



KHB 100

Fully automatic sharpening machine with 6 CNC axes for processing top and face of carbide tipped circular saw blades

Maximum precision and uncompromising quality

ISEL – Worldwide expertise in sharpening machines

ISEL, in the Swiss town of Schötz, has combined tradition and creativity for over 70 years in the field of sharpening technology for band, gang and circular saw blades for wood, aluminum, plastic and metal. In constant dialog with the customers and thanks to the team of competent and committed employees, its sharpening machines and complex systems have set worldwide standards. Innovative mechanical engineering and effective system technology ensure the highest customer satisfaction.

Swiss quality by tradition

Customer orientation and expertise from the very beginning! ISEL is today one of the leading suppliers of sharpening machines and systems for sawmills, saw producers and saw service companies that place the highest demands on efficiency and cost-effectiveness.

ISEL system technology is convincing thanks to its maximum operating convenience, flexibility in the applications as well as to adaptation to customer requirements. Its outstanding quality makes ISEL sharpening machines a future-proof investment.

Together ahead of the competition

As a customer, you benefit on one hand from our fair, partnership-based cooperation and on the other from our continuous development of the machining and sharpening processes. An additional advantage is the intelligent optimization in process and product handling.

We are system solvers

As a specialist in sharpening technology, we develop modern, future-oriented system solutions and machine concatenations.

We bring the automation of the sharpening processes and the optimization of the handling to „INDUSTRY 4.0“ cost-efficient harmonization.

Our core competences



Machining and sharpening solutions for band and gang saws

We offer our customers the world's largest selection of specialized and combined processing and sharpening machines:

- Profile grinding • Side grinding
- Straightening / tensioning
- Measuring / marking
- Tipping / Swaging • Welding



Sharpening and handling solutions for Carbide / HSS circular saw blades

Space-saving compact machine design, clear and simple operation, economical energy consumption as well as flexibility in machining are the essential features of our machine series for the treatment of:

- Hook and side angles (HM)
- Side angles (HM)
- Geometry and profile (HSS)
- Automation / Handling
- Repair / Brazing

Technische Änderungen vorbehalten.



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Specifications

Tooth pitch	8 – 120 mm **
Tooth height	up to 40 mm
Tooth data	programmable
Grinding wheel	200 - 250 mm

Tooth geometries:

Front rake angle	-12° to +30°
Tooth face	straight
Tooth back	0° – 45°
Tooth height difference	0 – 1.0 mm triple-chip

Circular saws::

Ø Saws	180 – 860 mm
Blade thickness	up to 8 mm
Ø Bore (Standard)	22 – 200 mm

Power requirements:

Standard Voltage	400 V 3 Ph. N
Connected load	6 kVA

Air supply:

Compressed air supply	6 bar
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Weight

Net weight	2'100 kg
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** Working speed is according to tooth shape, tooth pitch and feed system

Subject to alteration in design for technical advancement.

Certificate ISO 9001

Machining the rake and clearance angle in only one cycle

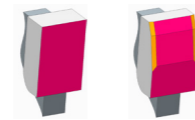
The quality and profitability are also decisively influenced by how different needs and requirements can be solved.

With the ISELI KHB 300 and through 6 controlled CNC axes guaranteed for sharpening complex tooth geometries in a single pass.

Tooth geometries:

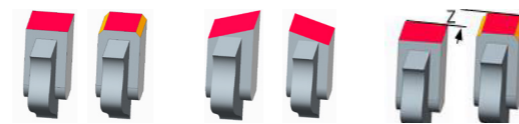
Tooth face:

- Straight grinding
- Group toothing up to 8 teeth



Tooth back:

- Straight grinding
- Bevel grinding up to 45°
- Chamfering
- Tooth height difference



Machine and operating concept

The machine is programmable via a 15.1-inch touch screen. The basic datas are entered only once and is carried along for all processing.

It is this high degree of precision that ensures the accuracy of the subsequent grinding results.

X-axis	Horizontal tooth feed carriage
R-axis	Radius tracking for tooth feed carriage
Y-axis	Lifting carriage for grinding head
W-axis	Horizontal grinding head carriage
U-axis	Carriage for bevel and chamfer of the tooth top
H-axis	Blade height carriage (automatic blade positioning)

The most important points in brief

- 6 CNC-controlled axes guarantee the complete processing of all common tooth geometries in only one cycle. Programmable via a 15.1-inch touch screen. The machine has been designed for use in the woodworking industry.
- Conceived and designed for fully automatic machining of carbide-tipped circular saw blades
- Tooth face and tooth top are ground against the cutting edge
- The space-saving machine concept enables for high ergonomics and excellent operability
- Easy access for maintenance work on the control cabinet, coolant pump, pneumatic and extinguishing device
- Unlimited storage capability for the circular saw parameters
- Optimal, fast and safe programming and setting of the circular saw parameters
- The machine is available for the use of cooling emulsion or cooling oil incl. with CO2 fire protection system.
- Vario tooth device with built-in sensor on the feed pawl.
- IAll axes are equipped with stable and strong roller linear guides to ensure high stability
- Safe servo drives according to EN 62061 SIL3 / EN ISO 13849-1 PLe
- Grinding head with integrated rotation speed monitoring
- Extremely strong precision blade clamping
- Remote maintenance kit.
- Special customer requests will gladly be examined.