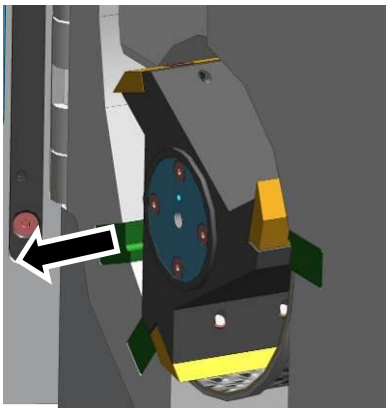


Fig. 2: Freely rotate the rotor

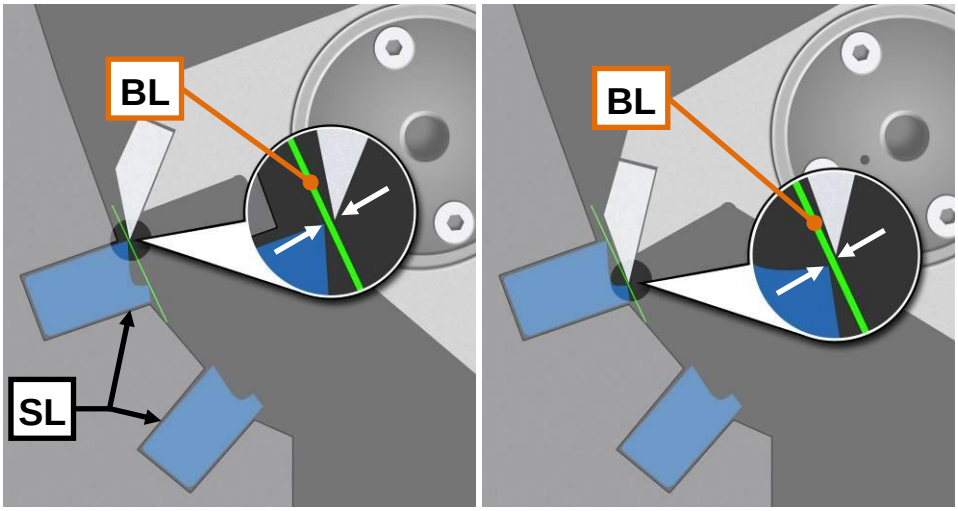


Fig. 3: Checking the cutting gap

- Using a feeler gauge (**BL**), check the cutting gap of all **three** cutting bars (**SL**). It should be at least 0.3mm.

The feeler gauge (**BL**) must be placed on both cut areas as shown in the diagram. The cutting gap must show a uniform distance across its entire depth. For this reason check the cutting gap across its entire depth.
The cutting edge that has the smallest distance to the knife denotes the cutting gap (**SP1/2**).
The second cutting edge can have a larger cutting gap width.

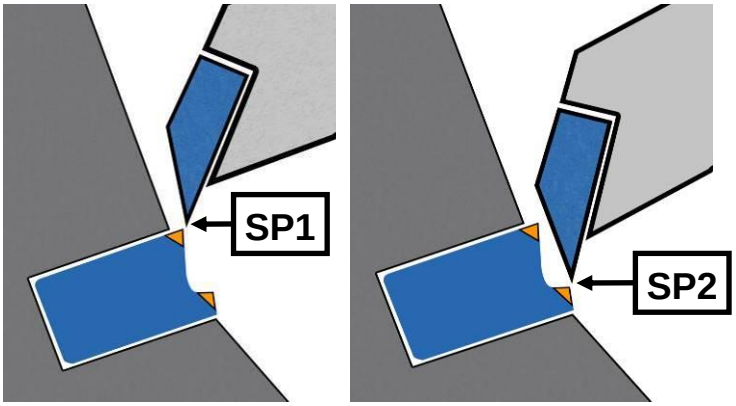


Fig. 415: Cutting gap

5.6.1 Removing the Rotor

- Stop the device.
- Open the grinding area door.
- Screw the removal grip (EG) onto the rotor and pull the rotor from the drive shaft.

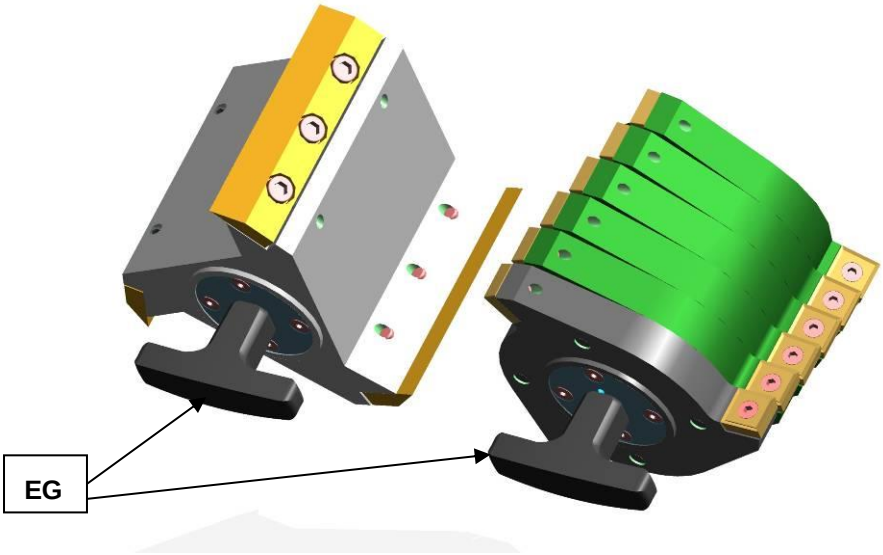


Fig 5: Removal grip

5.6.2 Inserting the Rotor

- Clean and lubricate the motor shaft and the rotor.
- Slide the rotor onto the motor shaft.

