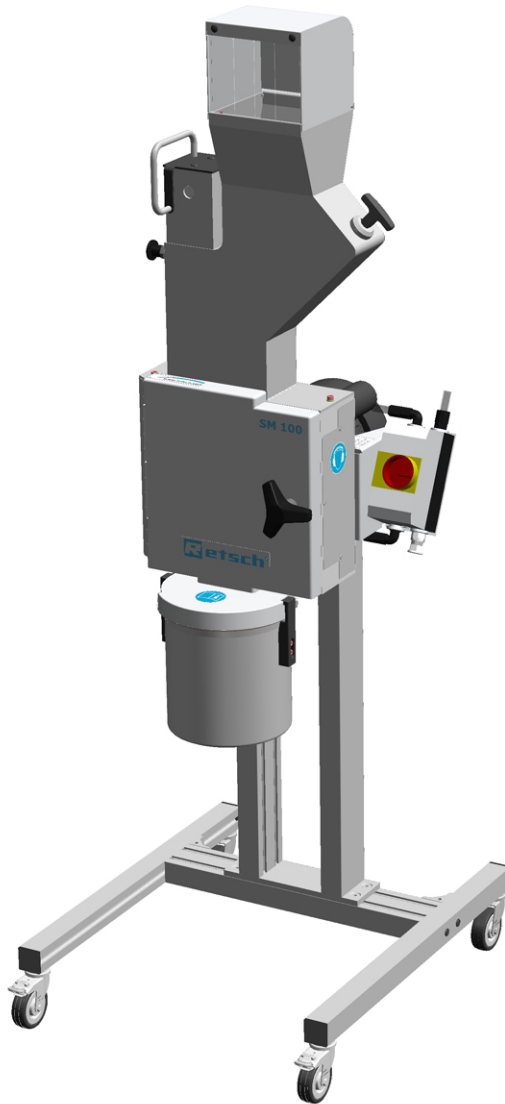


Manual Cutting Mill SM100



Translation



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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.

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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 Electrical connection **WARNING**

When connecting the power cable to the mains supply, use an external fuse that 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.**
-

3.6 Type plate description



Fig. 1: 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.

3.7 Removing Transport Safeguards

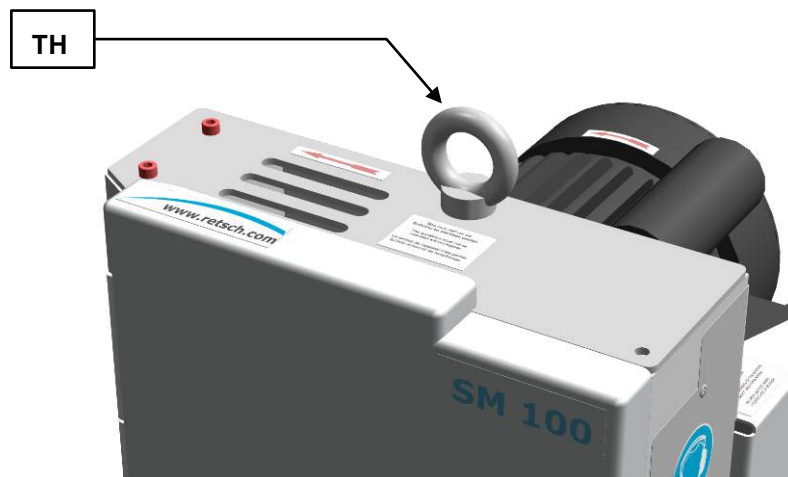


Fig. 2: Removing the transport aid

Only use the transport aid (TH) when lifting the device. The device weighs approx. 73 kg. Select secure lifting equipment that is approved for this weight.

Keep the eyebolt (TH) for transportation at a later date.

The eyebolt must be removed before assembling the hopper.

3.8 Frame assembly

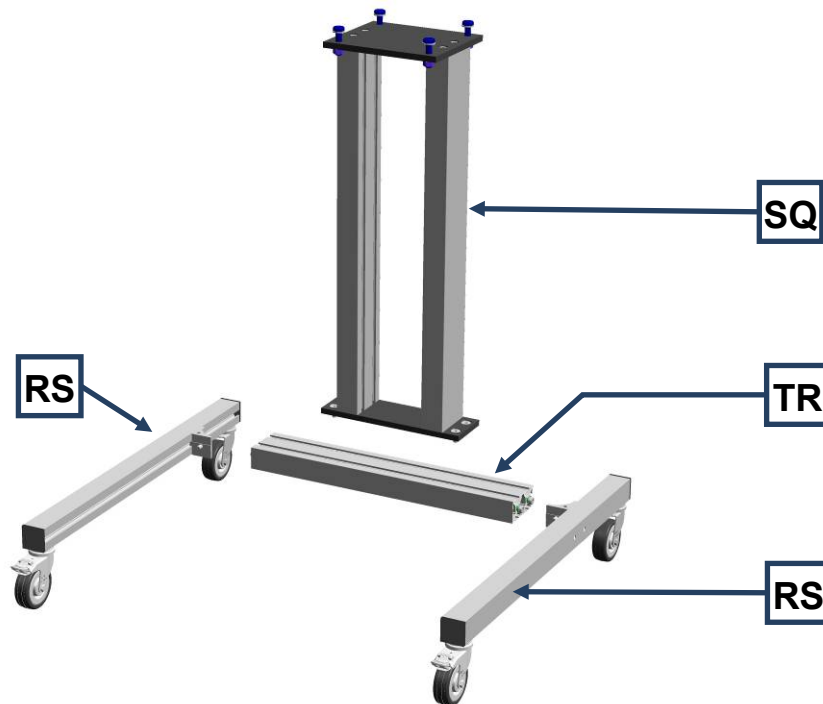


Fig. 3: Components of the stand

The components come pre-assembled to simplify assembly of the frame.

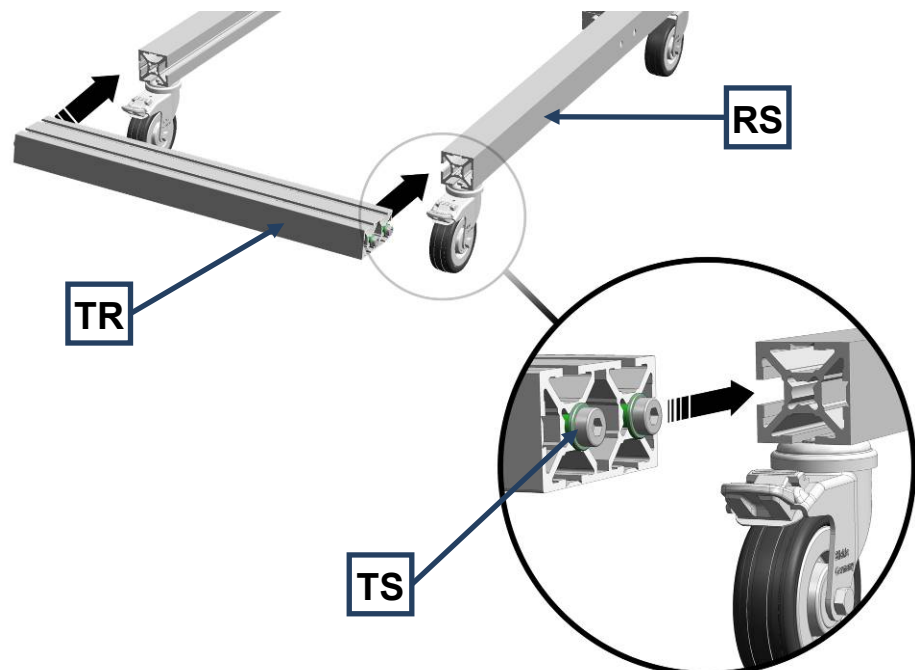


Fig. 4: Assembling the crossbar

- Where necessary slightly loosen the four screws (**TS**) on the crossbar (**TR**).
- Slide the crossbar into the lateral guides of the left and right roller track (**RS**).

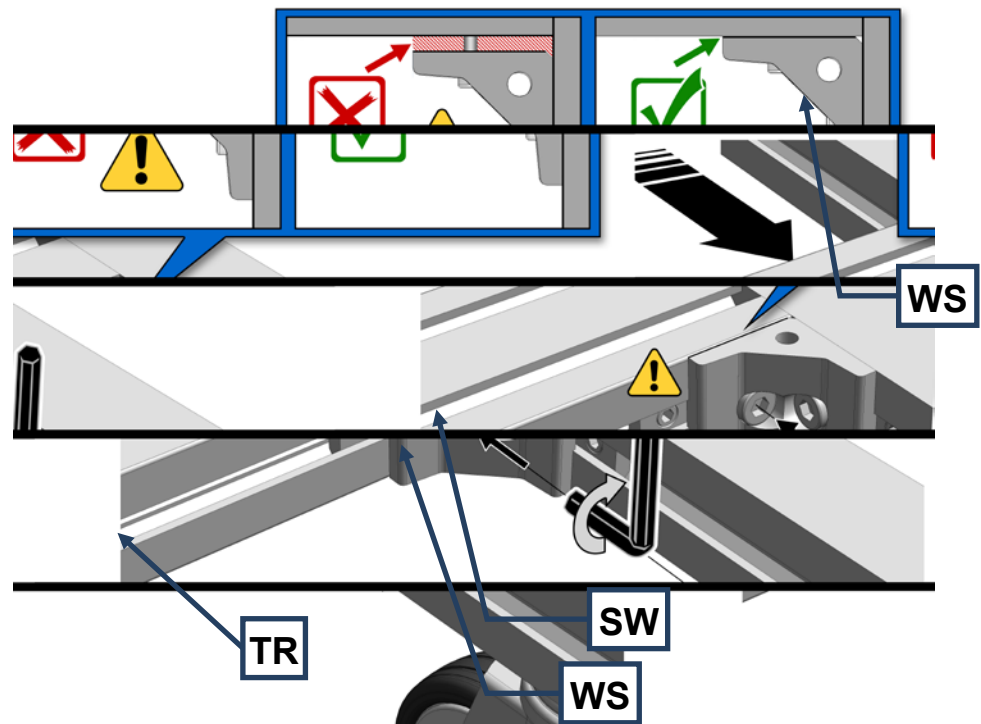


Fig. 5: Fastening the crossbar angle bracket

NB

Ensure that the crossbar (**TR**) is aligned flush with the pre-assembled angle section (**WS**).

