

# Uniteam CK

NC processing centre



 **BIESSE**

# When competitiveness means growth



Made **In** Biesse

The top portion of the image shows a ceiling made of numerous light-colored wooden slats arranged in a radial pattern, creating a modern architectural look. The slats are evenly spaced and extend from the center towards the edges of the frame.

The market demands a change in manufacturing processes, enabling companies to **accept the largest possible number of orders**. This is coupled with the need to maintain high quality standards and customisation of products with quick and defined delivery times, as well as responding to the needs of highly creative designers.

## Biesse responds

with **technological solutions that enhance and support technical expertise**, as well as a deep understanding of processes and materials. **Uniteam CK** is the ideal machining centre for medium and large industries that need flexibility in order to handle all the standard cuts used in woodwork but also want to offer a solution for the complex demands of modern design.

- ▶ **Maximum machining precision.**
- ▶ **Efficient across all machining operations.**
- ▶ **Perfect blocking of beams and pieces of various sizes.**

# Precision and flexibility in a single machining centre



Uniteam **CK**  
NC processing centre



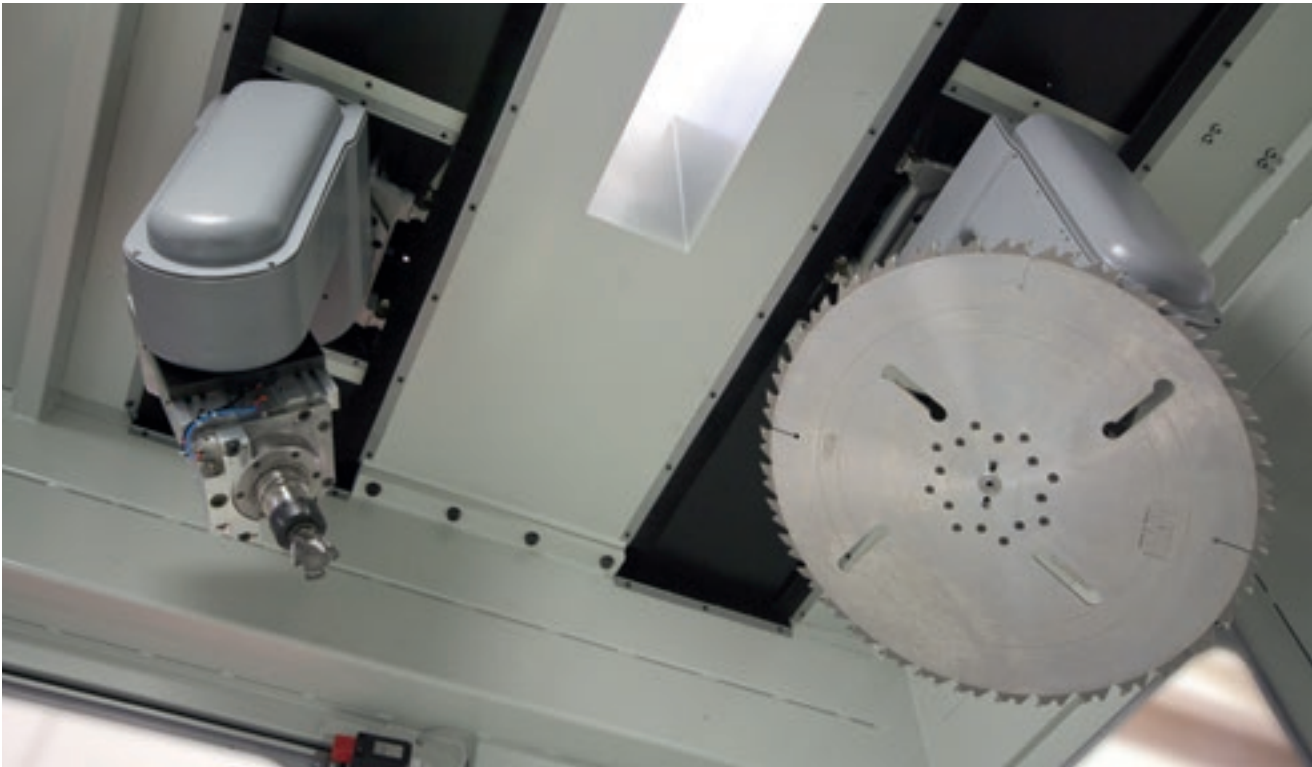
# Maximum working precision

The Uniteam CK is equipped with a robust fixed doorway structure that houses high performance working units used for the main machining operations. The system guarantees precision and optimal finishing of all elements created.