Apart from this the device is largely maintenance-free.
Nevertheless we recommend that the cutting tools are checked at least once a month depending on the frequency of use.

5.7 Inserting the filter unit and collecting receptacle

The ring sieve serves as an air outlet for the air flow that is generated by the size reduction rotors.

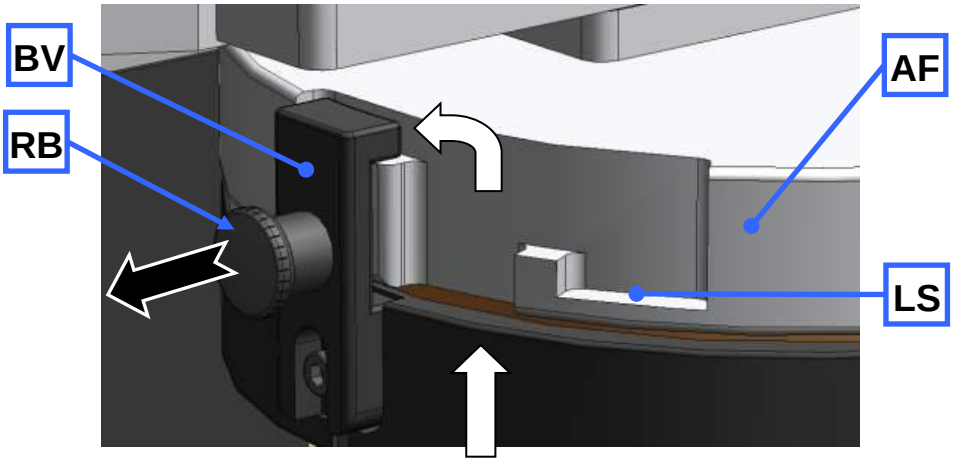


Fig. 16: Mounting and Removing the Ring Sieve

- Insert the bayonet fixing(BV) on the ring sieve (J) into the discharge flange(AF), as shown in the illustration.
- Turn the ring sieve in a clockwise direction so that the bayonet fixing will engage.
- To remove the ring sieve, pull out the latching bolt (RB) to release the bayonet fixing (BV).

Alternatively, the collecting receptacle can be positioned directly on the discharge flange. In the latching position (BV) the exit of the air flowis prevented.

In the latching position (LS) a gap remains between the discharge flange and the collecting receptacle which allows air to exit.

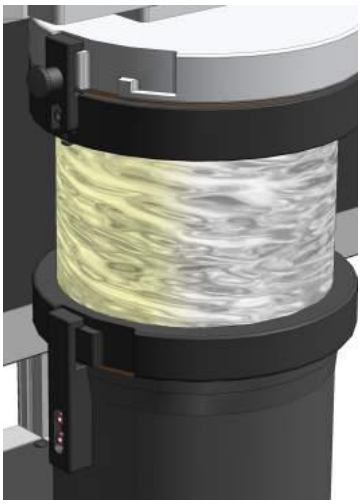


Fig. 17: Collecting Receptacle and Ring Sieve

5.8 Starting the grinding process

– Switch the device on.
– Set the rotation speed.
– Press the START button.

NOTE
Motor blockage
The material being ground clogs the rotor
– Blockages can damage mechanical components.
• Feed material only while the device is running.
• Dose the material feed to suit the properties of the material.

5.9 Stopping the grinding process

The current grinding process can be cancelled by pressing the STOP button (G6).
Once the motor has come to a complete stop, you can pull the mini detent pin (E) upwards and press the handle on the door latch (F) backwards.
The grinding chamber door can be opened now.

6 Mode of Operation of Feed Hopper

NOTE

Motor blockage

The material being ground clogs the rotor

– Blockages can damage mechanical components.

- **Feed material only while the device is running.**
- **Dose the material feed to suit the properties of the material.**

- Switch the device on.
- Pull the metering plunger (C) and the plunger (B) upwards.
- Put the material to be ground into the filling hole (AE).
- If necessary, use the metering plunger to push the material in further.
- Seize the plunger by the grip and pull the detent pin (D).
- Press the plunger slowly downwards.

NOTE

Do not use excessive force on the plunger. **Blockages can damage mechanical components.** In most cases the plunger's own weight is sufficient to press the material into the grinding chamber.

