KNECHT

Operating Instructions

W 40

Fully Automatic Surface Grinding Machine

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Operating Instructions

Fully Automatic Surface Grinding Machine W 40

Manufacturer

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

Documents for the machine operator

Operating Instructions

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1. Important notes

1.1 Foreword

These operating instructions are meant to make it easier to get to know the fully automatic surface grinding machine, referred to in this document as grinding machine, and to use it properly for the intended purpose.

The operating instructions contain important information on how to operate the grinding machine safely, properly and cost-effectively. Observance of these instructions helps to avoid dangers, repair costs and downtimes, and increases the reliability and service life of the grinding machine.

The operating instructions must always be accessible at the place of use of the grinding machine.

The operating instructions must be read and used by all persons entrusted with working on the grinding machine, e.g. those entrusted with

- Transport, installation, commissioning
- Operation, including troubleshooting in the process flow, as well as
- Servicing (maintenance, repair).

In addition to the operating instructions and the binding accident prevention regulations applicable in the country and place of use of the machine, the generally acknowledged rules of technology with regard to safe and professional work practices are to be observed.

1.2 Warnings and symbols in the operating instructions

Heeding the following safety alert symbols/designations used in the operating instructions is absolutely necessary:

CAUTION

The hazard triangle with the signal word "CAUTION" is used as a work safety indication for all work which could result in death or physical injury.

Special care and caution must be taken when carrying out such jobs.

ATTENTION

The signal word "ATTENTION" is used to call attention to hazards which could result in damage and/or destruction of the grinding machine or its environment if special attention is not paid while carrying out particular jobs.

NOTICE

The signal word "NOTE" calls attention to tips on use and useful information.

1. Important notes

1.3 Warning plates and their meaning

1.3.1 Warning and prohibition signs on / in the grinding machine

The following warning and prohibition signs have been affixed to the grinding machine:

CAUTION! DANGEROUS ELECTRICAL VOLTAGE (warning notice on the switch cabinet)

On being connected to the voltage supply (3x 400 V), the grinding machine becomes electrically live and touching its live parts directly could be life-threatening.

Live machine parts may be opened only by authorised, trained personnel.

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

CAUTION! Pacemakers (prohibition sign on the safety doors)

A powerful magnet is installed in the machine. To avoid possible malfunctions in the pacemaker, a minimum distance of 30 cm between the magnetic clamping plate and the implant must be observed.

1.3.2 General mandatory signs

The following general mandatory signs must be observed:

CAUTION! RISK OF INJURY ON THE BLADE

Work on the grinding machine involves the sharpening of blades which could cause cut injuries due to their sharpness.

Wearing protective gloves is mandatory when carrying out such jobs.

Be careful when transporting blades.

Protective gloves should be worn when changing the coolant (see Safety Data Sheet on "Coolant Lubricant").

1. Important notes

1.4 Rating plate and machine serial number

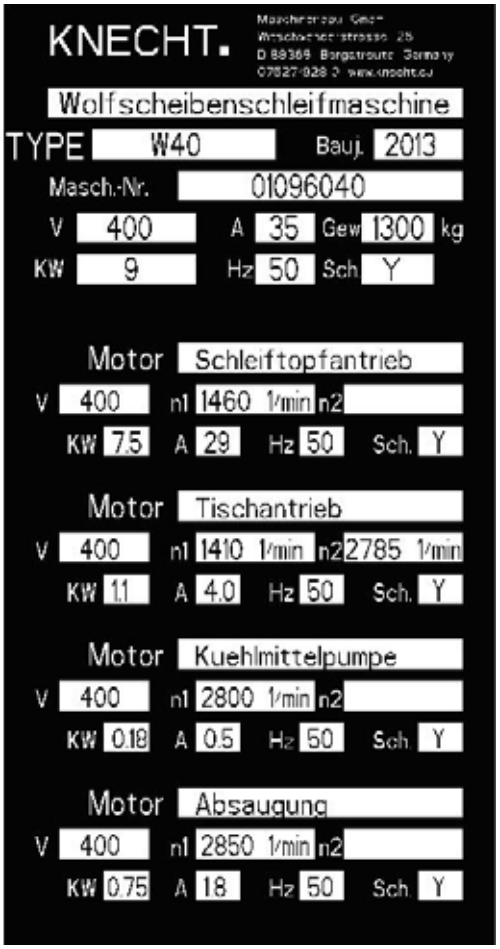

Figure 1-1 Rating Plate

The rating plate is located on the right side of the machine behind the control panel

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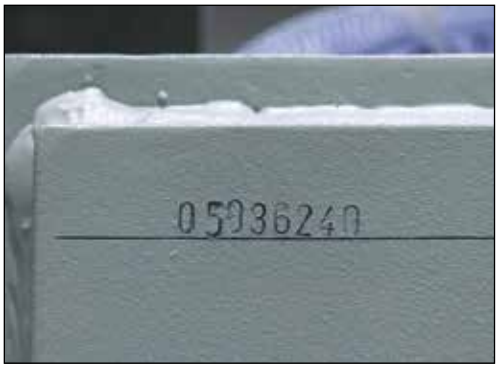

Figure 1-2 Machine serial number

The machine serial number is located on the rating plate and in the machine room, visible through the opening of the extraction unit.

1. Important notes

1.5 Figure and item numbers in the operating instructions

If the text refers to a machine component shown in a figure, then a figure or item number is added in brackets after the machine component.

Example: (7-1/1) denotes figure number 7-1, item 1.

Figure 7-1 *Rotary table*

The workpieces are placed on the rotary table (7-1/1) for machining. The rotary table has an electric magnet for fixing the workpiece. The strength of the magnetic field is divided into six levels and can be controlled.

The rotary table is powered by a spur gear. Two speeds are available.

2. Safety

2.1 Basic safety instructions

2.1.1 Observe notes in the operating instructions

The basic prerequisite for the safe handling and uninterrupted 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 accident prevention rules and regulations applicable at the place of use of the machine must also be observed.

2.1.2 Operator's duty

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

- are familiar with the basic occupational safety and accident prevention regulations and have been trained and instructed in the handling of the grinding machine,
- have read the operating instructions, particularly the "Safety" section, and have read and understood the warning notes. They have given a signed confirmation of this in writing.

Checks are also carried out at regular intervals to determine whether the worker is fulfilling his obligation to observe safety at work.

2.1.3 Obligations on the part of the personnel

All the personnel working on the grinding machine shall be obliged to

- observe the basic occupational safety and accident prevention regulations,
- read the operating instructions, particularly the "Safety" chapter, and the warning notes. They must provide signed confirmation of this in writing.

2.1.4 Hazards associated with the handling of the machine

The grinding machine has been built to the latest technological standards and the acknowledged rules of technical safety. In spite of that, its use presents inherent risks which could result in bodily harm or even death of the user or third parties, or impairment of the grinding machine or other property.

The grinding machine may be used only:

- for the intended purpose, and
- in faultless condition with regard to safety-relevant aspects.

2. Safety

Faults that could impair safety must be eliminated immediately.

2.1.5 Malfunctions

If safety-relevant malfunctions occur in the grinding machine, or if the processing behaviour 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 authorised technical staff to eliminate the malfunctions.

2.2 Use as intended

The grinding machine is only designed for surface grinding mincing plates and knives, also referred to as workpieces in this document.

All blades must be clamped in the centre of the magnetic table.

Any other use is considered improper use. KNECHT Maschinenbau GmbH assumes no liability for damages resulting from improper use. The user alone bears the risk in such cases.

Use as intended includes the observance of all the instructions in the operating instructions.

The grinding machine is being used improperly, if, e.g.,

- devices are not fastened properly.
- workpieces other than mincing plates or knives are ground.

2.3 Warranty and Liability

Warranty and liability claims in case of personal injuries 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 transportation, commissioning, operation and maintenance of the grinding machine,
- operating the grinding machine with defective safety devices, or improperly attached or malfunctioning safety and protective equipment,
- ignoring the operating instructions with regard to transportation, commissioning, operation, maintenance and repair of the grinding machine,
- unauthorised structural alterations to the grinding machine,
- unauthorised modification, e.g. of the drive conditions (power and speed), and
- insufficient monitoring of machine parts that are exposed to wear.

• use of unapproved replacement and wear parts

Use only original replacement and wear parts. If parts are purchased from external suppliers, it cannot be guaranteed that they will be constructed and manufactured to withstand the stresses and provide the required level of safety.

2.4 Safety regulations

2.4.1 Organisational measures

All the existent safety devices must be checked regularly.

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

2.4.2 Protective devices

Before commissioning the grinding machine, it is important to ensure that all protective equipment is properly mounted and in functional condition.

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

If spare parts are supplied, the protective equipment must be correctly attached by the operator according to the instructions.

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 the locally relevant accident prevention regulations must also be made available and observed.

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

2.4.4 Selection and qualifications of the personnel

Only trained and instructed personnel may work on the grinding machine. The minimum legal age for employment must be observed.

The responsibilities of the personnel must be clearly assigned, i.e. commissioning, operation, maintenance and repair, etc.

Personnel still in the training or instruction phase may only be allowed to work on the grinding machine under the permanent supervision of an experienced person.

2.4.5 Machine control system

Do not make any changes to the software program under any circumstances. Parameters that the operator can set himself are excluded from this prohibition.

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

2.4.6 Safety measures in normal operation

Refrain from any method of working which may pose a risk to safety. Only operate the grinding machine if all the safety devices are installed and fully functional.

Check the grinding machine for external signs of damage and correct operation of the safety devices at least once every shift.

Report any changes (including operating behaviour) immediately to the competent department/person. Where required, shut down the grinding machine immediately and secure against restarting.

Before switching on the grinding machine, ensure that no one is exposed to any risk from the start-up of the machine.

If there are any functional faults, immediately stop the machine and secure against restarting. Have the faults eliminated immediately.

2.4.7 Dangers due to electrical power

Work on electrical units or operating materials may only be performed by a qualified electrician in accordance with electrical rules.

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

Cables marked in yellow are electrically live even when the main switch is in off position.

