

# MATRIX

**FLEXIBLE DRILLING AND INSERTING  
MACHINE WITH NUMERICAL CONTROL,  
FOR LINE INSTALLATION**



# THE VERSATILE AND COMPACT DRILLING AND INSERTING MACHINE



## THE MARKET EXPECTS

a change in production processes to meet the ever growing demand for **personalised products** to satisfy customers' specific needs, coupled with quick and certain delivery times.



WATCH THE VIDEO



## BIESSE RESPONDS

with **technological solutions** able to meet the requirements of companies who manufacture to order, significantly reducing costs and cycle times. **Matrix** is the flexible and compact range of NC line drilling and inserting machines that can be configured according to the customer's various insertion types and production requirements and can be integrated into existing lines. Matrix combines versatility and performance to better manage on-demand production, ideal for the production of assembled and flat pack furniture and for the complementary production of subcontractors.

## MATRIX FT-KT-IT-ITG

- MACHINING PANELS OF VARIOUS FORMATS WITH ZERO SET-UP TIMES
- FLEXIBILITY AND CONFIGURABILITY IN CONFINED SPACES
- COMPLETE INTEGRATION IN THE PRODUCTION FLOW

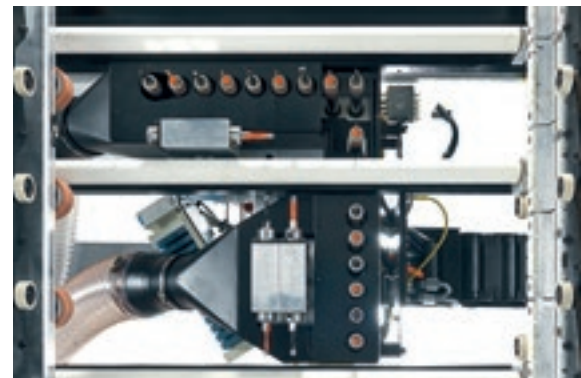
# MACHINING PANELS OF VARIOUS FORMATS WITH ZERO SET-UP TIMES



High performance thanks to the possibility of machining different pieces.



The presence of **two pairs of working heads** fitted on two independent mobile carriages makes it possible to perform the most complex drilling operations very quickly, even when machining a whole batch of different components.



**EXECUTION OF COMPLEX MACHINING OPERATIONS, THANKS TO THE POSSIBILITY TO WORK 5 FACES OF THE PANEL.**



Reduced tooling times thanks to the 8-position on-board tool magazine.

