

# **BIESSE** ROVER EDGE LINE

Modular Biesse Concept



# When competitiveness means reorganising manufacturing process



Made **In** Biesse

## The market demands

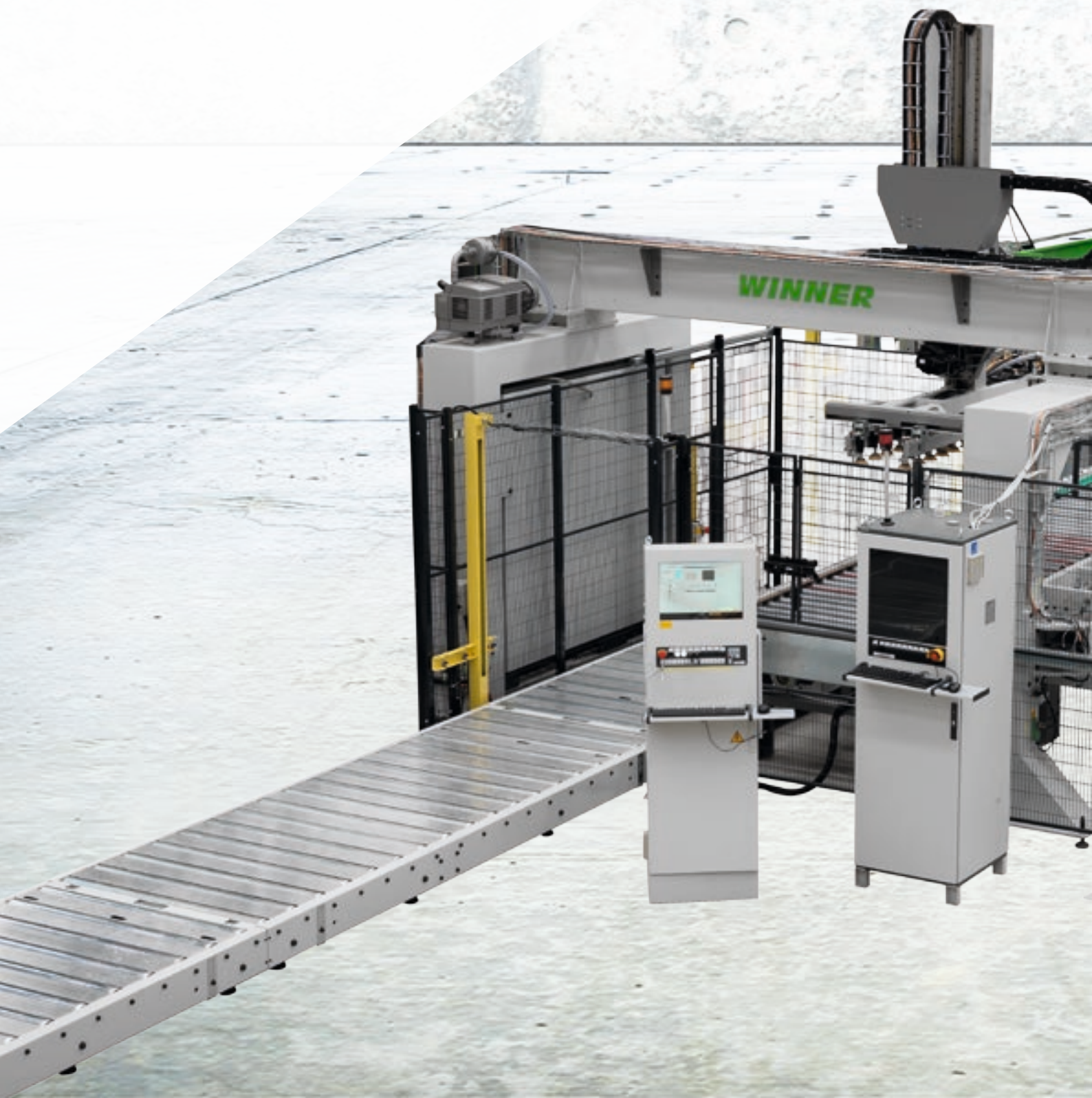
Interior design is moving from rectangular to **shaped forms**. Traditional production techniques may handle high volume curved panels but the cost of producing single panels increases significantly when compared to rectangular panels. Until now curved panels were made on stand-alone machines, resulting in high production costs, in terms of labour, time and investment in machinery.

