

ManualOperation Manual Cutting Mills

SM300

© Retsch GmbH, 42781 Haan, Rheinische Strasse 36, Germany

Copyright

© Copyright by
Retsch GmbH
Rheinische Strasse 36
D-42781 Haan
Federal Republic of Germany

1 Notes on the Operating Manual 5
1.1 Explanations of the safety warnings 6
1.2 General safety instructions 7
1.3 Repairs 8
2 Confirmation 9
3 Transport, scope of delivery, installation 10
3.1 Packaging 10
3.2 Transport 10
3.3 Temperature fluctuations and condensed water 10
3.4 Conditions for the place of installation 10
3.5 Removing Transport Safeguards 11
3.6 Mounting the Feed Hopper 11
3.6.1 Removing the Transport Safeguard 11
3.6.2 Mounting the Feed Hopper 12
3.7 Installation of the machine 13
3.8 Electrical connection 14
4 Technical data 15
4.1 Use of the machine for the intended purpose 15
4.2 Emissions 16
4.3 Degree of protection 16
4.4 Motor rotation speed 16
4.5 Receptacle volume 16
4.6 Rated power 16
4.7 Dimensions and weight 16
4.8 Required floor space 17
5 Operating the machine 18
5.1 Views of the Instrument 18
5.2 Operating elements and displays 20
5.3 Overview table of the parts of the device 21
5.4 Opening and closing of the grinding chamber 22
5.5 Mounting the bottom sieve 22
5.6 Replacing the rotor 22
5.6.1 Removing the Rotor ..... **Fehler! Textmarke nicht definiert.**
5.6.2 Inserting the Rotor 23
5.7 Inserting the Ring Sieve and Collecting Receptacle 24
5.8 Switching On and Off 24
5.9 Starting the grinding process 25
5.10 Stopping the grinding process 25

5.11 Connecting the external Industrial Vacuum cleaner ..... **Fehler! Textmarke nicht definiert.**

6 Mode of Operation of Feed Hopper 25

7 Cleaning and service 25

7.1 Adjusting the cutting bars ..... **Fehler! Textmarke nicht definiert.**

8 Fault messages.....28

9 Disposal.....29

10 Index 30

1 Notes on the Operating 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.

Copyright

Disclosure or reproduction of this documentation, use and disclosure of its contents are only permitted with the express permission of Retsch GmbH.

Infringements will result in damage compensation liability.

1.1 Explanations of the safety warnings

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 Transport, scope of delivery, 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 place of installation