# FLEXIBILITY AND CONFIGURABILITY WHEN SPACE IS LIMITED

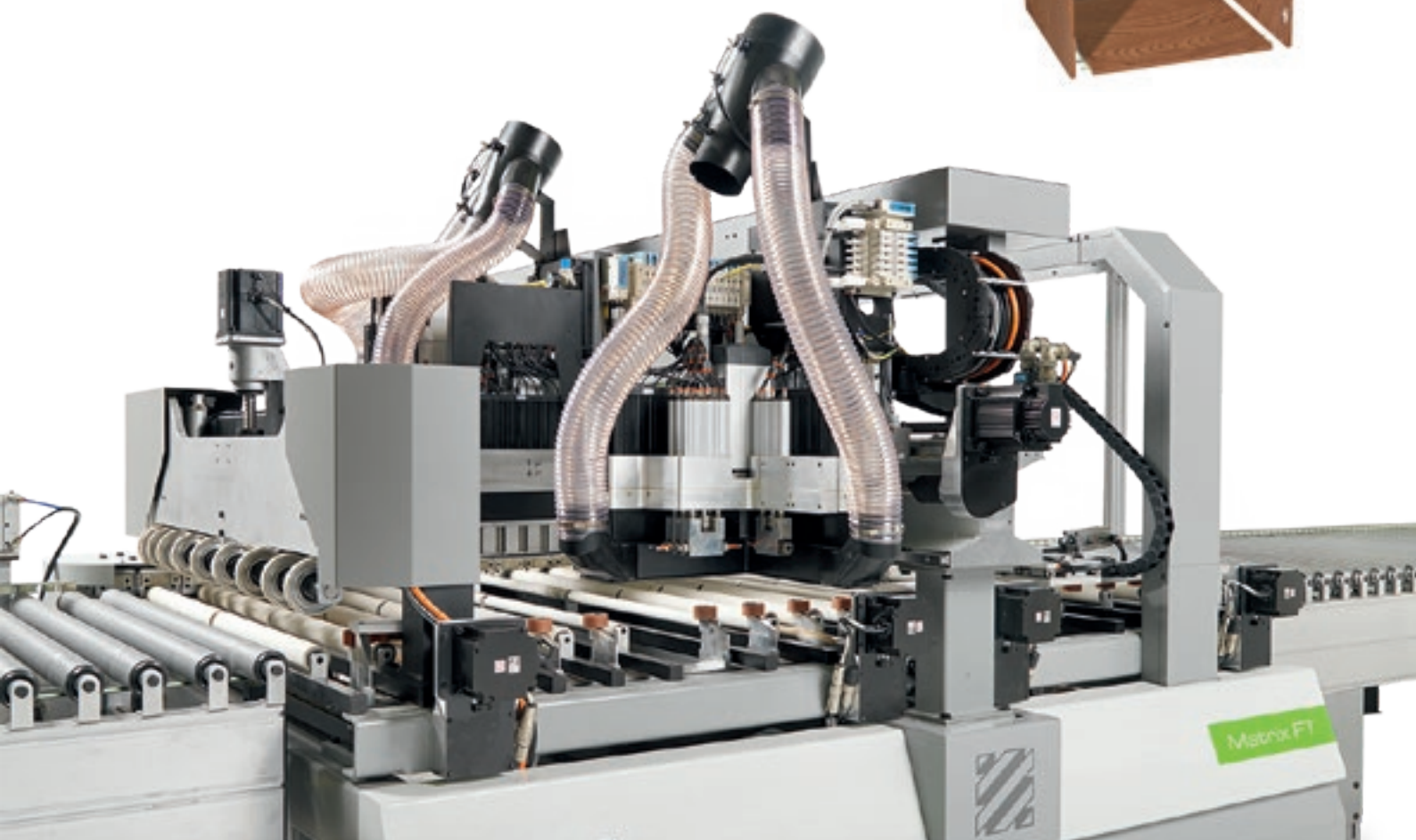
## MATRIX IS AVAILABLE IN TWO SIZES TO MEET DIFFERENT PRODUCTION REQUIREMENTS

**MATRIX FT 700** with a maximum working range of 700 mm for manufacturers of residential furniture.

**MATRIX FT 1300** with a maximum working range of 1300 mm is suitable for all types of furniture; residential, office, shops, allowing panels of various sizes to be machined.

