# OPERATING INSTRUCTIONS

## Derinder and
## dicer blade sharpening machine
## KLA 220 - HV 155


KNECHT

Knecht Maschinenbau GmbH • 88368 Bergatreute
Witschwender Straße 26 • Tel. 07527-928-0 • Fax 07527-928-32

# EU Conformity Declaration
## based on the relevant EU Guideline

- **Machines 89/392/EEC, Appendix II A**
- **Electromagnetic Compatibility 89/336/EEC**
- **Low voltage 73/23/EEC**

We hereby declare that the machine described in the following complies with the relevant fundamental health and safety requirements of the applicable EC directive in terms of its design and construction and in the version placed in the stream of commerce by us.

This declaration shall become null and void should any alterations be made to the machine without our express approval.

| | |
|---|---|
| **Designation of the machine** | Derinder and dicer blade sharpening machine |
| **Model designation:** | KLA 220 - HV 155 |
| **Applicable conforming standards, in particular:** | DIN EN 292-1 and DIN EN 292-2<br>DIN EN 294<br>DIN EN 349<br>VDE 0741 by analogy with DIN EN 60204-1 |
| **Applicable national standards, Directives and specifications:** | VBG 5<br>VBG 7n6<br>VBG 121 |
| **Manufacturer:** | Knecht Maschinenbau GmbH<br>Witschwender Straße 26<br>D-88368 Bergatreute |

Complete technical documentation is available.

A set of operating instructions for the machine is available both in its original version and in the native language of the user.

Bergatreute, 22 September 1997 — Managing Director

| ..... | ..... | ..... |
|---|---|---|
| *Location, date* | *Signature* | *Signatory, title* |

## Manufacturer

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## Documentation for the Machine Owner

Operating Instructions

## Date of Issue of the Operating Instructions

22 September 1997

## Copyright

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# CONTENTS

# 1. IMPORTANT INFORMATION

## 1.1 Foreword to the Operating Instructions

These operating instructions are intended to familiarise you with the sharpening machine and use its designated application possibilities.

The operating instructions contain important information on how to operate the sharpening machine safely, correctly and economically. Observing these instructions helps to avoid hazards, repair costs and downtimes and to increase the reliability and the life of the sharpening machine.

The operating instructions must always be available at the place of operation of the sharpening machine.

The operating instructions are to be read and applied by all persons entrusted with work on the sharpening machine, e. B.g.

- Transport, installation, start-up

- Operation, including fault rectification during processing and

- Service (maintenance, repairs).

Apart from these Operating Instructions and any locally applicable guidelines regarding accident prevention, all recognised technical rules governing safe and proper work must be observed.

## 1.2 Warning notes and symbols in the Operating Instructions

The following symbols / designations are employed in these Operating Instructions and must be strictly observed:

**CAUTION**

**This CAUTION symbol is employed as a work safety indication for all work where a risk to life and limb of operating personnel exists.**

**Particular care must be observed in performing any tasks that are designated with this symbol.**

**IMPORTANT**

**The word IMPORTANT can be found at points which are particularly important, so as to prevent damage to and / or destruction of the sharpening machine or its surrounding area.**

**NOTE**

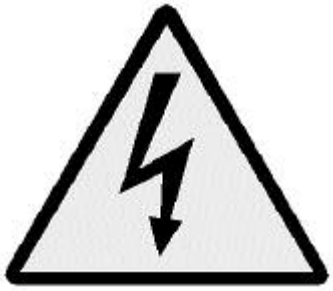
**This NOTE indicates application tips and particularly useful information.**

# 1. IMPORTANT INFORMATION

## 1.3 Warning signs on / in the sharpening machine and their meaning

The following warning and regulatory signs are located on the sharpening machine.

**CAUTION! DANGEROUS ELECTRICAL VOLTAGE** (Warning sign on control panel)



**After connection to the power supply (3 x 400 V), the sharpening machine carries dangerously high voltages.**

**Voltage-carrying components may only be opened by authorised experts.**

**Before service, maintenance and repair work is carried out, the sharpening machine must be disconnected from the mains power supply.**

**CAUTION! RISK OF INJURY ON THE KNIFE (regulatory sign on the machine hood)**

**When working on the sharpening machine, knives are sharpened which may cause serious cut injuries due to their sharpness.**

**Protective gloves must be worn when carrying out such work.**

**Take care when transporting knives. Use safety guards provided by the knife manufacturer. Wear safety shoes and a safety apron.**

**CAUTION! RISK OF INJURY DUE TO GRINDING PARTICLES (regulatory sign on the machine hood)**

**During the dressing process, grinding particles are produced which may get into eyes.**

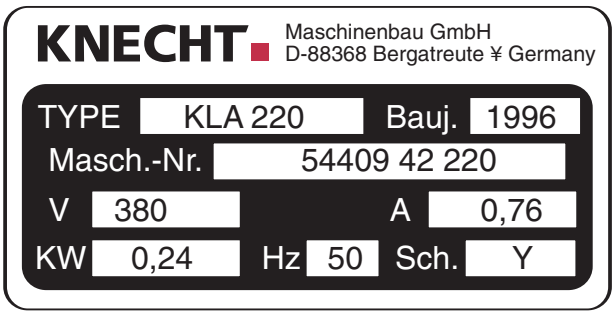
**You must wear suitable eye-protectors when carrying out such work.**

# 1. IMPORTANT INFORMATION

## 1.4 Rating plate and machine serial number

The rating plate is located on the rear panel of the machine.

