

TECHNO SAW

WORKING CENTRE WITH NO. 6 INTERPOLATING AXIS IN CONTINUOUS, A FIX PORTAL FRAME AND A DOUBLE EXIT MILLING HEAD, TO CUT AND MILL TIMBER ELEMENTS OF THE HOUSE FRAMES, GAZEBI, PAYGROUDS.



BASIC DESCRIPTION:

Techno Saw consists of three main structures that make up the machine as a whole:

- A gantry monobloc structure made of high strength and stable electrowelded mechanical carpentry where a 5 axis unit has been installed with a relative toolchanger (optional in Techno Saw).
- A structure for loading and a structure for unloading of the beams, consisting of mechanical carpentry.

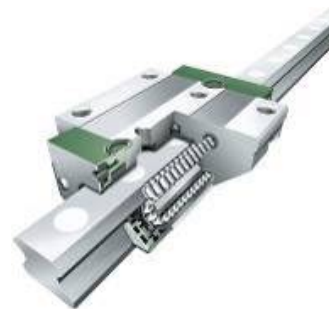


At the mechanical workshop Essetre, high precision machinings are carried out using high tech machine tools to achieve the highest degree of accuracy necessary to guarantee the quality of the final product.

the sliding of the mechanical units-groups is by means of rectified guides with preloaded recirculating sliding rollers with very low friction coefficient, high precision tolerance and **automatic lubrication**. through the electric pump operated by CN. When the lubricant reaches the minimum level inside the tank, an alarm message is generated and highlighted on the monitor.



Axis mechanical movement is carried out by **brushless motors** on a high precision rack with ground inclined teeth. Such units ensure the highest precision of the workpiece positioning and feed during machining.



All mechanical, electrical and electronic components are selected on first choice suppliers of international level range, in order to offer high reliability of our machining centers and easy availability different markets.



MACHINE EQUIPMENT:

the working area of techno Saw is composed by a **patented** 5 axis unit with **double opposit outlet** with the following technical specifications:

- Patented electrospindle with double opposit outlet;
- Aluminium case with a liquid cooling system to mantein the most efficient motor's temperature;
- Motor power 9 kW at 7000 Rpm/1'; **air cooling**
- Inverter to manage Rpm from 1000 to 7.000/1';
- Cone connection HSK 63F;
- Rotation B axis 250°;
- Rotation C axis 540°;
- Blade fixed diam 480 mm



Nr.1 Toolchanger 8 positions cone HSK 63F by controlled axis. It's mounted on bottom side of the cabine guard, complete with automatic protection to keep cleaned the cones and tools



Nr.1 Second gripper by CN to move the beam to unloading area (AXIS Y2). Gripper moves on preloaded rollers with movement on rectified rack.



Underneath the working area, a motorized straight conveyor is installed for a pre-collection of waste material in a space behind the protection cabin. In this way the waste produced from the machine, can be collected to another external collection area or inside a container with additional another external conveyor. This solution is suitable to avoid costly and tedious masonry work.

The entire working area the electrospindle works is protected by a CE cabin unit complete with guards with a front polycarbonate shatterproof front door to reduce the escape of chips, dust and noise.



Electrical cabinet inside the gantry containing electrical and electronic equipment equipped with an air-conditioning system to control and maintain the optimum temperature of the components.

STANDARD TOOLS INCLUDED:

Inside the Cnc Techno Saw are included the following tools for carpentry as follows:

Nr. 2 Blade diameter 480 mm;

Nr. 1 Helical milling cutter diameter 20 x 100 mm RH;

Nr. 1 Tools kit for carpentry, complete with cones HSK 63F and collets rings and include as follows:

Helical cutter diameter 20 x 50 mm RH

Dove-tail cutter RH

Hogger cutter diameter 100 x 70 mm

Inclined 45° RH cutter

AUTOMATIC LOADING AREA:

the loading area consists of a large loader for beams where a row of several workpieces can be positioned, which are automatically transported one by one into the entrance roller conveyor by means of motorized chains. The beam or beams later on are clamped by the handling gripper, which bring the workpieces inside the working area.

Nr. 1 Machine loading area consisting of:

- Nr. 5 fixed supports on the machine structure equipped with motorized chain for automatic loading of beams into the idle rollers of the working table .
- Infeed roller conveyor with plastic coated idle rollers so as not to damage the workpiece when sliding the beam.
- Automatic NC controlled gripper for moving the beam in the working area (Y1 axis). The gripper slides on recirculating roller guides by rectified rack.
- Pneumatic rollers for lateral and top to bottom clamping at the entrance to the working area to keep the workpiece stationary during machining.
- Loading system for 13.000 mm
- EC compliant safety photocells to prevent the operator from approaching moving parts.