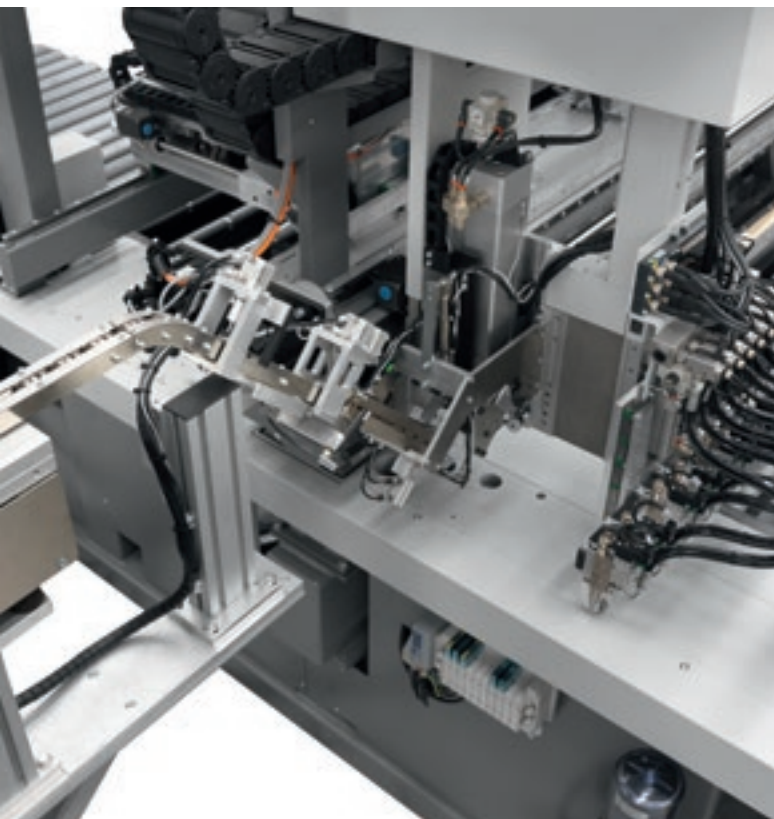
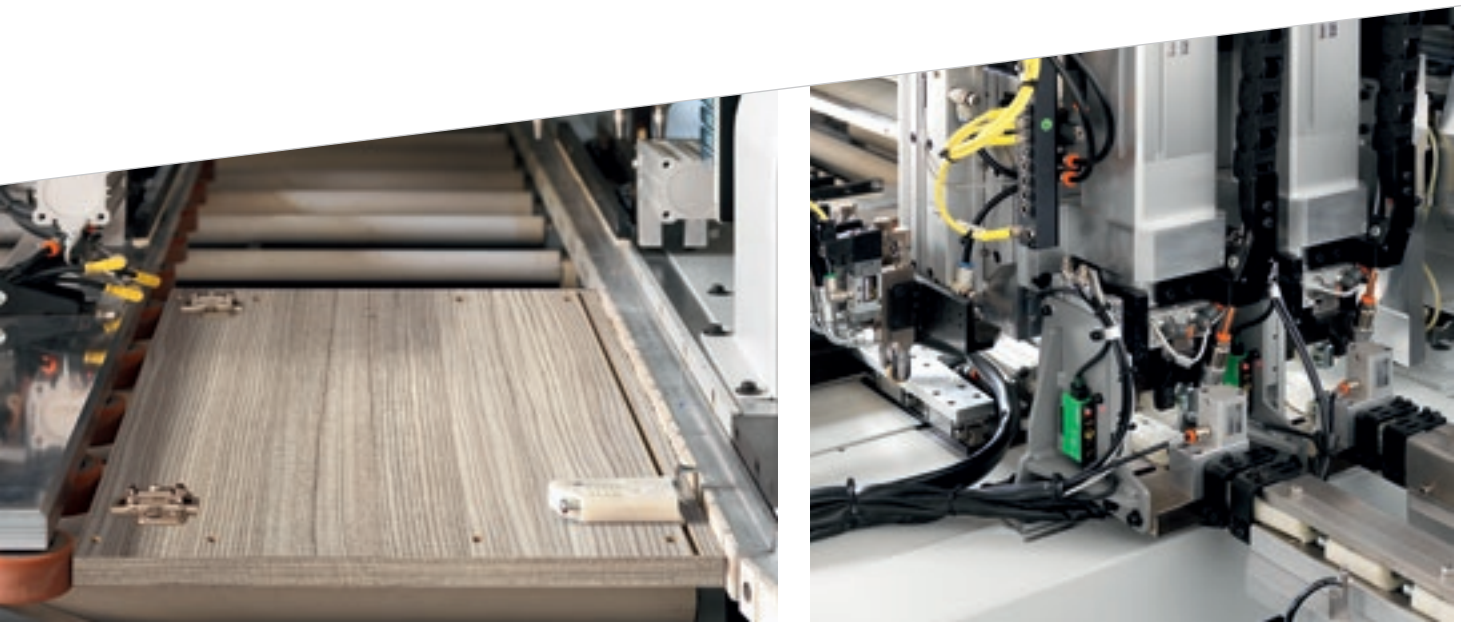
**MATRIX is available in the KT-IT-ITG** version in order to meet the different production requirements also in terms of insertion:

- ✔ **MATRIX KT** for drilling and insertion of glue and press-fit or screw-on hardware.
- ✔ **MATRIX IT** for the insertion of glue and press-fit or screw-fit hardware. Natural integration with the INSIDER FT2 drilling machine for insertion cells.
- ✔ **MATRIX ITG** for glue insertion, suitable for classic or full extension press-fit or screw-on guides. Natural integration with the INSIDER FT2 drilling machine for insertion cells.