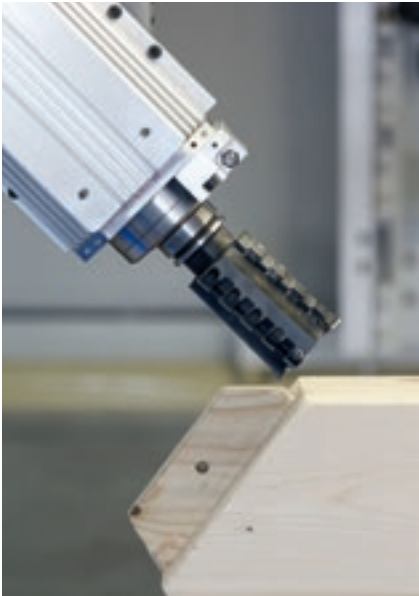


The **structure** includes a steel beam welded to a solid metal base. The overhead beam has a wide cross-section and was created using combined sections designed to guarantee extreme sturdiness.

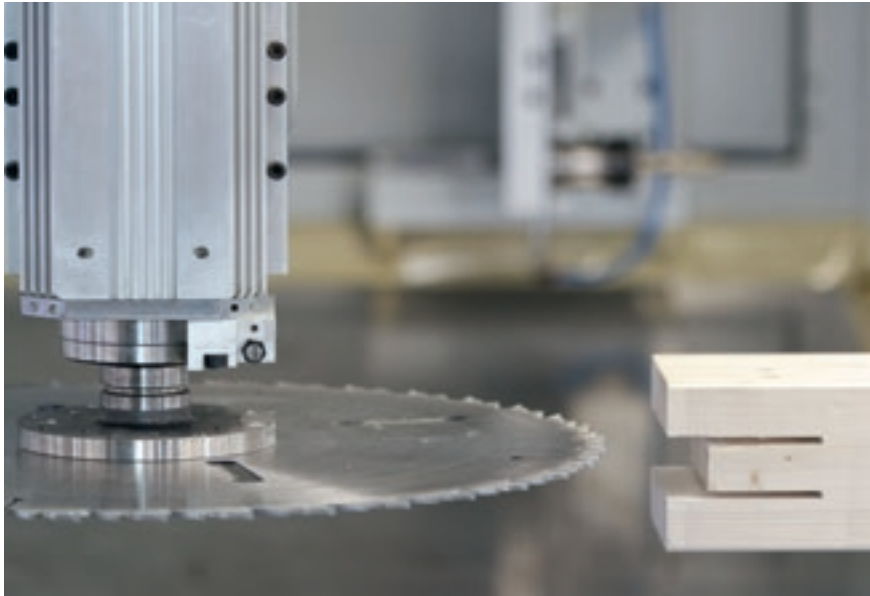
The mobile carriages that support the beam being processed run across the base below.



The **2 working units** (which can be customised to suit production needs) rapidly handle the most popular standard cuts, including mortice and tenon, strut, half lap joint, profile, and dovetail joints, etc.



**The 5-axis, 17kW** milling unit, can handle machining operations with large, heavy tools thanks to the encoder placed on the spindle axis, which regulates the current used, based on the advancement of the tool.



**Dedicated blade group, 735 mm** diameter with 5-axis control.

# Efficient across all machining operations

Up to 18 tools and aggregates are always available in the machine to allow for rapid tool changes.



