



CNBS 80

✦ The new generation of a low-cost, high-tech sharpening machine for band saws.

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The CNBS 80 is the ideal machine for sharpening CV, bimetal and carbide-tipped band saws with widths of 8 – 80 mm.

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

The operation on programming of the machine is a simple procedure. All relevant data such as tooth shape, hook and clearance angle, infeed, working speed, etc. are entered via a display. The feed speed of the grinding wheel can be steplessly adjusted. The same grinding wheel can be used to grind a variety of pitches. In fact, it is possible to cover all permissible pitch ranges with just 2 different wheels.

Programming

The CNBS 80 is equipped by 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.

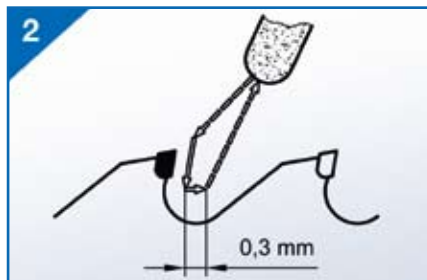
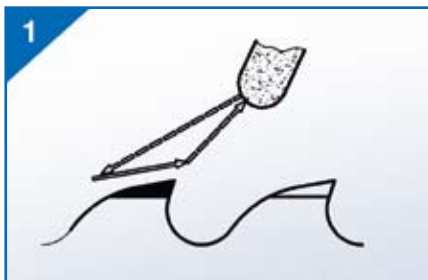


Fig. 1 – Movement of the grinding head on Bi-Metal band saw

Fig. 2 – Movement of the grinding head on carbide-tipped band saws

Fig. 3 – Movement of the grinding head on profile grinding, e.g. CV band saws

Therefore, it does not matter when resharpening whether your band saws have a constant or variable tooth pitch (combination tooth).

In cases where the tooth profile is not already stored in the control, the machine can be programmed for the new tooth profile. This can be accomplished in 2 different ways. The most frequently used programming approach is as follows:

First, the desired type of tooth profile is selected. For example a pointed or a cone-shaped tooth profile is defined with the number „4“.

Afterwards the master tooth profile (in storage location „00“) is copied on the desired program storage location.

The new tooth profile is stored under a 3 digit program number. The first digit always refers to the type of tooth shape. The two following digits describe the storage location. For example, the program number „401“, has the following meaning: pointed or cone-shaped tooth profile in storage location „01“.

CNBS 80

The operator selects the desired tooth pitch. All tooth parameters are adjusted to the new tooth pitch, perhaps the hook angle has to be changed.

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 degrees of freedom - as shown in the example below. These consist of straight lines and radii.



Integrated coolant tank

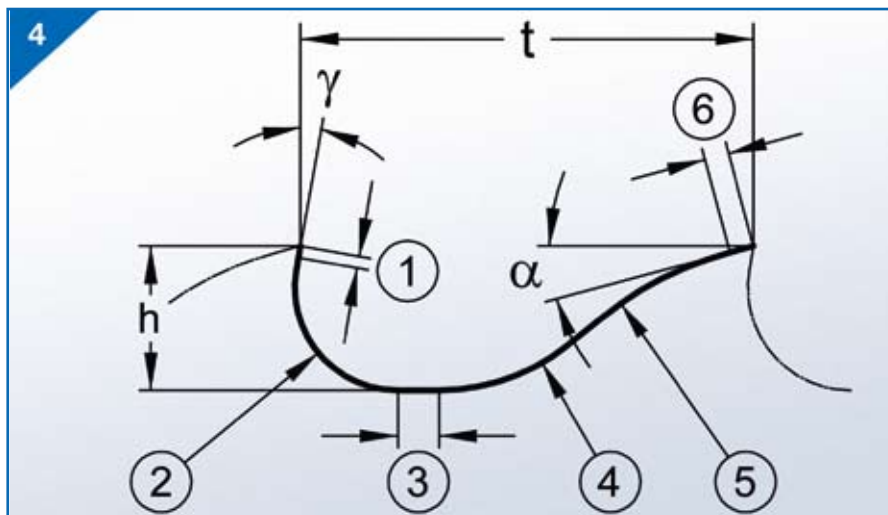


Fig. 4 – Outline with degrees of freedom

Function

The saw tooth to be sharpened is pushed into the grinding position via a feed pawl. Here the band saw is clamped in place by hold-down devices and a pressure roller. It is then possible to regrind the contour or face of the saw tooth for example. 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 effected 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.

