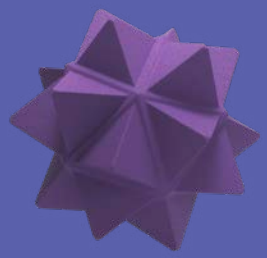
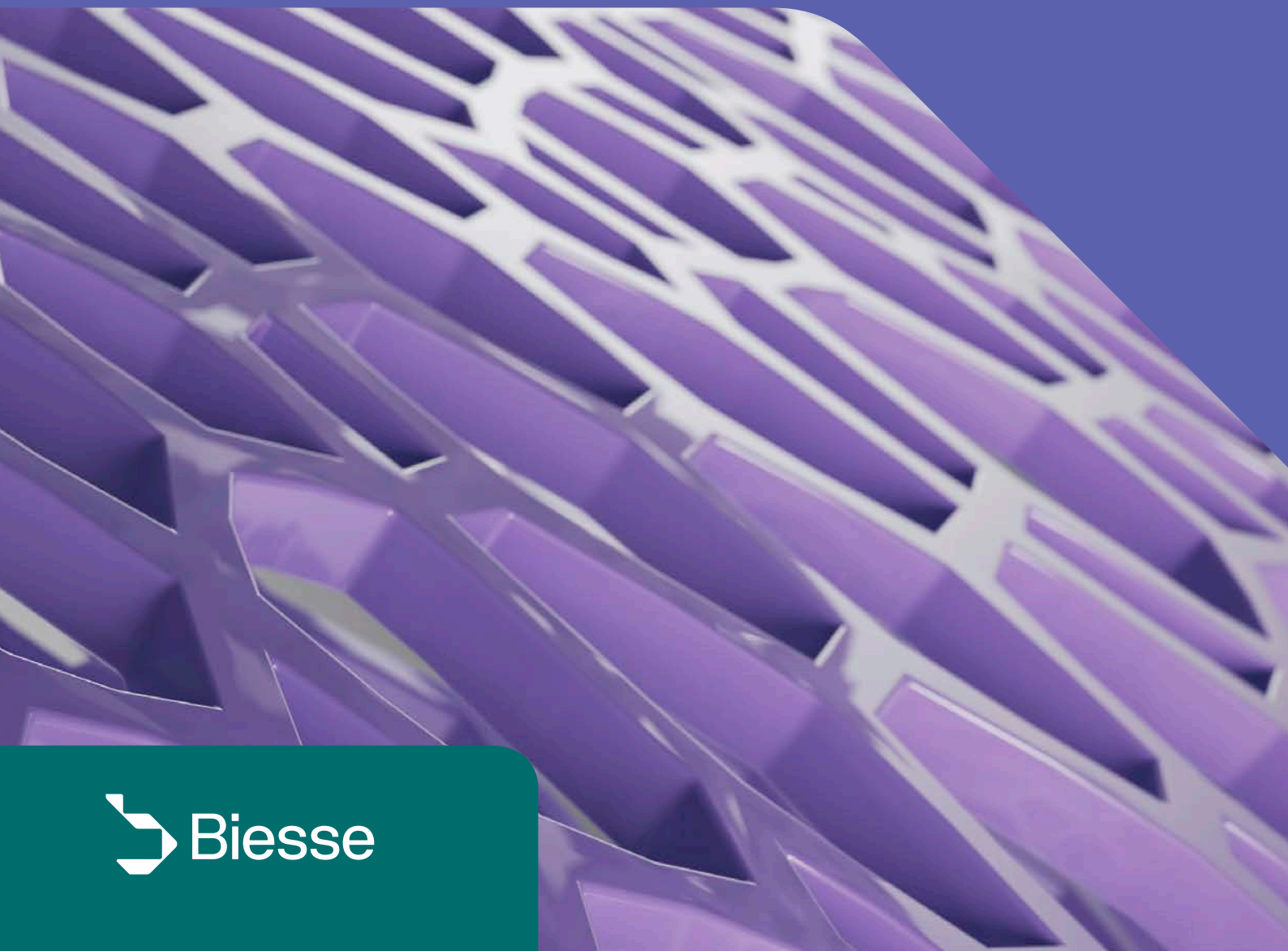


Biesse Machinery
Materia

Product Portfolio



Biesse

Biesse Machinery

Materia

Founded in Italy in 1969
International natives

We are an international company that manufactures lines, machinery and components for making products, enhancing the potential of a wide range of materials.

Thanks to our rooted competence nurtured by an ever-growing worldwide network, we support your business evolution - empowering your imagination.

Master of materials

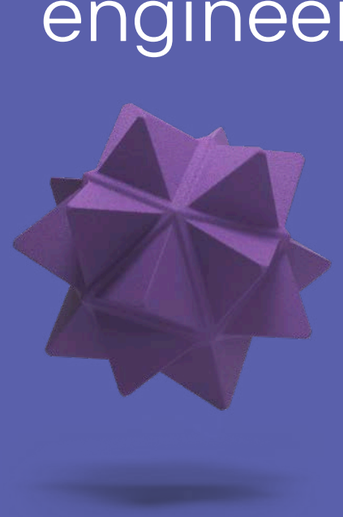
We simplify your manufacturing process to make the potential of any material shine

Join the
Biesse world.

biesse.com

Materia

We manufacture polymers and composites processing solutions for automotive, aerospace, technical packaging, and engineering plastics.



Discover
all our machines
for polymers
and composites

biesse.com

Explora

Machines

Machining type

Cut Cutting

Fin Finishing

Multi Multi-machining

Segment

Pro Distinctiveness and performance

Up Agility and expertise

Go Simplicity and compactness

Identify in a few words
the most suitable machine
for your needs from
our product portfolio.

Explora

Explora is the excellence in the processing of polymeric and composite materials, with a range of cutting-edge machines in line with the needs of the most demanding sectors.

The Explora range stands out for its high machining precision, offering exceptional flexibility at every stage of the process. Thanks to the integration of advanced technologies, Explora is designed to tackle the most complex production challenges, delivering innovative and reliable solutions.

Machining Types

A machining operation for every requirement

Machining types classify the different operations based on their intended purpose or end-use application.

Cut

Cutting

The range of solutions for cutting includes single-cut panel saws and waterjet machines for rubber, foam, plastic and composite materials.

Fin

Finishing

Solutions for the thermoforming of plastic materials.

Multi

Multi-machining

Range of machining centres for carrying out different types of milling, boring, nesting and trimming of plastic, composite and technopolymer materials.

Segment

Your needs, our skill

Your daily challenges feed our experience, as they enable us to get to know your requirements, your production dynamics and your spaces.

To meet your needs, we've created a range of products designed to help you choose the most suitable solution.

Pro

Distinctiveness and performance

Pro represents excellence in terms of performance, designed for customers who wish to distinguish themselves with the latest-generation solutions that they choose.

Up

Agility and expertise

The perfect choice for managing custom production requirements. The Up solutions combine advanced flexibility and functionality, guaranteeing efficient responses to constantly evolving production challenges.

Go

Simplicity and compactness

The Go solutions are designed for those looking for compact, easy-to-install machines that are simple to use. Ideal for those looking for a practical, immediate approach.

Cutting

The range of solutions for cutting includes single-cut panel saws and waterjet machines for rubber, foam, plastic and composite materials.