2.4.8 Particular danger zones

In the area of the grinding wheel, there is a hazard of pinching and being drawn in (e.g. clothing, fingers and hair). Suitable personal protective equipment must be worn.

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 starting repair work. The responsible supervisor is to be named.

For all service work, the grinding machine is to be disconnected from the power supply and secured against accidental restarting. Pull out the mains plug. Cordon off the servicing area, as far as possible.

After completion of the maintenance work and fault rectification, install all the safety devices and check whether they are fully functional.

2.4.10 Structural alterations to the grinding machine

Modifications, retrofitting or rebuilds of the grinding machine are not allowed without the permission of the manufacturer. This also applies to the installation and adjustment of safety devices.

No alterations may be carried out without prior written permission from KNECHT Maschinenbau GmbH.

Immediately replace machine parts which are not in perfect condition.

Use only original replacement and wear parts. If parts are purchased from external suppliers, it cannot be guaranteed that they will be constructed and manufactured to withstand the stresses and provide the required level of safety.

2.4.11 Cleaning the grinding machine

Cleaning agents and materials used must be handled properly and disposed of in an environmentally friendly manner.

Ensure that wear and replacement parts are disposed of in a safe and environmentally friendly way.

2.4.12 Oils and greases

When handling oils and greases, follow the safety instructions for the product. Observe special instructions for the foodstuffs sector.

2.4.13 Relocation of the grinding machine

Even when moving the machine a short distance from its site, disconnect it from all external power supply sources. Before restarting the machine, connect it properly to the current supply.

When loading or unloading, only use hoisting and load lifting equipment with sufficient load-bearing capacity. Appoint a qualified banksman (signaller) for the lifting process.

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

2. Safety

Only lift the grinding machine correctly with hoisting gear in accordance with the operating instructions (attachment points for hoisting equipment, etc.). Only use suitable transport vehicles with sufficient load-bearing capacity. Attach the load securely. Use suitable attachment points. When putting in operation again, proceed only as instructed in the operating instructions.

3. Description

3.1 Intended Use

The W 40 fully automatic surface grinding machine grinds mincing plates and knives, as well as mincer blade sets with a diameter up to 400 mm.

3.2 Technical specifications

Height	approx. 1800 mm
Width (incl. belt filter coolant unit)	approx. 1800 mm
Depth	approx. 1800 mm
Required space (WxDxH)	approx. 3400 mm x 2600 mm x 1800 mm
Weight	approx. 1200 kg
Weight of belt filter coolant unit	90 kg
Voltage supply*	3x 400 V
Mains frequency*	50 Hz
Connected load*	9 kW
Rated voltage*	35 A
Back-up fuse	25 A
Measured A-evaluated emission sound pressure level at workstation LpA**	75 dB (A)
Rotary table diameter	400 mm
Rotary table speed	31 and 62 rpm
Grinding wheel diameter	200 mm
Grinding wheel speed	100 - 3000 rpm
Cutting speed with grinding wheel d.200	1-30 m/s

*) This data may vary depending on the electrical power supply.
**) Noise emission information according to EN ISO 11201.

A mincing plate from Turbocut (d.200 mm) was ground.

3. Description

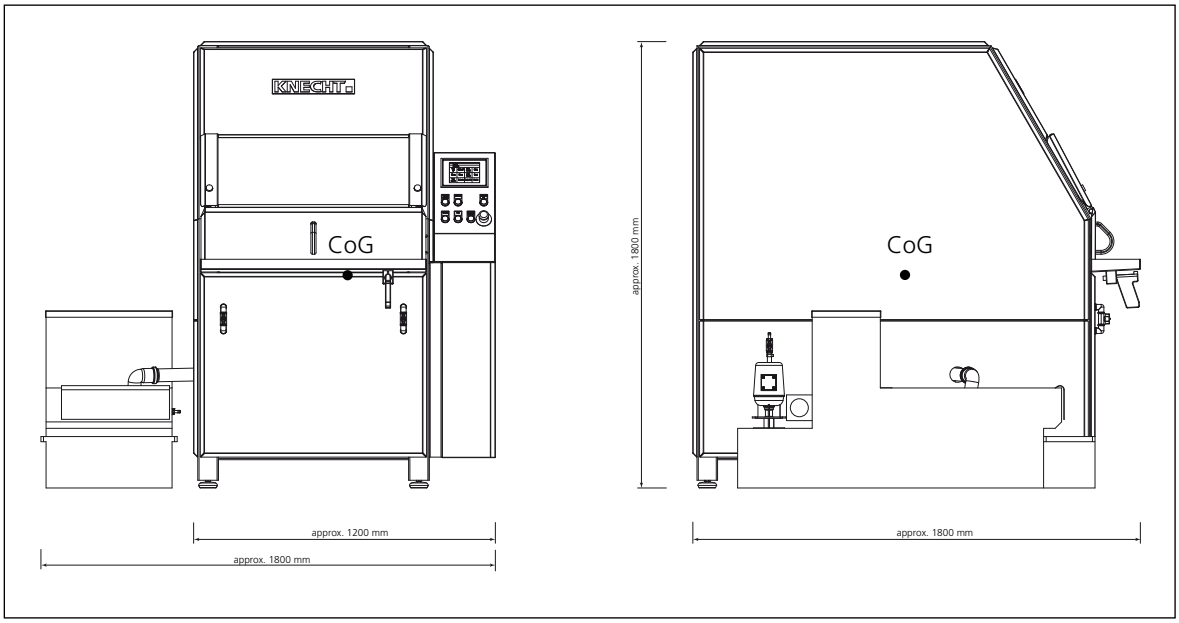

Figure 3-1 Dimensions in mm

3.3 Functional Description

With the W 40 surface grinding machine, mincing plates and knives with a diameter up to 400 mm can be ground fully automatically.

ATTENTION

The mincing plate must not protrudeover the magnetic table.

The mincing plates are fixed on the rotary table of the W 40 surface grinding machine via magnetic tension and aligned with the help of centring pieces.

For surface grinding, mincing knives are fixed on a mincing plate with the centring piece for blades provided.

For unusual applications, special holders are also available.

The machine is supplied with a boron nitride grinding wheel as standard. However, corundum grinding wheels can be used as well.

ATTENTION

Only abrasives that are approved by KNECHT Maschinenbau GmbH may be used.

An extraction unit (air purifying system) is integrated in the machine. Furthermore, there is a belt filter coolant unit in the machine.

3. Description

3.4 Description of the assemblies

Figure 3-2 General view of the grinding machine

1 Control panel
2 Safety doors
3 Working place light (concealed)
4 Flexible jointed coolant hose
5 Grinding unit (z-axis)
6 Rotary table (y-axis) (concealed)
7 Coolant tap
8 Belt filter coolant unit
9 Adjustable machine feet
10 Extraction unit

3. Description

3.4.1 Switching the grinding machine on / off

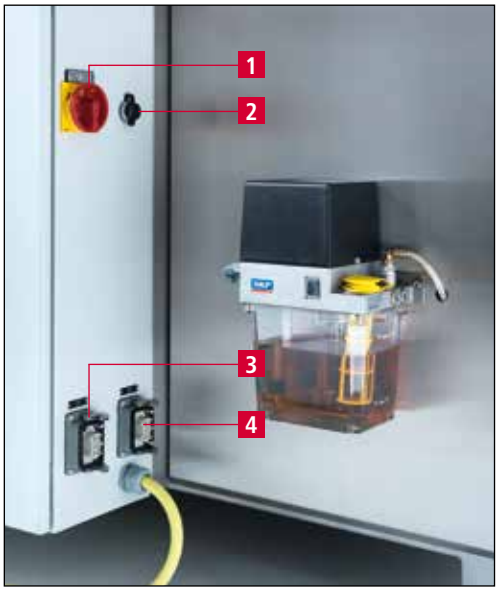

Figure 3-3 Main switch

The main switch (3-3/1) of the grinding machine is located on the backside of the switch cabinet.

Turning the main switch from "0" to "I" switches on the grinding machine.

Turning the main switch from "I" to "0" switches off the grinding machine.

2 Connection for internet
3 Connection for coolant pump
4 Connection for belt filter coolant unit

3.4.2 Control system in general

Figure 3-4 Control panel

The machine is controlled via the control panel on the right side of the machine.

The program is automatically loaded when the machine is switched on. The user interface is activated only when the "Control ON" button is pressed.

The machine is operated via the touch panel (3-4/1) and the buttons (3-4/2).

3. Description

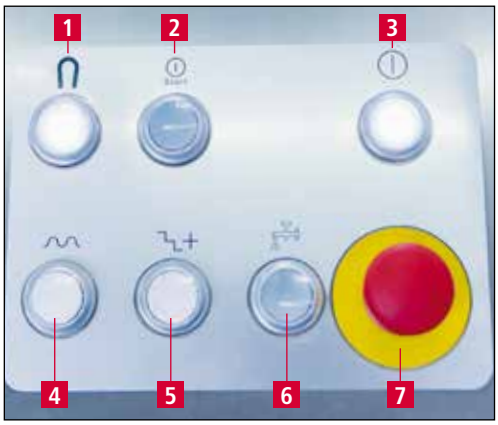

Figure 3-5 Control panel

1 "Magnet On/Off" button: Switches the rotary table magnet on/off
2 "Start/Stop" button: Starts or stops the selected product file
3 "Control On" button: Activates the controls
4 "Feed" button: Manually increases the traverse speed of the axes
5 "Step" button: Feeds the grinding wheel in defined steps
6 "Coolant On/Off" button: Switches the coolant pump on/off
7 "Emergency Stop" button

