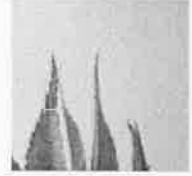
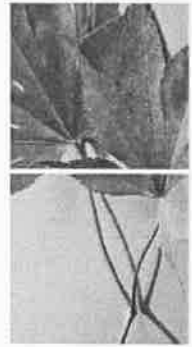
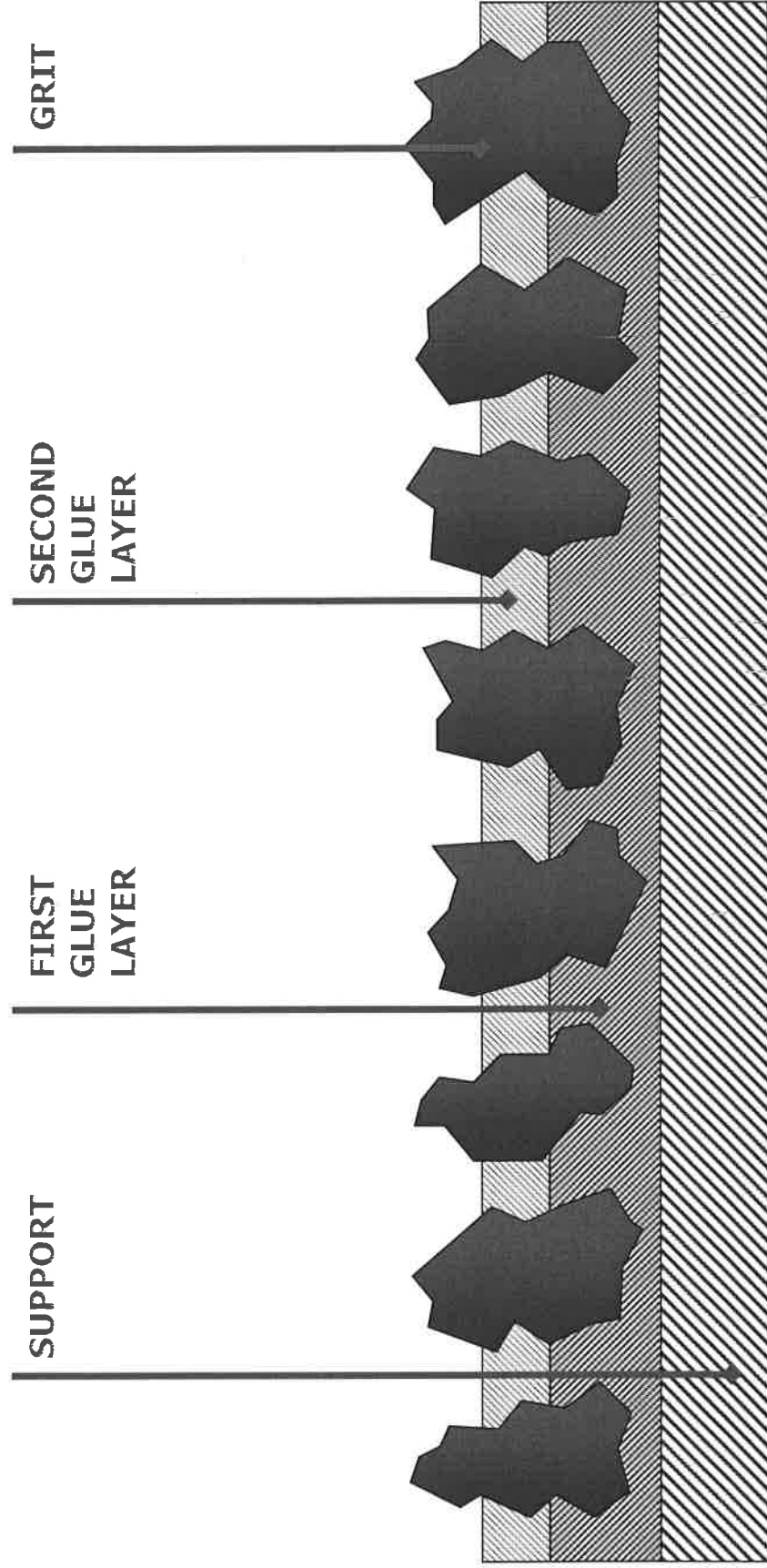


Tools



Tool: abrasive belt

A flexible abrasive tool consists of a support, a mineral (abrasive grain) and a double layer of bonding material.



