

# Evolution

NC squaring-edgebanders



**STEFANI**

# Evolution

NC squaring-edgebanders

## The evolution of squaring-edgebanding technology

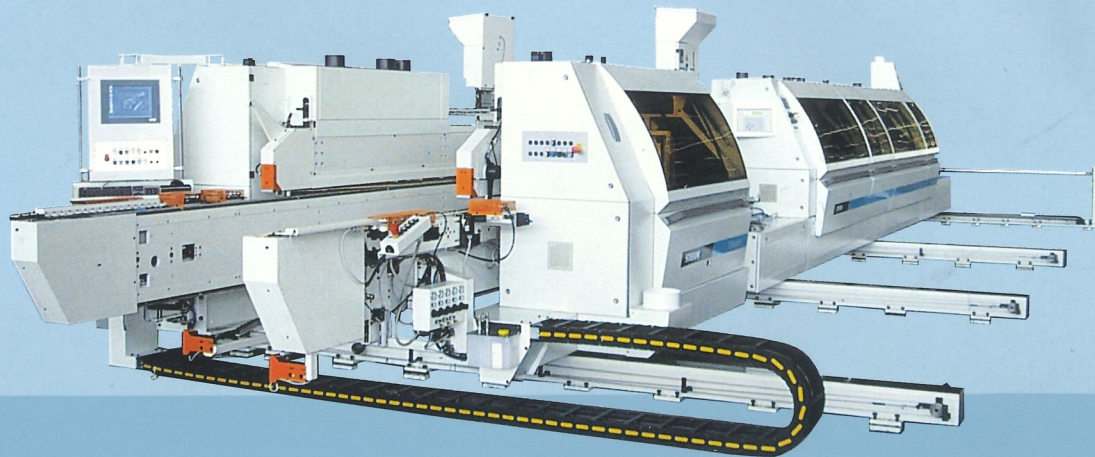
### Evolution:

#### the new Stefani squaring-edgebander

Constantly searching for innovation and for the maximum in performance and reliability, with a very advantageous price, new Evolution squaring-edgebander has been created in **STEFANI** facilities.

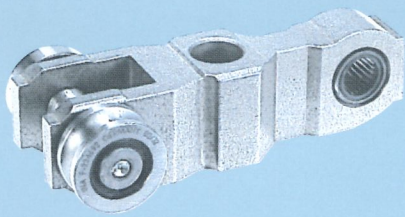
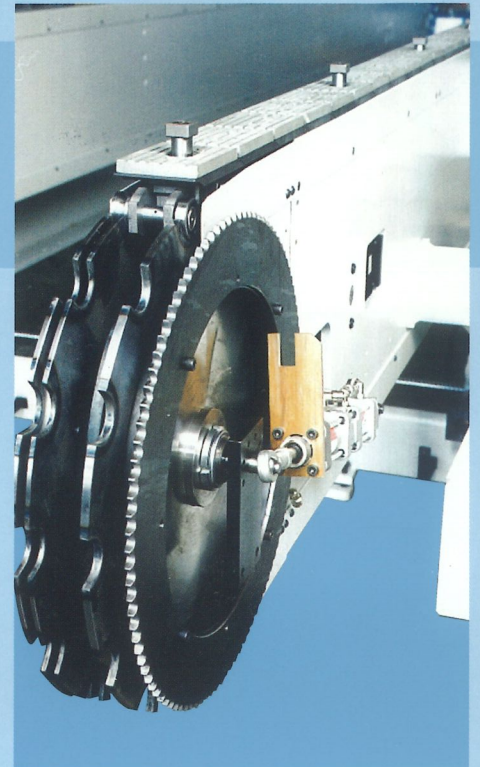
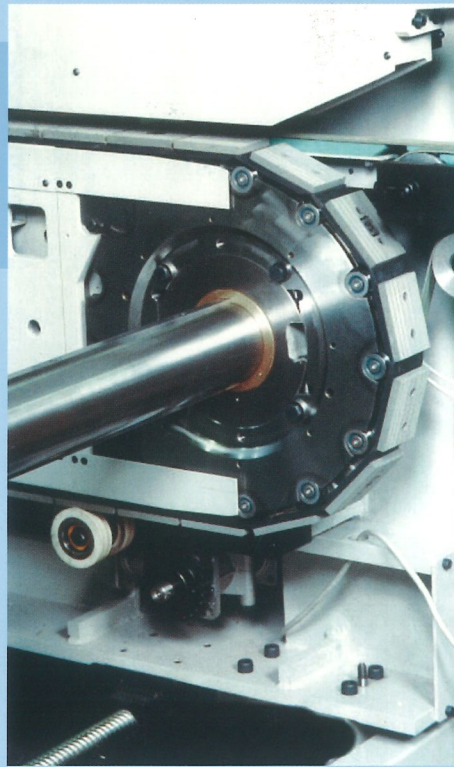
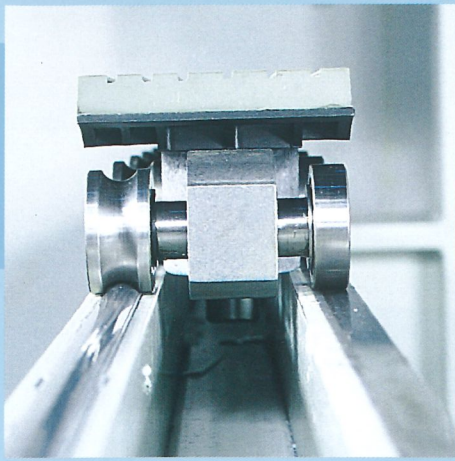
You will find in the **EVOLUTION** the sophisticated mechanics, the massive machine frame with large thickness and the steady steel pressure beam in order to assure the perfect hold of the panel also in case of high stress.

The remarkable lengths that **EVOLUTION** can reach and the complete range of **STEFANI** working units, allow customised compositions for every productive need.



**STEFANI**



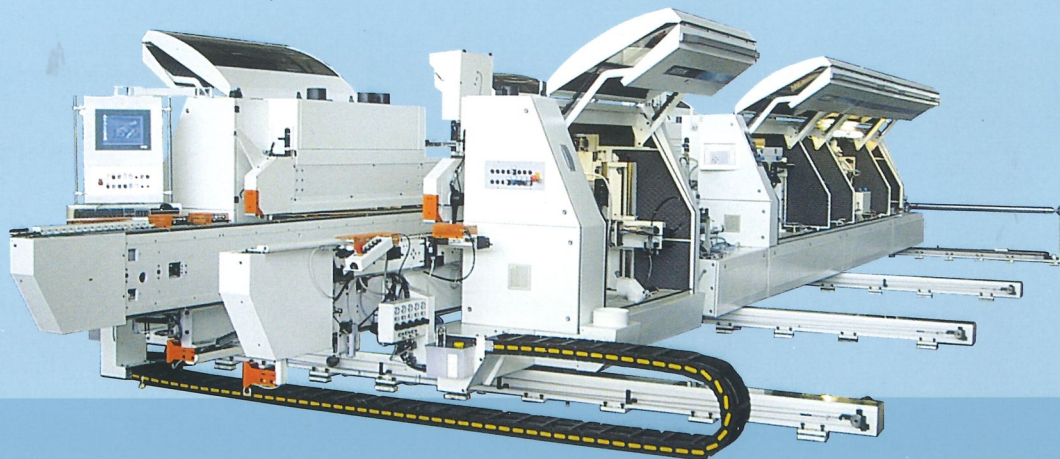


The **track** consists of **links** made in sintered steel and capable of withstanding the highest possible stresses. The track runs on round and flat guides by means of sealed bearings to reduce friction to an absolute minimum under high speed working condition. The pads fitted to the links are made of special low friction coefficient rubber and their support guarantees the complete protection from the dust created by the working process.

