### **BIESSE BREMA** VEKTOR

Vertical boring and insertion machine with numerical control

When competitiveness means carrying out as many machining operations as possible

#### The market requires

for a change in production processes to meet the ever growing request for **personalised products** 

to satisfy customers' specific needs, coupled with quick and certain delivery times. Production volumes are no longer a certainty, and manufacturing on the basis of statistical analysis is not a valid option. Production diversification is the key to success.

#### Biesse responds

with **technological solutions** able to meet the requirements of companies who manufacture to order, with significantly reduced costs and cycle times. The Brema Vektor range offers a wide choice of vertical boring and insertion machines to handle all production needs. Groundbreaking technologies for boring, milling, cutting and inserting hardware on panels of various sizes, **without any special set-up**.

- $\checkmark$  Maximum quality of machining operations.
- $\checkmark$  Reduced cycle times.
- $\checkmark$  Smooth, efficient production flow.

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BIESSE

# High level performance with a small footprint

Bre.Ma

**BREMA** VEKTOR



# Optimum machining quality

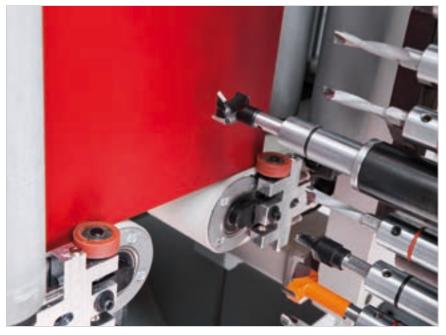
The technology used in all Brema Vektor machines guarantees high precision in all machining operations.



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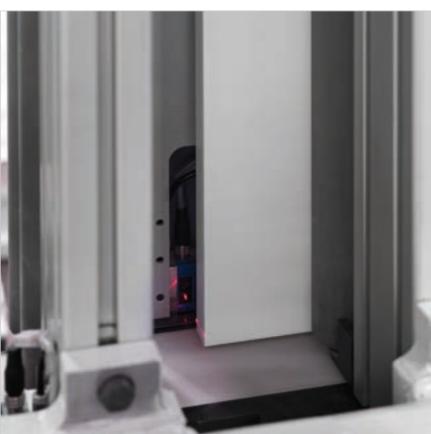
The vertical positioning of the panel and the structure of the machine make the loading/unloading operations highly ergonomic, and guarantee that even the most delicate surfaces can be machined successfully.

#### **BREMA** VEKTOR



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The longer-stemmed spindles allow users to successfully perform all drilling operations, guaranteeing optimum quality standards.



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A laser system for detecting the origin of the front and rear panel edges, ensures the machining positions in X can be corrected to compensate for the dimensional tolerances.

## Cycle time reduction

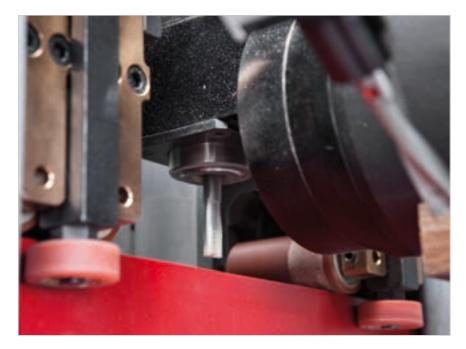
Unique technological solutions to meet productivity and flexibility requirements of the most demanding manufacturers.



Patented dual-section haul-off for machining the 4 panel edges without limits (not available on Vektor 25 and 30).



#### **BREMA** VEKTOR





The transit from one machining operation to another requires no operator intervention. The machine is suitable for different panel sizes, thanks to the roller vice which ensures a good hold on the piece and allows delicate or painted materials to be machined without damaging the surface.





Revolver "R10" unit with tool change in less than 2 seconds, during the machining operation.

## Quick tool changeover

The 10-position Revolver unit is managed by the N.C. The "Brema" aggregate locking system, and the 11 KW motor with direct drive transmission, ensure tool rotation control up to 18000 rpm. The speed is programmed directly via the control, and managed by an electronic inverter.

### **10 POSITIONS REVOLVER**

Tool change happens automatically in less than 2 seconds. Excellent configurability thanks to the aggregates available, and the possibility to create tailor-made aggregates. Optimised ergonomics with considerable savings in tooling set-up times. A perfect combination of Biesse optimisation and Italian genius.