Tool: abrasive belt



- Abrasive grains
- The abrasive grain which controls the amount of removal, consists of aluminium oxide minerals, silicon carbide or zirconium oxide.
- The grains dimension (which can vary from a small number of microns up to some millimetres) defines the depth of the removal and, therefore, also the workpiece finishing.
- The grain identification process takes place as follows: the grains (coming from the mineral crushing) go through several sieves with progressive closer meshes, which catch the grains of equivalent dimensions: considering the grain 180, for instance, we mean those grains which are caught by a sieve with a 180 strings for linear inch mesh.

Tool: abrasive belt

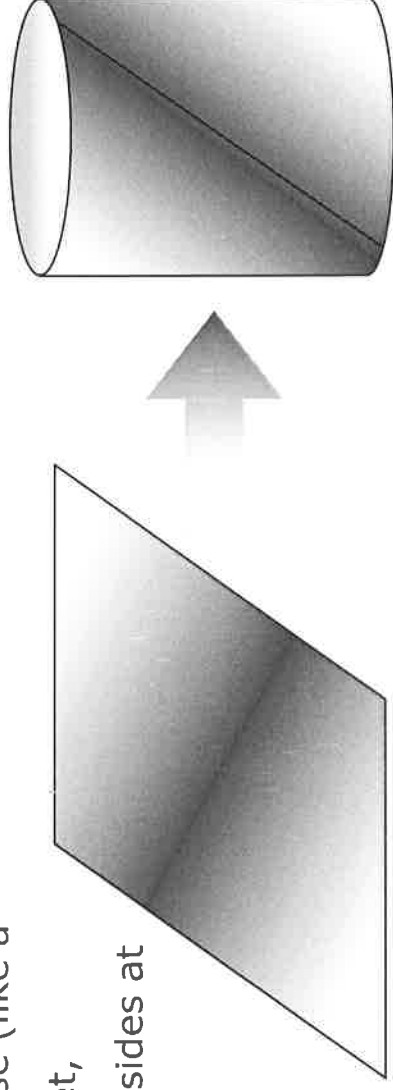
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	40	50	60	80	100	120	150	180	220
Very strong stock removal	■	■							
Strong stock removal			■						
Medium stock removal				■					
Presanding of veneered panels					■	■			
Intermediate sanding of solid wood					■	■			
Fine sanding of veneered panels							■	■	
Fine sanding of solid wood							■	■	
Superfinishing of solid wood (against the grain)									■

Tool: abrasive belt

■ Jointing

Jointing is the operation to close (like a cylinder) an abrasive belt sheet, previously cut with its oblique sides at 45°



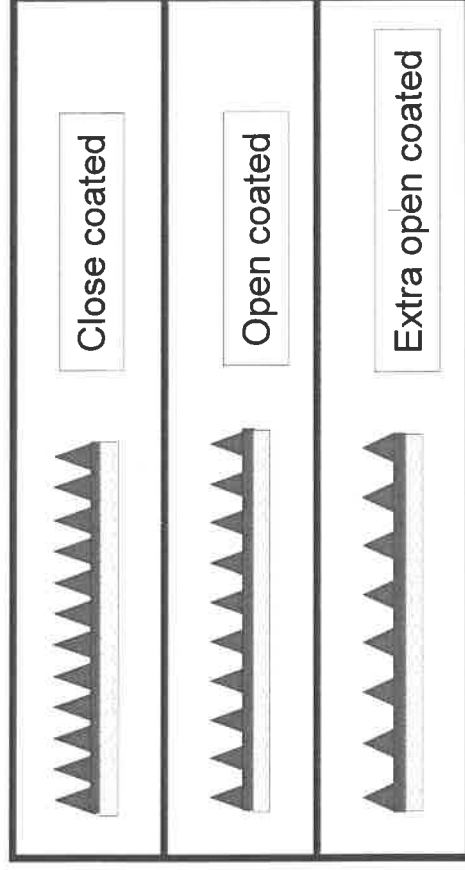
Here're the most frequently used methods:

- overposed jointing, with oblique cut and overposed gluing of the two edges;
- head to head jointing, with oblique cut and close gluing of the two edges through adhesive film inside the belt;
- head to head sinusoidal jointing, with sinusoidal cut and gluing through adhesive film inside the belt.

Tool: abrasive belt



- The grains are glued to the support via adhesives or resins depending on the type defining the resistance to mechanical wear, high temperatures and humidity of the belt.
- With the same grain on define three types of coated, depending on the amount of granules per unit area: closed, open, spaced.