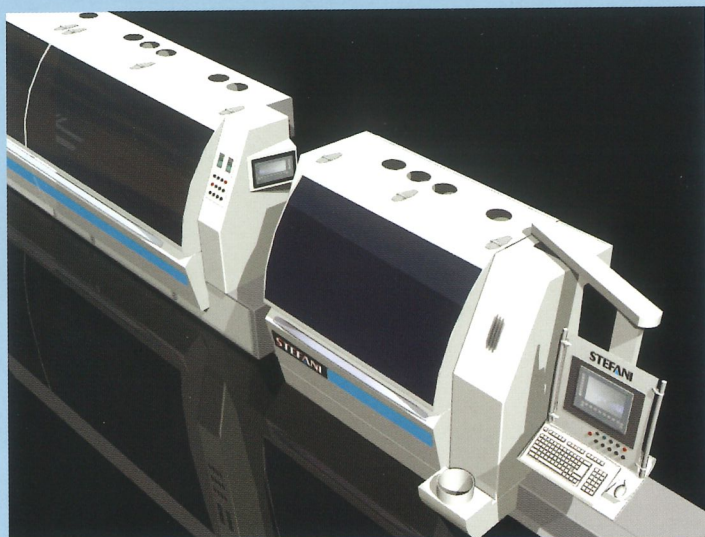
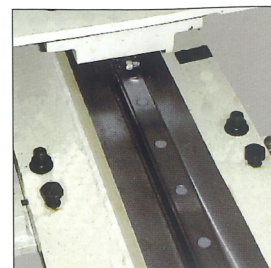
The **track sprocket** has 13 teeth for perfect constancy of the feed movement, avoiding the possibility of stretching the belt. The bearing housing sectors are tempered and ground to reduce wear and ensure long duration and operating accuracy.

#### **Infeed sprocket**

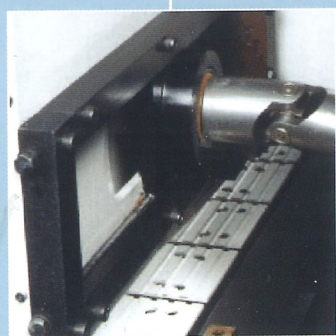
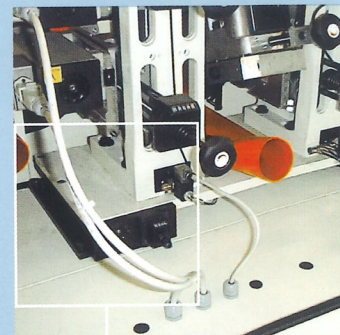
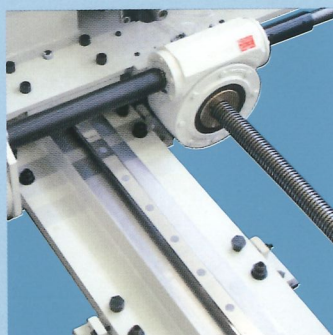
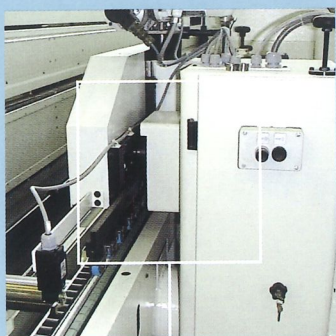
The infeed sprocket has odd teeth and is mounted directly on the machine structure. This design solution guarantees high-precision, straight-line chain feed. A design with odd teeth only requires one movement of the chain forwards and backwards. A design with even teeth, on the other hand, will stretch or shorten the chain.



# Machine frame



The cabinets of Evolution, are patented and distinguish for innovative and ergonomic design.



**Steel top pressure beam with motorised belt**

## Movable beam

The movable beam opening is rigid with a transmission that acts on a high precision worm screw, thus permitting perfect constant parallelism to be maintained over time. The beam has 2 speeds motorised movement:

- the first speed, for reaching the working area
- the second speed, for positioning the final millimetres with extreme accuracy.

Recirculating ball opening is available for greater speed. THK movable beam.

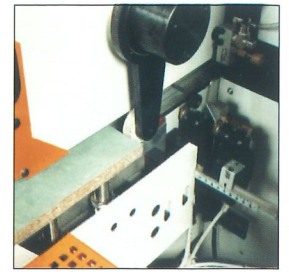
## Central panel support

The central support allows the support of the panels wider than 2200 mm. A pulley system enables a perfect centring of the support according to the opening of moveable beam.

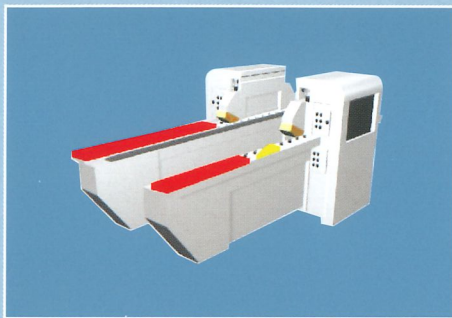


**THK movable sub-bases**

# Panel infeed system

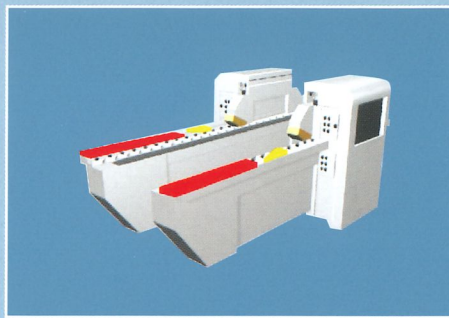


Evolution has different panel infeed systems, in function of the productivity, of the type of processing, and of the feed speed.



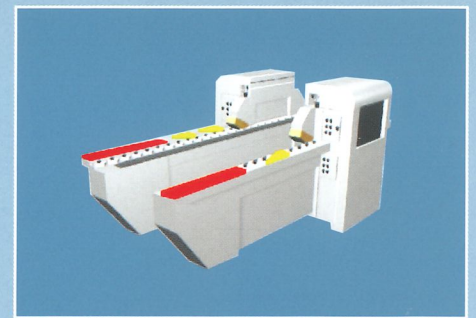
## Cross feeding 1200 mm Thin edge processing

SX 1 long infeed fence  
DX 1 short infeed fence + 1 side aligned system



## Cross feeding 1200 mm Thin edge, ABS and/or solid wood processing

SX 1 short infeed fence + 1 side aligned system  
DX 1 short infeed fence + 1 side aligned system

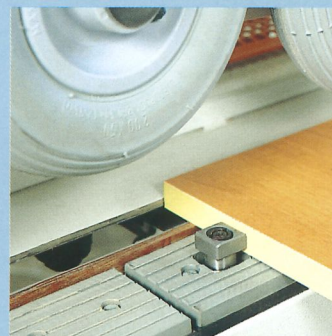
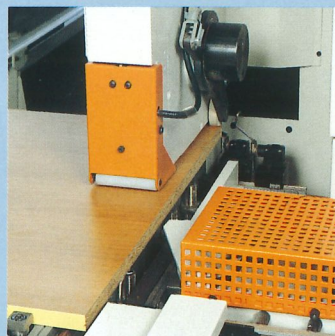


## Cross feeding more than 1200 mm Thin edge, ABS and/or solid wood processing

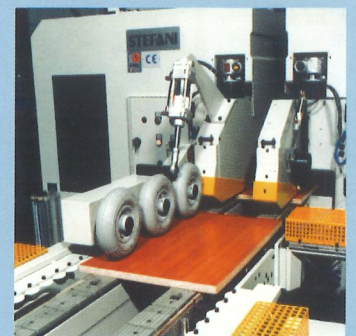
SX 1 short infeed fence + 2 side aligned systems  
DX 1 short infeed fence + 1 side aligned system



During automatic crossways machining, a sophisticated centring system always guarantees piece alignment against the machining line. A belt-driven mechanism, together with a nail-type centered device and a pusher mechanism against dogs guarantee the feeding and centring of the piece. Perfect synchronisation of the centring mechanisms guarantees a precise squaring of the piece, ensuring that the surfaces begin machined are perfectly perpendicular to each other.

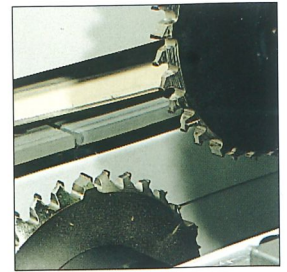


The panel is pulled into the machine by a pair of dogs which operate automatically and are adjustable in height so as to optimise the pulling phase in function of the panel thickness.