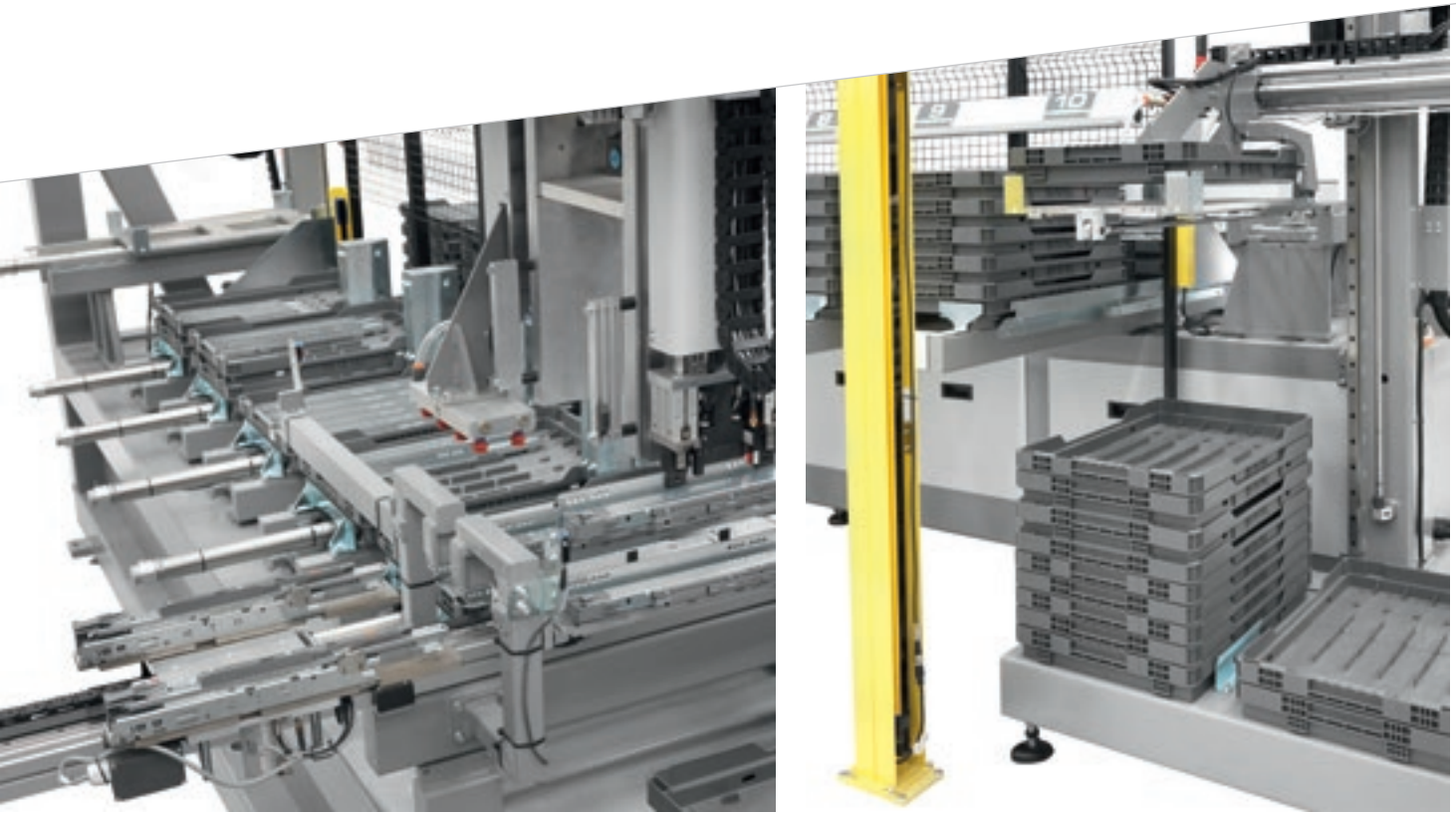
# MACHINING WITHOUT LIMITS

The wide configurability of Matrix allows the customer to carry out multiple machining operations on a single machine. Top and bottom machining, not only drilling but also milling.



## MACHINING OPERATIONS FORESEEN

Working units for the insertion of pre-inserted nuts, pins, mounting plates and wall unit supports, and for gluing.



Working units for the insertion of telescopic and classic guides, whether of the press-on or screw-on type.

Automatic tray feed and recovery.



Vertical drilling from above and below



Cutting



Glue injection



horizontal drilling



Drilling aggregates



Inserting base plates - wall brackets - shelf brackets



Millings

# PRODUCTION LINES

## COMPETITIVE CUSTOMISATION

**Customised solutions, plus the integration of Biesse Group solutions with complementary software and machinery, with over 1000 systems installed worldwide.**

Biesse Systems is a team of highly trained engineers for large scale production processes. Biesse Systems offers integrated cells and systems that are capable of maximising customer competitiveness by combining mass production techniques with a high degree of customisation to meet customers' exact requirements.