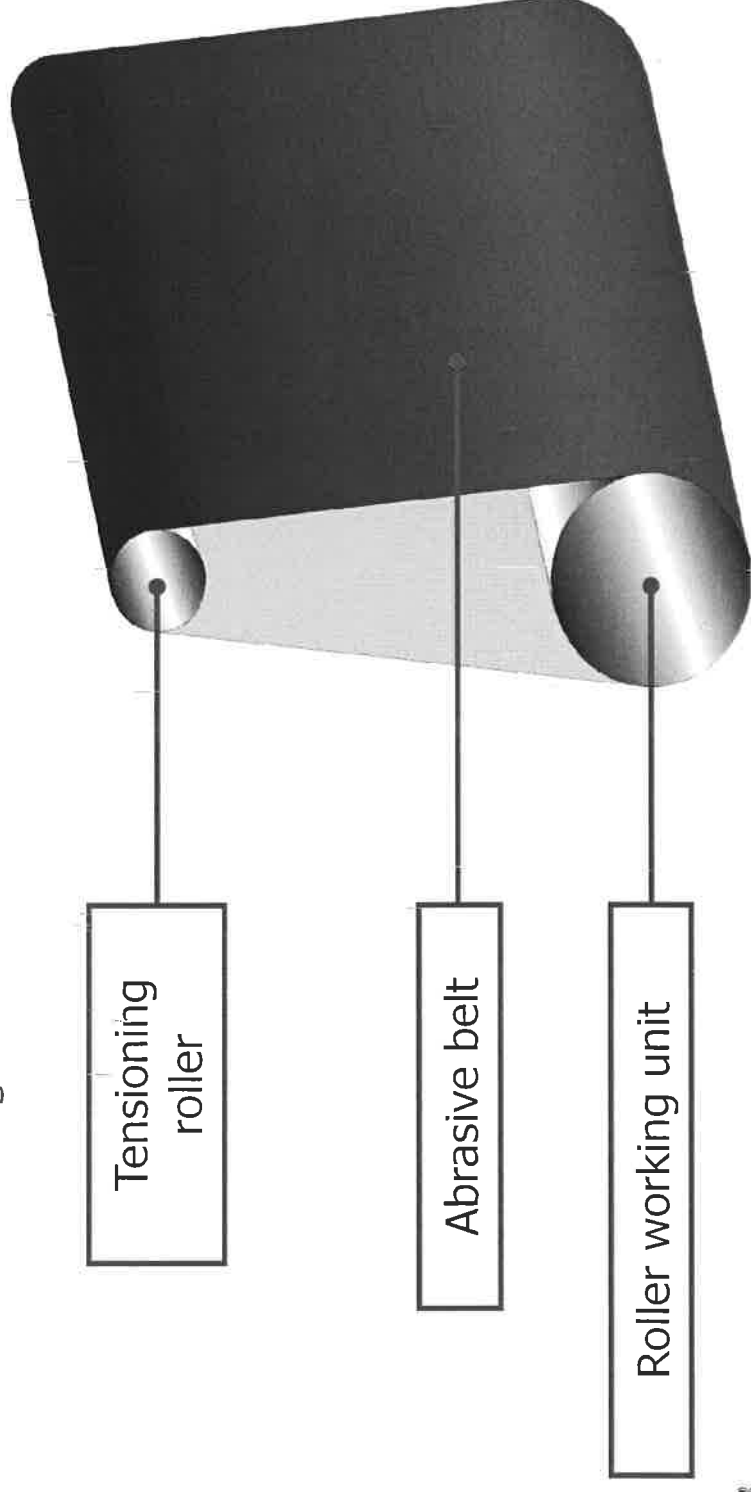
High density implies a high removal rate and better surface quality of the granules being closer together. However, increases the risk of clogging and therefore prefer open coated for the processing of soft materials and resinous, and with some types of paints and non-wood materials.

This will increase the durability and performance of the belt, especially if the machine is equipped with an effective belt cleaning system

Working units

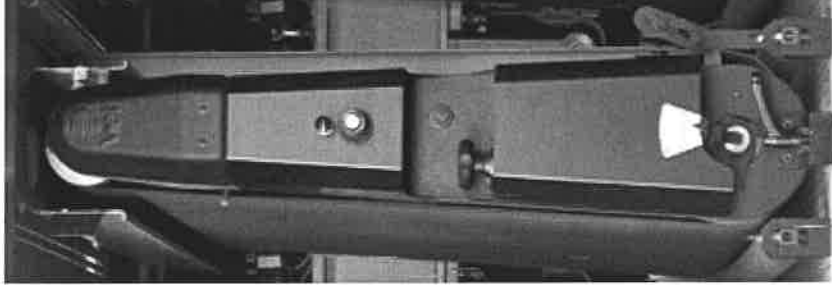
- The operation of abrasion of the sanding belt is determined by the rotation of the same and its pressure on the panel process.