3. Description

3.4.3 Layout of the user interface (main screen)

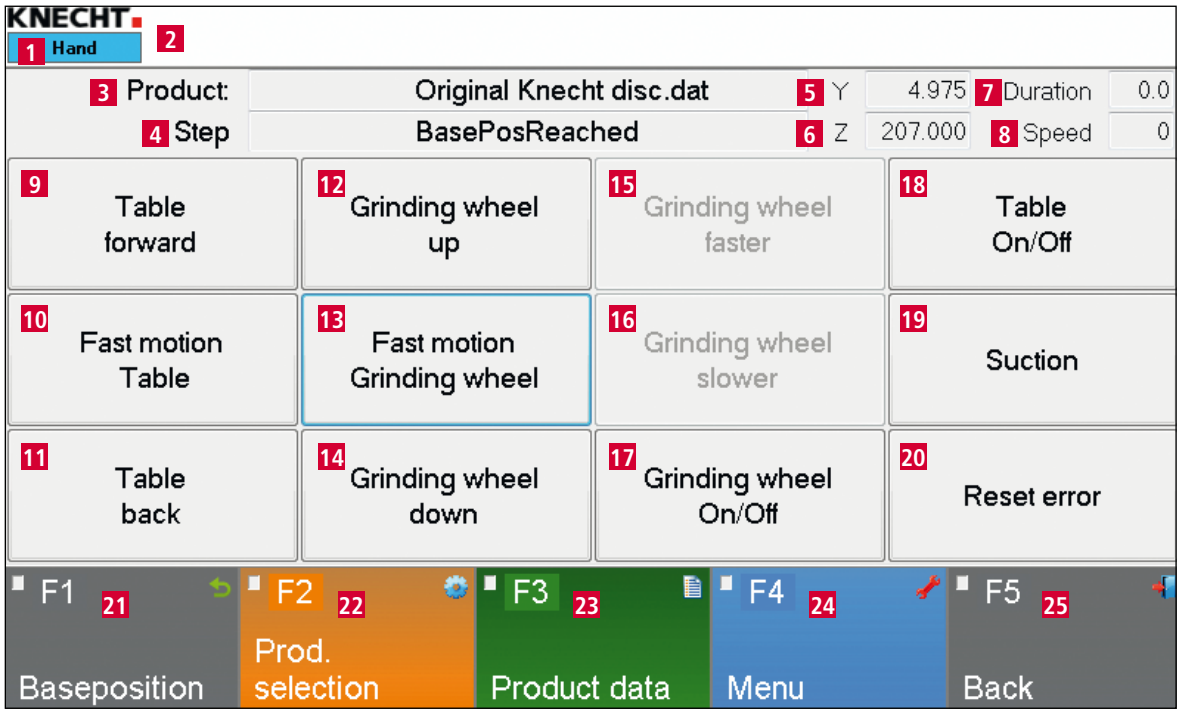

Figure 3-6 Main screen

1 Status display
2 Fault messages
3 Loaded product file
4 Current processing cycle
5 Actual value of y-axis
6 Actual value of z-axis
7 Grinding time (in s)
8 Current speed of the grinding wheel
9 "Table forward": For moving the table forward
10 "Fast motion Table": Rapid traverse for table forward/backward
11 "Table back": For moving the table backward
12 "Grinding wheel up": For raising the grinding wheel
13 "Fast motion Grinding wheel": Rapid traverse for grinding wheel up/down
14 "Grinding wheel down": For lowering the grinding wheel
15 "Grinding wheel faster": For increasing the speed of the grinding wheel
16 "Grinding wheel slower": For decreasing the speed of the grinding wheel
17 "Grinding wheel On/Off": For switching the grinding wheel on/off
18 "Table On/Off": For switching the table on/off
19 "Suction": For switching the extraction unit on/off
20 "Reset error": For deleting temporary fault messages
21 "F1 Baseposition": For moving the table and the grinding wheel to the base position

22 "F2 Prod. selection": For selecting the product files
23 "F3 Product data": For changing the product file parameters
24 "F4 Menu": For managing the product files and language of the user interface
25 "F5 Back": For going back to the last view

3.4.4 Belt filter coolant unit

Figure 3-7 Belt filter coolant unit

The belt filter coolant unit (3-7) is located on the left side of the machine.

During grinding, the work piece must be cooled constantly. For that, fill approx. 140 litres of water with coolant additive (see Chapter 9.1) into the water tank.

ATTENTION

The mechanism of the grinding machine is not rust-proof! Always use coolant additive.

4. Transport

For transporting the machine, the locally applicable safety and accident prevention regulations must be observed.

Only transport the machine in upright position (with the machine feet facing downwards).

4.1 Transport Aids

For transporting and for setting up the grinding machine, only use adequately dimensioned transport aids, e.g. truck, forklift, hydraulic lift truck.

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

Bear in mind the centre of gravity of the machine. The centre of gravity (CoG) is shown in figure 3-1.

4.2 Transport Damage

If damage is detected following unloading after acceptance of the delivery, inform KNECHT Maschinenbau GmbH and the freight forwarder about it immediately. If required, consult an independent expert immediately.

Remove the packaging and shipping straps. Remove the shipping straps on the grinding machine. Dispose of the packaging in an environmentally friendly way.

4.3 Transport to another installation site

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

A reliable electrical connection must be provided at the new installation site.
The grinding machine must be stable and firmly placed.

Installations on the electrical system may only be performed by an authorised specialist. Observe the locally applicable safety and accident prevention regulations.

5. Installation

5.1 Selection of qualified personnel

It is advisable to have trained KNECHT personnel perform the installation work on the grinding machine.

We assume no liability for damage caused by improper installation.

5.2 Installation Site

When determining the installation site, bear in mind the space requirement for installation, maintenance and repair work on the grinding machine.

5.3 Supply Connections

The grinding machine is delivered ready for connection with clockwise phase rotation and the appropriate connection cable.

After connection of the power supply, the electrical phase rotation of the machine must be checked by an electrically qualified person. The machine operates flawlessly only when the phase rotation is clockwise.

ATTENTION

The direction of rotation of the rotary table must be anti-clockwise (see Figure 6-4). That of the electrical phase must be clockwise.

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

5.4 Settings

The various components and the electrics are adjusted by KNECHT Maschinenbau GmbH before delivery.

ATTENTION

Unauthorised changes to set values are not permitted and may damage the grinding machine.

5. Installation

5.5 Initial commissioning of the grinding machine

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

Uneven floors must be compensated for via adjustable machine feet.

Have a qualified electrician on site install the current supply.

Completely install and check the safety devices before commissioning.

Have all the protective devices checked for proper functioning by authorised specialists before initial operation of the machine.

6. Commissioning

CAUTION

All work on the machine may only be performed by trained personnel.

The locally applicable safety and accident prevention regulations must be observed.

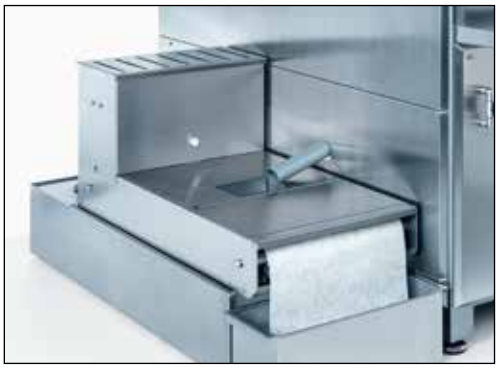

Figure 6-1 Filling the belt filter coolant unit

Set up the belt filter coolant unit and fill with water and coolant additive as described in Chapter 3.4.4.

For information on the coolant additive, see Chapter 9.1.

Connect the power plug (CEE plug) to the power socket provided on site (3x 400 V, 32 A) and switch the main switch to "I".

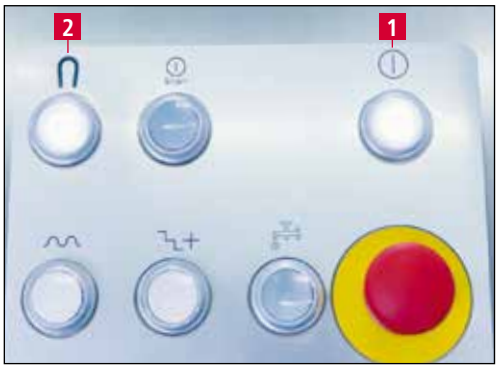

Figure 6-2 Control panel

Press the "Control On" button (6-2/1) on the control panel. The control unit is now activated.

Press the "Magnet On/Off" button (6-2/2).

6. Commissioning

Figure 6-3 Main screen

Press "Table On/Off" (6-3/1) and "Grinding wheel On/Off" (6-3/2) buttons on the touch panel of the main screen to switch both on.

The rotary table and the grinding wheel start rotating.

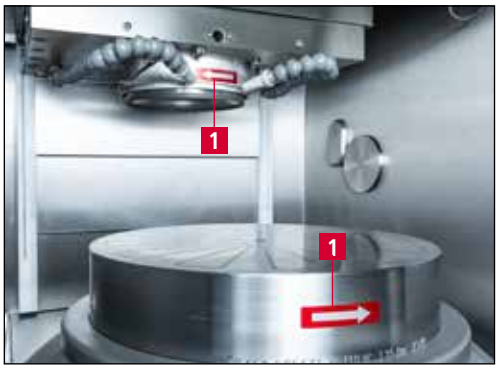

Figure 6-4 Check the direction of rotation

Check the direction of rotation.

The direction arrows (6-4/1) show the direction of rotation of the rotary table and grinding wheel.

Where necessary, switch the pole changer plug.

ATTENTION

In the event of an incorrect connection, the grinding wheel and the rotary table can turn opposite to the specified direction of rotation.

An incorrect direction of rotation can result in the grinding wheel coming loose.

During commissioning, check the direction of rotation of the rotary table first. The rotary table must turn anti-clockwise.

After ensuring the prescribed direction of rotation, once again press the "Table On/Off" (6-3/1) and "Grinding wheel On/Off" (6-3/2) buttons on the touch panel to switch off the rotary table and the grinding wheel.

7. Operation

7.1 Switching on the grinding machine

Set the main switch (3-3/1) to "I". Press the "Control On" button (3-5/3). The control unit is now activated.

7.2 Rotary table

Figure 7-1 Rotary table

The workpieces are placed on the rotary table (7-1/1) for machining. The rotary table has an electric magnet for fixing the workpiece. The strength of the magnetic field is divided into six levels and can be controlled.

The rotary table is powered by a spur gear. Two speeds are available.

7.3 Workpiece holder

Figure 7-2 Workpiece holder

To insert a workpiece, the rotary table can be moved to the change position. For that, move the table and the grinding wheel to the initial position via the "Baseposition" button (3-6/21) on the touch panel.