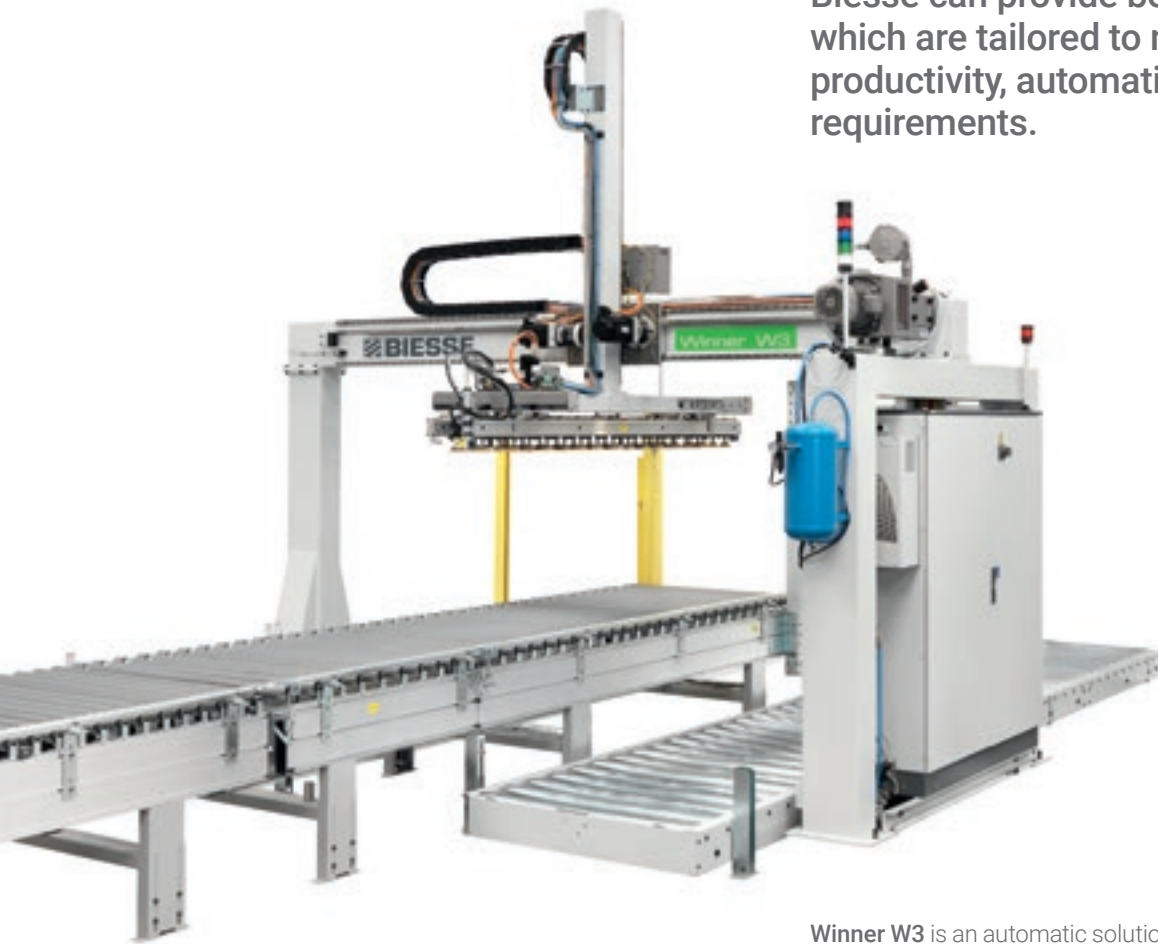






# COMPLETE INTEGRATION WITH THE FACTORY WORK FLOW

Biesse can provide bespoke solutions which are tailored to meet your specific productivity, automation and space requirements.



Winner W3 is an automatic solution that allows the loading and unloading of panels in flexible drilling lines for the management of job stacks.



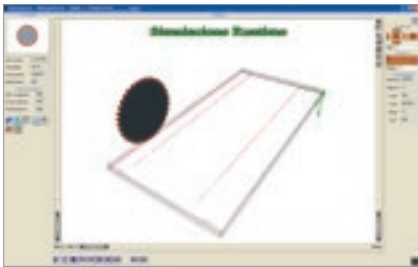
The Matrix range allows you to work sequentially, without set-up time, on a job order workload. It is the ideal machine for the furniture manufacturer, to be integrated in extended workflows. The "insertion only" version is particularly suitable for use with the Insider drilling machine.