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 Transport Safeguards

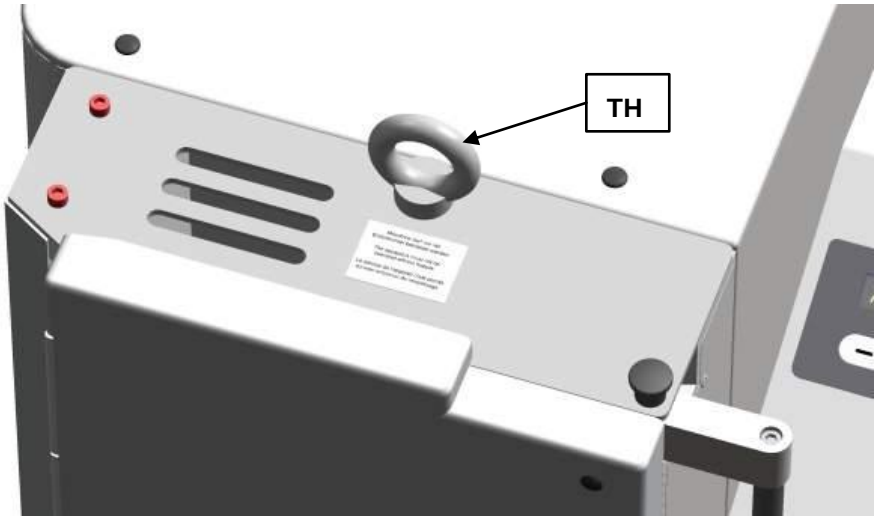


Fig. 1: Removing Transport Aid

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

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

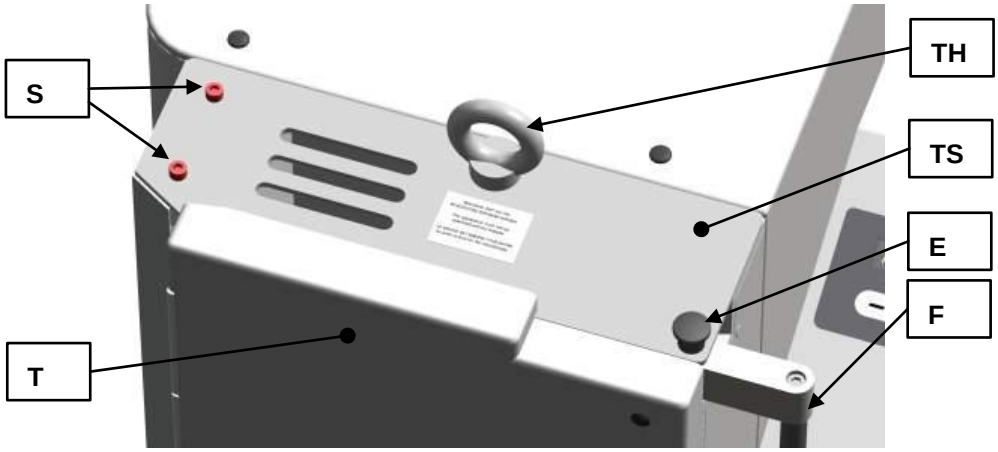


Fig. 2: Removing the Transport Safeguard

- 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

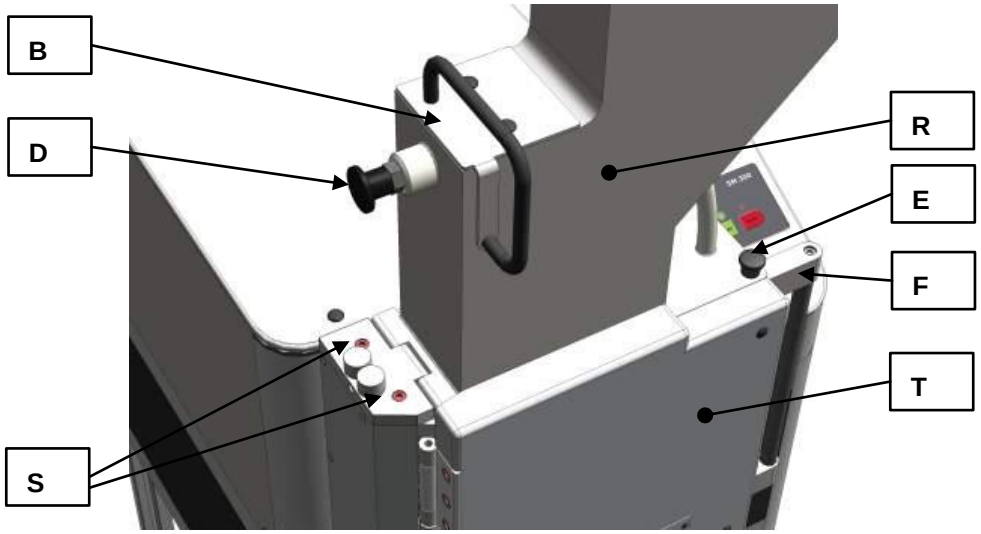


Fig. 3: Mounting the Feed Hopper

- 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).

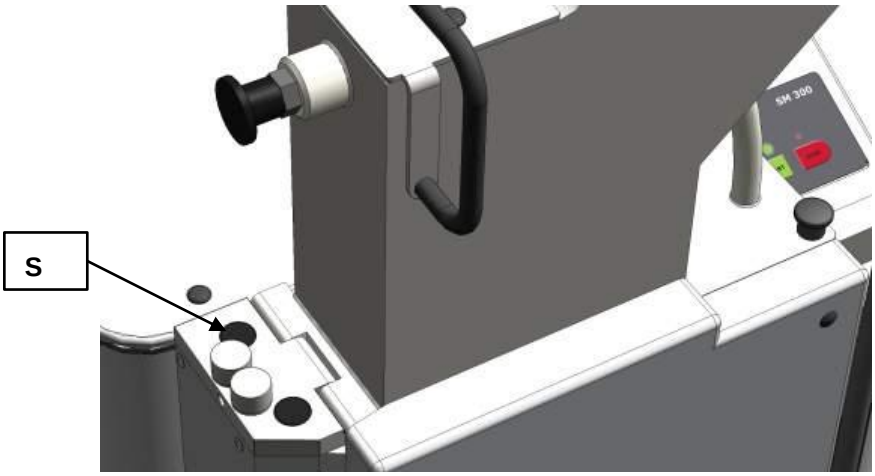


Fig. 4: Putting on the Protective Caps

NOTE

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

3.7 Installation of the machine

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 Electrical connection

The voltage required and the frequency of the machine are provided on the type plate.

• Ensure that the values agree with the available power supply system.

• Connect the machine to the power supply system using the connecting cable supplied.

⚠ CAUTION

An external fusing at the connection of the mains cable to the power supply must be provided in accordance with the conditions of the place of installation.

NOTICE

Electrical connection

– Mechanical or electronic components may be damaged.

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

4 Technical data

4.1 Use of the machine 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 700 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 700 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 300 - 700 rpm and it is steplessly adjustable.

