



AVB 850 - User manual

ELITE AVB 850

User manual



Version June 2025



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1. FIRST STEPS

Congratulations on your purchase of the automatic dual-grinding wheel circular saw blade grinder, ELITE model AVB 850.

Please read this guide before you begin.

The ELITE AVB 850 model is our fastest grinding machine for both the face and the back of all common tooth geometries on carbide-tipped circular saw blades with diameters ranging from $\varnothing 100$ to 850 mm. The dual-grinding wheel system allows for complete face and back sharpening in a single setup: once the machine finishes sharpening the face, it automatically adjusts to sharpen the back, or once the back is finished, it automatically adjusts to sharpen the face. It comes equipped with 5 CNC axes for complete machining of all common tooth geometries in one cycle.

You can view the product catalog at the following link: ELITE model AVB 850

This manual introduces you to the main functions of the grinder in order to avoid risks to your health or that may cause a breakdown or premature wear of the machine.

In case of any doubt, please contact us or one of our authorized distributors.

Informative Note: *The use described in the manual of this circular saw sharpener described therein may present some variations in use as our machinery is subject to possible construction modifications, depending on the incorporation of technological advances in our sharpening equipment.*



2. SAFETY

2.1.Safety regulations

Carefully observe and apply the following safety rules, not respecting these rules may cause personal injury or damage to the machine itself.

The installation and maintenance of the machine described in this manual must be carried out only by operators who are familiar with its operation and have sufficient technical knowledge.

The ELITE sharpening machines of the AVB 850 model range have been designed for the sharpening of circular saws with carbide teeth, excluding any other type of operation.



DANGER HIGH VOLTAGE



DANGER OF ACCIDENT



DANGER DUE TO SPARK PROJECTION



WEAR PROTECTIVE SHOES



DANGER FROM SHARP TOOLS



USE HEARING PROTECTORS

These warnings do not include all possible risks that improper use of the machine could cause. For this reason, the operator must proceed with prudence and observing the rules.



2.2. Use and storage of the instruction manual

This instruction manual must be read and understood by all personnel who come into contact with the machine.

This manual is for:

- Indicate the correct use of the machine according to the type of work to be carried out.
- Provide the necessary instructions for the transport, adjustment and maintenance of the machine.
- Facilitate the ordering of spare parts and information of risks.

Limits of use of the manual:

The machine is intended for professional use and therefore the experience of the operator is required and of vital importance.

Importance and conservation of the manual:

This manual must be considered part of the machine and must therefore be attached to it until the end of its use.

Additional information and clarifications:

The user, owner or maintenance person can contact the manufacturer to request any additional information on the use of the machine and possible modalities for maintenance and repair intervention.

Expiration of responsibility:

The manufacturer is considered exempt from any liability in the event of:

- Improper use of the machine.
- Use of the machine by untrained persons.
- Serious failures in scheduled maintenance.
- Unauthorized interventions or modifications.
- Use of non-original spare parts.



2.3. Declaration of conformity

The company hereby **ELITE Machines, SLU**
C/Joan Oró, 27
ES-08635 Sant Esteve Sesrovires

declares that the product indicated below, based on its conception and construction, as well as the version put on the market by our company, complies with the mandatory basic health and safety requirements of the CE directive.

This declaration loses its validity in the event of unauthorized modifications to the product.

Product name: ***ELITE model AVB 850***
Product type: ***Circular saws sharpening machine***
Serial No.: _____

EC Directive Competences:

- **EC Machinery Directive (2006/42/EC)**
- **European directive on electromagnetic compatibility (2014/30/EU)**
- **The protection purposes of the CE low voltage directive (2006/95/CE) were fulfilled according to annex I, nr. 1.5.1 of the machinery directive 2006/42/EC**

The technical documentation was compiled by Legal representative of the documentation:

Sergi Valls Gramunt
Joan Oró, 27
ES-08635 Sant Esteve Sesrovires

Date / manufacturer - Signature: _____

Signatory data: Sergi Valls Gramunt, manager



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3. TECHNICAL DATA

In the following information table, find the list of technical specifications of the sharpener described in this manual.

TECHNICAL DATA	AVB 850
Saw blade outside diameter	From ø100 to ø850 mm. (4" to 33.5")
Saw blade bore diameter	From ø10 mm. (0.34")
Saw blade thickness	Up to 8 mm. (0.31")
Tooth pitch	Up to 120 mm. (4,72"). CNC controlled
TOP GRINDING	
Clearance angle	From +5° to +35°
Bevel angle	From -45° to +45°
Grinding path	Up to 25 mm
Available tooth shapes	Flat (P) - Single bevel (L/H or R/H) - Alternate (AT) - Alternate and bevel (HGB) - Pointed tooth (PTR) - Triple chip (TRZ) - Pointed and flat - Triple chip and flat (TCH) - Double triple chip (D/T/C) - Combination (SLR)
FACE GRINDING	
Hook angle	From -10° to +35°
Grinding path	Up to 25 mm. (0.98")
Available tooth shapes	Flat (P) - Single bevel (L/H or R/H) - Alternate (AT)
OTHER DATA	
Grinding wheel motor	1.5 HP
Grinding wheel speed	Adjustable from 2500 to 5000 RPM
Grinding wheel diameter for top	Ø125 mm.
Grinding wheel diameter for face	ø175 mm.
5 CNC axis	A: Tooth pitch - B: Tooth cutting angle - C: Side angle of the tooth back - X: Sharpening load - Z: Sharpening path
Machine dimensions	1650 x 1200 x 1900mm.
Machine weight	690 kg



3.1 TECHNICAL REQUIREMENTS

A 6 bar air connection is required.