The bottom motorized roller is in contact with the panel, while the function of the upper idle roller to maintain tension on the sanding belt and allow its rotation



Roller unit

- The roller unit is generally made in grooved steel or rubber coated grooved with different types of hardness:
- ✓ The calibrating roller is usually steel or rubber with a hardness of 80 to 90 Sh, has excellent cutting capacity and ensures the flatness of the surface even in the presence of knots or grain varied
- ✓ The presanding roller is usually rubber hardness of 40 to 70 Sh, has an average removal rate, has better heat dissipation compared to the calibrating rollers
- ✓ The sanding roller is usually rubber hardness of 20 to 40 Sh, has a limited capacity for removal, an excellent ability to dissipate heat and good elasticity to absorb any differences in thickness or defects in the sanding belt (junction)

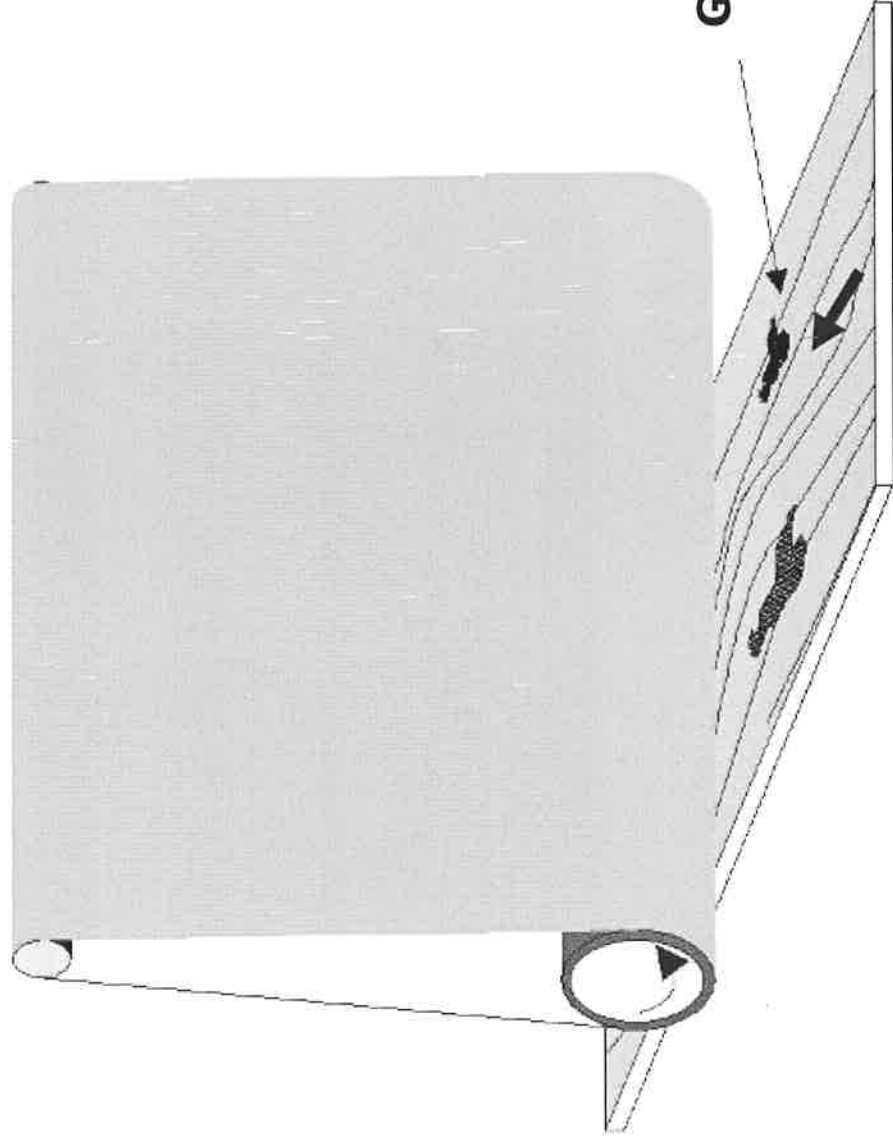


Roller unit

- veneered panels with large amounts of glue or paint treated with high-power clogging