If not, the plunger can be used to push the material in further carefully and within the scope of the device's efficiency

7 Assembling and using the cyclone

7.1 Cyclone assembly

CAUTION

V0014

Injuries to limbs
Rotating blade

– Can cause injury to hands and feet.

- **Keep hands and feet away from the device openings when the device is switched on.**
- **Pull the plug out before cleaning or retrofitting.**



CAUTION

V0001

Risk of injury to fingers
Reaching into the turning rotor

– Unintended reaching into the grinding area and the turning rotor.

- **Never connect the device to the mains without the discharge flange.**
- **Only operate the device with discharge flange.**



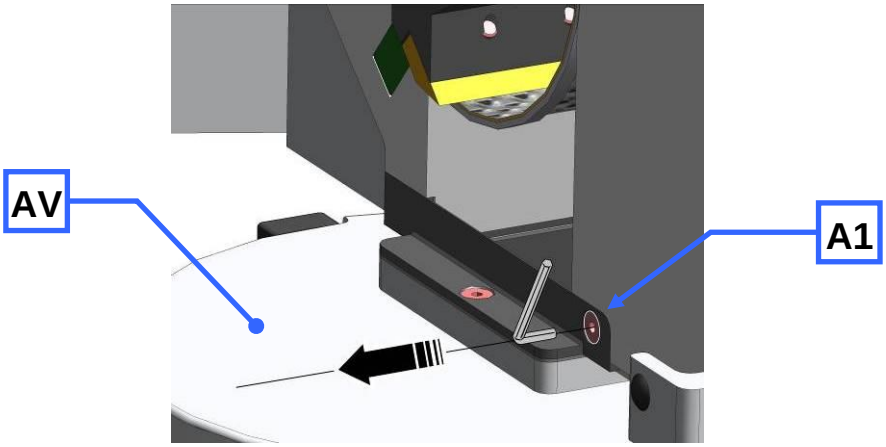


Fig. 18: Removing the discharge flange

- Disconnect the device from the mains.
- Loosen the screw (**A1**).
- Pull off the discharge flange (**AV**).

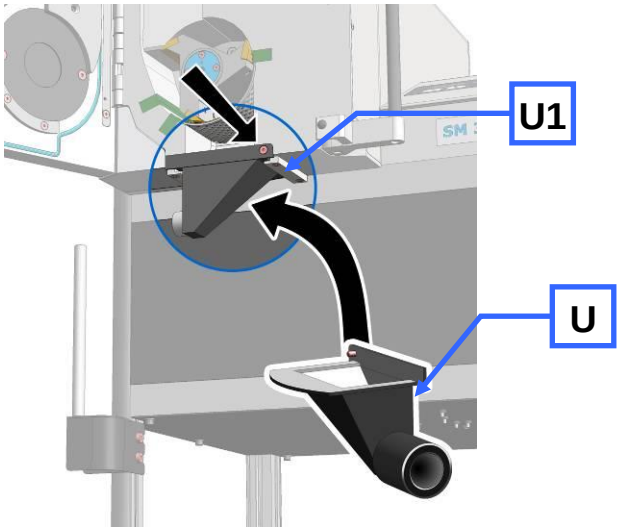


Fig. 19: Fastening the discharge flange

- Insert the retrofit dust removal (**U**).
- Tighten the screw (**U1**).

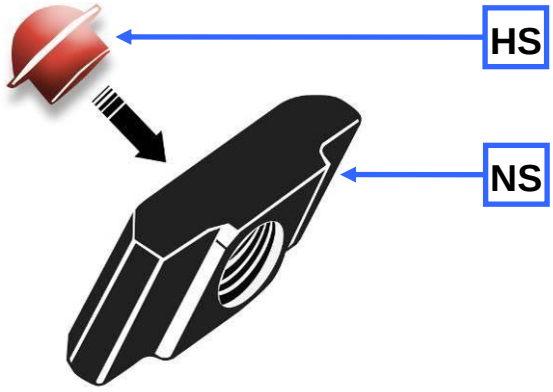


Fig. 20: Inserting the plug for the sliding block

- Insert the plug (**HS**) into the back (flat surface) of the sliding block (**NS**).

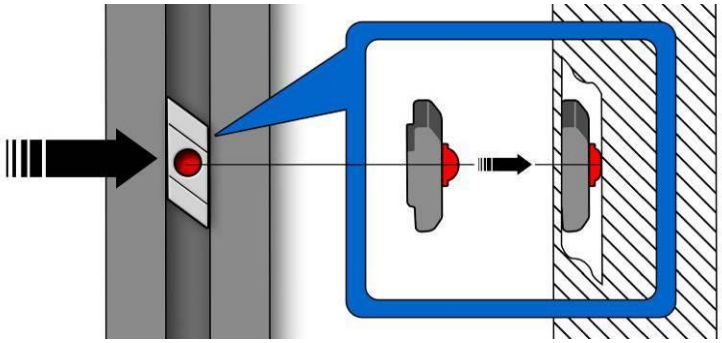


Fig. 21: Inserting the sliding block

- Guide the sliding block with plug into the aluminium profile.