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 machine

5.1 Views of the Instrument

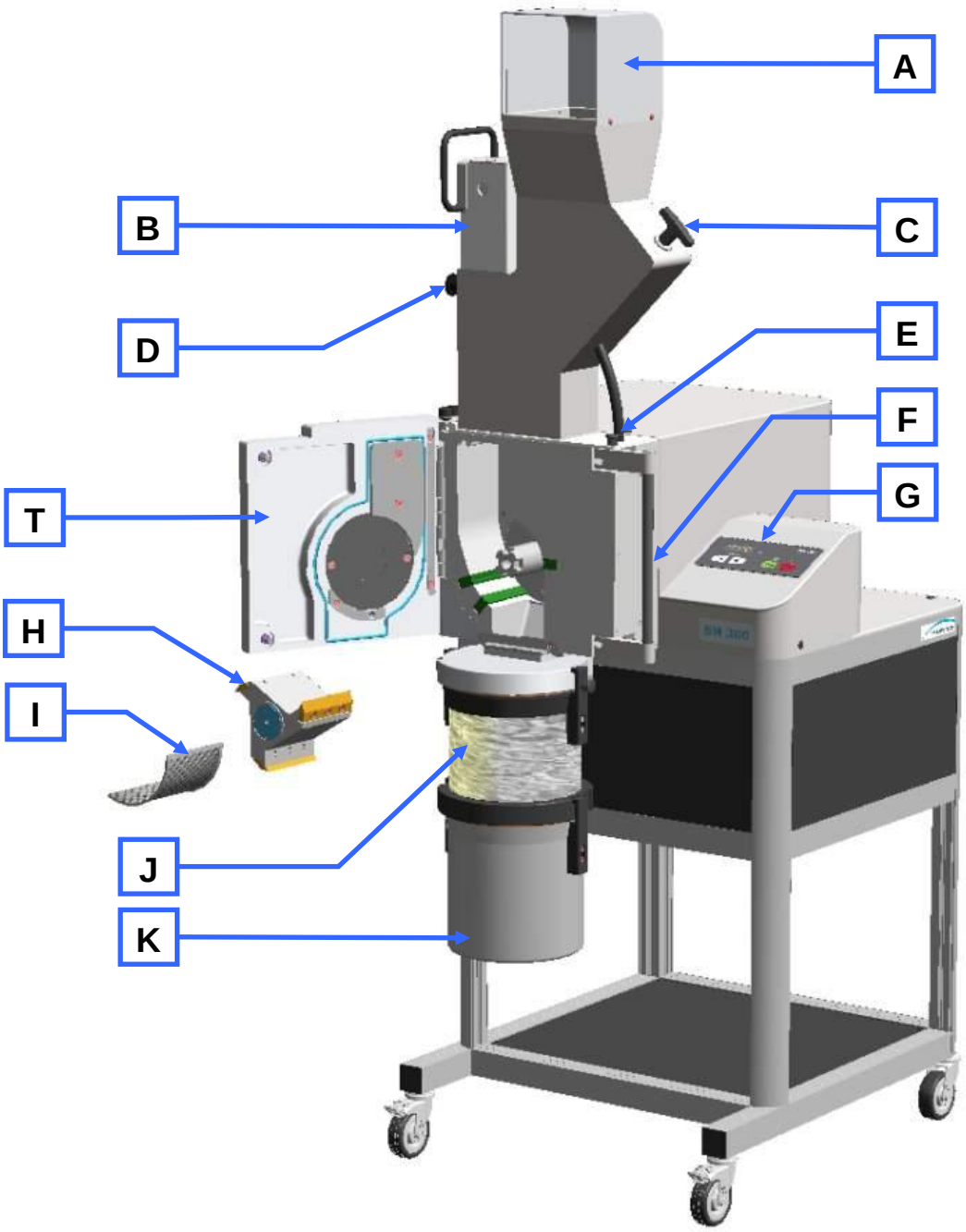


Fig. 5: Front view

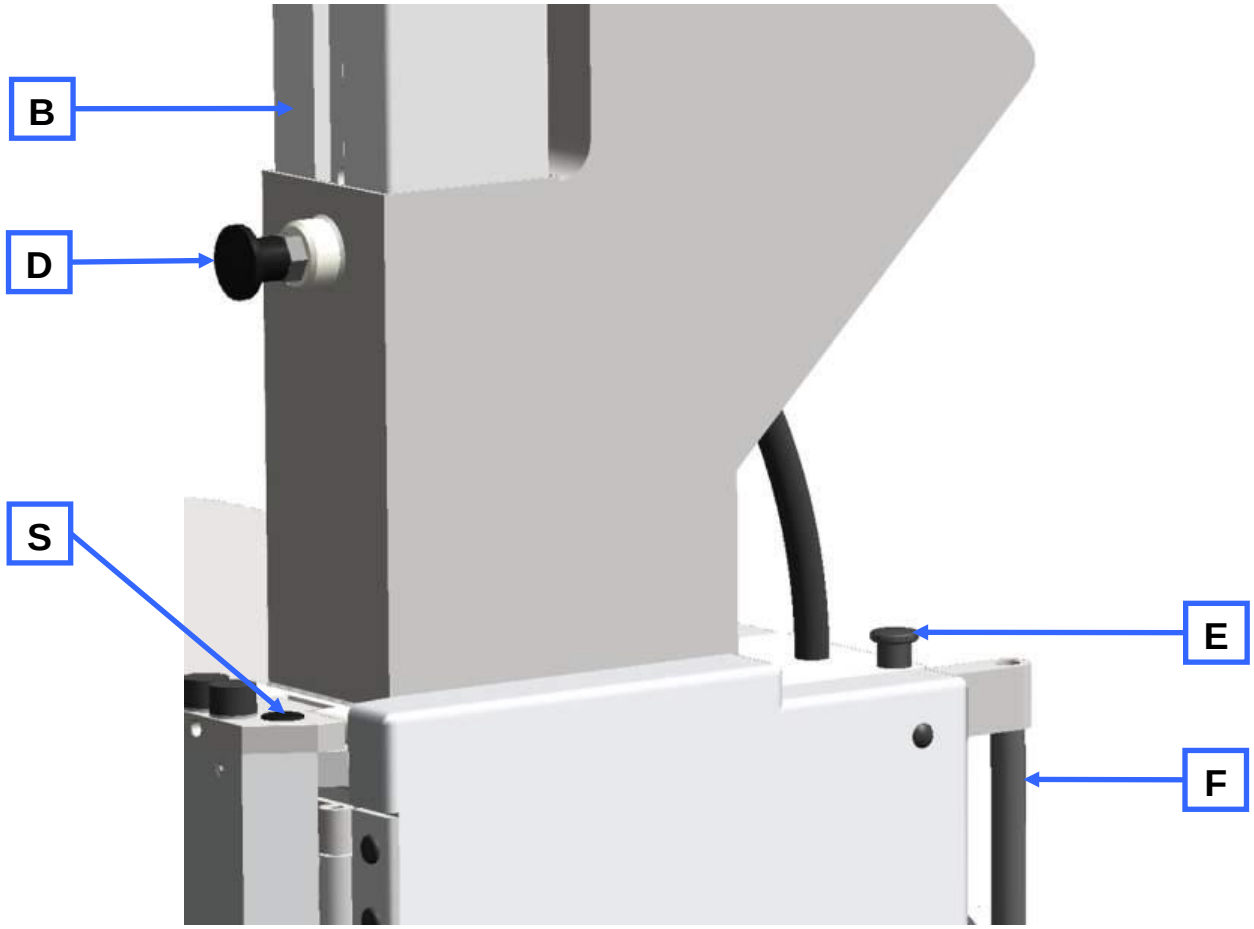


Fig. 6: Front view from the left (detail)