Example of a rating plate:



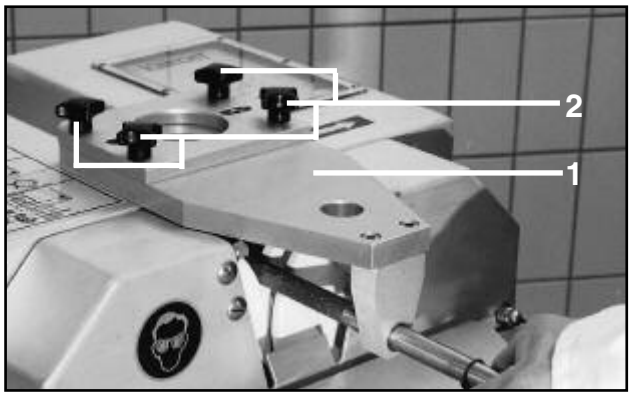

The machine serial number is on the rating plate and on the left below the water tray (see arrow).


## 1.5 Figure and item numbers in the Operating Instructions

If the text refers to a part or component in a figure, this is indicated by a reference to the figure number followed by the number of the item in question in brackets.

Example: (3-4/1) means Figure number 3-4 / Item 1.

*Sharpening wheels which have become out of true are dressed with the dressing device (3-4/1).*




*For dressing, the adjustable safety slides on the safety hood must be removed and the sharpening wheels separated by turning. The dressing device is attached to the machine hood with the four star handles (3-4/2).*

***Fig. 3-4*** *Dressing sharpening wheels*

# 2. SAFETY

## 2.1 Fundamental safety instructions

### 2.1.1 Observe the information in the Operating Instructions

The basic pre-condition for safe use and trouble-free operation of this sharpening machine is knowledge of the fundamental safety instructions and safety regulations.

• These operating instructions contain important information on safe operation of the sharpening machine

.

• These operating instructions, in particular the safety instructions, are to be observed by all persons working on the sharpening machine.

• In addition, the rules and regulations on accident prevention applicable to the operating location are to be observed

.

### 2.1.2 Obligations of the customer

The customer undertakes only to let persons work on the sharpening machine who

• are familiar with the fundamental regulations governing safe working practices and accident prevention and have been instructed in use of the sharpening machine,

• who have read and understood the operating instructions, and in particular the "Safety" section and warning information and have confirmed this with their signature.

Safe working practices on the part of all personnel are to be examined at regular intervals.

### 2.1.3 Obligation of the personnel

All persons entrusted with work on the sharpening machine undertake before beginning work

• to observe the basic regulations governing safe working practices and accident prevention

•to read these Operating Instructions, particularly the ‘Safety’ section, and the warning notes, and to confirm their understanding by their signature.

### 2.1.4 Dangers involved in using the sharpening machine

The sharpening machine has been constructed in accordance with the state of the art and the recognised technical safety regulations. Nevertheless, its use may involve dangers to the life and limb of the user or third parties or impairments of the sharpening machine or other property. The sharpening machine is only to be used:

• for its designated purpose (use as intended)

• when it is in a safe operating condition.

Any faults or problems that can negatively affect the unit's safety must be rectified immediately.

### 2.1.5 Faults

If faults occur on the machine which are relevant for safety, or if the machining performance indicates such faults, the sharpening machine is to be shut down immediately until the fault has been found and rectified.

Faults may only be rectified by authorised personnel.

## 2.2 Use as intended

The sharpening machine is only intended for sharpening linear, flat knives.

Apart from hand knife (e.g. carving knives), all knives must be clamped on the sharpening fixture HV 155.

Before working on a flat knife, it is first necessary to check whether the knife fits on the sharpening fixture. Only then may the knife be clamped.

Any other use beyond this does not constitute use as intended. Messrs. Knecht Maschinenbau GmbH cannot be held liable for damage, loss or injury incurred therefrom. The risks inherent in such improper use are the sole responsibility of the user.

Observation of all notes in these Operating Instructions is an integral part of that which constitutes proper use.

Use of the sharpening machine is classified as improper use if, for example,

• derinder and dicer blades are sharpened free-hand;

• if devices are not attached properly.

## 2.3 Warranty and liability

Our "General Terms of Sale and Delivery" always apply. The user will have been made aware of these Terms at the latest since conclusion of the Contract. Any warranty or liability claims for personal injuries or property damage are excluded if they can be traced to one of the following causes:

• improper use of the sharpening machine

• improper transporting, commissioning, operation and maintenance of the sharpening machine

- operation of the sharpening machine with defective guards, or incorrectly attached or non-operational safety and protective equipment
- failure to observe the instructions in the operating instructions concerning transport, commissioning, operation, maintenance and repair of the sharpening machine,
- unauthorised structural modifications on the sharpening machine
- Unauthorised modifications to the drive conditions for instance (power rating and speed)
- Inadequate inspection of machine components subject to wear
- Use of non-approved spare parts or parts subject to wear

Use only OEM replacement or spare parts. In the case of non-Knecht parts, we are unable to guarantee that they are designed and manufactured to cope with the appropriate stresses and with the appropriate level of safety.

## 2.4. Safety regulations

### 2.4.1 Organisational measures

All guards must be checked regularly.

The schedules for ongoing and recurring maintenance tasks given in these Operating Instructions are to be observed!

### 2.4.2 Protective equipment

Before putting the sharpening machine into operation each time, all protective equipment must be correctly fitted and operational.

Protective equipment may only be removed when the machine is at a standstill and has been secured against being started up again.

Where the unit is delivered in sections for assembly by the operator, the guards must be properly attached by the operator.

### 2.4.3 Informal safety measures

The operating instructions must always be kept at the place of operation of the sharpening machine.

In addition to these Operating Instructions, the generally and locally applicable regulations governing accident prevention are to be made available and observed.

All safety and danger information on the sharpening machine must be complete and easily legible.

### 2.4.4 Personnel selection and qualification

Only trained, instructed personnel may work on the sharpening machine. All legal mandates concerning the minimum age of workers must be observed!

Responsibilities for commissioning, operation, maintenance and repair are to be clearly defined.

Personnel undergoing schooling, training, instruction or familiarisation may only work on the sharpening machine under the constant supervision of an experienced person!