Discover
all our cutting
machines

biesse.com

Single

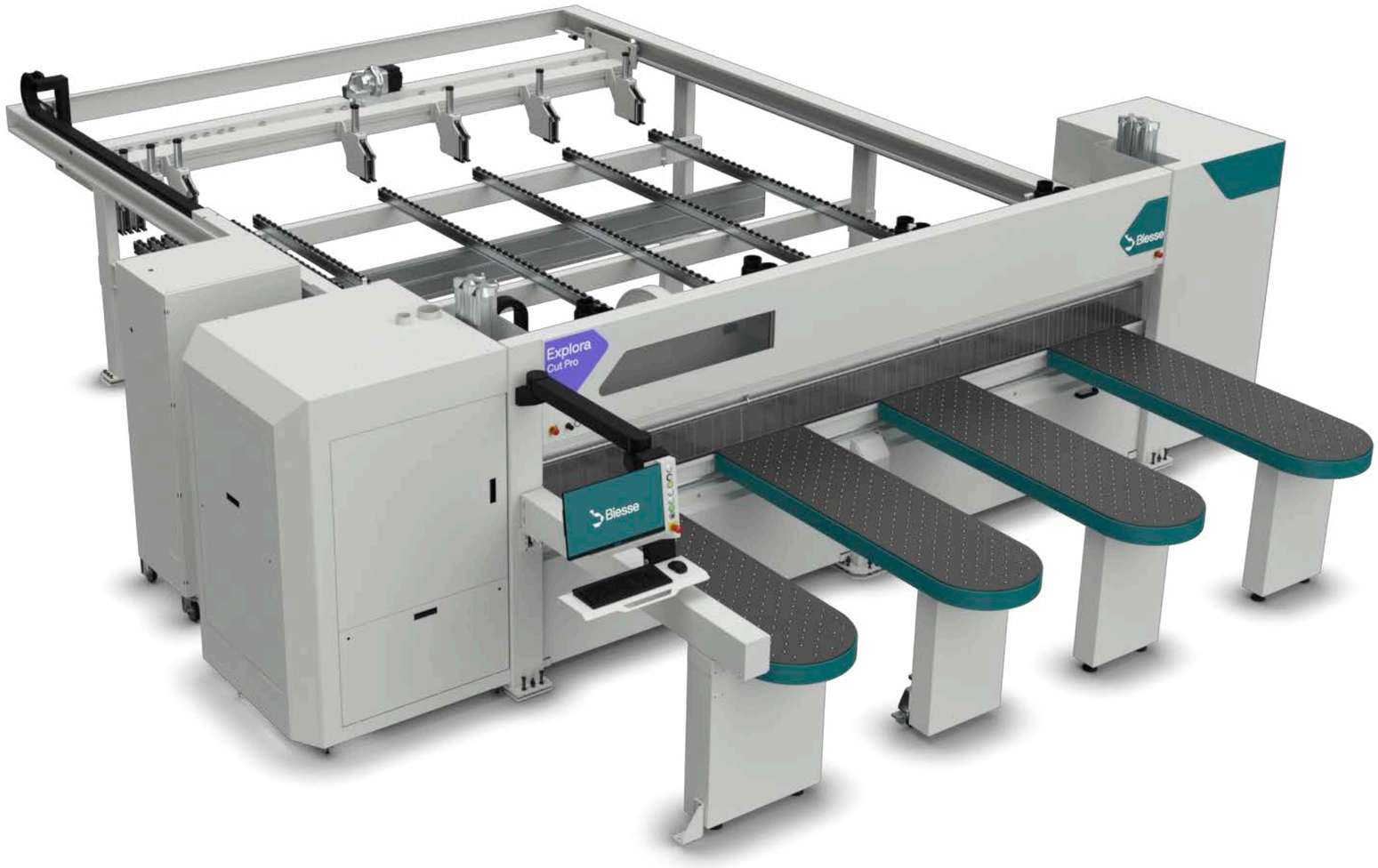
Product Brand	Model	Segment
Explora	**Explora Cut Pro** S F	Pro
	Explora Cut Up S F	Up

Waterjet

Product Brand	Model	Segment
Explora	**Explora Cut Up** J O	Up

Explora

Explora Cut Pro S F



Elevate your performance and experience in sizing slabs

Explora Cut Pro S F is the high-end single-cut panel saw equipped with a numerically controlled auxiliary push system. Designed to offer maximum precision, efficiency and quality in machining, it is intended for companies that want to do medium to large production runs.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Working the “sensitive” materials is not a problem

Working with “sensitive” materials is not a problem. The motorized positioning of the presser unit and the electronic adjustment of the clamp closing pressure, performed directly by the numerical control, eliminate any minimum operating pressure limits, ensuring excellent handling of materials that are easily damaged by pressure.

Zero-time blade changing

The quick blade change system (patented) offers a very fast tool-changing system. At the touch of a button, the operator can effortlessly change blades, eliminating the need for extra tools or complex procedures.

Two is better that one

The double presser device increases the suction capacity of the extraction hood, especially making trim cuts, and at the same time improves the cutting quality.

Fast and precise positioning of blades

The saw carriage features two independent slides for the main and scoring blades, each driven by its own motor, with the blade unit motor automatically controlled by an inverter, providing up to 37 kW of power.

Longer life with dust protections

Cables are protected by a strong cable chain and blades carriage is composed by removable guards for easy maintenance. All intake ports have pneumatic valves that open and close automatically according to the cutting pattern.

Longer life with dust protections

The cutting line closure system prevents trim from falling, reducing the risk of damage to moving parts and decreasing the need for maintenance and cleaning, thus increasing machine uptime.

Zero-time blade changing

The quick blade change system (patented) offers a very fast tool-changing system. At the touch of a button, the operator can effortlessly change blades, eliminating the need for extra tools or complex procedures.

More stripes at once

The continuous phenolic ply loading table allows narrow strips supported by the pusher to be handled, increasing the amount of strips that can be processed at a time.

Perfect alignment before final cuts

Side aligner on the saw carriage automatically intervening before every crosscut, to ensure the perfect alignment of the final piece to be machined. The system built into the saw carriage automatically pre-positions itself according to the width of the strip to be sectioned, ensuring perfect squaring and preserving the quality of the sides of thin sheets and plates.

Two is better that one

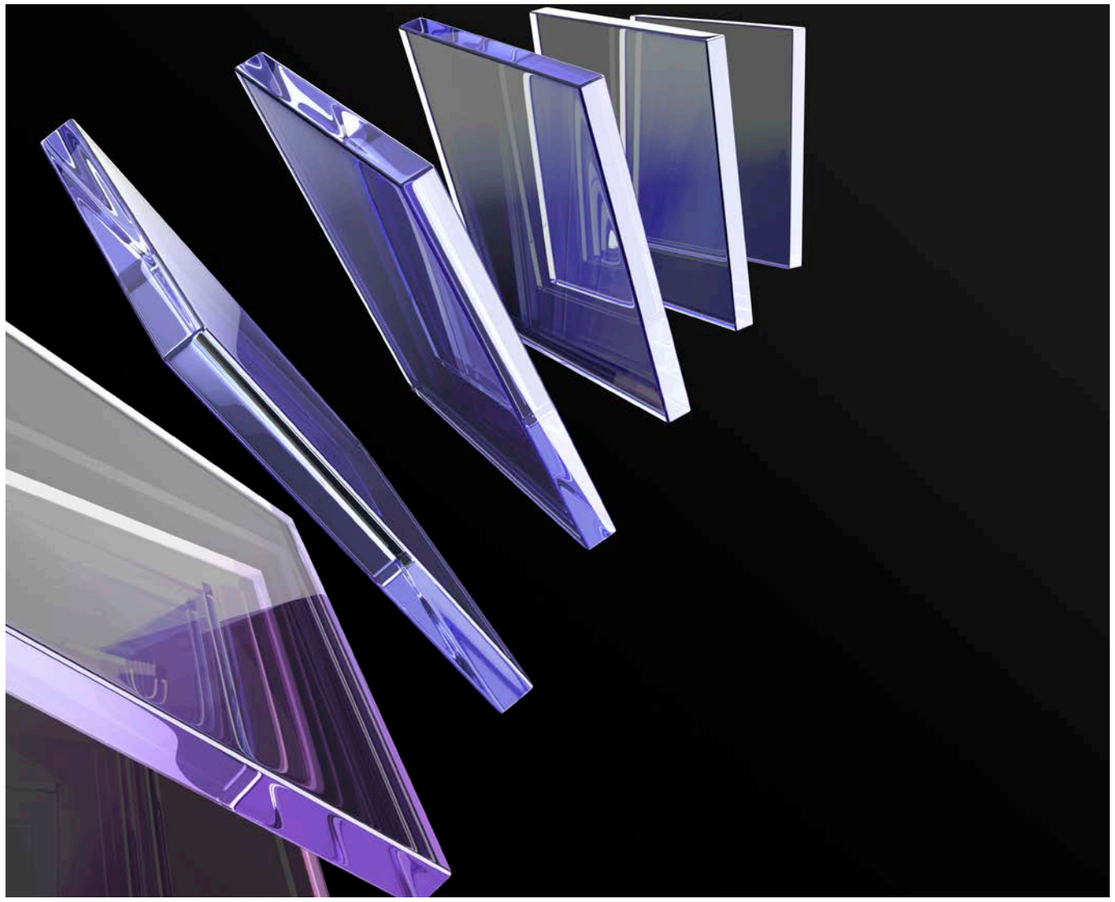
The double presser twin pusher device increases the suction capacity of the extraction hood, especially making trim cuts, and at the same time improves the cutting quality. Furthermore this system increases the cutting quality of both single sheets and panel packs due to the electronic clamping pressure adjustment feature. In addition to rack-and-pinion transmission on both sides allows perfect parallelism, thus maximum adherence on the cutting surface. Super effective in trimming both tails and heads of the stripes.

Energy saving mode

With the simple press of a button, which can be activated in any programming environment, the machine automatically switches to stand-by mode after a set period of inactivity, providing the right amount of consumption at each working condition.