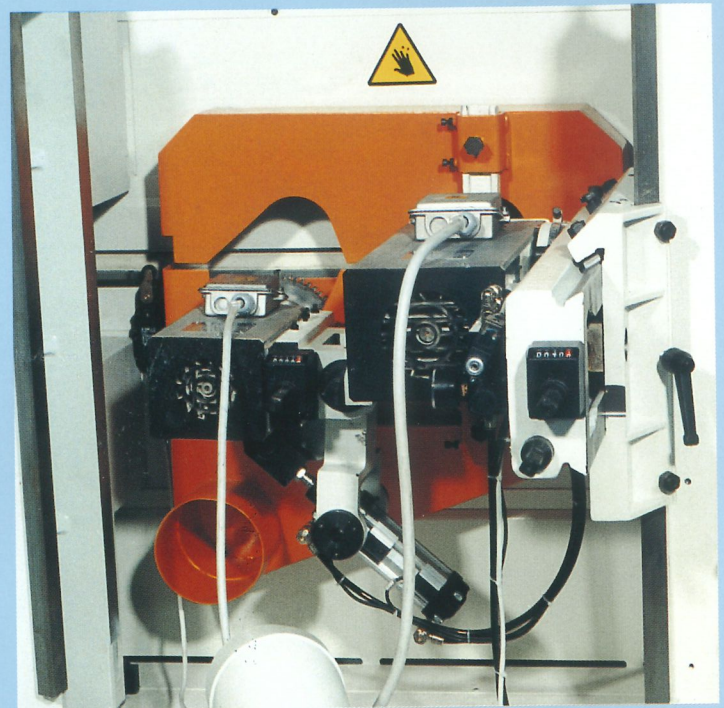
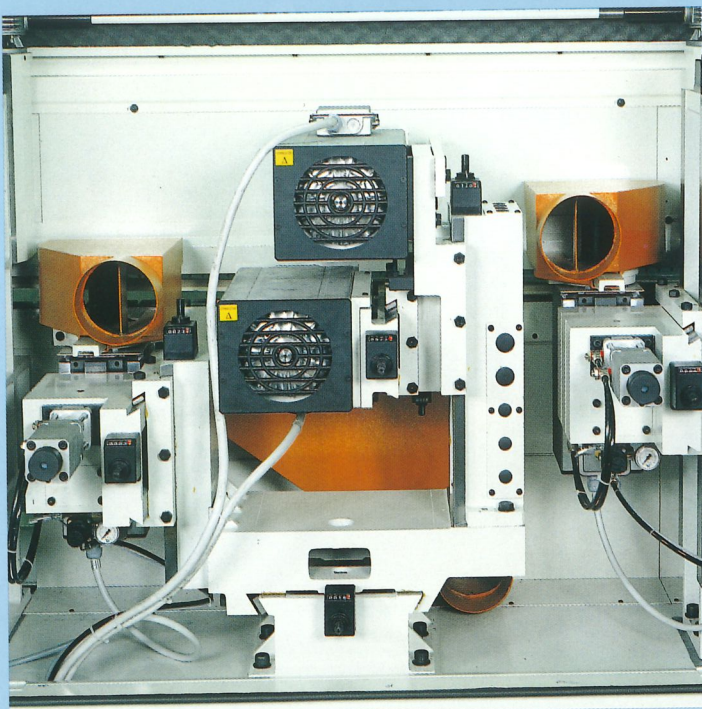
During lengthways processing, correct panel feeding is ensured by a wheeled pushing device; by pushing the panel against the left lateral guide it ensures perfect panel parallelism.

# Panel squaring: modular and customised

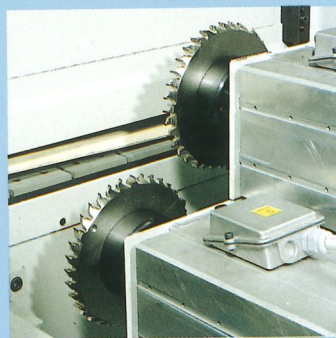


In the section dedicated to panel squaring, Evolution makes a modular solution available to satisfy every machining need.

There are several operating units to choose from, each of which integrates structural rationality with the need for customising the machine. The result is the possibility of numerous compositions which are always rational and effective.



The combination pre-milling unit-double hogging unit provides maximum squaring quality on panels covered in melamine and plastic materials.

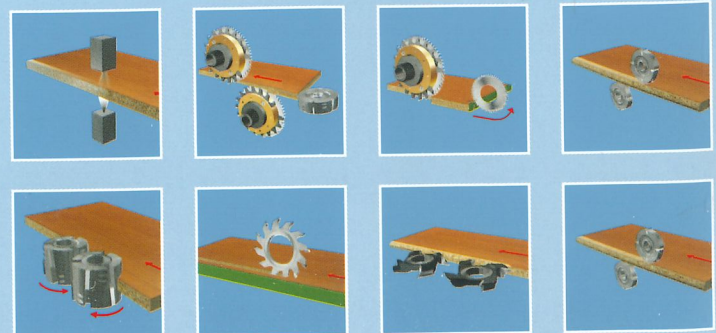


The combination scoring saw-hogging units, guarantees excellent quality machining of honeycomb panels or veneer coating panels.

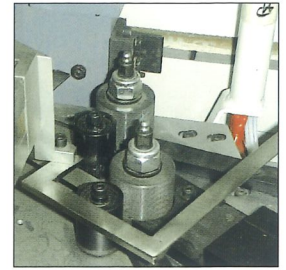


The squaring panel can be integrated with various operator units making it adaptable to different production needs:

- **Anti-adhesive unit**, for the application of adhesive-proof liquid to the upper and lower parts of the panel to facilitate the elimination of glue residue.
- **Grooving unit**, for making blind through slots on the upper and lower parts of the panel.
- **COMBI Pre-milling unit**, for grinding a panel which has been previously squared to guarantee optimal finishing of the machined surface.
- **SOFTFORMING shaping unit**, to prepare the profile for the softforming process.



# Edge gluing with precision edge feeding

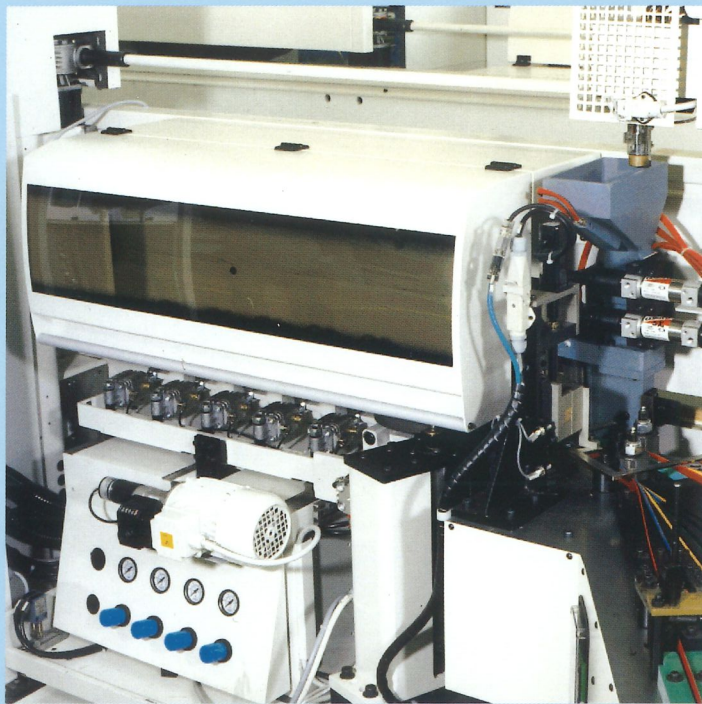


## Gluing unit for straight process

New high speed gluing unit up to 60 m/min working speed. Upper loading glue pot, independent motorization managed by brushless motors, a wide choice of optional devices and of digital axis make the HM 50 a top level unit.

Gluing unit VC 34 M is available for solid wood processing.

In addition, there is a gluing system that uses polyurethane glue (either with glue roller or slot), which is highly resistant to water and heat.



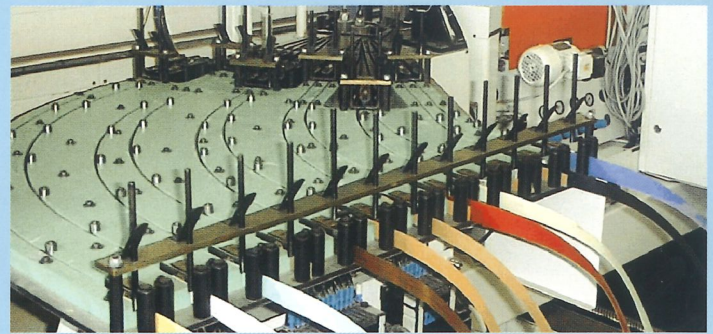
## Brushless motors

Brushless motors and electronic devices of the last generation allow high precision in edge feeding and in rear cut.

## Precision edge feeding and precision rear cut

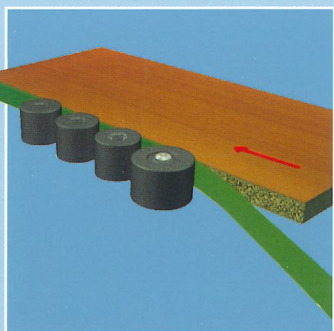
The precision edge feeding on the front of the panel is allowed by two needle rollers managed by brushless motors.

