ELITE CC
User manual

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THIS PAGE IS NOT WRITTEN INTENTIONALLY

1. FIRST STEPS

Congratulations on your purchase of the ELITE model CC automatic circular knife grinder machine.

Please read this guide before you begin.

The CC allows an automatic circular blades and counter-blades sharpening either in sharpening mode or production of same series mode. It incorporates a programmable control panel with a CNC axis and two manual axes which allows a large variety of sharpening configurations.

Its operation is control system with LCD screen and a CNC axis for automatic grinding process.

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 directly or one of our authorized distributors.

Informative Note: *The use manual of the 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 Machines of the CC model range have been designed for the grinding of the circulares blades from ø230 to 800 mm, 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 CC***
Product type: ***Circular knife 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

3.TECHNICAL DATA

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

TECHNICAL DATA	GBT 850
Saw blade diameter	From ø230 to ø800 mm. (9" to 31.5”). Available from ø80 mm as an option. (3.15”)
1 CNC axis	Programmable grinding wheel engine for roughing and finishing operations.
2 manual axes	Programmable blade speed from 1 to 70 RPM.
Variable speed blade holder	From 10 to 400 rpm.
Circular knife angle	From +100º to 0º
Grinding wheel motor	4CV at 3000 rpm.
Programmable blade holder speed	For roughing, finishing and polishing operation.
LCD screen	Very easy and friendly programming system, each step shows to operator the requiered values.
Programming of the grinding cycle	Roughing, finishing, polishing
Grinding wheel speed	Adjustable from 5000 to 9000 RPM
Half enclosure	
Machine dimensions	? x ? x ? mm.
Machine weight	740 kg. ?
REFRIGERATION EQUIPMENT	
Tank capacity	220 liters
Coolant flow rate	Up to 60 liters/minute

3.1 TECHNICAL REQUIREMENTS

A 6 bar air connection is required.

Connection voltage: 220V 3Ph 50/60 Hz

Required connection power: ? kW

3.2 ACCESSORIES INCLUDED

- Clamping jaw system to prevent vibration on large discs
- Saw holder for saw blades with a diameter of 230 to 850 mm.
- LED lamp lighting inside the work area
- Device for production of equal diameter saw blades.
- Machine closed by half enclosure.
- Prepared for connection to a machine filtration system or a centralized filtration system.

4.TRANSPORT

The ELITE CC 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	Dimensions (mm)	Weight (kg)
CC	x x	

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.

Before connecting the machine, remove any protection that the machine may have to protect the components during transport.

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.

Remember: before connecting the machine, remove any protection that the machine may have to protect the components during 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.

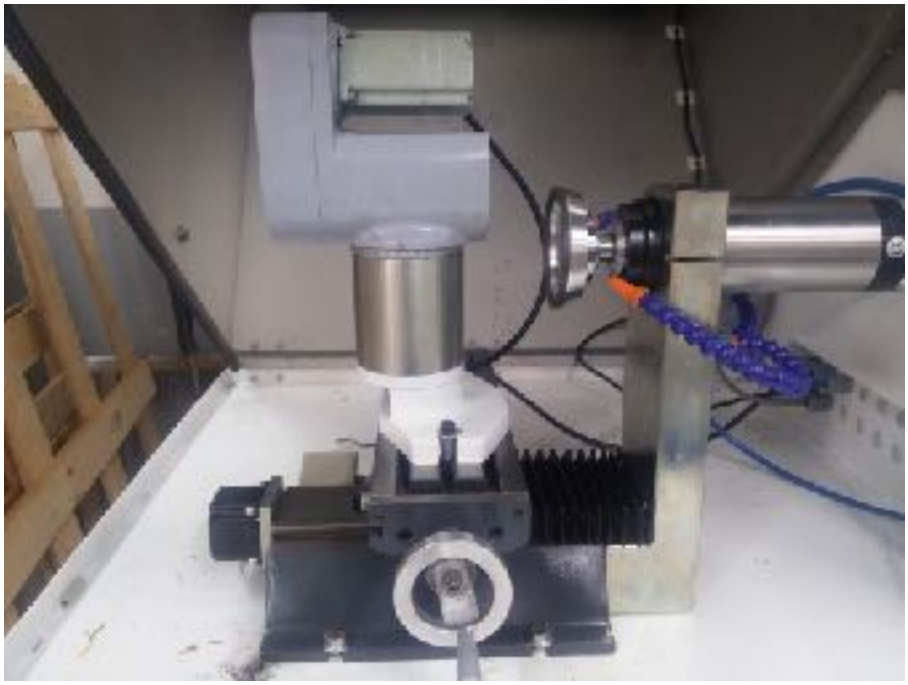
The machine is delivered without a plug and must be connected to a three-phase mains (480 / 400V or 220V + N + Pe), as described on the plate located on the rear side of the machine.
Connect only the ground wire with the yellow-green (grounding) intermediate wire.

