

# QuadroMat

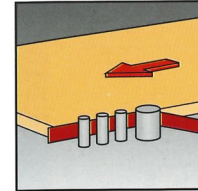
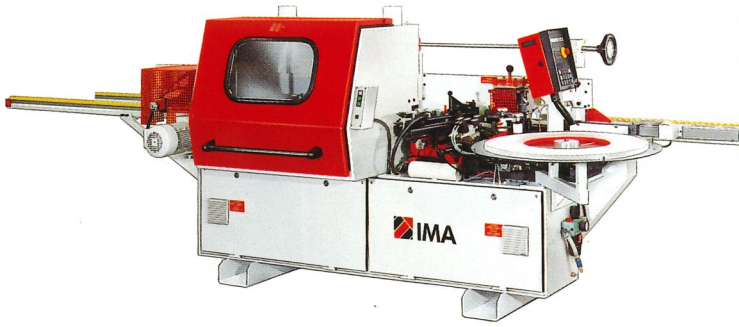
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**Perfect Edgedesign in  
one-man-operation**

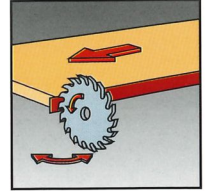


# The new QuadroMat series: The easy way and edge

QuadroMat 2112

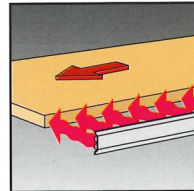
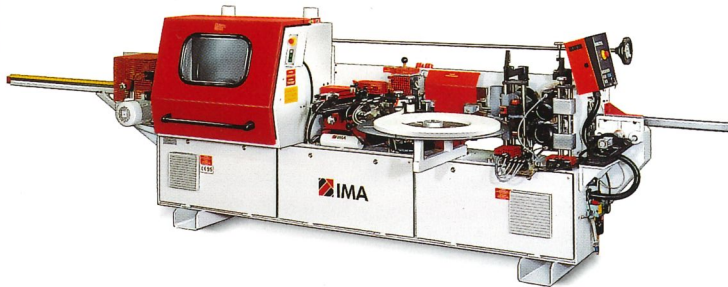


Edge banding

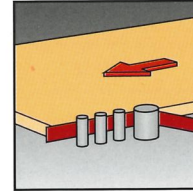


End trimming

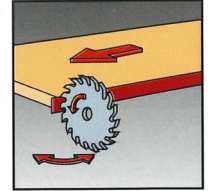
QuadroMat 3012



Heater area

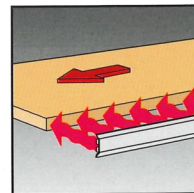


Edge banding

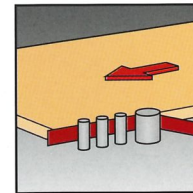


End trimming

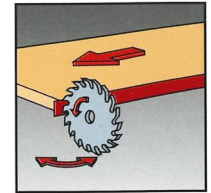
QuadroMat 3512



Heater area

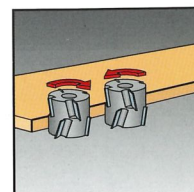
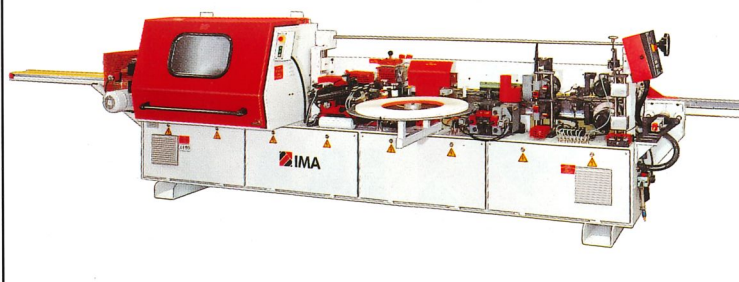


Edge banding

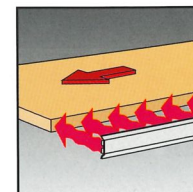


End trimming

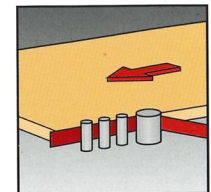
QuadroMat 4012 F



Jointing cutter

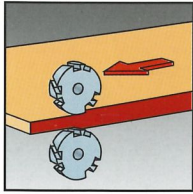


Heater area

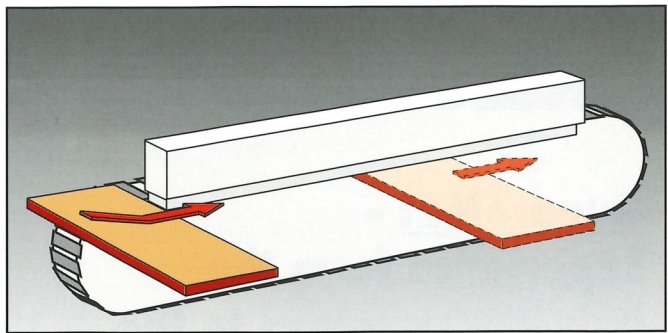


Edge banding

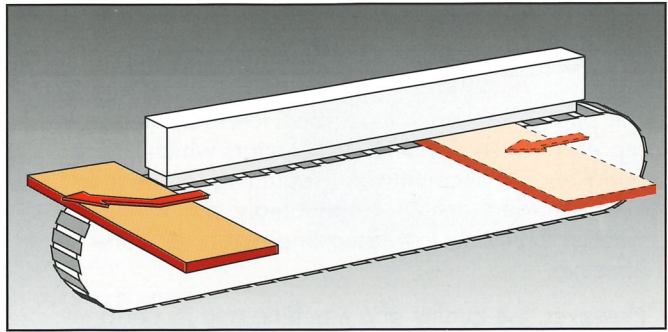
# of edgebanding processing



Chamfering  
radius milling  
flush milling



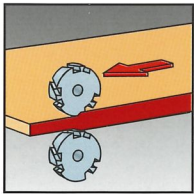
Panel infeed / forward pass



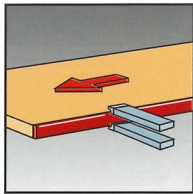
Panel outfeed / backward pass

All machines in the QuadroMat series include an automatically reversible feed chain. Edge processing occurs during the forward pass as well as during the backward pass, thus providing the following advantages:

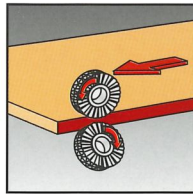
- 1-man-operation
- Reduced floorspace requirements due to the automatically reversible feed chain
- Small machine length due to the multiple machining unit
- low investment cost
- low tooling cost
- small set-up time gap and thus low set-up cost



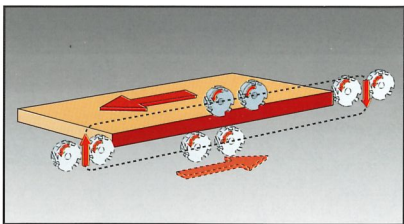
Chamfering  
radius milling,  
flush milling



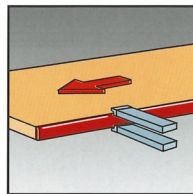
Profile scraper



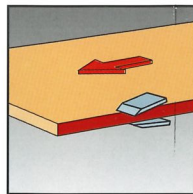
Buffing



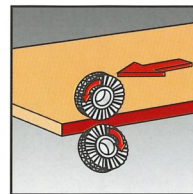
Chamfering,  
radius milling,  
flush milling  
+ contour trimming



