KNECHT

B 500

Automatic Sharpening and Polishing Machine

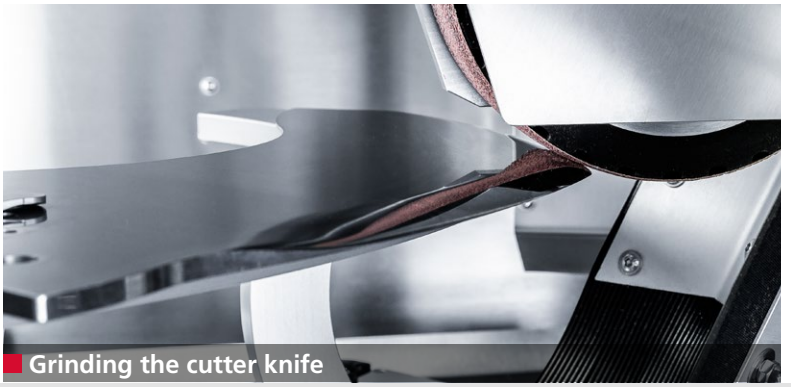


Higher Safety

Fully automated grinding of cutter knives



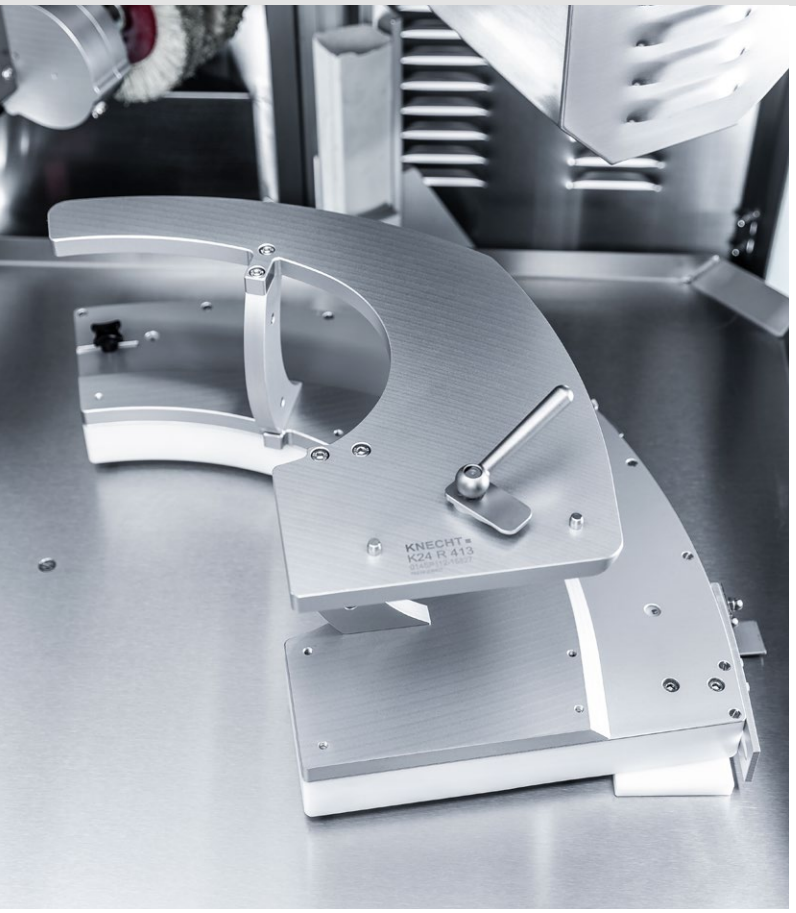
Mounting the cutter knife



Grinding the cutter knife

The sharpness, blade angle, shape and profile of a cutter knife have a large influence on the quality of the products fabricated. High cutting speeds (up to 180 m per second, which equals 650 km per hour or 404 mph) and side pressure put a substantial amount of mechanical strain on the cutter knives. Thus, the polished edge of a cutter knife has a direct impact on its break resistance.

The B 500 ensures exact and precisely angled edges as well as the preservation of the cutting profile and the original blade shape. And all that over the entire operating life of the cutter knife.