Fig. 7: Rear view

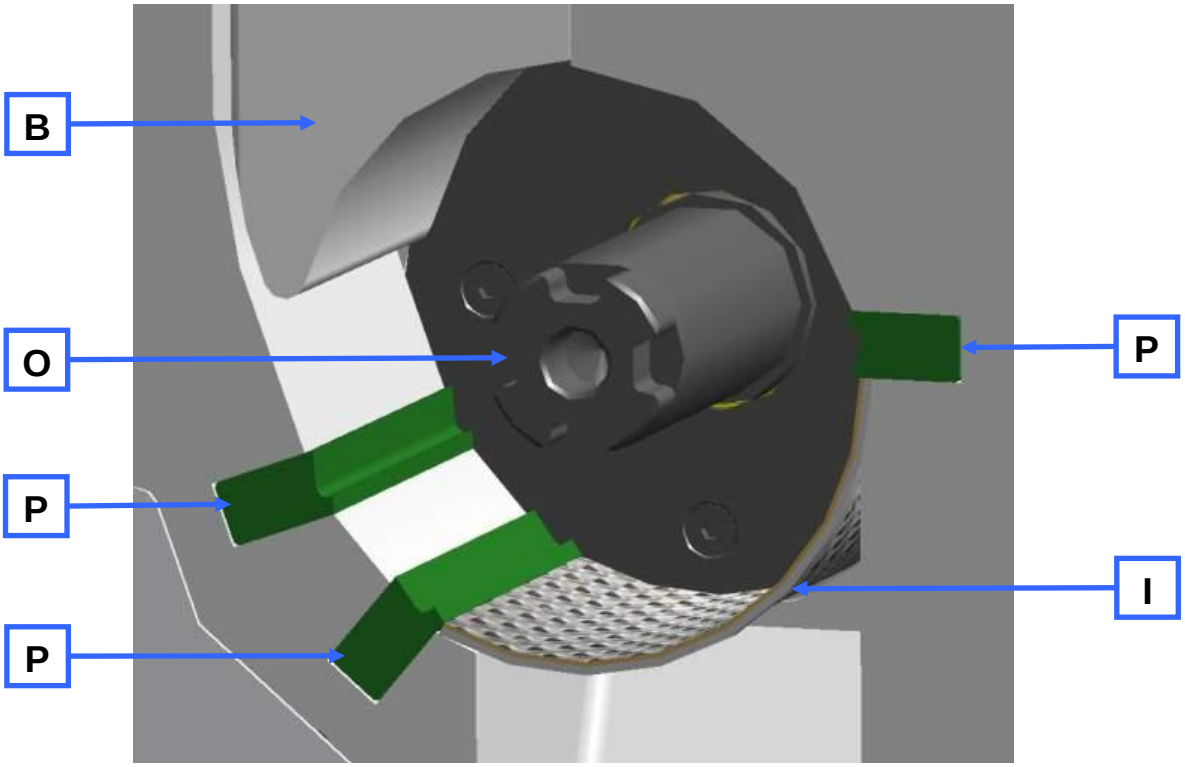


Fig. 8: View of grinding chamber

5.2 Operating elements and displays

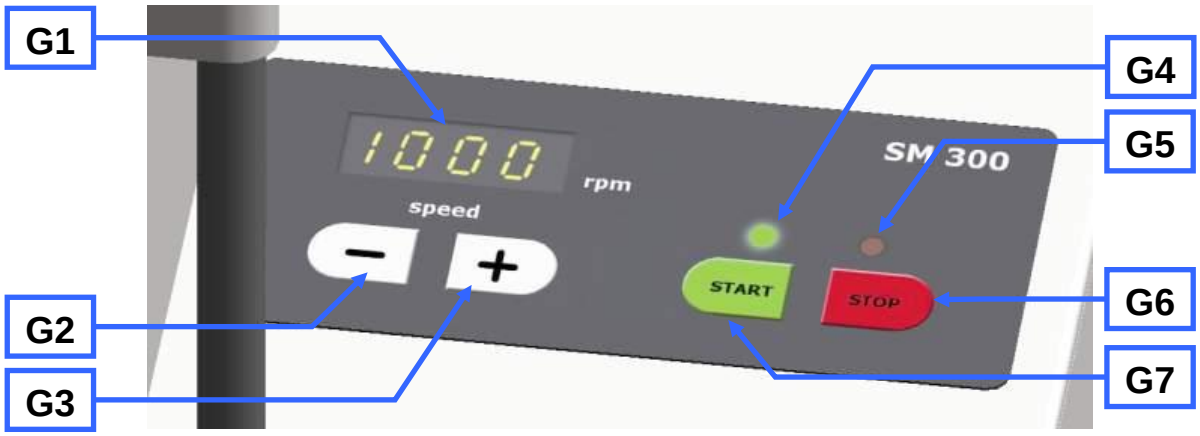


Fig. 9: View of the control panel and the display

5.3 Overview table of the parts of the device

Element	Description	Function
A	Access barrier Feed hopper	Prevents hands reaching into the feed hopper
B	Plunger	When pulled, it releases the feed chute. Pushes sample material onto the rotor.
C	Metering plunger	Pushes sample material into the feed shaft area of the feed plunger – Pulled out: material can be fed in. – Pushed in: material remains in the area of the feed plunger.
D	Detent pin	Prevents the feed plunger being pulled out, blocks it or releases it. – Pulled out: allows the feed plunger to move freely – Pushed in: feed plunger engages in the top position
E	Mini detent pin	Locks the door latch
F	Handle for door latch	Allows the door to be opened
G	Control panel	For starting and stopping the SM300 and setting the speed
H	Parallel section rotor	Size reduction tool
I	Bottom sieve	The size and type of its perforation influences the fineness of the material being ground
J	Ring filter	Air outlet and sieve for the sample material
K	Collecting receptacle	Collects comminuted stock
L	ON/OFF switch (main switch)	Disconnects and connects the SM 300 to the power grid. - ON = LED (red) STOP lights up - OFF = all LEDs are off