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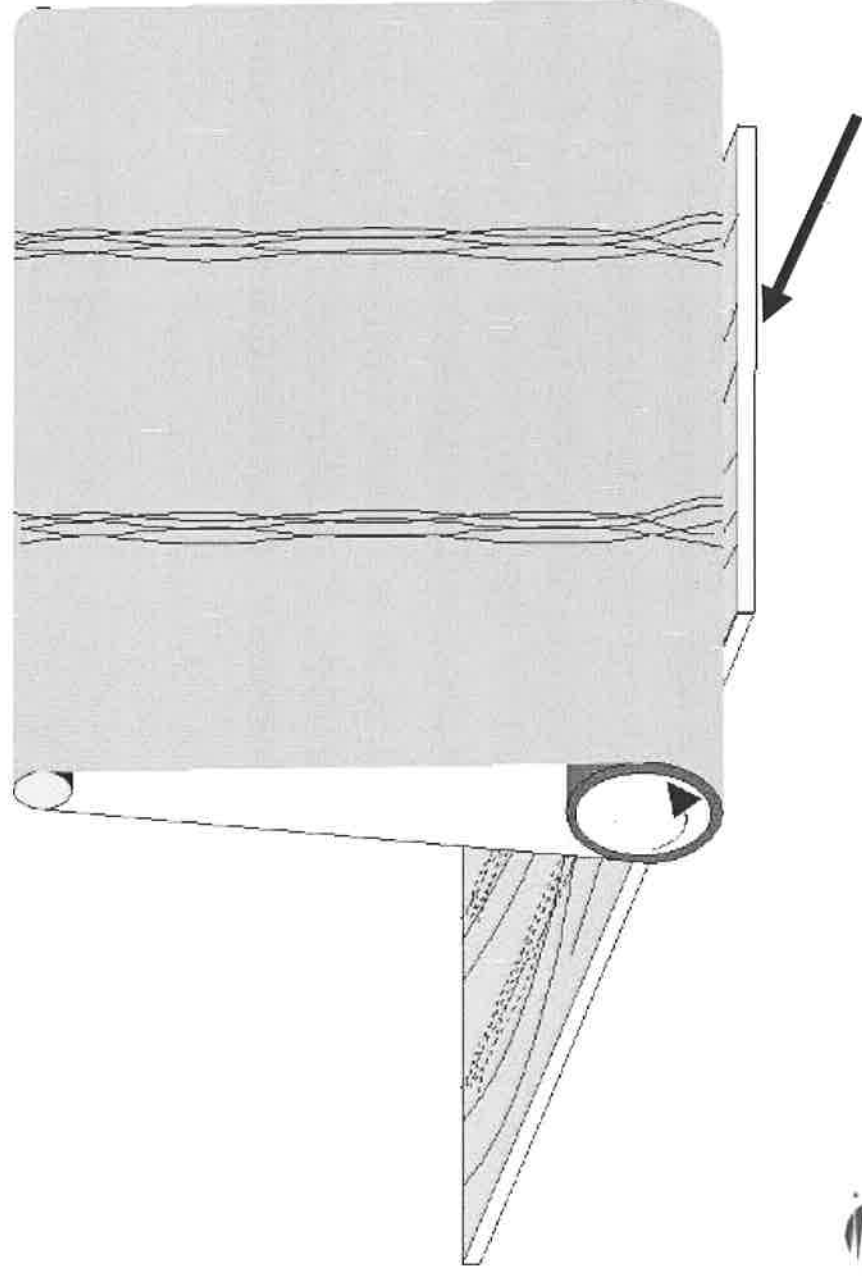
1° step



Roller unit

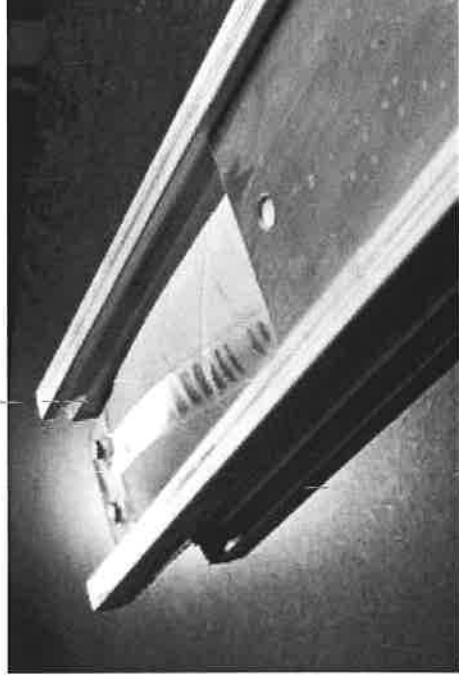
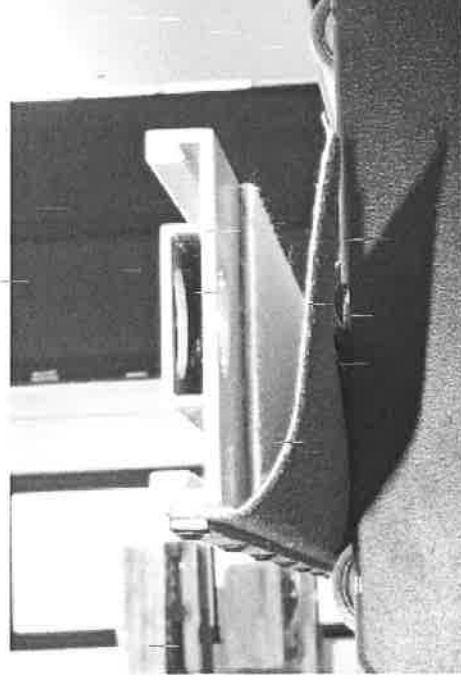
The belt tape leaves marks or streaks on the piece