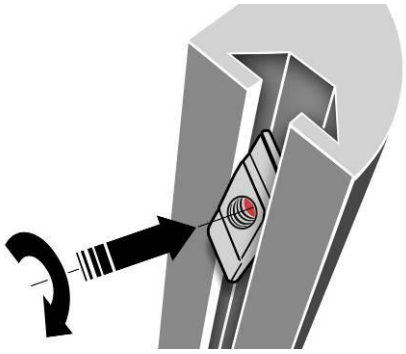


Fig. 22: Turning the sliding block

- Push in the sliding block against the resistance of the plug and turn the sliding block to the position indicated.
- Insert the second sliding block in the same way.

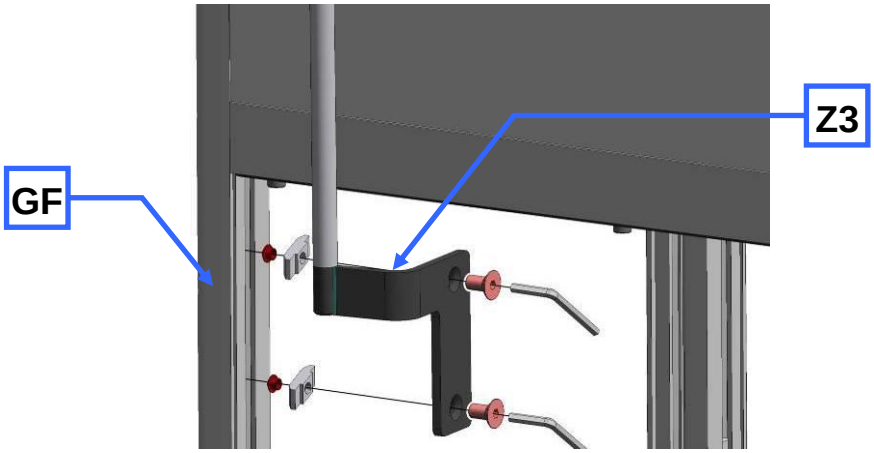


Fig. 23: Fastening the cyclone support

- Fasten the cyclone support (**Z3**) on the front left-hand leg of the housing (**GF**).

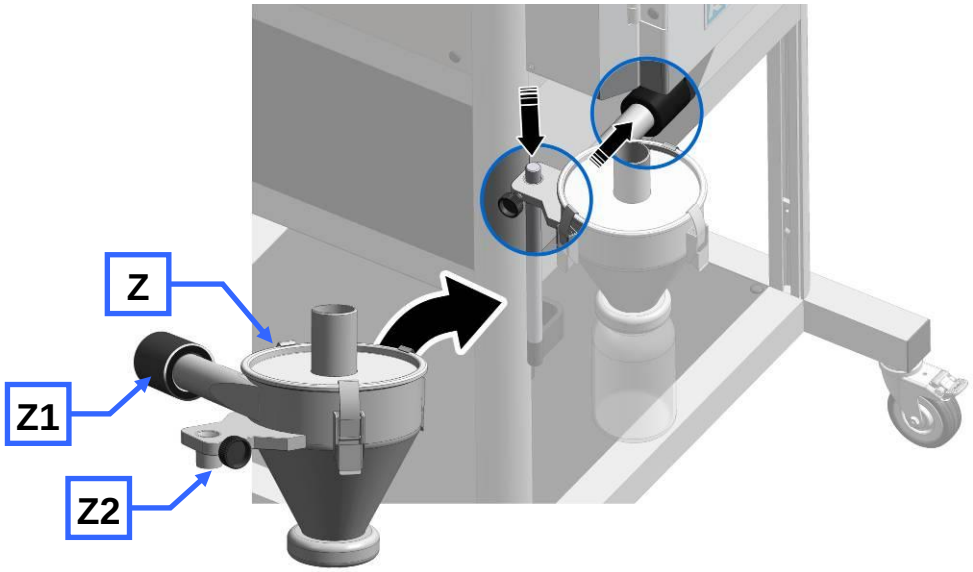


Fig. 24: Installing the cyclone

- Connect the cyclone (**Z2**) onto the rod of the stand on the cyclone support.

- Turn the side tube to the discharge flange and push the coupling (**Z1**) onto the adapters on the discharge flange.