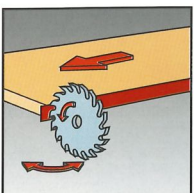
Profile scraper



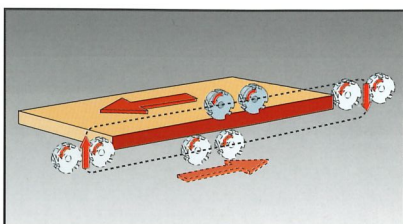
Flat scraper



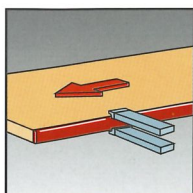
Buffing



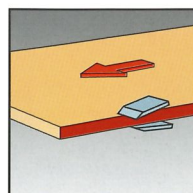
End trimming



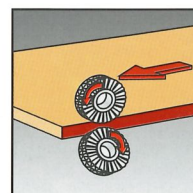
Chamfering,  
radius milling,  
flush milling  
+ contour trimming



Profile scraper



Flat scraper



Buffing

# Economic edge processing in

## **QuadroMat - Experience from the industry standard to the cabinet shop and architec- tural woodworking shop**

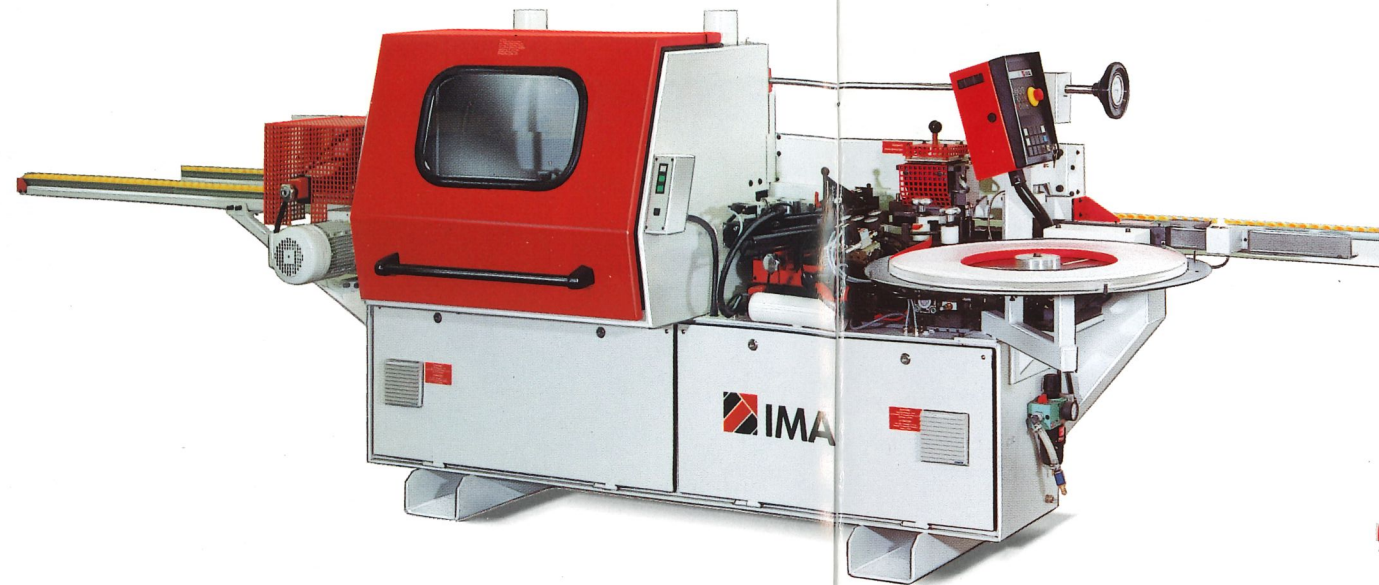
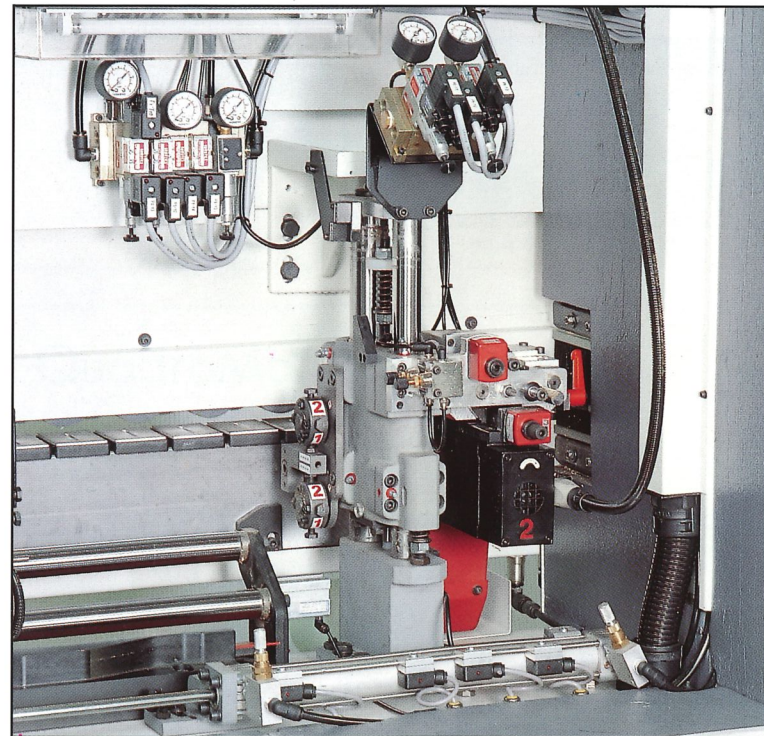
The purchase price will decide. However, the price represents only one of several factors which are to be taken into account when searching for the most *cost-effective* machine. Undoubtedly, a machine with an extremely low downtime rate is very cost-effective.

However, the quality of a machine and its performance are of great importance.

We do not measure the quality of a machine by its **precision** only, but also by its **performance and efficiency**, and last but not least by its **safety and durability**.

Guided by these ideas, IMA will help you to find the most economic machine for your specific requirements – presenting the optimum unit configuration and tooling for your application.

Using our experience from industrial applications, we are also a strong partner for the cabinet shop and architectural woodworking shop. You can take us at our word!