Copy grinding plate SP 112
The plate contains all necessary information about the shape and size of the knife. Each knife type receives its own custom-made copy grinding plate. Inconvenient programming and adjusting is unnecessary. This means simple and fast handling. It only takes one minute to change over the machine to a different knife type.

Knife types
Linear-shaped knives as well as sickle-shaped knives can be ground. The maximum knife size is 500 mm (19.7 in).

Higher Quality

Fully automated polishing and deburring of cutter knives



Polishing the cutter knife



Deburring the cutter knife

The B 500 sharpens, polishes and deburrs up to 100 cutter knives (500 l) per 8-hour shift, fully automatically. The average sharpening and polishing time per knife runs from 3 – 5 minutes, depending on the blade size.

With each regrinding the complete blade profile is processed. There is very little material removal from the knife. A 500 l cutter knife can be reground up to 40 times.

Abrasives
Water resistant wet-grinding belts are used to grind the knives. Up to 40 cutter knives (500 - 750 l) can be ground with one belt. The operator controls the grinding pressure using a potentiometer.

Polishing drives
The polishing brushes are provided with polishing paste in freely programmable cycles. The polishing pressure can be regulated individually.

Cooling unit
A cooling unit prevents the cutting tools from overheating during the grinding process. If cooling is insufficient, the coolant monitor shuts the machine off.

Sharpening principle
After pressing the start button the knife moves to the start position. An approach check detects the wear of the knife and starts the chosen grinding program. After sharpening, the machine first polishes the knife surface. Then the cutting tool is quickly and gently deburred.

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Highest cutting performance

Contour-accurate resharpening and simplest operation



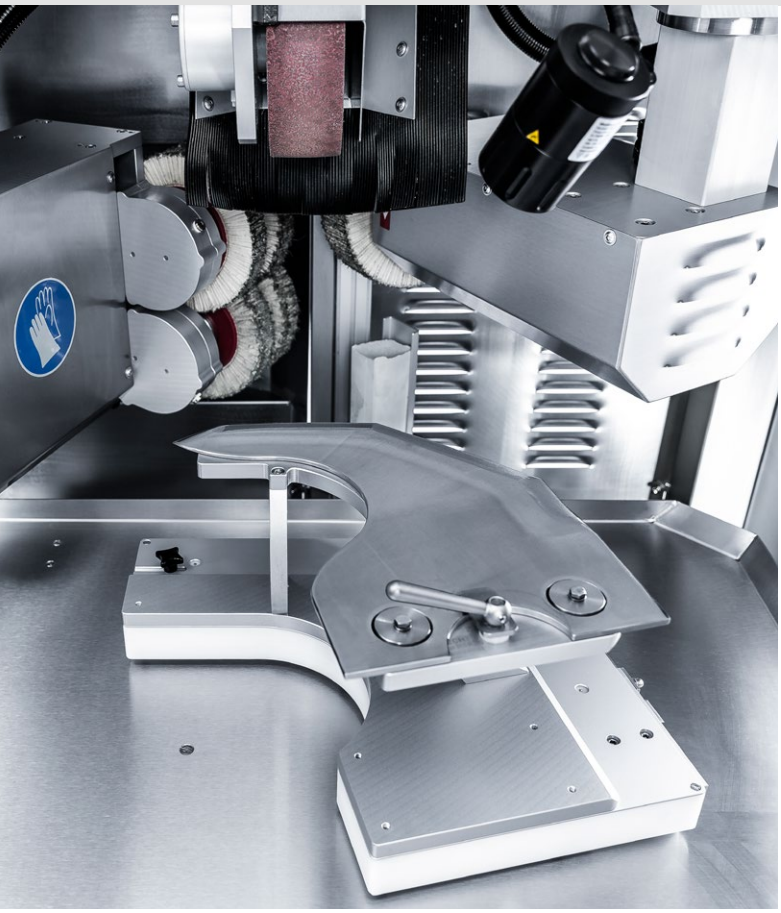
Control panel



Grinding angle adjustment

The B 500 is very easy to control. The operator determines the most important functions, such as the number of the grinding and polishing cycles and the crowning of the knife, via touch panel directly on the machine. This means that with every resharpening, the blade is given a cutting edge tailored exactly to the product.