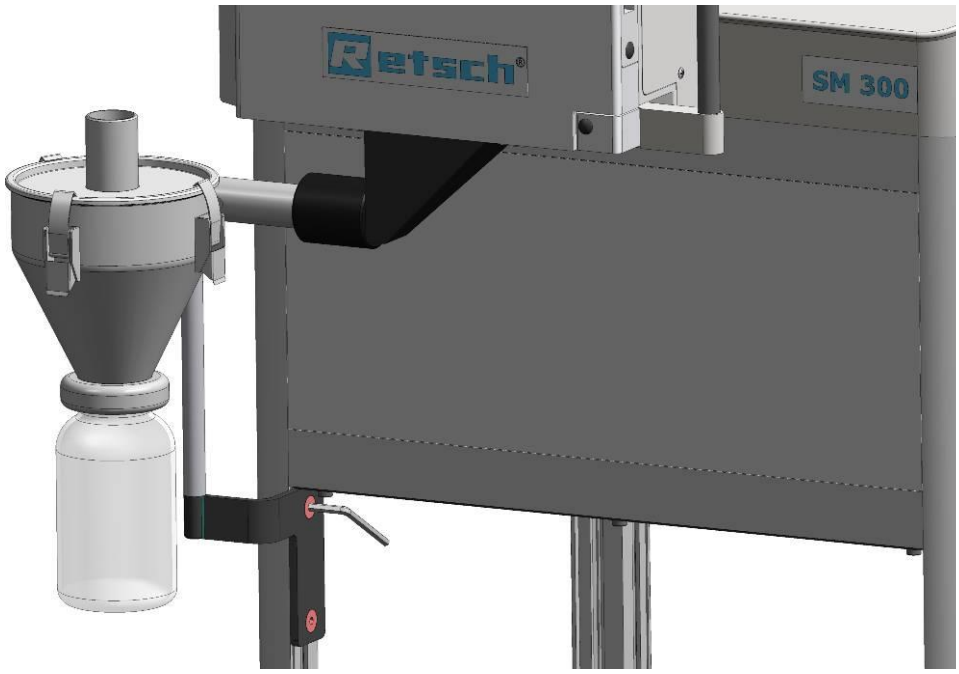


Fig. 25: Assembled cyclone

⚠ CAUTION

Before using the industrial vacuum cleaning, read the operating instructions supplied with the vacuum cleaner.

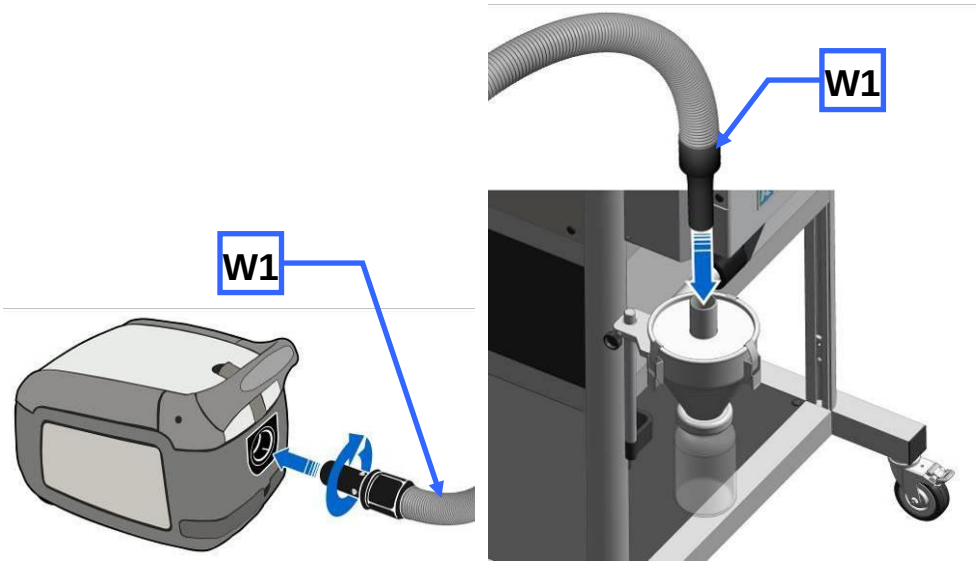


Fig. 26: Connecting the industrial vacuum cleaner

- Plug the connector for dust extraction (**W1**) into the top opening on the cyclone.

7.1.1 Inserting the wide mouth bottle adapter

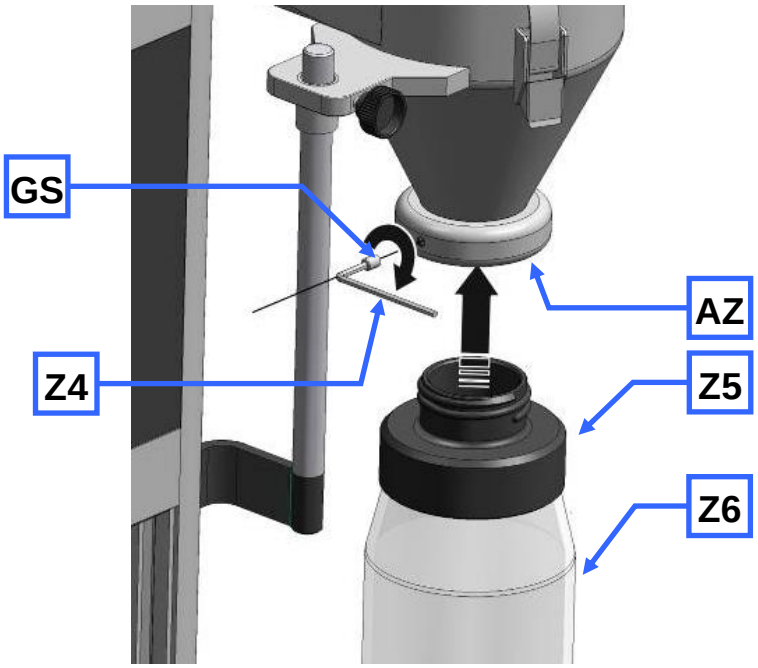


Fig. 27: Inserting the wide mouth bottle adapter

- Insert the adapter for wide mouth bottles (**Z5**) into the outlet opening of the cyclone (**AZ**) .
- Affix the adapter using the threaded pin (GS).
- Use a SW3 Allen key to screw in the threaded pin (**Z4**).