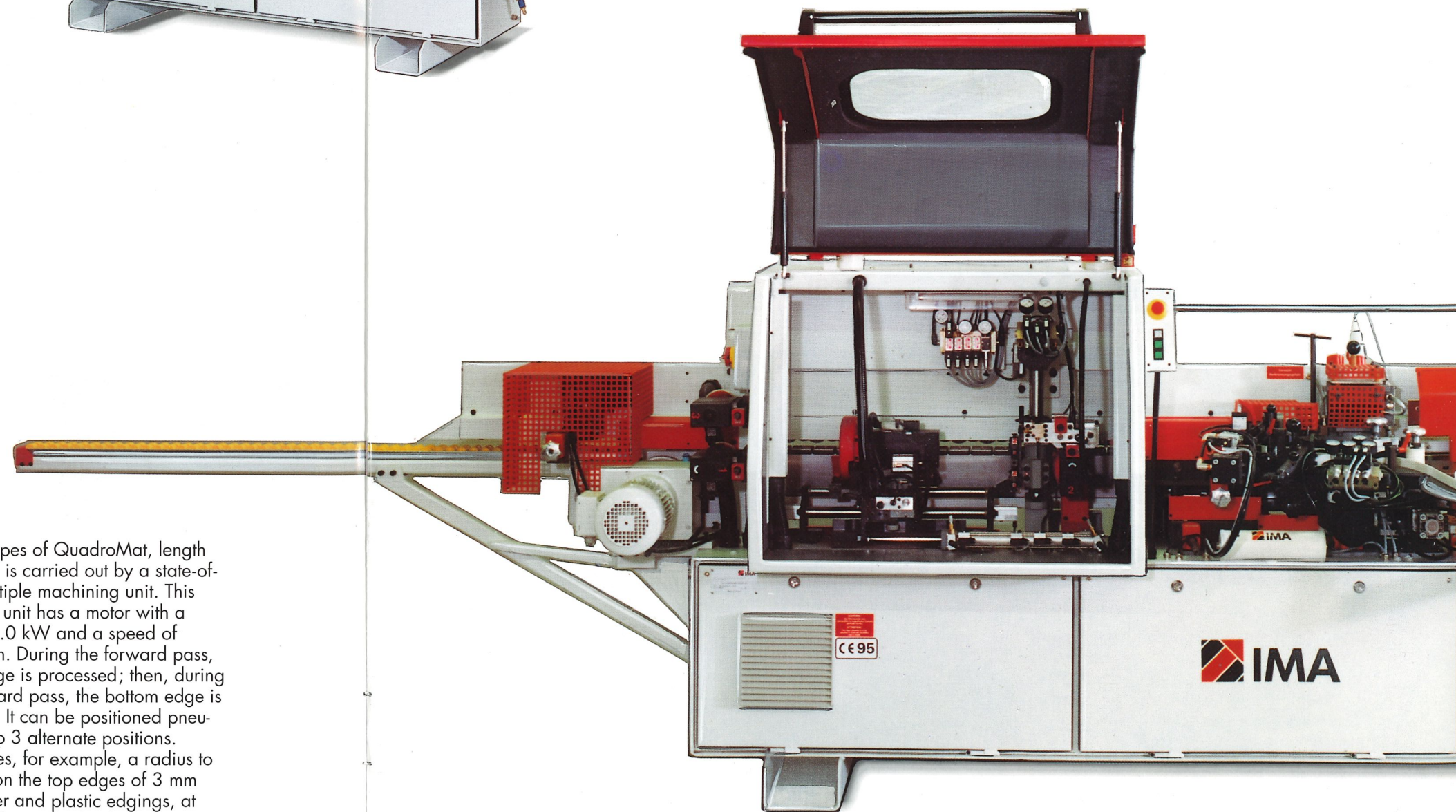


On both types of QuadroMat, length processing is carried out by a state-of-the-art multiple machining unit. This machining unit has a motor with a power of 1.0 kW and a speed of 18000 rpm. During the forward pass, the top edge is processed; then, during the backward pass, the bottom edge is processed. It can be positioned pneumatically to 3 alternate positions. This enables, for example, a radius to be milled on the top edges of 3 mm thick veneer and plastic edgings, at one time, during the backward pass, the unit jumps out and flush-mills the bottom edge.

# forward and backward pass

## **QuadroMat 2112 and 3012**

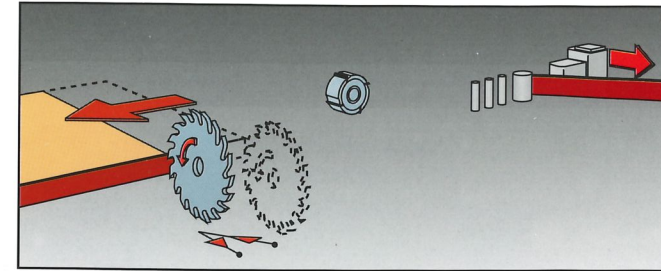
Both machines offer the user low-cost access to the cost-saving one-man operation. The QuadroMat 2112 is the basic model, including edge banding, end trimming, flush milling, chamfering and radius milling. If a profile scraper and buffing unit are needed to process plastic edgings, the QuadroMat 3012 will be the right choice.



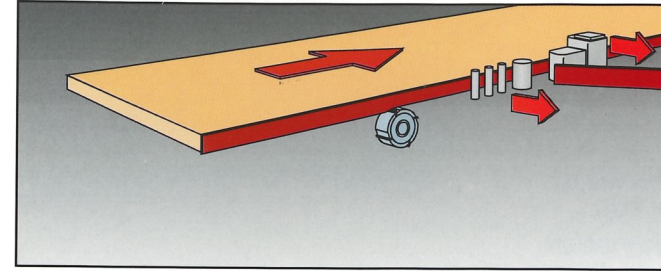
# forward and backward pass

## QuadroMat 2112 and 3012

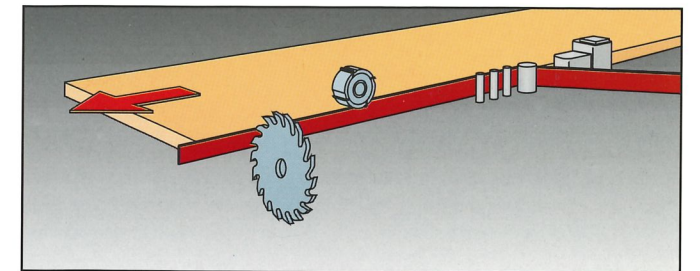
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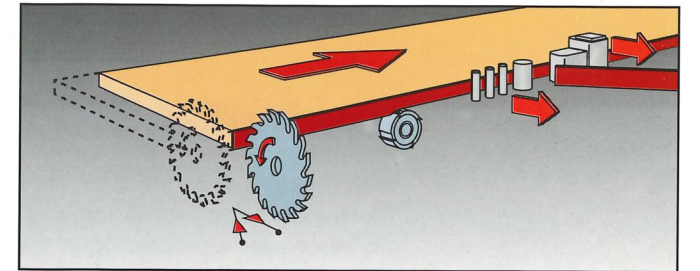
2. Bottom edge flush milling and chamfer end trimming



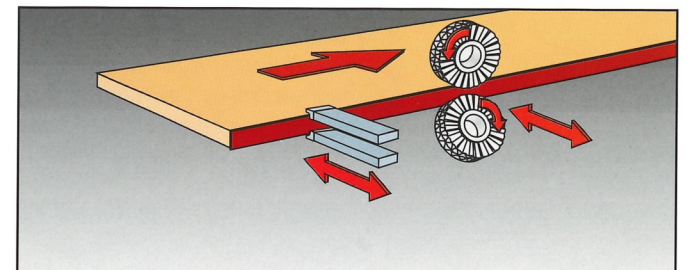
3. Bottom edge chamfering, radius milling or flush-milling