# Lean and efficient production flow

#### Design of integrated lines over 100 metres long

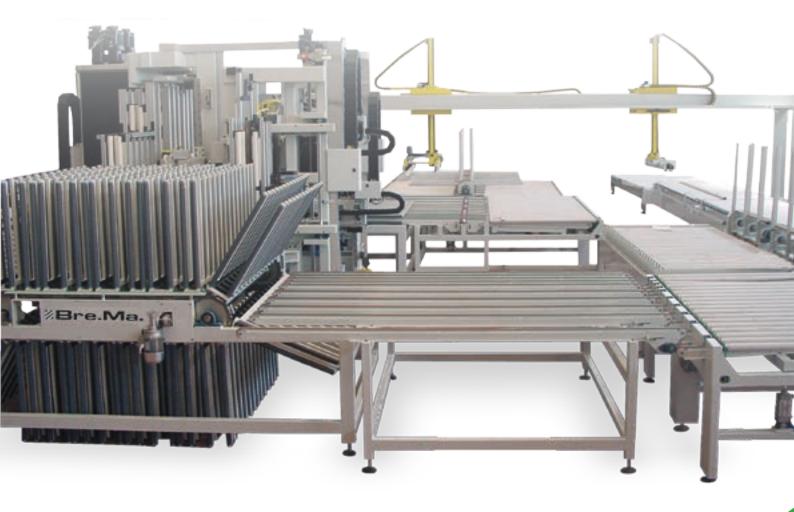
BiesseSystems provides a full project consultancy and management service to companies who wish to implement integrated technology solutions for their manufacturing processes.

A team of sector experts understands and pre-empts company needs, working with the customer from system inception through to installation and commissioning.



## Over 300 systems sold worldwide.

- $\checkmark$  Design and installation of turn-key systems.
- ✓ Design and installation of automated and integrated production lines.
- ✓ Upgrading, refurbishment and integration of pre-existing production systems.



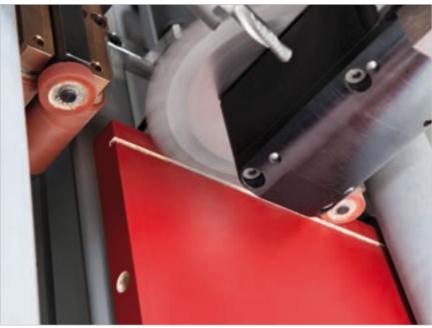
## To carry out every type of machining operation

Flexible vertical through boring machine with NC, for sequentially boring, milling and cutting panels of various sizes without any manual set-up. Available with a configuration for managing hardware insertion.



#### **BREMA** VEKTOR 15









## Excellent performance

The Brema Vektor FC version is fitted with a specific unit for opposed boring, so that the two main faces of the panel can be machined in one single step.



#### BREMA VEKTOR 15 FC



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Unit for opposed boring, for completing the machining operations on the rear face of the panel.

## The complete process, in one machine

Vektor CS is the flexible, vertical boring machine with a built-in unit for inserting glue and dowels. A single machine for processing all the cabinet elements in just one step, with one operator and in a smaller space.



#### **BREMA** VEKTOR 15 CS







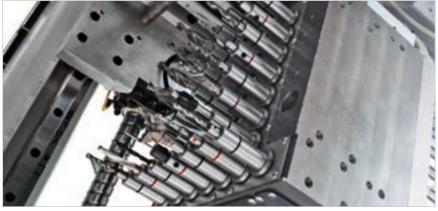
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Unit for managing the boring operation and the insertion of glue and dowels.

## For top productivity levels

Borer and hardware inserter for specific lines with considerable batch one production volumes. The technology of the boring and hardware insertion optimises and maximises the machining performance.





Work units that help optimise the process, reducing the number of boring descents and therefore the overall machining times.

#### **BREMA** VEKTOR GM



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Solution with boring units with mobile axes in X and Y, for optimising the boring sequences.



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Multi-position insertion device for managing various types of hardware.

Solution for boring and inserting hardware in window frames.



## The tailor-made machine

Flexible vertical through boring machine with NC, for sequentially boring, inserting, milling and cutting panels of various sizes without any manual set-up. Can be configured according to the specific machining needs, with a range of units for boring and inserting.



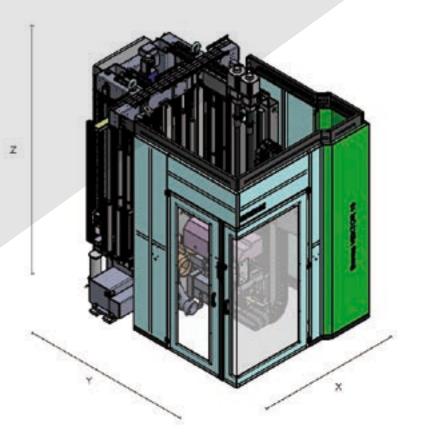




Unit with independent spindles for personalised boring operations.