### 2.4.5 Machine control

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

### 2.4.6 Safety measures during normal operation

Any practices that violate safe operation are prohibited.

Only operate the sharpening machine when all guards are present and fully operational.

Inspect the sharpening machine at least once per shift for outwardly visible damage and for operability of the guards.

Report any changes which have occurred (including changes in operating behaviour) immediately to the responsible office / person. If necessary, shut the sharpening machine down immediately and secure.

Before switching the sharpening machine on, ensure that nobody can be endangered by the machine starting up.

In the event of operational faults, shut the sharpening machine down immediately and secure. Have faults rectified immediately.

### 2.4.7 Dangers resulting from electrical power

Work on electrical installations or equipment may be carried out only by a qualified electrician in line with electrical regulations.

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

### 2.4.8 Points posing a particular danger

Hazard of pinching and danger of items being drawn in, e.g. clothing, fingers, hair in the area of the sharpening wheels.

### 2.4.9 Maintenance (servicing, corrective maintenance), troubleshooting

All maintenance tasks are to be performed to schedule and by trained personnel.

Operating personnel are to be notified prior to the start of any maintenance or repair work. A responsible supervisor must be appointed.

For all service work, disconnect the sharpening machine from the power supply and secure against being started up again unexpectedly. Disconnect mains plug.

The area around the maintenance work being performed is to be secured as required.

At the conclusion of any maintenance work or fault rectification, all guards are to be reinstalled and checked for proper operation.

### 2.4.10 Structural modifications to the sharpening machine

Do not carry out modifications, additions or conversions on the sharpening machine without the permission of the manufacturer.
This includes the installation of or adjustment to guards.

No conversion work may be carried out without the prior written consent of Messrs. Knecht Maschinenbau GmbH.

Any parts that are not fully operational must be replaced immediately.

Use only OEM replacement or spare parts. Parts manufactured by others provide no guarantee that they have been designed and manufactured in a manner that meets the requirements of safety and performance.

### 2.4.11 Cleaning the sharpening machine

Properly handle all employed cleaning agents and materials and dispose of them in an environment-friendly manner.

Ensure worn spare and replacement parts are disposed of in a safe and environment-friendly way.

### 2.4.12 Oils and greases

When handling lubricants (oils or greases), observe all safety regulations applicable to the product in question. Note any special requirements for use in areas where food is present.

### 2.4.13 Relocation of the sharpening machine

Even in the case of a slight relocation, disconnect the sharpening machine from all external power supplies. Before putting into operation again, correctly reconnect the sharpening machine to the power supply.

For loading and unloading, only use lifting equipment and load-bearing equipment with sufficient capacity.

Appoint a qualified instructor for the lifting process.

In the loading and installation area, no persons may be present other than those entrusted with this work.

Only lift the sharpening machine correctly with hoisting gear in accordance with the information in the operating instructions (attachment points for load-bearing equipment etc.).

Only use suitable transport vehicles with sufficient capacity.

Make sure the load is properly secured. The appropriate attachment points are to be used.

Follow the Operating Instructions when restarting the machine.

# 3. DESCRIPTION

## 3.1 Use as intended

The sharpening machine KLA 220 - HV 155 is used for sharpening dicer blades and derinder blades.

## 3.2 Technical Specifications

Height . . . . . 420 mm

Width . . . . . 700 mm

Depth . . . . . .900 mm

Weight . . . . . .44 kg

Power supply * . . . . . 400 V

Mains frequency * . . . . . 50 Hz

Power rating * . . . . . 0.36 kW

Power consumption * . . . . . 0.43 kW

Current consumption * . . . . . 1.7 A

Back-up fuse . . . . . 16 A

Operating noise sharpening wheels . . . . . 68 dB (A)

*) These specifications are subject to change according to electricity supply.

