



# ELITE CU PRO

High performance CNC knives grinding machine.

Robust building with very easy and intuitive PLC programming control which allows knives manufacturing for paper, recycling, wood industry, etc.

# ELITE CU PRO

## KNIVES SHARPENING MACHINE



Our **ELITE CU PRO model** is the most advanced manufacturing and sharpening knives machine. It features a grinding head designed to prevent corrosion better than standard painted grinding heads, equips a direct drive motor: this lets you have 20% more engine power compared to other engines that incorporates belt transmission.

### **Program your own sharpening parameters**

The control panel with LCD screen allows you to make and save programs easily, which it is perfect for sharpening and manufacturing knives either in series or in a timely manner thanks to its standard production program.

You can program a roughing cycle with its carriage speed, a finishing cycle with other parameters and speed, and an end cycle for polishing. All these operations are implemented by the machine at once.

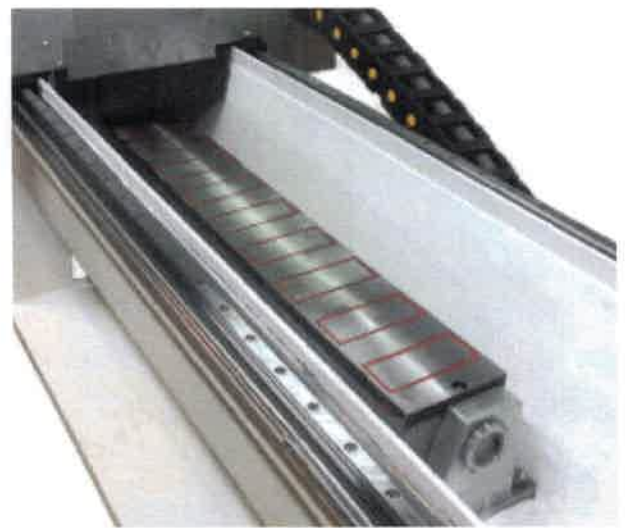
### **¿Edge or against cutting edge sharpening?**

Among of one of the programmable control parameters is the direction of rotation of the grinding wheel; say goodbye to tilt the head manually.

### **Easily access cooling equipment**

We thought that the cooling equipment must be easy to clean. Therefore, it can be mounted on the front of the machine or at the rear, or at the side, as best suits you!

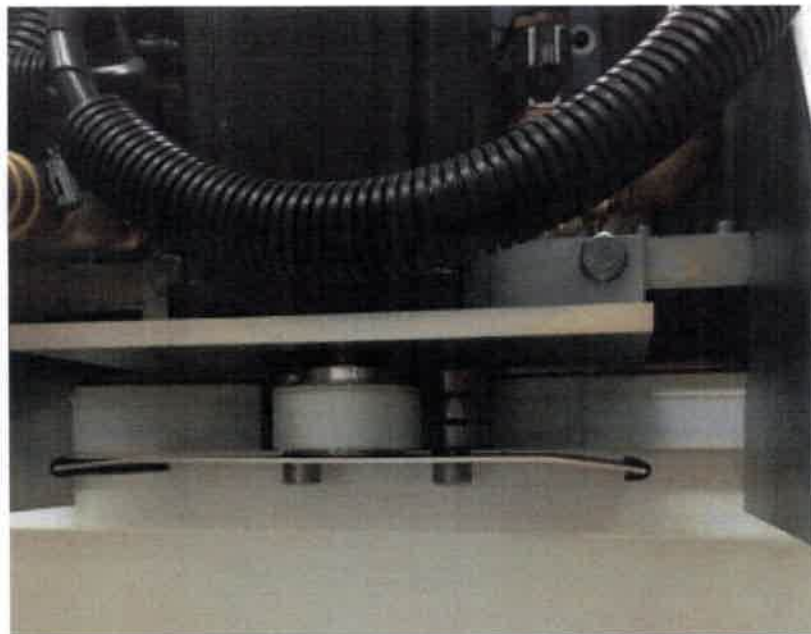
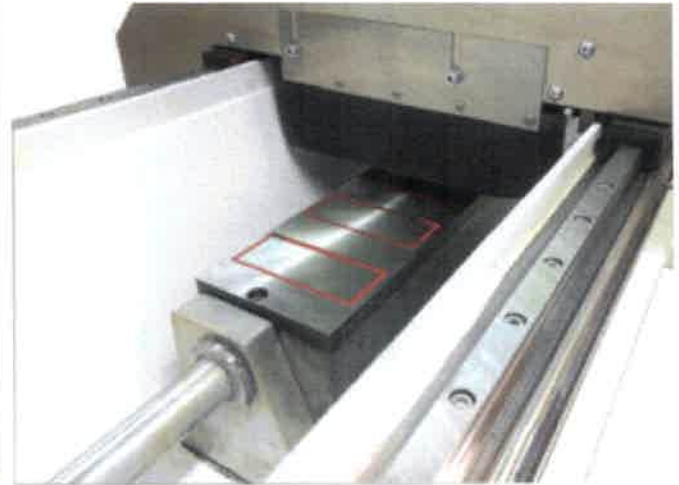
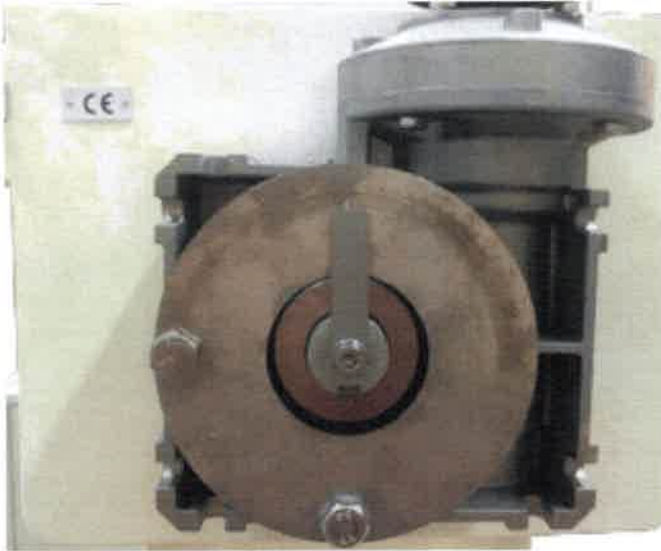