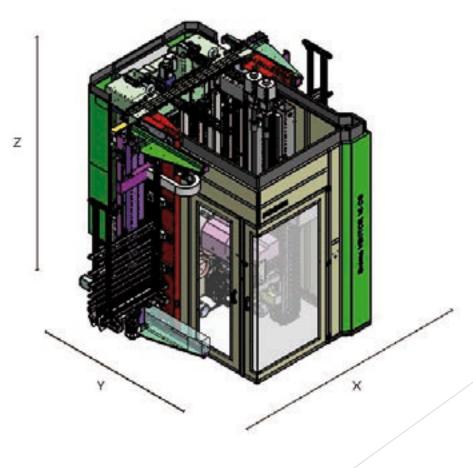
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# Technical specifications



#### Brema Vektor 15

	Х	Y	Z
	mm	mm	mm
Overall machine dimensions	2050	2750	3100
Min. size of machinable panel	300 x 40 x 8mm (4 opt)		
Max. size of machinable panel	co* x 1300 x 80mm		
* Panel movement distinguishes the max.	panel length that can be handled	in the cell or line	



#### Brema Vektor 15 CS

v l		
X	Ŷ	Z
mm	mm	mm
4130	2750	3100
300 x 40 x 8mm (4 opt)		
co* x 1300 x 80mm		
		4130 2750 300 x 40 x 8mm (4 opt)

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## The range

#### BREMA VEKTOF





**BREMA VEKTOR 15 FC** 

**BREMA VEKTOR 15** 



**BREMA VEKTOR GM** 



**BREMA VEKTOR 25** 



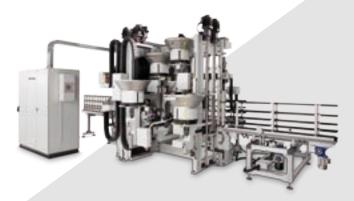
RANGE





#### **BREMA VEKTOR 15 CS**





**BREMA VEKTOR 30** 

## Service & Parts

Direct, seamless co-ordination of service requests between Service and Parts. Support for Key Customers by dedicated Biesse personnel, either in-house and/or at the customer's site.

#### **Biesse Service**

- $\checkmark$  Machine and system installation and commissioning.
- ✓ Training centre dedicated to Biesse Field engineers, subsidiary and dealer personnel; client training directly at client's site.
- $\checkmark$  Overhaul, upgrade, repair and maintenance.
- $\checkmark$  Remote troubleshooting and diagnostics.
- $\ensuremath{\boxtimes}$  Software upgrade.



The Biesse Group promotes, nurtures and develops close and constructive relationships with customers in order to better understand their needs and improve its products and after-sales service through two dedicated areas: Biesse Service and Biesse Parts.

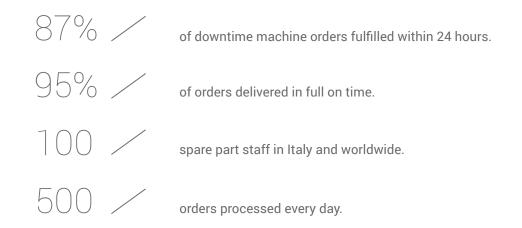
With its global network and highly specialised team, it offers technical service and machine/component spares anywhere in the world on-site and 24/7 on-line.





#### Biesse Parts

- ✓ Original Biesse spares and spare kits customised for different machine models.
- $\checkmark$  Spare part identification support.
- ✓ Offices of DHL, UPS and GLS logistics partners located within the Biesse spare part warehouse, with multiple daily pick-ups.
- ✓ Order fulfilment time optimised thanks to a global distribution network with de-localised, automated warehouses.



## Made With Biesse

Biesse Group technologies join forces with Lago's innovation and total quality management processes.

In the crowded world of domestic design, Lago takes its place as an emerging brand, thanks to a collection of stimulating products and a corporate philosophy that embraces the interaction between business and art, coupled with on-going research into sustainable development.

"We created a number of projects, or rather, concepts - states Daniele Lago that have shaped Lago as we see it today: we saw design as a cultural vision that applies not only to individual products, but rather to the entire business chain". "Flexibility is the key word here at Lago" says Carlo Bertacco, Manufacturing Manager. "We started to introduce the concept of processing only outstanding orders, which enabled us to reduce our footprint and empty the site from the very beginning".

"The machinery that we purchased – states Bertacco – is great, it entailed a limited investment versus the capabilities it offers and is linked to a specific manufacturing approach. What I am talking about is a given manufacturing volume with Lago-standard quality levels and the possibility of customising as late as possible, at the customer's request: in short, the very basic principles of lean manufacturing".

Lago's flexibility offers customers modular elements with which they can build a personal space that reflects their individual character. The "Lago Interior Life" corporate philosophy, as a matter of fact, is aimed at creating empathy between interiors and the people who live in them, between environmental and inner well-being.

Source: IDM Industria del Mobile

Lago, our customer since 1999, is one of most prestigious Italian furniture brands in the world.



http://www.lago.it

## Biesse Group

In / How / Where / With /

1 industrial group, 4 divisions. and 8 manufacturing sites.

€ 14 million p/a in R&D and 200 patents registered.

33 branches and 300 agents/certified dealers.

customers in 120 countries, manufacturers of furniture, design items and door/window frames, producers of elements for the building, nautical and aerospace industries.



3000 employees worldwide.

Biesse Group is a global leader in the technology for processing wood, glass, stone, plastic and metal.

Founded in Pesaro in 1969, by Giancarlo Selci, the company has been listed on the Stock Exchange (STAR segment) since June 2001.

#### **BIESSE**GROUP

BIESSE / BINTERMAC / BOIAMUT / MECHATRONICS

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