The direction of rotation of the motors must be checked by turning the pump motor on and check that it turns in the correct direction.

ELITE does not assume any responsibility in the event of an incorrect electrical installation that may cause a malfunction of the machine and even personal or material damage.

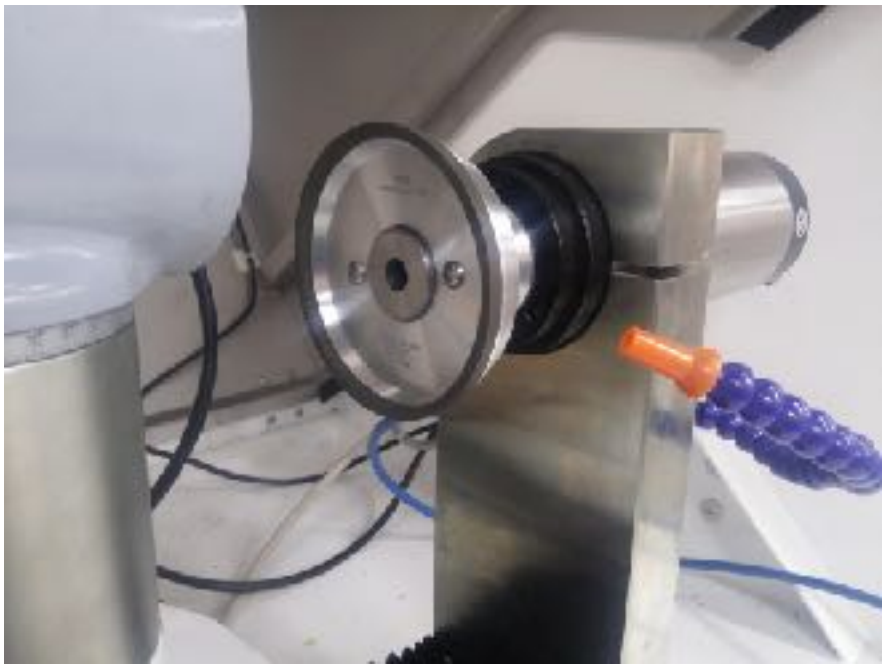
5.3.Main components of the machine

The grinding machine consists of the following parts:



Height Supplement for larger saws (optional)