Applications

Plastic slabs

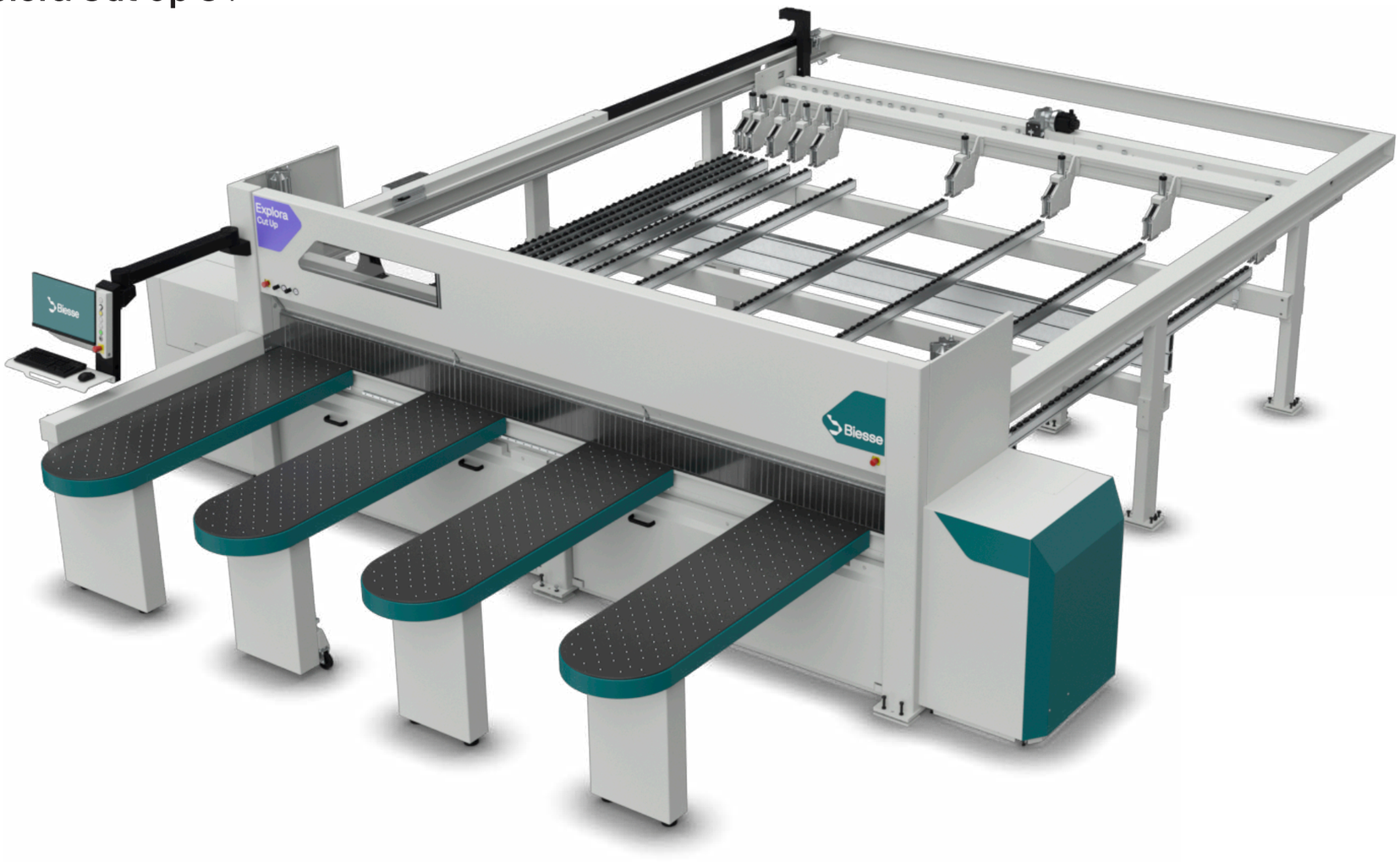


Cardboards

High density foam boards

Explora

Explora Cut Up S F



Versatility and performance combined in a single solution

The single-cut panel saw, designed for medium-sized batch production. It is compose with a numerically controlled pushing system, a robust pushing carriage, an automatic blade and presser adjustment, and independent clamps all mixed together for making a versatile and precise system suitable for cutting hard and soft materials.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Working the “sensitive” materials is not a problem

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Zero-time blade changing

The quick blade change system (patented) offers a very fast tool-changing system. At the touch of a button, the operator can effortlessly change blades, eliminating the need for extra tools or complex procedures.

Fast and precise positioning of blades

The saw carriage features two independent slides for the main and scoring blades, each driven by its own motor, with the blade unit motor automatically controlled by an inverter, providing up to 22 kW of power.

Energy saving mode

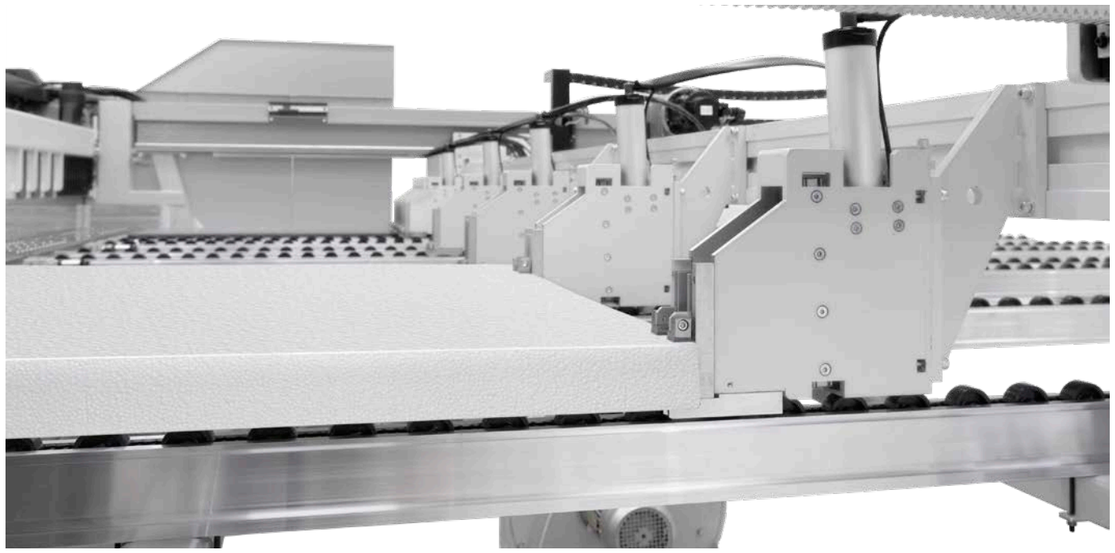
With the simple press of a button, which can be activated in any programming environment, the machine automatically switches to stand-by mode after a set period of inactivity, providing the right amount of consumption at each working condition.

Longer life with dust protections

Cables are protected by a strong cable chain and blades carriage is composed by removable guards for easy maintenance. All intake ports have pneumatic valves that open and close automatically according to the cutting pattern.

Zero-time blade changing

The quick blade change system (patented) offers a very fast tool-changing system. At the touch of a button, the operator can effortlessly change blades, eliminating the need for extra tools or complex procedures.



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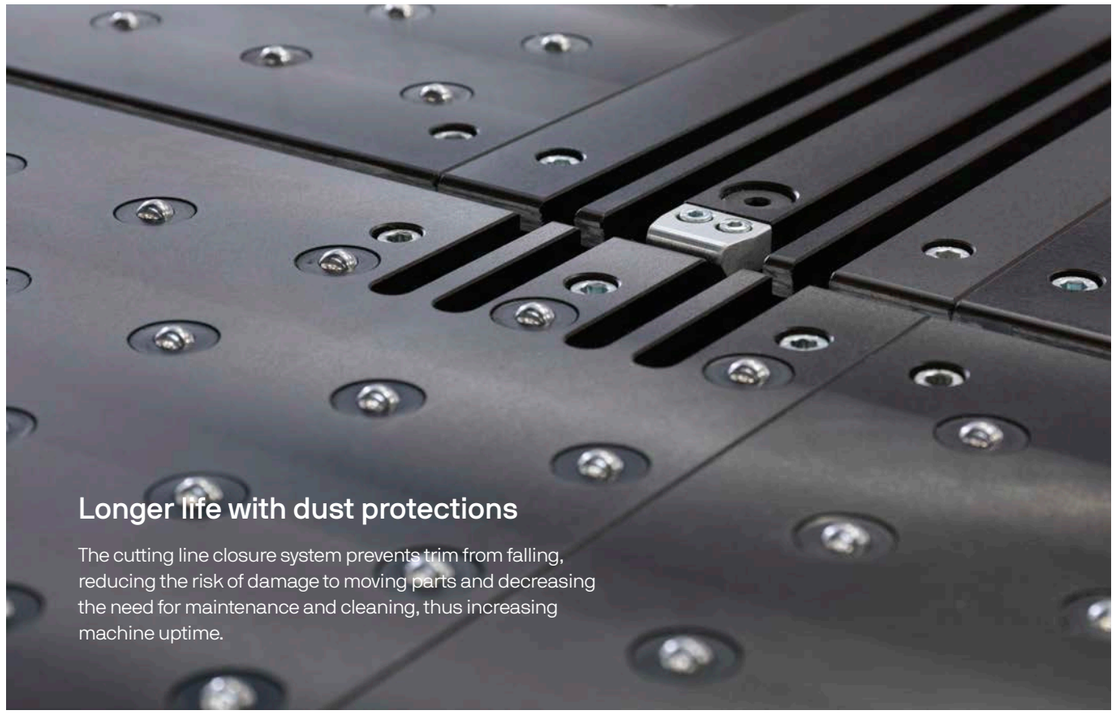
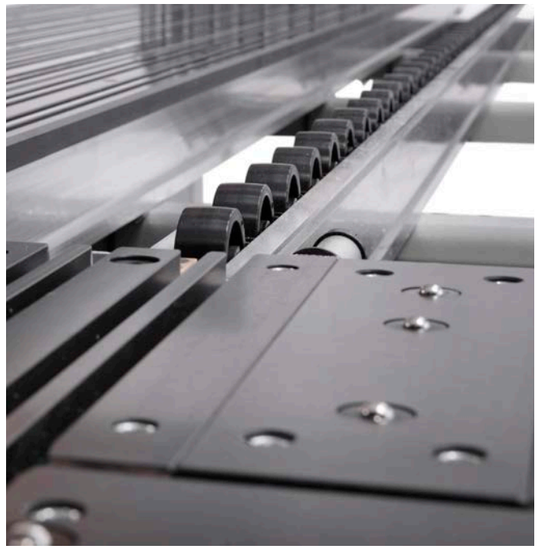


Longer life with dust protections

The cutting line closure system prevents trim from falling, reducing the risk of damage to moving parts and decreasing the need for maintenance and cleaning, thus increasing machine uptime.