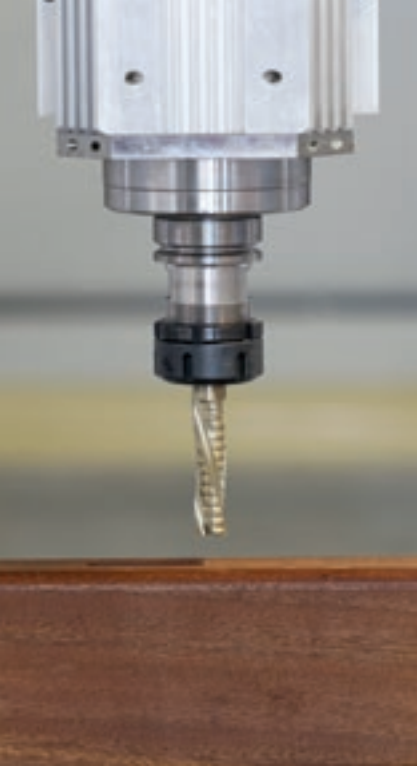
The main milling unit has a **tool magazine with 12 positions** that can hold a **640 mm diameter blade** and a chain-type aggregate.



Chain-type aggregate for blind holes or notches where metal joint plates can be inserted.



Several state of the art machining operations



# Flexible and precise

The Uniteam CK's system for moving beams uses the controlled movement of independent clamps for optimal positioning and to provide appropriate support for the element being machined. Every single clamp has both vertical and horizontal clamping, which can be automatically excluded, to allow for every machining operation required.



## HOUSINGSOLUTIONS

Precision and flexibility for a large number of machining operations, from standard woodwork to the more complex demands of modern architecture.

# Perfect blocking for beams and pieces of various sizes

The work table was designed to guarantee maximum grip and extremely high quality machining.



The **pre-loading system** allows for the positioning of multiple elements guaranteeing that the machining centre is continuously fed without interruption.

The regulated clamps are equipped with a system for the insertion of motorised belts and accurately block and support the element for machining.



# Uniteam CK



The **system that moves the beam through the machine** consists of four carriages equipped with vertical and horizontal hydraulic blocking systems.



The table blocks either long or short pieces with equal efficiency.



A **buffer**, made up of motorised chains that can collect the pieces, allows for the machine to be fed automatically for a continuous run with no downtime.



The clamps have a **90° hydraulic rotation system** that allows for all six faces of the piece to be machined without needing a second intervention.



# Technology to help operators

The Uniteam range stands out for a series of solutions designed to simplify machine use for everyday work.

**Motorised conveyor belt** for the removal of chips and waste.





Systems can be completely customised through graphic HMI software and embedded PLC.

The Uniteam range designed for housing is equipped with a very powerful NC, the cutting edge **Osai Open M**. Thanks to its characteristics, the CNC OPEN control family allows for machining with an elevated finish and optimal management of the machining centres:

- 5-axis machine control (bi-rotary head) through Tool Center Point (TCP)
- Algorithms for High Speed Cutting (HSC)
- Complete 3D roto-translation
- Management of dual and gantry axes
- Look-ahead with 1024 pre-calculated blocks
- Velocity Feed Forward (VFF) Calculation
- Advanced algorithms for jerk control
- Management of tool magazine, tool life, random tools, multi-pocket tools
- Multi-axis electronic cam
- Cross compensation
- Volume compensation to correct asymmetry or lack of mechanical alignment by the machine.