**Image 1:** Program your own sharpening parameters with the standard **CNC panel**. It allows to realize and to save programs, perfect for the sharpening of paper knives or knives manufacturing.

**Image 2: magnetic knives chuck** magnetizable and demagnetizable from the control panel. Same clamping force on the end of the plate or in the center: however narrow the knives are held perfectly on the edge of the plate. **The strongest fixing on the market in knives sharpening machines.** The super-polarity system is optionally available. With a fixing increased by 20%.

**Image 3: ball screw in the vertical axis for a fluid movement** and a down movement precision of 0.001 mm. The ball screw passes through the motor plate, guaranteeing maximum stability and rigidity and preventing dirt coming in from the sharpening.

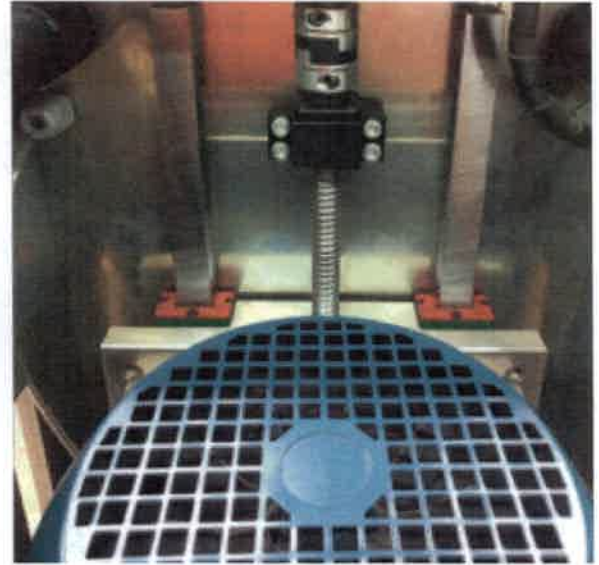
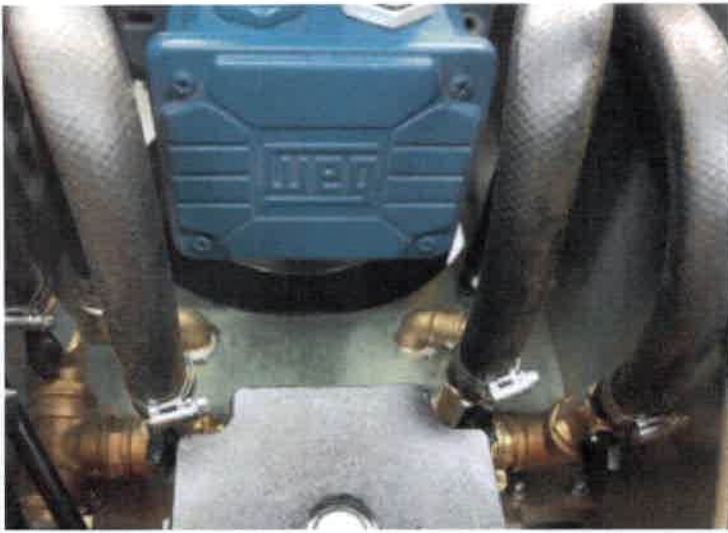


**Image 4: angular divider with endless reducer.** Ideal for precise selection of knife grades. And, if you still need more, it is available as an option the motorization and CNC control of the plate rotation.

