

Operating Instructions

S 20 | S 20 B

Universal Wet-Sharpening Machine



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Universal Wet-Sharpening Machine S 20 | S 20 B

Manufacturer

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Documents for machine operator

Operating Instructions

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1. Important notes

1.1 Preface to the operating instructions

These operating instructions are intended to make it easy to learn how to use the Universal Wet-Sharpening Machine, hereafter referred to as the grinding machine, and to properly utilize its features.

These operating instructions contain important notes on how to operate the grinding machine safely, properly, and efficiently. Observing these instructions helps to avoid hazards, reduce repair costs and downtimes, and to increase the reliability and service life of the grinding machine.

The operating instructions must always be stored in the location that the grinding machine is used.

The operating instructions must be read and applied by every person tasked with working with the grinding machine, e.g.:

- transport, installation, commissioning
- operation, including error rectification during operation, as well as
- servicing (maintenance, repair).

Recognized technical standards for safe and professional work must be observed in addition to these operating instructions and the binding accident prevention regulations applicable in the country of use and at the place of use.

1.2 Warnings and symbols in the operating instructions

The operating instructions use the following symbols/designations that must be followed:



The hazard triangle with the signal word “CAUTION” serves as a work safety notice for all work for which there is a risk of personal injury or death.

In these cases, work should be done with special attention and care.



“ATTENTION” is written in places where special attention must be paid to prevent damage or destruction of the grinding machine or its surroundings.



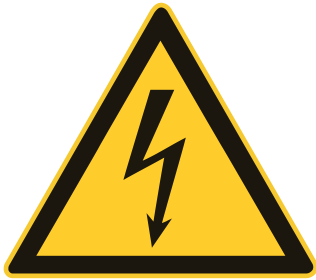
“NOTICE” refers to user tips and especially useful informations.

1. Important notes

1.3 Warning signs and their meaning

1.3.1 Warning and mandatory signs on/in the grinding machine

The following warnings and mandatory signs have been affixed on/in the grinding machine:



CAUTION! DANGEROUS ELECTRICAL VOLTAGE (warning sign on switch housing)

The grinding machine carries life-threatening voltage when it is connected to the current supply.

Current-carrying device parts may only be opened by authorized personnel.

The grinding machine must be separated from the mains supply before carrying out servicing, maintenance and repair work on it.



CAUTION! RISK OF INJURY FROM ABRASIVE PARTICLES (mandatory sign on machine front)

Grinding, polishing, deburring and dressing gives rise to grinding particles which can enter the eyes.

Wearing eye protection is mandatory when carrying out such work.

1.3.2 General mandatory signs

The following general mandatory signs must be followed:



CAUTION! RISK OF INJURY FROM KNIFE

Working with the grinding machine involves grinding knives that could cause serious cut injuries due to their sharpness.

Protective gloves must be worn when clamping and releasing knives.

Caution when transporting blades. Use the protective equipment provided by the knife manufacturer. Protective gloves and safety shoes must be worn.

1. Important notes

1.4 Rating plate and machine serial number

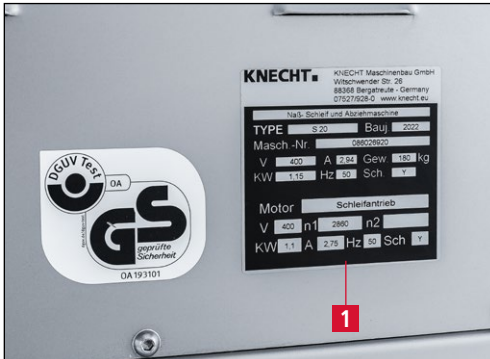


Figure 1-1 Rating plate

The rating plate (1-1/1) is located on the rear panel of the machine.



Figure 1-2 Machine serial number

The machine serial number can be found on the rating plate and on the right side wall underneath the wet-grinding belt.

1.5 Figure and position numbers in the operating instructions

If the text makes a reference to a machine component depicted in a figure, the figure and position number will be given in parentheses.

Example: (6-2/1) means figure number 6-2, position 1.

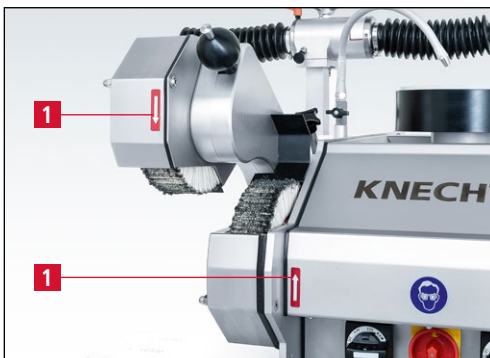


Figure 6-2 Checking the direction of rotation

Check the direction of rotation of the finned brushes.

The direction arrow (6-2/1) indicates the direction of rotation of the wet-grinding belt and finned brushes.

If the finned brushes are rotating in the right direction, then the direction of rotation of the grinding wheel and of the wet-grinding belt is also correct.

If the finned brushes are rotating in the wrong direction, have the phase reversed by a qualified electrician.

2. Safety

2.1 Basic safety instructions

2.1.1 Observe notes in the operating instructions

The basic prerequisite for the safe handling and trouble-free operation of this grinding machine is knowledge of the basic safety instructions and regulations.

- These operating instructions contain important notes on how to operate the grinding machine safely.
- All persons carrying out work on the grinding machine must follow these operating instructions, in particular the safety notices.
- In addition, the rules and regulations regarding accident prevention at the place of use are to be observed.

2.1.2 Obligation on the part of the operator

The operator is obliged to allow only those persons to work on the grinding machine, who

- are familiar with the occupational safety and accident prevention regulations and have received instruction in handling the grinding machine,
- have read and understood the operating instructions, in particular the section entitled "Safety" and the warning notes, and have provided signed confirmation of this.

The safety-awareness of the personnel at work will be monitored at regular intervals.

2.1.3 Obligation on the part of the personnel

All personnel working on the grinding machine shall be obliged, before starting work, to

- observe basic occupational safety and accident prevention regulations,
- read the operating instructions, particularly the section entitled "Safety" and the warning notes, and provide signed confirmation that they have understood them.

2.1.4 Hazards involved in handling the grinding machine

The grinding machine has been built to the latest technological standards and the recognized rules of technical safety. In spite of this, its use poses inherent risks which could result in bodily harm or even death of the user or third persons, or damage to the grinding machine or other property.

2. Safety

The grinding machine may be used only:

- for its intended purpose
- in a safe and secure condition.

Malfunctions that may impair safety are to be eliminated immediately.

2.1.5 Malfunctions

If safety-relevant malfunctions occur with the grinding machine, or if the processing behavior indicates that such malfunctions may have occurred, the grinding machine must be stopped immediately and until such time as the malfunction has been found and eliminated.

Allow only authorized trained personnel to eliminate the malfunctions.

2.2 Intended use

The grinding machine can be used universally for all standard cutter knives, as well as circular knives, hand knives, and other cutting tools.

Except for hand knives (e.g. cutting knives), all cutting tools must be clamped on the corresponding grinding plates.

First, check whether the grinding plate matches the knife to be ground. The knife can only be ground if this is the case.

Any other use or use beyond this is not considered as intended. KNECHT Maschinenbau GmbH is not liable for any damage resulting from this. The risk is borne solely the user.

Intended use also includes observing all instructions in the operating manual.

ATTENTION

Improper use of the grinding machine exists, for example, if:

- **cutting tools that cannot be guided by hand are ground without a grinding plate.**
- **fixtures are not properly attached.**
- **knives are sharpened/polished in the opposite direction of the cutting edge on the wet-grinding belt or the finned brushes.**

2. Safety

2.3 Warranty and liability

Warranty and liability claims in case of personal injury or property damage are excluded if such damage is attributable to one or more of the following causes:

- improper use of the grinding machine,
- improper transport, commissioning, operation, and maintenance of the grinding machine,
- operating the grinding machine with defective safety devices, or using improperly attached or malfunctioning safety and protective equipment,
- failure to observe the instructions with regard to transportation, commissioning, operation, maintenance and repair of the grinding machine,
- unauthorized structural alterations to the grinding machine,
- unauthorized modification, e.g. of the drive conditions (output and speed),
- failure to monitor machine parts that are subject to wear, and
- use of unapproved replacement and wear parts.

Use only original replacement and wear parts. If externally purchased parts are used, it is not guaranteed that they have been designed and manufactured to meet the requirements in terms of stress and safety.

2.4 Safety regulations

2.4.1 Organizational measures

Inspect all available safety devices regularly.

Observe prescribed intervals for recurring maintenance work or as specified in the operating instructions!

2.4.2 Protective equipment

Before every commissioning of the grinding machine, ensure that all protective equipment is properly mounted and in functional condition.

Protective equipment may be removed only after the grinding machine has stopped and has been secured against accidental restart.

When attaching spare parts, the protective equipment must be attached by the operator as stipulated.

2. Safety

2.4.3 Informal safety measures

The operating instructions must be permanently available at the place of use of the grinding machine. In addition to the operating instructions, the generally applicable as well as locally relevant accident prevention regulations must also be made available and observed.

All safety alert symbols and hazard warnings on the grinding machine must be complete and clearly legible.

2.4.4 Selection and qualification of personnel

Only trained and instructed personnel may work on the grinding machine. Observe the legally permitted minimum age!

The responsibilities of personnel with respect to commissioning, operation, maintenance, and repair must be clearly specified.

Personnel still undergoing training or instruction may only work on the grinding machine under the permanent supervision of an experienced person!

2.4.5 Machine control system

Only trained and instructed personnel are permitted to switch on and operate the machine.

2.4.6 Safety measures in normal operation

Do not operate the machine in any unsafe manner. Only operate the grinding machine if all the safety devices are installed and fully functional.

At least once per shift (or per day), check the grinding machine for externally visible damage and proper functioning of the safety devices.

Immediately report any changes present (including those of the operating behavior) to the responsible office or person. If necessary, immediately shut down the grinding machine and secure it against restart.

Before you switch on the grinding machine, ensure that no one can be injured by the start-up of the machine.

In the event of a malfunction, immediately stop the grinding machine and secure it against restart. Rectify malfunctions immediately.

2.4.7 Hazards due to electrical power sources

Work on electrical systems or operating materials may only be performed by a qualified electrician, in accordance with electrical regulations.

Defects, such as damaged cables, cable connections, etc. must be immediately rectified by an authorized specialist.

2. Safety



The yellow power supply cable is electrically live even when the main switch is turned off.

2.4.8 Particular hazard areas

Hazard in the area of the grinding wheel, wet-grinding belt and finned brushes: objects, e.g. clothing, fingers and hair, can be pinched and drawn in. Wear suitable personal protective equipment.

2.4.9 Servicing (maintenance, repair) and fault rectification

Maintenance work is to be carried out on schedule by trained personnel. Inform operating personnel before beginning repair work. Designate a supervisor responsible for this.

For all service work, the grinding machine is to be disconnected from the current supply and secured against accidental restart.

Remove power plug. Secure repair area as necessary.

After completing maintenance work and rectifying any faults, install all safety devices and verify that they are fully functional.

2.4.10 Structural alterations to the grinding machine

Do not make any changes, additions or conversions to the grinding machine without the approval of the manufacturer. This also applies to the installation and setup of safety devices.

Any conversion work requires the written permission from KNECHT Maschinenbau GmbH.

Immediately replace machine parts that are not in perfect condition.

Use only original replacement and wear parts. If externally purchased parts are used, it is not guaranteed that they have been designed and manufactured to meet the requirements in terms of stress and safety.

2.4.11 Cleaning the grinding machine

Properly handle any cleaning agents and materials used and dispose of them in an environmentally friendly manner.

Dispose of the wear parts and replacement parts in a safe and environmentally-friendly manner.

2. Safety

2.4.12 Lubricants/oils and greases

When using oils and greases, follow the safety regulations applicable to the product. Comply with the special regulations for the food areas.

2.4.13 Relocation of the grinding machine

Disconnect the grinding machine from any external power supply, even in the event of a minor change of location. Before restarting the grinding machine, connect it properly to the power supply.

For loading work, use only lifting equipment and load-bearing devices with sufficient lifting capacity. Appoint a qualified instructor for the lifting operation.

No persons other than those designated for this work may be present in the loading and installation area.

Only lift the grinding machine properly with lifting gear as specified in the operating instructions.

Only use a suitable transport vehicle with sufficient load-bearing capacity. Secure the load reliably. Use suitable attachment points. When restarting the machine, proceed only in accordance with the operating instructions.

3. Description

3.1 Intended use

The S20 | S20B Universal Wet-Sharpening Machine is meant for grinding, deburring and polishing all commonly used cutter knives as well as circular knives, hand knives and other cutting tools.

3.2 Technical specifications

3.2.1 General

Power supply*	3x 400 V
Mains frequency*	50 Hz
Output*	1,17 kW
Power consumption*	1,61 kW
Back-up fuse	16 A
Measured A-weighted emission sound pressure level at workplace LpA**	78 dB (A)

Grinding device wet-grinding wheel

Traverse (maximum cutting edge length)	320 mm
Maximum grinding radius	450 mm
Minimum grinding radius	80 mm
Possible cutter knife sizes	45–500l

Grinding device wet-grinding belt

Traverse (maximum cutting edge length)	300 mm
Maximum grinding radius	430 mm
Minimum grinding radius	80 mm
Possible cutter knife sizes	45–500l

*) This information may change depending on the electrical current supply.

***) Two-digit sound emission value according to EN ISO 4871 (measurement uncertainty KpA. 3 dB (A)).
Emission sound pressure level according to EN ISO 11201.

A K24 cutter knife from KNECHT Maschinenbau GmbH was ground.

3. Description

3.2.2 S20 (version with grinding wheel)

Energy consumption* _____ 2,79 A

Height _____ approx. 1400 mm

Width _____ approx. 1300 mm

Depth _____ approx. 1700 mm

Space requirement (W x D) _____ 1300 x 2000 mm

Weight _____ approx. 180 kg

Diameter finned brushes _____ d. 200 mm

Speed of wet-grinding belt/finned brushes _____ 1700 1/min

Diameter grinding wheel _____ d. 200 mm

Speed of grinding wheel _____ 420 1/min

*) This information may change depending on the electrical current supply.

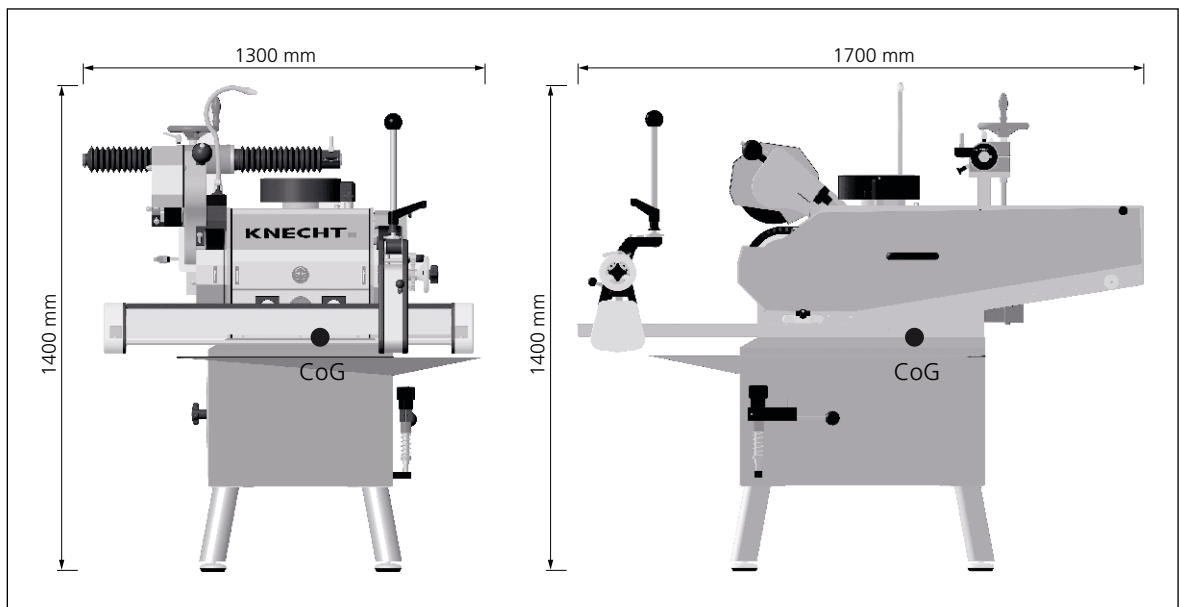


Figure 3-1 S20 dimensions in mm and centers of gravity (CoG) of the machine

3. Description

3.2.3 S20B (version without grinding wheel)

Energy consumption* _____ 2,70 A
Height _____ approx. 1300 mm
Width _____ approx. 1050 mm
Depth _____ approx. 1700 mm
Space requirement (W x D) _____ 1300 x 2000 mm
Weight _____ approx. 160 kg
Diameter finned brushes _____ d. 200 mm
Speed of wet-grinding belt/finned brushes _____ 1700 1/min

*) This information may change depending on the electrical current supply.