## Biesse responds

with technology solutions to produce high-volume shaped panels, optimizing space and reducing costs. **Rover Edge Line** is an innovative production line, unique to the industry, for the high volume production of edgebanded curved panels. This solution enables greater quantities of panels to be produced using fewer machines and therefore fewer operators.

- ✓ **Continuous production flow.**
- ✓ **Production consistency.**
- ✓ **Environmental conservation for chips disposal.**
- ✓ **Minimising material waste due to up-cycling of 'cut-offs'.**

The solution  
to optimise space  
and reduce costs





# ROVER EDGE LINE

Modular Biesse Concept

# Smooth and efficient production flow

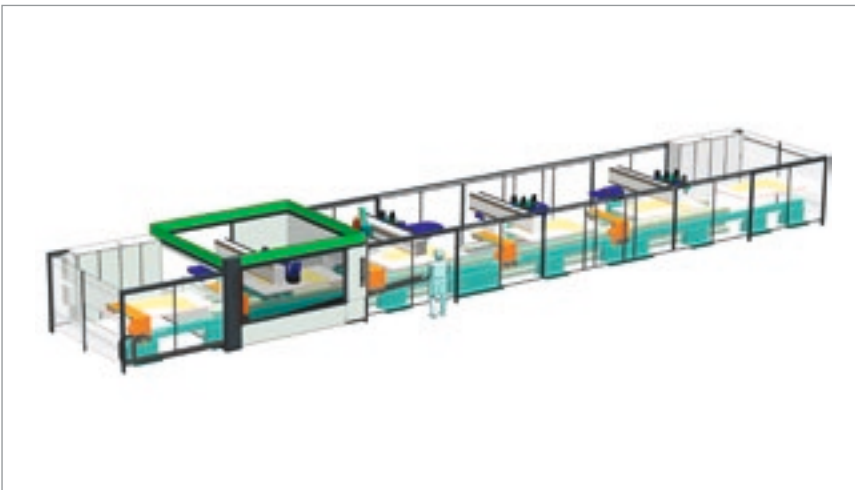
- ✓ 40% reduction in the number of machines.
- ✓ 30% reduction in the number of operators.
- ✓ 50% reduction of production time.
- ✓ Reduction of material waste due to up-cycling of 'cut-offs'.
- ✓ Greater cost efficiency due to lower investment.



**As Biesse manufactures their own machines using Lean Production techniques, that knowledge can be transferred to our customers.**

The line consists of 2 or 4 work stations dedicated to specific processes.

### Rover Edge Line 4S (with 4 working stations)



- ✓ Loading: infeed with Biesse handling solutions.
- ✓ Step 1: milling operations
- ✓ Step 2: Edgebanding operations.
- ✓ Step 3: edge finishing operations
- ✓ Step 4: drilling and insertion operations
- ✓ Cleaning And Labeling: brushing and labels application
- ✓ Unloading: stacker with Biesse handling solutions.

