KNECHT

B 600

Automatic Sharpening and Polishing Machine

Higher safety

Fully automated grinding of cutter knives

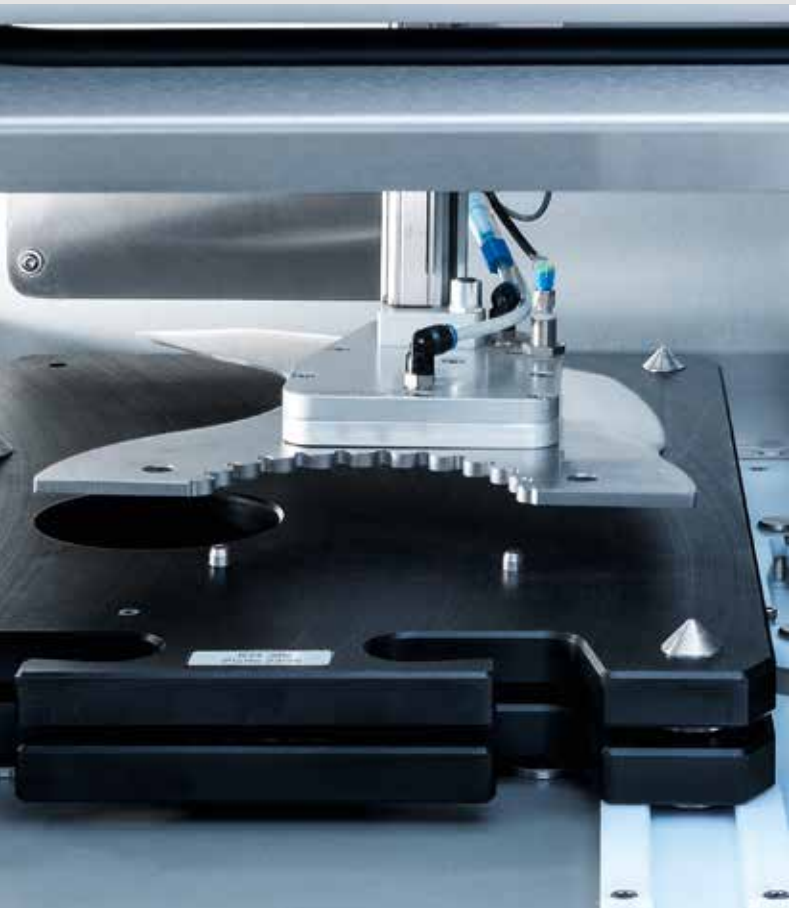
Knife holding fixture SP 114

Grinding the cutter knife

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 600 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.



Knife holding fixture SP 114
The knives are clamped on the knife holding fixture by a vacuum. Multiple knife shapes and sizes are assembled in groups and can be ground with only one knife holding fixture. In less than 1 minute the machine is changed to a different knife shape.

Knife types
Sickle-shaped knives as well as linear-shaped knives can be ground. The maximum knife size is 600 x 400 mm (23.6 in x 15.7 in), that equals a cutter knife of around 1000 l.

Knife magazine
The knife magazine has space for 8 knives. It can optionally be extended to 16 knives.

Higher quality

Fully automated polishing and deburring of cutter knives

Polishing the cutter knife

Deburring the cutter knife

The B 600 sharpens, polishes and deburrs cutter knives up to a size of 1000 l fully automatically.

The knife changer picks up the knife from the magazine and moves it to the grinding position. The sharpening program is started. After the grinding process is finished, the knife is returned to the magazine and the next knife is picked up. The machine processes up to 16 cutter knives in unmanned operation.

The performance amounts up to 80 cutter knives (500 – 750 l) per 8-hour shift.

Abrasives

For the sharpening process water resistant wet-grinding belts are used. Up to 40 cutter knives (500 – 750 l) can be ground with one belt. The operator controls the grinding pressure via touchscreen.

Polishing drives

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

Control system

The B 600 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. This means that with every re-sharpening, 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 600 online.

Sharpening principle

After pressing the start button, the knife changer removes the first knife from the magazine and transports it to the grinding position. An approach check detects the wear of the knife and starts the grinding program. After grinding, the machine first polishes the knife surface. Then the cutting tool is quickly and gently deburred. Meanwhile the knife changer restacks the magazine so that the following knife is ready for sharpening.

With each regrinding the complete blade profile is processed. The average process time per knife runs from 3 – 5 minutes, depending on the blade size. There is very little material removal from the knife. A 500 l cutter knife can be reground up to 40 times.