More stripes at once

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Perfect alignment before final cuts

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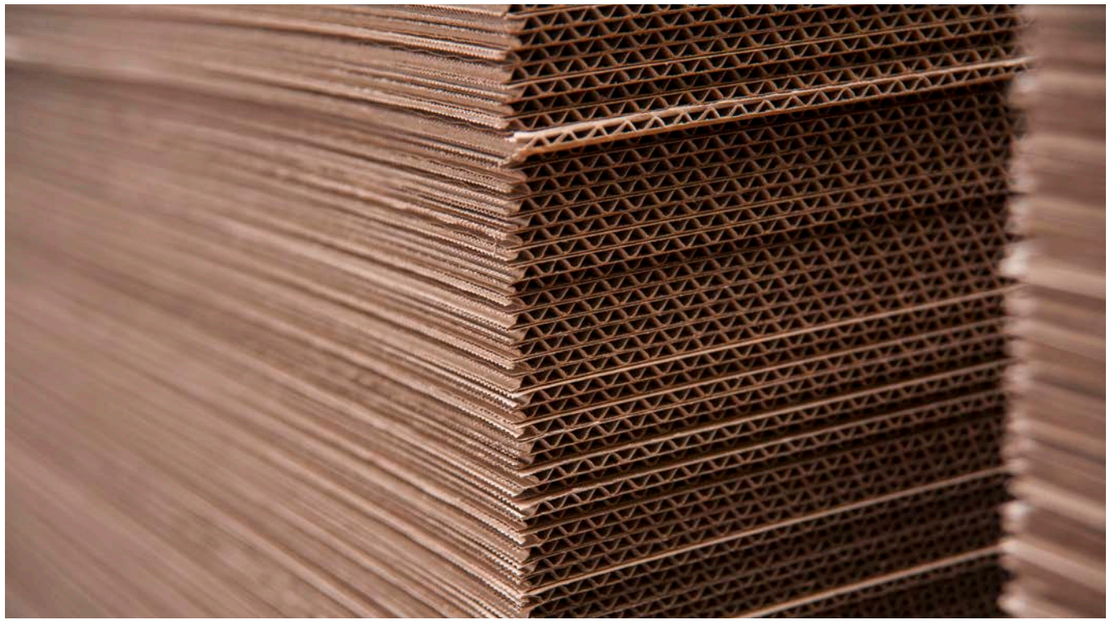
Applications

Plastic slabs

High density foam boards

Cardboards



Energy saving mode

With the simple press of a button, which can be activated in any programming environment, the machine automatically switches to stand-by mode after a set period of inactivity, providing the right amount of consumption at each working condition.

Up

Explora

Explora Cut Up J 0

Precision in every drop

Explora Cut Up J 0 is a versatile waterjet machine mainly ideated for processing whatever plastic slabs/ component offering a simple and intuitive operation.

Its advanced engineering solutions minimize abrasive consumption and simplify table and tooling setup, making production faster and more cost-effective.

Intricate geometries can be shaped thanks to its 5-axis capabilities, spanning a more diverse range of production.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Controlled flow, controlled costs

Explora Cut Up J 0 is equipped with an abrasive management system, that lets the machine automatically regulate the usage quantity, achieving up to 20% savings* while maintaining flawless cutting performance.
*Test performed on 100 standard cooking planes production.

Use your creativity

With its 5-axis head and limitless rotational capability, Explora Cut Up J 0 redefines production potential, enabling a wider range of applications.

Interact in safety

Easy to use always in safety conditions. This cutting machine is equipped with preventive safety features, ensuring operator protection from collisions while maintaining easy, unobstructed access.

Small batches, big results

With the ability to process all plastics slabs (but not limited to those) and none tool to manage, Explora Cut Up J 0 offers unparalleled versatility, empowering production possibilities and smaller batch sizes for highly diversified manufacturing.

Complex shapes, simple process

The 1 mm diameter “tool” of the waterjet technology allows Explora Cut Up J 0 to achieve precise internal square corners, complex geometries, and flawless inlays with exceptional accuracy.

Controlled flow, controlled costs

Designed for continuous operation, the Explora Cut Up J 0's advanced abrasive management system combines a primary pressurized tank and an on-board mini hopper for uninterrupted abrasive supply.
This system adjusts the abrasive flow to suit the processed to be carried out and the material nature, differentiating the flow for piercing and cutting operations, for a saving up to 20% on abrasive usage*.

*Test performed on 100 standard cooking planes production

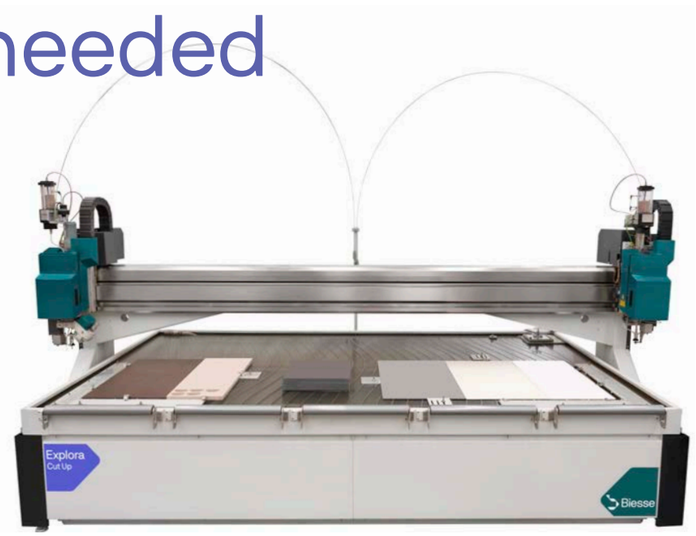
Use your creativity

This machine unlocks new possibilities for diverse applications. The JPC (Jet Performance Control) system and advanced interpolation feature work together to enhance productivity and address taper and jet lag issues, ensuring higher-quality results. Additionally, the Feeler Ring system measures material thickness for precise head positioning, elevating machining accuracy.

Available only for abrasive system.

Ready to cut, no setup needed

Explora Cut Up J 0 eliminates the need vacuum system and tool setup, making it the perfect choice for prototyping and small batch production while maintaining high productivity. Without the need for physical tools, the machine can seamlessly cut any material in succession, requiring no manual adjustments or tool inventory for each application. These benefits make Explora Cut Up J 0 perfect for prototyping and low-batch production, without compromising productivity.