Small workpieces are held via centring pieces (7-2/1). The centring pieces are used to align the workpiece correctly on the rotary table. The relevant centring piece is inserted in the hole in the centre of the rotary table.

Large workpieces are aligned centrally without centring pieces. The edge of the rotary table and the grooves on the rotary table can be used as an orientation aid.

The workpiece is clamped with the electromagnetic table. Before each grinding process, the magnet of the rotary table is activated by pressing the "Magnet On" (3-5/1) button.

7. Operation

7.4 Defining the working position

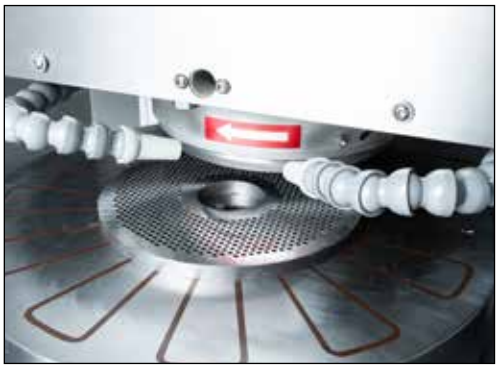

Figure 7-3 Position of rotary table

The working position of the rotary table differs depending on the size of the workpiece. The correct working position is reached if the workpiece is covered by the grinding wheel from the bore to the outer edge and the grinding wheel is just above the workpiece.

The position of the rotary table is defined via the "Table forward" (3-6/9) and "Table back" (3-6/11) touch panel button.

Rough adjustment can be carried out by activating "Fast motion Table" (3-6/10) and pressing the relevant buttons. For fine adjustment, deactivate "Fast motion Table".

The position of the grinding unit is defined via the "Grinding wheel Up" (3-6/12) and "Grinding wheel Down" (3-6/14) touch panel buttons.

Rough adjustment can be carried out by activating "Fast motion Grinding wheel" (3-6/13) and pressing the relevant buttons. For fine adjustment, deactivate "Fast motion Grinding wheel".

ATTENTION

Fast motion highlighted in green: Unit traverses continuously without interruption.

Fast motion highlighted in grey: Unit traverses a predefined distance.

When grinding mincing knives, it is important to ensure that the grinding wheel does not touch the collar of the knife.

7. Operation

7.5 Adjusting the coolant supply

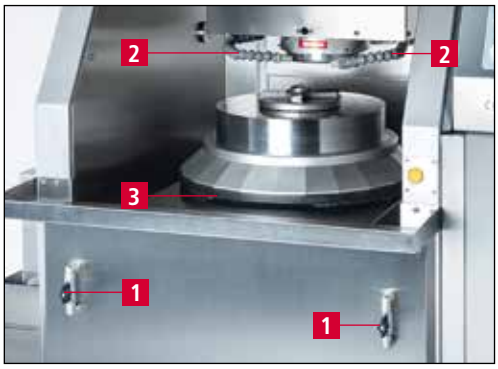

Figure 7-4 Interior

The coolant pump is switched on and off when the control is activated by pressing the "Coolant On/Off" (3-5/6) button. The coolant supply can be controlled with the coolant taps (7-4/1).

Turning the coolant tap clockwise reduces the coolant feed. Turning the coolant tap counter-clockwise opens the coolant tap and releases the coolant supply.

The jointed coolant hoses (7-4/2) are flexible and must be set so that the coolant flows directly onto the workpiece.

ATTENTION

When grinding, ensure that the workpiece is always adequately supplied with coolant, otherwise overheating and associated damage could occur in the metal structure of the workpiece. Check the coolant level regularly.

7. Operation

7.6 Grinding of mincing plates

Figure 7-5 Mincing plate on rotary table

Switch on the machine (see Chapter 3.4.1) and activate the control unit with the "Control On" (3-5/3) button.

Place and centre the mincing plate on the rotary table. For small workpieces, use centring pieces (7-2/1).

Fix the mincing plate in place by pressing the "Magnet On/Off" button (3-5/1).

Close the safety doors (3-2/2).

ATTENTION

The machine is electrically secured and the units can only be switched on with the safety doors closed and active magnet switched on.

The mincing plates are now ground as described in Chapter 8.1 "Fully automatic grinding with touching over change in performance", Chapter 8.2 "Fully automatic grinding with direct approach to product height", Chapter 8.3 "Fully automatic grinding with direct approach to product height with intermediate stop", Chapter 8.4 "Automatic grinding with manual touching", or Chapter 8.5 "Manual grinding".

ATTENTION

It is important to ensure that the correct product file is active.

The mincing plate can now be removed and ground on the rear side.

To ensure a consistent level of quality, the first side is then ground again.

7. Operation

7.7 Grinding of mincing knives

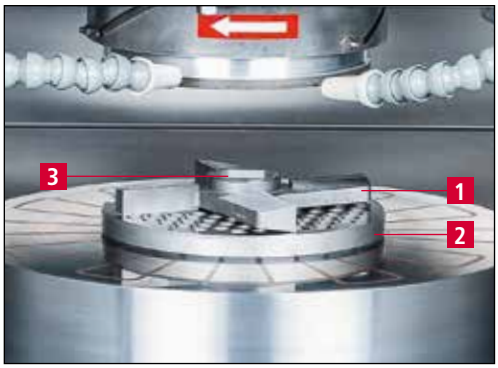

Figure 7-6 Sharpening of mincing knives

To grind mincing knives, switch on the machine (see Chapter 3.4.1) and activate the control unit with the "Control On" (3-5/3) button.

The mincing knife (7-6/1) is placed on a surface-ground mincing plate (7-6/2). The bushing is inserted in the bore of the mincing plate. Centre the mincing plate and mincing knife with the flat centring piece for mincing knives (7-6/3).

Fix the mincing knife in place by pressing the "Magnet On/Off" button (3-5/1).

NOTICE

The knife is not held with magnetic force here. In this case, switching on the magnetic table only serves to release the control so that the grinding drives can be switched on.

When grinding mincing knives, it is important to ensure that the grinding wheel does not touch the collar of the knife.

Precise adjustments to the position of the rotary table can be made via the "Table forward" (3-6/9) or "Table backward" (3-6/11) touchpanel fields or under "Product data – process data [1] – Product diameter" (8-30/2) .

The mincing plates are now ground as described in Chapter 8.1 "Fully automatic grinding with touching over change in performance", Chapter 8.2 "Fully automatic grinding with direct approach to product height", Chapter 8.3 "Fully automatic grinding with direct approach to product height with intermediate stop", Chapter 8.4 "Automatic grinding with manual touching", or Chapter 8.5 "Manual grinding".

ATTENTION

It is important to ensure that the correct product file is active.

The mincing knife can now be removed and ground on the rear side.

To ensure a consistent level of quality, the first side is then ground again.

7. Operation

7.8 Dressing the corundum grinding wheel

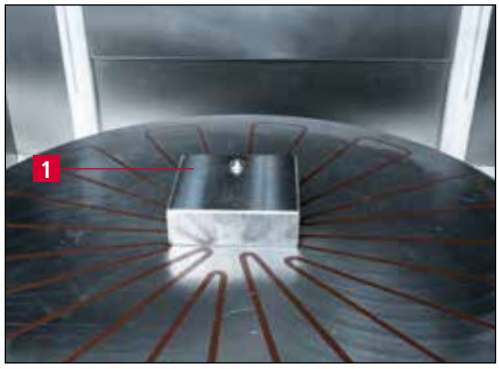

Figure 7-7 Dressing the corundum grinding wheel

If the grinding capacity decreases during grinding, the grinding wheel must be dressed.

Position the dressing device (7-7/1) on the rotary table and switch on the magnet of the rotary table by pressing the "Magnet On/Off" (3-5/1) button.

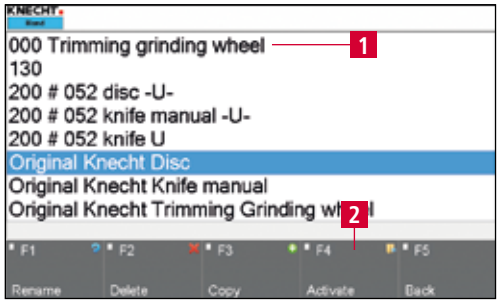

Figure 7-8 Activating the product file

Select the produce file "Trimming grinding wheel" (7-8/1) and confirm with "F4 Activate" (7-8/2).

Press the "Start/Stop" button (3-5/2).

Table and grinding wheel automatically move to touching position.

Figure 7-9 Dressing the grinding wheel

The grinding wheel remains positioned above the diamond. Now lower the grinding wheel via the "Fast motion Grinding wheel" (7-9/1) and "Grinding wheel down" (7-9/2) touch panel buttons until it scrapes against the diamond.

ATTENTION

Fast motion highlighted in green: Unit traverses continuously without interruption.

Fast motion highlighted in grey: Unit traverses a predefined distance.

7. Operation

Figure 7-10 Control panel

Press the "Start/Stop" button (7-10/1).

The grinding wheel is automatically trued at an angle.

The machine then moves back to the baseposition.

7. Operation

7.9 Changing the grinding wheel

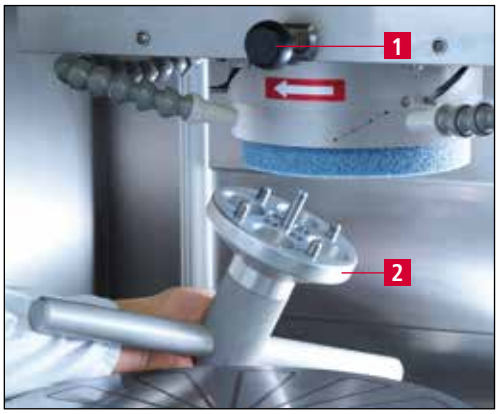

Figure 7-11 Changing the grinding disk

The grinding wheel can easily be changed with the help of the lock and the special key. To release the grinding wheel, insert the retaining pin (7-11/1) and simultaneously rotate the grinding wheel until the shaft blocks further rotation. Then loosen the flange with the special key (7-11/2).

