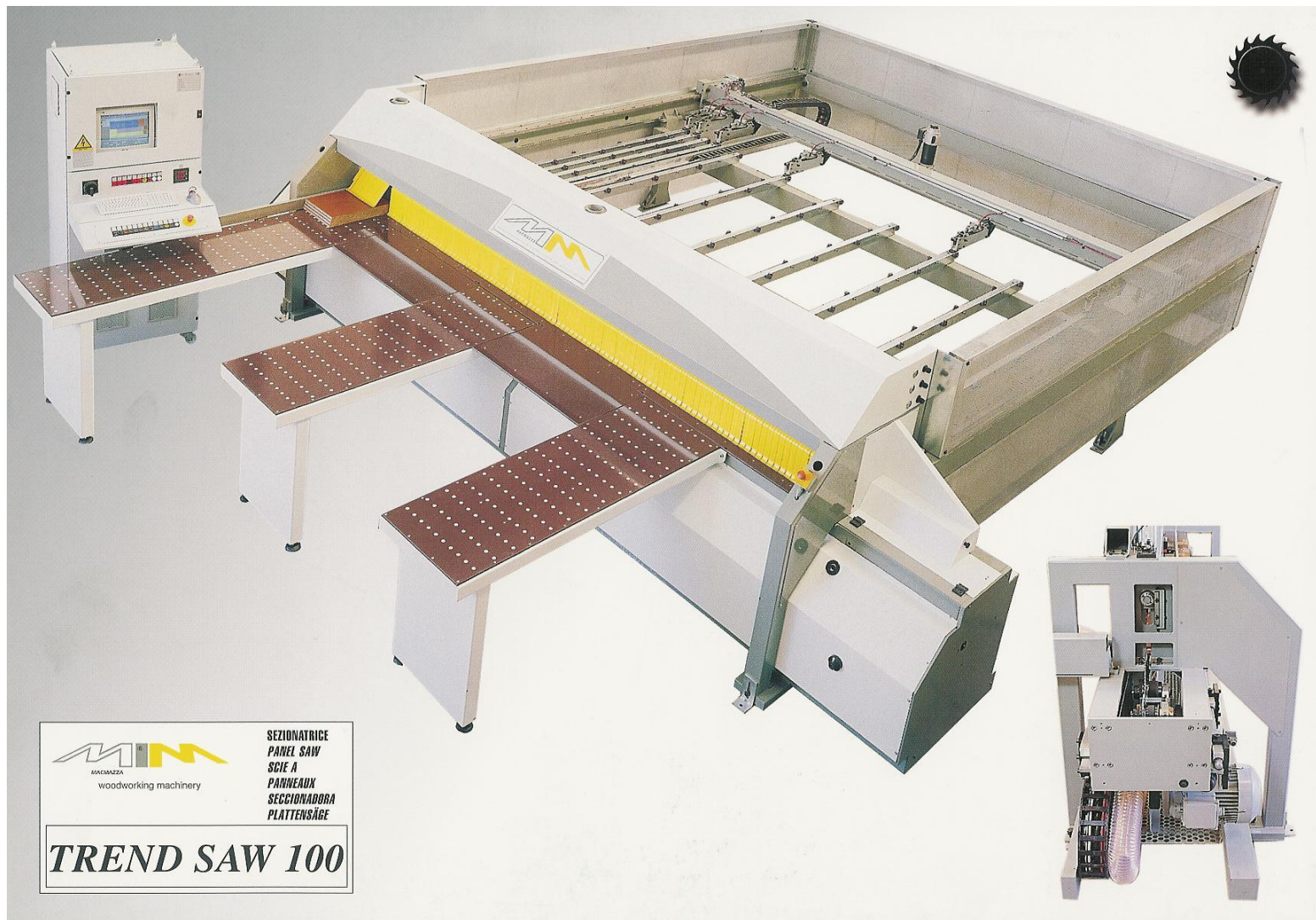
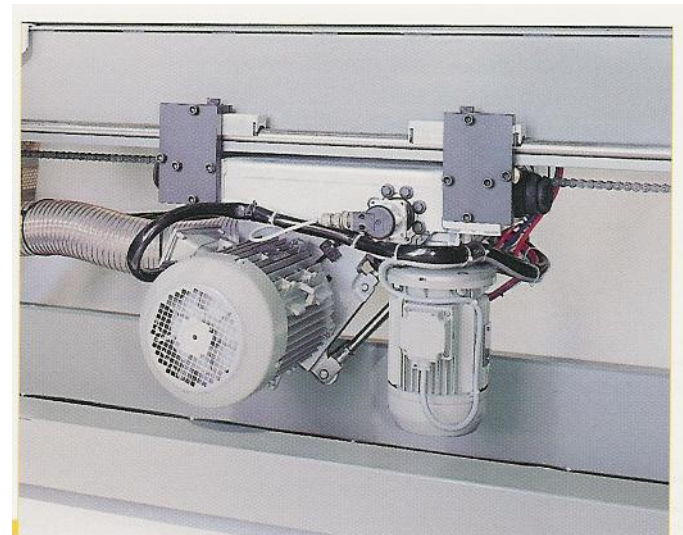
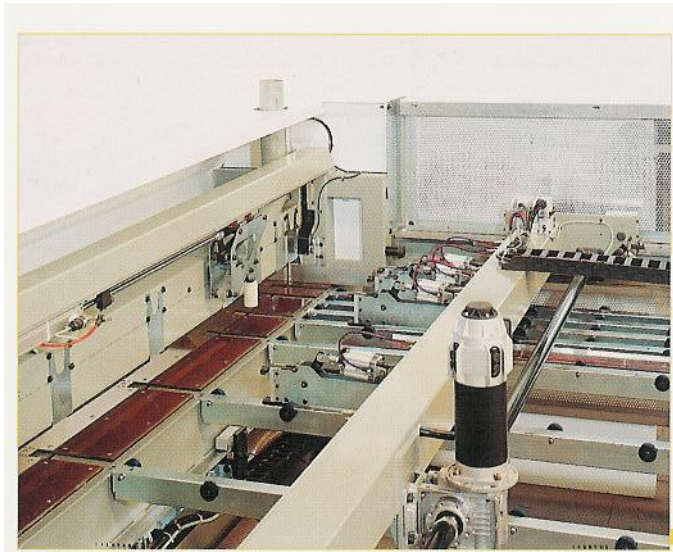