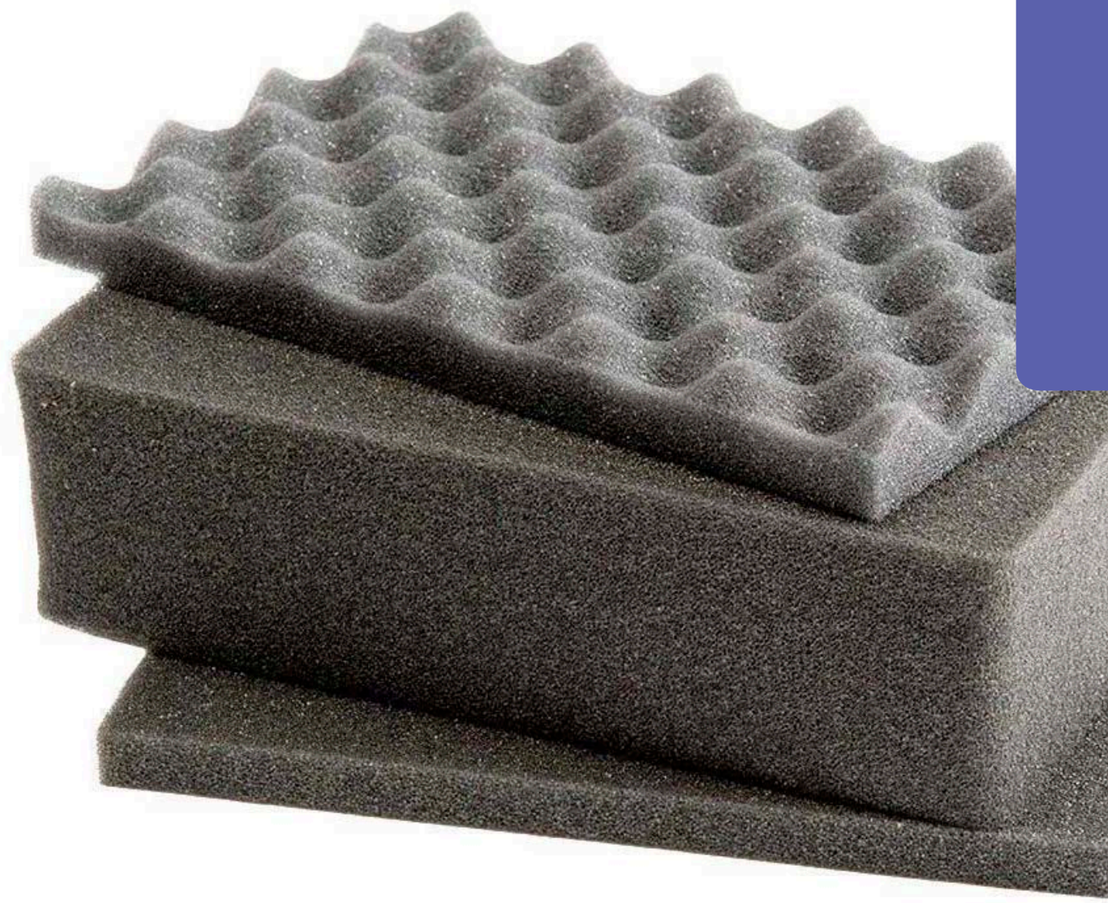


Complex shapes, simple process

Create the most demanding geometries that are impossible with traditional CNC machines. Internal square corners and complex shapes are easily processed, enabling the production of intricate components and perfectly precise inlays. This advantage is further amplified by the fact that these features apply to any material without requiring manual operator intervention.

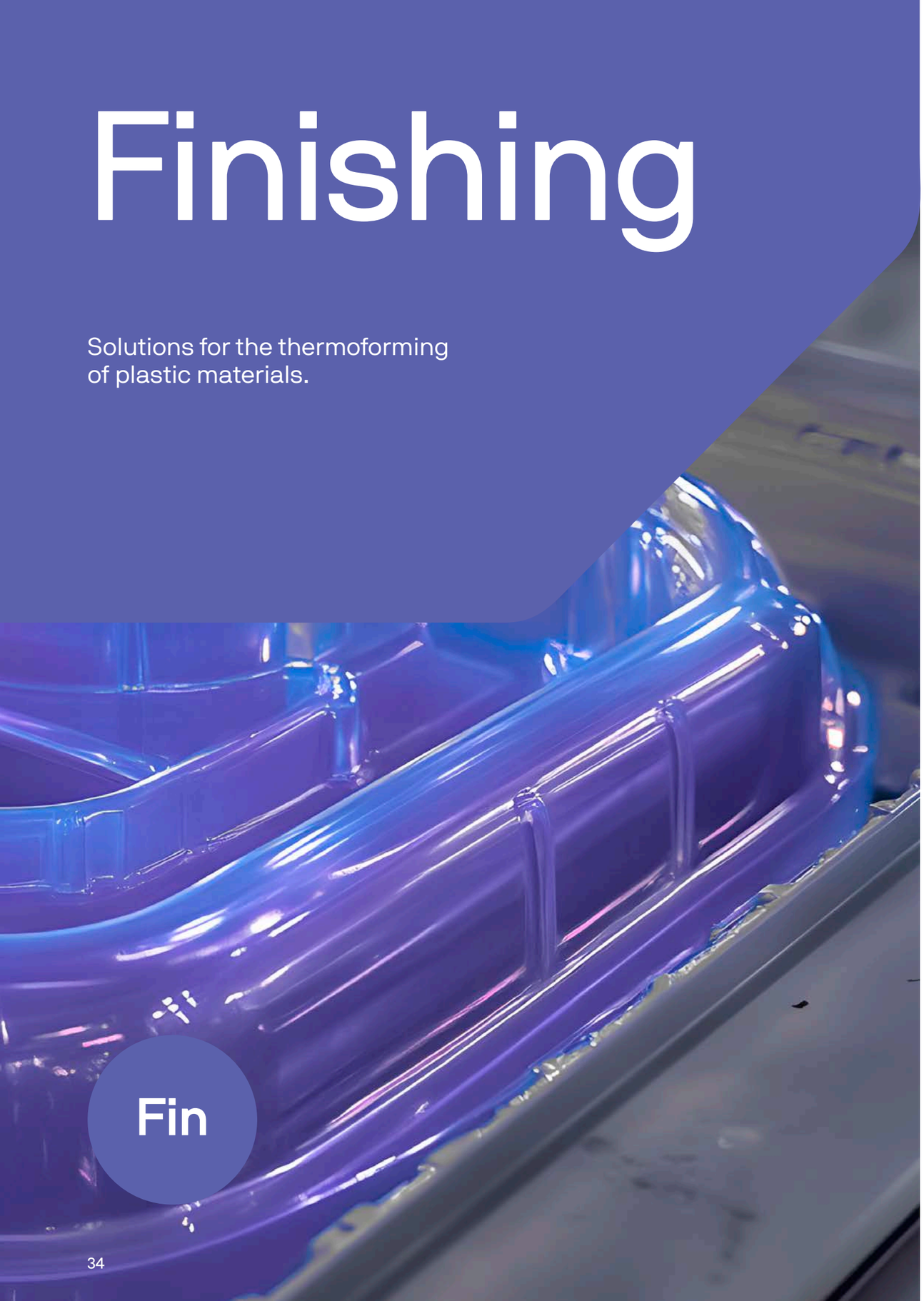
Applications

Technical packaging & gaskets



Finishing

Solutions for the thermoforming
of plastic materials.



Fin

Discover all
our thermoforming
machines

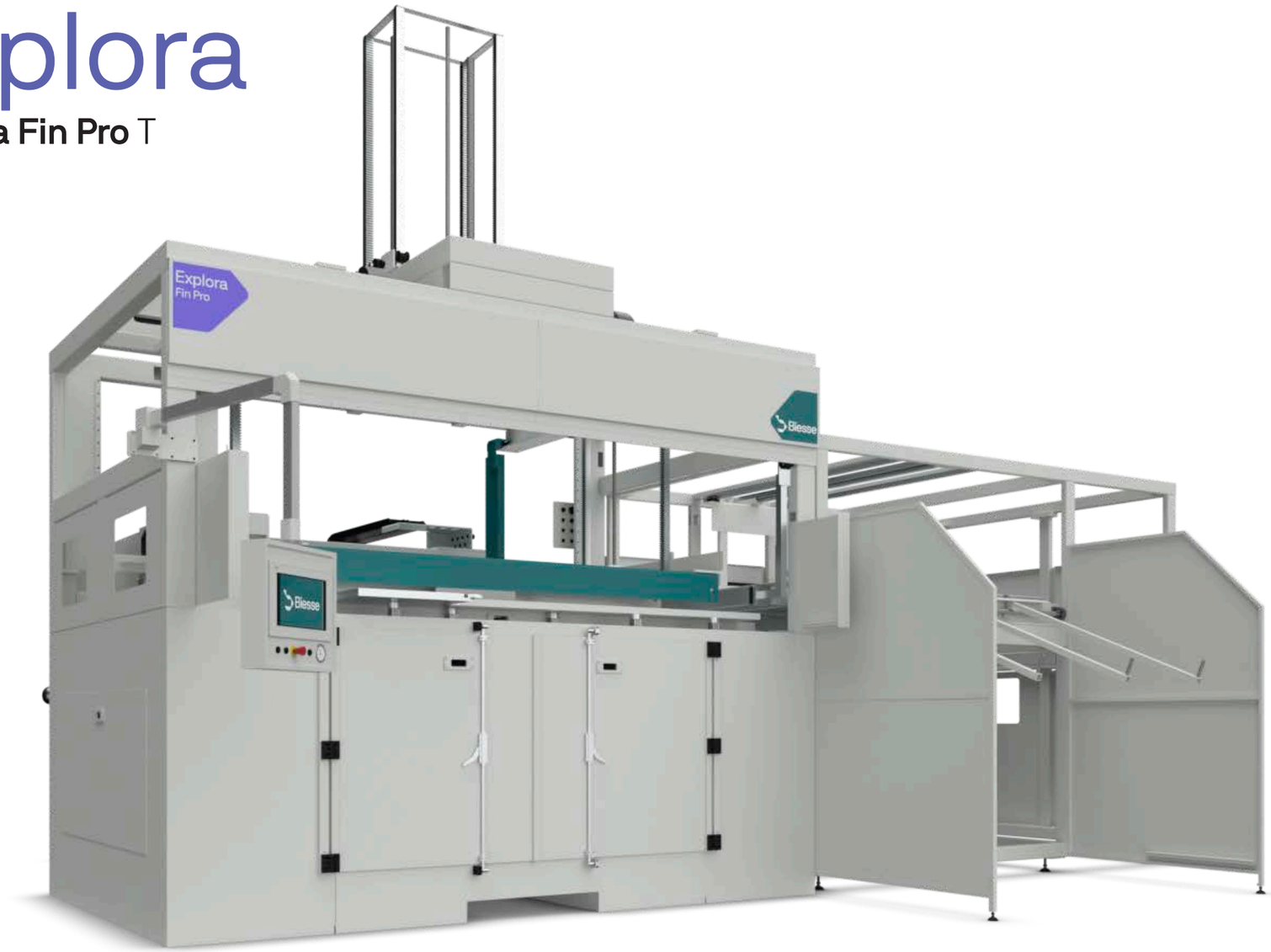
biesse.com

Thermoforming

Product Brand	Model	Segment
Explora	Explora Fin Pro T	Pro

Explora

Explora Fin Pro T



Transform your plain sheets into 3D elements

The Explora Fin Pro T is the thermoforming machine used to heat and shape plastic sheets into specific forms. It's ideal for shaping plastic materials using a mold and vacuum. Explora Fin Pro T can handle sheets of various colors, thicknesses, and finishes, making it versatile for different market needs. It is the right solution to create packaging, containers, trays, and many other products.