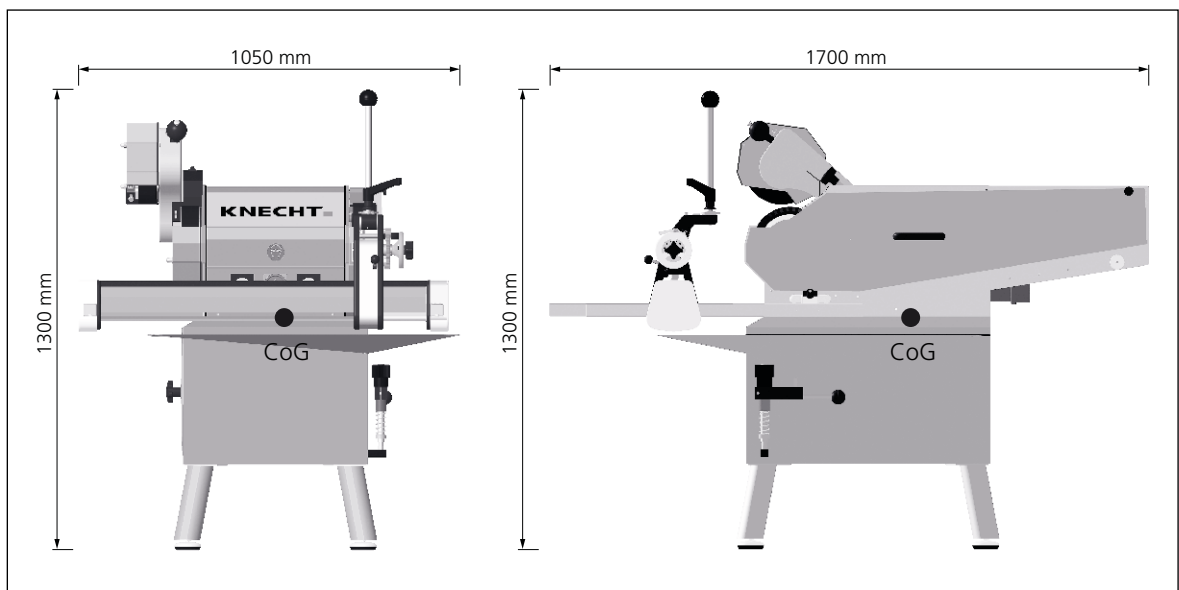


Figure 3-2 S20B dimensions in mm and centers of gravity (CoG) of the machine

3. Description

3.3 Functional description

The Universal Wet-Sharpening Machine can be used to grind, deburr and polish linear, sickle-shaped and circular knives.

All knives other than hand knives must be clamped onto grinding plates for grinding, deburring and polishing.

The grinding angle on the grinding wheel can be steplessly adjusted. The grinding angle on the wet-grinding belt is adjusted with different spacer discs.

3. Description

3.4 Description of the assemblies

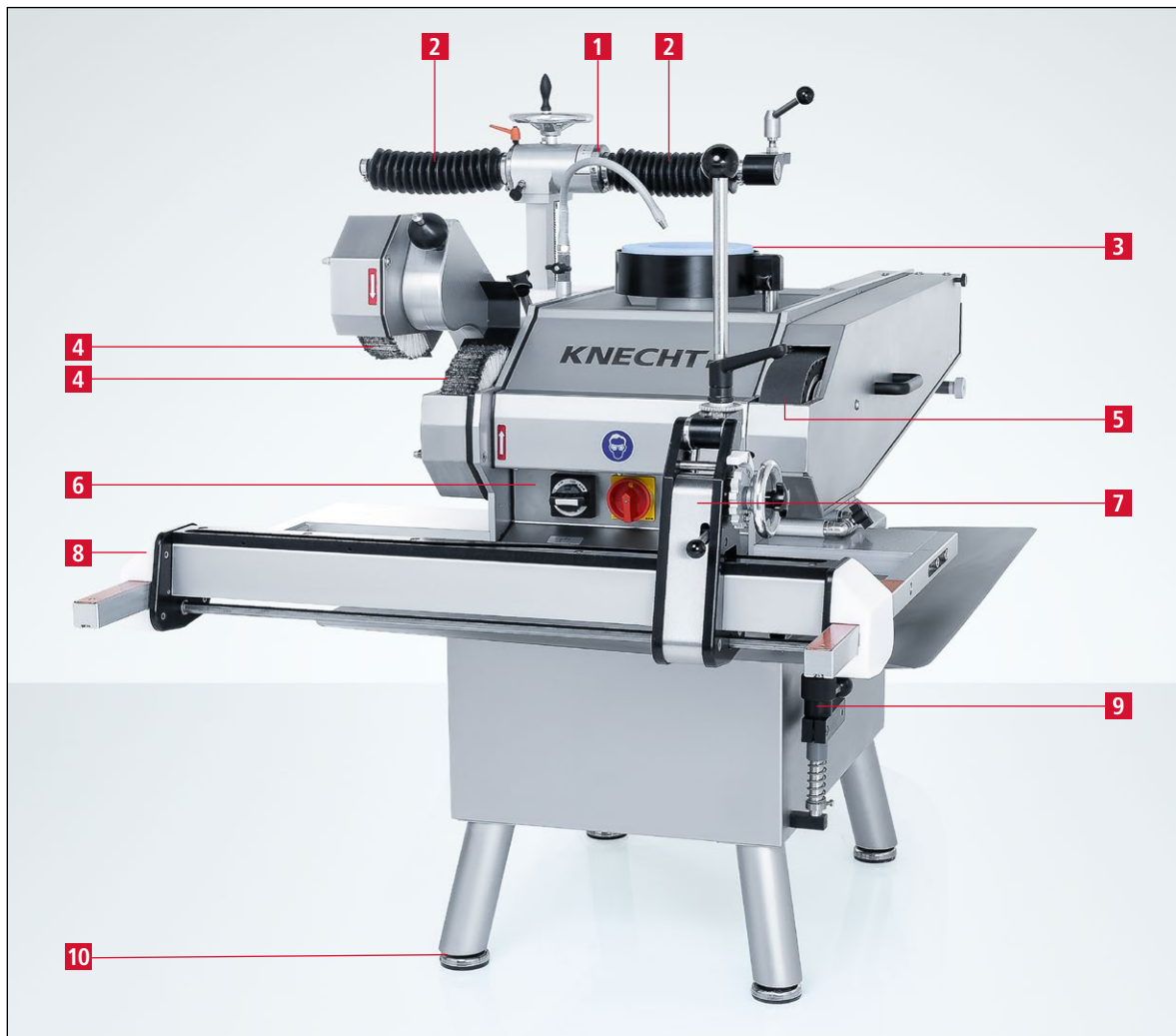


Figure 3-3 General view of sharpening machine S20

- 1 Grinding unit for wet-grinding wheel (S20)
- 2 Grinding arm (S20)
- 3 Wet-grinding wheel (S20)
- 4 Finned brushes
- 5 Wet-grinding belt
- 6 Control panel
- 7 Carriage
- 8 Grinding and polishing unit for wet-grinding belt and finned brushes
- 9 Dressing tool HV201 for grinding wheel (S20)
- 10 Machine feet

3. Description

3.4.1 Tool cabinet

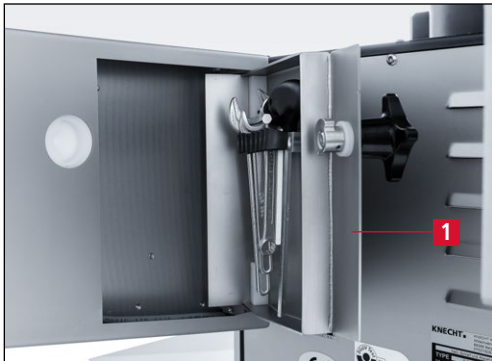


Figure 3-4 Tool cabinet

The tool cabinet (3-4/1) is located at the rear of the grinding machine by the wet-grinding belt.

3.4.2 Coolant dosing wet-grinding belt



Figure 3-5 Coolant dosing for wet-grinding belt

The coolant dosing unit (3-5/1) for the wet-grinding belt is located on the right side of the machine underneath the belt protection hood.

3.4.3 Control panel

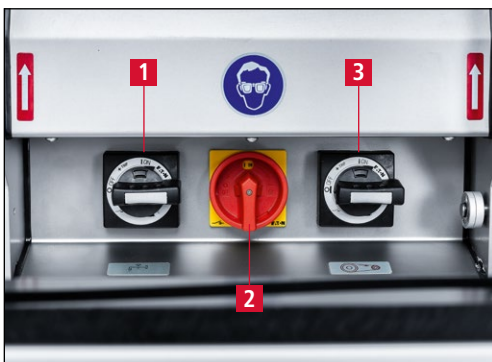


Figure 3-6 Control panel

- 1 Coolant pump ON / OFF
- 2 Main switch ON / OFF
- 3 Grinding motor ON / OFF

3. Description

3.4.4 Grinding unit (S20)

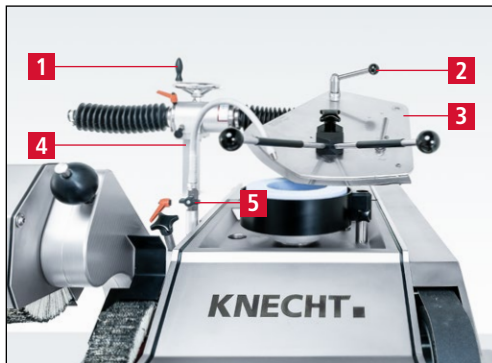


Figure 3-7 Grinding unit

- 1 Hand wheel for angle adjustment
- 2 Clamping lever
- 3 Grinding plate SP 107
- 4 Grinding unit
- 5 Coolant dosing for grinding wheel

3.4.5 Grinding and polishing unit for wet-grinding belt and finned brushes

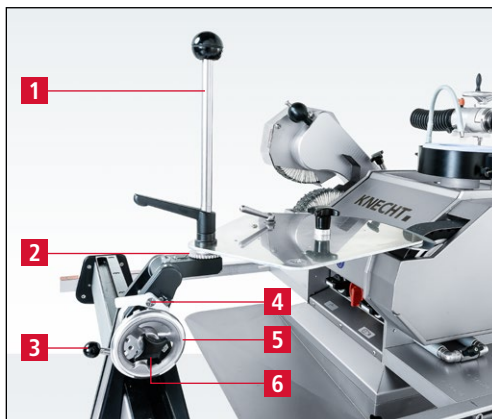


Figure 3-8 Grinding and polishing unit

- 1 Grinding lever
- 2 Function disc
- 3 Locking device for sickle-shaped knives
- 4 Locking lever
- 5 Hand wheel for infeed grinding unit
- 6 Star handle locking disc

3.4.6 Dressing tool HV201 (S20)

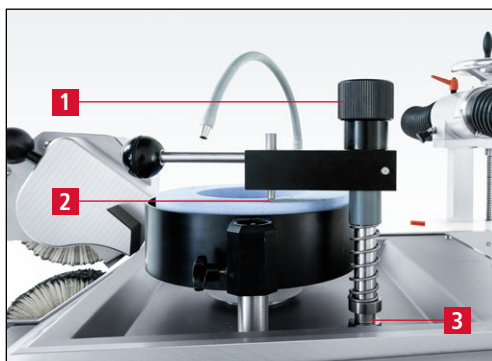


Figure 3-9 Dressing tool HV201

- 1 Adjusting nut
- 2 Dressing diamond
- 3 Mount for Dressing tool HV201

3. Description

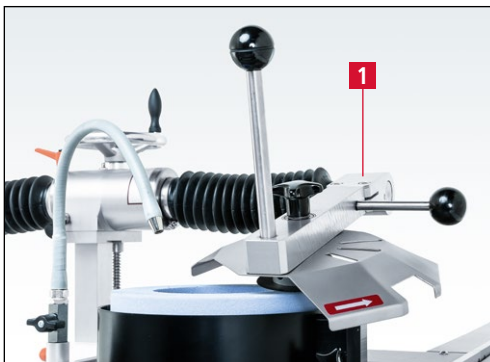
3.4.7 Coolant unit



- 1 Coolant pump
- 2 Water tank

Figure 3-10 Coolant unit

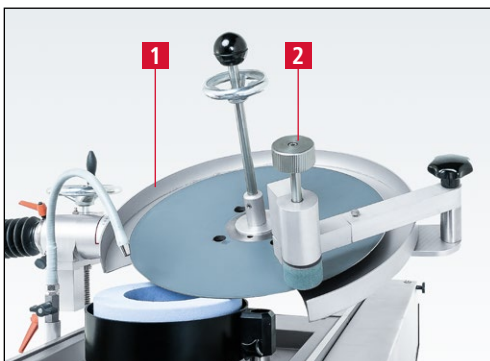
3.4.8 Circular knife grinding attachment HV25-1 for circular knives 80–250 mm (optional, S20)



- 1 Circular knife holding fixture

Figure 3-11 Circular knife grinding attachment HV25-1

3.4.9 Circular knife grinding attachment HV25-2 for circular knives 250–470 mm (optional, S20)



- 1 Blade guard
- 2 Deburring unit

Figure 3-12 Circular knife grinding attachment HV25-2

3. Description

3.5 Functional description of units



Figure 3-13 General view of sharpening machine S20

1 Grinding unit (S20)

Device for grinding linear and sickle-shaped cutting tools, e.g. cutter knives (up to 430 mm size or 500l.) on the wet-grinding wheel. The grinding unit also serves to accommodate the HV25-1 and HV25-2 Circular knife grinding attachments, which can be used to grind circular knives from d. 80 mm to d. 470 mm.

Fixtures:

- Mounting head for linear and sickle-shaped cutter knives
- Circular knife grinding attachment HV25-1 circular knives d. 80–250 mm (optional)
- Circular knife grinding attachment HV25-2 circular knives d. 250–470 mm (optional)
- Dressing tool HV201: for dressing the wet-grinding wheel

2 Wet-grinding wheel (S20)

Quickly removes a great deal of material. Used to easily repair heavily damaged cutter knives. Chamfered edges, e.g. on circular knives, are attached to the wet-grinding wheel. The desired grinding angle can be steplessly adjusted.

3 Upper polishing unit (finned brush on top)

For deburring cutter knives and other cutting tools in the back area.

4 Lower polishing unit (finned brush at the bottom)

For deburring and polishing cutter knives and other cutting tools in the front area. Hand knives are completely deburred and polished here.