The precision rear cut is allowed by means of pneumatic shear managed by high speed control card (for speed up to 30 m/min) or by means of motorized shear managed by brushless motors (for speed up to 60 m/min).

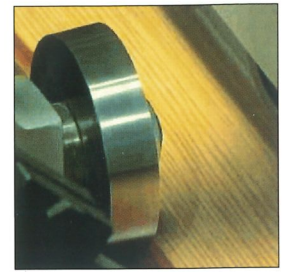


## Coil magazine

Evolution is equipped with a large range of coil magazines, from the traditional 2 coil magazine with clamp change over up to the 6 or 12 coil magazine with motorised rollers change over.



# Softforming gluing unit with high depth of inlay

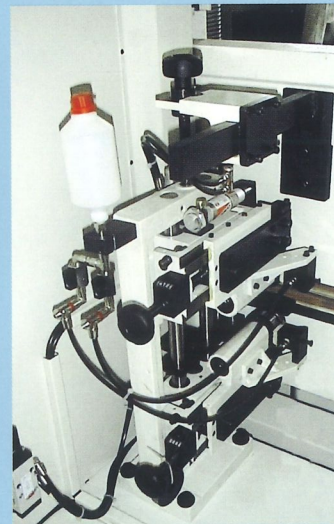
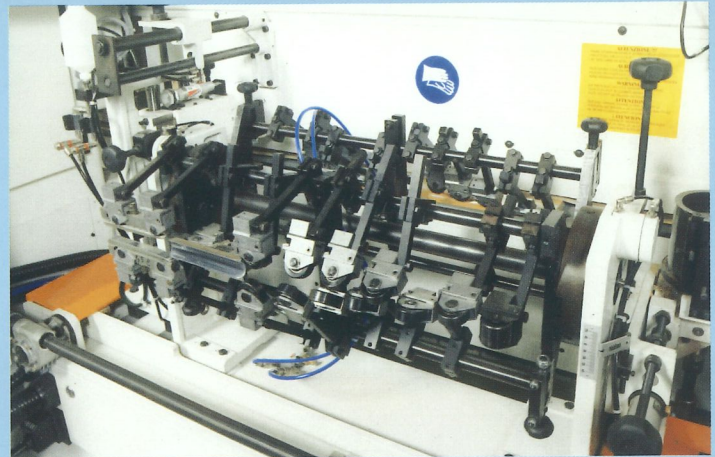
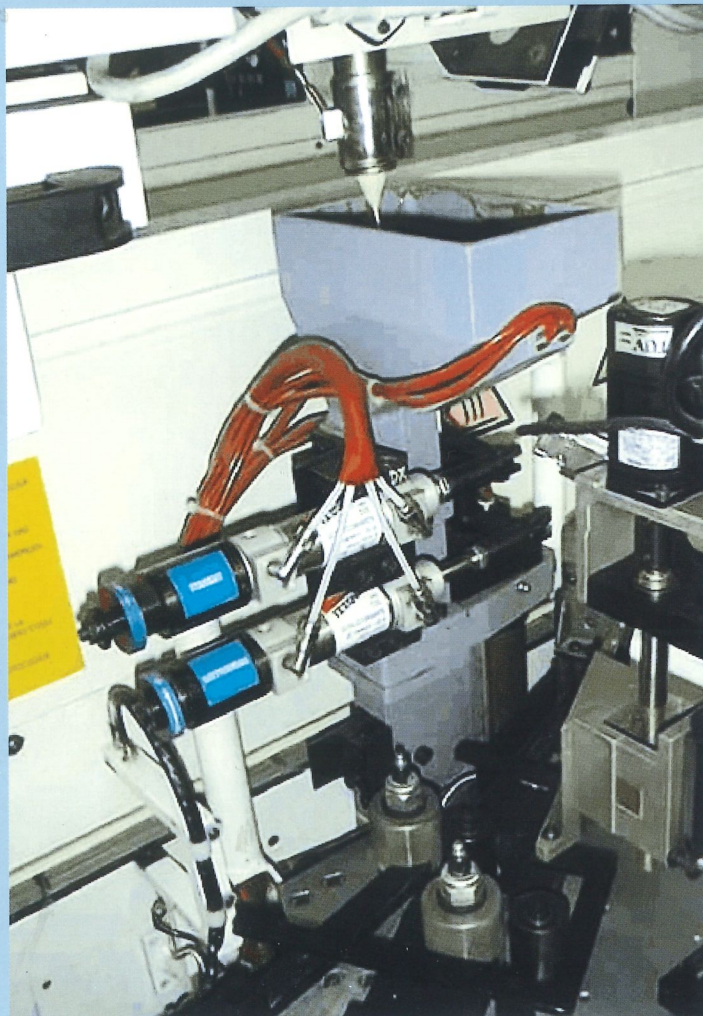


## Softforming gluing unit

HM 50 SA softforming gluing unit is equipped with one glue roller which can automatically change from straight profiles to shaping profiles. A large standard equipment and the structure of the unit allow high finishing and high productivity in every condition.

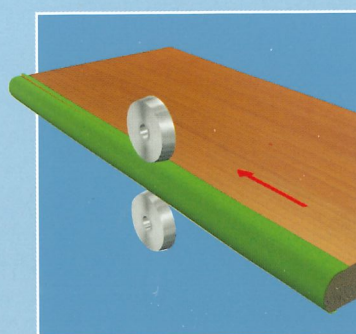
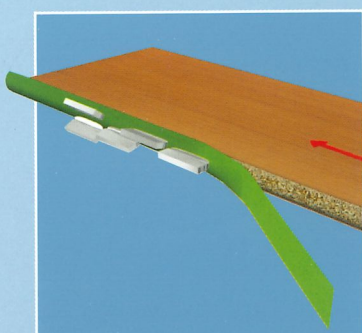
## Pressure sector

Pressure sectors of 1000 mm length with steel rollers or slide shoes enable the processing of profiles with difficult geometry. A revolver system (automatic optional) allows high flexibility on the profile change over.



## Longitudinal shear

Fitted on a dedicated column to cut the exceedance of the deep inlay edge profiles.





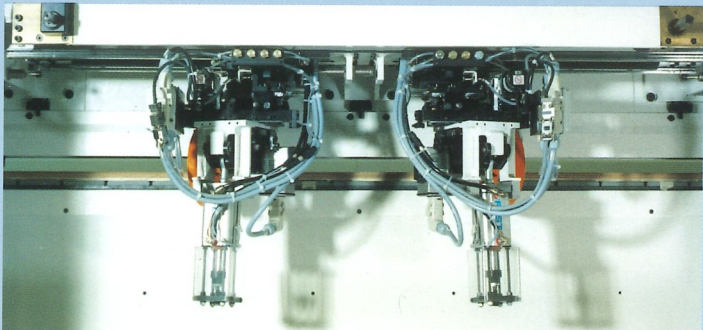
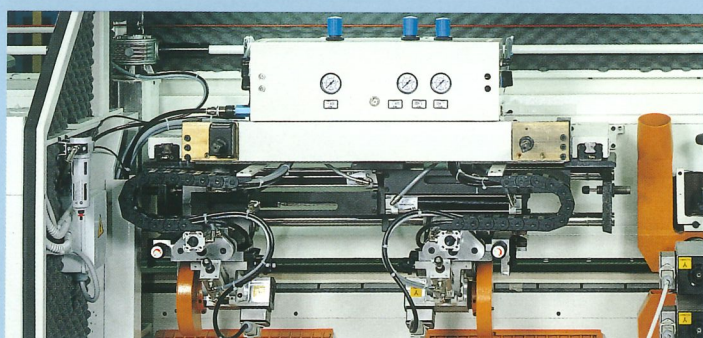
# Accurate and reliable working units...

Evolution offers a wide selection of operator units dedicated to edge finishing that ensure elevated quality of the finished products.