A size for several dimensions

Explora Fin Pro T is equipped with a "window adjustment system" that enables smooth change and adjustment of the X&Y dimensions, allowing a wide range of sheets sizes.

Load & Unload with ease

The sheets are automatically loaded with the aid of suction cups. The loading station is equipped with devices for aligning and centring each sheet to guarantee its precise positioning in the forming area.

Change format and production

The Explora Fin Pro T features an easy and quick format change system. This system allows for efficient management of different sheet sizes and types, ensuring precise positioning and optimal ergonomics for the operator.
The mould is loaded on the pull-out table and clamped at the base. Furthermore, the automatic recognition of the mould speeds up machine tooling times.

Just one click for a complete machine set up

Explora Fin Pro T set up is done with a click. All parameters can be set and saved under a single recipe and store in the machine log. No matter how many productions you have. The recipes lists will contain all your production. So in case of a new batch; just a click to recall the product, and "voilà": all thermoforming parameters will be set.

Always safe

Whenever high temperatures are involved, dedicated safety measures have to be installed. And Explora Fin Pro T is completed of all safety features to prevent human mistakes both for protecting human life, machine status and products. Perimetral metallic grids, frontal access photocell, sheet defletcion photocell, ball detection photocell, slabs presence photocell. Automatic shutdown switch, are ready to be activated for a safe machine and production.

Multi-machining

Range of machining centres for carrying out different types of milling, boring, nesting and trimming of plastic, composite and technopolymer materials.

Multi

Discover
all our multi-machining
machines

biesse.com

Milling

Product Brand	Model	Segment
Explora	**Explora Multi Pro** M S	Pro
	Explora Multi Pro M L	Pro
	Explora Multi Up M C	Up
	Explora Multi Up M X	Up

Nesting

Product Brand	Model	Segment
Explora	**Explora Multi Up** N A	Up
	Explora Multi Up N B	Up
	Explora Multi Go N K	Go

Explora

Explora Multi Pro M S

Precision redefined

The flat table machine with mechanical precision and industrial NC to boost the throughput of the most demanding technical components manufacturing.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Tested at your premises

Our customer-centric approach allows to certify the machine at installation premises, ensuring compliance with standard industry-leading quality and performance benchmarks. With the ability to check your machine with these rigorous tests, you can instill confidence in your products and processes, demonstrating your commitment to excellence to customers and stakeholders alike.

Everything under control

Explora Multi Pro M S has a sophisticated system for dimensional inspection of workpieces and precise compensation of machining processes. Leveraging advanced technology, our machine ensures unparalleled accuracy and efficiency in every production cycle.
With a state-of-the-art touch probe and laser system for tool setup, our CNC machine's dimensional inspection and compensation capabilities ensure optimal performance and reliability, setting the standard for excellence in modern manufacturing.

Endless opportunities

An all aluminium, highly adaptable work surface, enables a wide range of machining possibilities. With its versatile design, operators can effortlessly switch between different workpieces, setups, and machining tasks, maximizing productivity and efficiency.
The flexibility offered by our worktable allows for seamless transitions between various production requirements, from intricate precision machining to high-volume production runs.

Siemens core

This machine is equipped with Siemens components like motors, axes drives and NC system.
Unlocking the future of CNC machining, SINUMERIK ONE stands at the forefront of innovation, beneficial for worldwide manufacturers.

Versatile processing

Whether you're crafting intricate components for advanced applications or producing high-performance parts for automotive industries, our machine has the versatility to tackle it all.
From composite boards to plastics or light alloys, our CNC machine is equipped to process virtually any material you throw its way.
But it's not just about the materials, it's about the volume of the components you want to process.
You have the freedom to explore new design concepts, and bring your ideas to life in ways you never thought possible.

Complete Siemens ecosystem

Benefit from the industry-leading Siemens ecosystem integrated into our machine, featuring robust industrial control components renowned for their reliability and prompt availability. Siemens sets the standard in industrial automation, and Explora Multi Pro M S is equipped with components such as NC control, axes drives, modules, fieldbus, and drivers that ensure seamless operation and longevity. With Siemens, you can trust in standardized components which are widely recognized as the industry standard.

5 axis powerhouse

Experience precision and power with our 5-axis system; engineered to redefine industry standards, Thanks to the automatic tool changer it allows to use multiple tools, expanding the machining possibilities.

Multipiece processing

The machine's multi-zone design simplifies workpiece setup, making it easier for operators to position and secure pieces for machining. With multiple zones available for fixturing and clamping, changeovers are streamlined, further boosting the overall efficiency.

Bump up the volume

In the realm of manufacturing, having the capability to process large volumes of material is a game-changer. That's where our cutting-edge technology steps in, offering a machine designed to handle big processable volumes with unparalleled efficiency and precision.
Imagine being able to tackle massive workpieces or multiple parts in a single setup, without compromising on accuracy or quality. With Explora Multi Pro M S, that vision becomes a reality. Whether you're designing big components, intricate molds, or large-scale prototypes, our machine gives you the freedom to explore bold ideas and push the boundaries of what's possible.

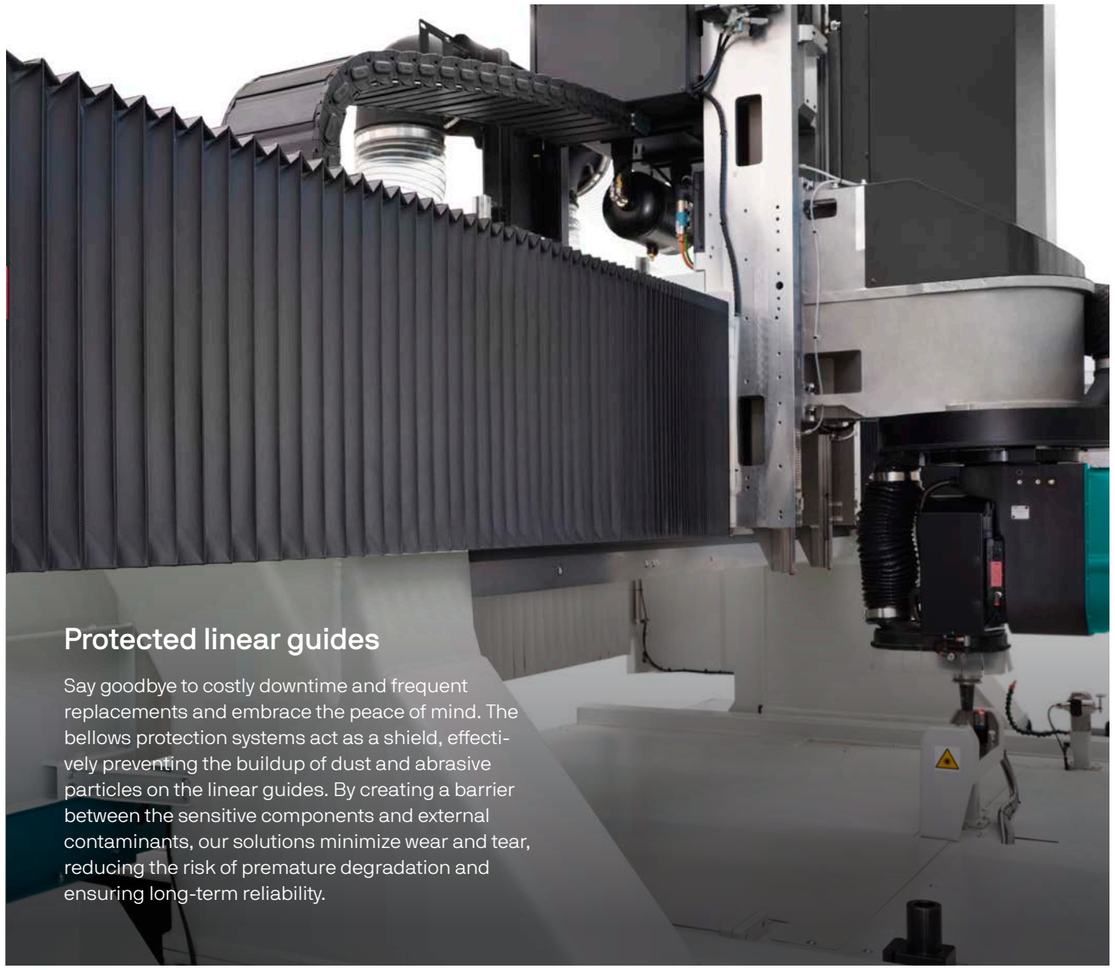
Distinctive, performant and very precise

Safe without compromises

Our comprehensive approach prioritizes operator safety by supplying a selection of physical and photocell barriers and state-of-the-art technology to prevent collisions, ensuring a secure working environment. With these safety measures in place, you can minimize the risk of accidents and protect both personnel and equipment, while maintaining optimal productivity and efficiency in your operations.