M	IEC C14 appliance inlet 16A	Power connection
N	Housing fan	Cools the interior of the device
O	Rotor shaft	Accommodates the size reduction tool
P	Cutting bars	Complements the size reduction tool
R	Feed hopper	For feeding the sample
S	Fastening screws for feed hopper	Locking screws for the feed hopper
T	Grinding chamber door	Closes the grinding chamber

5.4 Opening and closing of the grinding chamber

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.

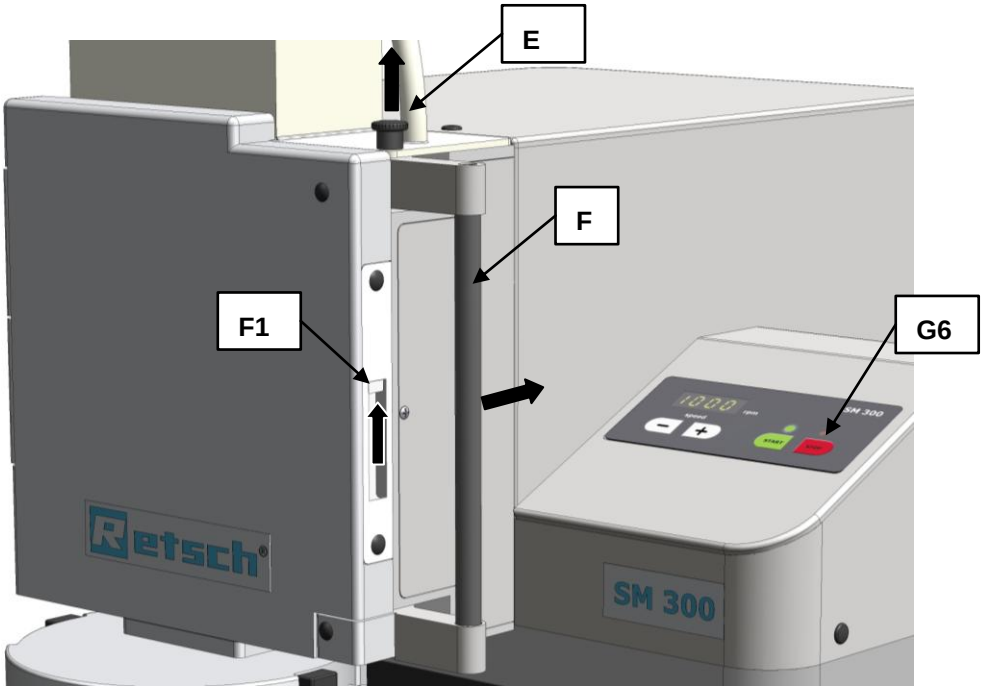


Fig. 10: Opening the grinding chamber door

5.5 Mounting the bottom sieve

- Select the appropriate bottom sieve.
- Open the mill housing and push the bottom sieve (**I**) of your choice into the SM 300.

For coarse preliminary size reduction it is also possible to work without the bottom sieve (**I**).

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

Reduction of tool service life
Abrasive sample materials

– The presence of abrasive composite materials during grinding can considerably reduce tool service life.

- **When grinding electronic scrap, take the properties of the composite materials into account.**

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.**

5.6.1 Removing the Rotor

- Stop the SM 300.
- Open the grinding chamber door.
- Screw the extraction handle (EG) onto the rotor and pull the rotor off the driving shaft.