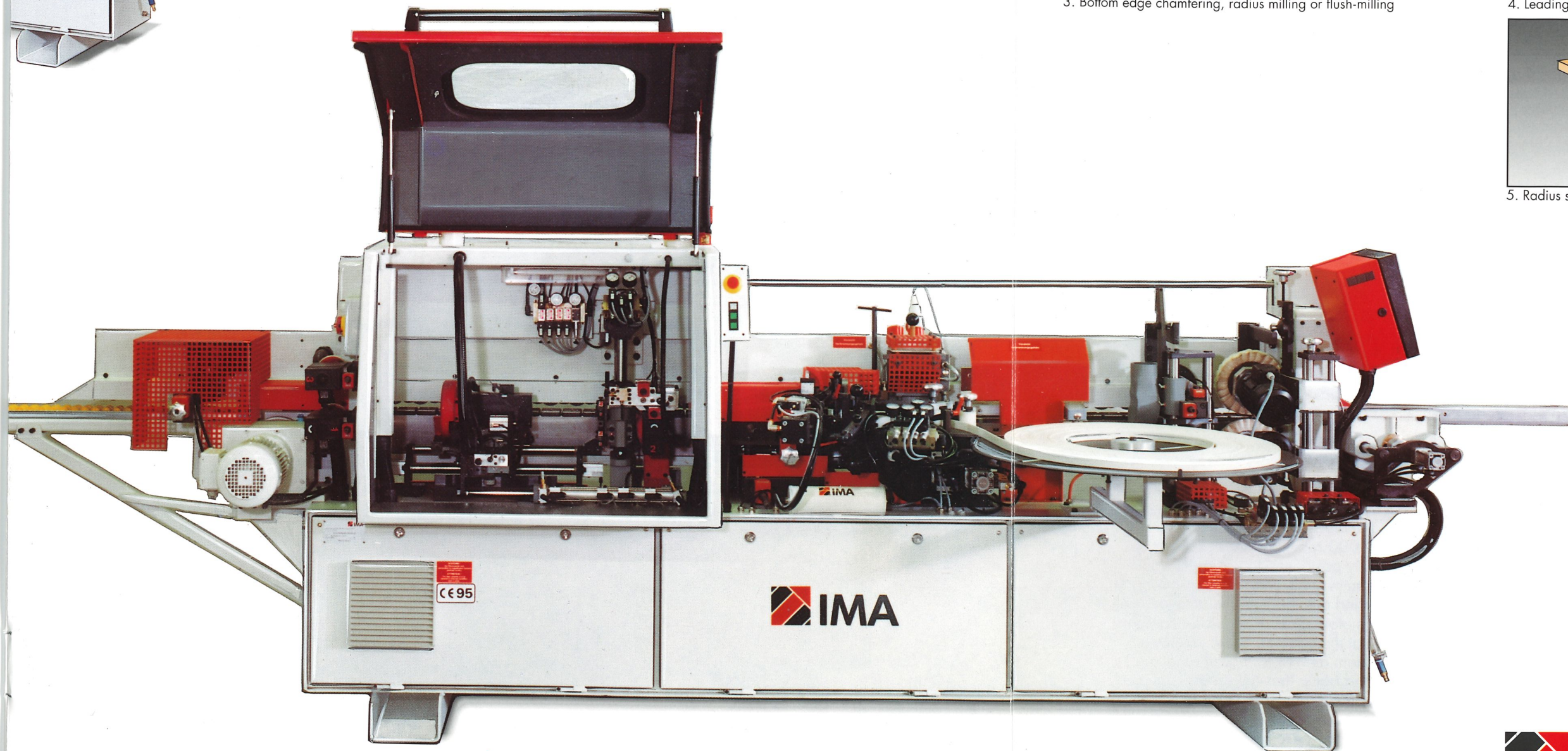
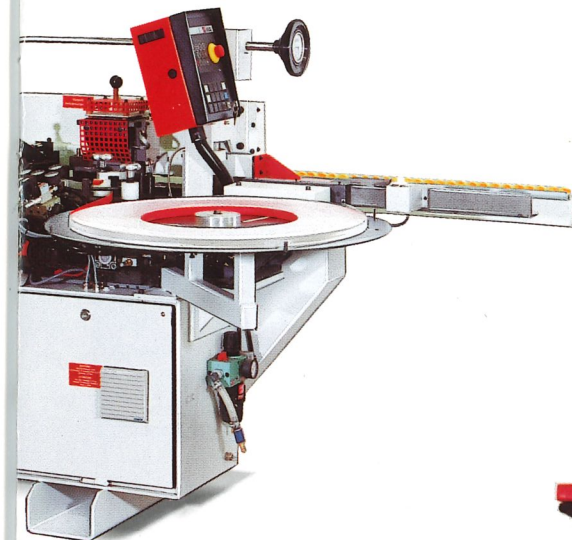
1. Edge banding - Top edge chamfering, radius or flush milling



4. Leading edge end trimming



5. Radius scraping, edge polishing

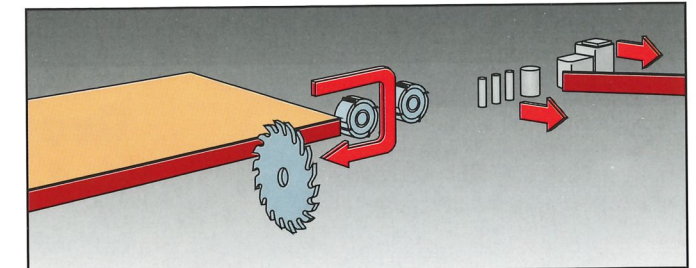


# Complete edge processing - professional and fast

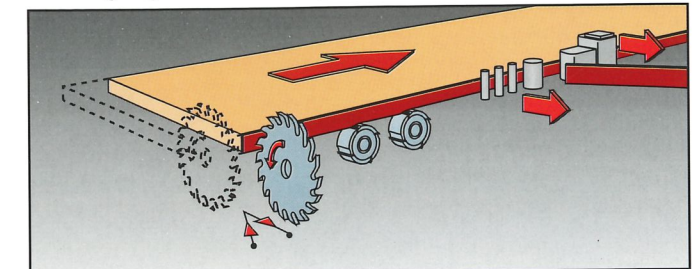


## QuadroMat 3512

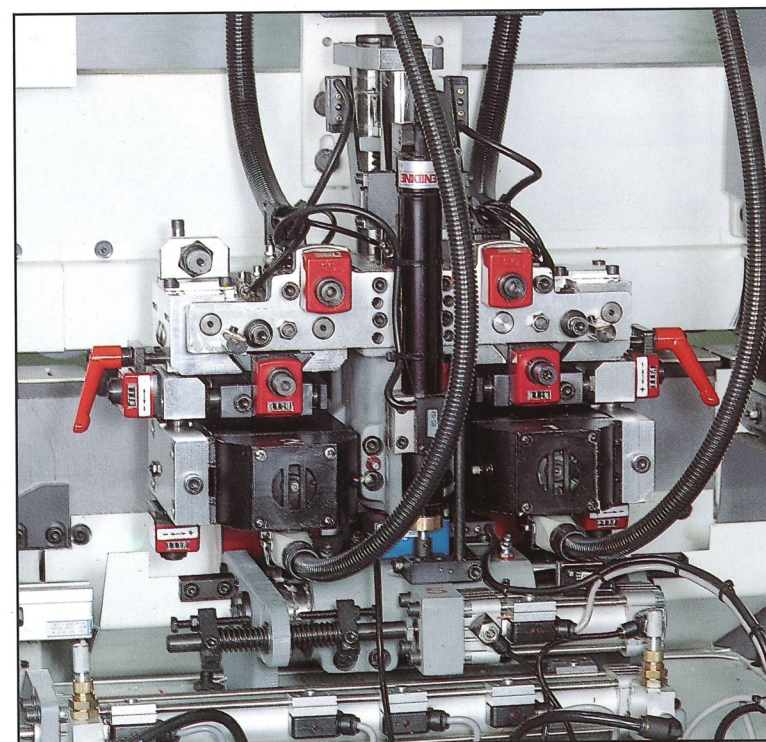
With a length of only 3.5 m, the QuadroMat is the shortest edge processing machine which allows complete processing of the edging materials, made possible by workpiece backward pass. The machine does not only mill the longitudinal edges but also contour-trims the leading and trailing edges thus ensuring complete processing. The finished workpiece comes back to the operator; no manual touch-up will be necessary.