# TS 100 – MACMAZZA SEMI-AUTOMATIC PANEL SAW MACHINE



## ***Characteristics:***

- Solid supporting structure with working table coated with phenol material, grooved in order to allow the passage of the grippers and plastic wheels over galvanized supporting tables.
- Pusher/Positioner, electronically controlled and moved by a motor with **linear speed variation**, equipped with No. 6 moving **pneumatic** clamping devices (**grippers**).
- Automatic side alignment on the cutting line.
- No. 1 supporting table (2200 mm long), coated with phenol material, with fence and measure stops.
- No. 2 auxiliary front tables phenol covered
- Saw carriage variable speed, controlled by electronic variator, from 0 to 100 m/min
- Possibility to realise grooves on the panels
- Personal Computer for machine total control and graphic software in Windows to perform length and cross cuts on the same panel, by visualizing all of them at the same time.
- Direct connection office machine by CD or by the net.





# Main assembling specifications

The space saving project grants minimum size inside the precious factory's lay-out, thanks to:

- saw carriage installed inside the base so halve its encumbrance in width
- safety guards directly installed over/ under the beams, without increasing the space needed
- saw body total length less than 6 meters to enter in a 20 “ container box

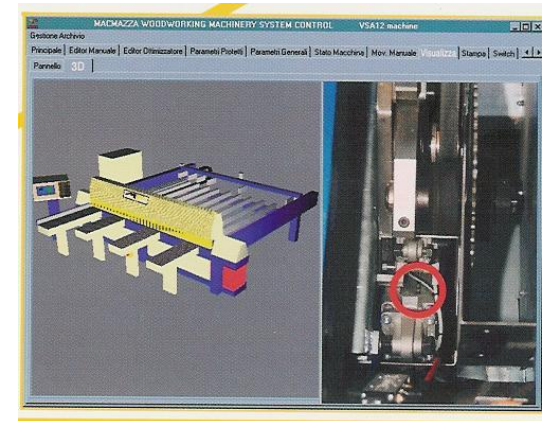
- The Saw Carriage, running inside the Panel Saw is composed by a main blade and a scoring blade to avoid the chipping in the lower part of the bottom panel.

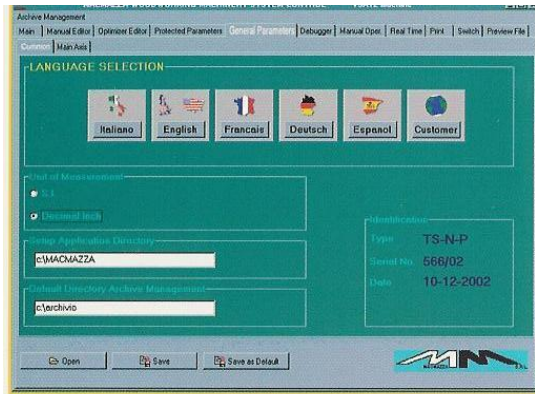
Both cutting blades are raised and lowered by means of an electro-pneumatic system that allows the return pass under the working table once the cut is completed.

The Pusher/Positioner is made of a machine-made carriage running on two beams, with precision rack and encoder. The traction system is ensured by Pinion and Rack and the transmission is made by turning shafts assuring a parallel and linear sliding of the structure.

The side Aligning device on the cross cutting line (automatically activated and sliding on a rectilinear guide) is constituted by a carriage, holding a roller, to which a pneumatic piston is connected, with adjustable and constant pressure.

Technical data and features are not binding and Macmazza reserves the right to carry out any modification not decreasing machine performances without prior notice.





## Machine operation description

The main characteristic of the TS-100, considering that it is semi-automatic, is the great versatility in the sizing of panels.

The panel or the stack of panels is loaded on the front supporting tables, downstream of the cutting line, and pushed against the grippers of the Pusher/Positioner, previously brought on the position of beginning of the working cycle.

Once finished the loading of the panels and given the START to the sizing cycle, the grippers clamp the panels, the pusher moves backwards and stops on the quote of the first cut carrying out, also, the recovery of the games in case of backwards positioning.

At first the finger protection systems located in front of the cutting line, between the operator and the machine, lower; then the pressure beam lowers and presses upon the panels to avoid movements during the execution of the cut.

## Safety features according E C regulation

The machine directly tested (also in laboratory for dust and noise) and certified by a well-known International Institute is provided with the following main devices:

Hand protector bar with flaps and sensors in front of the pressure beam and behind the safety hinges

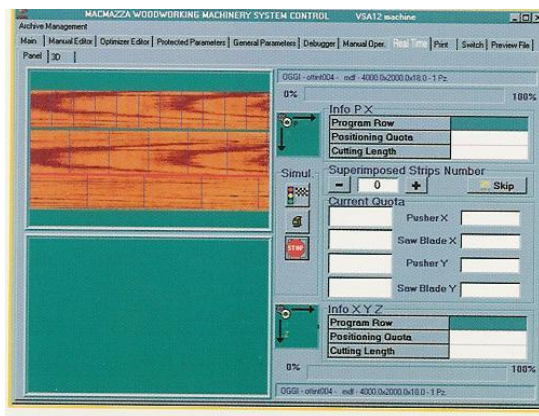
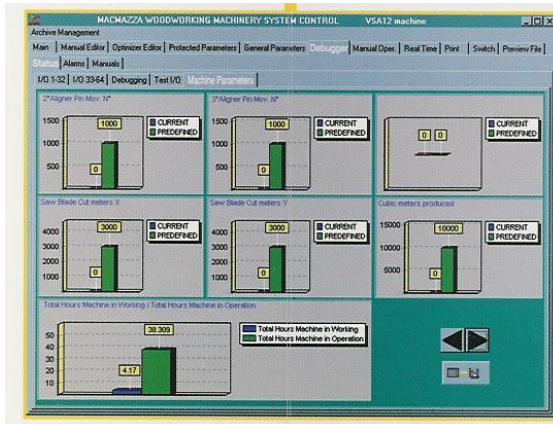
Emergency stops on critical points