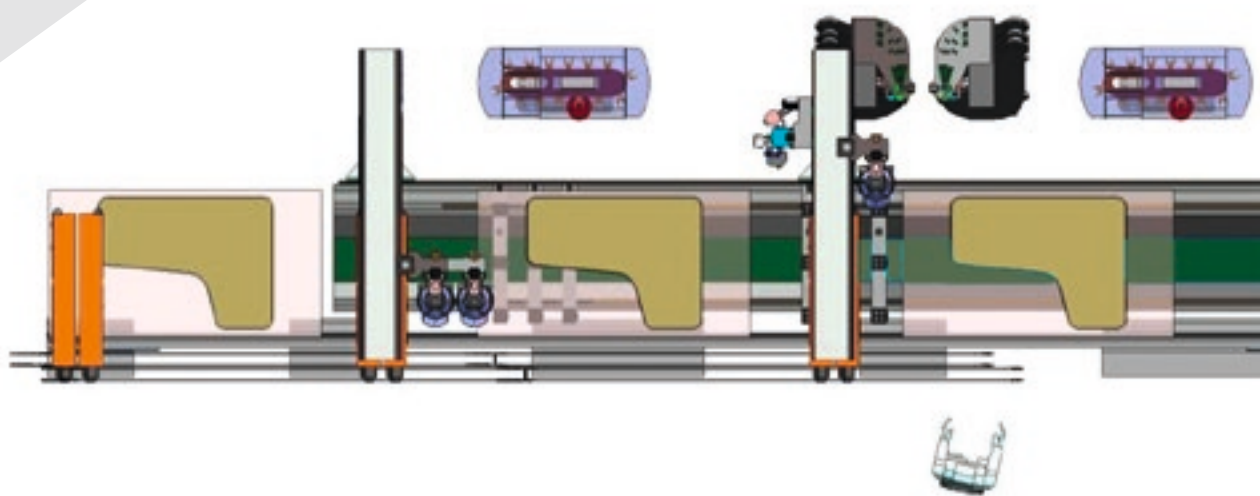
### Rover Edge Line 2S (with 2 working stations)



- ✓ Loading: manual or automatic (with Biesse handling solutions).
- ✓ Step1: milling and drilling operations.
- ✓ Step2: edge finishing operations.
- ✓ Cleaning and labelling: brushing and label application.
- ✓ Unloading: manual or automatic (with Biesse handling solutions).

# Continuous production flow

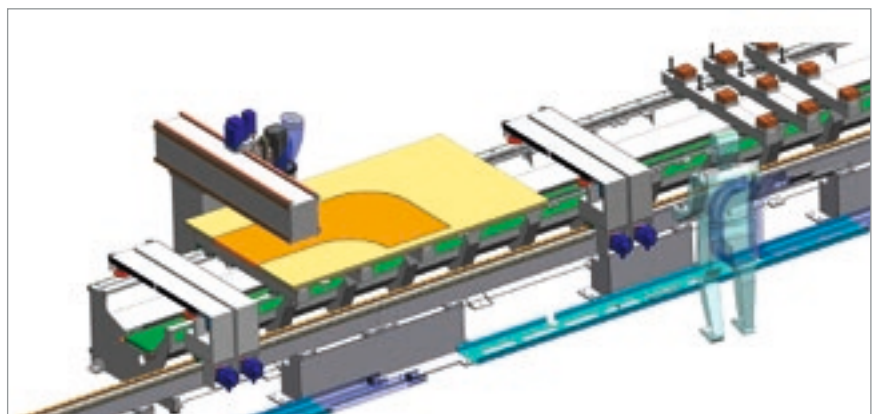
Rover Edge Line consists of through feed CNC machines designed to be installed in a existing production area and material flow. The panel automatically moves through the entire process.