3. Description

5 Wet-grinding belt

Enables tapered and convex grinding. Cutter knives and other cutting tools are clamped and ground in the grinding and polishing unit. Hand knives are ground without fixtures.

6 Grinding and polishing unit

Device for grinding and polishing linear and sickle-shaped cutter knives and other cutting tools on the wet-grinding belt and finned brushes.

4. Transport



When transporting, observe the local applicable safety and accident prevention regulations.

Only transport the grinding machine with the machine feet facing downwards.

4.1 Transport aids

For transporting and for setting up of the grinding machine, only use adequately dimensioned transport aids.

When using a forklift or a lifting truck, move the fork under the grinding machine.

Note the machine's center of gravity when transporting. The center of gravity (CoG) is shown in figure 3-1 and 3-2.

4.2 Transport damage

If damage is detected after unloading, during acceptance of the delivery, immediately inform KNECHT Maschinenbau GmbH and the forwarding agent. If necessary, an independent expert must be called in immediately.

Remove packaging and fastening straps. Dispose of packaging in an environmentally friendly manner.

4.3 Transport to another installation site

For transport to another installation site, ensure that the space requirements are fulfilled (see chapter 3.2).

A permissible electrical connection must be provided at the new installation site. The grinding machine must stand firmly and securely.



Work on the electrical unit is only to be carried out by an authorized specialist. Observe the locally applicable safety and accident prevention regulations.

5. Installation

5.1 Selection of qualified personnel



We recommend having installation work on the grinding machine carried out by the trained KNECHT personnel.

We are not liable for any damage resulting from improper installation.

5.2 Installation site

When determining the installation site, bear in mind the space required for installation as well as maintenance and repair work on the grinding machine (see chapter 3.2).

5.3 Supply connections

The grinding machine is provided ready to connect with the corresponding connection cable.



Ensure that the machine is correctly connected to the current supply.

5.4 Settings

KNECHT Maschinenbau GmbH will configure the various components as well as the electrical system before delivery.

ATTENTION

Unauthorized alterations to the preset values are not permitted and can damage the grinding machine.

5. Installation

5.5 Initial start-up of the grinding machine

Place the grinding machine at the installation site on a level base.

Level out any floor unevenness by turning the machine feet. Align the machine using a spirit level.

Have an authorized electrician install the current supply on-site.

Completely install and inspect the protective equipment before commissioning.



CAUTION

Have all protective equipment checked for proper functioning by authorized trained personnel before commissioning the machine.

6. Commissioning



All work must be performed by authorized trained personnel.
Observe the locally applicable safety and accident prevention regulations.
There is a risk that hands, hair, and clothing may be pulled in while the grinding machine is switched on.
Serious injury may result. Wear personal protective equipment.



Figure 6-1 Filling the water tank

Fill water tank (6-1/1) with approx. 15 liters of water.

Connect plug with the on-site outlet (3x 400V, 16A).

Turn main switch (3-6/2) to "ON" position.

Turn "Grinding motor" switch (3-6/3) to "ON" position. The grinding wheel, wet-grinding belt and finned brushes start rotating.

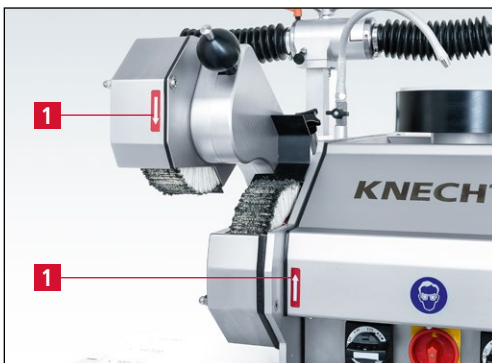


Figure 6-2 Checking the direction of rotation

Check the direction of rotation of the finned brushes.

The direction arrow (6-2/1) indicates the direction of rotation of the wet-grinding belt and finned brushes.

If the finned brushes are rotating in the right direction, then the direction of rotation of the grinding wheel and of the wet-grinding belt is also correct.

If the direction of rotation of the finned brushes is not correct, have the phase reversed by a qualified electrician.

ATTENTION

If the direction of rotation is incorrect, the grinding wheel, finned brushes and contact wheel may come loose.

6. Commissioning

NOTE

In an emergency situation, immediately turn the main switch (3-6/2) to "OFF". The switches for the grinding motor (3-6/3) and the coolant pump (3-6/1) automatically jump to "OFF".

7. Operation

7.1 General grinding fundamentals

To sharpen the cutting edge which has become blunt, the metal must be removed from the knife.

To do so, grind the knife up to the cutting edge until a small burr appears. Carefully remove the burr with the finned brush by applying moderate pressure. To do so, the knife is guided approx. 6 – 10 times over the finned brush, alternating between left and right (left – right – left – right – left etc.).

As it is not only the sharp cutting edge, but also the long service life that define a blade, the cutting edge angle is another important indicator of a blade's performance.

The smaller the cutting edge angle, the higher its theoretical service life. In practice, however, it seems that a cutting edge angle that is too small results in the cutting edge breaking off and thus becoming blunt.

The cutting edge angle is therefore between 25° and 35°. For cutting edge angles below 15°, the cutting edge is so unstable that it snaps with the smallest resistance.

For a cutting edge angle of more than 40°, the cutting edge is stable but it loses sharpness very fast.

The cutting edge profile is an additional criterion for the characteristics of the cutting edge.

There are three different ground surfaces:



Convex ground surfaces are usually found on cutter knives and hand knives, tapered and concave ground surfaces mainly on circular knives.

In essence: The profile and cutting edge angle stipulated by the manufacturer must be maintained.

7. Operation

7.2 Grinding sickle-shaped cutter knives on the grinding wheel (convex cutting edge) S 20

NOTE

KNECHT produces a suitable grinding plate for each knife. KNECHT requires as precise information as possible on the shape and size of the knife to be ground. A drawing from the knife manufacturer is ideal (knives that can be procured on the open market sometimes deviate from the original contour).

Photos of the entire knife and the knife label are also helpful.

ATTENTION

The grinding radius is not the knife radius. The grinding radius of a knife can be read on the grinding plate suitable for this knife, e.g. SR300. The grinding plate with the corresponding knife must be mounted in the correct position on the grinding arm.

For grinding plates with a grinding radius up to SR330, the mounting head is mounted on the grinding arm so that it points towards the operator.

For grinding plates with a grinding radius up to SR450, the mounting head is mounted on the grinding arm so that it points away from the operator.

7.2.1 Positioning the mounting head



Figure 7-1 Checking the position of the mounting head

The grinding radius (SR) specified on the grinding plate and the position of the mounting head on the grinding arm must match.

7. Operation

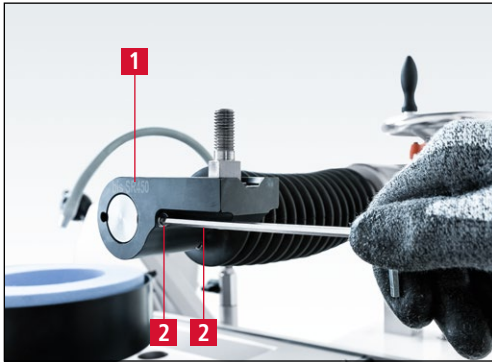


Figure 7-2 Fitting the mounting head

If required, refit the mounting head (7-2/1) to match the grinding radius.

To do so, loosen the two M8 set screws (7-2/2) with a 4 mm hexagon screwdriver and fit the mounting head (7-2/1) with the appropriate inscription facing outward.

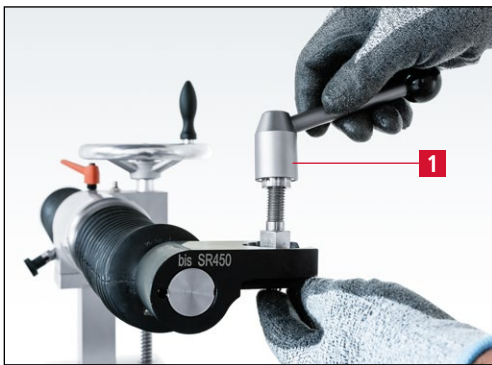


Figure 7-3 Removing the clamping lever

Remove the clamping lever (7-3/1).

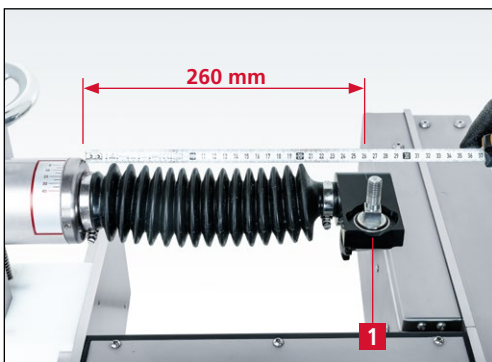


Figure 7-4 Positioning the mounting head

Move the grinding arm so that the center of the mounting head (7-4/1) is positioned 260 mm from the angle display. Use a measuring tape.

The mounting head is now positioned centrally to the right grinding surface of the cup grinding wheel.

7. Operation

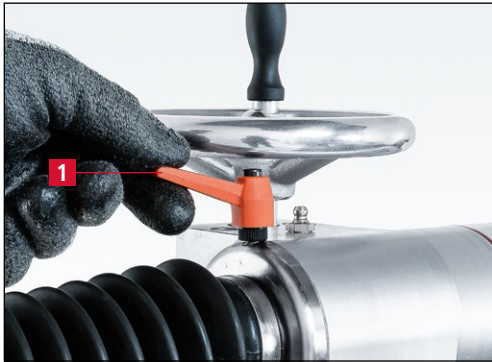


Figure 7-5 Clamping the grinding arm

Clamp the grinding arm with the fixing lever (7-5/1).

7.2.2 Inserting the function disc

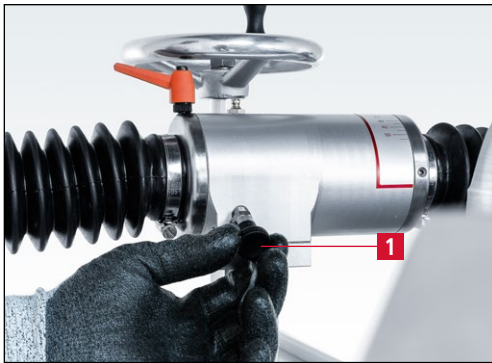


Figure 7-6 Engaging the locking bolt

Swivel the grinding arm to the horizontal position.

Engage the locking bolt (7-6/1).



Figure 7-7 Inserting the function disc

Place the function disc (7-7/1) on the locating bolt (7-7/2).

The nose of the function disc is outside the nose-shaped recess of the mounting head.

In this position, the grinding plate can be swiveled concentrically.

7. Operation

7.2.3 Mounting the grinding plate SP 107



Figure 7-8 Mounting the grinding plate

Place the grinding plate (7-8/1) on the locating bolt (7-8/2) of the grinding arm.

NOTE

If the grinding plate has several locating holes, mount it so that the cutting segment at the knife tip is ground first.



Figure 7-9 Removing the star handle

Remove the M 12 star handle (7-9/1) from the grinding plate.



Figure 7-10 Removing the spacer disc

Remove the spacer disc (7-10/1).

7. Operation

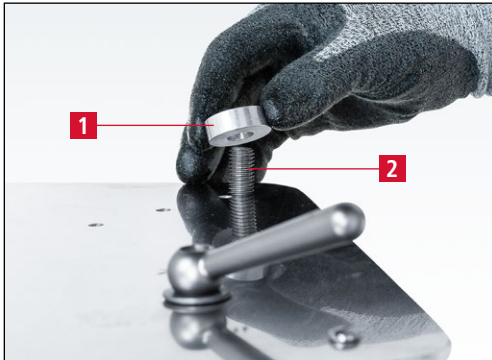


Figure 7-11 Placing the spacer disc on the locating bolt

Place spacer disc (7-11/1) on locating bolt (7-11/2) of the grinding arm.

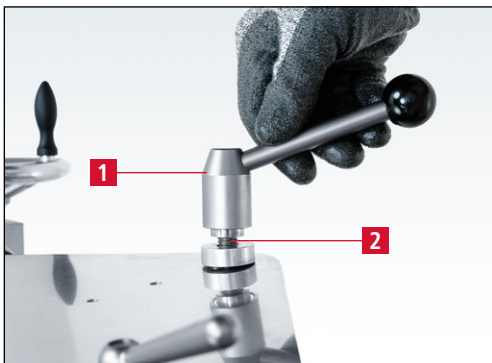


Figure 7-12 Clamping the grinding plate

Screw the M 12 clamping lever (7-12/1) onto the locating bolt (7-12/2) and tighten.

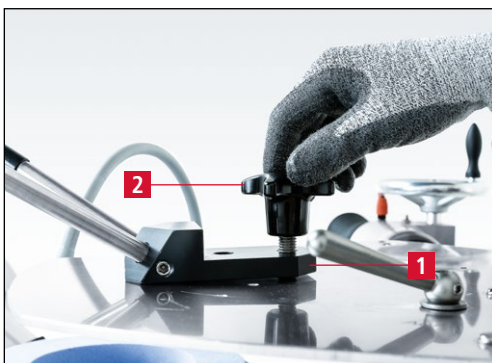


Figure 7-13 Mounting the grinding lever on the grinding plate

Place the grinding lever (7-13/1) on the mounting screw of the grinding plate and tighten it clockwise with the M 12 star handle (7-13/2).

7. Operation

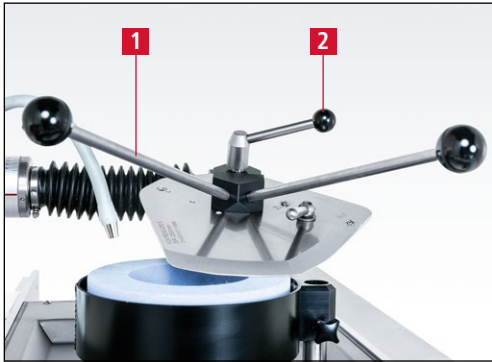


Figure 7-14 Mounting the grinding lever on the locating bolt

If the grinding plate does not have a mounting screw, place the grinding lever (7-14/1) directly on the thread of the locating bolt and tighten it clockwise with the M12 clamping lever (7-14/2).

7.2.4 Clamping the sickle-shaped cutter knife



Serious cuts may occur when handling cutter knives. Only transport cutter knives using transport devices intended for this purpose.

Protective gloves and safety shoes must be worn.

ATTENTION

Before clamping the knife, check whether the grinding plate fits the knife to be ground. Compare the inscription of the grinding plate with that of the knife.

The use of an unsuitable grinding plate can damage the knife and grinding plate.

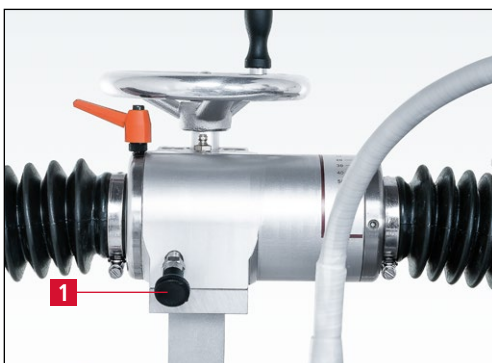


Figure 7-15 Loosening the locking bolt

Loosen the locking bolt (7-15/1).

7. Operation

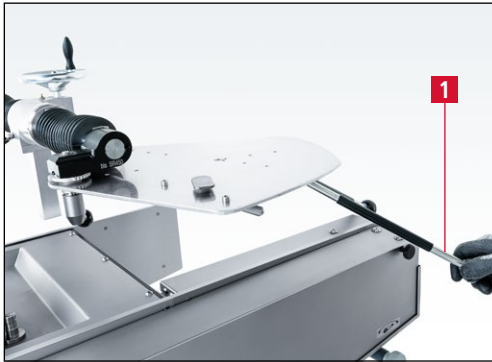


Figure 7-16 Swiveling the grinding plate backward

Swivel the grinding plate backwards using the grinding lever (7-16/1).