The new grinding wheel can only be mounted when the shaft is blocked. Hand-tighten the flange.

After changing the grinding wheel, re-adjust the grinding wheel protective equipment. The grinding wheel must not protrude under the guard by more than 1.5 cm.

ATTENTION

Remove the retaining pin.

NOTICE

For optimal working, only use abrasives recommended by KNECHT.

Make sure that the retaining pin is released and removed when the machine is switched on (turn the wheel briefly by hand).

For all work on the grinding machine, the locally applicable safety and accident prevention regulations as well as instructions in the “Safety” and “Important Notes” section of the operating instructions must be observed.

Use only original replacement and wear parts. If parts are purchased from external suppliers, it cannot be guaranteed that they will be constructed and manufactured to withstand the stresses and provide the required level of safety.

After a new grinding wheel is mounted, a test run must be carried out.

To do this, lower the grinding wheel to 5 mm above the rotary table and run with water for 10 minutes.

8. Control system

8.1 Fully automatic grinding with touching over change in performance

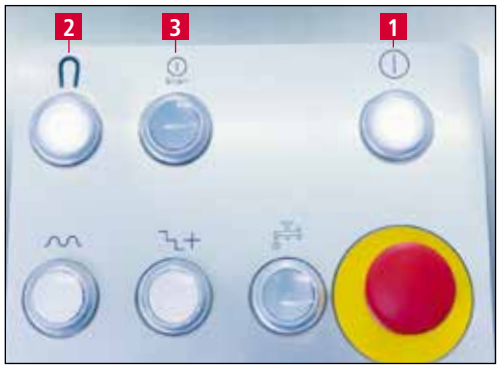

Figure 8-1 Control panel

Press the "Control On" (8-1/1) button.

Activate the relevant product file as necessary (see Chapter 8.6).

Place the workpiece. Close the safety doors.

Press the "Magnet On/Off" (8-1/2) and "Start/Stop" (8-1/3) buttons.

All the units are started; table and grinding wheel move to working position in front of the workpiece.

The grinding wheel slowly approaches the workpiece until it touches the surface. The machine runs through the grinding cycles in accordance with the product file.

Subsequently, the units move back to base position and shut down fully automatically.

The workpiece can be removed.

NOTICE

For fully automatic grinding, the parameter "Fully automatic grinding" (8-2/1) must be set to "true" in the product file.

Figure 8-2 Fully automatic grinding

Also see Chapter 8.8.2.

8. Control system

8.2 Fully automatic grinding with direct approach to product height

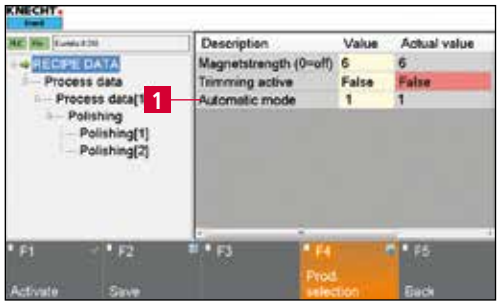

Figure 8-3 "RECEIPE DATA"

Press the "F3 Product Data" touch panel field (3-6/23) on the main screen to access the product data.

The value "1" must be set on the "Automatic mode" (8-3/1) line under "RECEIPE DATA".

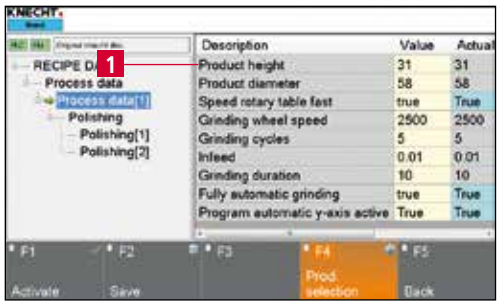

Figure 8-4 Fully automatic grinding

Under "Process data [1]", enter the exact height of the workpiece in the "Product height" line (8-4/1).

ATTENTION

Entering an incorrect product height can lead to damage to the workpiece and machine.

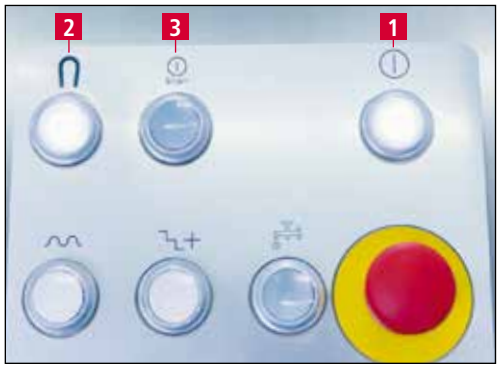

Figure 8-5 Control panel

Press the "Control On" (8-5/1) switch.

If necessary, activate the corresponding product file (see Chapter 8.6).

Attach workpiece. Close the protective doors.

Press "Magnet On/Off" (8-5/2) and "Start/Stop" (8-5/3) buttons.

This will start every unit, and the table and grinding wheel will run to their working position before the workpiece.

The grinding wheel runs slowly towards the workpiece until reaching the height entered, where it then begins the grinding process. The grinding cycles are executed in accordance with the active product file.

The units then run back to their initial positions and switch off automatically.

The workpiece can be removed.

NOTICE

For fully automatic grinding, the parameter "Fully automatic grinding" (8-3/2) must be set to "true" in the product file (also see Chapter 8.8.2.).

8. Control system

8.3 Fully automatic grinding with direct approach to product height with intermediate stop

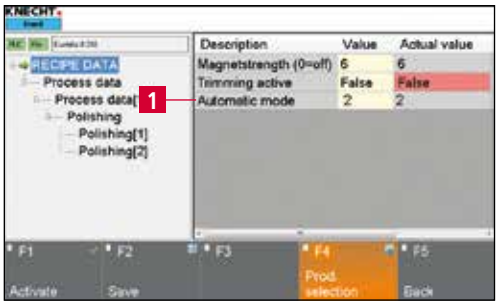

Figure 8-6 "RECEIPE DATA"

Press the "F3 Product Data" touch panel field (3-6/23) on the main screen to access the product data.

The value "2" must be set on the "Automatic mode" (8-6/1) line under "RECEIPE DATA".

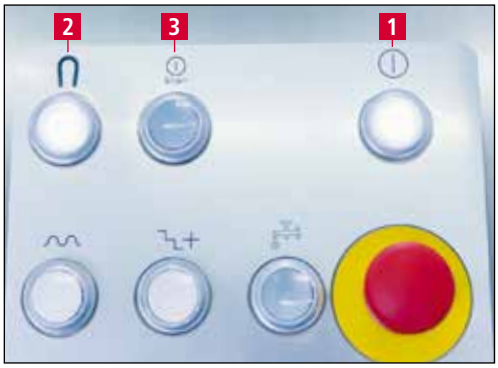

Figure 8-7 Control panel

Press the "Control On" (8-7/1) switch.

If necessary, activate the corresponding product file (see Chapter 8.6).

Attach workpiece. Close the protective doors.

Press "Magnet On/Off" (8-7/2) and "Start/Stop" (8-7/3) buttons.

This will start every unit, and the table and grinding wheel will run to their working position before the workpiece.

The grinding wheel runs slowly towards the workpiece until it touches its surface. The grinding cycles are executed in accordance with the active product file.

After completing the first grinding cycle, the units run back to their initial positions.

Open the protective doors.

You can now rotate the workpiece or remove parts of the workpiece, for example with multi-part grinding sets.

Close the protective doors.

Press the "Start/Stop" button (8-7/3).

The units will again run to their working position and carry out the grinding process until completion.

They will then run back to their initial positions and switch off automatically.

The workpiece can be removed.

NOTICE

For fully automatic grinding, the parameter “Fully automatic grinding” (8-8/1) must be set to “true” in the product file.

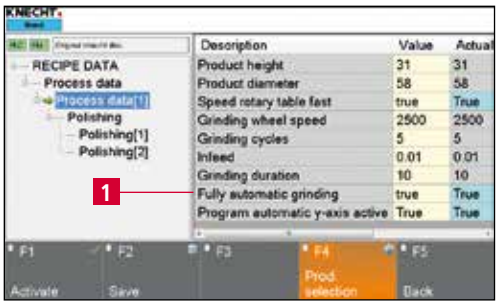

Figure 8-8 Fully automatic grinding

Also see Chapter 8.8.2.

8. Control system

8.4 Automatic grinding with manual touching

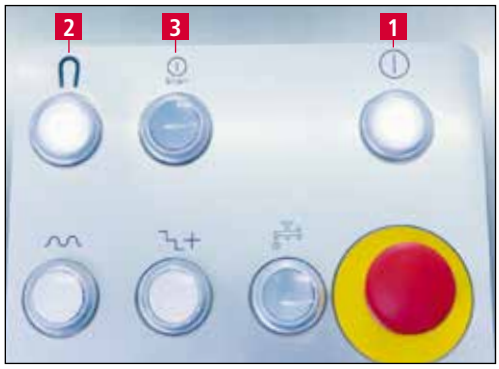

Figure 8-9 Control panel

Press the "Control On" (8-9/1) button.

Activate the relevant product file as necessary (see Chapter 8.6).

Place the workpiece. Close the safety doors.

Press the "Magnet On/Off" (8-9/2) and "Start/Stop" (8-9/3) buttons.

All the units are started; table and grinding wheel move to working position in front of the workpiece.

Figure 8-10 Main screen

The surface of the workpiece is approached with the help of the "Fast motion Grinding wheel" (8-10/1) and "Grinding wheel down" (8-10/2) touch panel buttons.

Press the "Start/Stop" button (8-9/3). The machine runs through the grinding cycles in accordance with the product file. The grinding wheel sparks out twice.

The units move back to base position and shut down fully automatically.

The workpiece can be removed.

ATTENTION

Fast motion highlighted in green: Unit traverses continuously without interruption.

Fast motion highlighted in grey: Unit traverses a predefined distance.

NOTICE

To be able to grind automatically with manual touching, the "Fully automatic grinding" (8-11/1) in the product file must be set to "false".