Engineered structure

Our machine structure is precisely engineered for maximum rigidity, minimizing vibrations and enhancing the quality of processed components. Reinforced in critical areas, the structure undergoes rigorous Finite Element Method (FEM) testing to ensure a robust platform for a long lasting production.



Protected linear guides

Say goodbye to costly downtime and frequent replacements and embrace the peace of mind. The bellows protection systems act as a shield, effectively preventing the buildup of dust and abrasive particles on the linear guides. By creating a barrier between the sensitive components and external contaminants, our solutions minimize wear and tear, reducing the risk of premature degradation and ensuring long-term reliability.

Applications

Engineering plastics

Explora

Explora Multi Pro M L

The ideal partner to level up your production quality

The Explora Multi Pro M L is an extremely performant 5-axis gantry machining centre with mobile crossbar, designed to meet the most demanding requirements in processing plastic, composites and light alloys.

This is perfect companion for simple trimming, prototyping, high-speed milling of resin or aluminium models.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Robust by design

At the base of the Explora Multi Pro M L family is a robust supporting structure manufactured in electro-welded steel. The rear “horseshoe” shaped structure is connected at the front by four columns and beam connecting the sides, above the front opening.

Power up your system

The CNC at the the heart of the factory: tirelessly working to create precision components with unmatched accuracy. The “gantry” portal (X-axis) moves smoothly along hardened guides with low-friction ball bearings, reducing power consumption and boosting performance.

Select to your job most suitable table

To support all clients in their specific jobs, Explora Multi Pro M L can be equipped with four different working table, each with a specific design. Open grate, gridded aluminum or phenolic, or with T-slots. Choose the table you want.

One NC Global presence

The machine brain: SINUMERIK 840D SL by Siemens is the suitable companion for increasing the machine output by significantly reducing cycle times.

Probe the probes

Explora Multi Pro M L is equipped with advanced presetter and probe systems to enhance precision and efficiency in machining operations.

Performant, distinctive and reliable

The machine brain

The machine brain: SINUMERIK 840D SL by Siemens is the suitable companion for increasing the machine output by significantly reducing cycle times.

Spanning from the simplest machine to the most performing one, the numerical control SINUMERIK 840D SL, completed with a wide user panel, offers the most suitable solution for a company that wants to create distinctives precise components.

Pendulum machining

This CNC is flexible when process time savings are a must. The operating unit can jump from the left side to the right of the machine letting the user loading parts in masked time.
The machine is equipped with safety features that allow the operator to work on the machine safely:

- removable work area partition can be installed to enable pendulum machining
- the partition has an aluminum structure and transparent polycarbonate panels for optimal visibility of the work area

Machine protection

In its standard configuration Explora Multi Pro M L is supplied with protective bellows covering the Z-axis guideways. The customer can also choose to equip the machine with bellows on X-axis and Y-axis guideways for added protection. Explora Multi Pro M L can be optioned with an upper bellow that closes off the entire upper section of the machine. This provides a safe working environment for the operator especially when machining materials that produce large amounts of dust.

When a tool changer is not enough

Let’s choose your tool changer, on basis of your currents and potential future needs. This CNC machining centre can be equipped with 1 or 2 tool changers. The tool changer is located under the gantry bridge for reduced tool changing time (recommended in case of pendulum functionality). An additional rotary tool changer (capacity up to 16 tools) can be located located on the right side of the machine.

Power up your system

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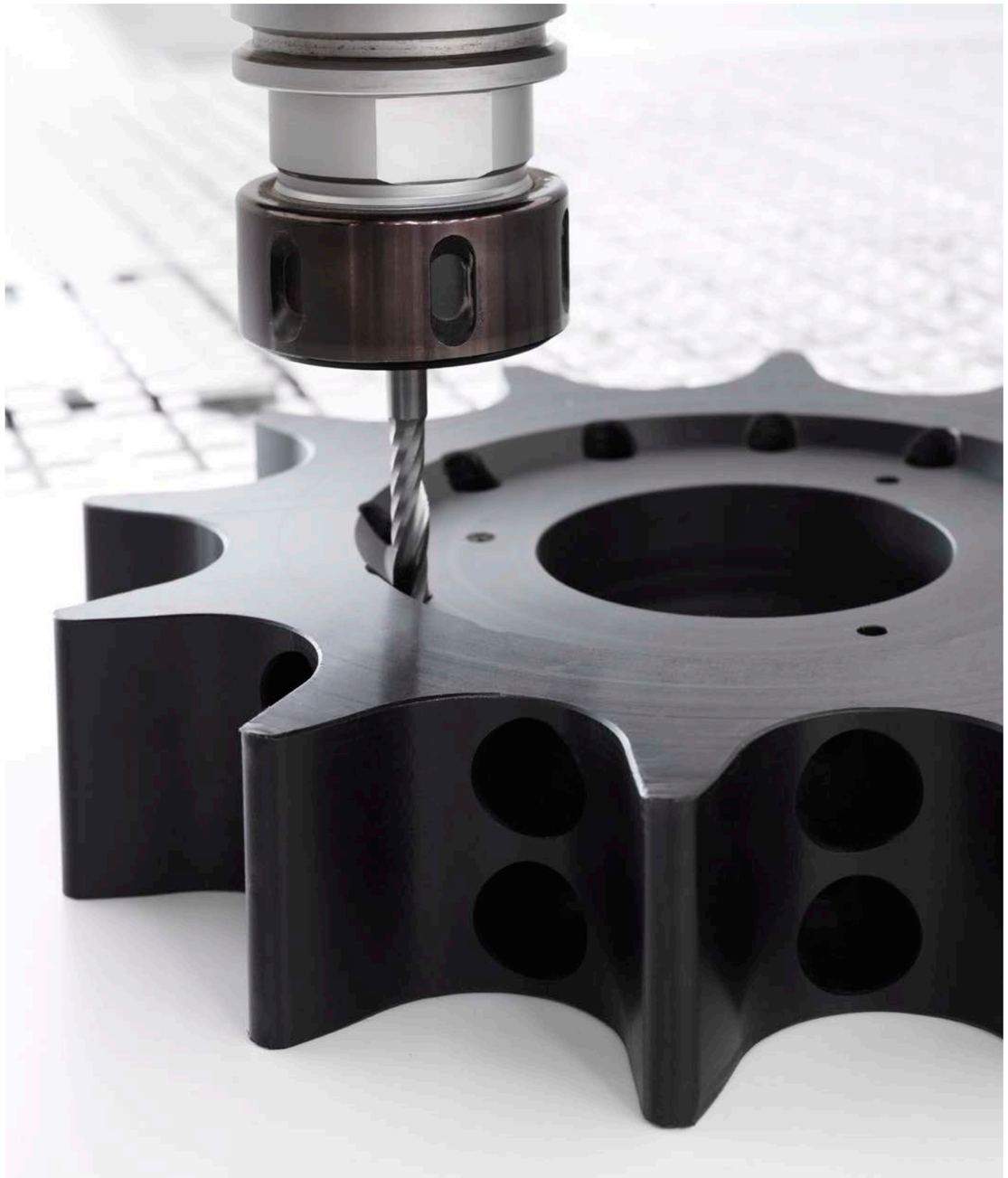
Applications

Engineering plastics



Composite materials

Explora

Explora Multi Up M C

The perfect partner in machining big elements of plastics, resins and composites and light alloys

Explora Multi Up M C is the ideal solution for all companies that want to process moulds and resins patterns; to turn every challenge into an opportunity.

It is the machining centre with Z-axis stroke up to 1200, ideated for processing plastics & composite materials, light alloys and resins.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Robust by design

At the base of the Explora Multi Up M C family is a robust supporting structure manufactured in electro-welded steel. The rear “horseshoe” shaped structure is connected at the front by four columns and beam connecting the sides, above the front opening.

Two heads are better than a single one

This super flexible 5-axis cnc machining centre, can be equipped with HS300D or HS673, on basis of the client needs and relevant configuration.

Select to your job most suitable table

To support all clients in their specific jobs, Explora Multi Up M C can be equipped with four different working table, each with a specific design. Open grate, gridded aluminum or phenolic, or with T-slots. Choose the table you want.