Protection fences around the machine

Electro-mechanical locking system to prevent opening of the saw carriage enclosure

Blades alignment adjusted through an front/ external small door also with blades in motion

Etc...



## Technical data:

|                                                             |      |             |
|-------------------------------------------------------------|------|-------------|
| <b>General Data</b>                                         |      |             |
| Electrical installed power (standard machine) approximately | KW   | 12          |
| Weight                                                      | Kg   | 4500        |
| <b>Dust extraction</b>                                      |      |             |
| Pressure                                                    | m3/h | 4000        |
| Flow rate                                                   | N/m2 | 2500        |
| <b>Compressed air</b>                                       |      |             |
| Capacity                                                    | l/h  | 4000        |
| Operating pressure                                          | bar  | 6/7         |
| <b>Pusher</b>                                               |      |             |
| Pusher run                                                  | Mm   | 4250 (3250) |
| Pusher speed                                                | M/1' | 0 – 40      |
| Full grasp grippers                                         | N°   | 6           |
| Max grippers opening                                        | Mm   | 95          |

|                                   |      |                     |
|-----------------------------------|------|---------------------|
| <b>Saw carriage</b>               |      |                     |
| Cut length                        | Mm   | 4300                |
| Max cut height                    | Mm   | 90                  |
| Main blade motor power            | Hp   | 15 to 4300 g/1'     |
| Saw carriage speed                | M/1' | 0 – 100             |
| Blade diameter                    | Mm   | 350/355             |
| Blade change/Scorer               |      | Manual              |
| Blade/Scorer alignment adjustment |      | Manual and External |
| Dust extraction outlets           | N°   | 4                   |
| Dust extraction outlets diameter  |      | 120                 |

## **The electronic equipment:**

It consists of a central processing unit with SIEMENS 80C166 microprocessor, for the managing of all the machine's functions and of a PERSONAL COMPUTER IBM compatible allowing all the feasible links with nets, lines and managerial in Windows so to allow any pre-existent programs use and the possibility of user's personalize.

This solution to use more microcomputer allows to the end-user the exponential speeding up of any job, simple or complex, in fact the machine is performing all its job on list at the same time that the operator is programming or optimizing on the P.C. keyboard (even needing all the PC memory); so, even if windows grant (but not always) the possibility to 'multi-share' several programs together, we prefer the higher technology of the real 'multitasking'. Of course, cutting programs can be made in the Office PC and simply transferred on board machine by a floppy disk or supplied by the net.

## **Hardware Standard (minimum) Features of the P.C.:**

- Processor type PENTIUM IV or AMD Athlon 2200
- Video color 17" VGA
- Video card VGA 64 Mb
- Memory RAM 256000 Mb
- Hard Disk 80 Gb
- Floppy Disk 1,44Mb STD 3,5
- CD Rom Driver 52x
- Net card
- 2 Serial ports + 1 parallel port
- Alphanumeric keyboard STD
- Possibility to install every net card
- Connection between CN and PC by RS 232 serial port