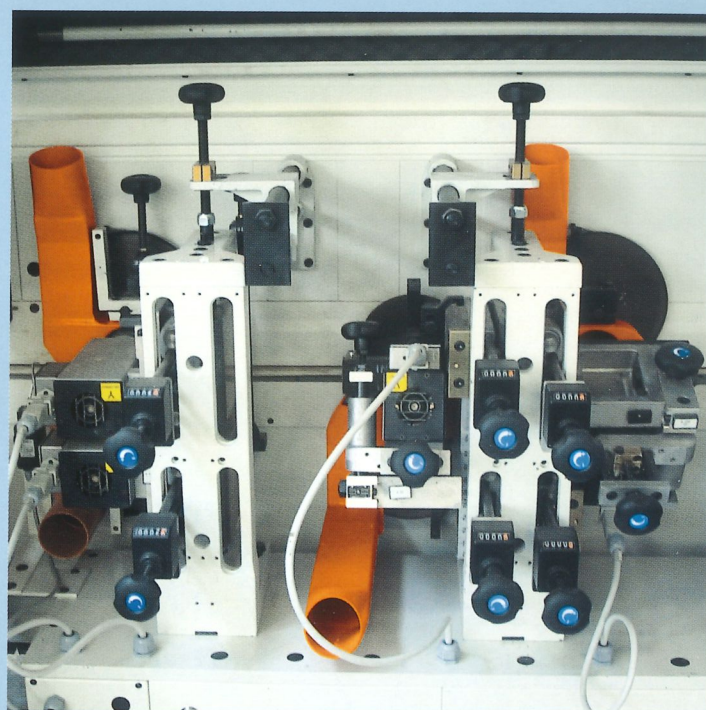
## Upper end trimming unit

The upper horizontal end trimming unit enables high speed machining and high precision front and rear cut, two features guaranteed by the special cutting geometry and the THK guides.



## Electronic end trimming unit

The electronic end trimming unit is designed for customers searching for high productivity.



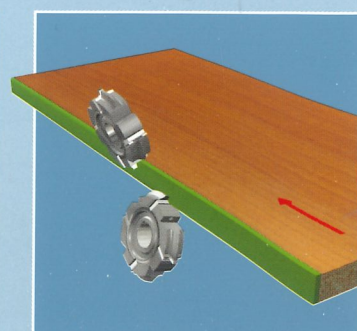
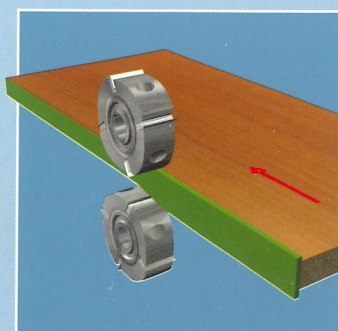
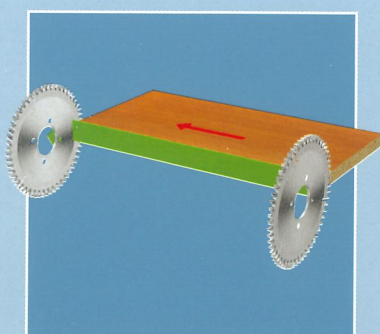
## Rough trimming unit

Unit designed for the rough trimming of thin and thick edges and for the finishing of solid wood edges.

The structure of the unit and the wide range of adjustments ensure a high-quality finish.

## Fine trimming unit

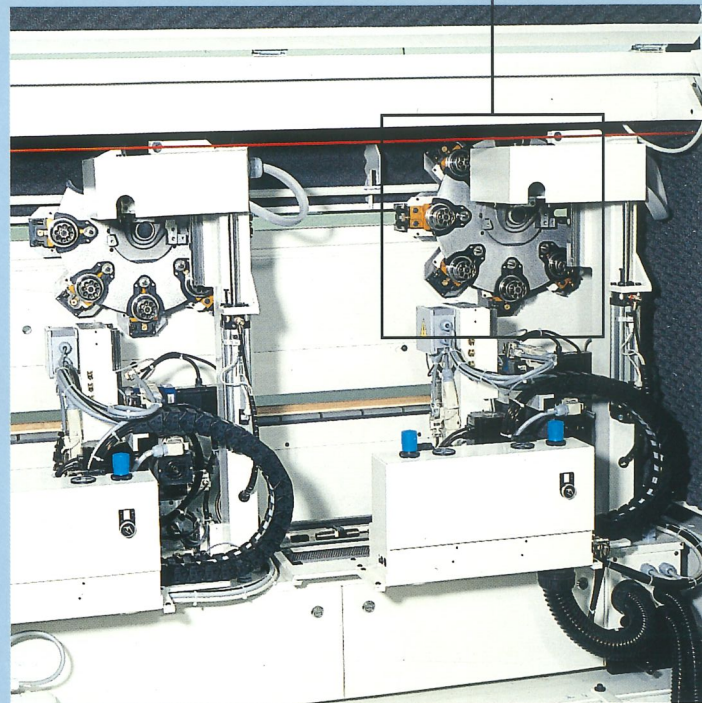
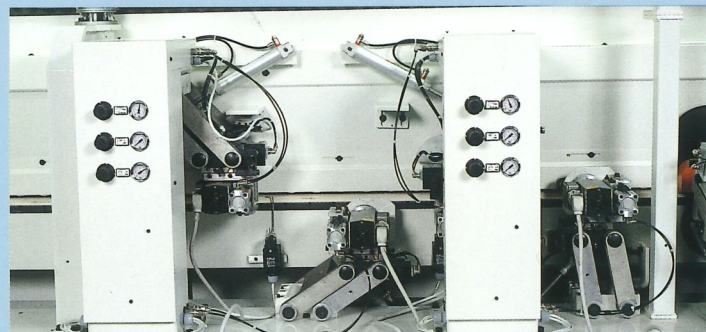
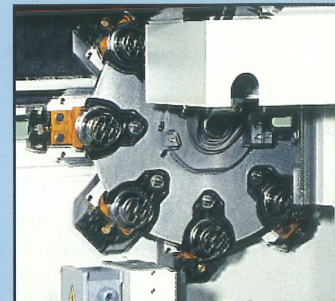
Unit designed for upper and lower finishing of the edge. High flexibility of the change over with units equipped with the quick-release device or two pneumatic positions or multifunction versions.



...with possibility to choose units from traditional up to multifunction...



**Multifunction 4-motors corner rounding unit**

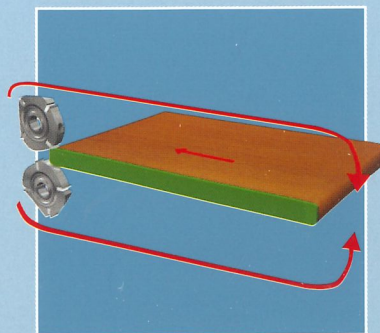
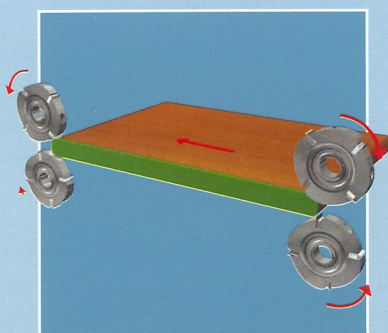


**4-motors corner rounding unit**

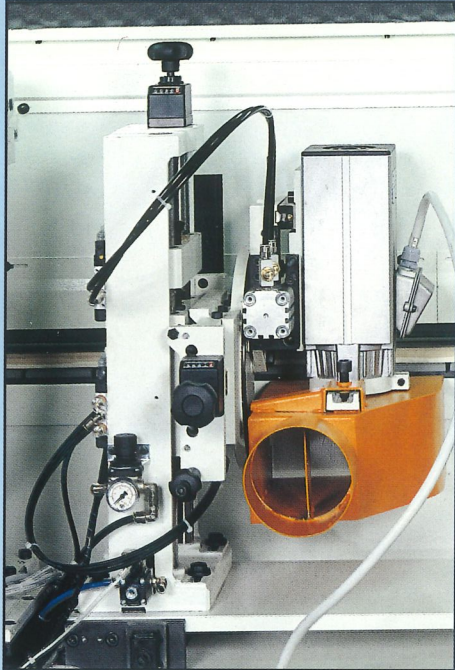
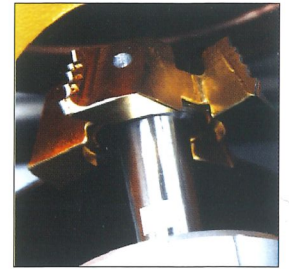
For finishing the edges of panel heads and tails.  
Necessary for rounding wooden edges.  
Available with quick-release motors or two pneumatic positions or multifunction unit with 16-motor magazine.

