

CONTROL UNIT

- By default, the control unit, placed in a separate cabinet, allows to pre-save **400 programs** of joinery or to make a new program during the execution of a cycle. The micro-chip manages the movements on the X & Y axis, or a total of 5 axis (depending on model), and also the operational sequences. It's possible to connect a **computer** to the office of production management.
- The delay for the launching of a new program depends only on the distances to cover on the X & Y axis.
- For more efficient applications, the computer can be connected to the **internal network** of the company, so the production start-up can be done via a **CAD/CAM system**. The parts to be framed are recognized thanks to a bar code. It allows to initiate the right framing program. The entire system can also be connected to the PARVEAU computer system, for **remote-maintenance**.

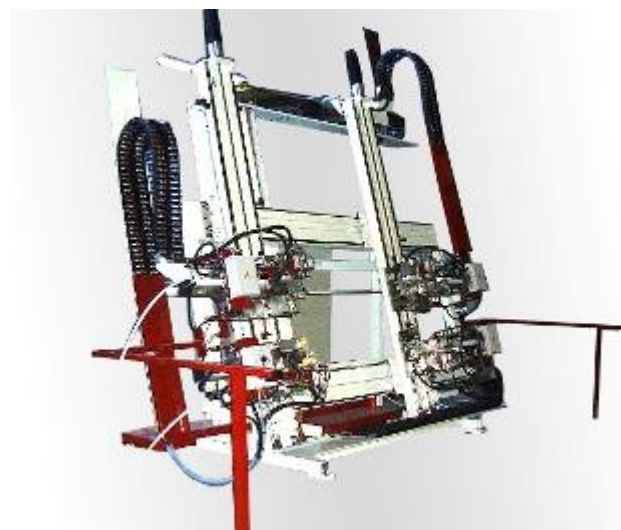
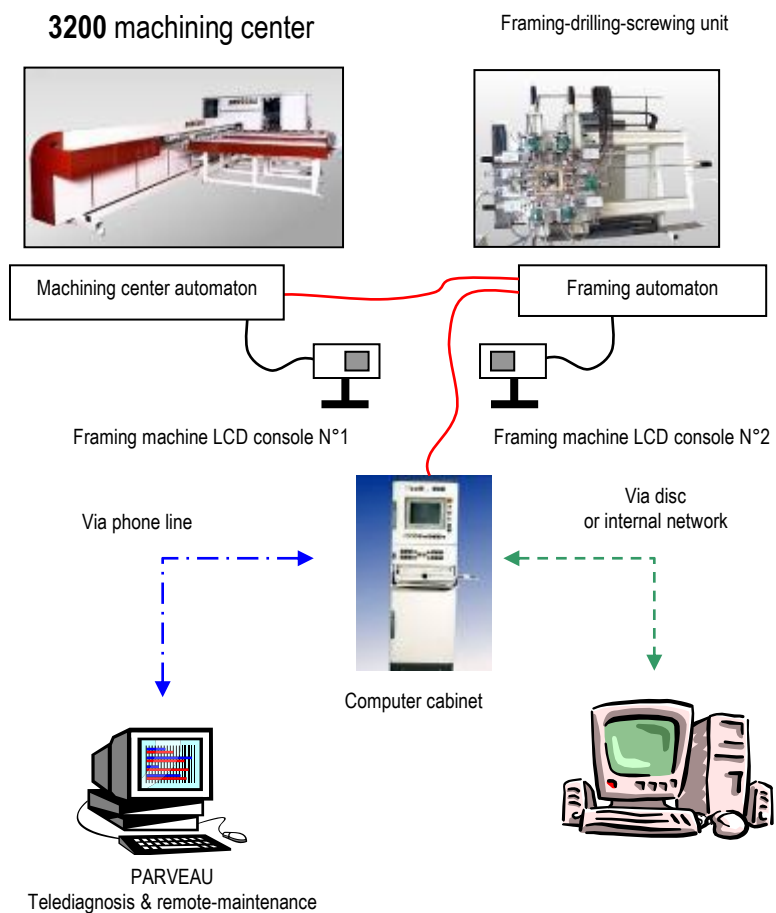


Control panel equipped with a programming terminal



Control console equipped with a computer connected to the client's GPAO. The left screen lists the programs. The right screen displays the dimensions of the joinery being framed.