This avoids the adapter turning when the wide mouth bottles are screwed in and out.
You can use 1l, 2l and 5l wide mouth bottles.

8 Cleaning and service

8.1 Adjusting the cutting bars

The cutting gap must be checked to ensure that the device is functioning satisfactorily (target distance 0.3mm). For this reason the cutting bars (**SL**) are arranged so that they can be shifted to permit adjustments to the cutting gap.

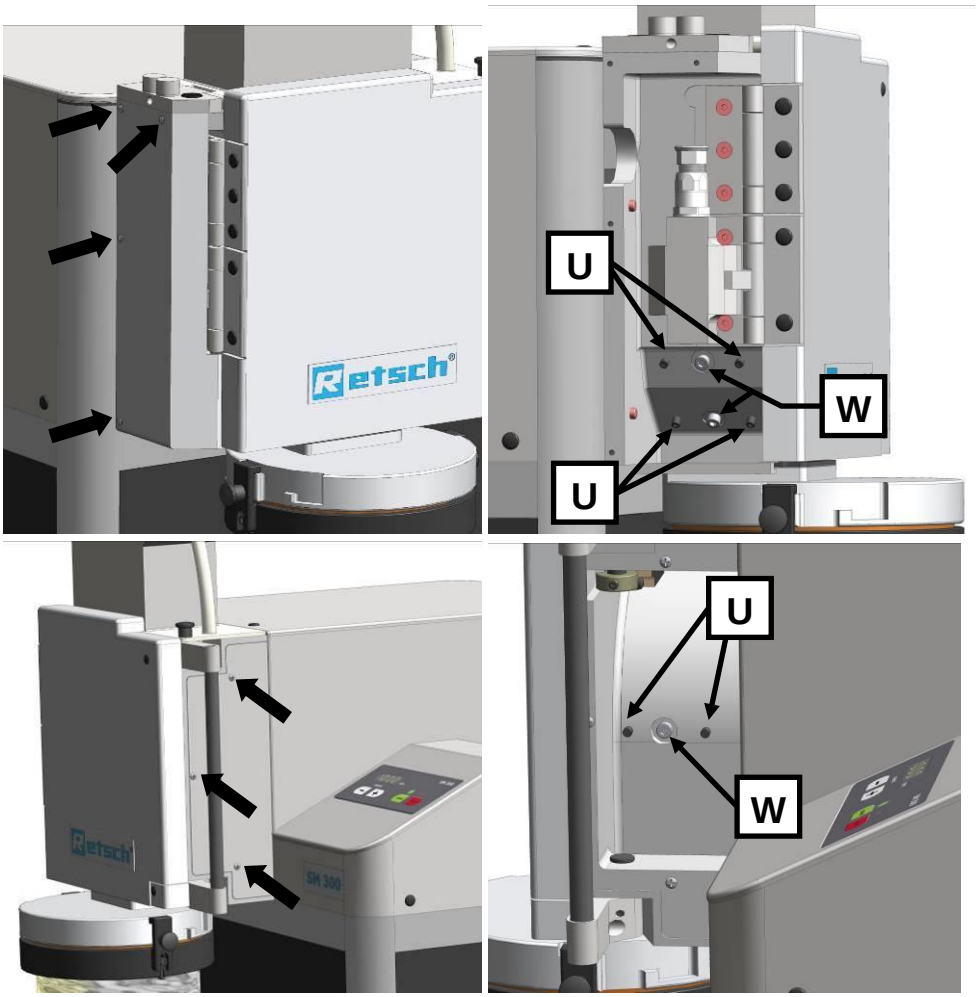


Fig. 6: Access to the cutting bars

- Unscrew the four screws on the left-hand cover.
- Unscrew the three screws on the right-hand cover.
- Open the grinding area door.
- Pull the rotor approx. 10 mm out of the grinding area until it can be freely rotated.