8. Control system

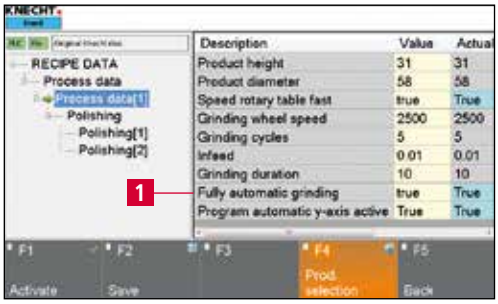

Figure 8-11 Fully automatic grinding

See also Chapter 8.8.2.

8. Control system

8.5 Manual grinding

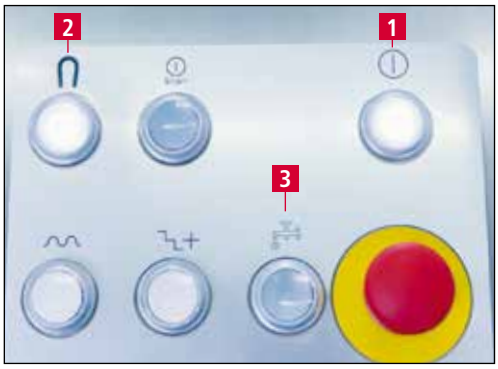

Figure 8-12 Control panel

Press the "Control On" (8-12/1) button.

Place the workpiece. Close the safety doors.

Press the "Magnet On/Off" (8-12/2) and "Coolant On/Off" (8-12/3) buttons.

Figure 8-13 Main screen

First activate "Suction" (8-13/1) on the touch panel, then press "Table On/Off" (8-13/2) and "Grinding wheel On/Off" (8-13/3).

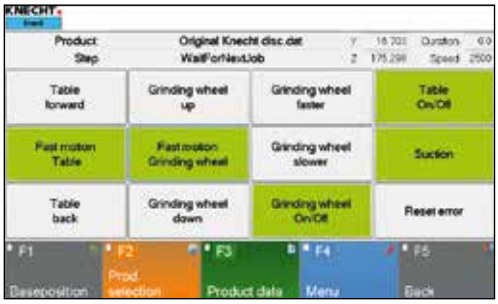

Figure 8-14 Switched-on units

All the required units are switched on now. The relevant buttons are illuminated and the touch panel buttons (8-14) are highlighted in green.

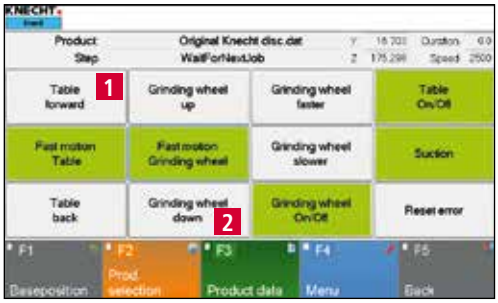

Figure 8-15 Moving the table and the grinding wheel to the working position

Now "Table forward" (8-15/1) and "Grinding wheel down" (8-15/2) are pressed to move the table (y-axis) and the grinding wheel (z-axis) to working position and to grind the workpiece.

8. Control system

ATTENTION

Fast motion highlighted in green: Unit traverses continuously without interruption.

Fast motion highlighted in grey: Unit traverses a predefined distance.

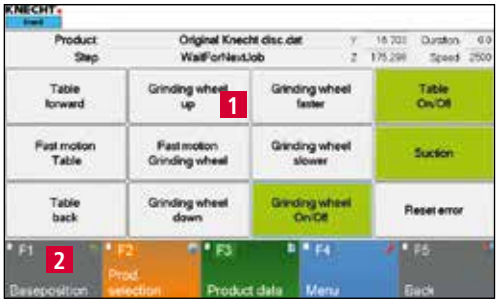

Figure 8-16 Baseposition

After grinding, raise the grinding wheel by pressing "Grinding wheel up" (8-16/1). Move the machine back to base position with the "F1 Baseposition" (8-16/2) command.

Switch off all the units manually.

The workpiece can be removed.

8. Control system

8.6 Activating the product file

You can grind various mincing plates and knives with the most diverse parameters. A separate product file for each grinding task is stored. This product file must be selected and loaded in the automatic operating modes (Chapter 8.1, 8.2, 8.3, and 8.4) prior to grinding.

Figure 8-17 Main screen

The procedure is as follows:

Activate the "F2 Prod. selection" (8-17/1) touch panel button. A new window (8-18) opens.

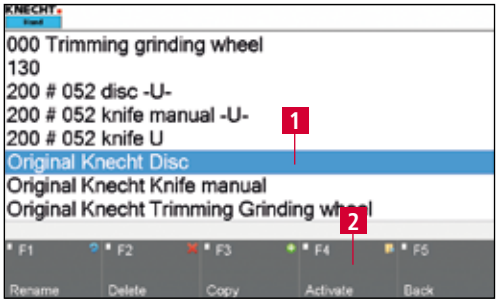

Figure 8-18 Selecting the product file

Select the required product file so that it is highlighted in blue as shown in the figure (8-18/1).

Load the product file in the control unit via the "F4 Activate" (8-18/2) touch panel button.

The program automatically switches back to the main screen.

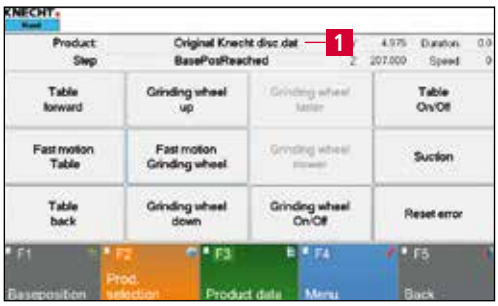

Figure 8-19 Main screen

The new product file appears in the "Product" row (8-19/1). The new parameters are now loaded by the control unit.

8. Control system

8.7 Renaming, creating and deleting the product file

ATTENTION

No parameters are changed.

Figure 8-20 Main screen

Product files can be renamed, deleted and new ones created by copying.

The procedure is as follows:

Activate the "F2 Prod. selection" (8-20/1) touch panel button.

A new window (8-21) opens.

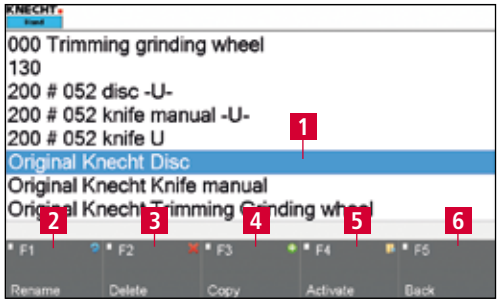

Figure 8-21 Editing the product file

Select the required product file so that it is highlighted in blue as shown in the figure (8-21/1).

Select the relevant touch panel button:
"F1 Rename" (8-21/2), "F2 Delete" (8-21/3) or "F3 Copy" (8-21/4).

8. Control system

8.7.1 Renaming the product file

Figure 8-22 Renaming the product file

On pressing "F1 Rename" (8-21/2), a window as displayed in the figure on the left (8-22) opens.

Edit the file name (8-22/1) using the keyboard and confirm with "OK" (8-22/2).

The window closes. The renamed file appears in the product file directory.

Then activate a product file with "F4 Activate" (8-21/5) or return to the main screen with "F5 Back" (8-21/6).

8.7.2 Creating the product file

Figure 8-23 Creating the product file

On pressing "F3 Copy" (8-21/4), a window as displayed in the figure on the left (8-23) opens.

Edit the file name (8-23/1) using the keyboard and confirm with "OK" (8-23/2).

The window closes. The new file appears in the product file directory.

Continue with Chapter 8.8 to edit the parameters of the product file.

8.7.3 Deleting the product file

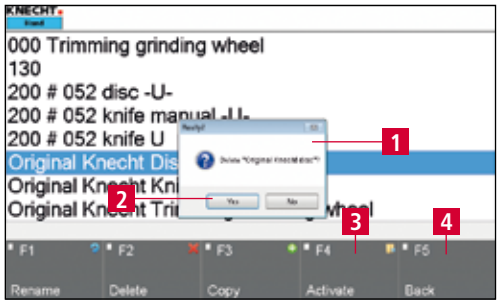

Figure 8-24 Deleting the product file

On pressing "F2 Delete" (8-21/3), a pop-up window (8-24/1) opens.

Confirm with "Yes" (8-24/2); cancel with "No".

The pop-up window closes.

Then activate a product file with "F4 Activate" (8-24/3) or return to the main screen with "F5 Back" (8-24/4).

8. Control system

8.8 Editing the parameters of the product file

Figure 8-25 Main screen

The parameters of the product files can be changed as follows:

Press the "F3 Product data" (8-25/1) touch panel button on the main screen.

A new window (8-26) opens.

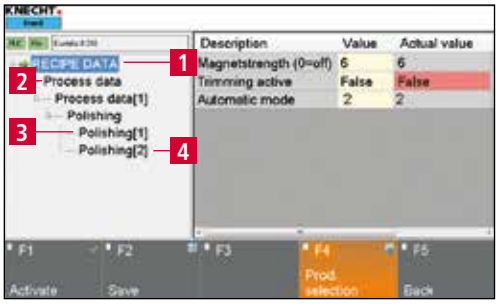

Figure 8-26 Parameter groups

There are four different parameter groups:

"RECIPE DATA" (8-26/1): RECEIPE DATA (see Chapter 8.8.1)

"Process data" (8-26/2): Grinding process data (see Chapter 8.8.2)

"Polishing [1]" (8-26/3): Sparking out process data 1 (see Chapter 8.8.3)

"Polishing [2]" (8-26/4): Sparking out process data 2 (see Chapter 8.8.3)

The active group is always indicated with a green arrow. To activate a group, press the name. The arrow moves forward and the group is highlighted in blue.