Spindle



5.3.Main components of the machine

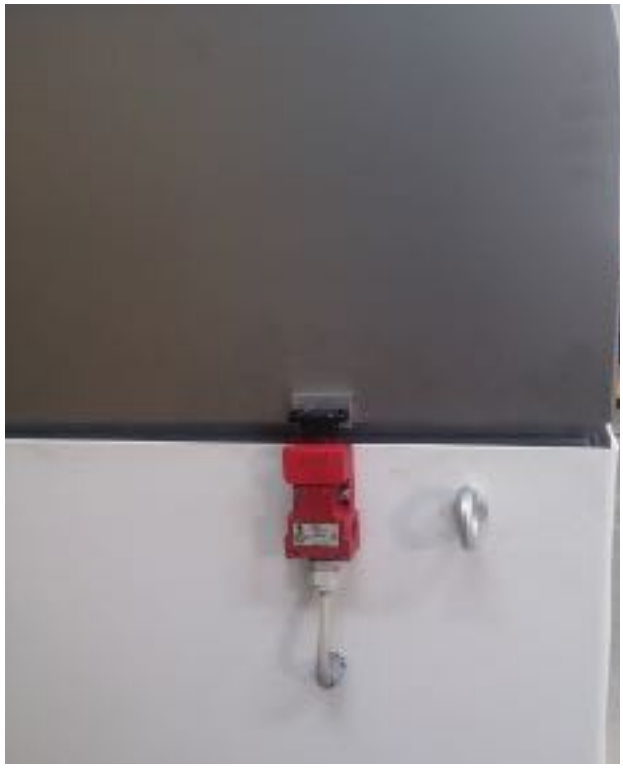
Electrical cabinet

LCD display

5.3.Main components of the machine

Main switch

Safety device



5.4.Control panel

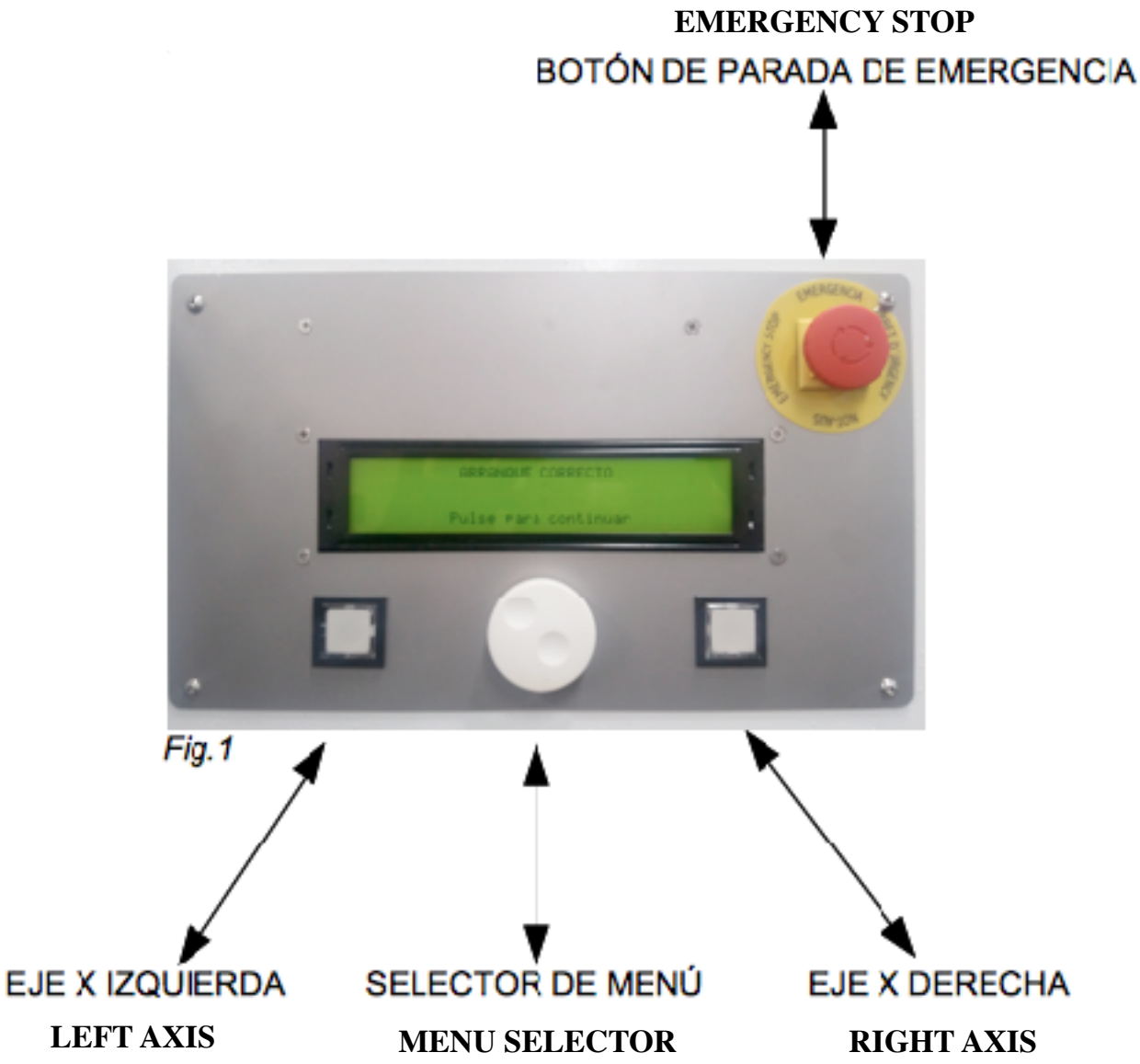


Fig.1

6.USER INSTRUCTIONS

6.1.Grinding operation

Once the machine has been switched on, the message "Correct start up" (Arranque Correcto) (fig.1) will appear in case the system is OK. Pressing the menu button to continue will give power to the electrical cabinet.

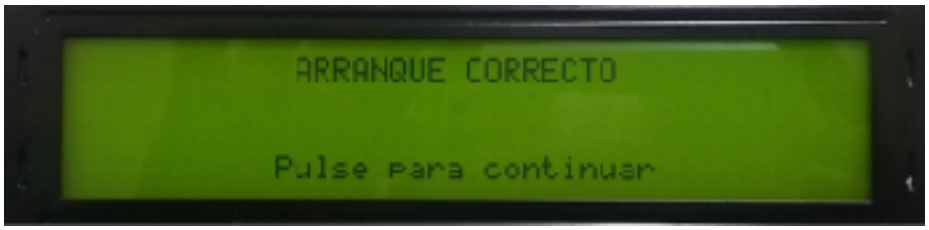


FIGURE 1

After pressing the menu selector, the following screen appears (see fig.2)

FIGURE 2

In this screen, you can select the following operations: 1. Sharpening (Afilado), 2. Production (Producción) and 3. Process values (Valores de proceso).

Select the program: 1. Adjust (see fig. 2), to set parameters of the sharpening operation by pressing the menu selector. Then the following screen will appear (see Figure 3).

FIGURE 3

1. Roughing (Desbaste): is the start-up process. The first numerical value indicates the total roughing (Fig. 3 See eg 0.04) and the second; The roughing by pass or partial thinning (Fig. 3 See ex. 0,01). Then, the application of the partial roughness by number of turns appears (Fig. 3 See G 1) and grind speed option for roughing expressed in RPM (Fig. 3 See RPM 9000). Select the parameters required for the program desired by the operator.

* NOTE: If "0.00" is entered in the total roughing option, this operation will be ignored.

3. Lapped (Lapeado): the final polishing of the cutting edge is indicated, where the number of turns to be polished can be selected (Fig. 3, see G 4) and the speed of the grinding wheel (Fig.). Again, select the parameters required for the program desired by the operator and press the menu selector to go to the next screen (see fig.4).

FIGURE 4

All values can be changed by turning the menu selector. To do this, move to the desired option, press the selector and when the required value is reached, press the selector again to set the value.

To go to the next step of the process, turn the selector to the next option and press the selector again to switch the screen.

*NOTE: If you do not want to do any of the steps, you must indicate in the total value (the first box of each option) "0".

In the following screen (fig.4) the following parameters can be selected:

Direction of the grinding wheel rotation (Giro muela): to choose between horary (Horario) or counterclockwise (Antihorario) using the menu selector. Choose the option desired by the operator. (see fig.4)

Direction of the knife rotation (Giro cuchilla): to choose between horary (Horario) or counterclockwise (Antihorario) using the menu selector. Choose the option desired by the operator. (see fig.4)

Rotary speed of the knife (RPM cuchilla): expressed on screen in RPM blade. (See fig. 4) Choose the option desired by the operator.

FIGURE 5

The following parameters appear on the screen shown below (fig.5):

- **To save (Guardar)**: allows you to store the previously selected data. To save them select this option using the menu selector and press it to store them (see fig 5)

- **To pass on (Transmitir)**: selecting this option using the menu selector will start the program. (See Figure 5)

After performing these steps, the operator must close the machine cabinet to finally start the program that has been configured.

