

CNBS 100



CNC-controlled sharpening machine
for wood and metal cutting band saw blades



- + Input panel with a display for easy setup
- + No adjustments during the grinding process required
- + Ideal for multiple machine operation

The CNC-controlled sharpening machine CNBS 100 grinds all common band saw blades with highest precision.

The band saw blade will be ground completely after the sharpening process was started. So the operator will be free for other jobs.

It operates with CBN or diamond grinding wheels using water cooling.

Function

The saw tooth to be sharpened is pushed into the grinding position via a feed pawl, which is mounted to the grinding head. So it doesn't matter if the tooth pitch is consistent or variable. Here the band saw is clamped in place by hold-down devices and a pressure roller. It is then possible to regrind the saw tooth.

The cooling prevents structural changes through the transfer of heat to the coolant.

Compact and sturdy design

The machine has an extremely compact and space-saving design. The coolant



Modified model for grinding band saw blades up to 15 m length and with optional air exhaust system

The programming of the machine is a simple procedure. All relevant data such as tooth shape, hook and clearance angle, tooth pitch, infeed, working speed, etc. are entered via a display. The advancing speed of the grinding wheel is infinitely adjustable.

An electronic hand-wheel is used to position the grinding wheel in reference to the tooth position.

The same grinding wheel can be used in most cases, because one wheel size can be used for different tooth pitch dimensions.

The contour to be ground is generated by an exact, computer-controlled 2-axis movement of the grinding head. The contour is pre-defined by the operator by means of a few extremely simple inputs in the CNC control system.

The desired stock removal can be achieved in one or more partial infeeds. Once the saw tooth is complete, the next saw tooth is ground, i.e. the band saw is generally sharpened in one revolution.

High stock removal and excellent surface finish is achieved by CBN grinding plus effective water cooling.

tank is integrated in the machine stand and is easily accessible from the front.

The full enclosure of the machine protects the machine operator, reduces the noise and contains splashing water. The sturdy band saw roller cross is also readily accessible and easy to adjust, thus ensuring user-friendly loading of the band saw.

Programming

The CNBS 100 is equipped from the factory with 7 different master tooth profiles. Beside standard tooth shapes and Woodmizer tooth shapes there are special tooth profiles for bimetal and carbide tipped band saws.

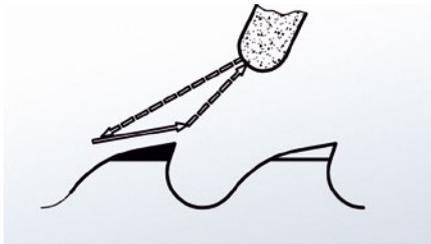
It has to be noted that with bimetal saw blades generally only the relief angles are ground. With carbide-tipped saw blades only the tooth face is ground.

In cases where the tooth profile is not already stored in the control, the machine can be programmed for the new tooth profile.

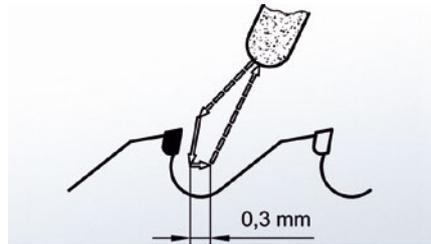
The new tooth profile is stored under a 3 digit program number. Whenever the same tooth profile will be ground again at a later time, the operator enters only the desired program number. The programming of the actual sharpening program is just as simple.

After selecting a specific tooth profile the machine automatically suggests a suitable feed and speed for the grinding wheel. These values can be adapted or modified as desired.

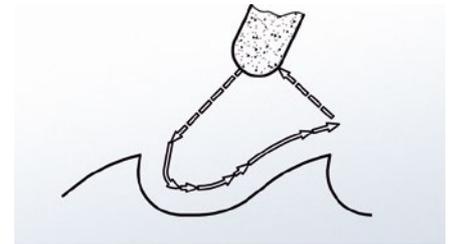
The advanced programming feature makes it possible to create unique tooth profiles with up to 6 selectable tooth profile parameters – as shown in the example on the right side. These consist of straight lines and radii.