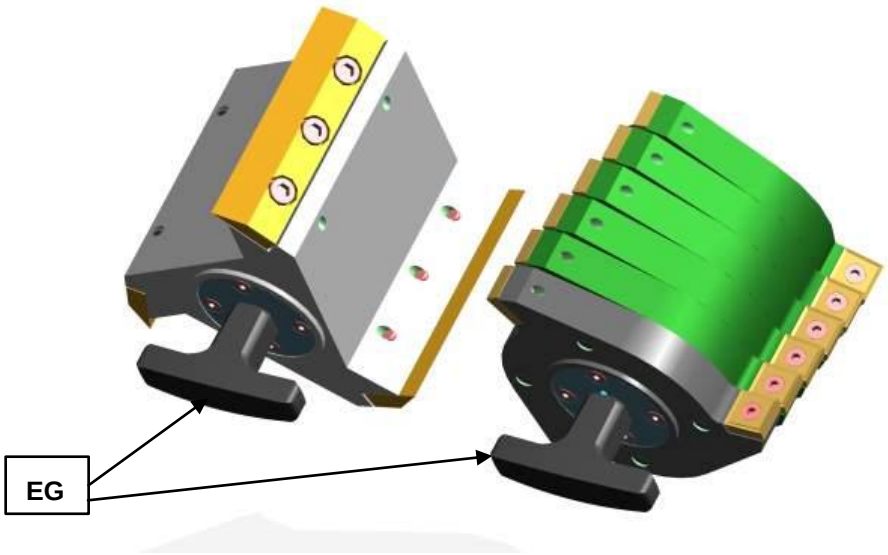


Fig. 11: Extraction handle

5.6.2 Inserting the Rotor

- Clean and lubricatethe motor shaftand the rotor.

- Push the rotor onto the motor shaft.

In other respects, the SM 300 is essentially maintenance-free .

However, we recommend that you inspect the cutting tools regularly depending on frequency of use ,but at least once a month .

5.7 Inserting the Ring Sieve and Collecting Receptacle

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

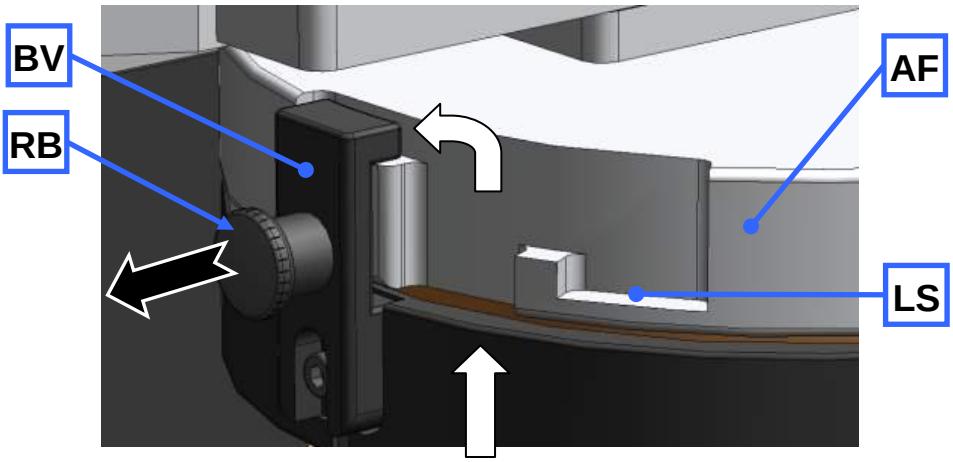


Fig. 12: Mounting and Removing the Ring Sieve

- 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.

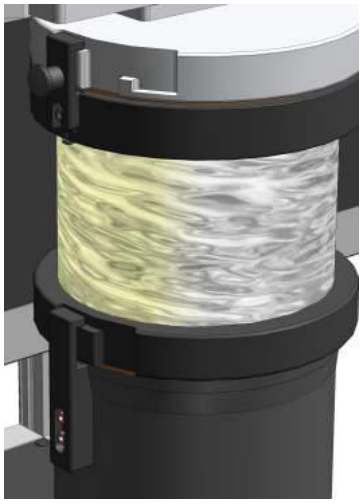


Fig. 13: Collecting Receptacle and Ring Sieve

5.8 Switching On and Off

5.9 Starting the grinding process

5.10 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 Cleaning and service

7.1 Adjusting the cutting bars

To ensure that the device will function satisfactorily, it is necessary to check the cutting gap (target spacing 0.3 mm). The (**SL**) cutting bars are therefore moveable so that the cutting gap can be set.