Tighten the screw on the left and right of the angle section (**SW**).

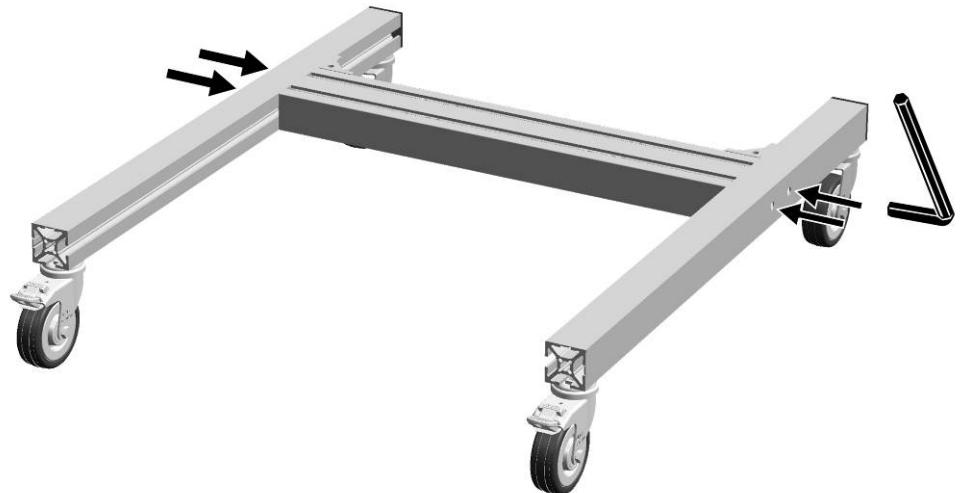


Fig. 6: Screwing the crossbar tight

- Tighten the four Allen screws.

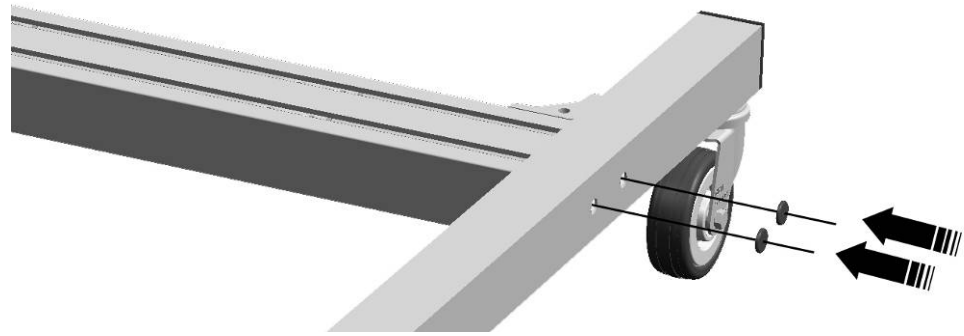


Fig. 7: Mounting the side protective caps

- Place the four black plastic caps on the openings.

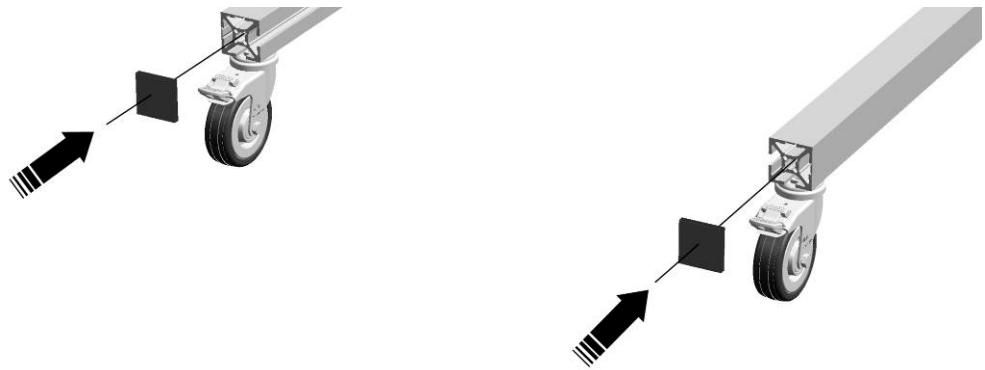


Fig. 8: Mounting the front protective caps

- Place the two caps on the ends of the roller track.

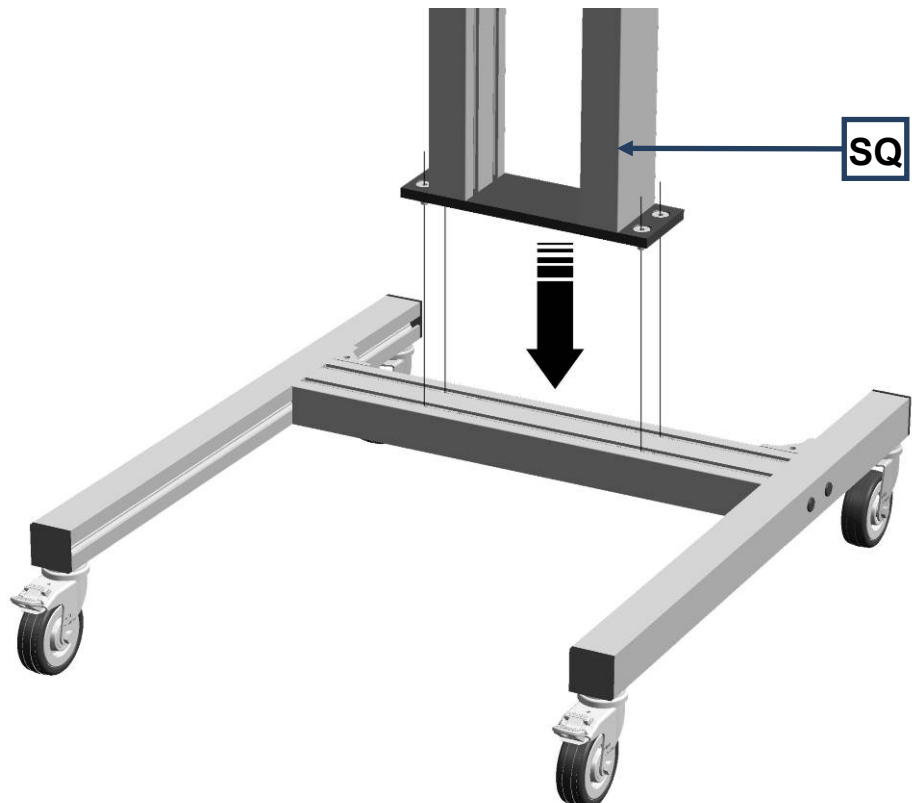


Fig. 9: Placing the crossbar on the stand

- Place the stand (SQ) on the crossbar.