**BIESSE WINNER LOADING SYSTEM**  
 Bridge feeder with pincer frame to handle packs of panels.



**TRANSFER DEVICES**  
 The transfer system is composed of 5 pairs of arms, each equipped

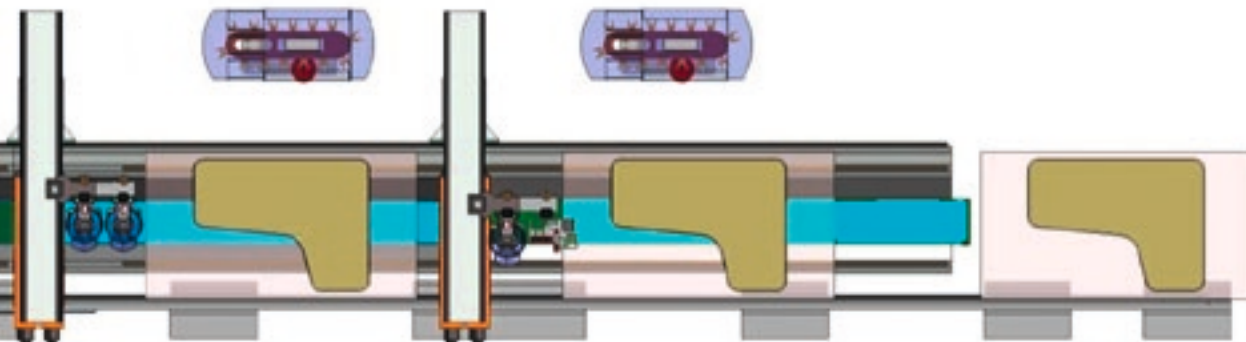


with 2 pneumatic gripping systems. With the 4 vacuum grippers 70 panels per day can be transferred.

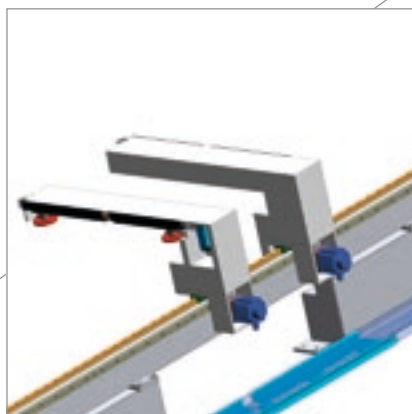




This solution is particularly advantageous for working on stacks. The work piece is transferred from the loading station, through the positions and then to unloading station, using a transfer system controlled by CN.



**BIESSE WINNER UNLOADING AND STACKER SYSTEM**  
 Bridge stacker with pincer frame to handle packs of panels.



# Production consistency

Rover Edge Line is designed to provide specialised production steps, optimised to perform specific processes to the highest quality standards, whilst delivering the flexibility and speed associated with stand-alone CNC machining centres to produce varying batch sizes and processes.



Milling



Edgebanding

Rover Edge Line makes it possible to efficiently manufacture high-volume products and deliver consistent long term reliability and quality.