3. Trailing edge contour trimming while the workpiece stands still



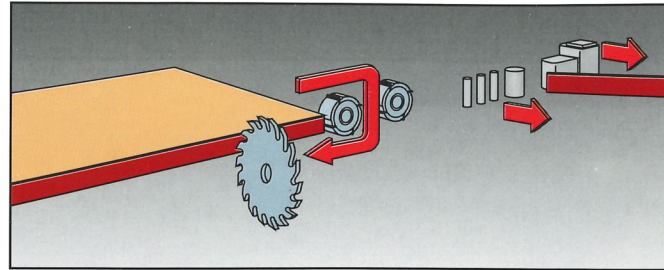
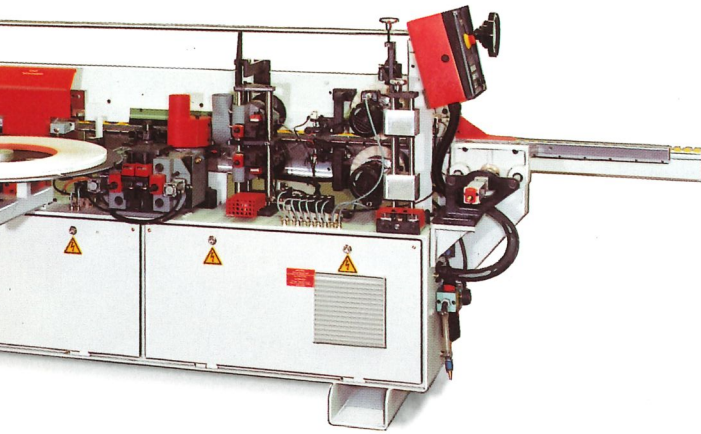
4. Bottom edge rough milling & fine milling, leading edge end trimming



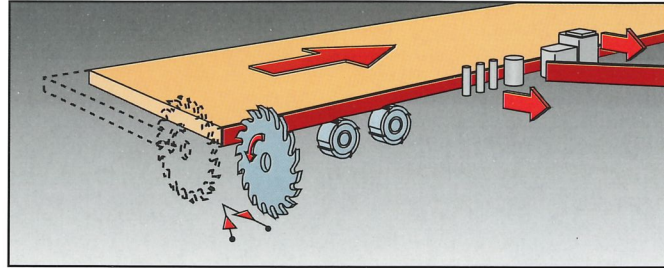
The multiple machining unit is equipped with 2 motors, each with 1000 Watts and 18000 rpm. Both motors are pneumatically positioned to a 3-point stop. For example, this enables jump-milling to be carried out. Through the arrangement of the motors, a workpiece side can be milled at the top and, subsequently, at the bottom as well as machined at the front and back, thus allowing a complete processing of the workpiece. The multiple machining unit with 2 motors thus has the same performance as common machining units with 8 motors. This saves an enormous amount of energy, tooling and setup costs.



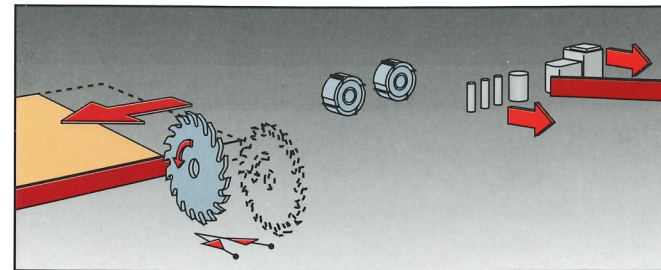
# professional and fast



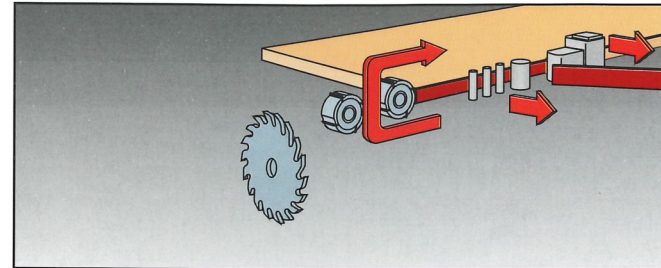
3. Trailing edge contour trimming while the workpiece stands still



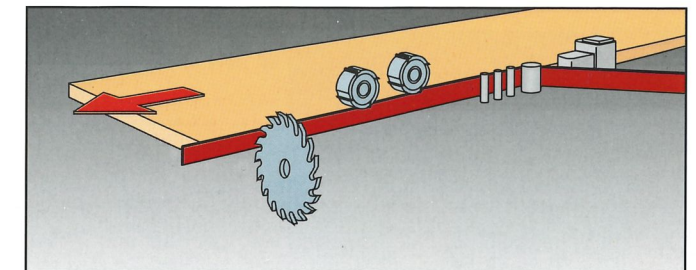
4. Bottom edge rough milling & fine milling, leading edge end trimming



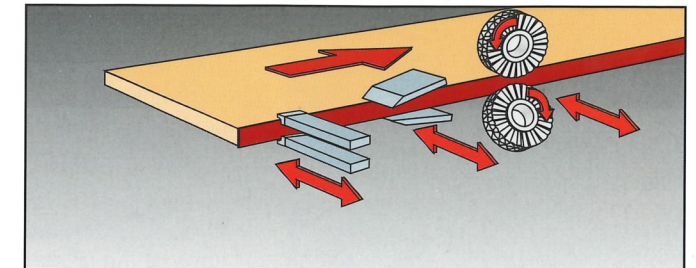
2. Trailing edge end trimming



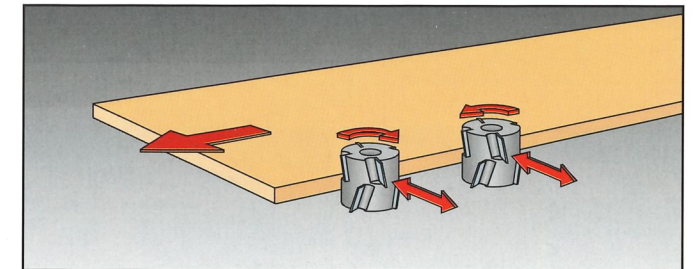
5. Leading edge contour trimming while the workpiece stands still