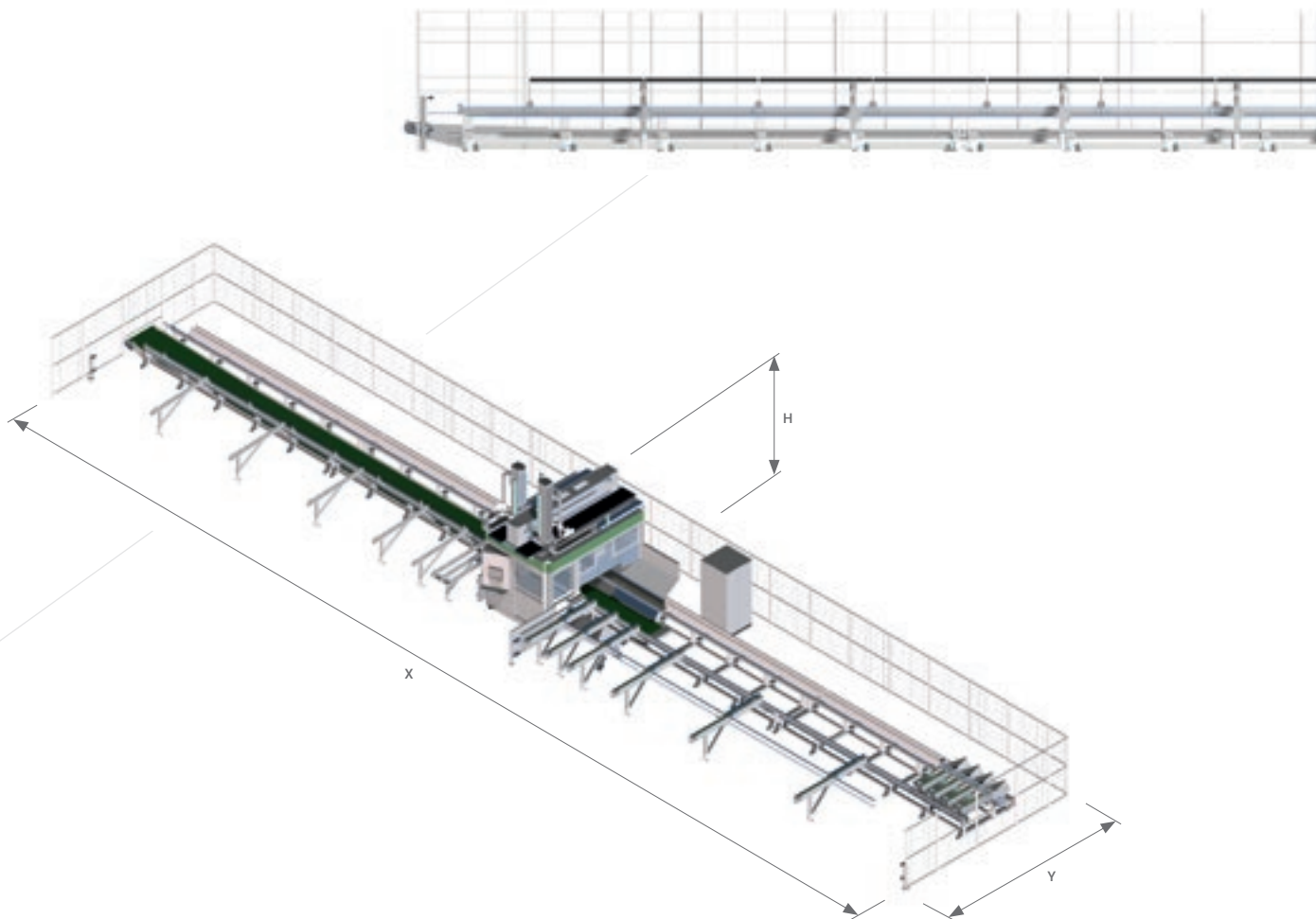
The **CAD/CAM software** used for UNITEAM machines is ideal for designing both straight and curved beams. It was specifically designed for the sector and simplifies machine use, guaranteeing process optimisation and significantly increased productivity.

Once the project has been imported in Btl format, the CAD/CAM module automatically associates the appropriate machining operations. The software shows the piece on the screen with the machining operations applied and is equipped with a 3D simulator for the machining centre.

The machine CAD allows full freedom in designing flat pieces, curved pieces and a variety of profiles.

Designs can also be imported from third-party CAD systems.