Edge finishing

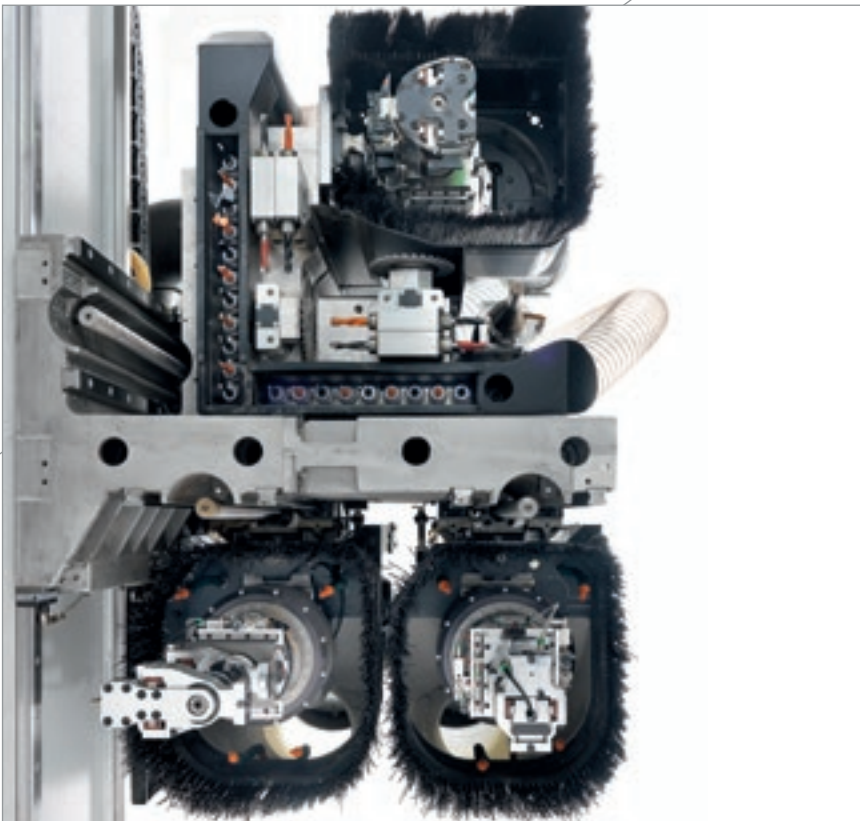


Boring



Inserting

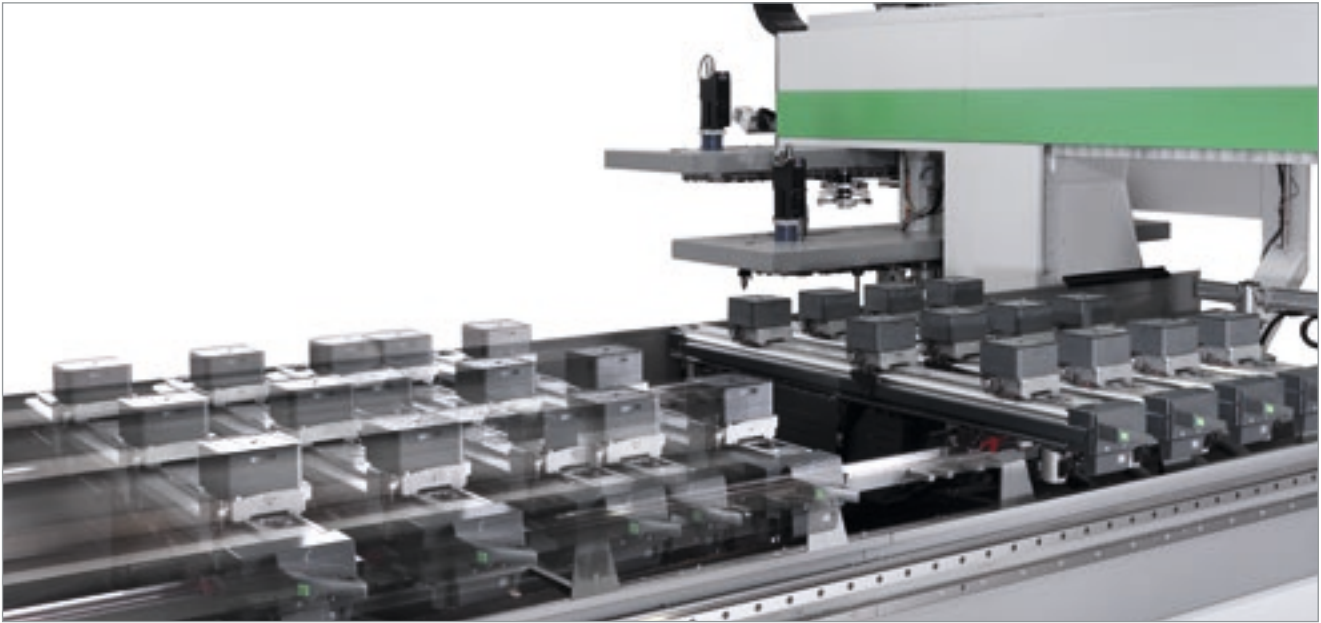
# Unique technological solutions for optimal performance



The option of various tool change magazine configurations, number of electros spindles and up to 2 independent 'Y' axes, allows our customers the flexibility to meet current demand, whilst 'future proofing' the machine to meet tomorrow's needs.



Electrospindles: with Setting axes, C Torque axes and inverter for a fast and heavy duty service.



EPS (Electronic Positioning System) can automatically re-configure for different products, without interrupting production.



It is possible to switch between machining operations without the need for operator intervention, due to the range of tools and aggregates in the magazine.



Rigidity and absence of vibration ensures constant and reliable quality of the finished product.

# Optimal edge adhesion



Similar to straight line edgbanding machines the glue is applied directly to the panel to achieve maximum adhesion. Thin and transparent (3D), as well as thicker and more rigid edges are supported.



**External glue feeding** occurs during the machining process via the granule feeding system within the integrated glue head. With the glue being stored in granules, only the required quantity is released for melting. This ensures optimal adhesion whilst preserving the glue characteristics.

Optimal edge pressure quality during gluing on shaped panels thanks to the twin roller **edge pressure system**.