The CBN deep grinding technique also guarantees a high cutting rate and optimal surface quality. The coolant prevents the tooth from getting hot, thus avoiding temperature-induced structural changes.

Compact and sturdy design

The machine has an extremely space-saving design. The coolant tank is integrated in the machine stand and is easily accessible from the front. The sturdy band saw roller cross is also readily accessible and easy to adjust, thus ensuring user-friendly loading of the band saw. The saw blade holder can be conveniently adjusted to the relevant band saw width via a lever.

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Advantages at a glance

- ↙ Simple operation
- ↙ Freely programmable tooth profiles
- ↙ Excellent surface finish thanks to CBN or DIA grinding wheel plus water cooling
- ↙ Low noise and dirt generation
- ↙ A variety of tooth pitches can be ground with the same grinding wheel
- ↙ Grinding wheel dressing not necessary
- ↙ Short setup times
- ↙ Good cost/performance ratio
- ↙ Coolant tank integrated in machine stand with easy access
- ↙ Robust design

Technical Data

Working range

Band saw width	8 – 80 mm
Tooth pitch	approx. 3 – 34 mm
Blade body thickness	approx. 0.5 – 3 mm
Band saw length	min. 1400 mm rather 2800 mm, max. 7000 mm (longer lengths possible on request!) Standard programs for pointed and rounded teeth
Hook angle	freely selectable from -10 to +25 degrees
Working speed	approx. 100 – 600 mm/min.

Grinding wheels

Radius wheel (14F1)	CBN or DIA
Diameter	Ø 200 mm
Width	max. 3 mm
Bore size	Ø 32 mm

Cooling

Water emulsion at approx. 0.5 bar pressure

Required compressed air connection

approx. 40 l/min at 6 bar

Electrical installation

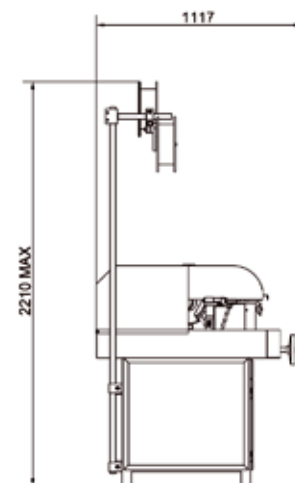
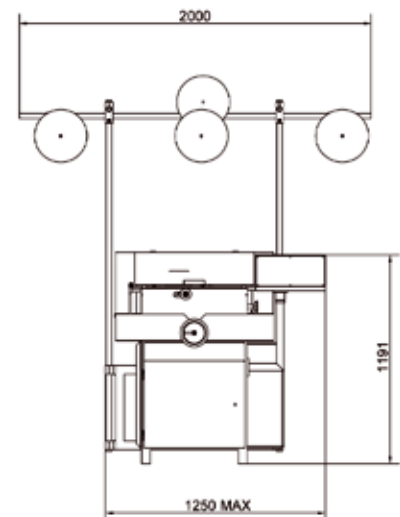
Grinding motor	0.5 kW
Total connected load	approx. 1.5 kW

Weight

Machine	350 kg
Roller cross	20 kg

Dimensions (W x D x H)

Without roller cross	1250 x 1117 x 1191 mm
With roller cross	2000 x 1117 x 2210 mm



Contact

Loroch GmbH
Josef-Loroch-Str. 1
69509 Mörlenbach, Germany

phone: +49 (0)6209 7159-50
+49 (0)700 56762433
+49 (0)700 lorochde

fax: +49 (0)6209 7159-38
e-mail: info@loroch.de
web: www.loroch.de