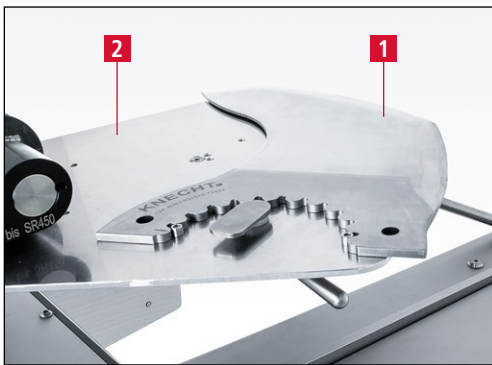


Figure 7-17 Clamping the knife onto the grinding plate

Clamp the knife (7-17/1) onto the grinding plate (7-17/2).



Figure 7-18 Locking the knife on the grinding plate

Turn the clamping lever (7-18/1) to the "Closed" position. The knife is now locked.

Swivel the grinding plate with the clamped knife forwards onto the grinding wheel.

7. Operation

7.2.5 Positioning the sickle-shaped cutter knife on the grinding wheel



Figure 7-19 Knife position on the grinding wheel

The cutting edge of the knife (7-19/1) must lie approximately on the center of the grinding wheel.



Figure 7-20 Adjusting the knife to the center of the grinding wheel

To do so, loosen the lower clamping lever (7-20/1) counterclockwise and move the entire grinding unit (7-20/2) until the cutting edge of the knife is approximately at the center of the grinding wheel (see figure (7-19)).

Retighten the lower clamping lever (7-20/1).

7.2.6 Setting the grinding angle



Figure 7-21 Loosening the clamping lever

To adjust the grinding angle, place the knife on the grinding wheel.

Loosen the upper clamping lever (7-21/1) by turning it counterclockwise.

7. Operation

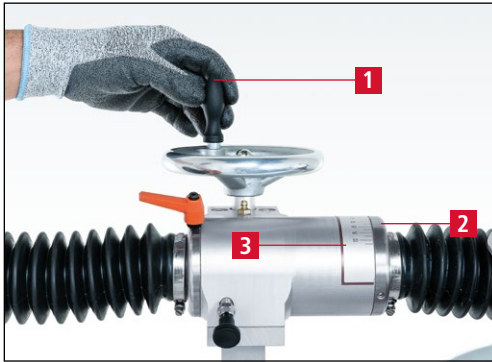


Figure 7-22 Setting the grinding angle

Turn the hand wheel (7-22/1) until the indicator (7-22/2) shows the desired angle on the angle scale (7-22/3).

Retighten the upper clamping lever (7-21/1).

7.2.7 Grinding the sickle-shaped cutter knife (convex cutting edge)



CAUTION

Grinding creates abrasive particles that can enter the eyes.

Wear safety glasses.

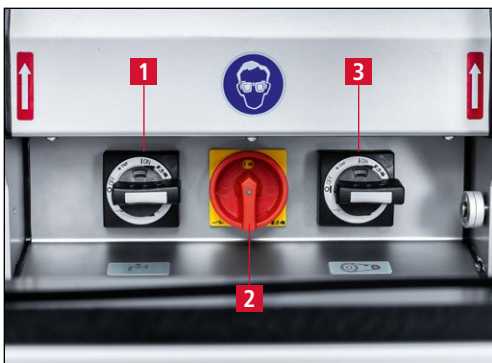


Figure 7-23 Switching on the grinding machine and coolant unit

Turn the main switch (7-23/2), switch for grinding motor (7-23/3) and coolant pump (7-23/1) from "OFF" to "ON" one after the other.

The grinding wheel, wet-grinding belt and finned brushes rotate.



Figure 7-24 Grinding burr

With sickle-shaped cutter knives, each cutting segment is ground separately (1 segment = corner to corner).

Using the grinding lever, move the knife evenly over the grinding wheel with moderate force. Grind until a small burr forms on the cutting edge.

7. Operation

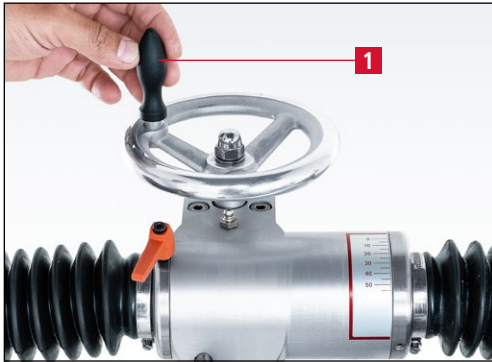


Figure 7-25 Reducing the grinding angle (convex grinding)

Now reduce the grinding angle on the hand wheel (7-25/1) by 5° and grind until the first chamfer is only approx. 3 mm wide.

Reduce the grinding angle by 5° again and grind until the second chamfer is approx. 3 mm wide.

Repeat the process until approx. 5° is reached.

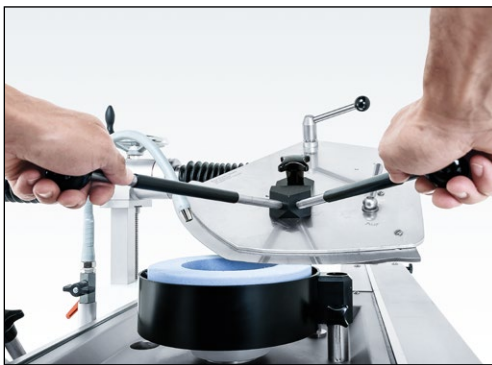


Figure 7-26 Swiveling the cutter knife to the next cutting segment and grind

When the first segment is completely ground, swivel the knife to the next segment. Adjust the grinding angle (see chapter 7.2.6).

If necessary, reclamp the grinding plate. To do so, unclamp the knife. Reclamp the grinding plate as described in chapter 7.2.3 in the locating hole that matches the next cutting segment.

Grind all cutting segments as described below:

Adjust grinding angle (see chapter 7.2.6).

Grind cutter knives (see chapter 7.2.7).

Repeat process for each cutting segment.



Figure 7-27 Convex pre-ground cutter knife

The cutter knife (7-27/1) is now pre-ground.

Before it can be deburred and polished, the fine grinding must be carried out on the grinding and polishing unit (see chapter 7.3).

7. Operation

7.3 Grinding sickle-shaped cutter knives on the wet-grinding belt (convex cutting edge) (S20 | S20 B)

NOTE

KNECHT produces a suitable grinding plate for each knife. KNECHT requires as precise information as possible on the shape and size of the knife to be ground. A drawing from the knife manufacturer is ideal (knives that can be procured on the open market sometimes deviate from the original contour).

Photos of the entire knife and the knife label are also helpful.

ATTENTION

The grinding radius is not the knife radius. The grinding radius of a knife is shown on the grinding plate suitable for this knife, e.g. SR400. The position of the grinding unit must correspond to the grinding radius (SR) shown on the grinding plate.

7.3.1 Setting the grinding radius



Figure 7-28 Set position of the grinding and polishing unit

The grinding and polishing unit has three setting positions:

< SR 310 for grinding cutter knives with a grinding radius up to 310 mm

< SR 370 for grinding cutter knives with a grinding radius of up to 370 mm

< SR 430 for grinding cutter knives with a grinding radius up to 430 mm

7. Operation

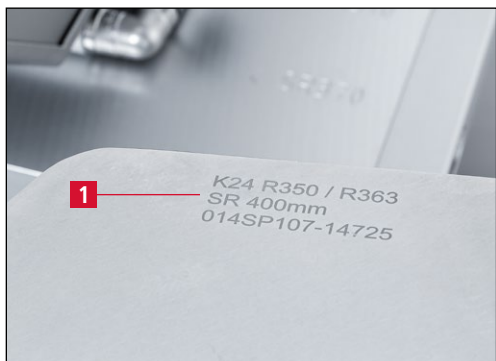


Figure 7-29 Displayed grinding radius on the SP 107 grinding plate

To position the grinding unit, compare the grinding radius of the grinding plate (7-29/1) with the displayed position of the grinding unit (7-28).

If necessary, reposition the grinding unit.



Figure 7-30 Loosen the M10 screws

To do this, loosen the four M 10 screws (7-30/1) on the left and right guide rods by approximately one turn using an 8 mm hexagon screwdriver.



Figure 7-31 Position display

Move the two guide rods (7-31/2) evenly into the desired position. The position is indicated by arrows (7-31/1).

Tighten the four screws (7-30/1) again.

7. Operation

7.3.2 Locking the carriage in place

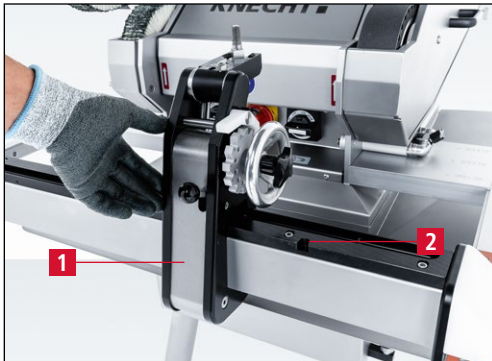


Figure 7-32 Moving the carriage into position

Move the carriage of the grinding and polishing unit (7-32/1) to the right into the locking recess (7-32/2).



Figure 7-33 Locking the carriage in position

Press the locking lever (7-33/1) on the carriage of the grinding and polishing unit downward. It is now secured against moving.

7.3.3 Inserting the function disc

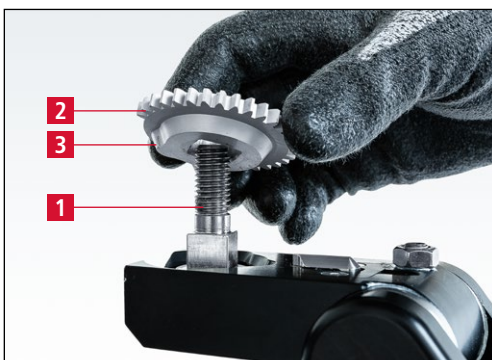


Figure 7-34 Inserting the function disc

The function disc (7-34/2) is placed on the locating bolt (7-34/1).

The nose (7-34/3) of the function disc must face in the direction of the grinding belt. The toothed area of the function disc faces the operator.

The grinding plate can be swiveled concentrically in this position.

7. Operation

7.3.4 Setting the grinding angle

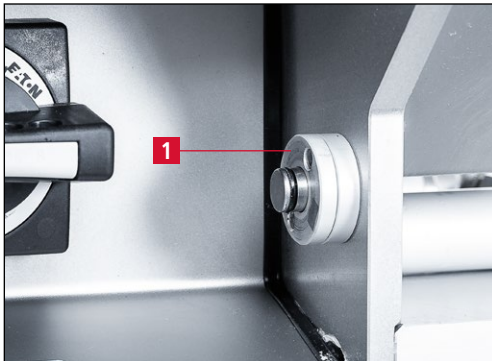


Figure 7-35 Spacer discs for grinding angle adjustment

The grinding angle is set on the grinding and polishing unit with spacer discs.

Spacer discs for 25° and 27° (7-35/1) are located to the right of the switch for the grinding motor.

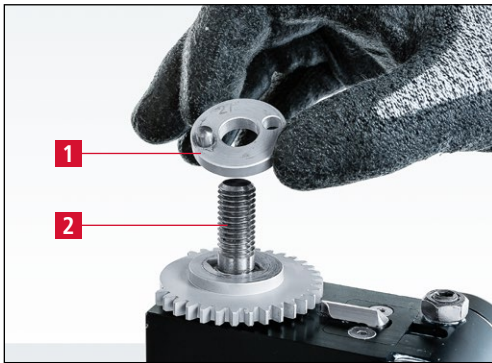


Figure 7-36 Setting the grinding angle

To set the desired grinding angle, place the appropriate spacer disc (7-36/1) on the locating bolt (7-36/2).

7.3.5 Mounting the grinding plate SP 107

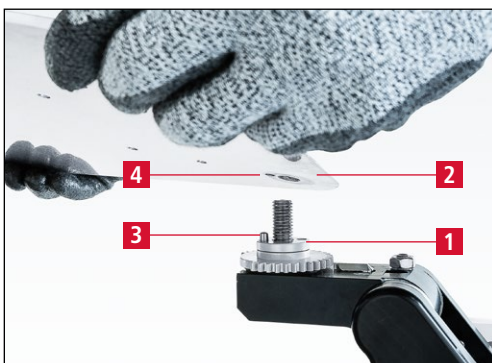


Figure 7-37 Mounting the grinding plate

The grinding plate (7-37/2) is placed over the spacer disc (7-37/1).

The cylindrical pin (7-37/3) of the spacer disc (7-37/1) must engage in the hole (7-37/4) of the grinding plate.

NOTE

If the grinding plate has several locating holes, mount it so that the cutting segment at the knife tip is ground first.

7. Operation



Figure 7-38 Slightly tightening the grinding lever

Turn the grinding lever (7-38/1) clockwise onto the locating bolt and tighten it slightly so that the grinding plate can still be moved.

7.3.6 Adjusting the swivel range of the grinding plate

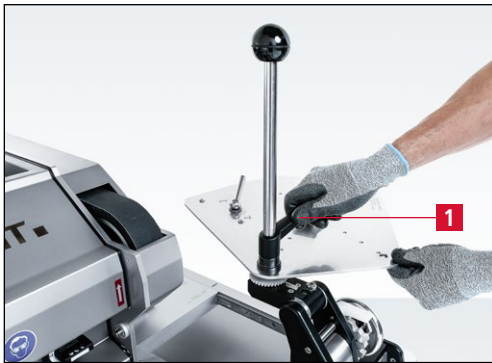


Figure 7-39 Setting the swivel range

Swivel the grinding plate to the right until the left edge of the grinding plate comes to rest approx. 10 cm to the right of the grinding belt.

Tighten the grinding lever (7-39/1) clockwise.

7.3.7 Clamping the sickle-shaped cutter knife



Serious cuts may occur when handling cutter knives. Only transport cutter knives using transport devices intended for this purpose.

Protective gloves and safety shoes must be worn.

ATTENTION

Before clamping the knife, check whether the grinding plate fits the knife to be ground. Compare the inscription of the grinding plate with that of the knife.

The use of an unsuitable grinding plate can damage the knife and grinding plate.

7. Operation

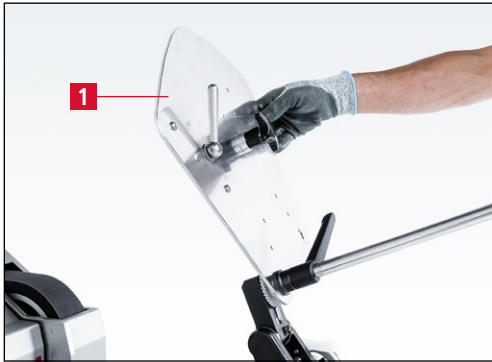


Figure 7-40 Swiveling the grinding plate backward into the anti-rotation lock

Swivel the grinding plate (7-40/1) back as far as it will go. It is now secured against rotating.

Position the grinding plate in such a way that the mounting area of the knife is easily accessible.



Figure 7-41 Clamping the knife onto the grinding plate

Clamp the knife (7-41/1) onto the grinding plate (7-41/2).



Figure 7-42 Locking the knife on the grinding plate

Turn clamping lever (7-42/1) to "Closed" position. The knife is now locked.

Swivel the grinding plate with the clamped knife forward to the grinding belt.

7. Operation

7.3.8 Basic function of the locking mechanism of the grinding and polishing unit

NOTE

The locking disc has several locking positions. The first two positions are U-shaped, all subsequent positions are V-shaped.