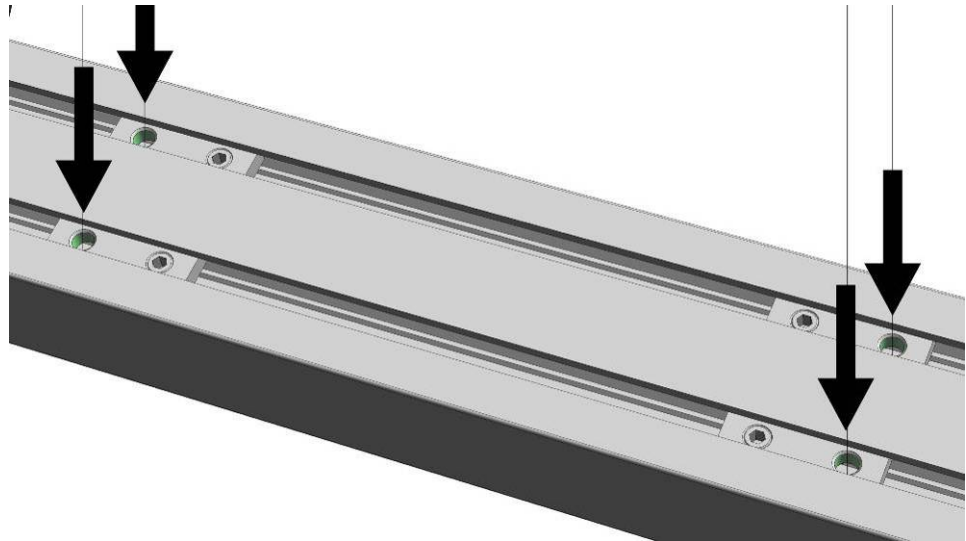


Fig. 10: Points for securing the stand

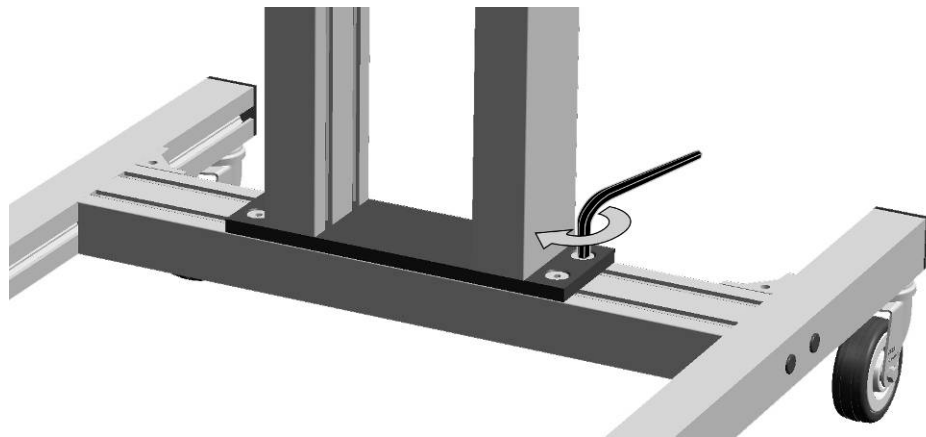


Fig. 11: Screwing the stand onto the crossbar

- Screw the stand (SQ) onto the crossbar.

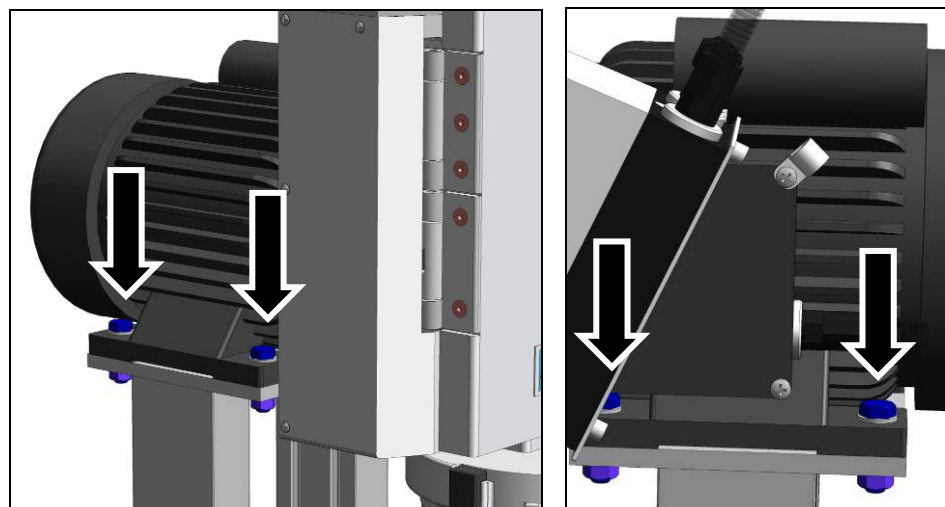


Fig. 12: Assembling the SM 100

- Then place the SM100 on the base frame.

- Using the 4 screws, screw the SM100 housing tightly onto the base frame.

3.9 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.**

3.9.1 Removing the Transport Safeguard

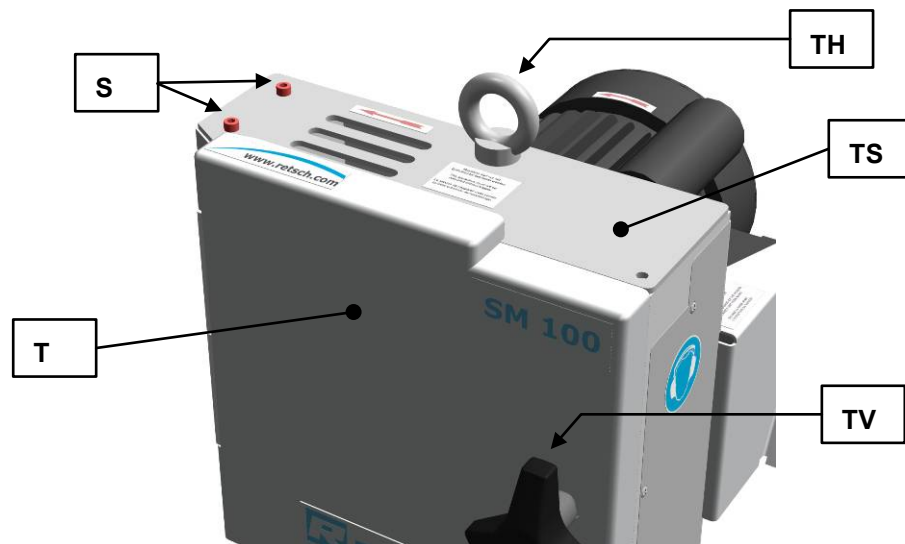


Fig. 13: Removing the transport lock

- Remove the transport aid (TH).
- Turn the door lock grip (TV) until the door can be opened.
- Open the grinding area door (T).
- Remove the two safety screws (S).

NB

Retain the transport lock (TS) for transportation at a later date.

3.9.2 Mounting the Feed Hopper

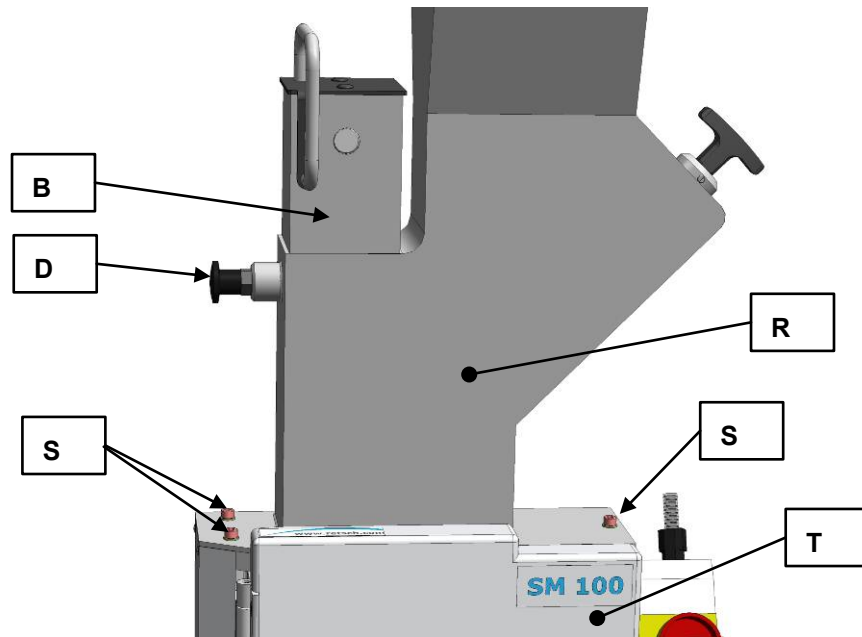


Fig. 3: Mounting the feed hopper

- Open the grinding area door (T).
- Pull the plunger (B) so it engages in the uppermost position.
- Place the feed hopper (R) on the device (see diagram)

⚠ CAUTION

It is possible for the feed hopper (R) to fall from the device as long as it is not secured by the three socket screws.

- Unlock the locking pins (D) of the plunger (B).
- Slide the plunger down.
- Screw in the three supplied socket screws (S).
- Initially only tighten the screws loosely.
- Close the grinding area door (T).
- Twist the rotary grip of the grinding area door.
- Align the feed hopper so that the plunger can be easily moved up and down without tilting.
- Screw the three socket screws tight (10Nm).
- Check again that the plunger can be easily moved up and down without tilting.

NB

The grinding area door and the grip of the door lock are somewhat stiff when new.

3.10 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 disconnect the machine from the mains at any time.
 - **Install the machine such that the connection for the mains cable is easily accessible.**
-

4 Technical data

4.1 Use of the machine for the intended purpose

Target group: Operating companies, operators

Designation of machine model: SM 100

This powerful cutting mill is used to grind elastic and fibrous products and product mixtures in batches or continuously. In addition this device is fundamentally not designed to grind wet or damp materials. The special moulding of the cutting tools in conjunction with the drive produces fast, efficient grinding without the ground material interrupting the procedure.

With the following special features

The new powerful grinding mill can successfully perform difficult grinding tasks where other grinding mills fail. The device facilitates particularly effective preliminary grinding of heterogeneous material mixtures such as waste or electronic components. Analytical fineness can usually be achieved in one step. The cutting mill can also be used successfully with a number of other materials. The grinding material is only slightly warmed in the process so that the mill can also be used for materials that are temperature sensitive.

Use with the large selection of sieves, hoppers and collecting vessels enables the equipment to be adjusted to individual tasks.