AUTOMATIC UNLOADING AREA:

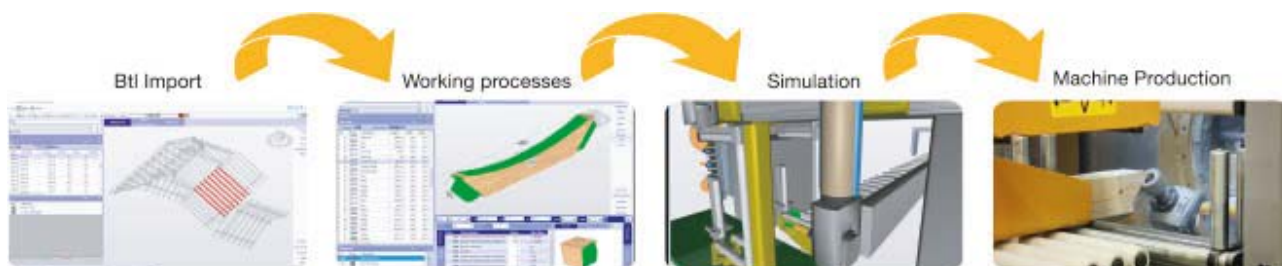
The unloading area consists of a large unloader for beams and workpieces where they are deposited due to the inclination of the boards. Workpieces and beams outgoing are clamped and by a motorized belt (Y-axis), which pushes the workpiece into the inclined unloader with idle rollers.

Nr. 1 Output working table machine consisting of:

- Nr. 5 supports for automatic unloading beams by pneumatic ejector.
- Outfeed roller conveyor with idle rollers for beam sliding.
- Motorized outfeed conveyor (Y2 axis) for workpiece handling. The conveyor is driven by a controlled axis with the task of extracting the workpiece from the work area to push it into the inclined unloading area composed of idle rollers.
- Unloading system for 13,000 mm
- CE safety photocells to prevent the operator from approaching moving parts.



SOFTWARE:



Techno Saw is managed by the Essetre Travi Software: thanks to its versatility, it allows interfacing with Cad Cam programmes (e.g. CadWork, Sema, Dietrich's, Hsb, BoCad etc..) specific for wooden structures in a simple, intuitive and fast operating way.

Nr.1 SOFTWARE GRAPHIC ESSETRE TRAVI specifically for machining beams with display of the workpiece on the monitor and its machining in three dimensions. This software allows elementary programming of the workpiece, using machining macros (based on BTL 10.4) already predefined within the programme. The software is equipped with simulations. The operator interface of the ESSETRE graphic software is Windows 11 Pro based and therefore the machine operator must be able to use this software. The software uses OPENGL graphics technology.

Nr.1 BTL Importer 10.4 to interface your drawing program by Dietrich's, Sema, CadWork, Hsb, Bocad etc.....

Nr.2 Dongles (key) for the Essetre Software functioning (1 in the machine and 1 in the office).

Nr.1 Annual internet assistance contract for the Essetre graphic Software and upgradings..

Nr.1 Fixed control console containing 21,5" TFT colour monitor, keyboard, push-buttons, warning lights, CNC and PC with the following technical specifications:

- Windows Interface 11 Pro
- Processor Intel Core i5 (or superior)
- Memory RAM 16Gb (or superior)
- SSD 512 Gb (or superior)

Nr.1 Numerical control TPA and **DDX cad-cam**

Nr.1 Extension for service annual hot line phone service and software upgradings. (one year during standard warranty + one year additional more).

Nr.1 RTCP (Rotation around the Tool Centre Point) - has been designed to compensate automatically for the offsets caused by moving the rotating axes of a 5-axis machine. This compensation is achieved by moving the main machine axes. It preserves the position of the tool centre.

**Nr.1 Automatic printer complete with interface with our numerical control to print stickers during the unloading.
Software for the automatic generation of the sticker included.**



TECHNICAL DATA:

Nr. 7 Controlled axes	X-2Y-Z-B-C-M.U.
Maximum workable beam dimensions *the lenght can be different	mm. 13.000*x450x150
Minimum lenght for automatic loading	mm 900
Minimum dimensions section	mm 30X40
Rotation c axis	Degrees 540
Rotation B axis	Degrees 250
X axis speed movement	mt/1' 100
Y axis speed movement	mt/1' 150
Z axis speed movement	mt/1' 50
Eletric installation	Volts 400/50Hz $\pm$ 5%
Air consumption (7 bar)	l/min 200

As far as the machine's equipment is concerned, Essetre S.r.L. reserves the right to make any technical change to improve its product at any time without notice.
It's suggested to verify the capacity and planarity of surface floor where will be installed the cnc center.
Machine must be installed inside an area protected from external atmospheric agents.
Aspiration system is not included in the offer and is under customer's charge

CE RULES CNC CENTER

INSTALLATION AND STARTING UP:

Machine installation at customer's premises performed by 1 Essetre/Yugoimpex technicians, for a total of 6 days each one (travel days included). It's necessary presence of one more member of Yugoimpex during mechanical installation.

Software training and starting up machine performed by 1 Essetre technician for a total of 6 days (travel days included), planned as follows:

- nr. 2 days for set up machine
- nr. 2 days for software training

Installation of automatic loading system and software will be for a maximum of 10 days.

Travel, board and lodging expenses for all our technicians are included.