# Technical specifications



## Working fields

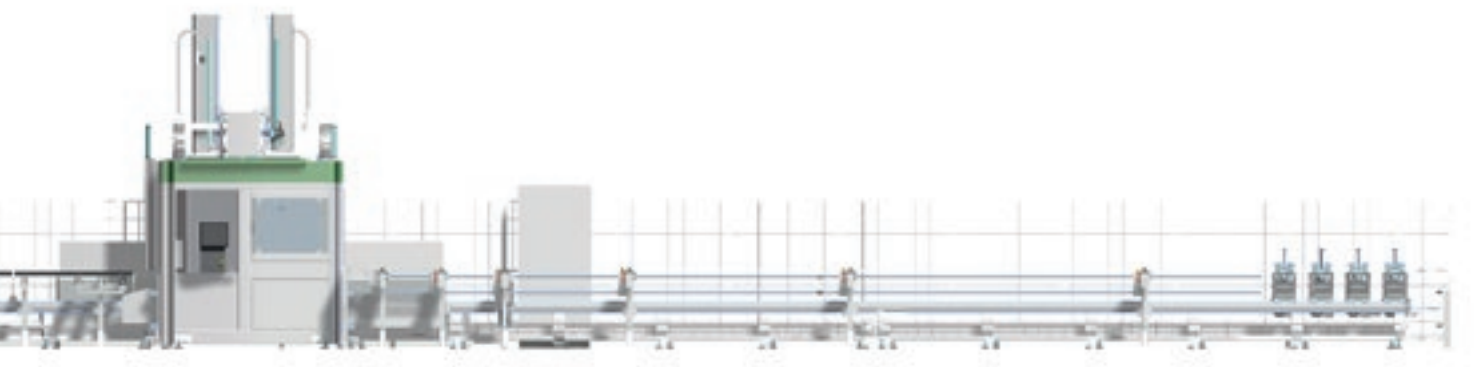
	X	Y	Z
	mm	mm	mm
Min/max	500/14000	50-600/1000	50/600

## Working dimensions

	X	Y	Z
	mm	mm	mm
Uniteam CK	32700	6200	4600

X/Y/Z axis speed 80/60/25 m/1'





- ▶ **The loading area is the same length as the unloading area.**
- ▶ **All machines are equipped for direct assistance teleservice.**

The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

A-weighted sound pressure level (LpA) during machining for operator workstation LpA=79dB(A). A-weighted sound-pressure level (LpA) for operator workstation and sound power level (LwA) during machining LwA=83dB(A). K measurement uncertainty dB(A) 4.

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746: 2009 (sound power) and UNI EN ISO 11202: 2009 (sound pressure levels at workstation) during panel machining. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.

# Uniteam range

The Uniteam range is an innovative series of machining centres dedicated to machining beams of solid or laminated wood. The range offers the best performance available on the market.