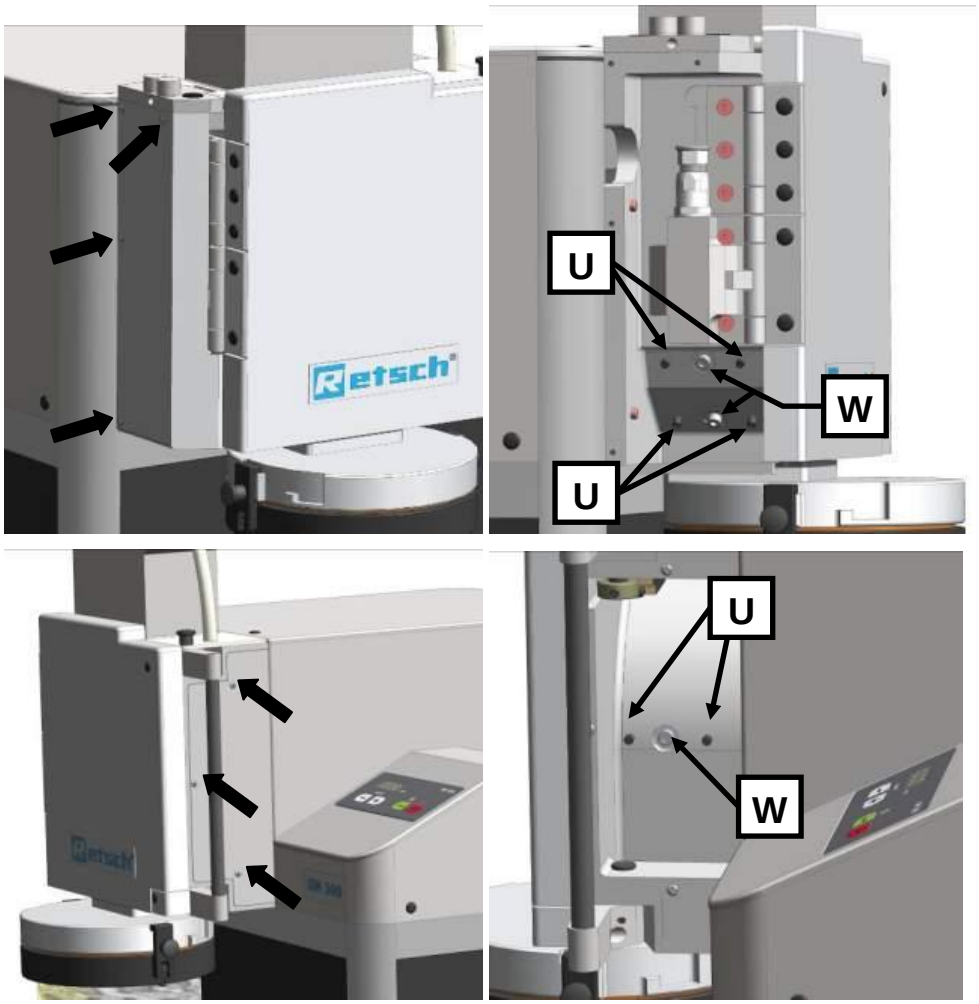


Fig. 14: Access to the cutting bars

- Loosen the four screws in the left cover.
- Loosen the three screws in the right cover.
- Open the grinding chamber door.
- Pull the rotor approx.10 mm out of the grinding chamber until it can move freely.

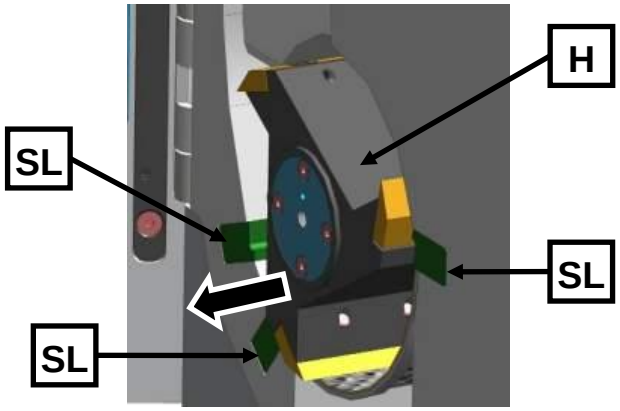


Fig. 15: Twist the rotor until it rotates freely

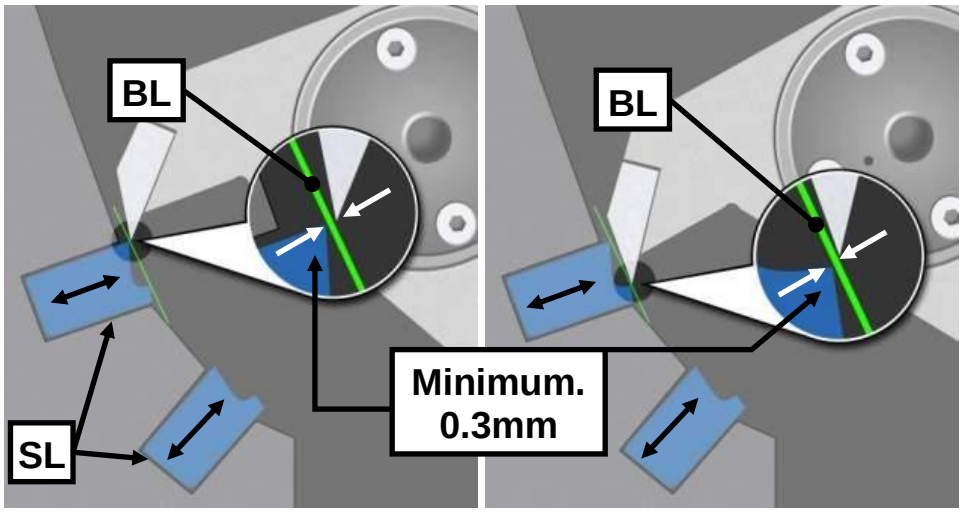


Fig. 16: Setting the cutting gaps

- Use a (**BL**) feeler gauge to check the cutting gap between all three (**SL**) cutting bars. The gap should be at least 0.3 mm.

The (**BL**) feeler gauge must be put on the two cutting surfaces as shown in the illustration. The cutting gap must have the same spacing along its entire depth. Check the cutting gap along its entire depth therefore.