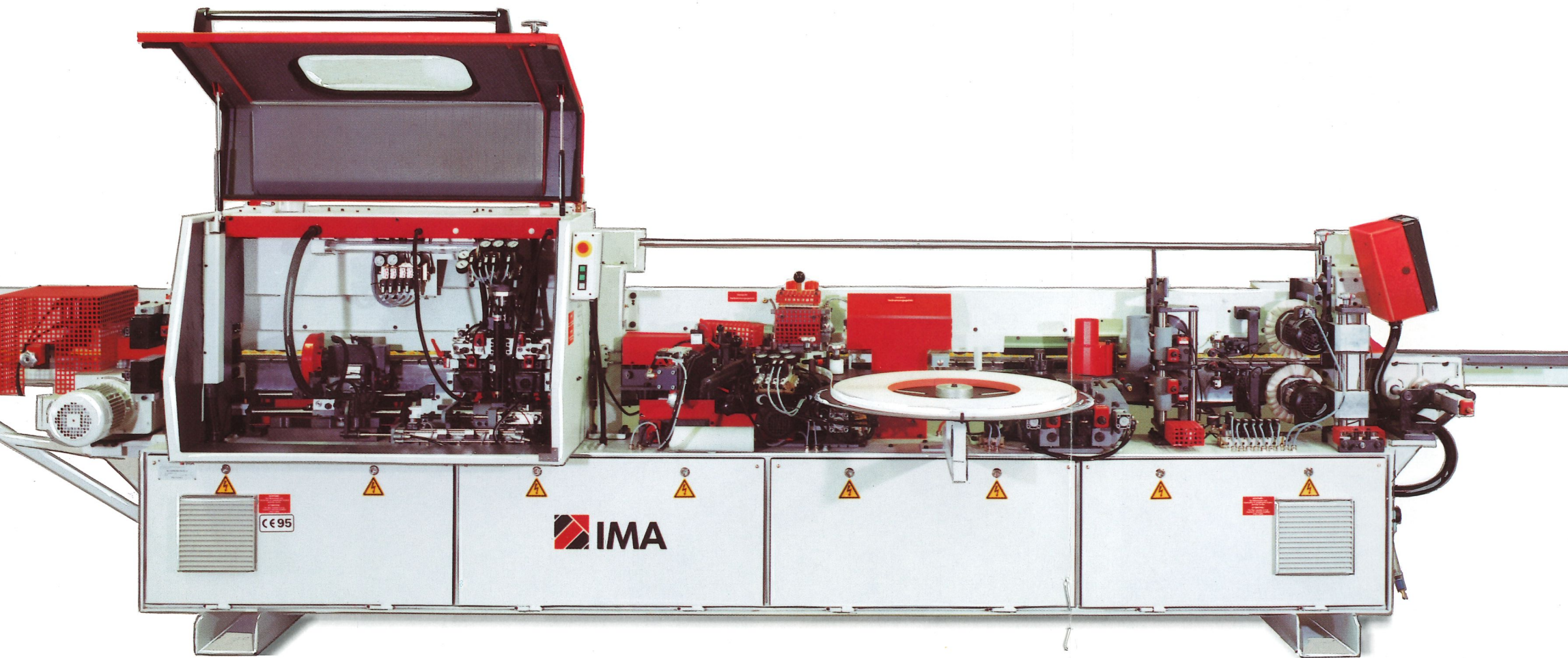
1. Edge banding - Top edge rough milling and fine milling



6. Profile scraping, flat scraping, buffing



Jointing cutter (for the 4012 F type only)



## QuadroMat 4012 F

Perfect edge processing requires perfectly sawed or milled workpiece edges. Due to miscellaneous surface structures and given on-site possibilities, a chip free and good surface finish is not always possible in practice.

The standard version of the QuadroMat 4012 F includes a jointing cutter with a herringbone tooth arrangement, which is employed to precision-cut the small vertical surface of the workpiece prior to the edge banding process. This ensures an optimum surface finish of the vertical workpiece edge, resulting in a proper and thin glue joint.



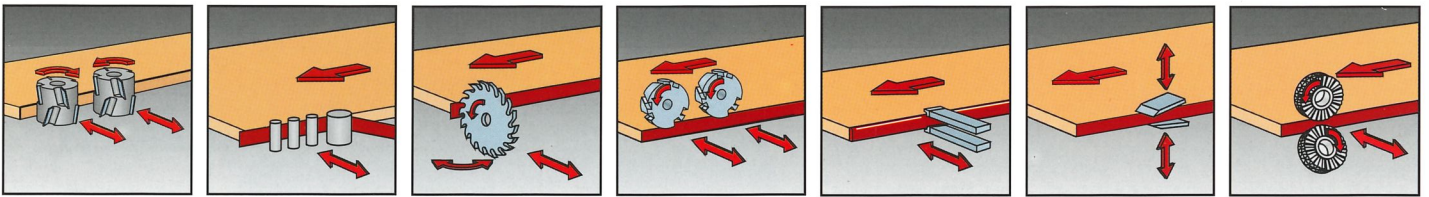
# Program controlled edge processing



The QuadroMat is typically equipped with a programmable logic controller (PLC). The controller contains 20 edge processing programs. All machine functions can be arranged in any order to form a program, for example:

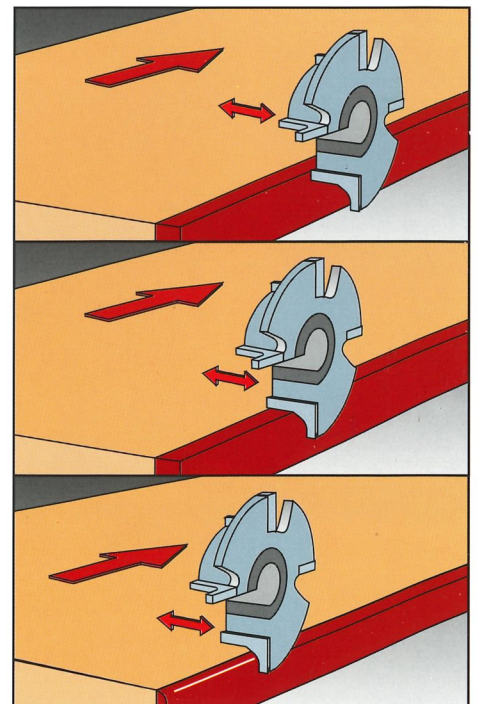
- Jump-in and jump-out motions of the jointing cutter
- Axial positioning of the multiple machining unit
- Swiveling of the end trimming saw
- Jump-in and jump-out motions of the scrapers and buffing units

The individual programs generated can be saved under a two-digit program number and can easily be called up with the push of a button.