**2-motors corner rounding-trimming unit**

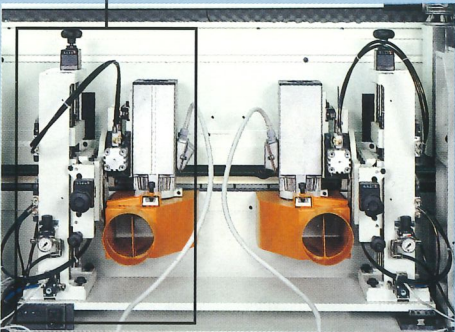
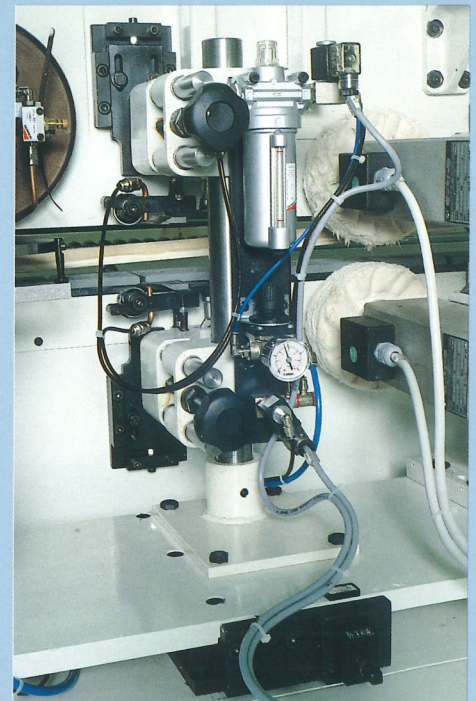
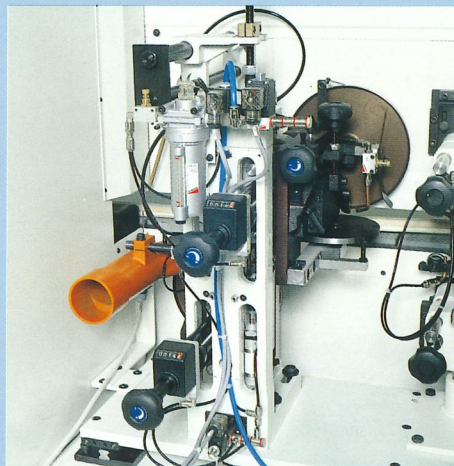
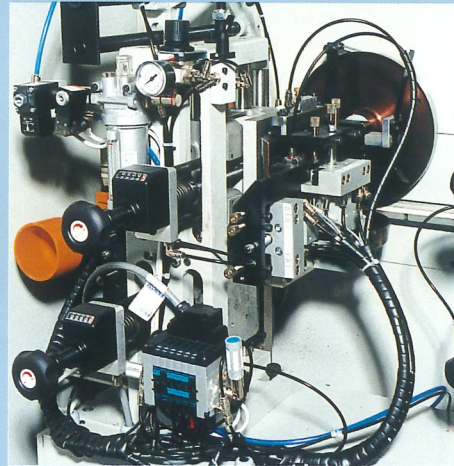
Designed for finishing the head and tail edges and the upper and lower parts of the panel.  
Fitted with an 8-positions automatic tools change over.  
Movements by brushless motors to ensure high working speeds.  
**PATENTED SYSTEM.**



...to guarantee  
high quality finishing ...



**Multifunctional edgescraper**



**Grooving unit**

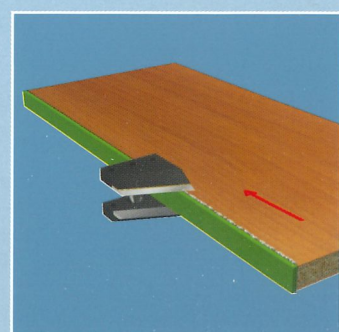
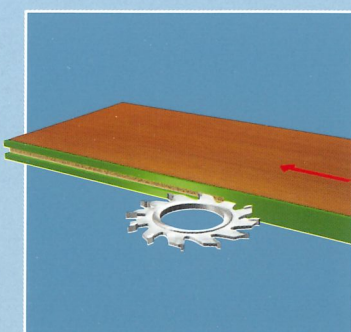
Executes through and dead grooves on the panel.  
Top and side feelers to guarantee high precision.

**Edgescraper**

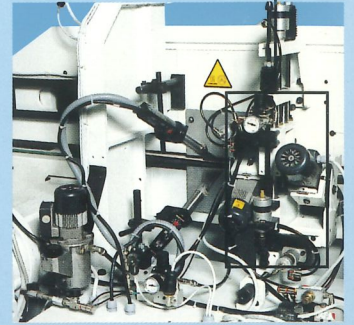
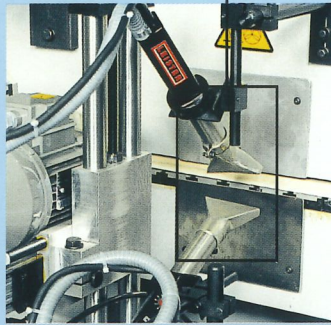
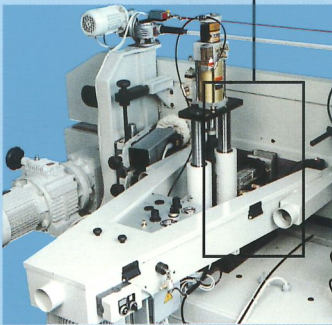
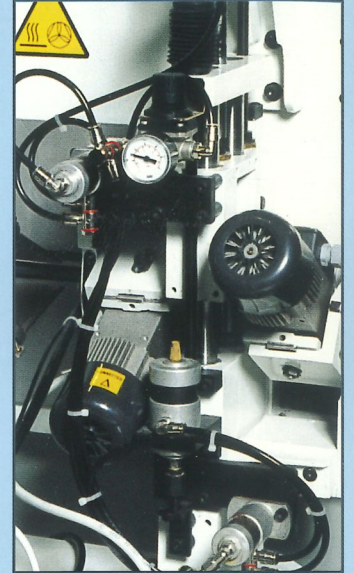
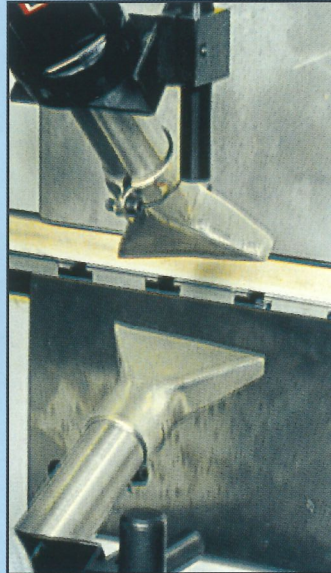
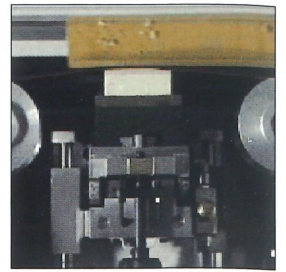
For finishing ABS and PVC edges rounded or chamfered.  
The structure of the unit and the large diameter of the feelers provide the maximum stability and ensure a top quality finish.  
Available in quick-release or multi-function versions.

**Gluescraper**

Removes eventual glue residues, guaranteeing a perfectly clean panel. The tools are kept efficient by a humidifying liquid spray to avoid glue deposit.



With maximum flexibility of use



**Sanding unit**

Sands the veneer or solid wood edges using an abrasive belt. Evolution offers a wide range of sanding units that, in addition to sanding the straight part of the edge using units with or without oscillation, also sand the upper and lower edges with tilted units dedicated to this machining operation.

**Edge brightening unit**

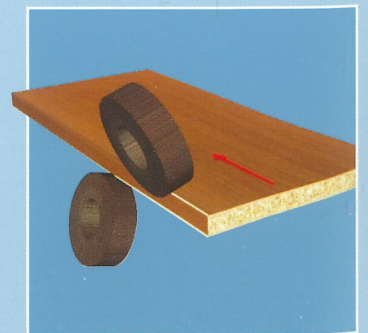
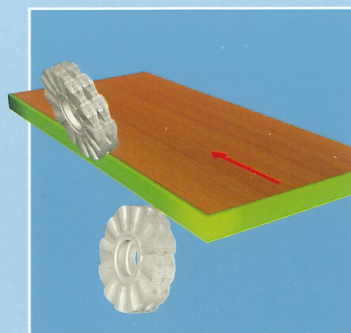
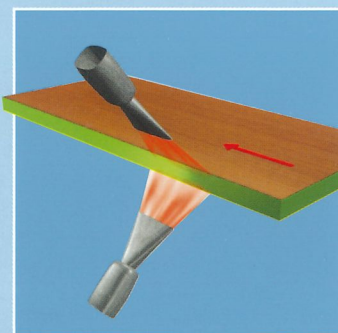
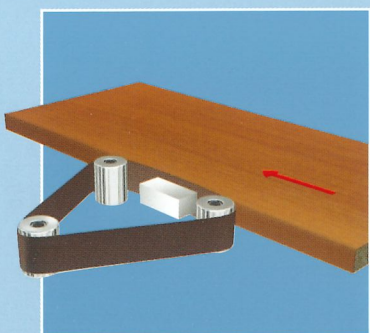
In finishing ABS edges, the unit revives the colour of the plastic material, altered by the previous machining processes.