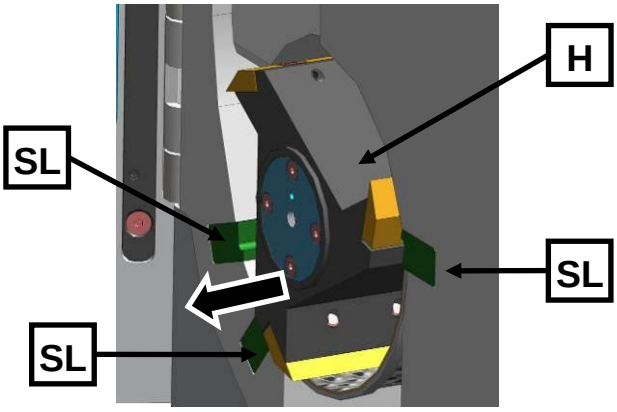


Fig. 7: Freely rotate the rotor

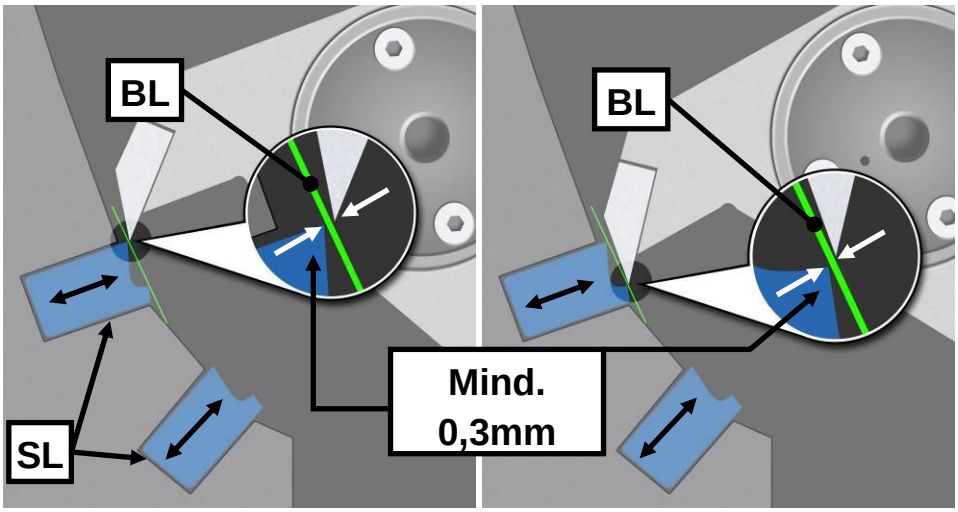


Fig. 8: Adjusting the cutting gaps

- Using a feeler gauge (**BL**) check the cutting gap for all three cutting bars (**SL**). It should be at least 0.3 mm.

The feeler gauge (**BL**) must be placed on both cut areas as shown in the diagram. The cutting gap must show a uniform distance across its entire depth. For this reason check the cutting gap across its entire depth.
The cutting edge that has the smallest distance to the knife denotes the cutting gap (**SP1/2**).
The second cutting edge can have a larger cutting gap width.

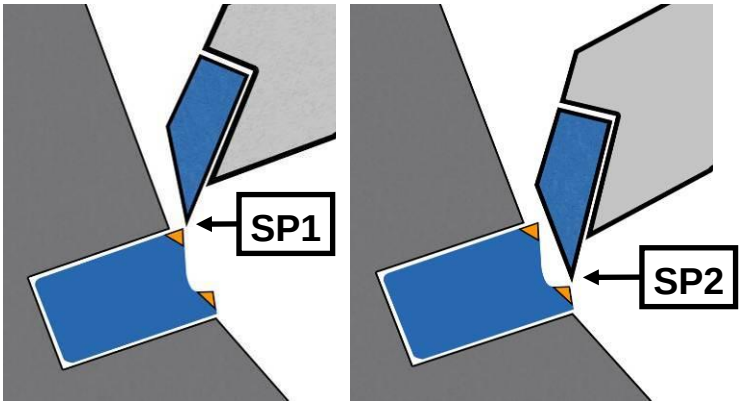


Fig. 28: Cutting gap

- By twisting the stud bolts (U) to the right, slide the cutting bar closer to the rotor blade and thereby reduce the cutting gap. Increase the cutting gap by twisting to the left.
- Tighten the screw (WS) and check the cutting gap. Repeat the process if necessary.
- After adjusting the cutting bar, tighten the screw (W) firmly again to 7Nm.
- Finally re-assemble the right and left-hand cover on the device.

Do not set the cutting gap to less than 0.3 mm. Contact between the cutting plates and cutting bars can damage the mechanical components.
The tightening torque of the screw (**W**) must be 7Nm. This is necessary to guarantee that the cutting bars are securely positioned.

8.1.1 Replacing the Fuses

WARNING W1.0014

Danger to life through electric shock
Exposed power contacts

- When replacing the fuses, contact to live contacts on the fuse or the fuse receptacle can lead to an electric shock.
- An electric shock can cause burns, cardiac arrhythmia, respiratory arrest, as well as cardiac arrest.
- **The power cable must be unplugged before exchanging the fuses.**