# 3. DESCRIPTION

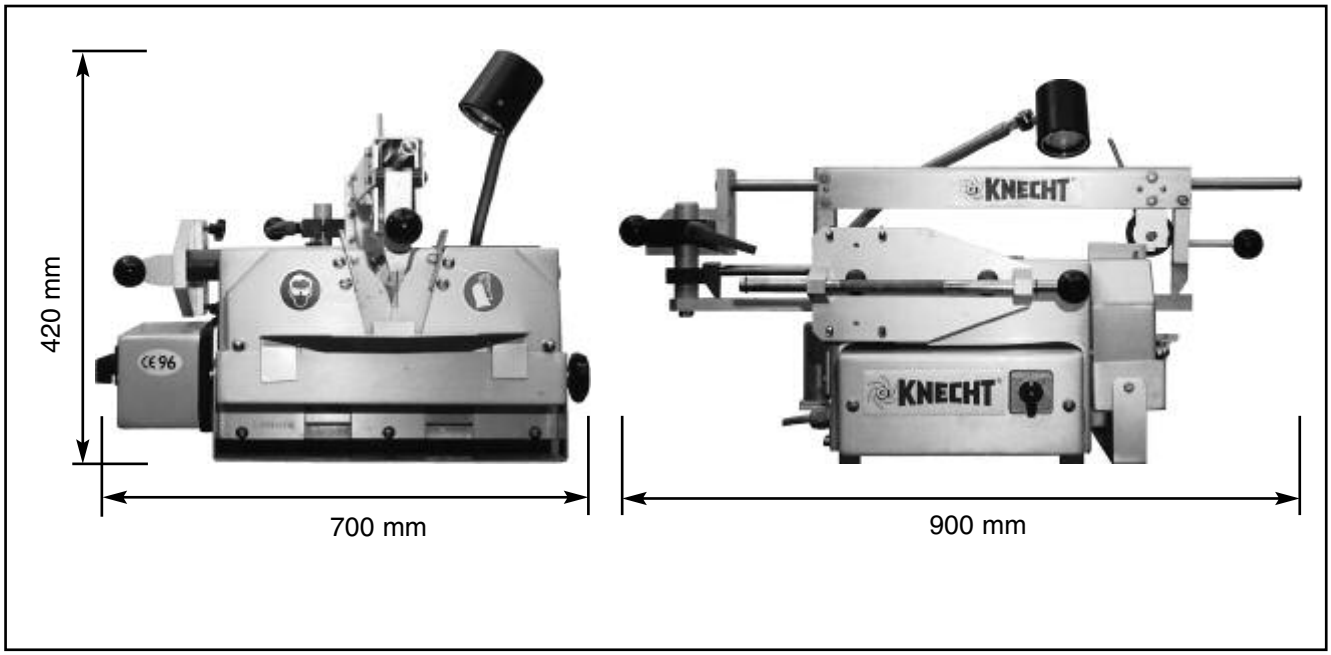



**Fig. 3-1** Dimensions in mm

## 3.3 Functional Description

With the sharpening machine KLA 220 - HV 155, flat, linear knives with a knife length of max. 700 mm (HV155) can be clamped in a fixture (HV155) and sharpened.

By turning the sharpening wheels further apart or closer together, the sharpening angle can be adjusted between 0° and 40°.

Sharpening wheels which have become out of true can be dressed with the dressing device.

# 3. DESCRIPTION

## 3.4 Description of the assemblies

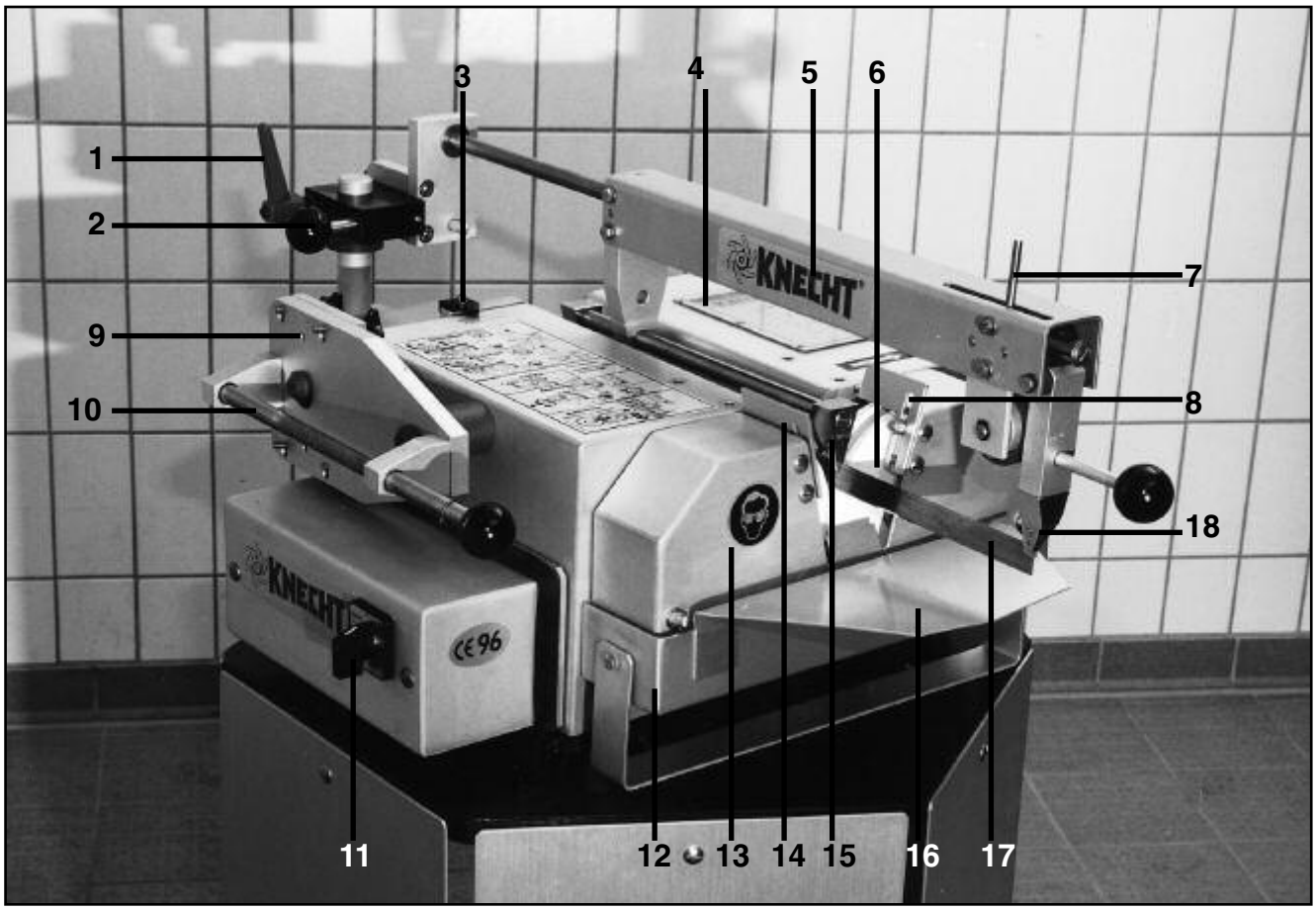



**Fig. 3-2** General view of sharpening machine

1 Clamping lever height adjustment
2 Stop bolt
3 Scale lateral traverse
4 Angle scale
5 HV 155
6 Sharpening wheels
7 Eccentric clamp lever
8 Safety slide
9 Dressing device
10 Dressing file
11 Switch
12 Water tray
13 Safety hood
14 Safety slide
15 Clamping jaws
16 Inlet panel
17 Knife
18 Clamping jaws