- Fast, successive grinding by 18 spiral-shaped cutting plates distributed round the rotor
- Parallel section rotor
- Cutting tools made from quality materials
- User-friendly with central locking and control panel
- Consistent reliability of all operational device components
- Diverse use possible due to device variations and wide range of accessories
- Powerful grinding thanks to 1,5 kW motor with high torque
- Can be cleaned very quickly due to the push-fit rotor
- Defined ultimate fineness through bottom sieves with mesh sizes of 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 emissions in accordance with DIN 45635-31-01-KL3.

Emissions at 1m distance:

- approx. 68 dB (A) when idling

When grinding depending on the material to be ground:

- approx. 85 to 95 dB (A) with peaks up to 110 dB (A)

4.3 Degree of protection

- IP54

4.4 Motor rotation speed

The motor speed is 1500 min⁻¹.

4.5 Receptacle volume

The capacity is < 5 l and can be expanded to up to 26 l using accessories.

4.6 Rated power

- 1500 W

4.7 Dimensions and weight

Height: 1675 mm

Width: 582 mm

Depth: 700 mm

Weight: approx. 73 kg (without hopper, rotor and base frame)

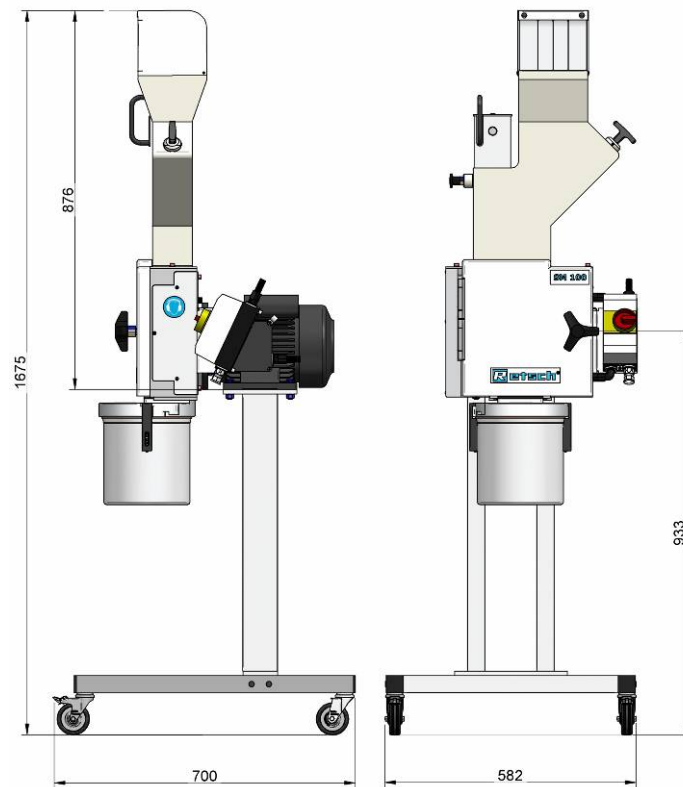


Fig. 4: Dimensions

4.8 Required floor space

1090 mm x 765 mm – no safety distances necessary

5 Operating the machine

5.1 Views of the Instrument

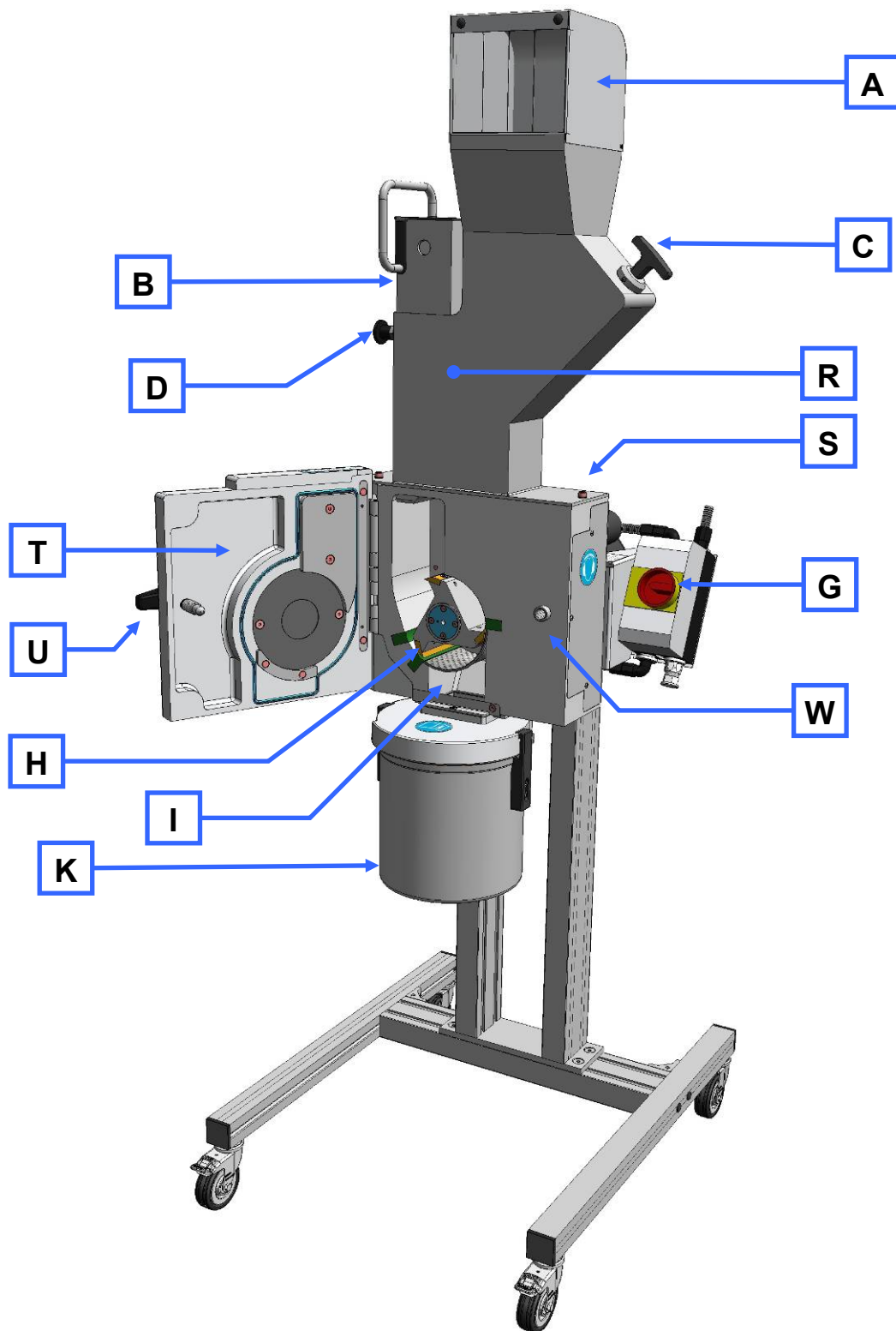


Fig. 5: Front view

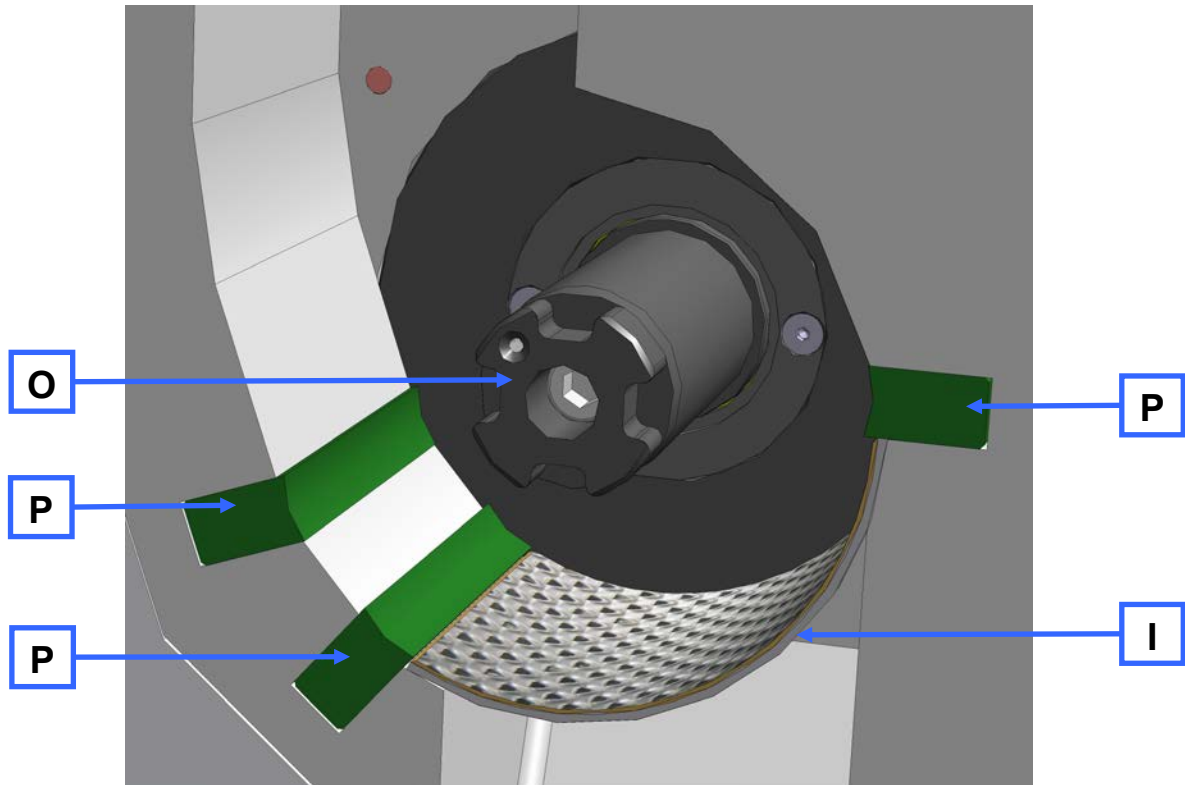


Fig. 6: Grinding area view

5.2 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 <ul style="list-style-type: none"> – 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. <ul style="list-style-type: none"> – Extended: free movement of the fill plunger is possible – Released: fill plunger engages in the uppermost position
G	On/off switch	Starts and stops the device
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
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 Chamber door	Closes the grinding area
U	Threaded handle	Closes the grinding area door