The cutting edge with the smallest spacing from the knife marks the cutting gap (**SP1/2**). The second cutting edge can have a larger cutting gap.

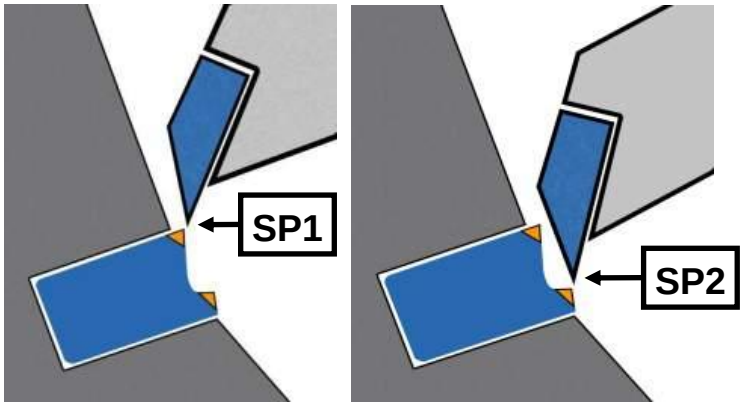


Fig. 17: Cutting gap

- Turning the studs (**U**) in a clockwise direction pushes the cutting bar closer to the rotor knife and reduces the cutting gap accordingly. Turning in an anti-clockwise direction increases the cutting gap.
- Tighten the (**WS**) screw and check the cutting gap. Repeat the procedure if necessary.
- Tighten the (**W**) screw at 7Nm again after adjusting the cutting bar.
- Then mount the right and left covers onto the device again.

NOTE

Do not set the cutting gap at less than 0.3 mm. Contact between the cutting plates and the cutting bars can damage mechanical components.

The tightening torque for the (**W**) screw must be 7Nm. It is not otherwise possible to guarantee that the cutting bars will be positioned securely.

8 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)

9 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:

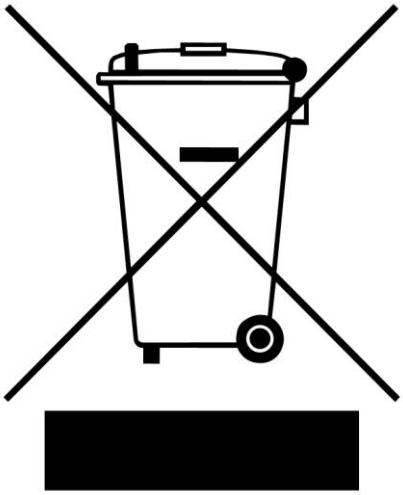


Fig. 18: Disposal label

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

10 Index

A

Access to the cutting bars....30
Adjusting the cutting bars 29
air exit 28
air flow....28
Atmospheric humidity 13

B

Bayonet fixing 28

C

Capacity....19
Changes 5
Cleaning and service 29
Collecting Receptacle and Ring Sieve 28
Conditions for the place of installation....12
Conditions of the installation site 17
Confirmation 11
Connecting cable 16
Connecting the external Industrial Vacuum cleaner 28
Copyright 5
Cutting gap 31

D

Degree of protection 19
Description....24
Dimensions and weight....20
Discharge flange....28
Disposal 33
Disposal label 33

E

Electrical connection....16
Emissions 19
Explanations of the safety warnings 6
External fusing 17
Extraction handle 27
Eye bolt....13

F

F.01 32
F.04 32
F.04.-.... 32
F.11 32
F.15 32
F.18 32
F.26 32
F.37 32
Fault messages.... 32
Filling hole 29
Frequency of Use.... 27
Front View.... 21
Front view from the left (detail) 22
Function 24

G

General safety instructions 8

I

Inserting the Ring Sieve and Collecting Receptacle 27
Inserting the Rotor 27
Inspection.... 27
Installation height.... 16
Installation of the machine 16
IP20.... 19

L

lubricate 27

M

maintenance-free.... 27
Maximum relative humidity 13
Mode of Operation of Feed Hopper 29
Moderate or mild injury 6
Motor rotation speed 19
motor shaft 27
Motor Speed 19

Mounting and Removing the Ring Sieve 27
Mounting the bottom sieve.....25
Mounting the Feed Hopper 13, 14, 15

N

Notes on the Operating Manual.....5

O

once a month 27
Opening and closing of the grinding chamber 25
Opening the grinding chamber door. 25
Operating elements and displays 23
Operating the machine 21
Overview table of the parts of the device 24

P

Packaging 12
property damage.....6
Putting on the Protective Caps 16

R

Rated power 19
Rear view.....22
Receptacle volume 19
Removing the Rotor.....26
Removing the Transport Safeguard 14
Removing transport aid.....13
Removing Transport Safeguards.....13
Repairs..... 10
Replacing the rotor..... 25
Required floor space..... 20

S

Safety warnings 6
serious injury..... 6
Service Address..... 10
Setting the cutting gaps 31
Starting the grinding process 28
Stopping the grinding process 28
Switching On and Off..... 28

T

Target group 8
Technical data..... 18
Temperature fluctuation and condensed water . 12
Transport..... 12
Transport, scope of delivery, installation 12
Twist the rotor until it rotates freely..... 30
Type plate 16

U

Use of the machine for the intended purpose.... 18

V

View of the control panel and the display 23
Views of the Instrument 21