**Image 5: ball bearing for precise movement of the carriage,** by ball recirculation with continuous lubrication system, allows a fluid movement without play and free of vibrations, because they hold the carriage so that it can not go down but not rise.

**Image 6: carriage movement vibration free.** We dispense with mechanical means such as the rack-and-pinion system that over time will maladjust and require expensive maintenance. The toothed belt system avoids vibrations isolating as much as possible the carriage-head connection.

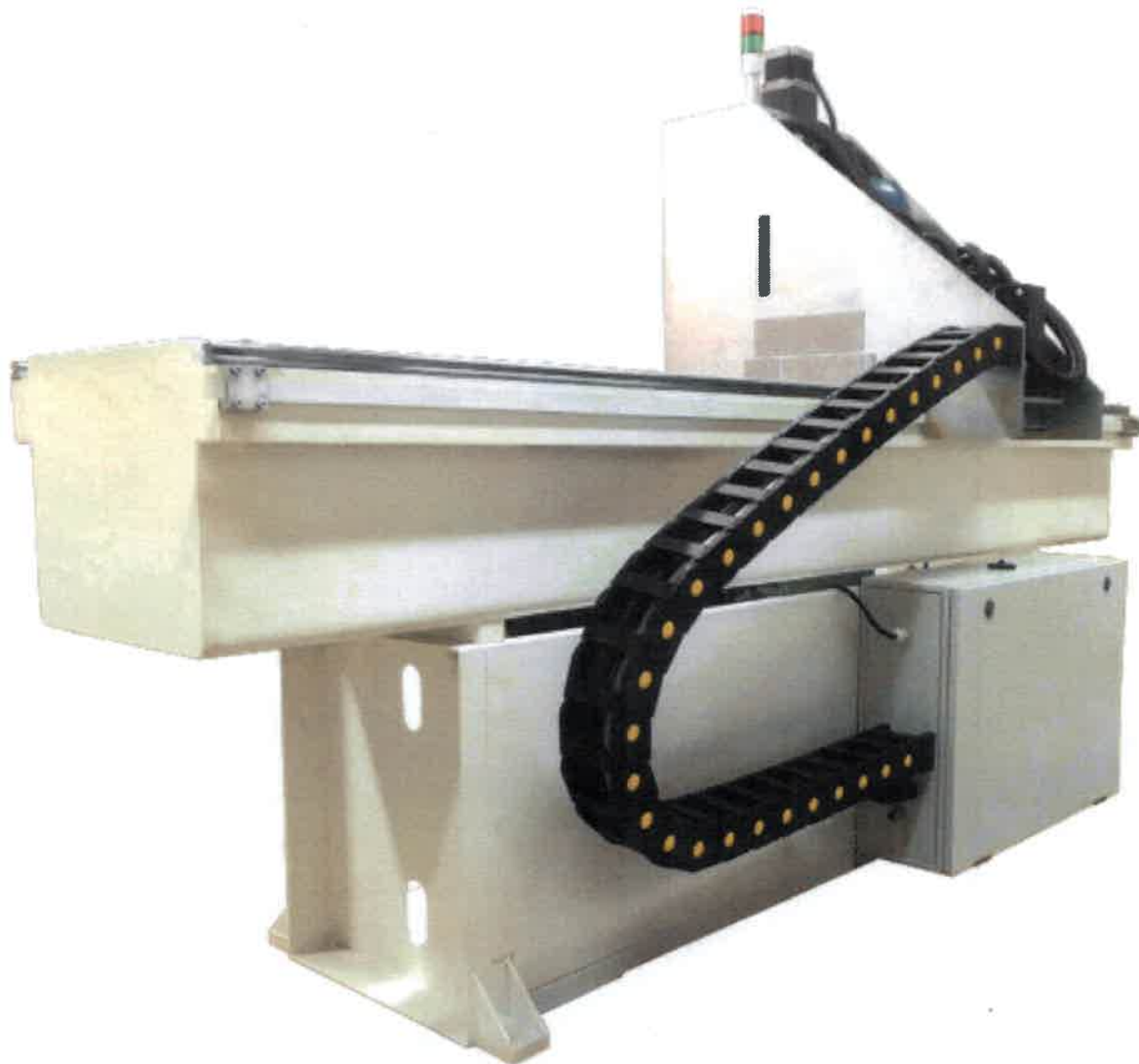




**Image 7: 4 independent coolant outputs** with a rear faucet each. They can be configured in the grinding so that two of them point at one end and the other two at the other end. Or on knives so that two point at the upper ends of the knives and the other two at the ends.