## **Software Features of the P.C.**

- Software "SEZ2000" working in **Windows**



## Machine's workings:

**Automatic:** execution of programs and/or programs lists, with change of automatic program at panels' end.

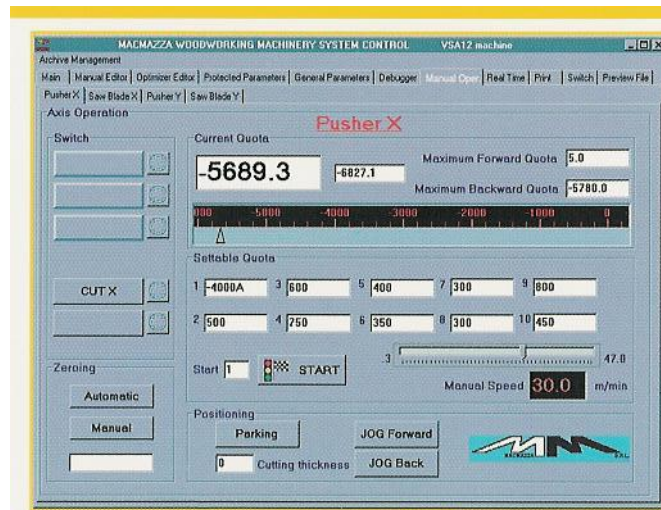
**Multitasking:** possibility to use all the control's features (manual editor, optimization of cutting plans, trouble shooting and diagnostic etc...) also during the automatic execution of the working cycles.

## Programming:

- No. 2 different cuttings levels, length (X) and cross (Y)
- Cuts number for each program = 200
- Lines number for each programs list = 200
- Max. number of programs and lists of programs until the exhaustion of the available capacity of the Hard Disk (there's almost no limit by the nowadays PC).
- Graphic visualization (color VGA) of the cutting program in editing, with the direction of the cuttings flow
- Editing of the cutting programs with Automatic
- Computing of the remainder of the panel, of the number of possible repetitions and of the percentage of rejection on the whole panel.

## Real time:

- Indication of the working program line is indicated as regards the general list of programs that is on execution in that moment.
- Indication of the number of just worked panels as regards every single program of the general list.



### **Diagnostic:**

- Software of self-diagnostic with signaling of errors or possible breakdowns by alarm messages.
- Suggestions and directions about the instructions of intervention to solve problems by diagrams, manuals, individual pictures and interactive graphics.
- Possibility of the Report Machine State printing to be transmitted to the Service Department for failures Diagnostic, via E-mail, modem, Internet.

### **Language and unit of measure:**

- Operator interface in the languages: Italian, English, French, Spanish, and German.
- Unit of measure by millimeters/tenths or inches/thousandths of an inch.

### **Optional Software:**

- Semi-Automatic: cyclic execution (or not) of 10 different sizes that can be programmed by keyboard with the possibility of cutting speed variation.
- Cycle Stop/Restart: possibility to put on stop a cutting program working in automatic execution, at the aim to execute one or more cuttings in semi-automatic way and restart of the automatic cycle from the break point.
- Logic of superimposition of the cross strips for the optimization of the cutting times and graphic visualization during the cutting scheme working, with the indication of the executed cuts.
- Optimization program type Basic, Opt-Maca, Opt-Macb
- Printing labels program in types ASCII or Bar Codes
- Statistics about the use of main machine parts, with signaling of a pre-fixed value obtained and instructions for the maintenance suggested at that point.
- Direction and storing of the data relating to the daily production with the possibility to create tables and production database.



## **Operational Capacity**

|                                      |   |                                                                                                                                     |
|--------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Length of Hours for operation</b> | : | 24 hours / day                                                                                                                      |
| <b>Number of people to operate</b>   | : | 1 person                                                                                                                            |
| <b>Production output yield</b>       | : | 40 m <sup>3</sup> / day                                                                                                             |
| <b>Warranty</b>                      | : | 10 years on saw carriage mechanical guide;<br>12 months for the rest and an extension on mechanical parts can be done as an option. |