**FLEXIBLE, HIGHLY AUTOMATED SYSTEMS FOR THE PRODUCTION OF KITCHEN DRAWER UNITS TO ORDER.**



# EASY TO USE, AND PERFECTLY INTEGRATED WITH THE COMPANY DATABASE

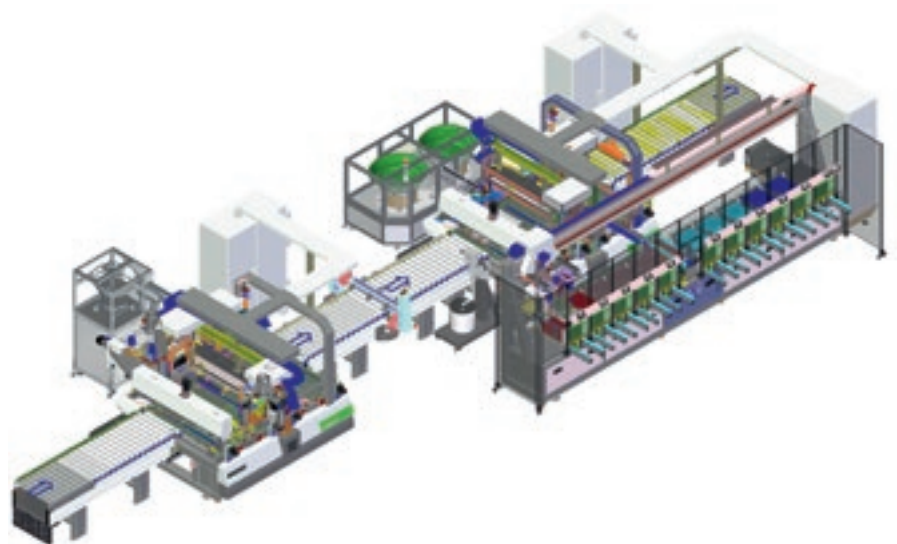
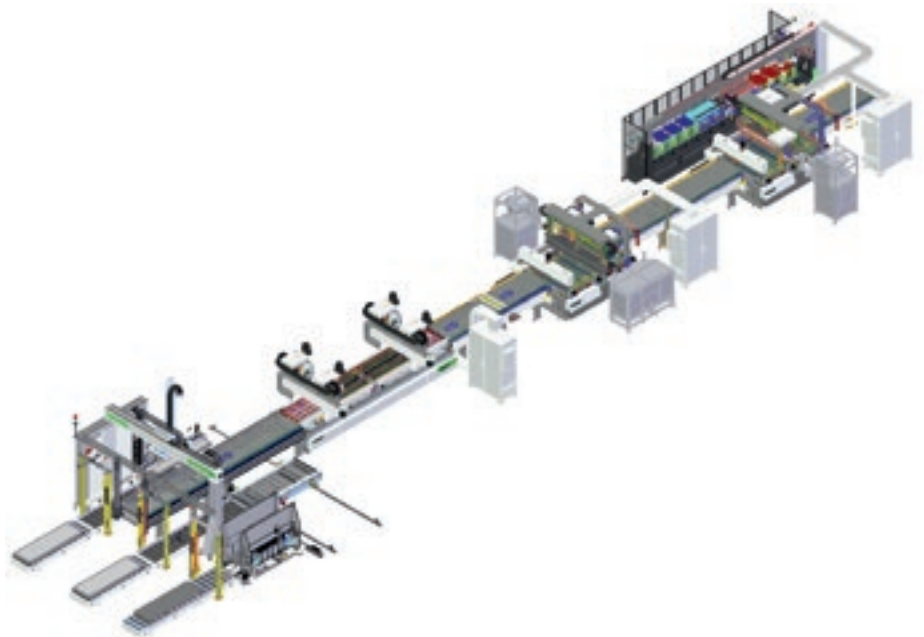


BieseWorks is the system for programming Biese machines, combining high performance with remarkable ease of use. The interface can be customised to meet to user requirements.