3° step



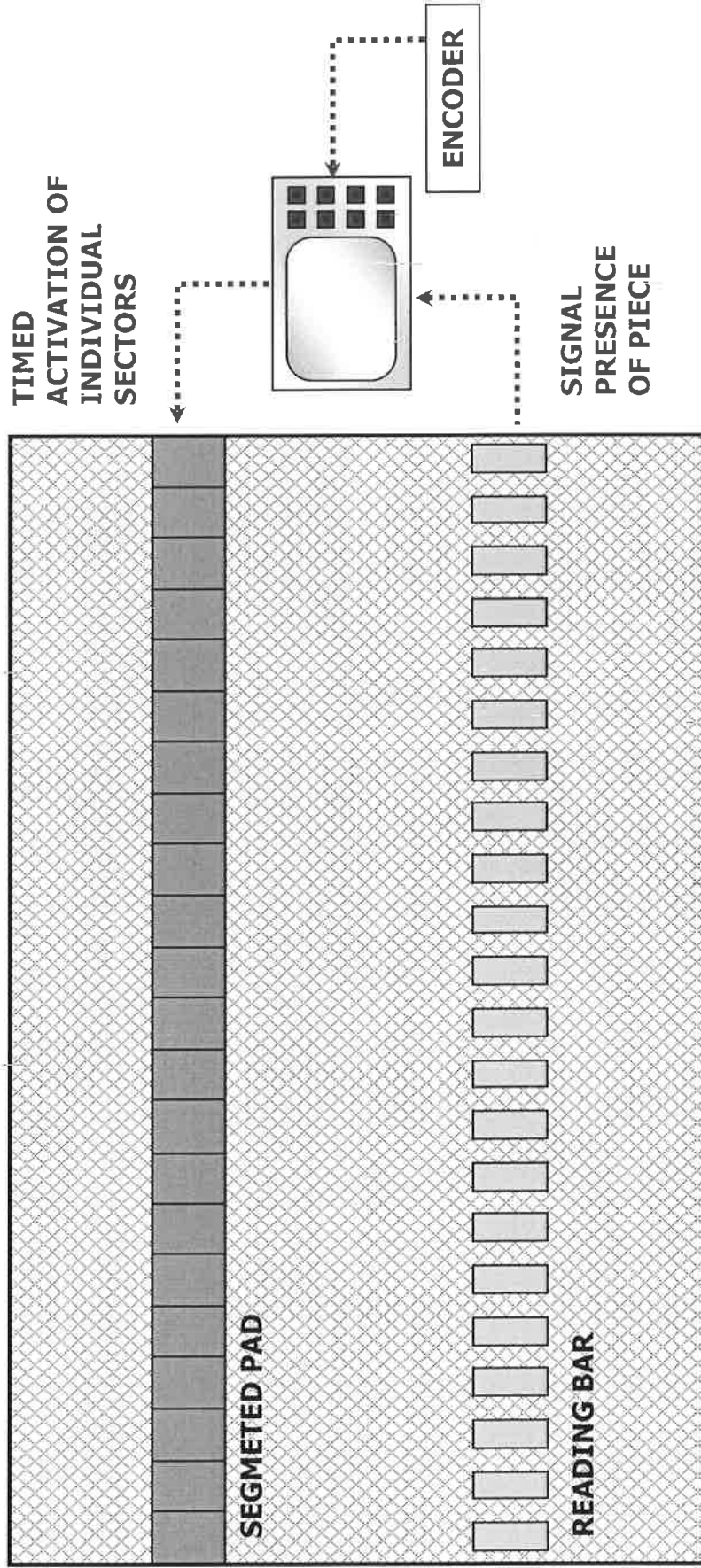
Pad unit

- There are different types of pad:
 - ✓ Rigid pad: This is usually a bar of aluminum that is glued felt and graphite. It has a low capacity to adapt to any surface irregularities. It is normally used after calibration as a finishing unit for solid wood elements
 - ✓ Pneumatic pad: single membrane driven by compressed air presses the pad blade on the panel with the possibility of fluctuation of about 0.5 mm without the ability to control the processing on the panel edges