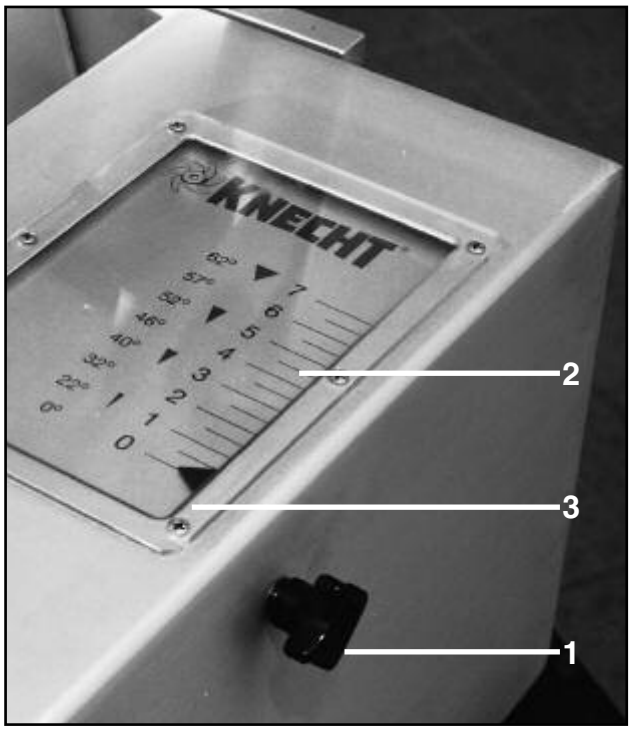
# 3. DESCRIPTION

## 3.5 Structure

The sharpening wheels are each driven by a motor. The power is transmitted via a V-belt on a worm gear. The left-hand motor can be switched in both directions.

The knife is moved by hand.

## 3.6 Angle adjustment




The angle is adjusted via the star handle (7-2/2) on the side of the machine.

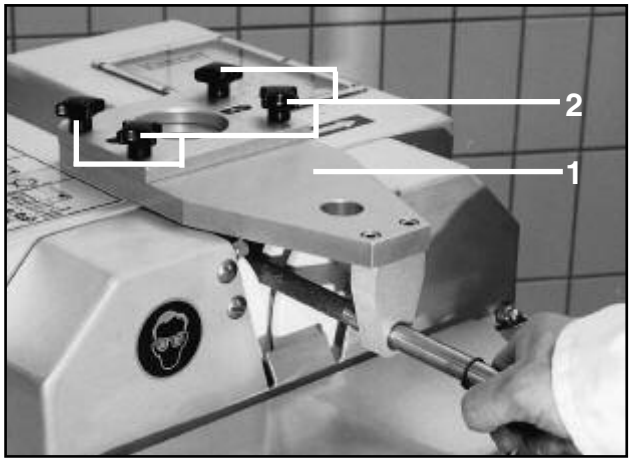
On the right of the machine housing there is a window (3-3/2) in which the sharpening angle can be read off.

To adjust the angle scale, the pointer (3-3/3) can be clamped with the star handle (3-3/1).

**Fig. 3-3** Angle adjustment

# 3. DESCRIPTION

## 3.7 Dressing device HV 156




Sharpening wheels which have become out of true are dressed with the dressing device (3-4/1).

For dressing, the adjustable safety slides on the safety hood must be removed and the sharpening wheels separated by turning. The dressing device is attached to the machine hood with the four star handles (3-4/2).

**Fig. 3-4** Dressing device HV 156

**CAUTION**

**When the safety slides of the safety hood are removed, only switch the machine on when the dressing device is fitted.**

**Risk of serious injuries!**

## 3.8 Replacing sharpening wheels

To replace the sharpening wheels, remove the water tray and the safety hood.

Then separate the sharpening wheels by turning and unscrew the flange bolts (both bolts have a right-hand thread).

**CAUTION**

**When the safety hood is removed, there is a danger of hair, fingers and clothing being drawn in. Before replacing the sharpening wheel, disconnect the mains plug. Only switch machine on when protective hood is fitted. Risk of serious injuries!**

**Fig. 3-5** Replace sharpening wheels

**Fig. 3-6** Water tray

## 3.9 Water tray

After sharpening, the water tray must be folded down, as otherwise the sharpening wheels are standing in the water and become out of true.

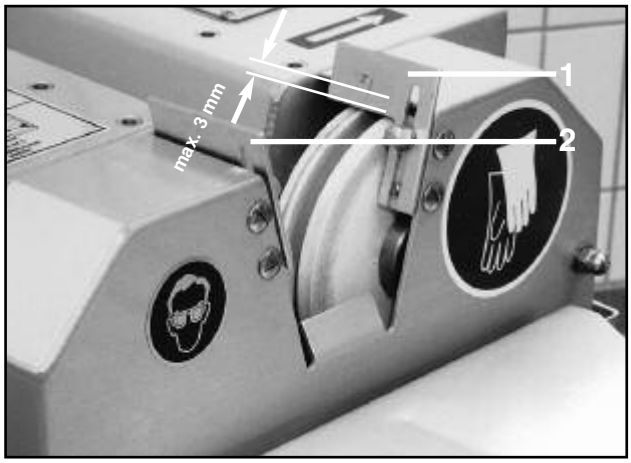



**Fig. 3-7** Safety bracket

## 3.10 Safety brackets

The safety brackets (3-7/1) and (3-7/2) must always be adjusted so that the maximum distance between sharpening wheels and safety bracket is 3 mm.