5.3 Opening and closing of the grinding chamber

 **CAUTION**

2.V0001

Possibility of personal injuries

Injuries due to rotating rotor

- Reaching into the turning rotor
- **Never open the grinding chamber door while the rotor or the motor is still rotating.**



- Stop the device by actuating the switch (G).
- Open the grinding area door by turning the handle (U).

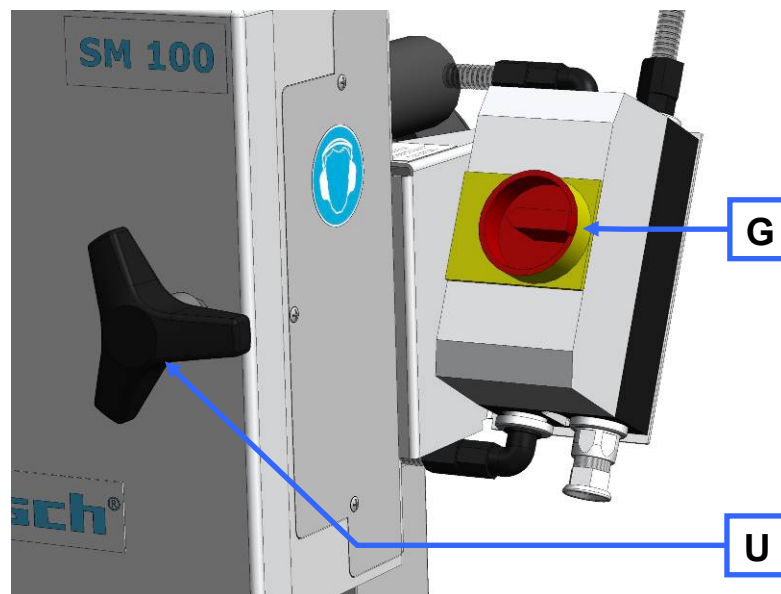


Fig. 7: Opening the grinding area door

5.4 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.

5.5 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.**

5.5.1 Removing the Rotor

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

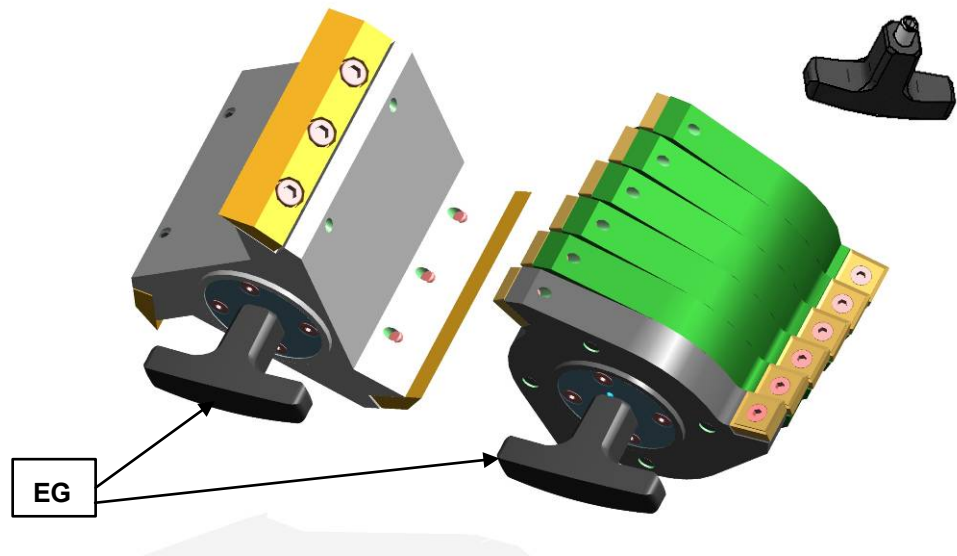


Fig. 14: Removal grip

5.5.2 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.

5.6 Inserting the filter unit and collecting receptacle

The filter unit serves as air outlet for the flow of air generated by the grinding rotors.

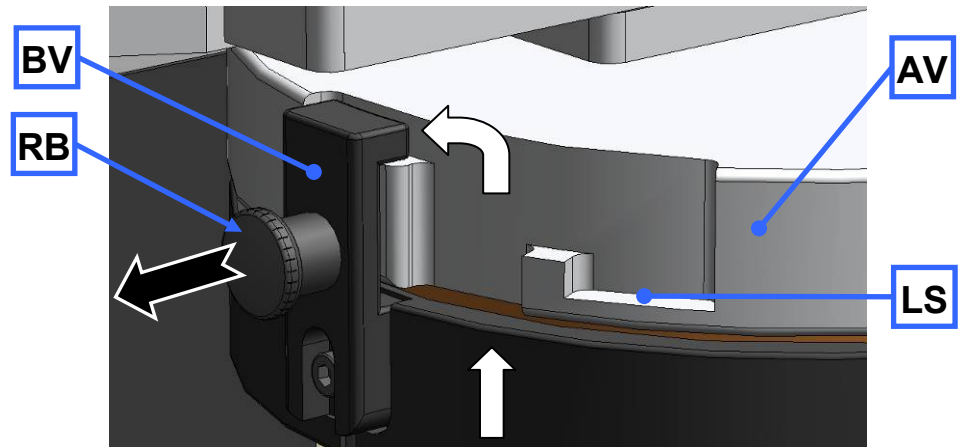


Fig. 2: Attaching and removing the filter unit

- Insert the bayonet lock (BV) on the filter unit (J) into the discharge flange (AV) as shown in the diagram.
- Twist the filter unit in a clockwise direction to engage the bayonet lock.
- To remove the filter unit, pull the locking pins (RB) out to release the bayonet lock (BV).

Alternatively the collecting receiver can be placed directly on the discharge flange. The discharge of the air flow is prevented in the latching position (BV).

In the latching position (LS) a gap remains between the discharge flange and collecting vessel; this permits air discharge.

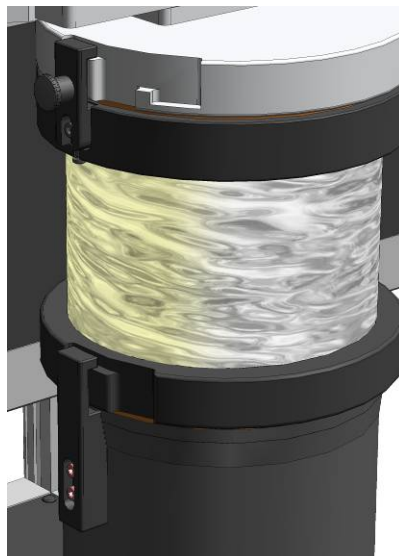


Fig. 3: Collecting receiver and filter unit

5.7 Switching On and Off

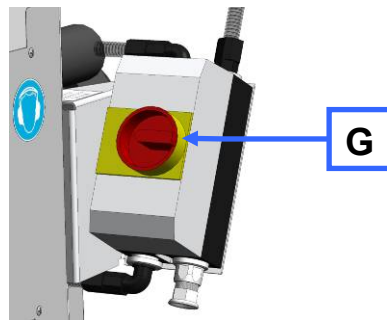


Fig.4: On/off switch

You can switch the device on/off using the on/off switch (G). The motor starts up or is shut down when the switch is actuated. The switch disconnects the device from the mains.

5.8 Starting the grinding process

NB

Only fill test material when the device is running because this may otherwise lead to motor blockages when starting the device.

The cutting gap between the rotor and cutting bar must be checked after each grinding operation with hard materials. The maximum cutting gap may be 0.5 mm (minimum is 0.3 mm).