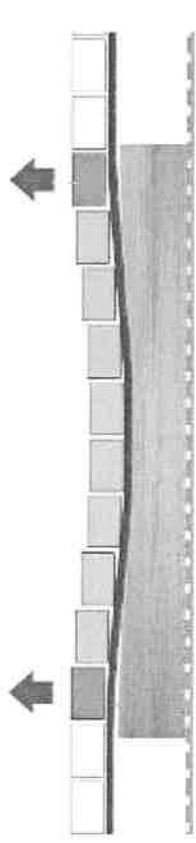


Pad unit

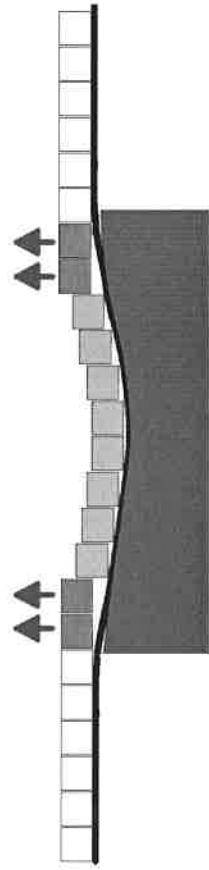
- The reading bar infeed to the machine reads position and shape of the panel and through an electronic control activates the corresponding sections of the pad



Pad unit



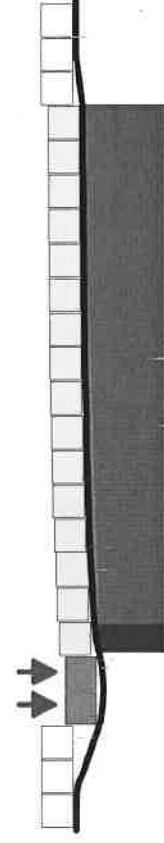
- With electronic segmented pad you can turn on/off 1 or more peripheral section



- Concave panel



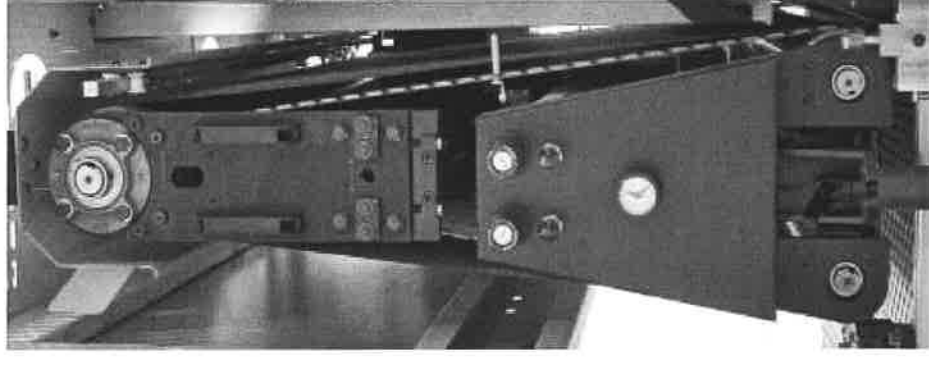
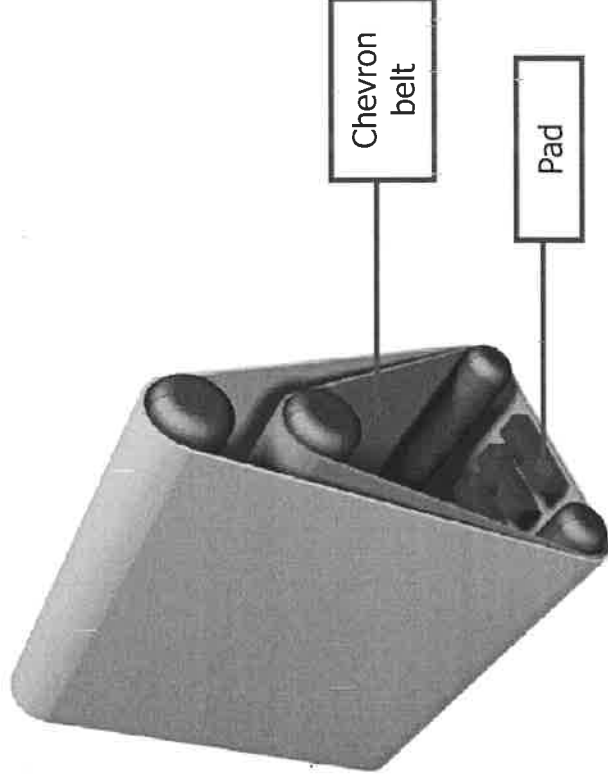
- Convex panel



