Operating Instructions

HV 150
Hand Knife Grinding Attachment
Operating Instructions

Hand Knife Grinding Attachment HV 150

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 machine operator

Operating Instructions

Date of issue of the operating Instructions

September 2, 2019

Copyright

The copyright for these operating Instructions as well as other documents for the machine operator is held by KNECHT Maschinenbau GmbH. They are provided only to customers and operators of our products and are included with the machine.

These documents may neither be reproduced, nor made accessible to third parties, in particular rival firms, without our express permission.
# Table of Contents

1. Operation  5

1.1 Intended purpose  
1.2 Mounting the HV 150 hand knife grinding attachment  5
1.2.1 Mounting the CBN grinding wheels  
1.2.2 Mounting the HV 150 hand knife grinding attachment  
1.2.3 Aligning the HV 150 hand knife grinding attachment  
1.3 Grinding hand knives  
1.3.1 Switching on the grinding machine  
1.3.2 Coolant regulation  
1.3.3 Grinding hand knives  

2. Care and maintenance  

2.1 Cleaning  13
2.2 Lubrication schedule and lubricant table  13

3. Disassembly and disposal  

3.1 Disassembly  14
3.2 Disposal  14

4. Service, spare parts and accessories  15

4.1 Postal address  15
4.2 Service  15
4.3 Spare parts  15
4.4 Accessories  
4.4.1 Abrasives used  16
1. Operation

1.1 Intended purpose

The HV 150 hand knife grinding attachment is used to grind hand knives. This attachment is meant to be installed onto KNECHT grinding machines of the USK 160 S series.

1.2 Mounting the HV 150 hand knife grinding attachment

1.2.1 Mounting the CBN grinding wheels

Mount two CBN grinding wheels in order to grind hand knives using the HV 150.

To do so, loosen the star handles (1-1/1) on the left-hand side of the machine and remove the protection hood. Then remove the finned grinding wheel.

![Figure 1-1 Removing the protection hood](image1)

Use a spanner wrench (SW22) to loosen the nut (1-2/1) of the grinding spindle.

Loosen = turn left (in the direction of rotation)
Tighten = turn right (against the direction of rotation)

Pull the finned grinding wheel off the grinding spindle.

![Figure 1-2 Removing the finned grinding wheel](image2)

NOTICE

If the grinding spindle turns too, counter it with a spanner wrench (SW10) on the end of the shaft.
1. Operation

Push the intermediate flange (1-3/1) to the stop on the grinding spindle.

Notice: The recess on the grinding wheel (1-4/1) must be pointing in the direction of the machine.

Push the first CBN grinding wheel (1-4/1) to the intermediate flange (1-4/2).

Push another intermediate flange (1-5/1) to the first grinding wheel (1-5/2) on the grinding spindle.
1. Operation

Push the second CBN grinding wheel (1-6/1) to the intermediate flange (1-6/2) on the grinding spindle.

**NOTICE**

The recess on the grinding wheel (1-6/1) must be pointing outwards.

Push on the clamping flange (1-7/1) and turn the nut (1-7/2) onto the thread by hand.

Then reattach the nuts (1-7/2) with both spanner wrenches (SW 10 and SW 22).

If not yet in place, mount the stripper (1-8/1) using the Allen key SW 4 and align it with the grinding wheels.
1. Operation

1.2.2 Mounting the HV 150 hand knife grinding attachment

Insert the HV 150 hand knife grinding attachment into both notches (1-10/1) from above.

Screw on the HV 150 from the left and rear sides using both star handles (1-11/1) and (1-11/2).

Remount the protection hood and affix using both star handles (1-9/1).

Figure 1-9 Mounting the protection hood

Figure 1-10 Attaching the HV 150

Figure 1-11 Affixing the HV 150
1. Operation

Push spray guard (1-12/1) from the rear. Make sure that the slot (1-12/2) is completely in the bar (1-12/3).

Figure 1-12 Mounting the spray guard
1. Operation

1.2.3 Aligning the HV 150 hand knife grinding attachment

When the grinding wheels are touching the grinding attachment, the black guard has to be re-aligned.

To do so, pull the spray guard (1-13/1) out to the back.

![Figure 1-13 Removing the spray guard](image)

Then loosen and remove the grinding attachment using the star handles (1-14/1) and (1-14/2).

![Figure 1-14 Remove HV 150](image)

Loosen the four M6 screws (1-15/1) on the underside of the grinding attachment and shift the guard until it is in the correct position.

Then tighten the four screws (1-15/1) once again and mount the hand knife grinding attachment in the reverse order.

![Figure 1-15 Align guard](image)
1. Operation

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

Serious injury may result.

ATTENTION

Before switching on the grinding machine, be sure to check that the CBN grinding wheels are running free. The grinding wheels may not be touching the hand knife grinding attachment.