**Imagen 8: high-rigidity carriage;** equips linear guides for maximum rigidity and precision, combined with smooth displacement.

**Imagen 9: programming the direction of the grinding wheel rotation;** the machine has as standard a simple and easy grinding wheel holder change: using 6 screws located at the top, the grinding wheel can be changed. With easy access: these screws are accessed through a side cover.



**Image 10: guide of the carriage cables,** by means of cable chain without maintenance.



**Image 11: Fourth additional axis for multiple jobs.** By means of the fourth axle we incorporate to the machine a second motor that can perform finishing tasks of the cutting edge with a finer grinding wheel, sharpening of the lower bevel in knives or even the braking of the teeth in serrated knives.





## Technical specifications

<b>Grinding wheel motor</b>	5,5 kW (7,5 CV) y direct drive. Optional: 11 kW (15 CV) 1500 RPM
<b>Silent grinding head</b>	Vibration free.
<b>Mechanical chuck as standard Magnetic chuch as optional.</b>	Rotation from 0° a 90° and 1000, 1500, 2000, 2500, 3060, 4090, 5120 o 6150 mm. of grinding capacity.
<b>Customizable magnetic chuck</b>	Width: 150 or 250 mm. Normal polarity or high polarity for fine knives. Super-polarity: increase of 20% of the fixing force.
<b>PLC control programmable with LCD display</b>	For easy programming of automatic grinding process. Make your own sharpening programs with the built-in CNC as standard.
<b>Automatic working cycle</b>	With automatic and programmable step increments and finishing cycles.
<b>Automatic knife measuring system</b>	WORKSENSOR as optional.
<b>Angular divider for precise rotation of the magnetic plate from 0° to 90°</b>	Included as standard.
<b>Angle chuck divider automated for automatic rotation as an option.</b>	Optional.
<b>Control system with 2 axes of CNC (Optional up to 4 axes)</b>	Z: Grinding wheel downfeed. X: carriage movement. (Optionally available axis A: rotation of the chuck from 0° to 90° and axis Y with additional motor for the milling of toothed or polished knives).
<b>Automatic lubrication system</b>	From the spindle head and continuous lubrication from roller bearing units carriage and head carriage.

## Main Advantages

The ELITE CU PRO is a very robust and powerful machine free of vibrations for more accurate and fast work.

Greater precision in the Z axis, thanks to its operation by recirculating ball screw.

Programmable by LCD display easy and intuitive to use, with automatic and programmable chuck rotation from 0° to 90°.

Fully configurable operation cycle: roughing, finishing and polishing. Knives angle, grinding speeds, grinding loads and direction of rotation of the grinding wheel.



## Technical specifications

<b>Ball screw</b>	On the Z axis with automatic lubrication.
<b>Carriage movement</b>	By toothed belt: fluid movement of the carriage and without marks on the knife.
<b>Step-free adjustable carriage speed</b>	From 1 to 30 m/min.
<b>Sharpening race adjustable at any time in the program</b>	Work on one side and prepare the other.
<b>Cable chain in carriage</b>	
<b>Magnetic disk cleaner</b>	Optional.
<b>Elite CU PRO 1000</b>	270x108x180 cm. - 830 Kg.
<b>Elite CU PRO 1500</b>	320x108x180 cm. - 1080 Kg.
<b>Elite CU PRO 2000</b>	370x108x180 cm. - 1480 Kg.
<b>Elite CU PRO 2500</b>	420x108x180 cm. - 1900 Kg.
<b>Elite CU PRO 3000</b>	470x108x180 cm. - 2400 kg.
<b>Elite CU PRO 4000</b>	520x108x180 cm. / 2900 kg.
<b>Voltage</b>	400 V, 50 HZ 3 Ph / 230 V 50/60 Hz. 3 Ph
<b>Maximum electrical consumption</b>	16 kW.

We reserve the right to make design changes in the interest of technical progress.

**ELITE Sharpening Machines, S.L.**  
Casanovas, 1  
E-08782 St. Joan Samora  
Barcelona - España  
Telf. +34 932 935 178  
[www.elite.es](http://www.elite.es) - [info@elite.es](mailto:info@elite.es)