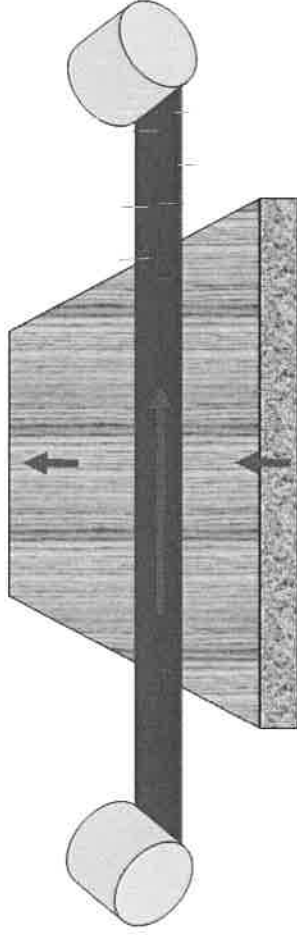
- Panel with solid wood edge

Superfinishing pad unit

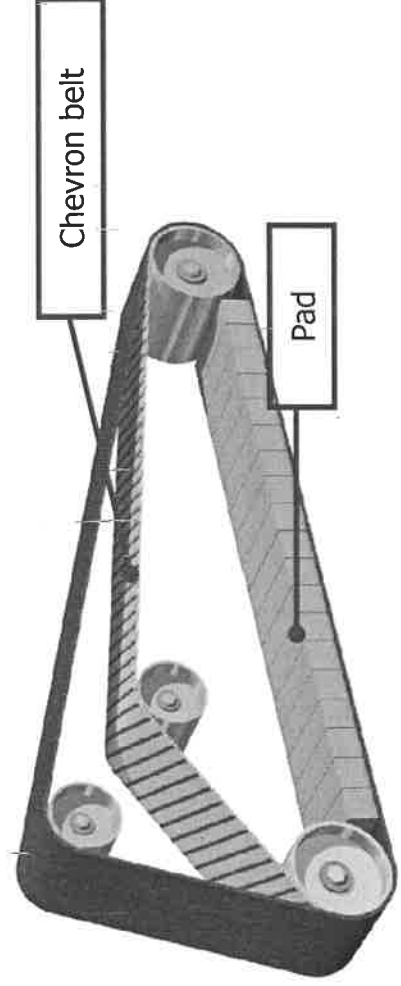
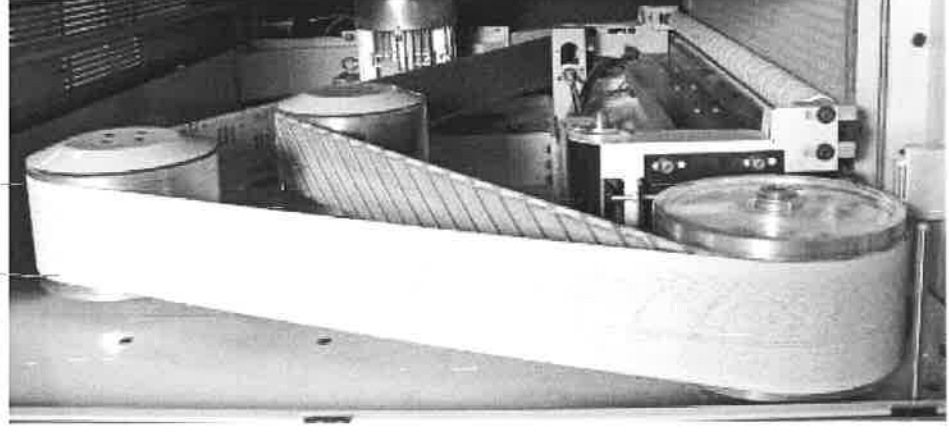
- The superfinishing pad is an evolution of the pad unit. Between the abrasive belt and the pad insert runs a chevron belt with length less than the abrasive. For the difference of length between the two belts, the contact point varies continuously, producing a very soft sanding.



Cross unit



- The cross unit consists of a narrow sanding belt of great length, which rotates perpendicular to the feeding panels direction.
- The cross unit is always composed by a chevron belt and electronic segmented pad



Cross unit

- Recommended the use of cross unit on veneer panels with large amounts of glue or lacquered with paint or high-power clogging. In this case, the clogging of the belt does not cause defects in the process of the panel because the clogged area of the tape is immediately followed by an area cleaner
- The cross working coupled with the longitudinal ensures perfect flatness even on polyester painted panels to level the film of paint. Optimal in the high gloss finish before polishing

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