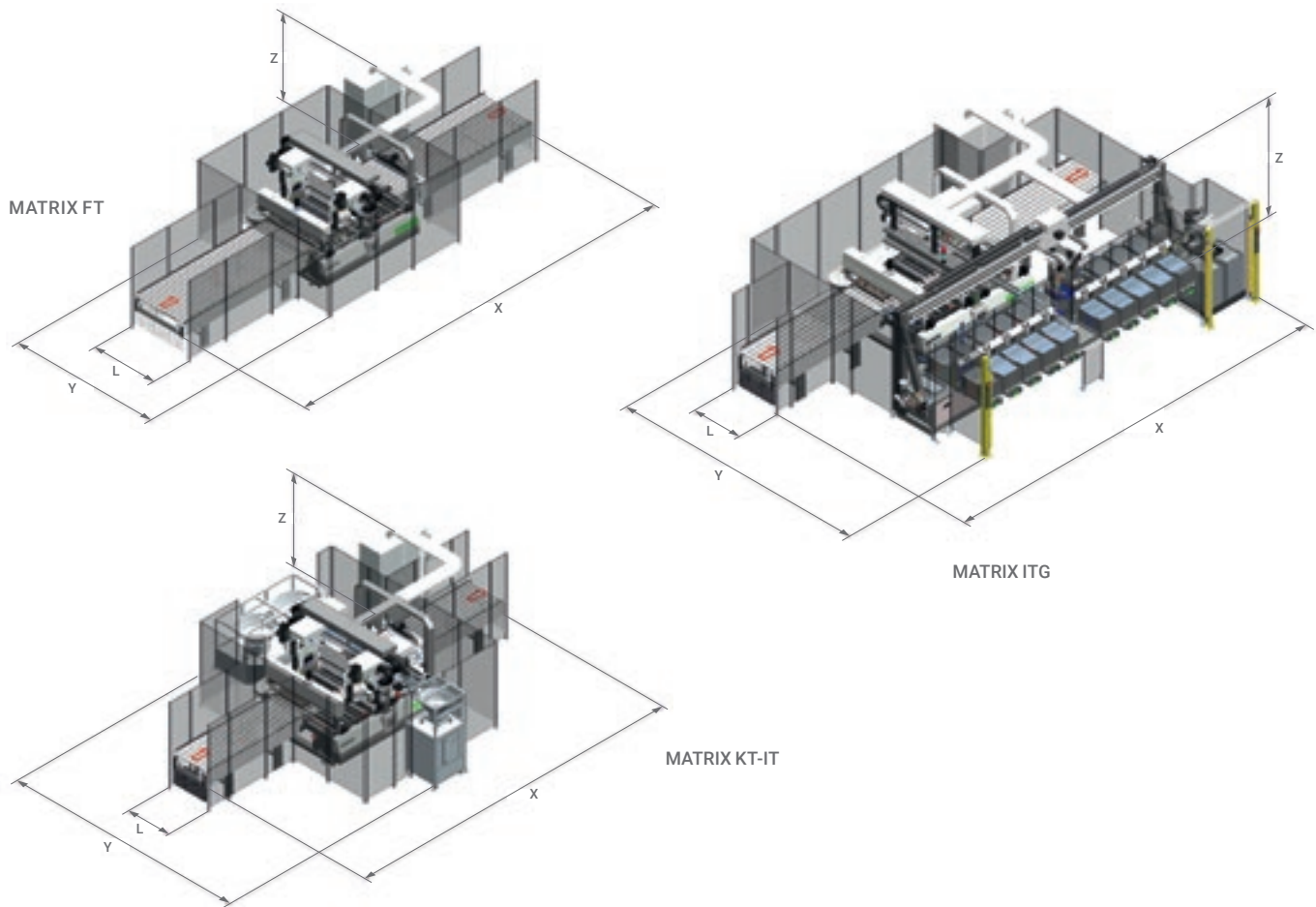
**Software integration within the production plants has become a pressing need. Biese has a specialised team able to manage the system software architecture, data exchange with existing database systems (via line supervisors), and product tracking during machining.**

The supervisor enables the quick and intuitive import and management of work loads, as well as management of the communication interfaces with the individual operators along the line, thus checking the entire production process.

An extremely powerful yet user-friendly operator interface that allows quick decisions and automatically optimises the cycle on the basis of the tools available, to minimise work times.



# TECHNICAL SPECIFICATIONS



## OVERALL DIMENSIONS

		MATRIX FT 700	MATRIX FT 1300	MATRIX KT-IT 700	MATRIX ITG 700
X	mm/inch	7940/312	9940/391	7940/312	8150/321
Y	mm/inch	4000/157	4000/157	VARIABLE *	VARIABLE *
Z	mm/inch	2200/87	2200/87	2200/87	2460/97
L	mm/inch	1230/48	1680/66	1230/48	1230/48
Work table height	mm/inch	900/35	900/35	900/35	900/35

\* depending on the configuration and type of Insertions.

## WORKING FIELDS

			MATRIX FT-KT-IT-ITG 700	MATRIX FT 1300
X	mm/inch	min/max	260/10 - 2600/102	260/10 - 3000/118
Y	mm/inch	min/max	70/2.7 - 700/27	70/2.7 - 1300/51
Z	mm/inch	min/max	10/0.3 - 60/2.3	10/0.3 - 60/2.3

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.

Matrix FT-KT: Weighted surface noise level A Lp<sub>fA</sub> 83 dB(A). Weighted sound pressure level A (L<sub>wA</sub>) 97,32 dB (A).

Matrix KTG: Weighted surface noise level A Lp<sub>fA</sub>\* = 78 dB(A).

Measurement uncertainty K = 4 dB (A). The measurement was carried out in compliance with UNI EN ISO 3746, UNI EN ISO 11202 UNI EN 848-3 and subsequent modifications.

Matrix IT-ITG: Weighted surface noise level A Lp<sub>fA</sub> 71 dB(A). K measurement uncertainty: 1,68 dB(A).

The measurement was carried out in compliance with UNI EN ISO 3746, UNI EN ISO 11202 and subsequent modifications. 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.