If necessary, re-align the grinding attachment (see Chapter 1.2.3).

1.3 Grinding hand knives

1.3.1 Switching on the grinding machine

Turn the main switch (1-16/1) of the USK 160 S to the “I” position.

![Figure 1-16 Switching on the grinding machine](image)

1.3.2 Coolant regulation

The water supply must be turned on when using the CBN grinding wheels. If it is not activated, push the rubber on the water nozzle (1-17/1) behind the hole (1-17/2) on the water nozzle.

The quantity of coolant is regulated by the water nozzle (1-17/1).

Turning clockwise = more water
Turning counterclockwise = less water

![Figure 1-17 Opening the water nozzle](image)
1. Operation

1.3.3 Grinding hand knives

To grind the hand knife, place the knife in the slit (1-18/1) from above and slowly pull back out of the slot towards to the tip.

![Figure 1-18 Grinding hand knives](image)

Repeat this process alternating between the right and left sides until the desired knife sharpness is achieved.

![Figure 1-19 Grinding hand knives](image)

**NOTICE** Always begin the grinding process on the knife shaft.

Then deburr and polish the hand knife on the polishing disk (1-20/1) as described in the operating instructions for the USK 160 S.

Switch off the grinding machine after the grinding process is finished.

To do so, switch the “I/0” main switch (1-16/1) to the “0” position.

![Figure 1-20 Deburring and polishing hand knives](image)
2. Care and maintenance

For all work on the HV 150 hand knife grinding attachment, the locally applicable safety and accident prevention regulations as well as instructions in the "Safety" and "Important notes" section of the USK 160 S universal wet-grinding machine operating instructions must be observed.

Use only original replacement and wear parts. When using external parts, it cannot be guaranteed that they are constructed and manufactured to be suitable and safe.

2.1 Cleaning

Clean the hand knife grinding attachment after each sharpening in order to prevent the grinding sludge from drying and making it harder to remove.

After cleaning, lightly grease the hand knife grinding attachment with non-corrosive oil (also refer to the lubrication schedule, Chapter 2.2).

2.2 Lubrication schedule and lubricant table

<table>
<thead>
<tr>
<th>Lubrication work</th>
<th>Cycle</th>
<th>OEST</th>
<th>SHELL</th>
<th>EXXON Mobil</th>
<th>DEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubricate the threads of star handles and clamping levers</td>
<td>4 weeks</td>
<td>Multi-purpose grease L2</td>
<td>Gadus S2 V100 2</td>
<td>Mobilith SHC 100</td>
<td>Dolon E2</td>
</tr>
<tr>
<td>Lubricate machine parts after cleaning</td>
<td>After each grinding</td>
<td>Paraffinum perliquidum 16 L</td>
<td>Shell Risella 917</td>
<td>Marcol82</td>
<td>Merkur pharmaceutical white oil 40</td>
</tr>
</tbody>
</table>
3. Disassembly and disposal

3.1 Disassembly

Dispose of all operating materials properly.

Secure moving parts against slippage.

Disassembly must be conducted by qualified trained personnel.

3.2 Disposal

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

Operating materials (e.g. grinding wheels, etc.) must also be disposed of properly.
4. Service, spare parts and accessories

4.1 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

4.2 Service

Service line:
For address, see postal address

service@knecht.eu

4.3 Spare parts

If you are in need of spare parts, please use the spare parts list provided with the machine. Please make your order using the format provided in the following.

When ordering, please always provide: (Example)

<table>
<thead>
<tr>
<th>Machine type</th>
<th>(USK160S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine number</td>
<td>(12530953160S)</td>
</tr>
<tr>
<td>Assembly designation</td>
<td>(base plate, USK160S)</td>
</tr>
<tr>
<td>Designation of individual part</td>
<td>(pump, USK160S)</td>
</tr>
<tr>
<td>Item no.</td>
<td>(9)</td>
</tr>
<tr>
<td>Drawing no.</td>
<td>(013E-01-0000)</td>
</tr>
<tr>
<td>Quantity</td>
<td>(1)</td>
</tr>
</tbody>
</table>

We are always happy to answer any questions.
4. Service, spare parts and accessories

4.4 Accessories

4.4.1 Abrasives used

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions</th>
<th>Order number</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set of 2 CBN grinding wheels</td>
<td>d.150x7xd.15H7 B76</td>
<td>412F-83-0150-76</td>
<td></td>
</tr>
</tbody>
</table>

**ATTENTION**

Do not use any other abrasives without the approval of KNECHT Maschinenbau GmbH.

KNECHT Maschinenbau GmbH is not liable in the event that other abrasives are used.

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

Thank you for choosing KNECHT!