(See chapter on *Adjusting the cutting bars*)

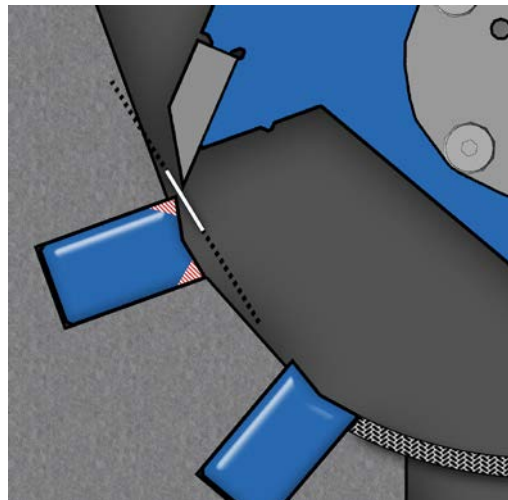


Fig. 8: Cutting gap

5.9 Stopping the grinding process

The grinding process in progress can be stopped by actuating the on/off switch. The grinding area door can now be opened.

6 Cleaning and service

6.1 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.

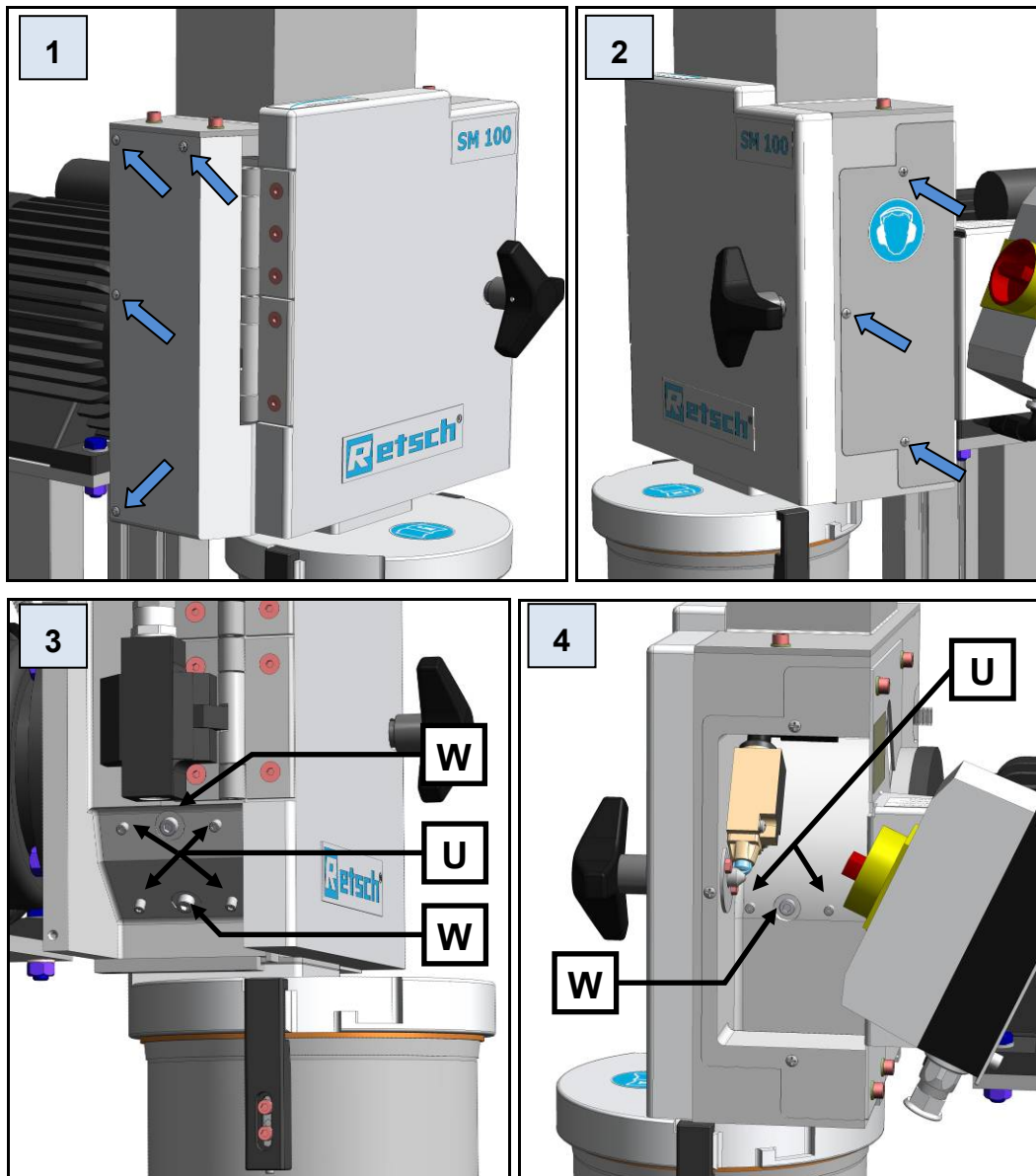


Fig. 15: Access to the cutting bars

- Unscrew the four screws on the left-hand cover [1].
- Unscrew the three screws on the right-hand cover [2].
- Open the grinding area door.
- Pull the rotor approx. 10 mm out of the grinding area until it can be freely rotated.

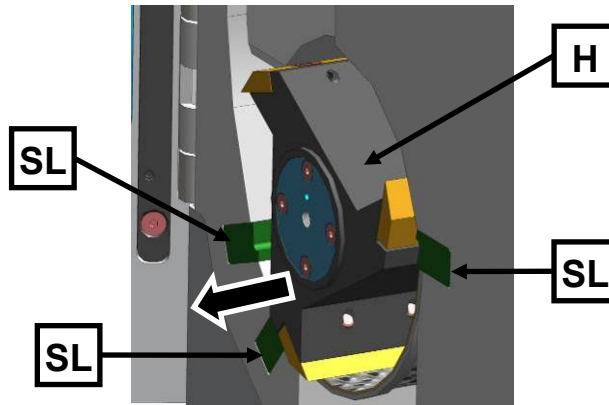


Fig. 16: Freely rotate the rotor

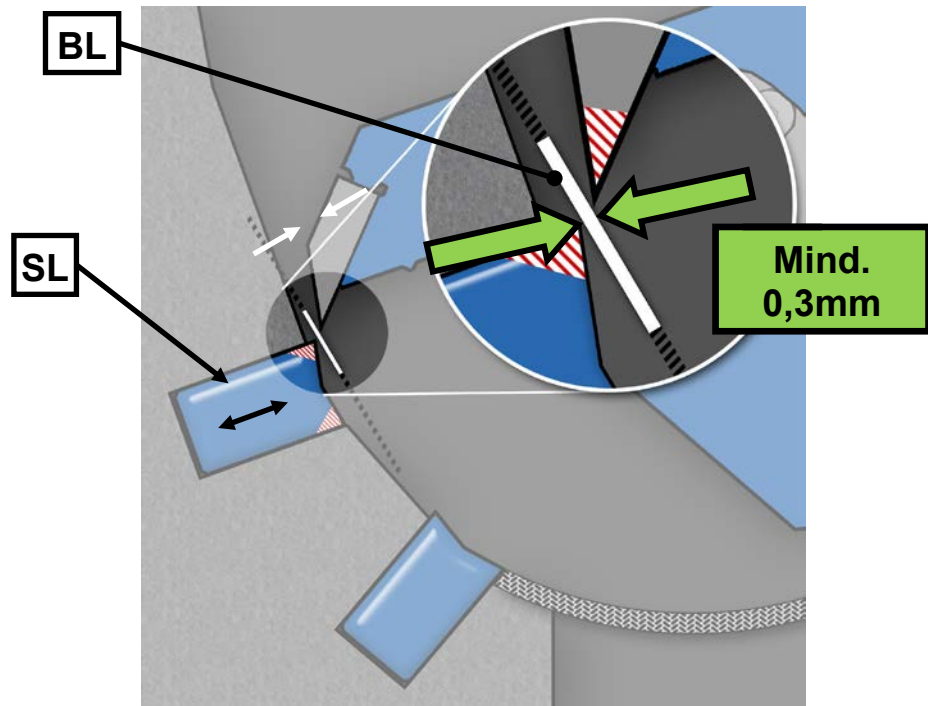


Fig. 17: Adjust the cutting gaps

- 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 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**). The second cutting edge can have a larger cutting gap width.

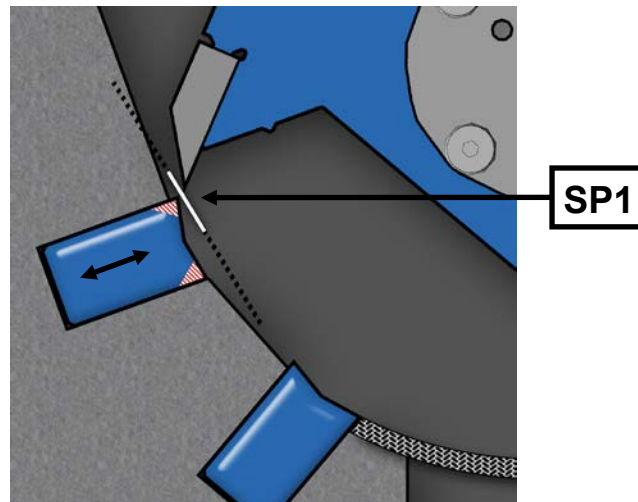


Fig. 18: Cutting gap

- 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 [**3**].
- 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 [**4**].
- Finally re-assemble the right and left-hand cover on the device.

NB

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.