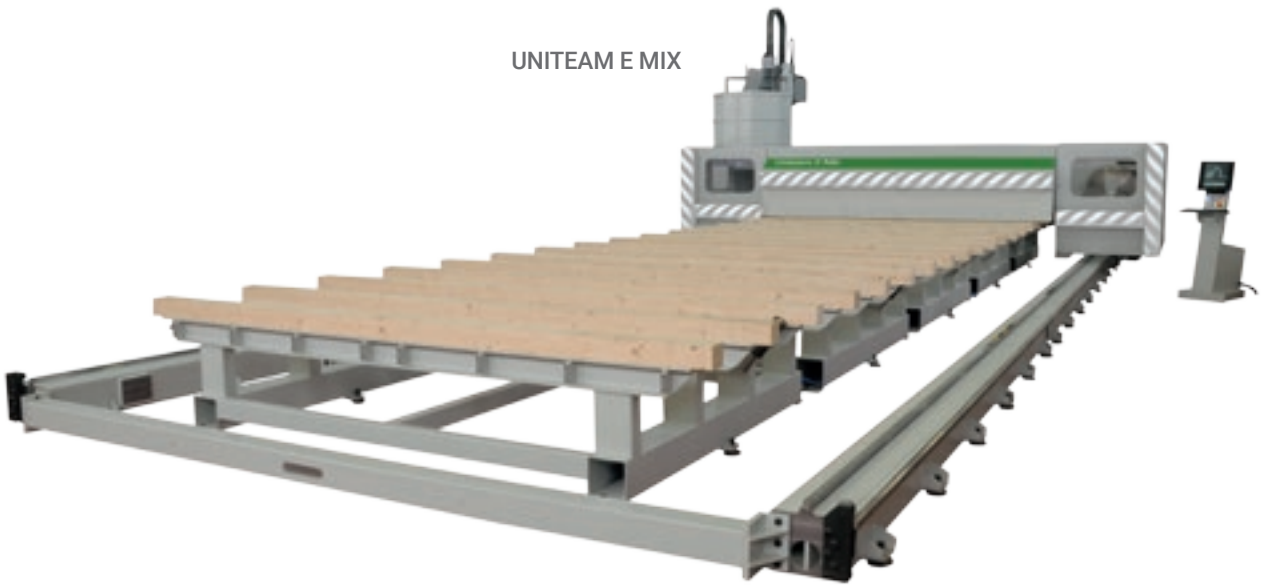
UNITEAM CK



UNITEAM UT



UNITEAM E MIX



UNITEAM E BM3



# 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

## The innovation behind the Uniteam machining centre takes centre stage in the Japanese housing market

Sky Corporation is one of the top Japanese companies to produce CLT panels. Founded in 1990, the company grew significantly and currently owns 6 factories, 2 sales offices, 3 logistics centres, a team of 195 people and revenues of 50 million USD per year. The company produces components for wood houses, structural materials for non-residential buildings up to 3,000 m<sup>2</sup> (pre-cut using CAD/CAM), panels and other wood products.

"We have a vast range of customers, from builders to woodworkers, and from companies that sell wood to other businesses. Very different companies share a common interest in quality materials machined with the utmost precision, with no errors or defects and limited costs" stated Yukitsugu Takahashi, Sky Corporation president. "What sets us apart from our competitors is our technology, no other company in the sector has a high-tech production process that can compare," Yukitsugu Takahashi continued. In 2015, Sky Corporation purchased a Uniteam machining centre to be able to handle machining that the company couldn't achieve with the equipment it already owned. "Thanks to this new purchase, we are now able to use a machine for machining operations that were previously done manually, thus improving productivity and performance. We are able to process pre-cut panels for non-residential use with Japa-

nese machines, but we use the Uniteam machining centre for longer components, complex joints, and CLT panels, which our previous machines were unable to handle. Thanks to its powerful and efficient CAD/CAM software, the Uniteam has significantly cut the number of cases where manual work was required as well as significantly cutting costs and helping optimise company logistics. Plus, the CAD/CAM software used by the Uniteam can interface with all CAD software available on the market".

Sky Corporation decided on the Uniteam machining centre after a scrupulous visit of the Italian Company. "Before buying, I visited their factory to see the Uniteam in action, I learned about their approach to developing this technology and met with their very enthusiastic and efficient team. The company that produces Uniteam has become a valid partner of ours, and we have worked together on improving the machine's performance to meet our production needs. The fact that Uniteam became part of the Biesse Group further motivated us to strengthen our collaboration. The financially sound company and continued investments in consulting and services further back up their skill and reliability," the president of Sky Corporation explained. Sky Corporation is happy to use the Uniteam machining centre as part of its production process, especially to meet

market demand in Japan following the recent introduction of CLT panels. "Owning this technology allowed us to accept a growing number of orders from customers who are building houses and other structures based on this new technique. It was a wise investment and has helped us grow significantly," Yukitsugu Takahashi concluded.

*The innovation was also featured on local television and published online:*  
<http://youtu.be/8XA76a8eLAo>.



# Biesse Group

In

1 industrial group, 4 divisions  
and 9 production sites.

How

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

Where

37 branches and 300  
agents/selected dealers.

With

Customers in 120 countries (manufacturers of furniture,  
design items and door/window frames, producers of ele-  
ments for the building, nautical and aerospace industries).

We

3,800 employees throughout the world.

**Biesse Group** is a multinational 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 since June 2001.

 **BIESSEGROUP**

 **BIESSE**

 **INTERMAC**

 **DIAMUT**

**MECHATRONICS**