Connection voltage: 220/400V 2Ph 50/60Hz

Required connection power: 1.5 kW

3.2. EQUIPAMIEN INCLUDED

- Double wheel holder for sharpening the front and back surfaces
- 3 mm feed dog
- Device for serial sharpening of equal diameters
- LED lighting of the work area
- Ready for connection to an ELITE FILTRAmag individual filtration system or a centralized filtration system.



4.TRANSPORT

The ELITE AVB 850 is delivered packed in a wooden crate.

During all transport and transfer, the machine must be kept in its original vertical position, any variation in this position may lead to the loss of the guarantee.



Machine model	Packing dimensions (mm)	Gross weight (kg)
AVB 850	1970 x 1480 x 2200 mm.	780



4.1. Instructions for unpacking and setting up

Take special care when lifting the load: The load may not be centered!

To lift or move the load, use a forklift with blades long enough to support the machine, taking into account the width and depth of the machine for the calculation of the weights to lift.



Once the packaging has been opened, remove the fixing stops from the feet of the machine.

Remove protections before connecting the machine.





5.INSTALLATION

5.1.Machine placement

Before any work make sure that the machine is well aligned and does not oscillate at any of its ends, in which case it must be wedged to avoid movements. For its correct level it is necessary to use a leveling tool. This check must be carried out both longitudinally and transversally.



Poorly leveling the machine can cause unwanted vibrations and premature wear of the linear guides.

Before connecting it, remove all packaging protections that the machine has for transport.



WARNING: The machine must not be used under any circumstances by unqualified or unauthorized personnel.



5.2.Electrical connection



DANGER HIGH VOLTAGE!

The electrical connection of the machine must be carried out by qualified technical personnel only at the voltage indicated in the machine order / machine identification plate.
For any doubt about the voltage, consult the manufacturer before the connection.

Any claim for an incorrect connection will be out of warranty.



5.3.Main components of the machine



- 1. Machine operation door.
- 2. Full enclosure.
- 3. Machine control panel.



5.4. Control panel



1. LCD screen
2. Z axis up / grinding wheel up.
3. X axis left / grinding wheel left.
4. X axis right / grinding wheel right.
5. Z axis down / grinding wheel down.
6. START button.
7. STOP button.
8. Emergency stop.



For sections 6 to 8 of this manual, as well as for more up-to-date information and useful videos on the operation of the machine, please refer to our website

www.elite.es



www.elite.es/en/support/manuals/avb-850-user-manual



9.ACCESSORIES AND CONSUMABLES

9.1.Grinding wheels

9.1.1 Top grinding

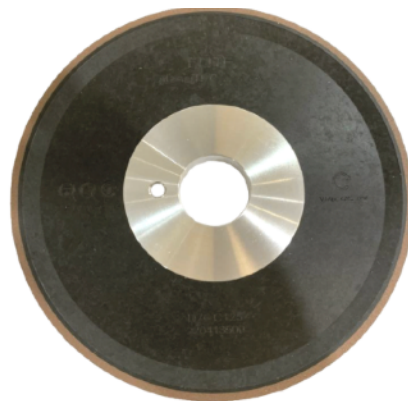
For top grinding use the grinding wheel ref. nr. 2011-B. 6A2H D126/46 C100/75 Ø125x5x6x18ø32 MM.



Grinding wheel for top grinding

9.1.2 Face grinding

For face grinding use the grinding wheel ref. nr. 2132-A. 12V9 20° D76 C125 ø175x2,9x13x13xø32 mm.



Grinding wheel for face grinding



9.3. Coolant agents

We recommend to use ELITE SintoCut PRO MIX or equivalent to mix with water emulsion. If you prefer to grind with oil, you can use our SintoCut PRO MD. Both coolant are available in 20 liters can or 200 liters barrel.



SintoCut PRO MIX 20 L



SintoCut PRO MIX 200 L



SintoCut PRO MD 20 L



9.3. Equipment

Additional equipment of the machine.

9.3.1 Filtering systems

Machine could be equipped with one of the following ELITE filtering systems. If your machine already has one of this systems and you need information or help, please refer to the manual of the filtering system.

9.3.1.1 FILTRAmag UNO

Filtering system integrated in the machine to save space.



9.3.1.2 FILTRAmag SOLO



Independent filtering system for one machine.



9.3.1.3 FILTRAmag PRO

Centralized filtering system for up to 5 machines.





10. WARRANTY

All our machines are tested before being shipped. However, there can always be defects that are not observable with the naked eye.

Our machines are guaranteed against manufacturing or material defects under normal use and maintenance conditions.

The period of this guarantee is 12 months from the date of purchase and consists of the replacement of defective material.

The guarantee will be automatically canceled in the event of a modification outside our company. Or in manifest cases of misuse of the machine.

The guarantee does not include parts subject to normal wear due to use such as skids, lubrication cartridge, abrasives, etc.



www.elite.es/en/support/manuals/avb-850-user-manual

For more up-to-date information and useful videos on how to operate the machine, see our website www.elite.es