Otherwise, the following message appears on the screen “Open Cabin” (Cabina Abierta) “Close the cabin to start grinding” (Cierre la cabina para poder afilar) :

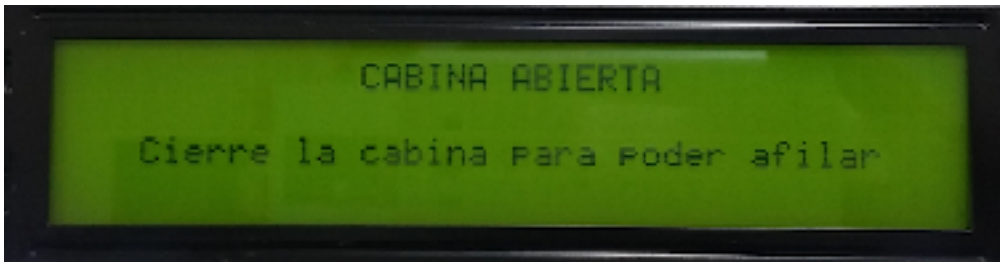


FIGURE 6

Finally, you should approach the blade until it rubs against the grinding wheel. Now you can start the sharpening process.

6.2.Production operation

The production operation is designed to sharpen several tools with the same diameter.

FIGURE 7

To program the production operation, go to the LCD menu screen. Select the program: 2. Production (Producción) (see fig.7), to set parameters of the production operation, by pressing the menu selector. You will then see the following screen (see Figure 8).

FIGURE 8

- **1. Diameter (Diámetro)**: The first parameter corresponds to the actual measured diameter of the circular saw (Fig. 8 See eg 0.10) and the second; To the desired sawing diameter (Fig. 8 See i.e.: 0.03).

- **2. Angle (Ángulo)**: In this parameter you must enter the selected angle in the divider head (Fig. 8 See i.e.: 0º)

- **3**. **Roughing (Desbaste)**: is the boot process. The first numeric value indicates the total roughing, which is calculated automatically by the program. The operator must only enter the values required for the partial roughing (Fig. 8 See i.e.: 0.01) and for the grinding wheel speed expressed in RPM (revolutions per minute).

- **4. Finishing (Acabado)**: Once the roughing process is finished, the finishing process is started. In the first box the amount of total finishing is shown (Fig. 8 See i.e.: 0,04), in the second box the amount of partial finishing (Fig. 8 See i.e.: 0,01). Then, the option of the partial finishing by number of turns appears (Fig. 8 See G 2) and wheel speed option for finish expressed in RPM (Fig. 8 See RPM 4500). Select the parameters required for the program desired by the operator.

* **NOTE**: If "0.00" is entered in the total roughing option, this operation will be ignored.

- **5. Polishing (Lapeado)**: the final polishing of the cutting edge is indicated, where the number of turns that the polishing can be selected (Fig. 8 see Gr 7) and the speed of the grinding wheel (Fig.). Again, select the parameters required for the program desired by the operator and press the menu selector to move to the next screen (see fig.9).

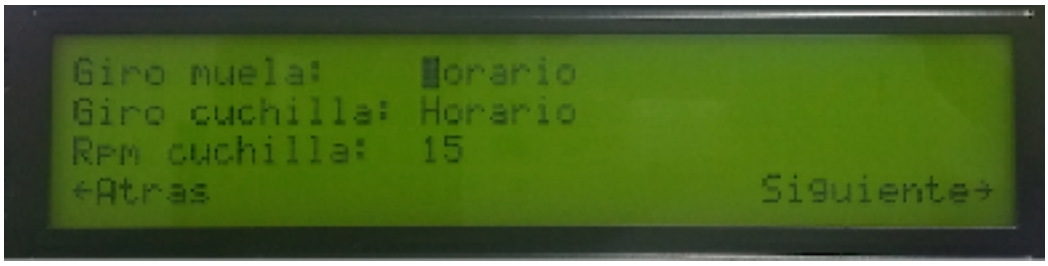


FIGURE 9

In the following screen (fig.9) the following parameters can be selected:

- **Direction of the grinding wheel rotation (Giro muela)**: to choose between horary (Horario) or counterclockwise (Antihorario) using the menu selector. Choose the option desired by the operator. (see fig.9)

- **Direction of the knife rotation (Giro cuchilla)**: to choose between horary (Horario) or counterclockwise (Antihorario) using the menu selector. Choose the option desired by the operator. (see fig.9)

- **Rotary speed of the knife (RPM cuchilla)**: expressed on screen in RPM blade. (See fig. 9) Choose the option desired by the operator.