PARVEAU driving concept : A homogenous and evolutive system



Example of a framing-drilling-screwing machine for fixed frames. Here, the drilling-screwing units are placed horizontally, the capacities are much more important : 2400 x 2500 mm. The hole drilling for the inserts is no longer necessary.

CNC framing-drilling-screwing machine for mechanical assembling of wooden joinery



Example of mechanical assembled joinery using the inserted screw technique that renders the joinery detachable. A flawed part or the glass can be changed.

The advantages of the mechanical assembling of wooden joinery are no longer to be proven : simplification of the assembly machining by counter-profiling, simplicity and quickness of the framing operation, that doesn't requires any gluing, pressing, or recovery delay afterwards. Thanks to its framing experience, PARVEAU designed a CNC Framing-drilling-screwing machine, capable of assembling joineries of different sizes in less than a minute*.

Destined to industrial joinery companies making single to medium serial productions, the PARVEAU CNC Framing-drilling-screwing machine, is the solution of the future for assembling.

PARVEAU
Profitable machining*

PARVEAU MAB
33, Avenue de la Gare
19130 VIGNOLS
F R A N C E
Tél. +33 (0)5 55 25 80 01
Fax +33 (0)5 55 25 06 29
Internet : <http://www.parveau.fr>
E.Mail : infos@parveau.fr

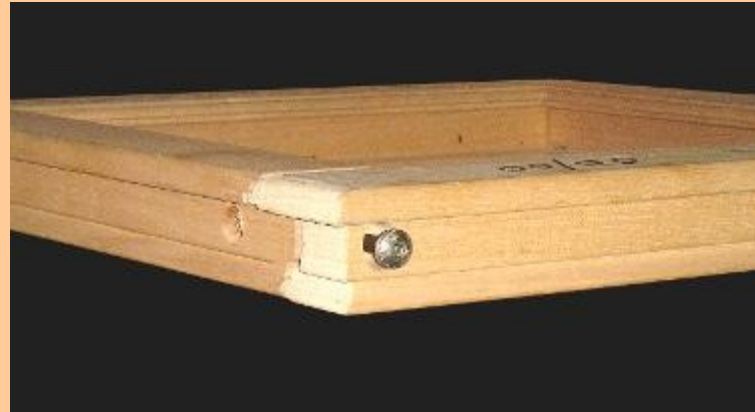


* drilling + screwing time/sec of a 4 piece opening frame : less than 30 seconds
The feeding and evacuation time are not included

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ASSEMBLING SYSTEM

- The **screw and plastic insert** assembling system is similar to the one applied in the assembly of bed sides, tops and bottoms, in furnishing.
- The parts are framed simply by applying pressure on the components.
- The screwing is made automatically.
- This principle allows part processing before the assembling.