The created grinding programs are stored in the data memory of the machine. The number of grinding programs is unlimited. Updates and new programs are loaded onto the B 500 online.



1. **Wet-grinding belt**
2. **Polishing unit**
3. **Deburring unit**
4. **Knife**
5. **Copy grinding plate**

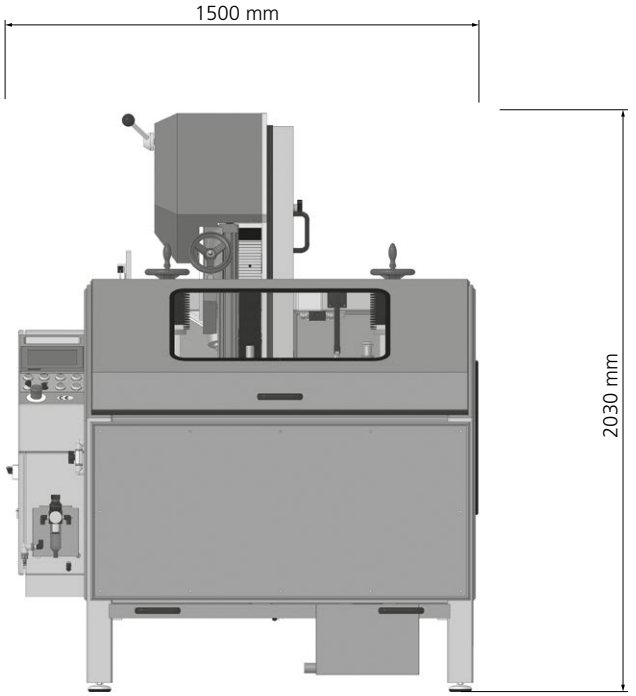
B 500

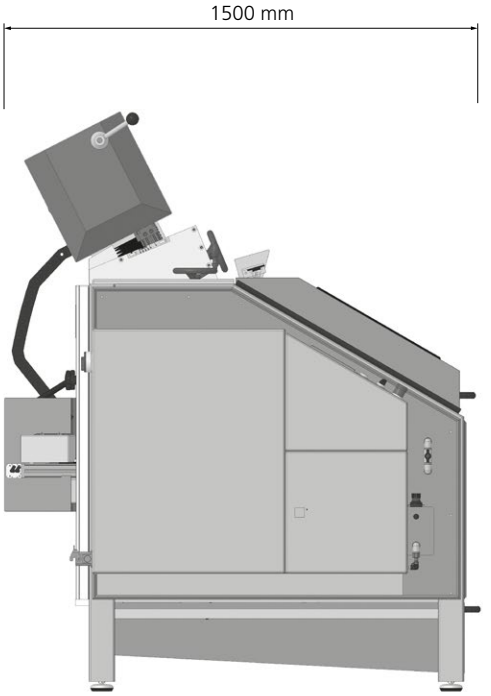
Technical specifications and space requirements*

Depth	1500 mm
Width	1500 mm
Height	2030 mm
Weight	approx. 500 kg
Depth*	2500 mm
Width*	2200 mm
Height*	2200 mm
Electrical supply**	6.5 kW 3x 400 V 50 Hz
Back-up fuse**	16 A
Compressed air supply according ISO 8573-1:2010 [1:4:2]	6.5 bar
Air consumption	50 l per minute
Emission sound pressure level according EN ISO 11201:2010	approx. 72 dB(A)
Internet connection	RJ45
Largest cutting tool	500 mm (19.7 in), cutter knives up to 750 l (depending on blade shape)
Performance (cutter knives 500 – 750 l)	100 knives / shift (8 hrs)

**) This information may change depending on the electrical power supply

The machine meets the EC safety and health requirements and is provided with the CE-symbol.
As at 2026.11 | Subject to technical modifications.





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