FIGURE 10

The following parameters appear on the screen shown below (see fig.10):

- **To save (Guardar)**: allows you to store the previously selected data. To save them select this option using the menu selector and press it to store them (see fig. 10)

- **To pass on (Transmitir)**: selecting this option using the menu selector will start the program. (see fig. 10)

Finally, you should approach the blade until it rubs against the grinding wheel. Now you can start the sharpening process. This process will only be performed on the first blade, for the following blades, it will copy exactly the same process followed on the first blade.

6.3.Process value operation

To program the process value operation, go to the LCD menu screen (see fig. 11) and select *3. Process settings (3. Valores de proceso)* using the menu selector.

FIGURE 11

Once the process value operation is selected, the following screen will appear (see figure 12), in which the following parameters can be selected:

- **Grinding wheel distance (distancia separación muela)**: indicates the safe separation distance from the grindstone to the circular blade at the end of the working cycle.

- **Time off light (tiempo desconexión luz):** Reflects the time in seconds it takes the cabin light to turn off once the auto-duty cycle has started. The value 0s (seconds) indicates that the cabin light is always on.

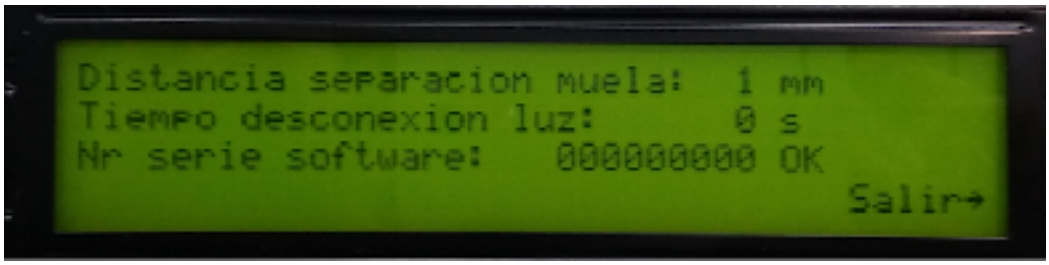


FIGURE 12

Once the parameters in figure 12 are selected, select at the menu selector the Exit (Salir) option to start the automatic work cycle.

7.MAINTENANCE

Our machines require very little maintenance. In any case, it is recommended to carry out the following operations periodically (ATTENTION: before pressing the emergency button or disconnecting the machine):

- **Daily:** General cleaning of the machine.
- **Weekly:** Lubrication of the X-axis guide.
- **Periodically:** Replacing the drill (if applicable)

To replace the grinding wheel, proceed as follows:

- Switch off the machine using the general switch.
- Remove the two M5 or M6 allen screws located on the front of the grinding wheel.
- Remove the grinding wheel and proceed with its replacement.

8.PROBLEMS AND SOLUTIONS

In case of malfunction please refer to the following instructions, taking into account that it is usually necessary to act on different parameters to solve a problem:

Some tips and solutions for potential problems:

- **The machine does not start.**
  - **Solution** - Check that the connection of the machine to the three-phase grid is correct and that the supply voltage corresponds to that indicated on the nameplate located on the machine. Check that the motors rotate in the direction indicated by the arrows, otherwise reverse the position of two of the wires in the socket.

9.ACCESSORIES AND CONSUMABLES

9.1.Grinding wheels

For the grinding wheel use the ref. nr. 3300-A. 11A2 B76 C100 ø100x4x5x20xø32 mm.

Grinding wheel

9.2.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

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 FILTRAmaq UNO

Filtering system integrated in the machine to save space.

9.3.1.2 FILTRAmaq SOLO

Independent filtering system for one machine.

9.3.1.3 FILTRAmaq PRO

Centralized filtering system for up to 5 machines.

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