**CAUTION**

**With incorrectly adjusted safety bracket, danger of fingers, hair and clothing being drawn in.**

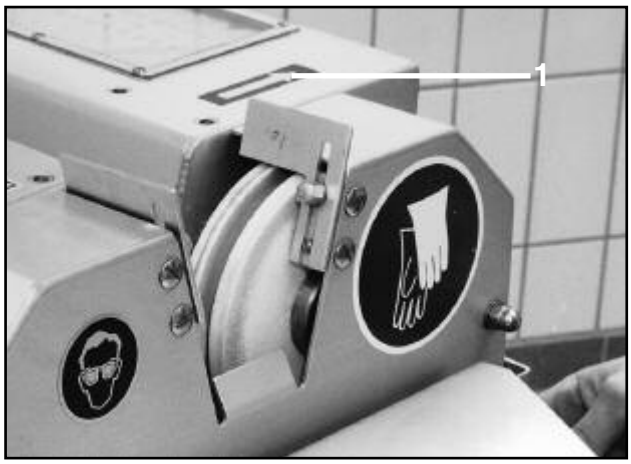



**Figure 3-8** Direction of rotation

## 3.11 Direction of rotation

The direction of rotation of the right-hand sharpening wheel must correspond to the arrow on the machine hood (3-8/1).

**With incorrect direction of rotation, danger of fingers, hair and clothing being drawn in.**

**CAUTION**

**Risk of serious injuries!**

# 4. TRANSPORTATION

CAUTION

**The valid, local safety and accident prevention regulations must be observed when transporting the unit.**

**Transport the sharpening machine only with the machine feet pointing downwards.**

## 4.1 Means of transport

For transporting and installing the sharpening machine, only use transport aids of sufficient size, e.g. car, fork-lift, hydraulic lifting truck.

## 4.2 Damage caused during transport

If there are signs of damage after unloading the machine when conducting the acceptance test on the consignment, please inform Messrs. Knecht Maschinenbau GmbH and the haulage contractor immediately. If necessary, consult an independent valuator.

Remove the packaging and shipping straps. Remove shipping straps from the sharpening machine.

Dispose of all packaging materials in an environment-friendly manner.

## 4.3 Transportation to a different installation location

If transporting the machine to a different installation location, please ensure that the available space at the intended location is adequate (see Section 3.2).

An authorised electrical connection must be available at the new installation site.

Sharpening machine must stand firmly and securely.

CAUTION

**Installations on the electrical unit may only be carried out by an authorised specialist or by our customer service department.**

**All locally applicable safety and accident prevention regulations must be observed.**

# 5. INSTALLATION

## 5.1 Selection of qualified personnel

**CAUTION**

**We recommend having the assembly work on the sharpening machine carried out by trained Knecht personnel. We are unable to assume liability in the event of damage, loss or injury resulting from incorrect installation.**

## 5.2 Installation location

When defining the installation location, take into account the space required for assembly, maintenance and repair work on the sharpening machine (see section 3.2).

## 5.3 Supply connections

The sharpening machine is delivered ready for connection with the appropriate connection cable.

**CAUTION**

**Observe correct connection to the power supply.**

**In the event of incorrect connection, the sharpening wheels may turn in the opposite direction to that stipulated. The wrong direction of rotation may lead to serious injuries.**

**See Section 3.11 for the prescribed direction of rotation.**

## 5.4 Adjustments

The various components and the electrical system are adjusted on the premises of Messrs. Knecht Maschinenbau GmbH prior to delivery.

**IMPORTANT**

**Unauthorised modifications to the set values are not permitted and may lead to damage to the sharpening machine.**

# 5. INSTALLATION

## 5.5 Installing the sharpening machine

Place the sharpening machine at the set-up location on a level table approx. 60 cm high.

Have the power supply installed by a qualified electrician.

Install and inspect all guards prior to start-up.

**CAUTION**

**All guards must be installed and tested for proper operation by a qualified specialist before the machine is started.**

# 6. START-UP

**All work is to be carried out by authorised specialist personnel only.**

**The relevant applicable safety and accident prevention regulations must be observed.**

**CAUTION**


**When the sharpening machine is switched on, there is a danger of hands, hair and clothing being drawn in.**

**This could result in serious injuries.**

**CAUTION**

Figure 6-1

Connect power plug (CEE - plug) with the customer's socket (3x400V, 16A.

Turn switch for sharpening wheel to position **I**. The sharpening wheels rotate.

Check the direction of rotation.

The direction arrow (6-1/1) indicates the direction of rotation of the right-hand sharpening wheel.

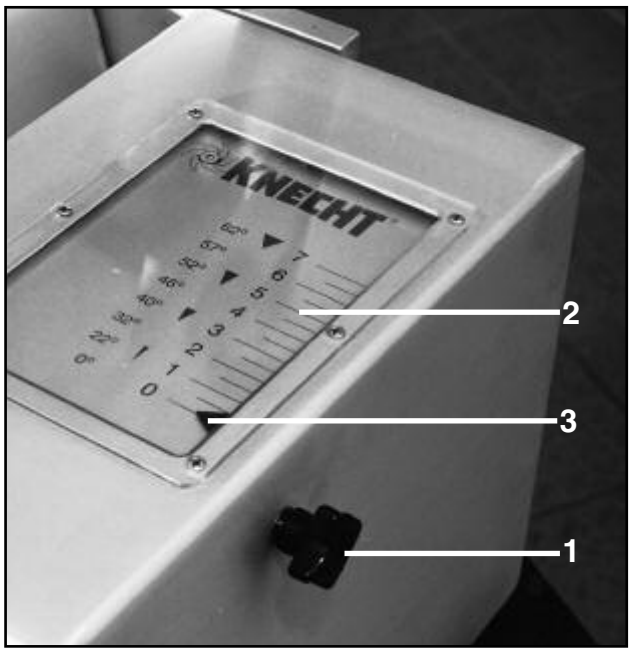
After ensuring the correct direction of rotation, turn switch to **0**.

# 7. OPERATION

**For all work on/with the sharpening machine, the valid local safety and accident prevention regulations and the sections "Safety" and "Important instructions" in the operating instructions must be observed.**

**CAUTION**

## 7.1 Angle adjustment




The angle is adjusted via the star handle (7-2/1) on the side of the machine.