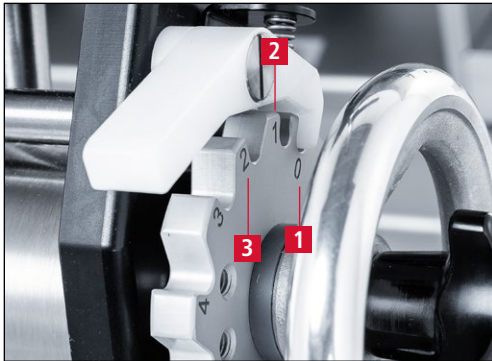


Figure 7-43 Locking disc

The two U-shaped locking positions are used to adjust the knife on the grinding belt and to grind the burr.

The V-shaped locking positions are used for convex grinding of the knife.

0 = adjustment position (7-43/1)

1 = grinding position (7-43/2)

2 – 11 = convex grinding (7-43/3)

NOTE

Every grinding process is started with adjustment position "0".

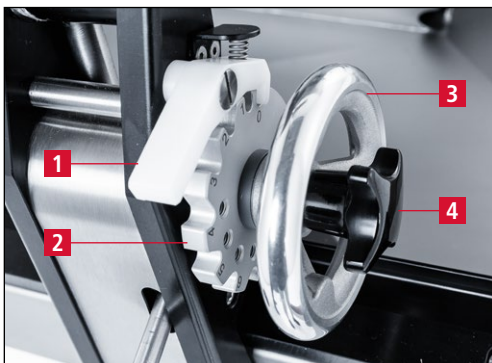


Figure 7-44 Overview of locking mechanism

- 1 Locking lever
- 2 Locking disc
- 3 Hand wheel
- 4 Star handle

7. Operation

7.3.9 Bringing the grinding and polishing unit into the adjustment position



Figure 7-45 Bringing the grinding unit into adjustment position "0"

To bring the grinding and polishing unit into the adjustment position, press the locking lever (7-45/1) with your thumb and turn the hand wheel (7-45/2) with your remaining four fingers until adjustment position "0" is reached.

Release the locking lever (7-45/1).



Figure 7-46 Loosening the star handle

Slightly loosen the star handle (7-46/1) by turning counterclockwise.

The grinding unit can now be moved back and forth freely using the hand wheel.



Figure 7-47 Moving the grinding unit to the grinding belt

Use the hand wheel to move the grinding unit clockwise towards the grinding belt until the cutting edge of the cutting segment to be ground first touches the grinding belt slightly.

Tighten the star handle (7-47/1) clockwise.

7. Operation

7.3.10 Grinding the sickle-shaped cutter knife



Grinding creates abrasive particles that can enter the eyes.

Wear safety glasses.

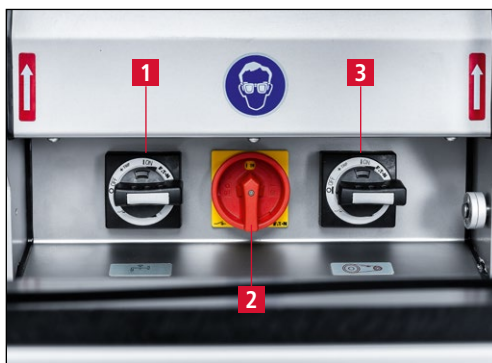


Figure 7-48 Switching on the grinding machine and coolant unit

Turn the main switch (7-48/2), switch for grinding motor (7-48/3) and coolant pump (7-48/1) from "OFF" to "ON" one after the other.

The grinding wheel, wet-grinding belt and finned brushes rotate.



Figure 7-49 Bringing the grinding unit into grinding position "1"

Move the grinding unit from adjustment position to grinding position "1".

To do so, press the locking lever (7-49/1) with your thumb and turn the hand wheel (7-49/2) clockwise towards the grinding belt with your remaining four fingers until grinding position "1" is reached (7-49/3).

Release the locking lever (7-49/1).



Figure 7-50 Grinding burr

With sickle-shaped cutter knives, each cutting segment is ground separately (1 segment = corner to corner).

Using the grinding lever (7-50/1), press the knife against the grinding belt (7-50/2) with moderate force and move it evenly over the grinding belt.

Grind until a small burr forms on the cutting edge.

7. Operation

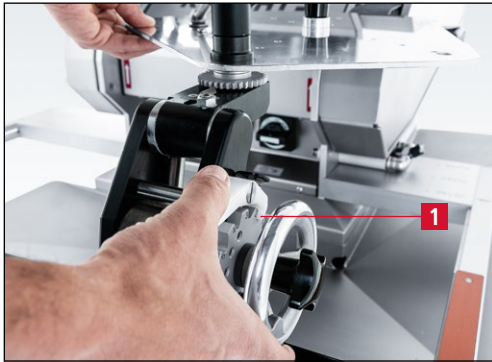


Figure 7-51 Sickle-shaped cutter knife, convex grinding

With the following locking positions, the knife is ground convex.

To do this, press the locking lever with your thumb and with the remaining four fingers, turn the hand wheel clockwise towards the grinding belt, until locking position "2" (7-51/1) is reached. Release the locking lever.

In this position, make about ten grinding strokes (1 stroke = 1 movement from one corner to the other corner of the cutting segment).

Then move to the next, locking position "3". Do approx. ten grinding strokes here also.

Repeat the process until approx. locking position "7" until the entire convex edge of the knife is ground.



Figure 7-52 Cutter knife swiveled back and secured

Use the hand wheel to move the grinding unit counterclockwise to grinding position "1".

Swivel back the grinding plate with the knife until it is secured in the anti-rotation lock (7-52/1).



Figure 7-53 Stop screw

The number of infeeds can be limited by the stop screw (7-53/1) in any position.

For better access to the stop screw (7-53/1), unscrew the star handle and remove the hand wheel.

7. Operation

7.3.11 Polishing and deburring the sickle-shaped cutter knife



CAUTION

There is a risk that hands, hair, and clothing may be pulled in while the grinding machine is switched on.

Never hold the cutting edge against the running direction of the finned brush. Serious injury may result!

Polishing and deburring create abrasive particles that can enter the eyes. Wear safety glasses.



Figure 7-54 Applying the polishing paste

The burr created on the knife during the grinding process is removed by the finned brush. This will help the cutter knife retain its final sharpness.

Before deburring/polishing, briefly hold the polishing paste (7-54/1) against the running finned brush (7-54/2).

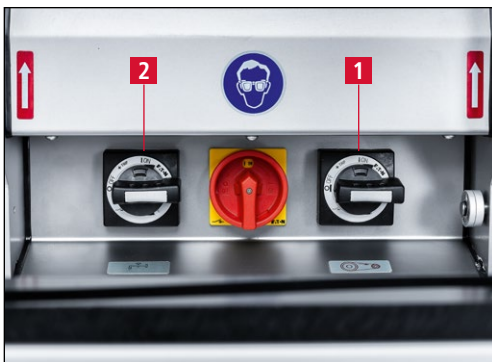


Figure 7-55 Switching off the grinding machine

Switch off the grinding motor (7-55/1) and the coolant unit (7-55/2).

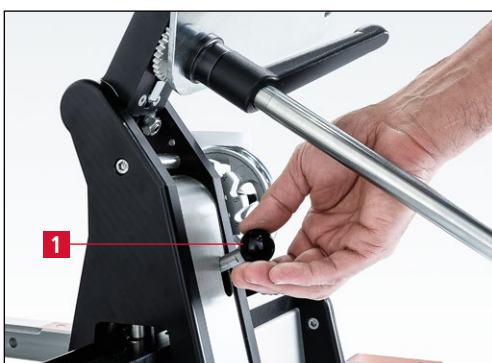


Figure 7-56 Opening the locking mechanism on the carriage

Open the locking mechanism on the carriage by pulling the locking lever (7-56/1) upwards.

7. Operation

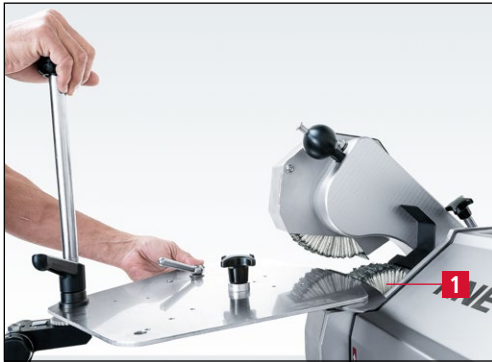


Figure 7-57 Knife rests on the finned brush

Move the carriage with the clamped cutter knife to the lower finned brush (7-57/1) and let it rest there.



Figure 7-58 Distance between finned brushes approx. 20 mm

The distance between the upper and lower finned brushes should be approx. 20 mm.

Check the distance between the finned brushes by tilting the cutter knife.

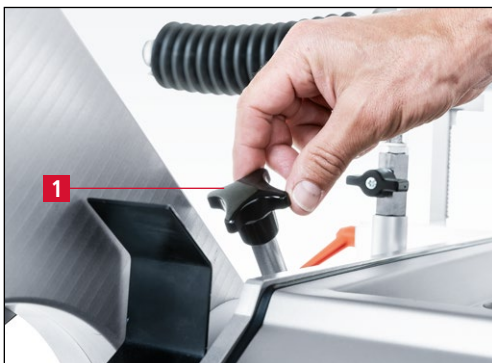


Figure 7-59 Adjusting the distance

If required, adjust the distance by turning the star handle (7-59/1).

7. Operation



Figure 7-60 Swiveling the upper polishing unit upward

Press the locking bolt (7-60/1) of the upper polishing unit.

Swivel the polishing unit (7-60/2) upward into the rest position.



Figure 7-61 Switching on the grinding machine

Switch on the grinding motor (7-61/1).



Figure 7-62 Polishing the knife bale

In locking position 1, make approx. four polishing strokes (1 stroke = one movement from one corner to the other corner of the cutting segment).

Then move to the next locking position "2". Here, too, make approx. four polishing strokes.

Repeat the process to approx. locking position "7" until the entire knife bale is polished.

7. Operation



Figure 7-63 Knife outside the polishing area in secured position

Move the grinding unit back to locking position "1".

Move the carriage with the clamped knife to the right outside the polishing area.

Swivel the knife backward into the anti-rotation lock (7-63/1).



Figure 7-64 Moving the upper polishing unit into the working position

Press the locking bolt (7-64/1) of the upper polishing unit.

Swivel the polishing unit (7-64/2) forward into working position until it engages.



Figure 7-65 Deburring

Move the carriage with the clamped cutter knife between the rotating finned brushes. The grinding unit must be in locking position "1".

Guide the ground cutting segment over the finned brushes with moderate force.

Alternately press (lower finned brush) – pull (upper finned brush) – press – pull – press – pull – press etc.

Continue deburring until the burr is removed and the cutting edge is smooth (approx. eight strokes).

7. Operation



Figure 7-66 Switching off the grinding machine

Switch off the grinding motor (7-66/1).



Figure 7-67 Checking the knife sharpness

Move the carriage with the clamped knife to the right outside the polishing area.

Swivel the knife backward into the anti-rotation lock.

Check the cutting segment for sharpness and absence of burrs. Helpful aid: Sponge or paper.



Figure 7-68 Swiveling the cutter knife to the next cutting segment and grind

Unclamp the cutter knife.

Move the grinding unit to the grinding belt – lock the carriage.

Loosen the grinding lever slightly (7-68/1) and swivel the knife to the next cutting segment.

If necessary, reclamp the grinding plate.

Unclamp the knife for this purpose.

Clamp the grinding plate as described in chapter 7.3.5 in the location hole matching the next cutting segment.

Grind all cutting segments as described below:

Move grinding and polishing unit to setting position "0" (see chapter 7.3.9).

Grind cutter knives (see chapter 7.3.10)

7. Operation

Polish and deburr the cutter knives (see chapter 7.3.11).

Repeat procedures for each cutting segment.

7. Operation

7.4 Grinding linear cutter knives on the grinding wheel (convex cutting edge) (S20)

NOTE

KNECHT produces a suitable grinding plate for each knife. KNECHT requires as precise information as possible on the shape and size of the knife to be ground. A drawing from the knife manufacturer is ideal (knives that can be procured on the open market sometimes deviate from the original contour).

Photos of the entire knife and the knife label are also helpful.

ATTENTION

The grinding radius is not the knife radius. The grinding radius of a knife can be read on the grinding plate suitable for this knife, e.g. SR300. The grinding plate with the corresponding knife must be mounted in the correct position on the grinding arm.

For grinding plates with a grinding radius up to SR330, the mounting head is mounted on the grinding arm so that it points towards the operator.

For grinding plates with a grinding radius up to SR450, the mounting head is mounted on the grinding arm so that it points away from the operator.

7.4.1 Positioning the mounting head



Figure 7-69 Checking the position of the mounting head

The grinding radius (SR) specified on the grinding plate and the position of the mounting head on the grinding arm must match.

7. Operation



Figure 7-70 Fitting the mounting head

If required, refit the mounting head (7-70/1) to match the grinding radius.

To do so, loosen the two M8 set screws (7-70/2) with a 4 mm hexagon screwdriver and fit the mounting head with the appropriate inscription facing outward.

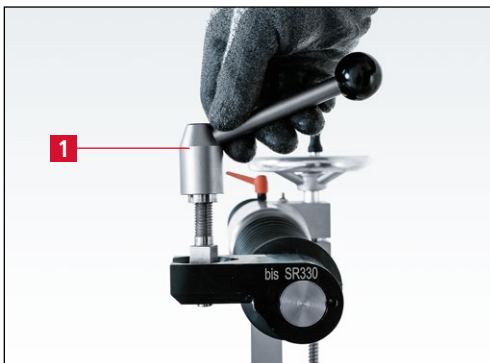


Figure 7-71 Removing the clamping lever

Remove the clamping lever (7-71/1).

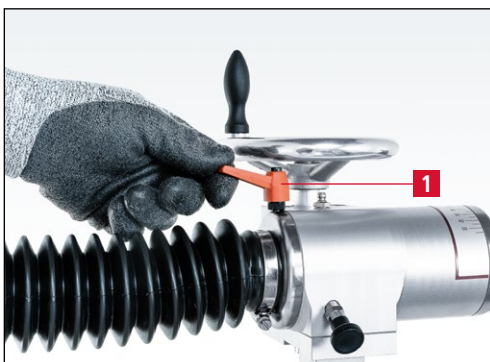


Figure 7-72 Releasing the locking of the grinding arm

Release the locking of the grinding arm.

To do this, open the clamping lever (7-72/1).

The grinding arm can now be moved linearly.

7. Operation

7.4.2 Inserting the function disc



Figure 7-73 Engaging the locking bolt

Swivel the grinding arm to the horizontal position.

Engage locking bolt (7-73/1).

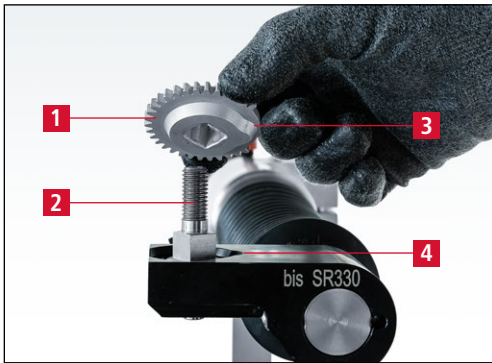


Figure 7-74 Inserting the function disc

Place the function disc (7-74/1) on the locating bolt (7-74/2).

The nose of the function disc (7-74/3) must fit into the nose-shaped recess of the mounting head (7-74/4).

In this position, concentric swiveling of the grinding plate is prevented.

7.4.3 Mounting the grinding plate SP 107



Figure 7-75 Mounting the grinding plate

Place the grinding plate (7-75/1) on the locating bolt (7-75/2) of the grinding arm.

NOTE

If the grinding plate has several locating holes, mount it so that the cutting segment at the knife tip is ground first.