6.2 Felt gasket – servicing and replacement

NOTICE

Replace the felt gasket (**FD**) every three months. (03.182.0024)

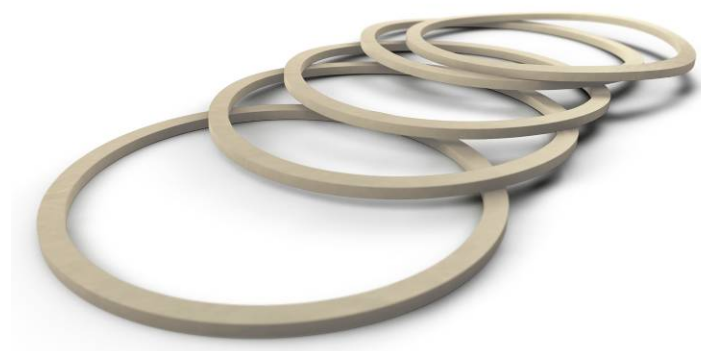


Fig. 19: Felt gasket

- Remove the rotor (**H**).
- Unscrew the two screws (**SD**).
- Remove the sealing ring (**DR**) that holds the felt gasket.

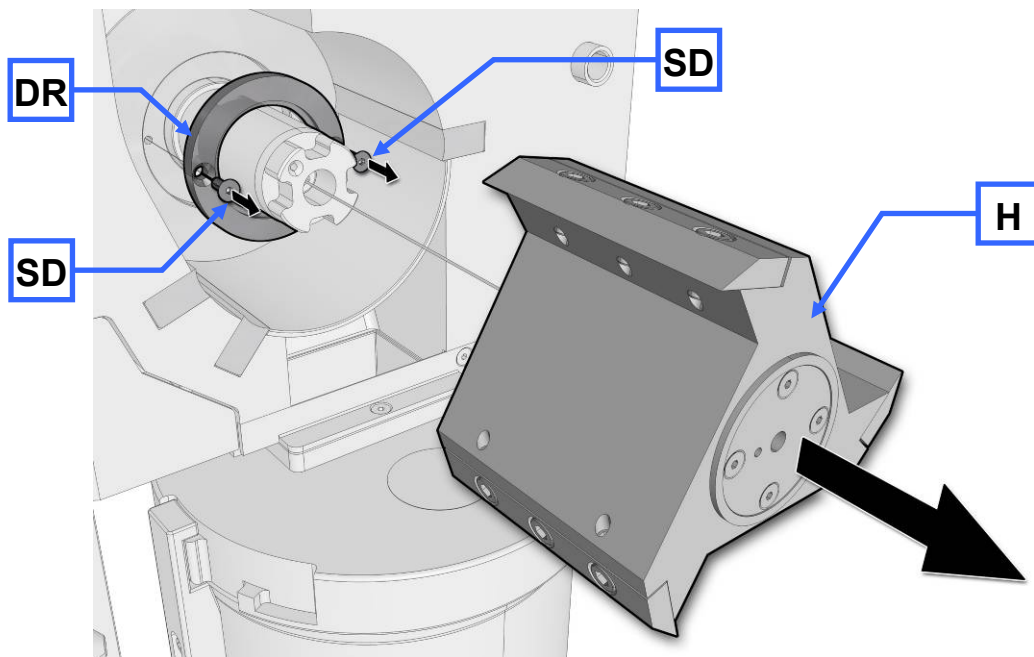


Fig. 20: Dismantling the sealing ring with felt gasket

- Remove the felt gasket (FD).
- *NOTICE*
- **Oil the felt gasket before inserting it.**
- Insert the new felt gasket (FD) in the sealing ring (DR).

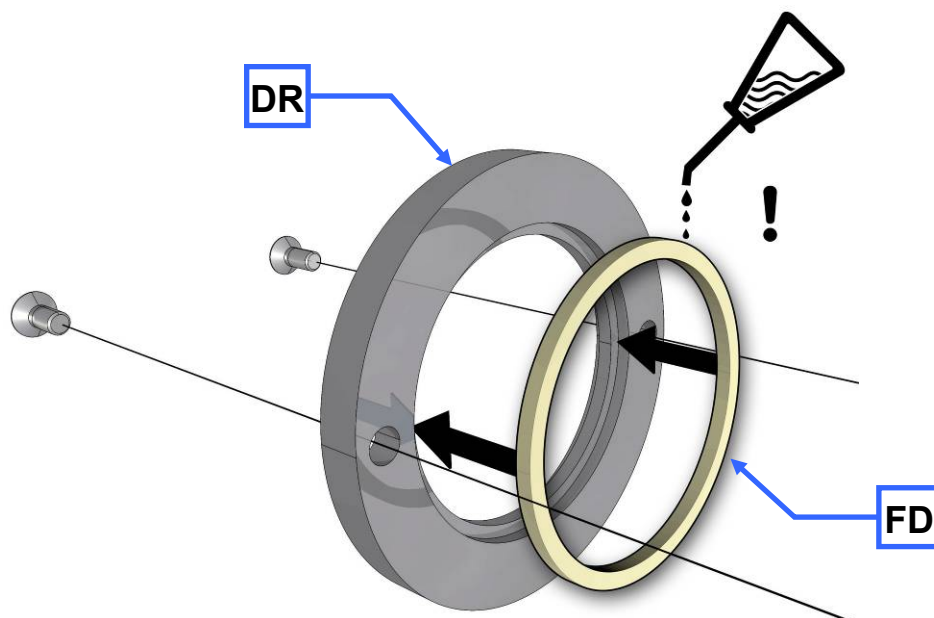


Fig. 21: Inserting the felt gasket in the sealing ring

- Mount the sealing ring (DR) with the inserted felt gasket (FD).
- Tighten screws (SD).

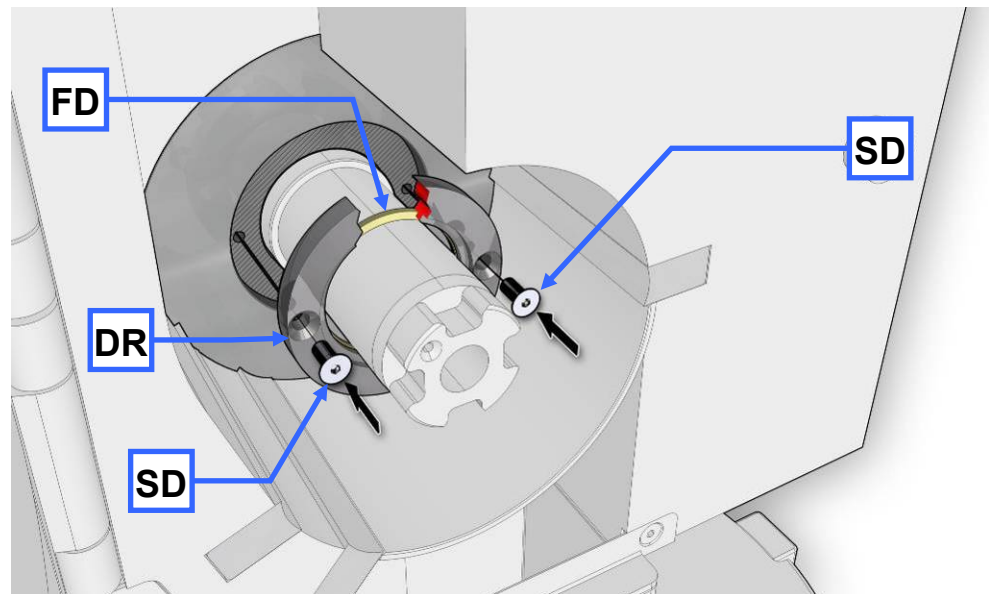


Fig. 22: Mounting the sealing ring with felt gasket

6.3 Cleaning

⚠ 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.**

⚠ CAUTION

3.V0055

Cuts

Danger due to shears on the bottom sieve

- There is risk of cuts from the shears when inserting and removing the bottom sieve.
- **Do not put hands in the outlet hopper.**
- **Only change or remove the sieve when the rotor has been removed.**

⚠ WARNING

1.W0004

Risk of injury

When device is not correctly assembled after cleaning

- There is a risk of injury to the operator.
- **The device may only be cleaned by skilled personnel who have been sufficiently instructed in operating the device.**

The following components on this device can be removed or moved for cleaning purposes:

- Lift up the feed hopper safety guard
- Remove the feed hopper
- Remove the rotor
- Remove the sieve
- Remove the collecting receiver
- Remove the outlet flange

6.3.1 Clean the feed hopper

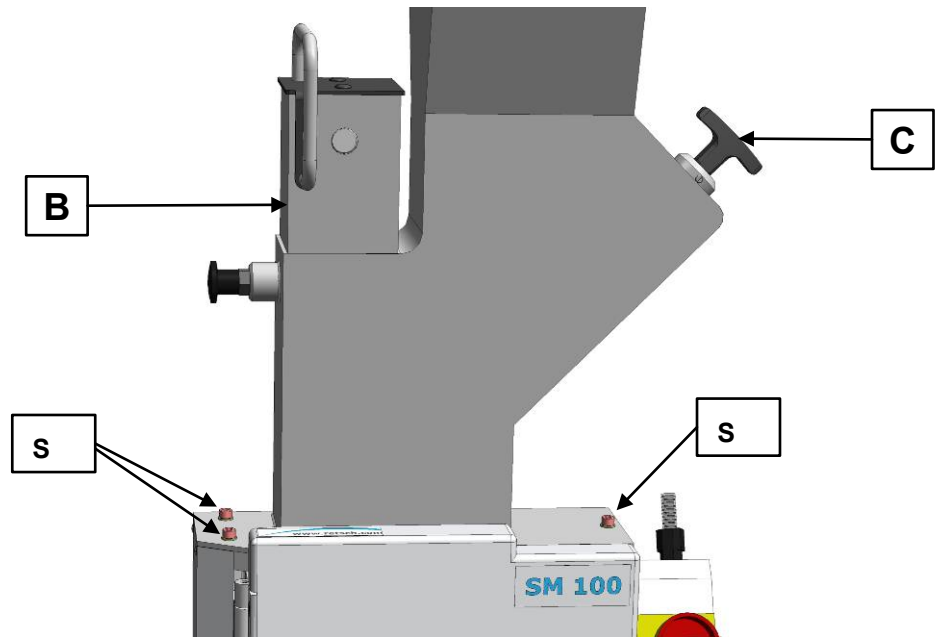


Abb. 23: Removing the feed hopper

Normally it is sufficient to clean the feed hopper through the fill shaft.