On the right of the machine housing there is a window (7-1/2) in which the sharpening angle can be read off.

As the sharpening angle alters due to wear of the sharpening wheels, the scale must be readjusted daily or after every dressing process.

**Fig. 7-1** Angle adjustment

For this the sharpening wheels are turned away from each other until the scale arrow (7-1/3) is at **0**. Then lock the scale with the small star handle (7-2/2) and turn the sharpening wheels towards or away from each other until they are apparently touching (Fig. 7-3)

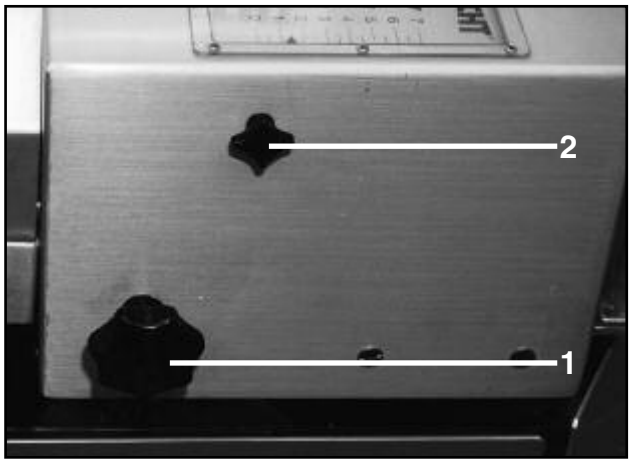



**Fig. 7-2** Lock scale arrow

Then the lock of the scale is released again and the sharpening wheels turned towards each other until the required sharpening angle is displayed on the scale.

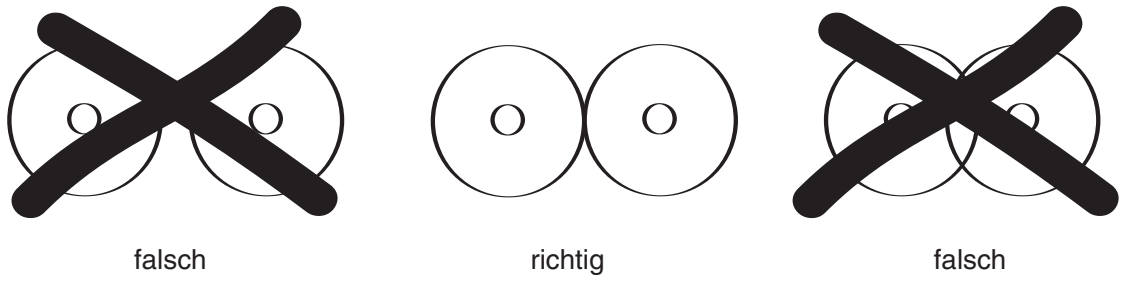



**Fig. 7-3** Adjusting the sharpening wheels

## 7.2 Replacing sharpening wheels

To replace the sharpening wheels, the water tray (7-5/1) and the safety hood must be removed.

Then separate the sharpening wheels by turning and unscrew the flange bolts (both bolts have a right-hand thread).

After assembling the sharpening wheels, the sharpening angle must be readjusted. (see section 7.1) The safety slides must also be readjusted. (see section 3.10)

**Fig. 7-4** Replace sharpening wheels

**CAUTION**

**Before replacing sharpening wheels, disconnect the mains plug.**

**Only switch machine on when protective hood is fitted.**

# 7. OPERATION

## 7.3 Water Tray

After sharpening, the water tray (7-5/1) must be folded down, as otherwise the sharpening wheels are standing in the water and become out of true.


**Fig. 7-5** Water tray

## 7.4 Dressing the sharpening wheels

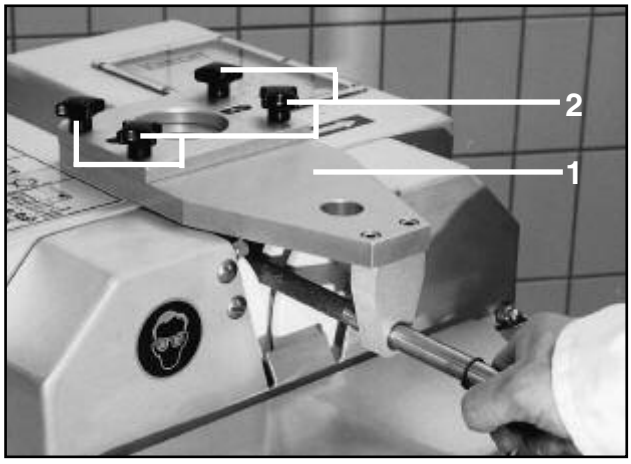



**Fig. 7-6** Dressing the sharpening wheels

Sharpening wheels which have become out of true are dressed with the dressing device (3-4/1).

For dressing, the adjustable safety slides on the safety hood must be removed and the sharpening wheels separated by turning. The dressing device is attached to the machine hood with the four star handles (4-3/2).

