



EKOSTAR 500

CNC-controlled sharpening machine for CBN-abrasive grinding

- Sharpening, re-toothing and chamfering of metal circular saw blades
- Grinding of chip breaker grooves with additional equipment

EKOSTAR 500

The new generation for re-sharpening, re-toothing and chamfering of HSS metal cutting circular saw blades.

A state-of-the-art machine concept for optimum grinding results.

A new, totally modern machine concept for metal cutting circular saw blades up to 500 mm in diameter. The EKOSTAR 500 for re-sharpening, re-toothing and chamfering HSS and solid carbide saw blades, blades with vari pitch toothing, and for chip breaker grooves. This machine achieves an outstanding standard of grinding quality. Alongside standard tooth shapes in accordance with DIN 1837 to 1840 A, B and C, the EKOSTAR 500 also offers the facility for grinding non-standard tooth shapes.

The optimum grinding finish achieved is the culmination of successful interaction between the saw blade feed and lift movement of the grinding head, which are computer controlled. This results in absolute indexing precision and a perfect tooth shape. The CBN abrasive grinding technique guarantees high stock removal rates coupled with optimum surface quality. The grinding direction can be pre-selected as required.

The powerful cooling system operating at 6 bar pressure effectively reduces heat generation at the tooth, guaranteeing a high degree of stability. The machine can be operated using either water-based cooling emulsion or oil. The coolant tank with its capacity of 240 litres and the filtration unit are integrated in the body of the machine. By the use of an automatic path offset, different pitches can be machined using the same grinding wheel thickness. This means that only a small number of grinding wheels need to be stocked, and frequent grinding wheel changeover is a thing of the past. A blade clamp at the point of grinding replaces the clamping flanges formerly required.

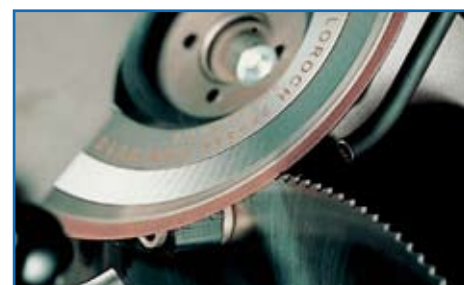
Innovation in design and control engineering.

The operator can adjust the position of the control panel to suit his needs. This is where all the data required is entered into the system. The Sym-menu prompt system ensures optimum clarity of the screen. The most important information is easily seen at a glance. All the positions can be individually selected on the screen using the Easy-Touch system. Any changes required can be carried out quickly and easily. Based on the data entered, the computer calculates the tooth pitch and tooth height, and suggests the DIN tooth height difference, which can also be separately adjusted. The computer also automatically calculates the grinding wheel thicknesses for the computed tooth pitch. The hook and clearance angle are pre-selected on screen. No other settings need to be entered into the machine. With its compact design, the EKOSTAR 500 takes up only a minimum of space. The generous door can be opened completely to one side, offering easy access to the entire grinding area, while the operator is not bothered by the irritation of dripping coolant.

The outstanding versatility of the EKOSTAR 500 is demonstrated by its wide range of possible uses: complete machining of saw blades in a single clamping operation.



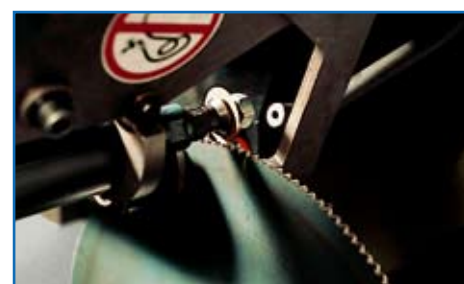
Sharpening



Chamfering



Re-toothing



Grinding chip breaker grooves

EKOSTAR 500

The automatic grinding machine EKOSTAR 500 is ideal for the sharpening, chamfering and re-toothing of metal circular saw blades.

In addition the machine can be used for cutting off defective teeth and grinding of saw blades with vari pitch toothing.

Besides HSS-, segmental saw blades and solid carbide blades, the EKOSTAR 500 will also grind friction saw blades. The saw blade data will be entered into the control panel. The computer immediately calculates the tooth pitch and the tooth height and suggests the DIN tooth height difference for tooth shape "C".

The computer also automatically calculates the required grinding wheel thickness and informs the operator if a grinding wheel change is necessary.

The hook- and clearance angle, the amount of the stock removal and the grinding speed are presented on the screen: that's all, the machine is ready to start grinding!

The chamfering is semi automatic.

Advantages at a glance

- ✎ Absolute indexing precision and a perfect tooth shape through modern CNC-control system
- ✎ CBN-abrasive grinding with effective cooling guarantees high stock removal rates coupled with optimum surface quality
- ✎ Automatic path offset: different pitches can be machined using the same grinding wheel thickness, which means a very small number of grinding wheels needs to be stocked
- ✎ Blade clamp at the point of the grinding enables the grinding of saw blades with \varnothing 140 – 500 mm by use of the same clamping flange
- ✎ Fast and easy programming using the Loroch Easy-Touch system
- ✎ 240 litres coolant tank in steel and high pressure cooling with 6 bar pressure
- ✎ Complete enclosure with big door



Special program: full metal tooth



Control

EKOSTAR 500

Technical Data

Working range

Saw blade diameter	Ø (20) 140 – 500 mm
Tooth pitch	1 – 25 mm
Number of teeth	2 – 998
Saw blade thickness	up to 8 mm

Grinding wheels

CBN-grinding wheel	Ø 200 mm
Diamond-grinding wheel	Ø 200 mm
Bore size	Ø 32 mm

Cooling

Coolant pressure	approx. 6 bar
Coolant type	Water emulsion / Oil

Electrical installation

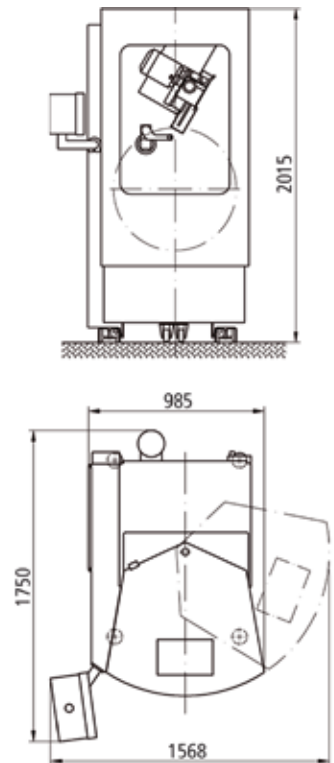
Power input grinding motor	2.2 kW
Power input machine	approx. 7 kW

Weight

approx. 1025 kg

Dimensions (W x D x H)

door closed	985 x 1750 x 2015 mm
door opened	1568 x 1750 x 2015 mm



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