Facility to apply thick edges even on small radius curves, thanks to the **edge heating lamp**.



(Optional) video-camera for the easy set up of critical materials or dimensions.



Pre-melting system for PUR glues in cartridge format, that allows to melt only the glue to be used.



# Environmentally friendly disposal of waste

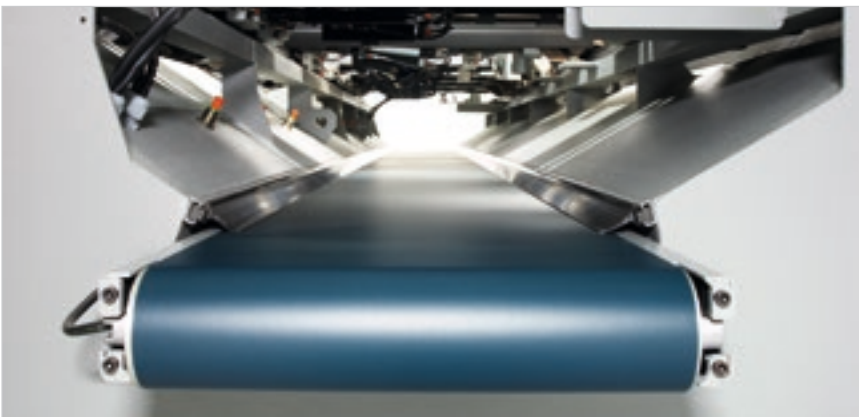
Rover Edge Line is designed to meet the needs of ecological requirements in terms of environmental protection, allowing to separate plastic chips from woody chips through dust extraction and belt conveyor. This unique solution is possible because we have the single operations separated (routing separated from edge-banding and edge-finishing operations). Chips are transported to the end of the production cycle to guarantee continuity of the production flow.



Six position NC controlled adjustable suction hood.



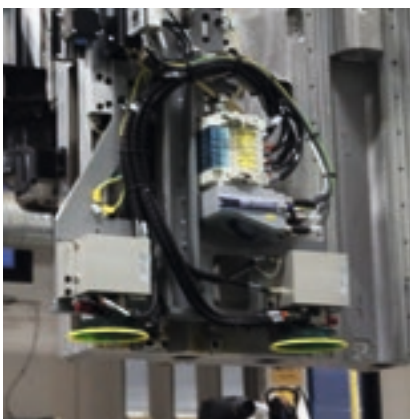
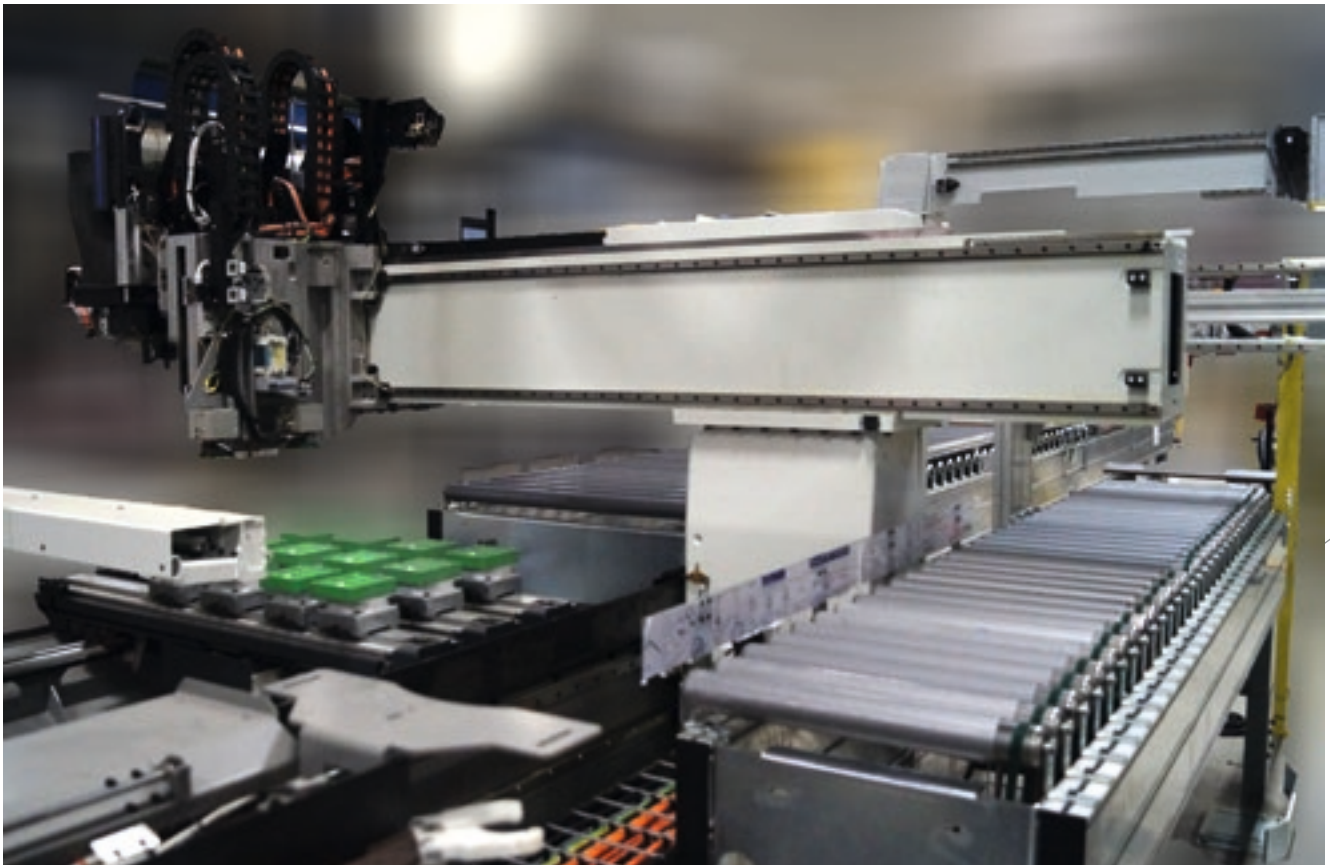
Powered conveyors for removal of chips and waste material.