7. Operation

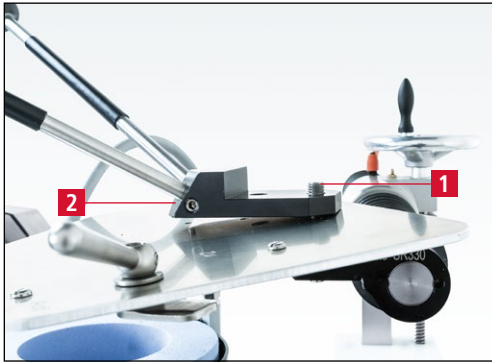


Figure 7-76 Attaching the double grinding lever

Place the double grinding lever (7-76/1) on the locating bolt (7-76/2).

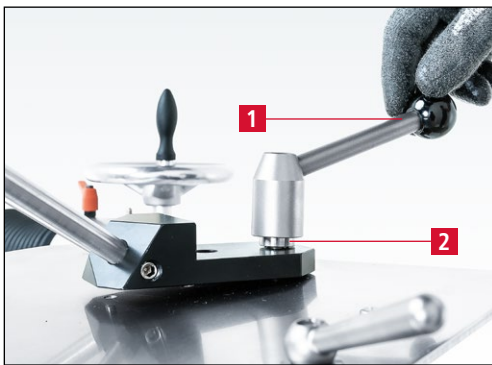


Figure 7-77 Clamping the grinding plate

Screw the clamping lever (7-77/1) onto the locating bolt (7-77/2) and tighten clockwise.

7.4.4 Clamping the linear cutter knife



Serious cuts may occur when handling cutter knives. Only transport cutter knives using transport devices intended for this purpose.

Protective gloves and safety shoes must be worn.

ATTENTION

Before clamping the knife, check whether the grinding plate fits the knife to be ground. Compare the inscription of the grinding plate with that of the knife.

The use of an unsuitable grinding plate can damage the knife and grinding plate.

7. Operation



Figure 7-78 Swiveling the grinding plate to the rear

Swivel the grinding plate backward with the double grinding lever (7-78/1). The handle bars of the grinding lever come to rest to the left and right of the belt protection hood.

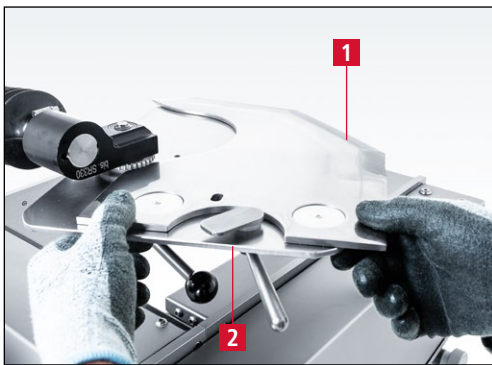


Figure 7-79 Clamping the knife onto the grinding plate

Clamp the knife (7-79/1) onto the grinding plate (7-79/2).



Figure 7-80 Locking the knife on the grinding plate

Turn the clamping lever (7-80/1) to the "Closed" position. The knife is now locked.

7. Operation



Figure 7-81 Swiveling the grinding plate forward

Swivel the grinding plate with the clamped knife forward onto the grinding wheel.

7.4.5 Positioning the linear cutter knife on the grinding wheel



Figure 7-82 Knife position on the grinding wheel

The cutting edge of the knife (7-82/1) must lie approximately on the center of the grinding wheel.



Figure 7-83 Adjusting the knife to the center of the grinding wheel

To do so, loosen the lower clamping lever (7-83/1) counterclockwise and move the entire grinding unit (7-83/2) until the cutting edge of the knife is approximately at the center of the grinding wheel.

Retighten the lower clamping lever (7-83/1).

7. Operation

7.4.6 Aligning the linear cutter knife on the grinding wheel



Figure 7-84 Loosening the clamping lever

Slightly loosen the clamping lever (7-84/1) until the grinding plate with the clamped knife can be moved.

NOTE

The best grinding results are achieved by engaging the full width of the grinding wheel on the cutting edge of the knife.



Figure 7-85 Aligning the knife on the grinding wheel

Swivel the grinding plate with the clamped knife until the full width of the grinding wheel is engaged.



Figure 7-86 Tightening the clamping lever

Tighten clamping lever (7-86/1).

7. Operation

7.4.7 Setting the grinding angle



Figure 7-87 Loosening the clamping lever

To adjust the grinding angle, place the knife on the grinding wheel.

Loosen the upper clamping lever (7-87/1) by turning it counterclockwise.

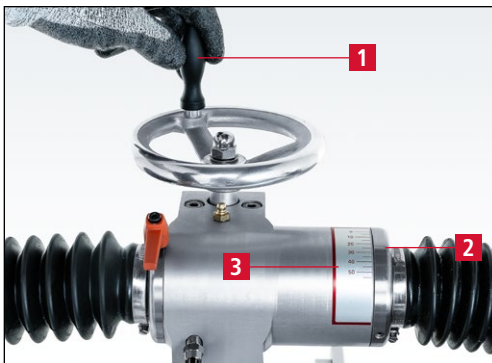



Figure 7-88 Setting the grinding angle

Turn the hand wheel (7-88/1) until the indicator (7-88/2) shows the desired angle on the angle scale (7-88/3).

Retighten the upper clamping lever (7-87/1).

7. Operation

7.4.8 Grinding the linear cutter knife (convex cutting edge)

 Grinding creates abrasive particles that can enter the eyes.
Wear safety glasses.

CAUTION



Figure 7-89 Switching on the grinding machine and coolant unit

Switch on the grinding motor (7-89/1) and coolant unit (7-89/2).



Figure 7-90 Grinding linear cutter knives

With linear cutter knives, each cutting segment is ground separately (1 segment = corner to corner).

Using the grinding lever (7-90/1), move the knife evenly over the grinding wheel with moderate force.

Grind until a small burr forms on the cutting edge.



Figure 7-91 Reducing the grinding angle (convex grinding)

Now reduce the grinding angle on the hand wheel (7-91/1) by 5° and grind until the first chamfer is only approx. 3 mm wide.

Reduce the grinding angle by 5° again and grind until the second chamfer is approx. 3 mm wide.

Repeat the process until approx. 5° is reached.

7. Operation



Figure 7-92 Swiveling the cutter knife to the next cutting segment and grind

When the first segment is completely ground, loosen the clamping lever (7-92/1) and swivel the knife to the next segment.

Adjust the grinding angle (see chapter 7.4.7).

Align the cutter knife on the grinding wheel (see chapter 7.4.6), and tighten the clamping lever.

Grind all cutting segments as described below:

Align the cutter knife on the grinding wheel (see chapter 7.4.6)

Adjust grinding angle (see chapter 7.4.7)

Grind cutter knives (see chapter 7.4.8)

Repeat process for each cutting segment.



Figure 7-93 Convex pre-ground cutter knife

The cutter knife (7-93/1) is now pre-ground.

Before it can be deburred and polished, the fine grinding must be carried out on the grinding and polishing unit (see chapter 7.5).

7. Operation

7.5 Grinding linear cutter knives on the wet-grinding belt (convex cutting edge) (S20 | S20 B)

NOTE

KNECHT produces a suitable grinding plate for each knife. KNECHT requires as precise information as possible on the shape and size of the knife to be ground. A drawing from the knife manufacturer is ideal (knives that can be procured on the open market sometimes deviate from the original contour).

Photos of the entire knife and the knife label are also helpful.

ATTENTION

The grinding radius is not the knife radius. The grinding radius of a knife is shown on the grinding plate suitable for this knife, e.g. SR400. The position of the grinding unit must correspond to the grinding radius (SR) shown on the grinding plate.

7.5.1 Setting the grinding radius



Figure 7-94 Set position of the grinding and polishing unit

The grinding and polishing unit has three setting positions:

< SR 310 for grinding cutter knives with a grinding radius up to 310 mm

< SR 370 for grinding cutter knives with a grinding radius of up to 370 mm

< SR 430 for grinding cutter knives with a grinding radius up to 430 mm

7. Operation



Figure 7-95 Displayed grinding radius on the SP 107 grinding plate

To position the grinding unit, compare the grinding radius of the grinding plate (7-95/1) with the displayed position of the grinding unit.

If necessary, reposition the grinding unit.



Figure 7-96 Loosen the M 10 screws

To do this, loosen the four M 10 screws (7-96/1) on the left and right guide rods (7-96/2) by approximately one turn using an 8 mm hexagon screwdriver.



Figure 7-97 Position display

Move the two guide rods (7-96/2) evenly into the desired position. The position is indicated by arrows (7-97/1).

Tighten the four screws (7-96/1) again.

7. Operation

7.5.2 Releasing the carriage



Figure 7-98 Releasing the carriage

Pull the locking lever (7-98/1) on the carriage of the grinding and polishing unit upwards.

The carriage can now be moved linearly.

7.5.3 Insert the function disc



Figure 7-99 Removing the grinding lever

Remove the grinding lever (7-99/1).

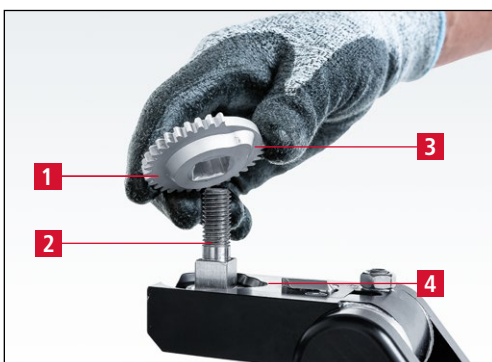


Figure 7-100 Inserting the function disc

The function disc (7-100/1) is placed on the locating bolt (7-100/2).

The nose of the function disc (7-100/3) must fit into the nose-shaped recess of the mounting head (7-100/4). The toothless area of the function disc faces the operator.

In this position, concentric swiveling of the grinding plate is prevented.

7. Operation

7.5.4 Setting the grinding angle

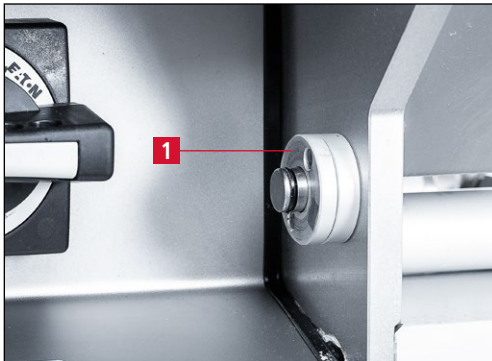


Figure 7-101 Spacer discs for grinding angle adjustment

The grinding angle is set on the grinding and polishing unit with spacer discs.

Spacer discs for 25° and 27° (7-101/1) are located to the right of the switch for the grinding motor.

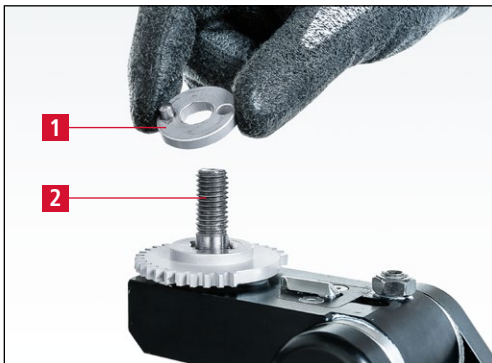


Figure 7-102 Setting the grinding angle

To set the desired grinding angle, place the appropriate spacer disc (7-102/1) on the locating bolt (7-102/2).

7.5.5 Mounting the grinding plate SP 107

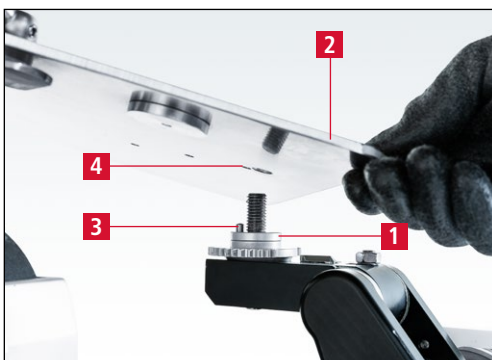


Figure 7-103 Mounting the grinding plate

The grinding plate (7-103/2) is placed over the spacer disc (7-103/1).

The cylindrical pin (7-103/3) of the spacer disc (7-103/1) must engage in the hole (7-103/4) of the grinding plate.

7. Operation



Figure 7-104 Clamping the grinding plate

Turn the grinding lever (7-104/1) clockwise onto the locating bolt and tighten it.

7.5.6 Clamping the linear cutter knife



Serious cuts may occur when handling cutter knives. Only transport cutter knives using transport devices intended for this purpose.

Protective gloves and safety shoes must be worn.

CAUTION

ATTENTION

Before clamping the knife, check whether the grinding plate fits the knife to be ground. Compare the inscription of the grinding plate with that of the knife.

The use of an unsuitable grinding plate can damage the knife and grinding plate.



Figure 7-105 Swiveling the grinding plate backward

Swivel the grinding plate (7-105/1) backward.

Position the grinding plate so that the mounting area of the knife is easily accessible.

7. Operation

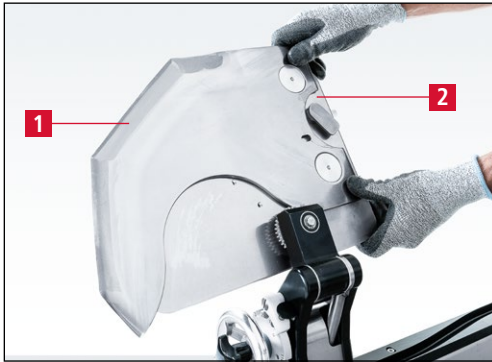


Figure 7-106 Clamping the knife onto the grinding plate

Clamp the knife (7-106/1/1) onto the grinding plate (7-106/2).



Figure 7-107 Locking the knife on the grinding plate

Turn clamping lever (7-107/1) to "Closed" position.

The knife is now locked.

Swivel the grinding plate with the clamped knife forward to the grinding belt.

7.5.7 Basic function of the locking mechanism of the grinding and polishing unit

NOTE

The locking disc has several locking positions. The first two positions are U-shaped, all subsequent positions are V-shaped.

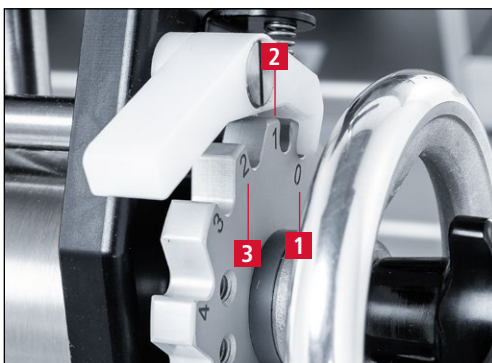


Figure 7-108 Locking disc

The two U-shaped locking positions are used to adjust the knife on the grinding belt and to grind the burr.

The V-shaped locking positions are used for convex grinding of the knife.

0 = adjustment position (7-108/1)

1 = grinding position (7-108/2)

2 – 11 = convex grinding (7-108/3)

7. Operation

NOTE

Every grinding process is started with adjustment position "0".

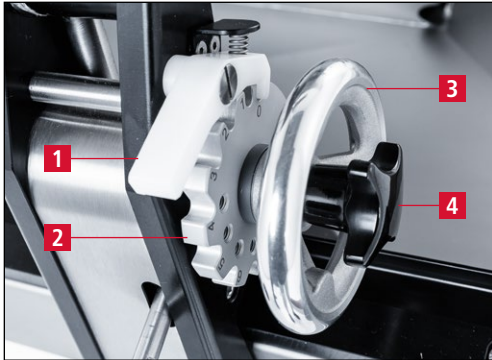


Figure 7-109 Overview of locking mechanism

- 1 Locking lever
- 2 Locking disc
- 3 Hand wheel
- 4 Star handle

7.5.8 Bringing the grinding and polishing unit into the adjustment position



Figure 7-110 Bringing the grinding unit into adjustment position "0"

To bring the grinding and polishing unit into the adjustment position, press the locking lever (7-110/1) with your thumb and turn the hand wheel (7-110/2) with your remaining four fingers until adjustment position "0" is reached.