**CAUTION**

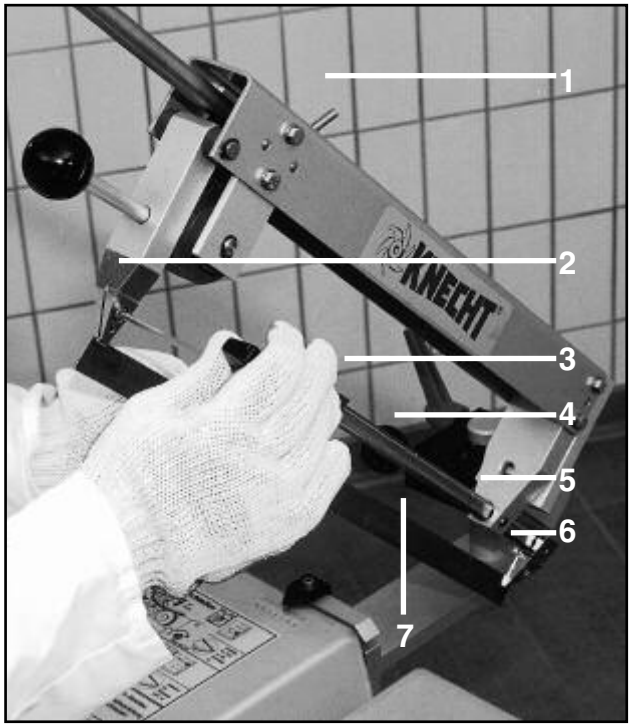
**When the safety slides of the safety hood are removed, only switch the machine on when the dressing device is fitted.**

**Risk of serious injuries!**

After dressing, refit the safety slide to the safety hood and with the machine switched on, round off the edges of the sharpening wheels with the trimming stone. After dressing, the sharpening angle must be readjusted. (see section 7.1)

# 7. OPERATION

## 7.5 Clamping linear knives




Linear knives (7-7/7) are clamped with the clamping jaws (7-7/2; 3; 6). The clamping jaws (7-7/3) and (5-1/6) can be moved on the holding rod (7-7/4) by undoing the bolts in the clamping jaws with an Allen key WAF 5.

The holding rod (7-7/4) can be moved after the clamping screw (7-7/6) has been undone.

By moving the clamping jaws, knives of up to 700 mm long can be clamped. Short knives are clamped with only two clamping jaws.

Pull eccentric lever (7-7/1) forwards until the knife is clamped.

**Fig. 7-7 Clamping linear knives**

**CAUTION**

**Sharp cutting edge.**

**This involves the risk of serious cut injuries.**

**Wear protective gloves.**

After the knife is clamped, switch the machine on. Place the knife on the sharpening wheels and draw across the sharpening wheels with slight pressure from the beginning to the end.

For knives sharpened on one side, move fixture to side.

After honing, switch machine off.

**Figure 7-8** Sharpening

# 7. OPERATION

## 7.6 Sharpening hand knives

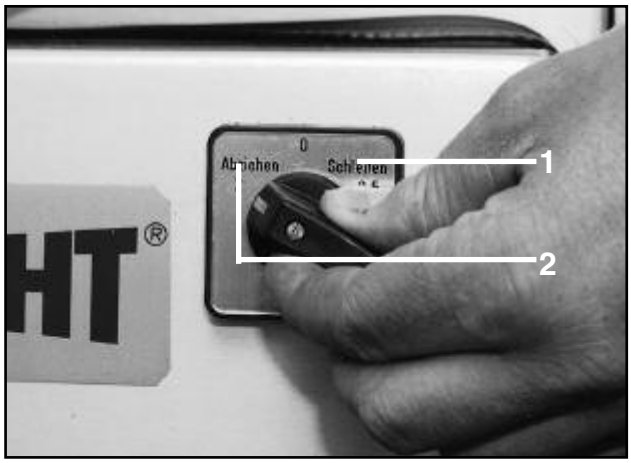



**Fig. 7-9** Switch

Hold hand knives vertically between the sharpening wheels. Switch machine on, switch position I = sharpening (7-9/1).

Draw the knife with slight pressure across the sharpening wheels. Raise knife at the tip in accordance with the sharpening course.

**Fig. 7-10** Sharpening hand knives

When the cutting edge is sharp, put machine in position II = honing (7-9/2). Now draw the knife in the same way across the sharpening wheels without pressure until the cutting edge is smooth.

**CAUTION**

**Sharp cutting edge.**

**This involves the risk of serious cut injuries.**

**Wear protective gloves.**

# 8. MAINTENANCE AND CARE

**CAUTION**

**For all work on the sharpening machine, the valid local safety and accident prevention regulations and the sections "Safety" and "Important instructions" in the operating instructions must be observed.**

**Please use only original replacement and wear parts. In the case of non-Knecht parts, we are unable to guarantee that they are designed and manufactured to cope with the appropriate stresses and with the appropriate level of safety.**

## 8.1 Abrasives

The following abrasives are approved for the KLA 220 - HV 155:

| Designation | Type | Grain | Dimensions | Remarks |
|---|---|---|---|---|
| Sharpening wheel | A | 320 | d.150x10xd.25 | |
| | Rec. Arkansas | 1000 | d.150x10xd.25 | |
| | Al vacuum-coated | 120 | d.150x10xd.25 | |
| | Steel | | d.150x10xd.25 | |

## 8.2 Cleaning

The machine must be cleaned each time after sharpening since, otherwise, the grinding sludge will dry on and will be very difficult to remove.

Smear the machine lightly with acid-free oil after cleaning (see also Lubrication schedule).

Change the coolant once per week.

## 8.3 Lubrication

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

We recommend lubricating the threads on the fixing bolts with grease every 4 weeks (see also lubrication schedule).

# 8. MAINTENANCE AND CARE

## 8.4 Lubrication schedule

| Lubrication schedule and lubricant table | | | | | |
|---|---|---|---|---|---|
| **Lubricating work** | **Interval** | **OEST** | **SHELL** | **ESSO** | **DEA** |
| Lubrication of the threads of star handles and clamping levers | 4 weeks | GOC 180 | Alvania R2 | Beacon EP2 | Dolon E2 |
| Oiling of machine parts after cleaning | after every sharpening process | Paraffin oil Perliqium | Ondina 1727 | Marcol80 | Merkur white oil Pharma 40 |
| Coolant additive | 2 weeks | Colometa SK 808 | Dromus B | Kutwell S72 | Targon AL |

# SPARE PARTS LIST

# Derinder and dicer blade sharpening machine
## KLA 220 - HV 155

**ATTENTION!**
When ordering spare parts, please state machine model and machine serial number.

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