Example of a frame assembled by screw and plastic insert

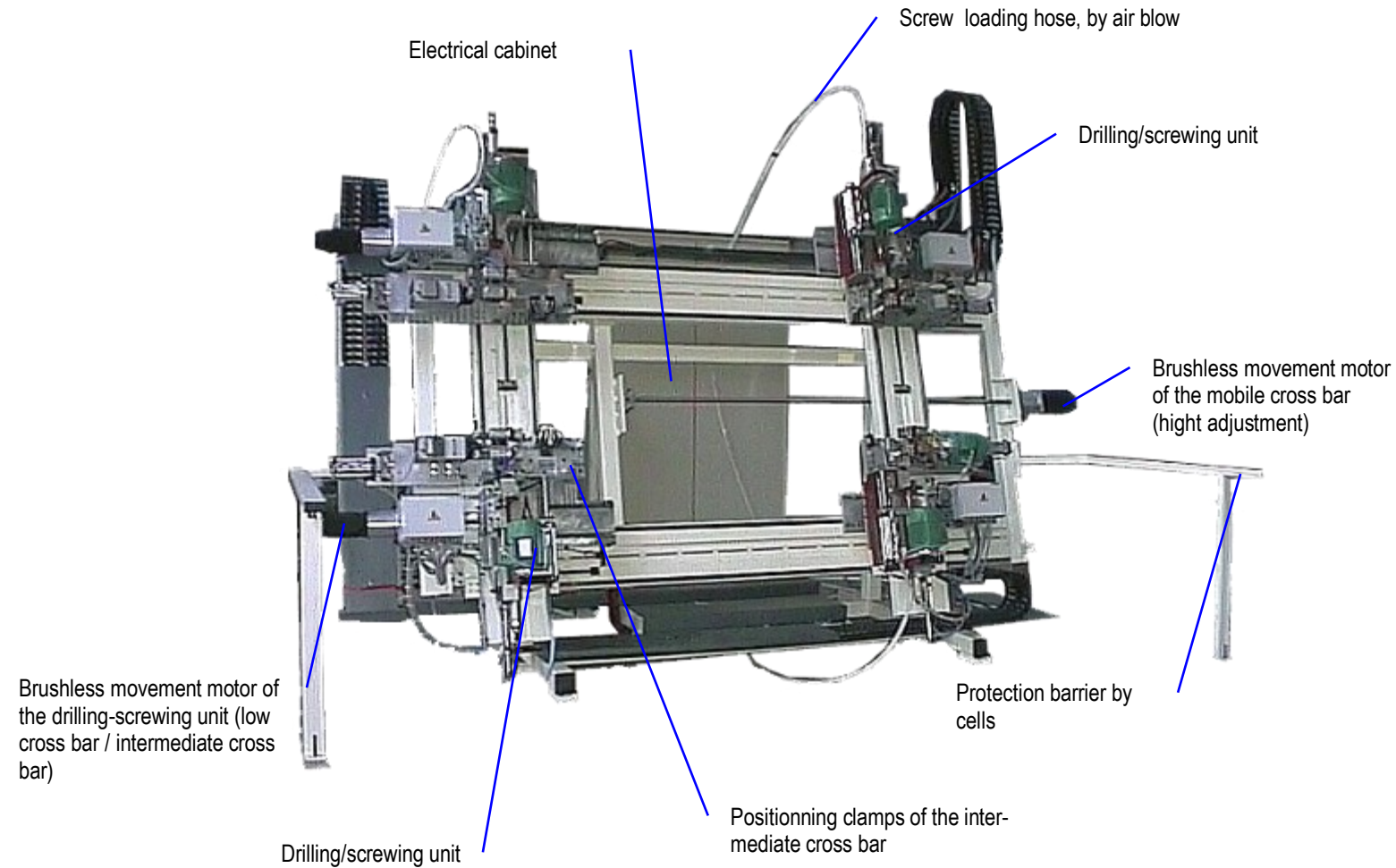
FUNCTIONING PRINCIPLE

- The operator enters manually the frame measurements, or scans a **bar code** previously placed on each part, after the tenoning. The machine thus recognizes each part of the frame and downloads the corresponding program. The information is transmitted via the **computer network**, from a CAD/CAM (computer aided design/manufacturing) system. The operating units are placed following the measurements of the joinery, very quickly thanks to its 5 digital axis (the number of axis can vary depending on the model).
- The operator positions the parts and initiates the cycle of the machine.
- The **PARVEAU framing-drilling-screwing** machine places then the **parts in contact** (4 parts for a simple frame, 5 parts for a French window with bottom rail), **drills**, then **screws** them until perfect tightening.
- Once the frame is made, the operator clears it. The cycle timing (framing operations, drilling, screwing) is of about **30 seconds**. The frame is ready for finishing.



Example of screws used for mechanical joinery. They can be equipped with washer.

High points



Framing-drilling-screwing machine for mechanic assembling of the opening

DISTRIBUTION OF SCREWS

- A unit **automatically distributes screws** by pneumatic projection through the connecting circuits to the screwing units.
- The washer equipped screws, randomly disposed, are arranged by a conventional **tilting bin** system or by a **WEBER** distributor for the industrial, more demanding applications.
- The used screws are with washers. The head print is a **Torx** type, in order to facilitate the automatic screwing. The length of the screws vary between 70 and 90 mm.



Tilting bins for screw distribution



WEBER screw distribution system



Horizontal framing screwing machine with in-line automatic evacuation of the joineries.

IN-LINE FRAMING MACHINE

- To insert itself in production lines, PARVEAU developed a new generation of horizontal machines. One framed and screwed, the joinery is evacuated horizontally towards another post.
- Intermediate digital shoes allow the positioning of the intermediate cross bars or mullions on variable positions.
- A single operator can make the system work, even for important frame sizes.



Example of joinery including an intermediate cross bar with 3 low cross bars forming a bottom rail.



Framing example of a small 350 x 400 mm frame