8. Control system

8.8.1 Meaning of the parameter “RECIPE DATA”

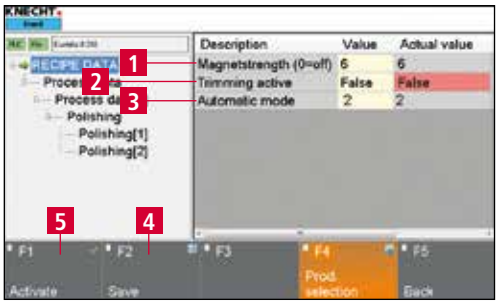

Figure 8-27 “RECIPE DATA” parameter

“Magnet strength (0 = off, 6 = max)” (8-27/1): Magnet strength from 0 = off to 6 = max

“Trimming active (8-27/2)”: Dress the grinding wheel (False = not active, True = active)

“Automatic mode” (8-27/3): selection of various automatic programs (1 = fully automatic grinding with touching over change in performance, 2 = fully automatic grinding with direct approach to product height, 3 =

Changing the parameters: Tap on the relevant ((8-27/1), (8-27/2) or (8-27/3)) button highlighted in yellow.

Tap on “Numbers” to open the window as shown in (8-28); tap on “Values” to open the window as shown in (8-29).

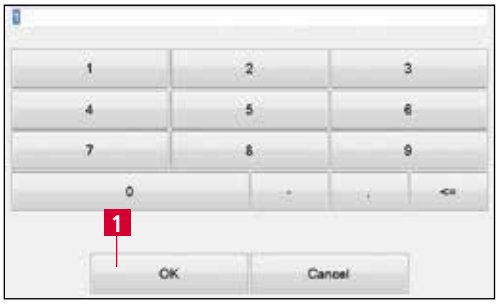

Figure 8-28 Editing the “Numbers” parameter

Select the desired number and confirm with “OK” (8-28/1).

The “Cancel” touch panel button closes the window without accepting the number.

Figure 8-29 Editing the “Values” parameter

In the window for “Values”, select between “true” and “false” and confirm with “OK” (8-29/1).

The “Cancel” touch panel button closes the window without accepting the value.

ATTENTION

Save the changed values with the “F2 Save” (8-27/4) touch panel button.

If a current product file is changed, overwrite via the “F1 Activate” (8-27/5) touch panel button of the control system.

8. Control system

8.8.2 Meaning of the parameter “Process data”

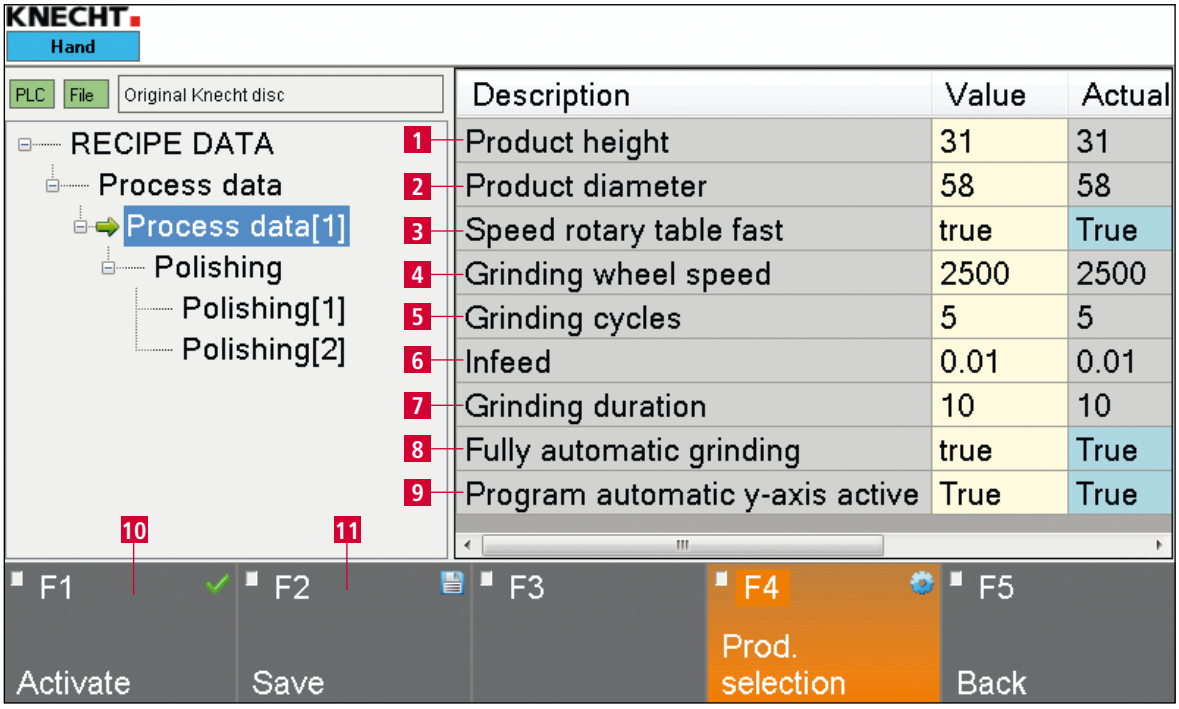

Figure 8-30 “Process data” parameter

1 “Product height”: height of the workpiece (in mm)

2 “Product diameter”: diameter of the workpiece (in mm)

3 “Speed rotary table fast”: speed of the rotary table (True = fast, False = slow)

4 “Grinding wheel speed”: speed of the grinding wheel (rpm)

5 “Grinding cycles”: number of grinding cycles

6 “Infeed”: path that is fed from cycle to cycle (in mm)

7 “Grinding duration”: dwell time between cycles (in s)

8 “Fully automatic grinding”: automatic or manual touching (True = automatic, False = manual)

9 “Program automatic y-axis active”: approaching the base position (True = yes, False = no)

To change the parameters, tap on the relevant button highlighted in yellow.

Tap on “Numbers” to open the window as shown in (8-31); tap on “Values” to open the window as shown in (8-32).

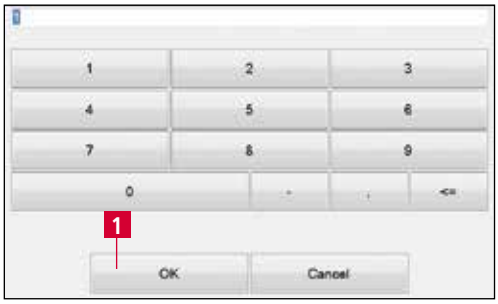

Figure 8-31 Editing the "Numbers" parameter

Select the desired number and confirm with "OK" (8-31/1).

The "Cancel" touch panel button closes the window without accepting the number.

Figure 8-32 Editing the "Values" parameter

In the window for "Values", select between "true" and "false" and confirm with "OK" (8-32/1).

The "Cancel" touch panel button closes the window without accepting the value.

ATTENTION

Save the changed values with the "F2 Save" (8-30/11) touch panel button.

If a current product file is changed, overwrite via the "F1 Activate" (8-30/10) touch panel button of the control system.

8. Control system

8.8.3 Meaning of the parameter “Polishing [1]” and “Polishing [2]”

Figure 8-33 “Polishing [1]” parameter

“Active” (8-33/1): Spark out cycle active (True = yes, False = no)

“Position Z-axis lift” (8-33/2): Path that is covered by the cycle (in mm)

“Duration” (8-33/3): Dwell time between cycles (in s)

To change the parameters, tap on the relevant button highlighted in yellow.

Tap on “Numbers” to open the window as shown in (8-34); tap on “Values” to open the window as shown in (8-35).

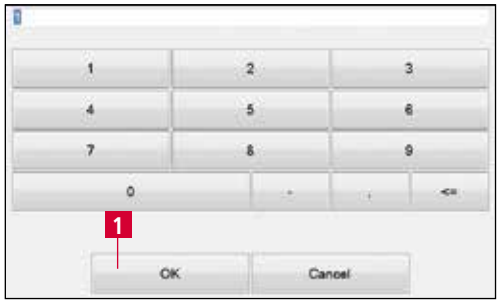

Figure 8-34 Editing the “Numbers” parameter

Select the desired number and confirm with “OK” (8-34/1).

The “Cancel” touch panel button closes the window without accepting the number.

Figure 8-35 Editing the “Values” parameter

In the window for “Values”, select between “true” and “false” and confirm with “OK” (8-35/1).

The “Cancel” touch panel button closes the window without accepting the value.

ATTENTION

Save the changed values with the “F2 Save” (8-33/5) touch panel button.

If a current product file is changed, overwrite via the “F1 Activate” (8-33/4) touch panel button of the control system.

8. Control system

8.9 Language

Figure 8-36 Main screen

The user interface language can be changed to the language of the country of use.

Press the touch panel button "F5 Back" (8-36/1) to go back to the start screen.

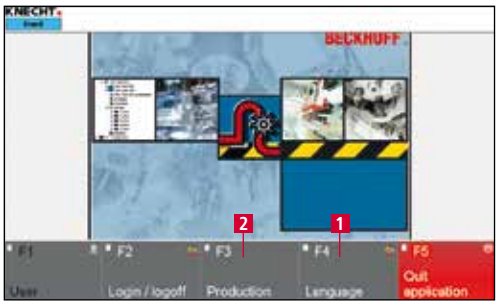

Figure 8-37 Start screen

Press the "F4 Language" (8-37/1) touch panel button.

A new window (8-38) opens.

Figure 8-38 Selecting the language

The desired language is selected and automatically activated by pressing the corresponding touch panel button (8-38/1).

Then return to the start screen by pressing the "F5 Back" (8-38/2) touch panel button.

The main screen appears when the "F3 Production" (8-37/2) button is pressed.

9. Care and maintenance

9.1 Coolant additive

An anti-rust coolant additive must be added to the cooling water (see Chapter 9.1.1).

ATTENTION

No other coolant additive may be used without the approval of KNECHT Maschinenbau GmbH.

9.1.1 Cooling lubricant maintenance plan

- Check fill level daily.
- After topping up with water, always measure concentration and if necessary top up with cooling lubricant.
- Check cooling lubricant concentration weekly.

Cooling lubricant: Colometa SBF-PN	**Refractometer °Brix: 3 - 5**			
Date:	**°BRIX**	**Conc %**	**Remarks etc.**	**Signature**

(The value read off in Brix multiplied by 1.8 is the concentration in %).

The concentration must always lie between 3 - 5 °Brix (corresponds to between 5 and 9% concentration).