**Buffing unit**

The buffing unit guarantees perfect cleaning of the machined part and restores the gloss to edges in plastic material. According to the needs, overlapping brushes may be chosen which take up limited space, or oscillating brushes for homogeneous wear along the entire width of the brush.

**Staining unit**

Applies a layer of paint on the upper and lower edges in paper, melamine, veneer to guarantee perfect colour uniformity of the applied edge. The unit includes a paint feed pump.



# Managing by PC Office

## Tele-assistance: a direct link to the company

Stefani offers its clients an effective tele-assistance service via modem for eventual interventions or program updates, considerably reducing service costs and times.

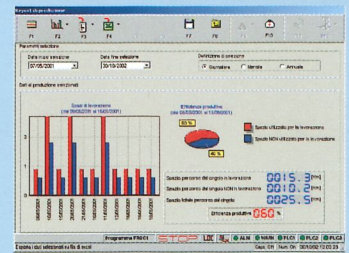
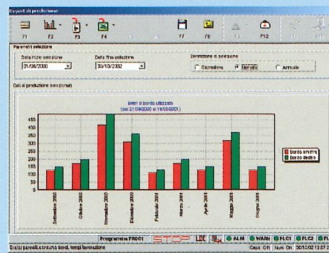
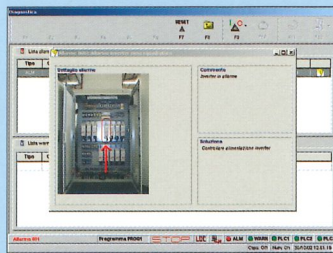
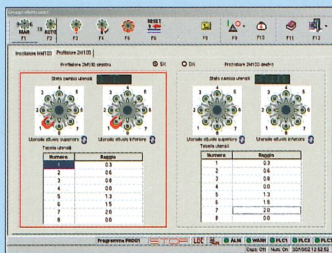
## High functionality and ease of use

The use of Office PC allows easy management of the data exchange between the control and the "outside" with the possibility of saving, printing, filing, analysing, and sending all of the machine work data. The layout of the screen, keyboard and mouse create an ergonomic and efficient control station. The use of a PC interface offers flexibility and the possibility of expansion to more complex configurations.



## The management software

The software that manages the entire machine has been developed internally within the company using a programming logic suitable to the specific needs of the machine. The software allows management of an unlimited number of machining programs with the possibility of associating a name and a description to each program. The use of the software is facilitated by the graphic and extremely rational layout that characterises the entire program structure.



## Writing programs is extremely easy

The software is structured in independent tables and is easily comprehensible thanks to the graphic auxiliary. Writing new programs is easy and immediate by utilising the codes inherent to the existing tables already in use. The machine data table is common to all of the programs: in case of changes, the data is automatically updated with a considerable reduction in programming times and highly rationalised employment. Entering the machining data is guided and controlled with logical functions so that even the most inexperienced operator is able to correctly set-up the programs. Other control functions filter eventual operator programming errors.

## A complete diagnosis

The screen displays messages regarding machine operation (ex.: machine empty cycle in progress), warning situations (ex.: insufficient glue temperature) or alarm situations (ex.: no compressed air or open cabins), facilitating machining and reducing intervention times. In addition to this, there is information relative to alarm intervention timing.

# Technical and operational characteristics

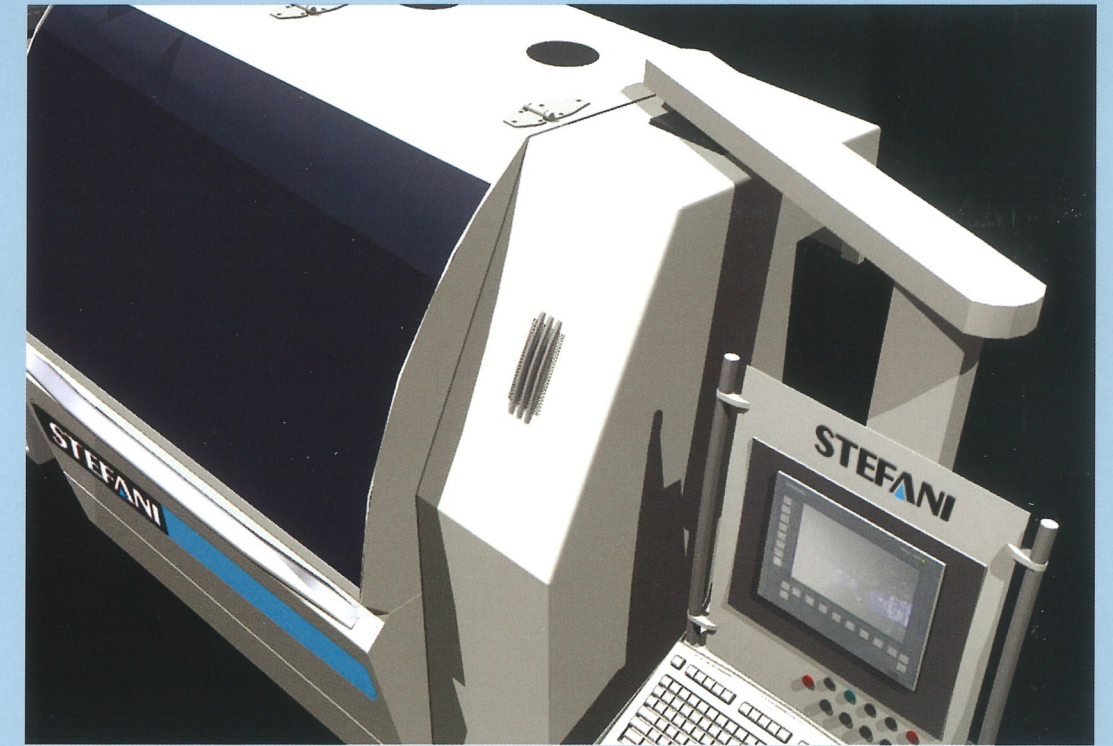
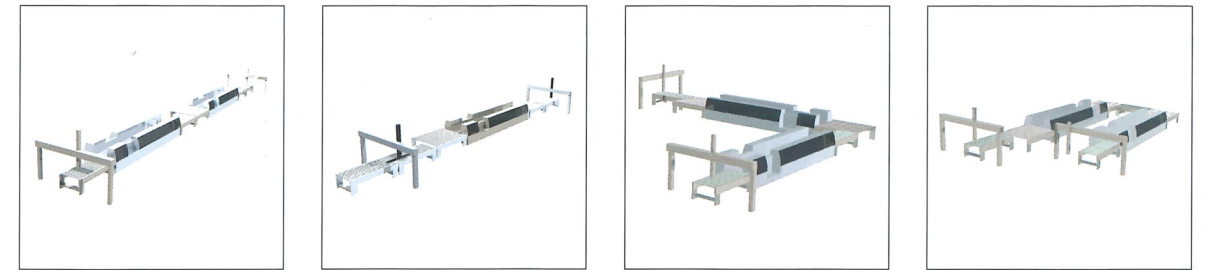
- Office PC with Windows operating system
- Colour liquid crystal display
- Alphanumeric keyboard and mouse
- Graphic display of operator units
- Unlimited program memorisation capacity
- Control of operator unit interventions
- Operator unit selection
- Automatic motor start-up
- Graphic diagnostics for solving errors

- Display of work data: pieces being machined, pieces produced, pieces per minute, etc.
- Report of the executing machining operations, metres machined and hours the machine is in use on a daily basis and on a total basis
- Program up-date by floppy disk or tele-assistance
- Back-up and restore function for machine data and machining programs
- Possibility of managing programs from the office
- Possibility of selecting the desired language

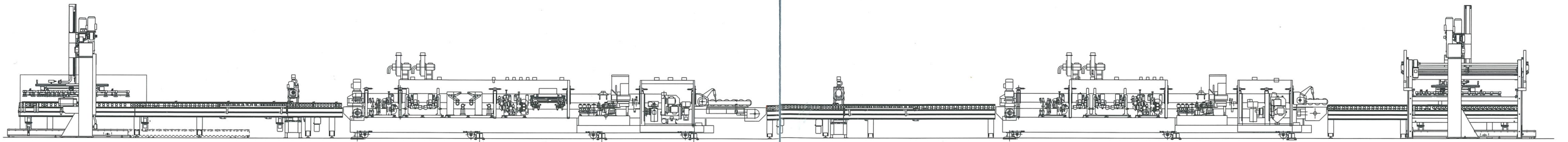
# In line with your needs

Evolution synthesises and unites squaring technology with edge banding technology for high performance and high machining quality. Evolution modularity translates into a vast selection of squaring-edgebanding machines that offer a wide range of composition possibilities, for both squaring and edgebanding processes, in lengthways and crossways machining of the panel. Here are represented the most requested lines for ABS and thin edge.