# Up-cycling of 'cut offs'

Rover Edge Line incorporates a material recovery system which up-cycles raw material to use in the production of other components.



"Double desk" production:

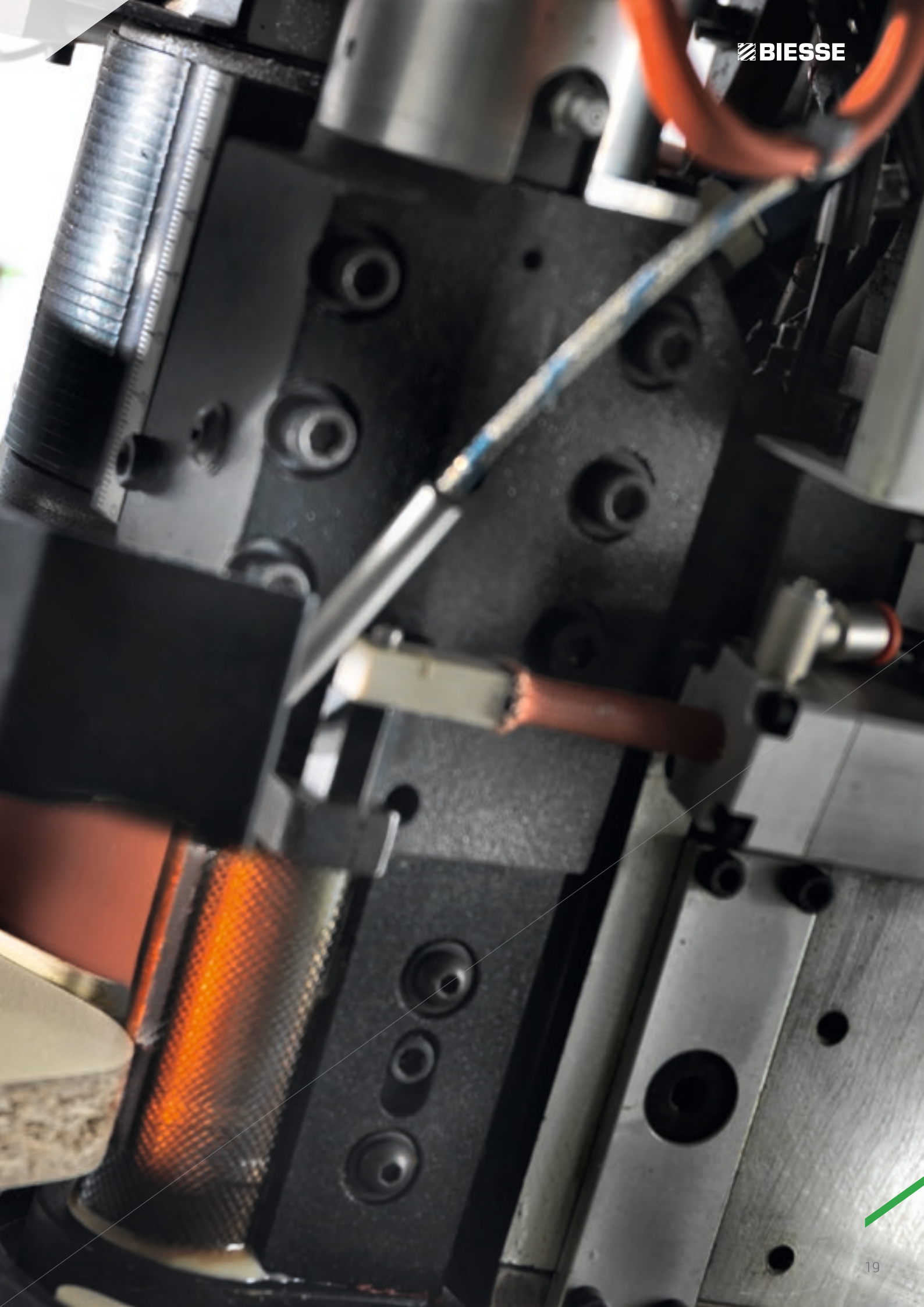
- ✓ two shaped desks can be machined from one rectangular board and rotated prior to stacking.
- ✓ cut-offs are automatically removed and stacked.

# Robust edgebanding

Edgebanding has always been based on applying glue directly to the panel; Biesse has followed this principle and applied it to straight edgebanding as well as shaped edgebanding performed by machining centres.

## ROVEREDGE

Maximum bonding, possibility of applying thin edges and 3D transparent edges, easy maintenance and panel cleaning during the machining cycle. A perfect combination of Biesse technology and Italian genius.



# 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

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

500 / Biesse Field engineers in Italy and worldwide.

50 / Biesse engineers manning a Teleservice Centre.

550 / Certified Dealer engineers.

120 / Training courses in a variety of languages every year.

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.
- ✓ 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.

87% ✓ of downtime machine orders fulfilled within 24 hours.

95% ✓ of orders delivered in full on time.

100 ✓ spare part staff in Italy and worldwide.

500 ✓ orders processed every day.

# Made **With** Biesse

**Biesse Group technology supports the manufacturing efficiency of the world's largest furniture manufacturers.**

"We were looking for a solution that would be so innovative that it would satisfy all our needs at the same time," states the manufacturing manager of one of the world's largest furniture manufacturers. "Most of our production was already made using numerical control tools, but now everything that we produce is made with these technologies. This is why it was necessary to increase our production capacity. Biesse offered a solution that we liked very much, a veritable range of processing centres

and automatic magazines. Innovative, fascinating and decidedly powerful. With Biesse we defined a "turnkey" solution to be planned, built, tested, installed, inspected and commissioned within a precisely defined schedule".

*Source: excerpt from an interview with the manufacturing manager of one of the world's largest furniture manufacturers.*



# Biesse Group

In

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

How

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

Where

33 branches and 300 agents/certified dealers.

With

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

We

3,000 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.

 **BIESSEGROUP**

 **BIESSE**

 **INTERMAC**

 **DIAMUT**

**MECHATRONICS**