Release the locking lever (7-110/1).



Figure 7-111 Loosening the star handle

Slightly loosen the star handle (7-111/1) by turning counterclockwise.

The grinding unit can now be moved back and forth freely using the hand wheel.

7. Operation



Figure 7-112 Moving the grinding unit to the grinding belt

Use the hand wheel to move the grinding unit clockwise towards the grinding belt until the cutting edge of the cutting segment to be ground first touches the grinding belt slightly.

Tighten the star handle (7-112/1) clockwise.

7.5.9 Aligning the linear cutter knife on the wet-grinding belt

NOTE

The best grinding results are achieved when the full width of the grinding belt is engaged on the cutting edge of the knife.



Figure 7-113 Loosening the grinding lever

Slightly loosen the grinding lever (7-113/1) counterclockwise until the grinding plate with the clamped knife can be moved.



Figure 7-114 Aligning the knife on the grinding belt

Swivel the grinding plate with the clamped knife until the full width of the grinding belt touches the cutting edge (7-114/1).

7. Operation



Figure 7-115 Tightening the grinding lever

Tighten the grinding lever (7-115/1) clockwise.

Hold the grinding plate with your second hand so that it does not rotate when tightened.

7.5.10 Grinding the linear cutter knife



CAUTION

Grinding creates abrasive particles that can enter the eyes.

Wear safety glasses.

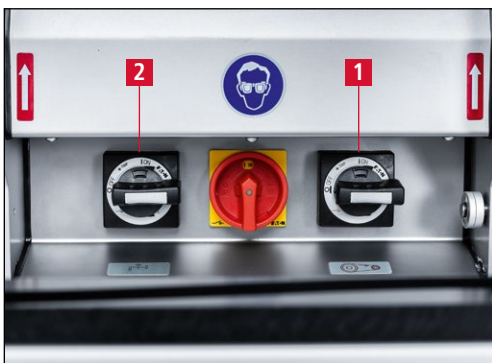


Figure 7-116 Switching on the grinding motor and coolant unit

Switch on the grinding motor (7-116/1) and coolant unit (7-116/2).



Figure 7-117 Bringing the grinding unit into grinding position "1"

Move the grinding unit from adjustment position to grinding position "1".

To do so, press the locking lever (7-117/1) with your thumb and turn the hand wheel (7-117/2) clockwise towards the grinding belt with your remaining four fingers until grinding position "1" is reached (7-117/3).

Release the locking lever (7-117/1).

7. Operation



Figure 7-118 Grinding burr

With linear cutter knives, each cutting segment is ground separately (1 segment = corner to corner).

Using the grinding lever (7-118/1), press the knife against the grinding belt (7-118/2) with moderate force and move it evenly over the grinding belt.

Grind until a small burr forms on the cutting edge.

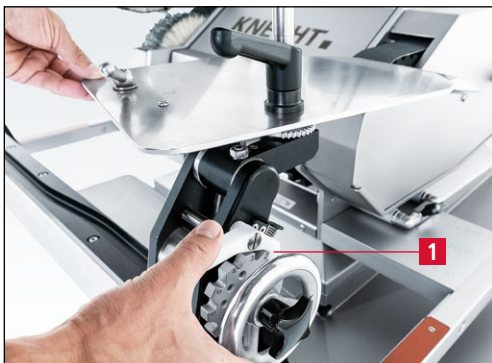


Figure 7-119 Linear cutter knife, convex grinding

With the following locking positions, the knife is ground convex.

To do this, press the locking lever with your thumb and with the remaining four fingers, turn the hand wheel clockwise towards the grinding belt, until locking position "2" (7-119/1) is reached. Release the locking lever.

In this position, make about ten grinding strokes (1 stroke = 1 movement from one corner to the other corner of the cutting segment).

Then move to the next, locking position "3". Do approx. ten grinding strokes here also.

Repeat the process until approx. locking position "7" until the entire convex edge of the knife is ground.



Figure 7-120 120 Cutter knife swiveled back and secured

Use the hand wheel to move the grinding unit counterclockwise to grinding position "1".

Swivel back the grinding plate with the knife (7-120/1).

7. Operation

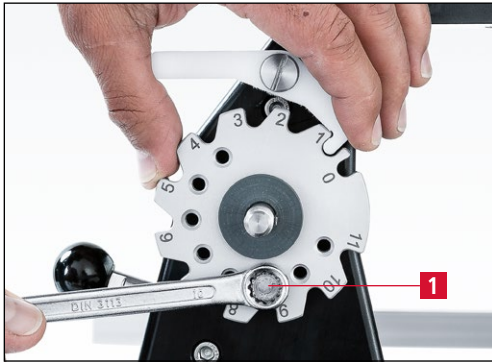


Figure 7-121 Stop screw

The number of infeeds can be limited by the stop screw (7-121/1) in any position.

For better access to the stop screw (7-121/1), unscrew the star handle and remove the hand wheel.

7.5.11 Polishing and deburring the linear cutter knife



CAUTION

There is a risk that hands, hair, and clothing may be pulled in while the grinding machine is switched on.

Never hold the cutting edge against the running direction of the finned brush. Serious injury may result!

Polishing and deburring create abrasive particles that can enter the eyes. Wear safety glasses.



Figure 7-122 Applying the polishing paste

The burr created on the knife during the grinding process is removed by the finned brush. This will help the cutter knife retain its final sharpness.

Before deburring/polishing, briefly hold the polishing paste (7-122/1) against the running finned brush (7-122/2).



Figure 7-123 Switching off the grinding machine

Switch off the grinding motor (7-123/1) and the coolant unit (7-123/2).

7. Operation



Figure 7-124 Knife rests on the finned brush

Move the carriage with the clamped cutter knife to the lower finned brush (7-124/1) and let it rest there.



Figure 7-125 Distance between finned brushes approx. 20 mm

The distance between the upper and lower finned brushes should be approx. 20 mm.

Check the distance between the finned brushes by tilting the cutter knife.

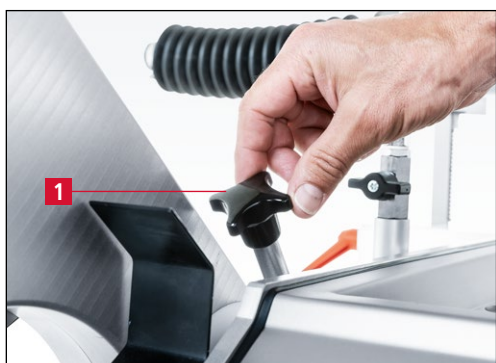


Figure 7-126 Adjusting the distance

If required, adjust the distance by turning the star handle (7-126/1).

7. Operation



Figure 7-127 Swiveling the upper polishing unit upward

Press the locking bolt (7-127/1) of the upper polishing unit.

Swivel the polishing unit (7-127/2) upward into the rest position.



Figure 7-128 Switching on the grinding machine

Switch on the grinding motor (7-128/1).



Figure 7-129 Polishing the knife bale

In locking position "1", make approx. four polishing strokes (1 stroke = one movement from one corner to the other corner of the cutting segment).

Then move to the next locking position "2". Here, too, make approx. four polishing strokes.

Repeat the process to approx. locking position "7" until the entire knife bale is polished.

7. Operation



Figure 7-130 Knife outside the polishing area in secured position

Move the grinding unit back to locking position "1".

Move the carriage with the clamped knife to the right outside the polishing area.

Swivel the knife backward.



Figure 7-131 Moving the upper polishing unit into the working position

Press the locking bolt (7-131/1) of the upper polishing unit.

Swivel the polishing unit (7-131/2) forward into working position until it engages.



Figure 7-132 Deburring

Move the carriage with the clamped cutter knife between the rotating finned brushes. The grinding unit must be in locking position "1".

Guide the ground cutting segment over the finned brushes with moderate force.

Alternately press (lower finned brush) – pull (upper finned brush) – press – pull – press – pull – press etc.

Continue deburring until the burr is removed and the cutting edge is smooth (approx. eight strokes).

7. Operation



Figure 7-133 Switching off the grinding machine

Switch off the grinding motor (7-133/1).



Figure 7-134 Checking the knife sharpness

Move the carriage with the clamped knife to the right outside the polishing area.

Swivel the knife (7-134/1) backward.

Check the cutting segment for sharpness and absence of burrs. Helpful aid: Sponge or paper.



Figure 7-135 Swiveling the cutter knife to the next cutting segment and grind

Move the grinding unit to the grinding belt.

Loosen the grinding lever slightly (7-135/1) and swivel the knife to the next cutting segment.

Grind all cutting segments as described below:

Move grinding and polishing unit to setting position "0" (see chapter 7.5.8)

Align linear cutter knife on wet-grinding belt (see chapter 7.5.9)

Grind the linear cutter knife (see chapter 7.5.10)

Polish and deburr linear cutter knife (see chapter 7.5.11)

Repeat procedures for each cutting segment.

7. Operation

7.6 Grinding hand knives on the wet-grinding belt (S20 | S20B)



There is a risk that hands, hair, and clothing may be pulled in while the grinding machine is switched on.

Never hold the cutting edge against the running direction of the wet-grinding belt. Serious injury may result!

Grinding, polishing and deburring create abrasive particles that can enter the eyes. Wear safety glasses.



Figure 7-136 Grinding hand knives

Place the hand knife flat on the wet-grinding belt (7-136/1).

The cutting edge should not run across, but at an angle to the grinding belt. With your free hand press the knife onto the grinding belt. The stronger the pressure, the more convex the grinding.

Run both sides of the hand knife alternately over the grinding belt until a small burr has formed over the entire length of the cutting edge.



Figure 7-137 Upper polishing unit in rest position

Press the locking bolt (7-137/1) of the upper polishing unit.

Swivel the polishing unit (7-137/2) upward into the rest position.

7. Operation



Figure 7-138 Deburring and polishing hand knives

The knife is deburred and polished on the lower finned brush (7-138/1). This gives the hand knife its final sharpness.

The burr is gently removed under moderate pressure.

To do this, the knife is passed over the finned brush approx. 6–10 times alternately to the left and to the right (left – right – left – right – left, etc.).

7. Operation

7.7 Dressing the grinding wheel (S 20)



Dressing creates abrasive particles that can enter the eyes.

Wear safety glasses.

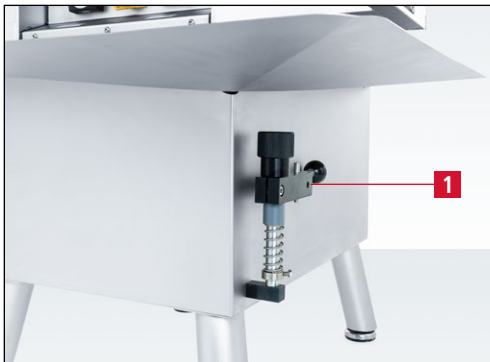


Figure 7-139 Dressing tool HV201

The dressing tool HV201 (7-139/1) is located at the bottom, right of the machine base.

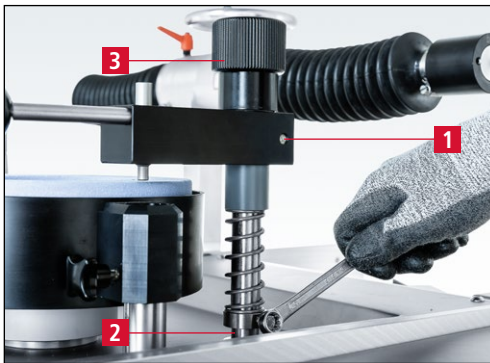


Figure 7-140 Mounting the dressing tool

It is used to dress uneven, or unevenly ground, grinding wheels.

To attach the dressing tool (7-140/1), it is placed on the holder (7-140/2) and fastened with the AF10 open-end wrench supplied.

Its height can be adjusted with the adjusting nut (7-140/3).

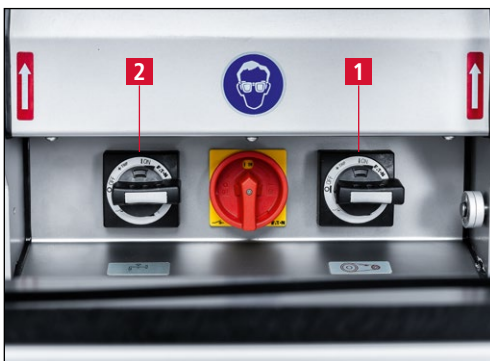


Figure 7-141 Switching on the grinding machine

Switch on grinding motor (7-141/1) and coolant unit (7-141/2)

7. Operation

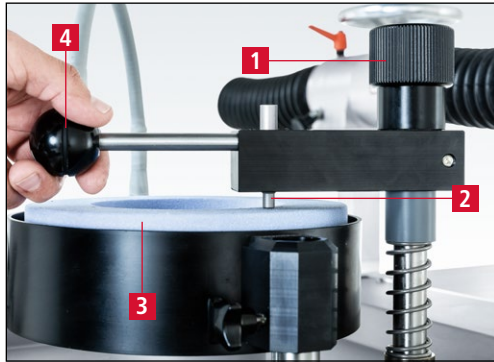


Figure 7-142 Dressing the grinding wheel

Turn the adjusting nut (7-142/1) clockwise until the dressing diamond (7-142/2) touches the grinding wheel (7-142/3).

Then move the dressing tool (7-142/4) slowly over the rotating grinding wheel (7-142/3).

When the dressing diamond (7-142/2) has ground itself free, turn the adjusting nut (7-142/1) a quarter revolution clockwise and move the dressing tool over the rotating grinding wheel.

Repeat the process until the grinding wheel is flat.

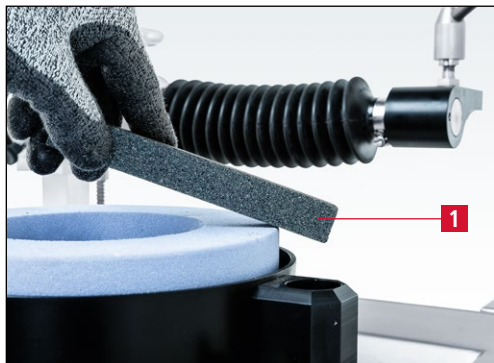


Figure 7-143 Rounding off the outer edge of the grinding wheel

After dressing, round off the outer edge of the grinding wheel with the supplied dressing stone (7-143/1).

Finally, remove the dressing tool and adjust the grinding wheel guard (see chapter 7.8).

7. Operation

7.8 Adjusting the grinding wheel guard (S20)

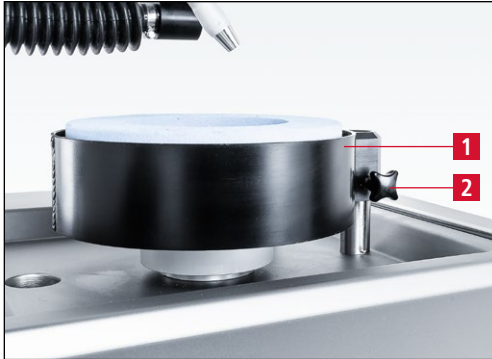


Figure 7-144 Adjusting the grinding wheel guard

To adjust the grinding wheel guard (7-144/1), loosen the star handle (7-144/2) counterclockwise.

Shift the grinding wheel guard so that its upper edge is approx. 5 mm below the grinding wheel edge.

Finally, tighten the star handle (7-144/2) clockwise.