Movement of the grinding head on Bi-Metal band saw



Movement of the grinding head on carbide-tipped band saws



Movement of the grinding head on profile grinding, e.g. CV band saws



Bi-Metal band saw with Combi-/Variotoothing



Carbide-tipped band saw



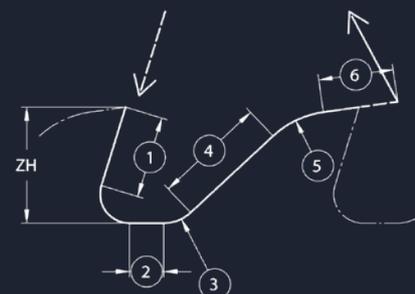
CV band saw

The CNBS 100 is the ideal machine for sharpening CV, bimetal, stellite and carbide-tipped band saws with widths of 8 – 100 mm.

Advantages of the CNBS 100

- + Excellent surface finish thanks to CBN or DIA grinding wheel plus water cooling
- + Grinding of constant or variable tooth pitch
- + A variety of tooth pitches can be ground with the same grinding wheel

- + Freely programmable tooth profiles

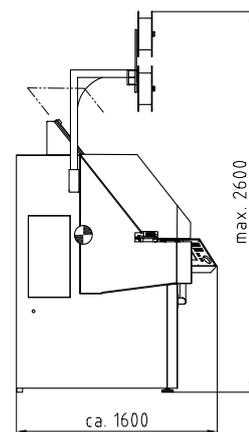
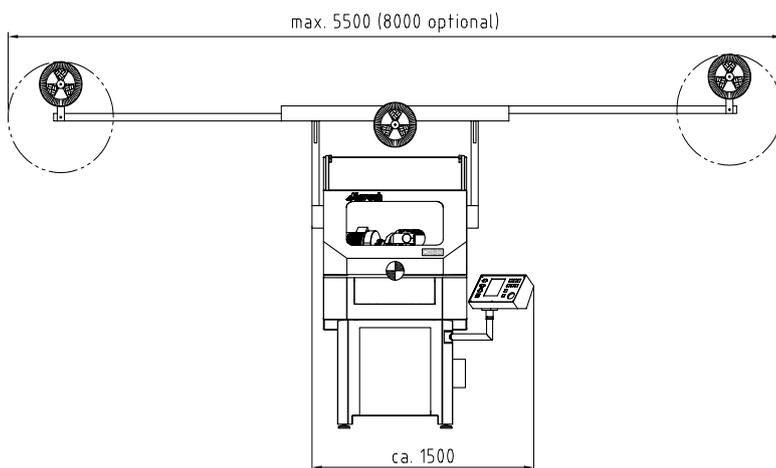


Outline with degrees of freedom

- + Grinding wheel dressing not necessary
- + Complete job done in one saw blade revolution
- + Low noise and dirt generation
- + Robust and compact design
- + Good cost-/performance ratio

Technical Data

Range of Operation	
Band saw width	8 – 100 mm
Tooth pitch	3 – 45 mm
Tooth height	max. 18 mm
Blade body thickness	approx. 0.5 – 3 mm
Band saw length	min. 3600 mm, max. 7000 (15000) mm
Hook angle	-10° to +25° arbitrary
Working speed	approx. 100 – 500 mm/Min.
Grinding wheels	
CBN or DIA	Ø 200 mm (14F1)
Width	1.3 – 3 mm
Bore size	Ø 32 mm
Cooling	
Coolant pressure	approx. 0.5 bar
Coolant type	water emulsion
Required compressed air connection	
	approx. 33 l/min. with 6 bar
Electrical installation	
Grinding motor power	0.5 kW
Machine input power	approx. 1.5 kVA
Weight	
Machine	approx. 690 kg
Dimensions (W x D x H)	
With roller cross	max. 5500 x 1600 x 2600 mm – Standard (max. 8000 x 1600 x 2600 mm – Optional)



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