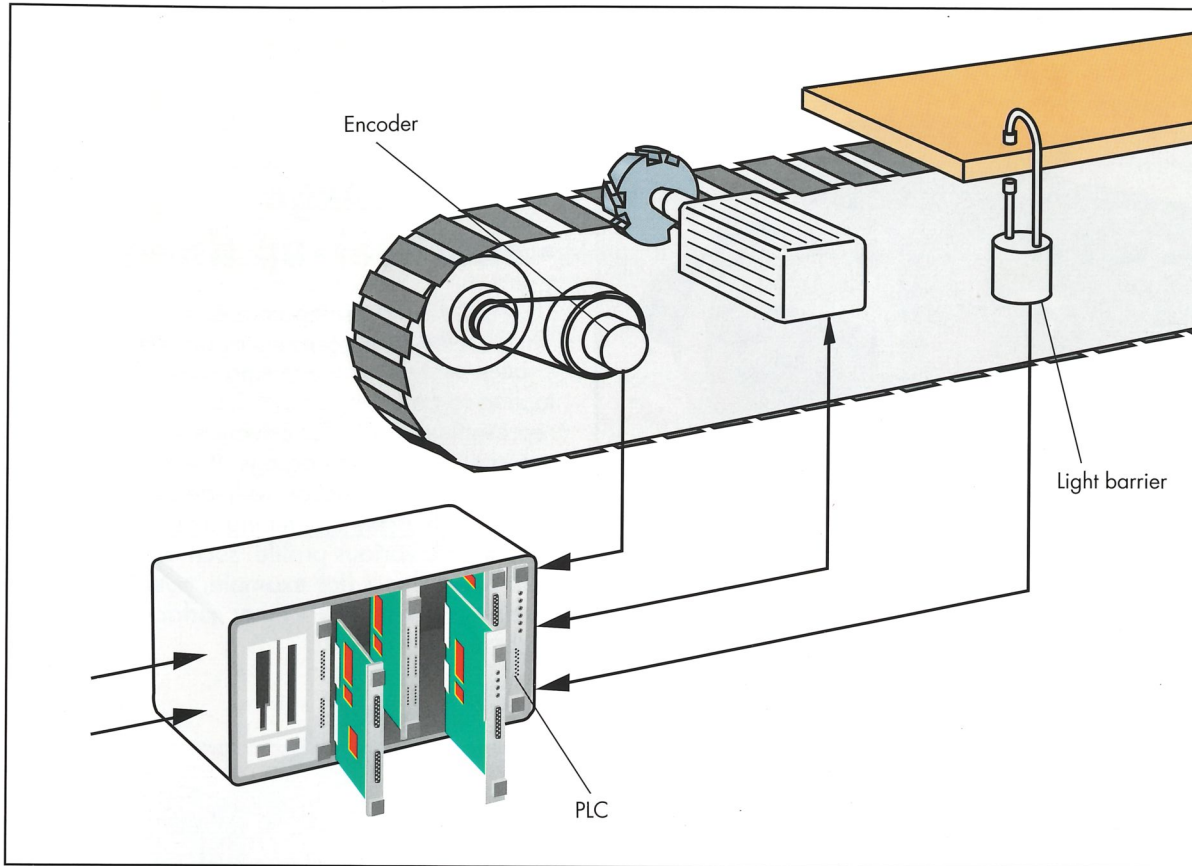
## Pneumatic 3-point adjustment

The multiple milling unit of the QuadroMat series can be axially positioned to 3 alternate positions. This pneumatic adjustment is program controlled. Using this function, the user can carry out jump-milling, or when using the applicable tooling, profile the outer surface and flush-mill the inner surface of the workpiece. An ideal application for furniture doors.





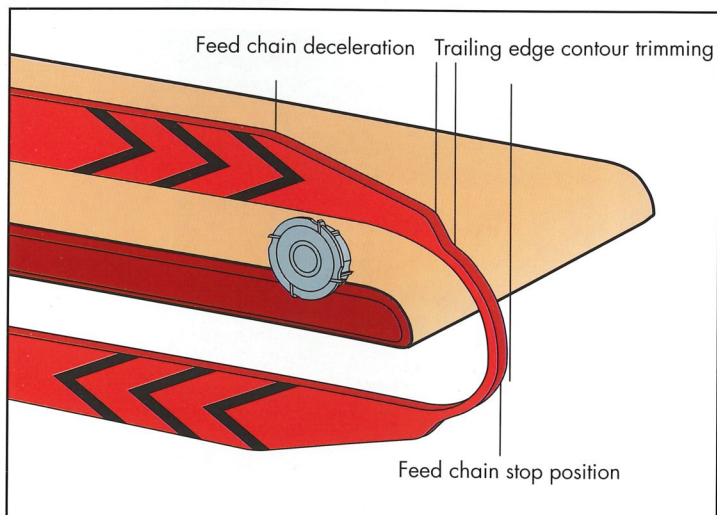
# Line control - Edge profiles via push button



The line control of the QuadroMat replaces the conventional trip switches. By entering the machine set-up data and workpiece data on the operator console, a flexible adjustment of the machine can be realized via push button.

A light barrier determines the exact length of the workpiece and transmits the length and position data to the machine controller.

The controller (PLC) triggers the unit motion needed to process the workpiece by programs previously stored.

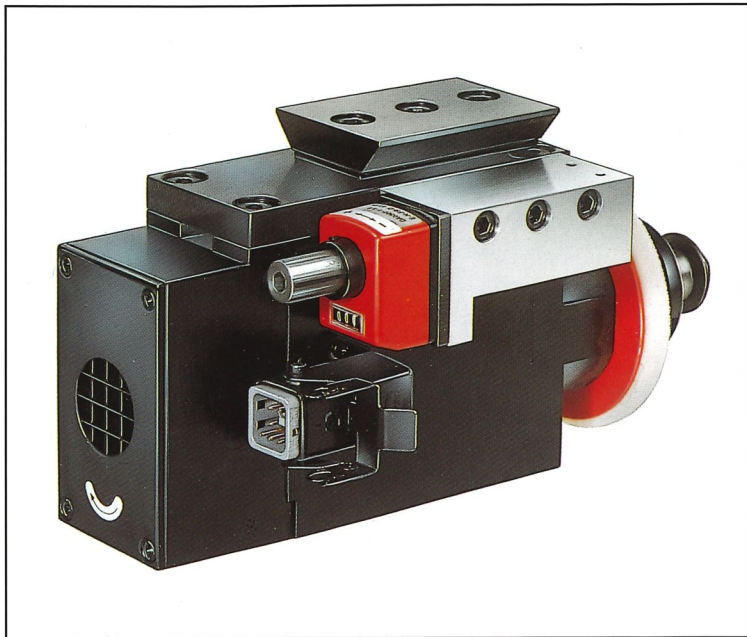


## Advantages of a line control

Line controls are employed, for example, to process postformed or softformed panels. They trigger the following processes at the right time:

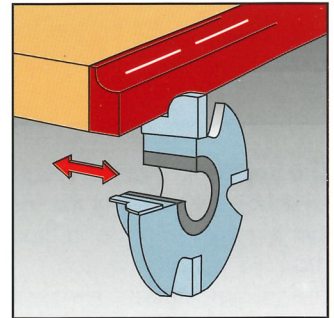
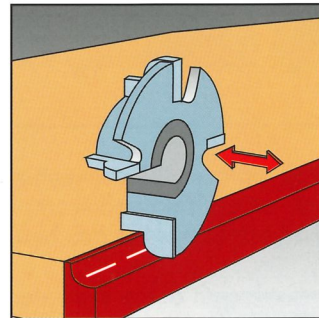
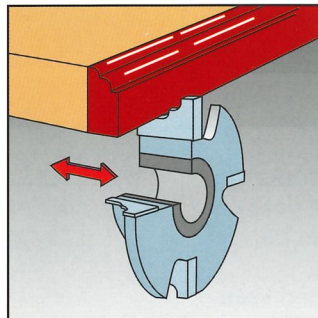
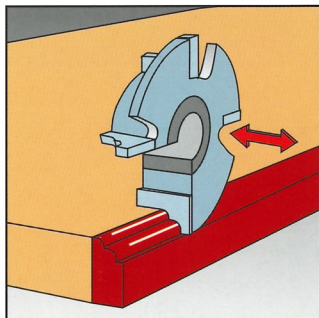
- Starting the vertical motion of the milling unit when contour-trimming along the cross-sectional profile produced in the length pass. In this process, the profile is exactly traced.
- Stopping the feed chain motion to contour-trim the leading or trailing edges of the workpiece.