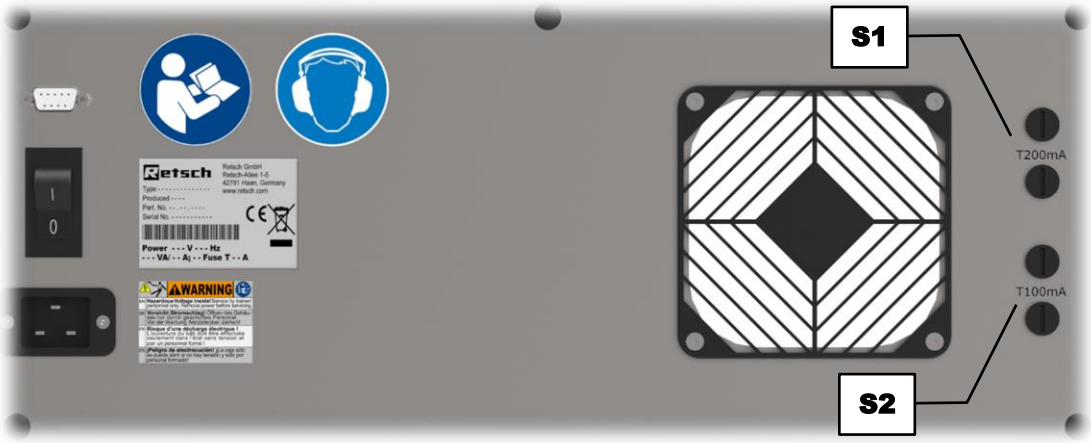


Fig. 1: Exchanging the fuses

Voltage	Fuse
100 – 240 V	200 mA delay-action (**S1**)
100 – 240 V	100 mA delay-action (**S2**)

Four fuses are located in the fuse drawers (**S1**) and (**S2**) on the backside of the device. Fuses can be replaced by trained qualified personnel.
⇨ Unscrew the fuse drawers by means of a flat-bladed screwdriver.
⇨ Replace the defective fuses in the fuse drawers.
⇨ Screw the fuse drawers back in.

9 Fault messages

F.01	Overload	Frequency converter switched off because of overloading
F.04	Open the door	Close the door and close the lock.
F.04.-	Open the lock	Close the lock
F.11	Engine is overheated.	Starting impossible. Please wait until it cools down.
F.15	Fault in the safety circuit of the frequency converter activation	Door switch opened, Handle switch opened, The motor-driven lid lock monitoring has detected a fault.
F.18	Fault in the transformer's safety circuit	Contact monitoring Relay Inrush current limiter
F.26	Excessive temperature frequency converter	Frequency converter is overheated
F.37	No communication with the frequency converter	Frequency converter does not respond (4 seconds after start)

10 Disposal

Please observe the respective statutory requirements with respect to disposal.
Information on disposal of electrical and electronic machines in the European Community.
Within the European Community the disposal of electrically operated devices is regulated by national provisions that are based on the EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).
Accordingly, all machines supplied after 13.08.2005 in the business-to-business area to which this product is classified, may no longer be disposed of with municipal or household waste. To document this they have the following label:

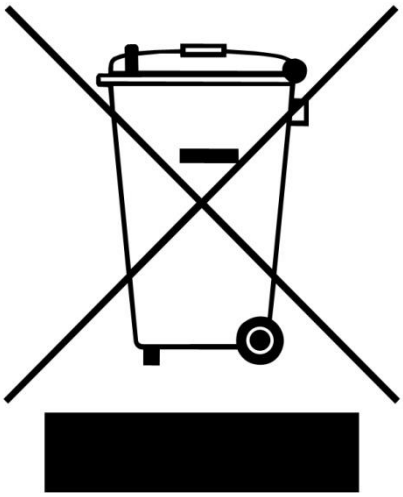


Fig. 29: Disposal label

Since the disposal regulations within the EU may differ from country to country we would request you to consult your supplier.

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EU Declaration of Conformity

Translation

CUTTING MILL

SM 300 | 20.729.xxxx

EU DECLARATION OF CONFORMITY

Herewith we declare, represented by the signatory, that the above mentioned device complies with the following directives and harmonized standards:

Machinery Directive 2006/42/EC

Applied standards, in particular:

DIN EN ISO 12100	Safety of machinery
DIN EN ISO 13849-1	Safety of machinery - Safety-related parts of control systems
DIN EN 13683	Garden equipment - Integrally powered shredders/chippers – Safety
DIN EN 60204	Safety of machinery - Electrical equipment of machines

EMC Directive 2014/30/EU

Applied standards, in particular:

DIN EN 55011	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement
DIN EN 61000-3-2	Electromagnetic compatibility (EMC)
DIN EN 61000-3-3	Electromagnetic compatibility (EMC)
DIN EN 61326-1	Electrical equipment for measurement, control and laboratory use - EMC requirements

Low Voltage Directive 2014/35/EU

Applied standards, in particular:

DIN EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use

Authorized person for the compilation of technical documents:

Dr. Loredana Di Labio (technical documentation)

Furthermore, we declare that the relevant technical documentation for the above mentioned device has been compiled according to Annex VII Part B of the Machinery Directive, and we undertake to submit this documentation on request to the market surveillance authorities.

In case of a modification of the device not previously agreed with Retsch GmbH, as well as the use of unauthorised spare parts or accessories, this declaration will lose its validity.

Retsch GmbH

Haan, 05/2016

Dr. Ing. Frank Janetta, Team Leader R&D Department

CE

part of VERDER scientific

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