- To do this pull out the plunger (B) and the metering plunger (C).

6.3.1.1 Lift up the feed hopper safety guard

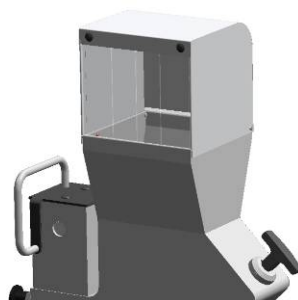


Fig. 24: Lifting up the feed hopper safety guard

- Loosen the screw (ES) on the feed hopper safety guard.
- Lift up the feed hopper safety guard.

If the feed hopper needs more thorough cleaning it can also be dismantled for cleaning.

6.3.1.2 Remove the feed hopper

WARNING

2.W0004

Risk of injury to skin and hands

Fast rotating blades

- There is a risk of injury to hands, fingers and skin.
- **Never operate the device without the feed hopper.**

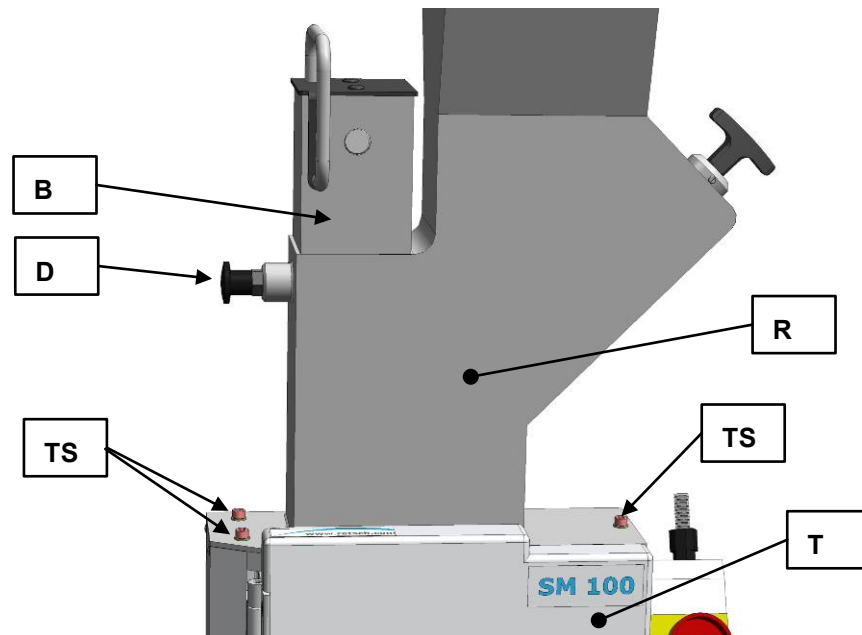


Fig. 25: Mounting the feed hopper

- Disconnect the device from the mains by pulling the plug from the socket.
- Open the grinding area door (T).
- Unscrew the three screws (TS).
- Lift the feed hopper out of the device for cleaning.

Follow the instructions in the following section to mount the feed hopper.

6.3.1.3 Mount the feed hopper

- Open the grinding area door (T).
- Place the feed hopper (R) on the device (see diagram).

CAUTION

It is possible for the feed hopper (R) to fall from the device as long as it is not secured by the two socket screws.

- Screw in the two socket screws supplied(S).
- Initially only tighten the screws loosely.
- Close the grinding area door (T).
- Twist the rotary grip of the grinding area door.
- Align the feed hopper so that the plunger can be easily moved up and down without tilting.
- Screw the three socket screws tight (10Nm).

- Check again that the plunger can be easily moved up and down without tilting.

6.3.2 Clean grinding area

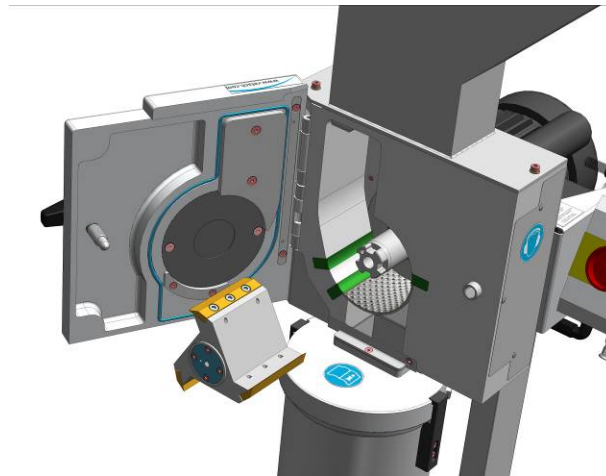


Fig. 26: Removing the rotor

- Open the grinding area door (T).
- Pull the plunger (B) into the uppermost latching position.
- Screw the removal grip (EG) onto the rotor and pull the rotor from the drive shaft.
- Remove the sieve.

6.3.3 Remove the discharge flange

WARNING

3.W0004

Risk of injury to skin and hands

Fast rotating blades

- There is a risk of injury to hands, fingers and skin.
- **Never operate the device without the discharge flange**

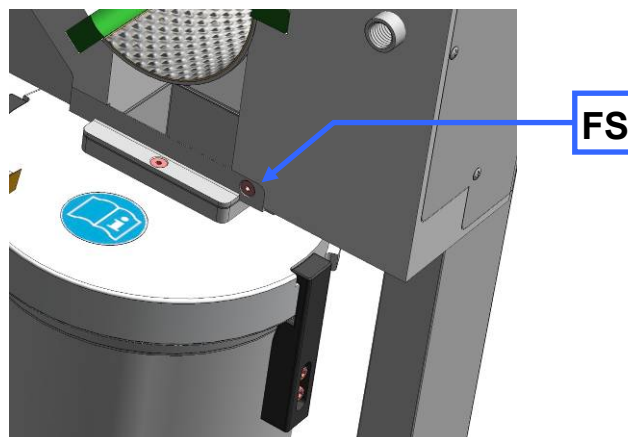


Fig. 27: Removing the discharge flange

- Loosen the screw (FS).
- Pull the discharge flange (AV) forwards out of the bracket.

7 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:

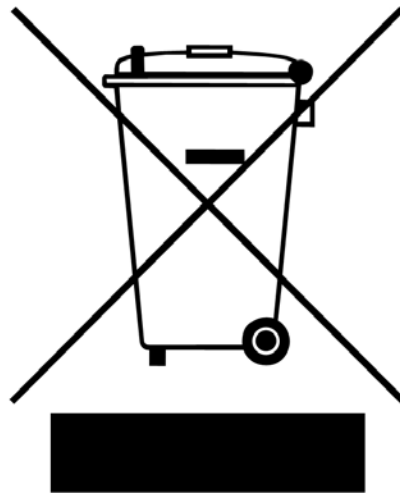


Fig. 28: Disposal label

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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LABORATORY CUTTING MILL SM100

Certificate of CE-Conformity according to:

EC Mechanical Engineering Directive 2006/42/EC

Applied harmonized standards, in particular:
DIN EN ISO 12100 Security of machines

EC Directive Electromagnetic Compatibility 2004/108/EC

Applied standards, in particular:
DIN EN 55011 B / Generic standard interference emission - living areas -
DIN EN 61326-1 Immunity

Additional applied standards, in particular

DIN EN 61010 Safety prescriptions concerning measuring-, operating-, controlling- and
laboratory equipment

Authorized person for the compilation of technical documents:

J. Bunke (technical documentation)

The following records are held by Retsch GmbH in the form of Technical Documentation:

Detailed records of engineering development, construction plans, study (analysis) of the measures required for conformity assurance, analysis of the residual risks involved and operating instructions in due form according to the approved regulations for preparation of user information data.

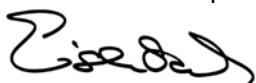
The CE-conformity of the Retsch laboratory cutting mill SM100 is assured herewith.

In case of a modification to the machine not previously agreed with us as well as the use of not licensed spare parts and accessories this certificate will lose its validity.

Retsch GmbH

Haan, October 2010

Ralf Eisenbach Dipl.-Ing.





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