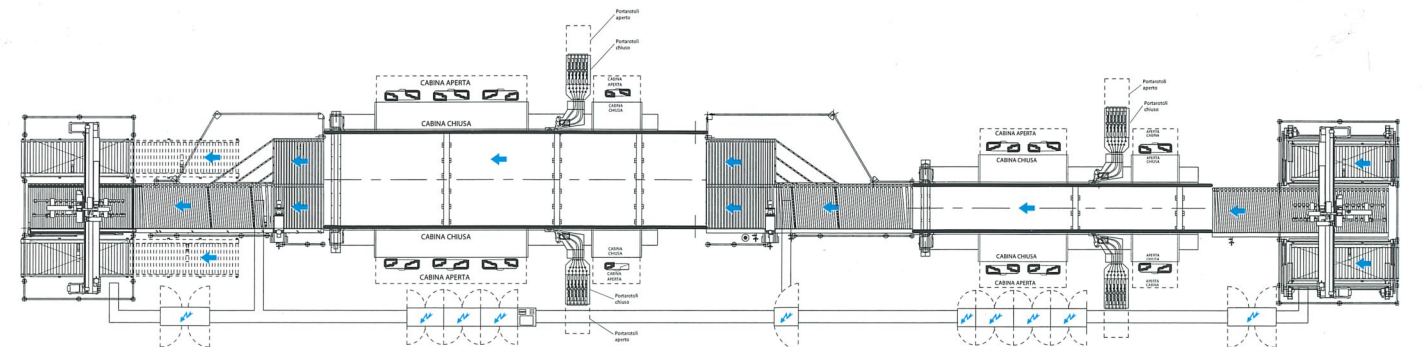
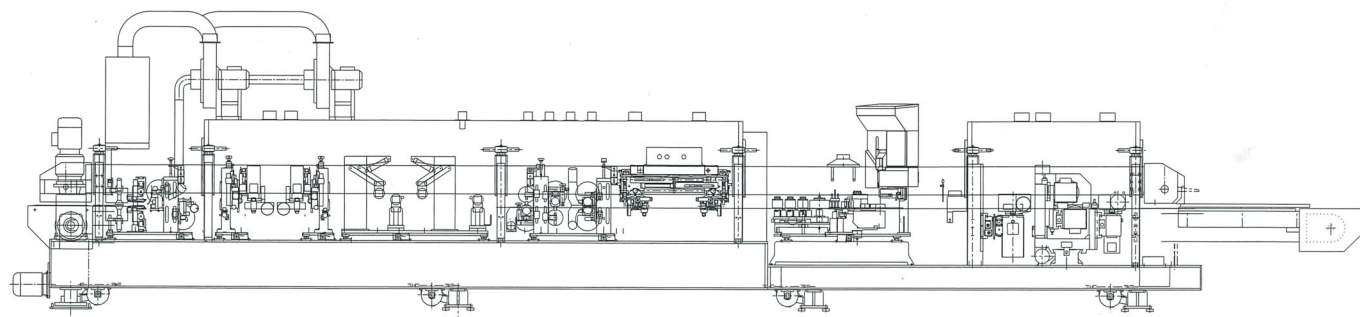
Evolution can be integrated with the most modern movement systems, making it possible to create customised and completely automatic squaring-edgebanding lines.



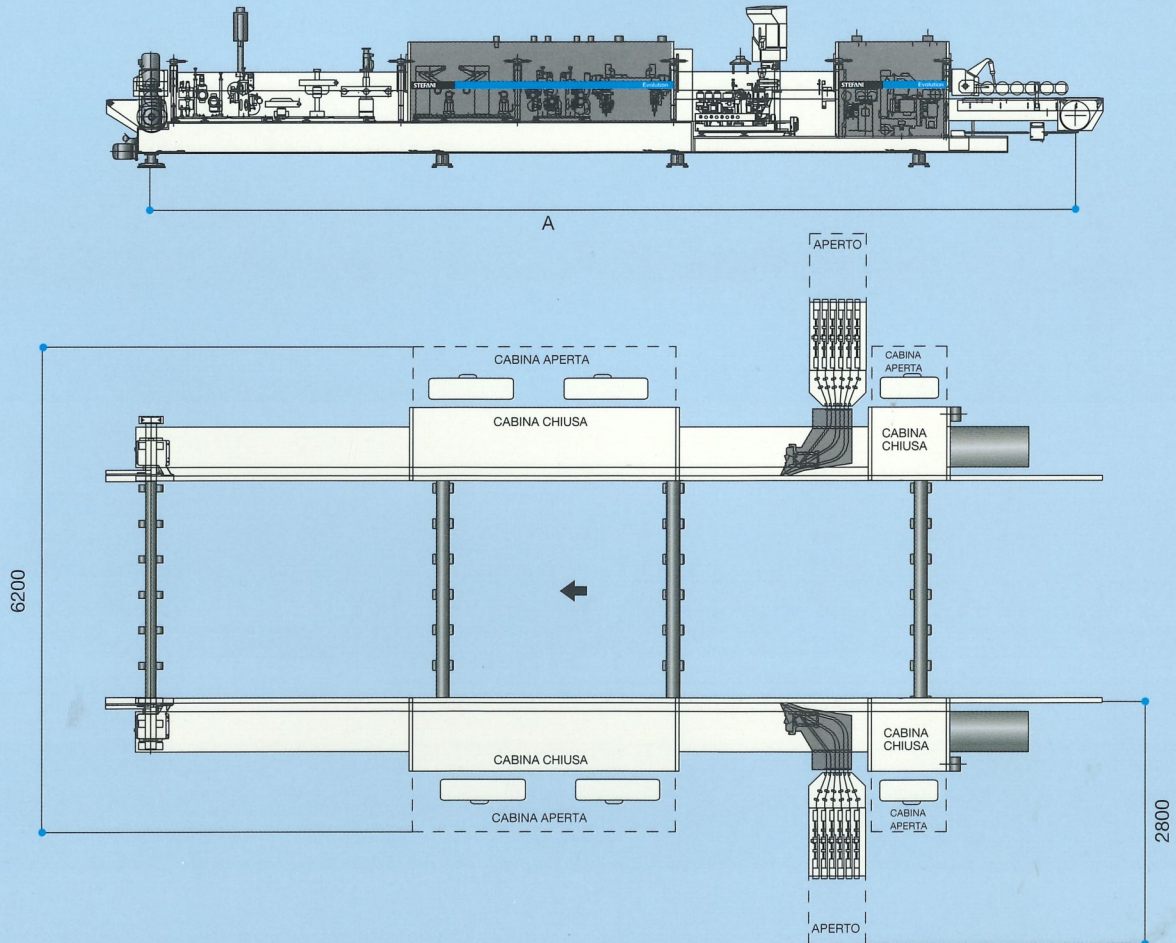
Evolution line .



Evolution - 1<sup>st</sup> and 2<sup>nd</sup> in line.



Variable panel overhang	30 - 90 mm
Crosswise way	1200 mm (1400-1600)
Minimum and maximum edge thickness	0,3 - 25 mm
Minimum and maximum panel thickness	10 - 60 mm
Minimum panel width on single belt	90 mm
Minimum panel width on double belt	220 / 230 mm in function of the working units fitted on the machine
Dogs distance	500 mm (STD) 400/300 mm
Dogs height	12 / 18 / 24 mm
Feed speed	12-60 m/min adjustable
Compressed air	6 bar
Work height	from 960 to 970 mm (STD)



**(A) Track sprockets distance : mm**

<b>1st in line</b>	5900	6500	7200	7800	8500	9100	9800	10400	11100	11700	12400	13000	13700	14300	15000	15600	16300	16900	17600	18200
<b>2nd in line</b>	-	6500	-	7800	-	9100	-	10400	-	11700	-	13000	-	14300	-	15600	-	16900	-	18200

# Italy's leading squaring-edgebanding machine specialist

# STEFANI



Over fifty years' experience in the woodworking machinery industry, thousands of edgebanding and squaring-edgebanding machines sold throughout the world, have made the STEFANI name one of the most well-known and esteemed at international level.

A brand synonymous with technical innovation, reliability and high quality standards, STEFANI is the ideal partner for largescale furniture makers who require machines and systems with high output capacities.





STEFANI

**STEFANI**

Combined edgbanding and squaring machines and systems for the furniture industry

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