KNECHT

B 600

Automatic Sharpening and Polishing Machine

Health-supporting technology

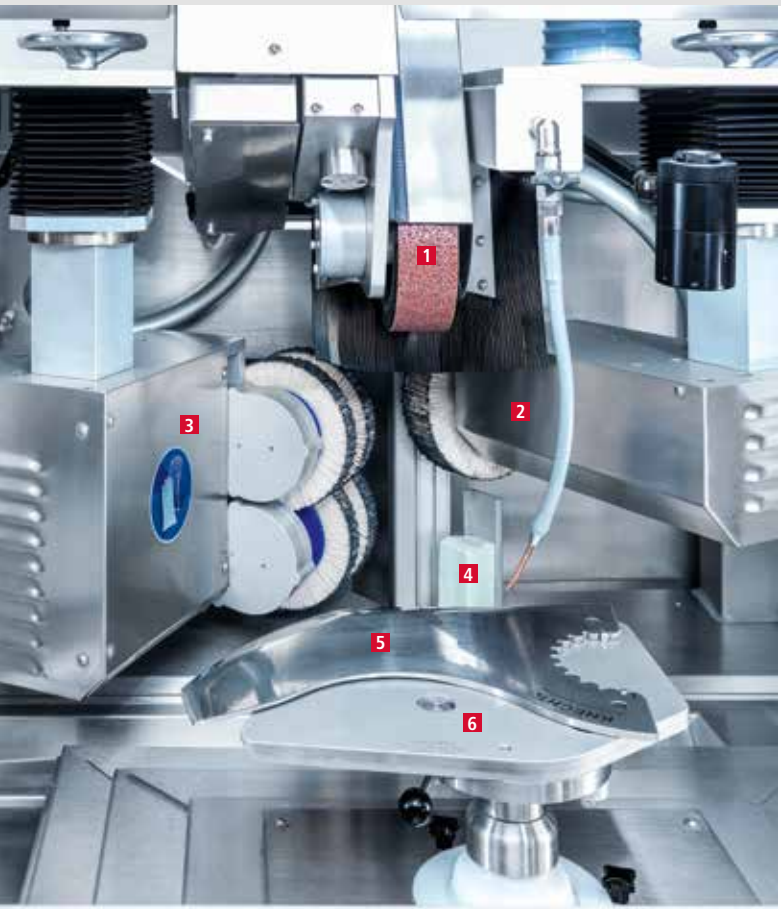
Encapsulated workroom and constant cooling of the workpieces

Belt filter coolant unit

Suction unit

The belt filter coolant unit prevents the cutting tools from overheating during the grinding process. If cooling is insufficient, the coolant monitor shuts the machine off. The coolant unit has a volume of 140 l. A filter fleece removes the grinding abrasion completely from the coolant circuit. The removed material is collected on the filter fleece and can be easily disposed of in an environmentally friendly way.

The integrated suction unit removes floating particles from the workroom. This enables visibility during the grinding process. Moreover, it protects the operator's respiratory system.



1 Wet-grinding belt

2 Polishing unit

3 Deburring unit

4 Polishing paste

5 Cutter knife

6 Knife holding fixture SP 114

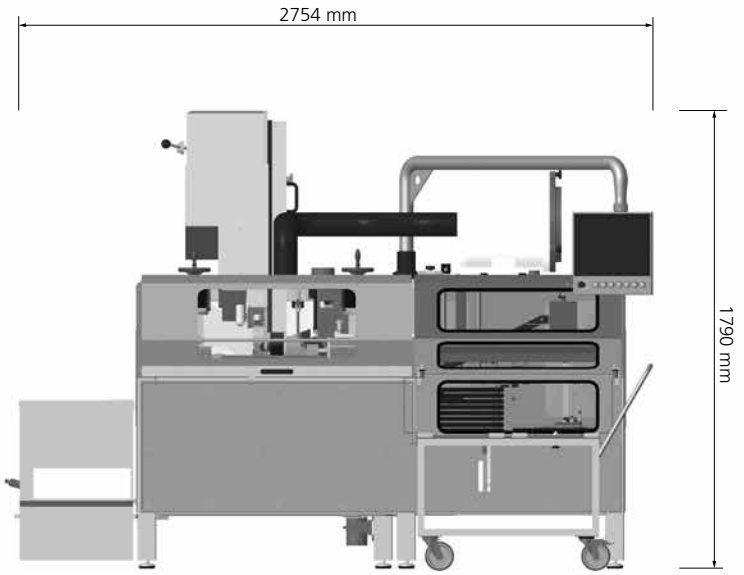
KNECHT

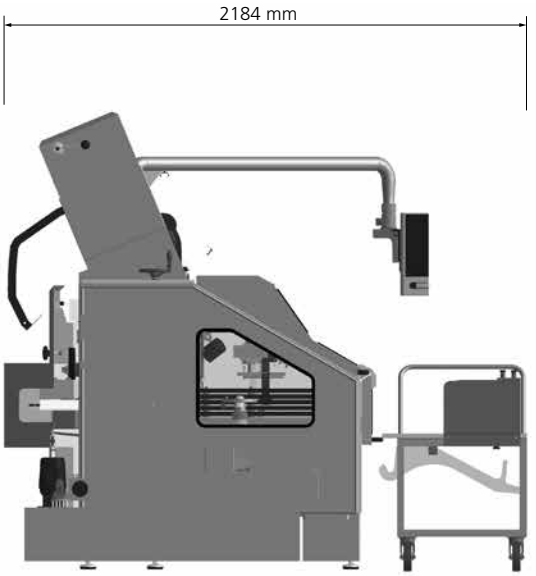
B 600

Technical specifications and space requirements*

Depth (incl. magazine extension)	2184 mm
Width (incl. belt filter coolant unit)	2754 mm
Height	1790 mm
Weight	approx. 700 kg
Depth*	4000 mm
Width*	4000 mm
Height*	2600 mm
Electrical supply	11 kW 3x 400 V 50 Hz
Back-up fuse	32 A
Compressed air supply	6,5 bar
Compressed air consumption	< 50 l per minute
Emission sound pressure level according EN ISO 11201	approx. 79 dB (A)
Internet connection	RJ45
Largest cutting tool	600 x 400 mm (23.6 in x 15.7 in), or cutter knife around 1000 l
Knife magazine	8 knives (16 knives optional)
Performance (cutter knives 500–750 l)	approx. 80 knives per 8-hour shift

The machine meets the EC safety and health requirements and is provided with the CE-symbol.
As at 2020.06 | 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