Check the cooling lubricant regularly for odour and appearance. The cooling lubricant must be replaced at the latest every three months (biological hazard due to germ formation in the cooling lubricant).

Maintenance plan has been enclosed for copying.

9. Care and maintenance

9.2 Lubrication

Figure 9-1 Central lubrication system

All bearing points are equipped with water-tight, lubricated anti-friction bearings and are therefore maintenance-free.

All the lubrication points are supplied via the central lubrication system. A pulse from the control system ensures that the lubrication points are regularly supplied with oil.

Unscheduled pulses can be released via the touch panel if the operator considers it necessary to lubricate the machine (e.g. after a thorough cleaning, repair or after servicing).

See also the explanations in the lubrication schedule, Chapter 9.2.2.

ATTENTION

Always ensure that the storage tank of the central lubrication system is sufficiently filled with the prescribed amount of oil.

The lubrication system generally runs automatically at the programmed intervals.

9.2.1 Additional lubrication interval

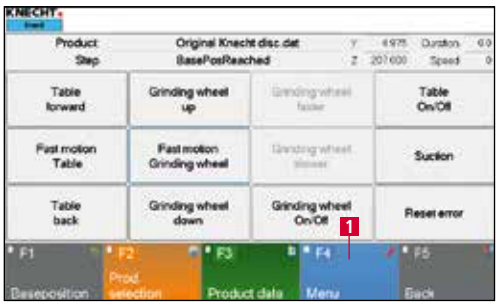

Figure 9-2 Main screen

If it appears that the linear rails need an additional lubrication by the central lubrication system, then proceed as follows:

Press the "F4 Menu" (9-2/1) touch panel button on the main screen. A new window (9-3) opens.

9. Care and maintenance

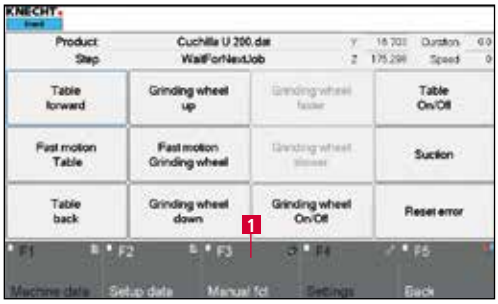

Figure 9-3 Menu

Press the "F3 Manual function" (9-3/1) touch panel button to call the manual function of the machine.

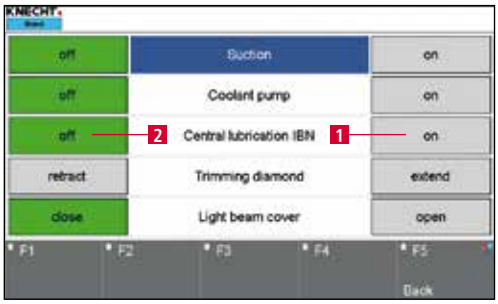

Figure 9-4 Manual functions

Activate the "On" (9-4/1) touch panel button to switch on the central lubrication unit.

Activate the "Off" (9-4/2) touch panel button to switch it off. Otherwise, the central lubrication unit switches off automatically after a certain period of time.

9.2.2 Lubrication schedule and lubricant table

Lubricating work	Interval	OEST	SHELL	EXXON Mobil
Grease machine parts after cleaning	After each grinding operation	–	Shell Risella 917	Marcol 82
Central lubrication system	Monitor fill level as necessary	Lubricating oil CGLP 68	–	–

9. Care and maintenance

9.3 Maintenance plan

Interval	Component assembly	Maintenance activity
Daily	Grinding space	Clean plate in interior using the spray gun.
	Grinding space	Remove drip ring from rotary table and clean.
	Grinding space	Push finned plates upwards by hand and clean guides with an oily cloth in order to avoid the potential formation of rust.
	Drip ring	Remove the drip ring and remove the grinding sludge below it.
	Light barrier	Open the covers to the light barrier and clean the light barrier with a soft towel. Open the covers using the manual functions (see Chapter 9.4, figure 9-9).
	Belt filter	Check fill level, refill as necessary. If the water was refilled, the concentration must be checked (see Chapter 9.1.1), and you may need to refill the cutting fluid.
	Central lubrication system	Check fill level, refill as necessary.
	Protective door	Clean panel of protective door.
	Machine	Inspect for visible damage.
Weekly	Suction unit	Clean hose support and check filter.
	Belt filter	Measure cutting fluid concentration (see Chapter 9.1.1)
Monthly	Magnet	Lightly surface grind any unevenness
Annually		Request service call from KNECHT Maschinenbau GmbH

9. Care and maintenance

9.4 Cleaning

Figure 9-5 Cleaning

Clean the machine after each grinding process to prevent grinding sludge from drying, hence making it harder to remove.

After cleaning, we recommend greasing the machine lightly with acid-free oil.

See also the explanations in the lubrication schedule, Chapter 9.2.2.

ATTENTION

When cleaning, under no circumstances should you spray directly into the water trough opening.

Figure 9-6 Removing the drip ring

Remove the drip ring (9-6/1) daily and remove the grinding sludge below it.

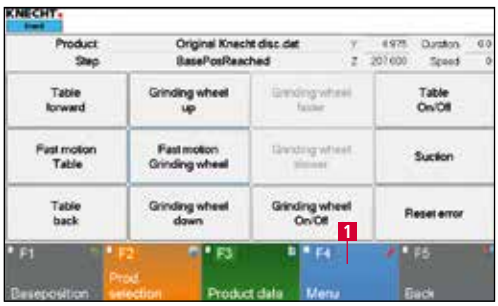

Figure 9-7 Main screen

The coolant pump needed for cleaning the machine is switched on and off manually as follows:

Press the "F4 Menu" (9-7/1) touch panel button on the main screen. A new window (9-8) opens.

9. Care and maintenance

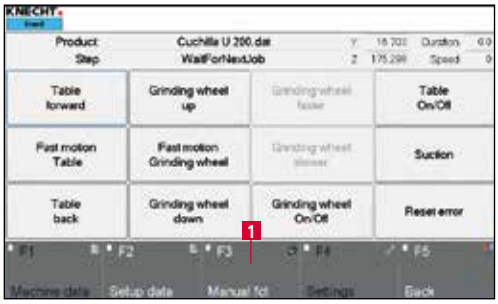

Figure 9-8 Menu

Press the "F3 Manual function" (9-8/1) touch panel button to call the manual function of the machine.

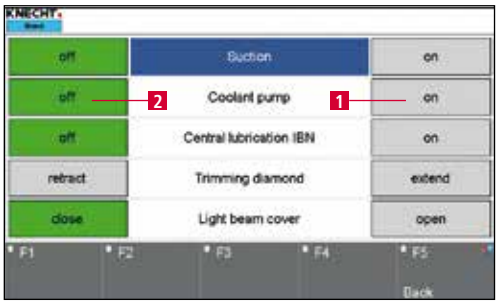

Figure 9-9 Manual functions

Press the "On" (9-9/1) touch panel button to switch on the coolant pump.

Press the "Off" (9-9/2) touch panel button to switch it off.

10. Disassembly and disposal

10.1 Disassembly

All operating materials must be disposed of correctly.

Secure moving parts against slipping.

The disassembly must be carried out by a qualified specialist company.

10.2 Disposal

At the end of the machine service life, it must be disposed of by a qualified specialist company. In exceptional cases and in agreement with KNECHT Maschinenbau GmbH, the machine can be returned.

Operating materials (e.g. grinding wheels, coolants etc.) must also be disposed of correctly.

11. Service, spare parts and accessories

11.1 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

11.2 Service

Service management:
See postal address

service@knecht.eu

11.3 Spare parts

If you need spare parts, please use the spare parts list provided with the machine. Please place your order as shown below.

Please always include the following information:	**(Example)**
Machine type	(W40)
Machine serial number	(03114940)
Designation of assembly	(table incl. drive)
Designation of individual part	(Lenze transmission ...)
Item no.	(16)
Drawing no.	(410GA20-0090)
Quantity	(1 pc.)

Please feel free to contact us with any questions.

11. Service, spare parts and accessories

11.4 Accessories

11.4.1 Grinding wheels used

Type	Dimension	Suffix	Stand-ard	Order number	Remarks
Corundum	d.200x78x80	K36		412B-32-0236	
Corundum	d.200x78x80	K36, H16		412B-32-0656	
Corundum	d.200x78x80	K36, I16		412B-32-0756	
Boron nitride	d.200x50x78			412F-80-0435	

ATTENTION

No other grinding wheels may be used without the approval of KNECHT Maschinenbau GmbH.

KNECHT Maschinenbau GmbH accepts no liability if other grinding wheels are used.

If you require grinding wheels or other accessories, please contact our sales staff, dealers, or KNECHT Maschinenbau GmbH directly.

Thank you for buying our product!

12. Appendix

12.1 EC Declaration of Conformity
in accordance with the EC Directive 2006/42/EC

- Machinery Directive 2006/42/EC
- Electromagnetic Compatibility Directive 2014/30/EC

We hereby declare that the machine mentioned below fulfils the basic health and safety requirements of the relevant EC Directive by virtue of the machine's construction and design and the version placed by us on the market.

This declaration becomes void if the machine is modified in any way without our consent.

Designation of the machine:	Fully automatic surface grinding machine
Type designation:	W 40
Applicable harmonised standards, in particular:	DIN EN ISO 12100 DIN EN ISO 13857 DIN EN ISO 16089 DIN EN 61000-3-2 DIN EN 61000-3-3 DIN EN 55014-1 DIN EN 349
Responsible for the documentation:	Peter Heine (Dipl. Ing. Mechanical Engineering BA) Phone +49-7527-928-15
Manufacturer:	KNECHT Maschinenbau GmbH Witschwender Straße 26 88368 Bergatreute Germany

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.

Bergatreute, January 27, 2020		Managing Director
Place, date	Signature	Signatory details

KNECHT Maschinenbau GmbH
Witschwender Straße 26 . 88368 Bergatreute . Germany . T +49-7527-928-0 . F +49-7527-928-32
mail@knecht.eu . www.knecht.eu