# INDUSTRY 4.0 READY



INDUSTRY 4.0 READY

**Industry 4.0 is the latest industry frontier, based on digital technologies and machines that speak to the companies. The products can be interconnected with the production processes via smart networks.**

Biesse's commitment is to transform our customers' factories with real-time technology, ready to guarantee digital manufacturing opportunities, with smart machines and software packages becoming vital tools that facilitate the daily tasks of people all over the world processing glass, stone, metal and more. Our philosophy is a practical one: to supply entrepreneurs with solid data that can help them to lower their costs, optimise their processes and improve their results.

**And that means being 4.0 ready.**

# MADE WITH BIESSE

## FOR A REVOLUTIONARY BUT CONSCIOUS DESIGN

**Conscious design that understands society and skilfully changes it for the better. That's the mission at the heart of Lago, a furniture company founded in 1976 with two simple concepts encoded in its DNA: curiosity and doing things well.**

The common ground for the Biesse Group and Lago, which reinforces the historic partnership between the furniture and carpentry sectors, is the Alliance project: a collection of brands, people and businesses that have decided to join the design company from Veneto on a journey of respect for our planet, ourselves and our future. The historic partnership is borne out by the innovative production plant that Biesse developed with Lago, completely restructuring the manufacturing site. The result is the inclusion of a new Batch One facility within the existing production context, in the spirit of personalisation, speed and flexibility.

The facility has a new square-edging cell with Stream MDS and Winner W1, a new drilling cell with Skipper 130 and a new Selco WNR 650 sizing centre connected to Win-

store 3D K1, which intelligently manages all the material to be processed.

"Including the 'batch one' process bolsters the 'just in time' objective set by Lago, reducing the warehouses needed for semi-finished products and raw materials, as well as reducing scrap material and elevating product quality. What's more, it improves efficiency, reduces time to delivery and offers complete control over the production flow," explains Mauro Pedè, Biesse Systems Sales Director.

"The new investments have led us to a new productive flexibility that we will continue to implement, for a renewed production speed and even greater customisation of the range," adds Daniele.

Carlo Bertacco echoes the sentiment, "We are completing a 2,500 m<sup>2</sup> expansion, to be even faster and more flexible while maintaining the extremely high level of quality that Lago is known for. It's an equation that relies heavily on technology: I'm referring to one of the particularly valuable machines we purchased from Biesse – a small 'Brema Eko' – not only is it extremely flexible, it allows us

to greatly simplify some steps, since we can process painted pieces without worrying about damaging them.

It's proof that with clear ideas and a precisely organised work flow one can find simple solutions that produce excellent results."

**LAGO BELIEVES  
THAT DESIGN MUST  
BE GUIDED BY MAN,  
BY HUMANITY AND  
EMPATHY**



**Daniele Lago**  
*Founder*

**LAGO.IT**



# CUSTOMER CARE IS WHO WE ARE

**SERVICES** is a new experience for our customers, to offer not just excellent technology but the added value of an increasingly direct connection with the company, the professionals who work there and the experience they embody.



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## **A WORLDWIDE NETWORK**

39 branch offices, over 300 certified agents, retailers in 120 countries, and spare parts warehouses in America, Europe and the Far East.



## **SPARE PARTS AVAILABLE IMMEDIATELY**

Identification, shipping and delivery of spare parts for every need.



## **EVOLVED TRAINING OPPORTUNITIES**

Lots of on-site, online and classroom training modules for personalised growth.



## **VALUABLE SERVICES**

A wide range of services and software packages to help our customers achieve continuous improvements in performance.



## AN EXCELLENT LEVEL OF SERVICE

**+550**

HIGHLY SPECIALISED  
TECHNICIANS AROUND  
THE WORLD, READY TO  
HELP CUSTOMERS WITH  
EVERY NEED

**90%**

OF MACHINE DOWN CASES  
WITH RESPONSE TIME  
UNDER 1 HOUR

**+100**

EXPERTS IN DIRECT  
CONTACT THROUGH  
REMOTE CONNECTIONS  
AND TELESERVICE

**92%**

OF SPARE PARTS ORDERS  
FOR MACHINE DOWNTIME  
PROCESSED WITHIN 24  
HOURS

**+50.000**

ITEMS IN STOCK IN  
THE SPARE PARTS  
WAREHOUSES

**+5.000**

PREVENTIVE  
MAINTENANCE VISITS

**80%**

OF SUPPORT REQUESTS  
SOLVED ONLINE

**96%**

OF SPARE PARTS ORDERS  
DELIVERED IN FULL ON  
TIME

**88%**

OF CASES SOLVED WITH  
THE FIRST ON-SITE VISIT

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international native.

We simplify your  
manufacturing  
to make the process  
of any material



ur  
g process  
potential  
I shine.

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