# Quick change - Quick and reliable edge profiles

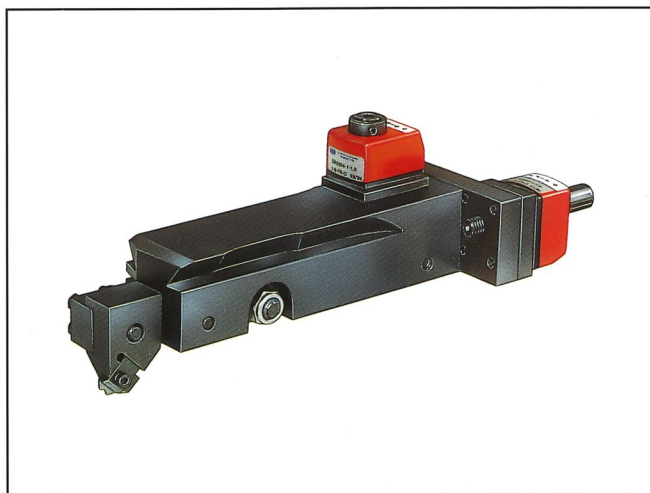


## Quick change - short set-up times

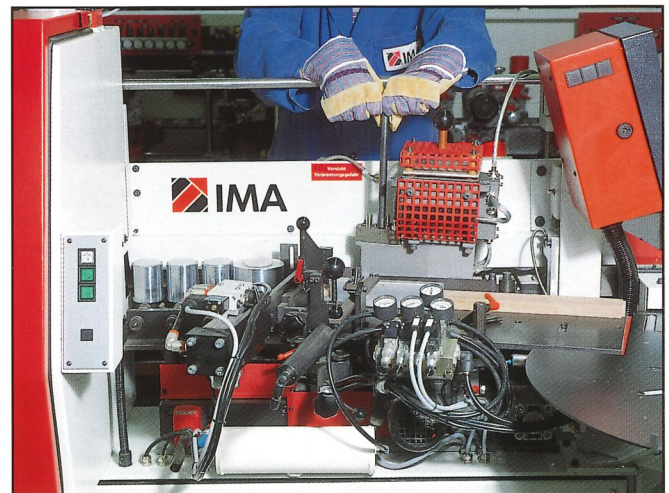
The multiple machining units of the QuadroMat series are equipped with a quick change system for the milling motors, enabling tooling to be changed in a few seconds. This represents a particular advantage when processing solid wood edgings, if various profiles are used. In conjunction with the 3-point control of the multiple machining unit, it is possible to fabricate various profile, such as high-quality furniture doors (for example, outer surface quarter-round milling – inner surface flush-milling).



## Scraper quick change



## Gluing unit quick change



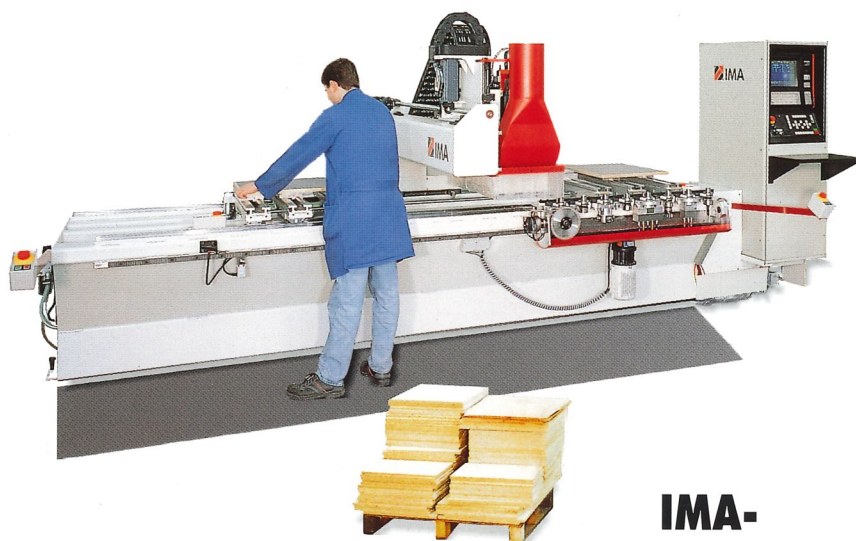
# Advantages of the QuadroMat series

Using 2 to 5 finishing units, the QuadroMat guarantees an edging finish which would require up to 10 finishing units on common edge banding machines. On a minimum machine length with panel forward pass and backward pass, the 2 units of the QuadroMat enable perfect edge banding in a very short time. The feed chain running forward and then backward brings the workpiece back to the place where it was fed in. Here, the operator takes the panel, either to band an additional edge or to stack it.

- One-man-operation for processing and for panel stacking
- small length means reduced floor space requirements
- automatically reversible feed chain = no additional floor space requirements
- PLC controlled set-up equals no testing phase and quicker production starts
- 2 machines can be operated by one man

The combination of the QuadroMat and a machining center results in the IMA workshop center. Prior to the edgebanding process, the workpieces will be cut to size, routed and furnished with grooves and bore-holes, which results in a

- minimization of the transport paths inside the factory
- reduction of the production costs by up to 25%
- reduction of the through-feed times



**IMA-  
workshop center:**

**2 machines  
+ 1 man  
= ready to assembly  
furniture elements**

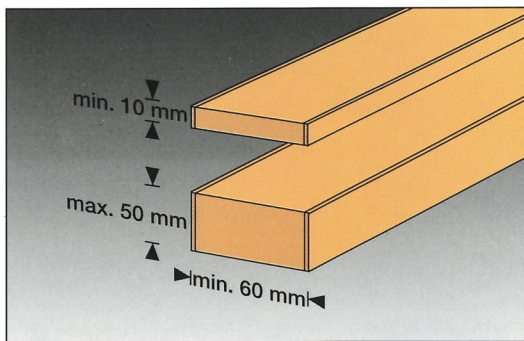


# Technical data QuadroMat

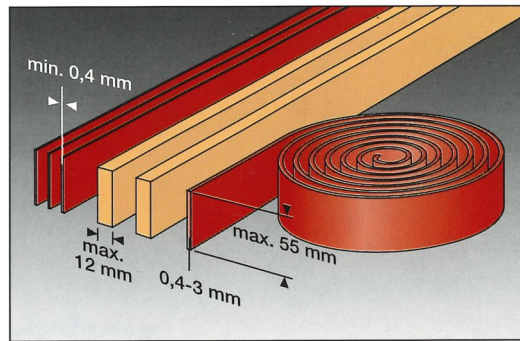
	2112	3012	3512	4012 F
<b>Workpiece dimensions</b>				
Minimum width	60-80 mm*			
Minimum length	150 mm			
Thickness	10-50 mm			
Minimum edging length	400 mm			
<b>Track speed</b>	18 m/min			
<b>Weight net</b>	approx. 1.700 kg	approx. 2.100 kg	approx. 2.400 kg	approx. 2.800 kg
<b>Supply of services</b>				
Compressed air supply $\varnothing 1/2''$	7-10 bars			
Power supply	400 V / 50 Hz			
<b>Power &amp; current consumption</b>	6 kW / 17 A	7.5 kW / 21 A	8.5 kW / 21 A	14.5 kW / 40 A
<b>Noise emission</b>	< 85 dBA			

\*Depends on the edging material

## Reliable edge banding up to 12 mm thickness



min. and max. workpiece dimensions



edging materials

We reserve the right to change the specifications.



# IMA

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