7. Operation

7.9 Changing the grinding wheel (S20)



For all work on the grinding machine, observe the locally applicable safety and accident prevention regulations as well as instructions in the "Safety" and "Important notes" section of the operating instructions.

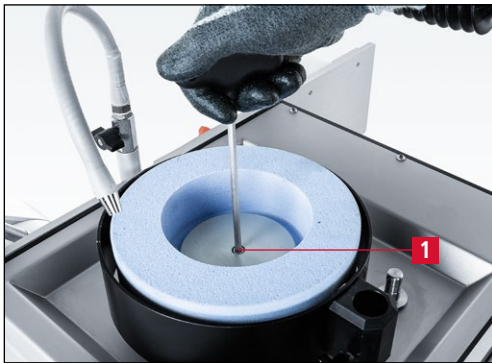


Figure 7-145 Changing the grinding wheel

There is a screw (7-145/1) in the center of the grinding wheel.

Loosen the screw (7-145/1) with the supplied AF5 hexagon screwdriver and remove the grinding wheel.

Clean the contact surface of the grinding wheel on the clamping flange with a cloth.

The new grinding wheel is mounted in reverse order.

ATTENTION

Only original abrasives from KNECHT Maschinenbau GmbH are permitted to be used.

KNECHT Maschinenbau GmbH assumes no responsibility for the use of non-original abrasives.

Incorrect grinding wheels can overheat the cutting edges when grinding and cause blade fractures (grinding cracks).

7. Operation

7.10 Changing the wet-grinding belt



For all work on the grinding machine, observe the locally applicable safety and accident prevention regulations as well as instructions in the "Safety" and "Important notes" section of the operating instructions.



Figure 7-146 Opening the belt protection hood

Pull the belt protection hood (7-146/1) upwards at the handle with a jerk.

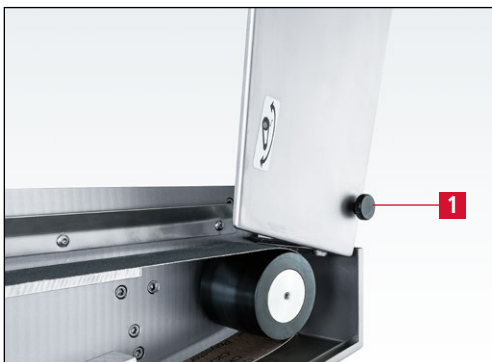


Figure 7-147 Engaging the belt protection hood

Move the belt protection hood upwards until the locking bolt (7-147/1) engages. In this position, the belt protection hood is secured against tipping down.

The power supply is automatically interrupted.

The grinding belt is released by the belt release mechanism.

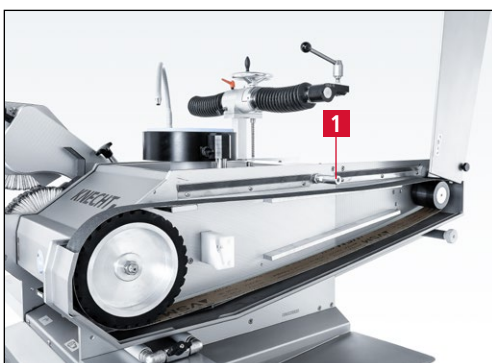


Figure 7-148 Changing the wet-grinding belt

Remove the used grinding belt.

Place the new grinding belt over the contact wheel and guide pulley. Ensure that the grinding belt passes **under the water nozzle** (7-148/1).

The arrows indicating the direction of rotation of the grinding belt must point to the left.

Turn the grinding belt by hand and check that it does not rub anywhere.

7. Operation



Figure 7-149 Closing the belt protection hood

ATTENTION

Pull out the locking bolt (7-149/1). The locking mechanism is released.

Then close the belt protection hood completely again.

Observe the running direction arrows on the inside of the grinding belt!

Only original abrasives from KNECHT Maschinenbau GmbH are permitted to be used.

KNECHT Maschinenbau GmbH assumes no responsibility for the use of non-original abrasives.

Incorrect grinding belts can overheat the cutting edges during grinding and lead to knife breakage (grinding cracks).

NOTE

The power supply is interrupted when the belt protection hood is open. The machine cannot be switched on.

If the belt protection hood is opened while the machine is running, it switches off automatically.

7. Operation

7.11 Adjusting the belt movement

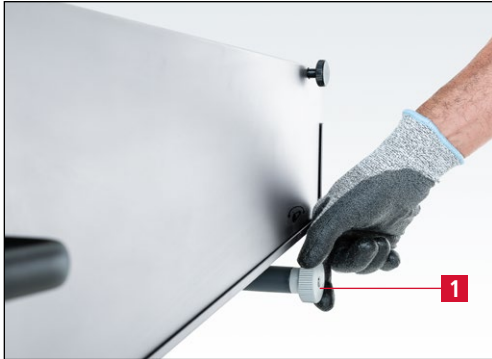


Figure 7-150 Belt adjustment

If the grinding belt does not run centrally on the contact wheel, it can be aligned with the belt adjustment (7-150/1).

Turning the belt adjustment (7-150/1) counter-clockwise causes the grinding belt to move to the left.

Turning the belt adjustment (7-150/1) clockwise causes the grinding belt to move to the right.

7. Operation

7.12 Changing the finned brushes



Do not switch on the machine with the protective hoods removed!

Serious injuries are possible!

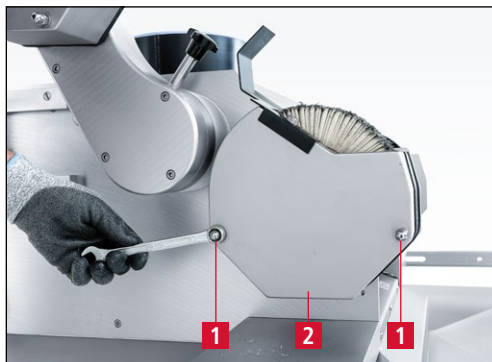


Figure 7-151 Loosening the cap nuts of the lower polishing unit

To change the finned brush of the lower polishing unit, fold the upper polishing unit upwards into the rest position (see chapter 7.6, figure 7-137).

Loosen the cap nuts (7-151/1) of the lower polishing protection hood (7-151/2) counterclockwise with the supplied open-end wrench AF 13.

Remove the polishing protection hood and clean it under running water.

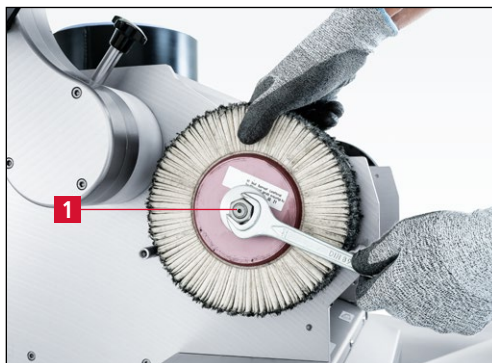


Figure 7-152 Changing the lower finned brush

Open the clamping nut (7-152/1) **counterclockwise** with the supplied open-end wrench AF 22.

Pull the used finned brush off the grinding spindle and replace it with a new one.

Tighten the clamping nut (7-152/1) **clockwise**.

Then completely reassemble the hood (7-151/2) in reverse order.

Turn the finned brush by hand and perform a function check.

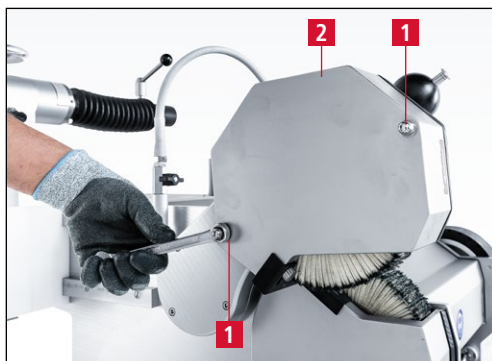


Figure 7-153 Loosening the cap nuts of the upper polishing unit

Fold down the upper polishing unit (see chapter 7.5.11, figure 7-131).

Loosen the cap nuts (7-153/1) of the upper polishing protection hood (7-153/2) counterclockwise with the supplied open-end wrench AF 13.

Remove the polishing protection hood (7-153/2) and clean it under running water.

7. Operation

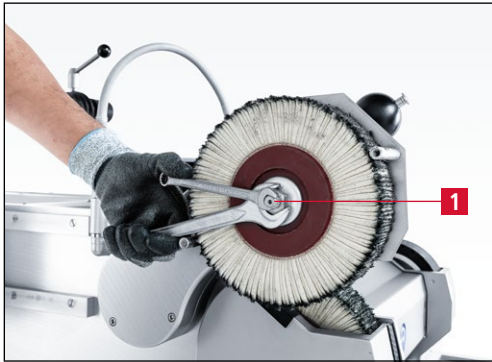


Figure 7-154 Changing the upper finned brush

ATTENTION

Open the clamping nut (7-154/1) **clockwise** with the open-end wrench AF22. Fix the shaft with the open-end wrench AF 10.

Pull the used finned brush off the grinding spindle and replace it with a new one.

Tighten the clamping nut (7-154/1) **counterclockwise**.

Then completely reassemble the hood (7-153/2) in reverse order.

Turn the finned brush by hand and perform a function check.

Only original abrasives from KNECHT Maschinenbau GmbH are permitted to be used.

KNECHT Maschinenbau GmbH assumes no responsibility for the use of non-original abrasives.

Incorrect finned brushes can lead to insufficiently deburred cutting tools and damage the cutting edges.

7. Operation

7.13 Circular knife grinding attachment HV 25-1 (optional S 20)



Serious cutting injuries are possible when using circular knives. Only transport circular knives with the transport devices provided for this purpose.

CAUTION

Wear firm protective gloves and safety shoes.



Figure 7-155 Circular knife grinding attachment HV25-1

For grinding circular knives d. 80–250 mm, the Circular knife grinding attachment HV25-1 (7-155/1) is mounted on the machine.

The circular knives are clamped on the knife holding fixture with the corresponding flanges.

NOTE

For further information, please refer to the technical documentation of the Circular knife grinding attachment HV25-1 | HV25-2.

7. Operation

7.14 Circular knife grinding attachment HV 25-2 (optional S20)



Serious cutting injuries are possible when using circular knives. Only transport circular knives with the transport devices provided for this purpose.

VORSICHT

Wear firm protective gloves and safety shoes.



Figure 7-156 Circular knife grinding attachment HV 25-2

For grinding circular knives d. 250–470 mm, the Circular knife grinding attachment HV 25-2 (7-156/1) is mounted on the machine.

The circular knives are clamped on the knife holding fixture with the corresponding flanges.

HINWEIS

For further information, please refer to the technical documentation of the Circular knife grinding attachment HV 25-1 | HV 25-2.

8. Care and maintenance



For all work on the grinding machine, observe the locally applicable safety and accident prevention regulations as well as instructions in the "Safety" and "Important notes" section of the operating instructions.

8.1 Cleaning

Clean the machine each time after sharpening to prevent the grinding abrasion from drying, hence making it harder to remove.

After cleaning the grinding machine, we recommend the following products for machine care (see also cleaning agent and lubricant table in chapter 8.1.1).

Coolant must be replaced weekly. The water tank must be cleaned each time the coolant is changed.

ATTENTION

Do not spray the grinding machine with water. Do not allow the finned brushes to get wet.

8.1.1 Cleaning agent and lubricant table

Cleaning / lubrication work	Interflon	WÜRTH	SHELL	EXXON Mobil
Cleaning and care of machine parts	Dry Clean Stainless Steel	Stainless steel care spray	Risella 917	Marcol 82
Lubricate threads and sliding surfaces	Fin Grease	Multi-purpose grease	Gadus S2	Ronex MP

8.2 Maintenance plan (one-shift operation)

Interval	Assembly	Maintenance task
Daily	All machine surfaces	Clean with soft cloth and care spray.
Weekly	Star handle threads	Lubricate with multi-purpose grease.
	Guideways	Clean and lubricate with multi-purpose grease.
	Water tank	Replace coolant and clean water tank.
Annually		Contact the service department of KNECHT Maschinenbau GmbH.

9. Disassembly and disposal

9.1 Disassembly

All operating materials must be disposed of properly.

Secure moving parts against slippage.

Disassembly must be conducted by a qualified specialist.

9.2 Disposal

After the machine has reached the end of its service life, it must be disposed of by a qualified specialist. In exceptional situations, and after consultation with KNECHT Maschinenbau GmbH, the machine may be returned.

Operating materials (e.g. grinding wheels, grinding belts, finned brushes, etc.) must be disposed of correctly.

10. Service, spare parts and accessories

10.1 Postal address

KNECHT Maschinenbau GmbH
Witschwender Straße 26
88368 Bergatreute
Germany

Phone +49-7527-928-0
Fax +49-7527-928-32

mail@knecht.eu
www.knecht.eu

10.2 Service

Service line:

For address, see postal address

service@knecht.eu

10.3 Wear and spare parts

If you need spare parts, please use the spare parts list provided with the machine. Please place your order using the format described below.

When ordering, please always provide:	(example)
Machine type	(S 20)
Machine number	(086026920)
Designation of assembly	(contact wheel 40° shore)
Item number	(45)
Drawing number (article number)	(408L-20-0628)
Quantity	(1 pc.)

We are always happy to answer any questions.

10. Service, spare parts and accessories

10.4 Accessories

10.4.1 Abrasives used, etc.

Designation	Dimensions	Grain	Article Number	Note
Grinding wheel H6V2709	d.200x60xd.50	80	412B-10-0492	
Grinding wheel L/M6V51	d.200x60xd.50	120	412B-11-0491	Installed on delivery
Grinding wheel 60C120H8V30	d.200x60xd.50	120	412B-95-0120	For heavy material removal
Wet-grinding belt	2200x60	80	412A-62-0725	
	2200x60	100	412A-63-0726	
	2200x60	120	412A-64-0727	Installed on delivery
	2200x60	240	412A-66-0728	
Wet-grinding belt Compact grain	2200x60	180	412A-70-0180	
Finned brush	d.200x50xd.17		412J-02-0510	Installed on delivery
Polishing paste	1200 g		412R-01-0501	Installed on delivery
Dressing diamond 1,5 carat	d.10x60		312A-01-2328	Installed on delivery

ATTENTION

Only original abrasives, wear and spare parts from KNECHT Maschinenbau GmbH are permitted to be used.

KNECHT Maschinenbau GmbH assumes no responsibility for the use of non-original parts.

If you require abrasives or other accessories, please contact our sales staff and distributors, or KNECHT Maschinenbau GmbH directly.

Thank you for choosing KNECHT!

11. Appendix

11.1 EU Declaration of Conformity

in accordance with EU Directive 2006/42/EU

- Machinery 2006/42/EU
- Electromagnetic Compatibility 2014/30/EU

We hereby declare that the machine designated as follows, due to its construction and design, as well as the version we placed on the market, complies with the relevant fundamental safety and health requirements of the applicable EU Directive.

In case of a modification of the machine not agreed with us, this declaration loses its validity.

Machine designation: Universal Wet-Sharpening Machine
Model designation: S20 | S20B

Machine number: from no. 088037020

**Applicable harmonized standards,
in particular:** DIN EN 12100-1
DIN EN 12100-2
DIN EN 60204-1
ISO 13857
DIN EN 349

Responsible for documentation: Peter Heine
(B. Eng. Mechanical Engineering BA)
Phone +49-7527-928-15
p.heine@knecht.eu

Manufacturer: KNECHT Maschinenbau GmbH
Witschwender Straße 26
88368 Bergatreute
Germany

A complete technical documentation is available. The operating instructions document for the machine is available in its original version and in the native language of the user.

The validity of the declaration expires in the event of changes to the legal requirements.

Bergatreute, April 28, 2023

KNECHT Maschinenbau GmbH


Markus Knecht
Geschäftsführer

KNECHT Maschinenbau GmbH

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