Machine access and protections

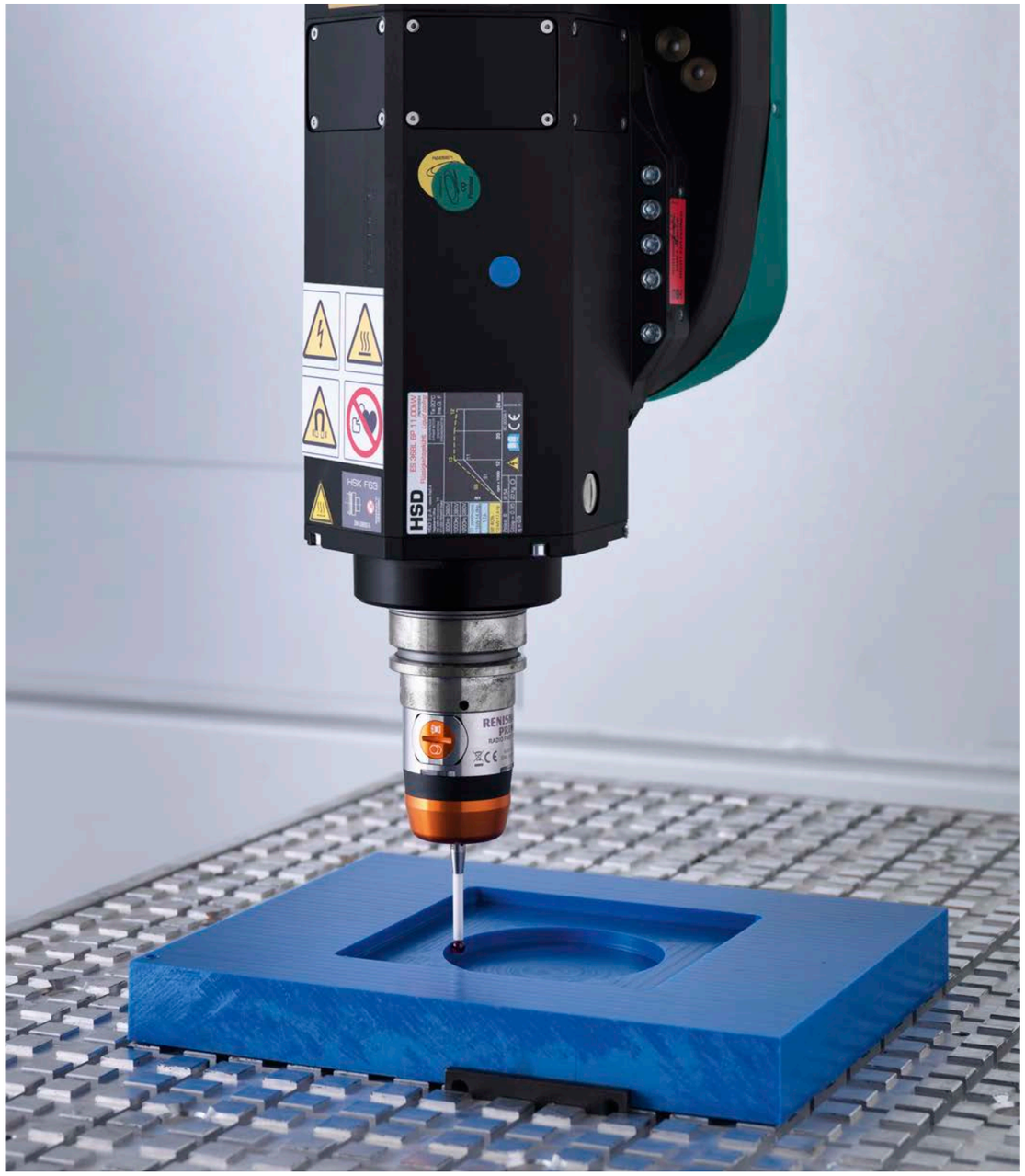
Machine’s access is provided by sliding front doors actuated by air cylinders. Doors are built both in metal and polycarbonate, letting the user control the machine while running.

When a tool changer is not enough

Let’s choose your tool changer, based on your current and potential future needs. This CNC machining centre can be equipped with 1 or 2 tool changers. The tool changer is located under the gantry bridge for reduced tool changing time (recommended in case of pendulum functionality). An additional rotary tool changer (capacity up to 16 tools) can be located on the right side of the machine.

Part probes

Radio frequency thickness tracer: this probe acquires the coordinates and dimensions of the workpiece, ensuring precise machining by continuously monitoring the material's thickness.
Probing cycle: the machine performs a complete probing cycle to verify the dimensions and alignment of the workpiece, ensuring high precision and quality. These systems are designed to provide high accuracy and reliability, making the Explora Multi Up M C suitable for complex and high-precision applications in various industries.



Two heads are better than a single one

This super flexible 5-axis cnc machining centre, can be equipped with HS300D or HS673, on basis of the client needs and relevant configuration.

Machine access and protections

The front part of the machine is fitted with sliding doors actuated by air cylinders and running on guide rails and ball runner blocks for optimal machine access.
Safety features, outlined in the Machine Directive for the operator's health and safety, are included. Automatic sliding doors are available for high productivity, less downtime.

Tool presetter

Laser presetting probe: Used for tool pre-setting, it helps in accurately determining the tool's dimensions (such as length and diameter) without physical contact, before starting the machining process, ensuring accurate depth control.
Contact presetting probe: Used for measuring and setting tool lengths allowing operators to set the tools accurately before starting the machining process., ensuring accurate depth control.

Pendulum machining

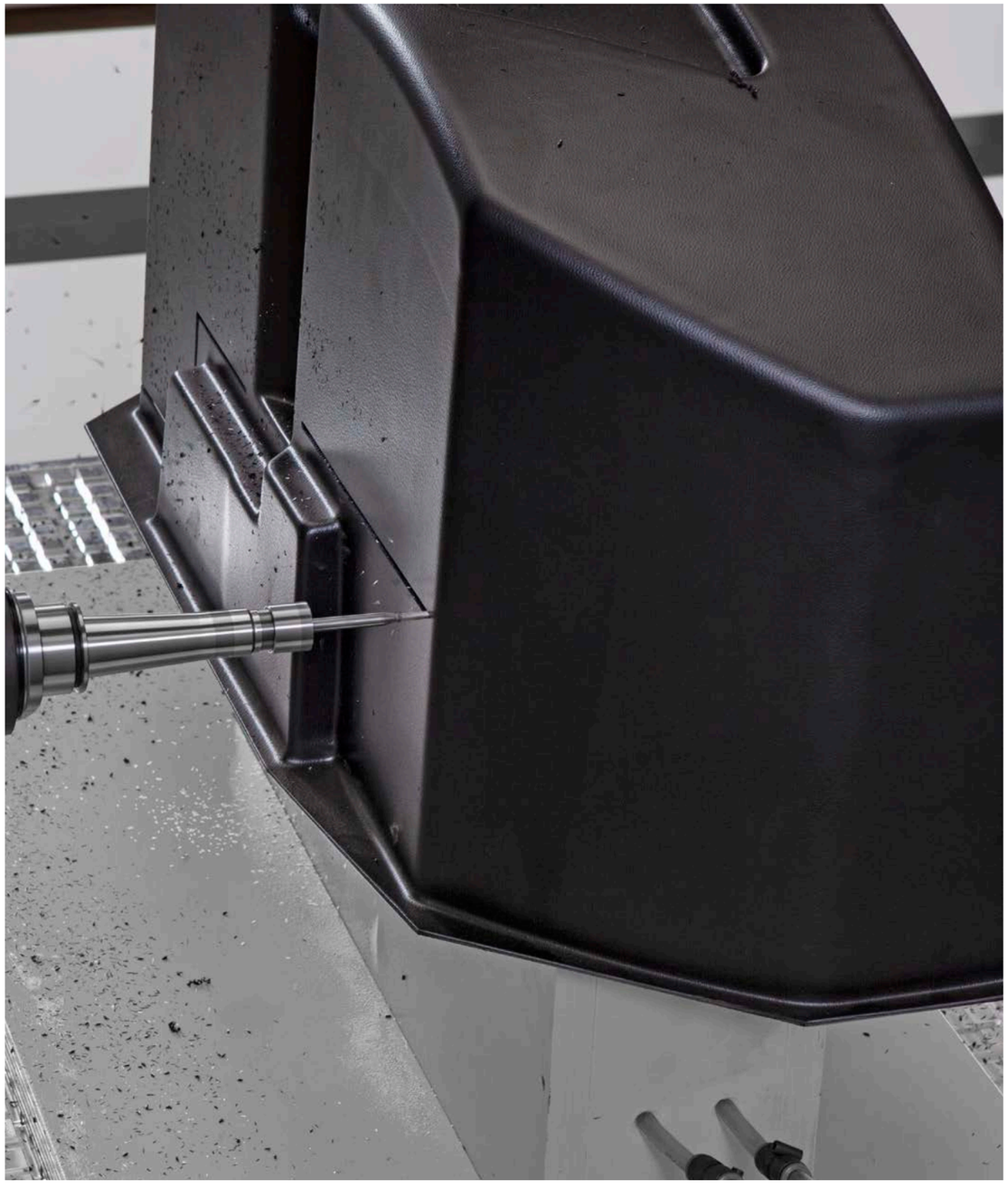
This CNC is flexible when process time savings are a must. The operating unit can jump from the left side to the right of the machine letting the user loading parts in masked time.
The machine is equipped with safety features that allow the operator to work on the machine safely:

- removable work area partition can be installed to enable pendulum machining
- the partition has an aluminum structure and transparent polycarbonate panels for optimal visibility of the work area

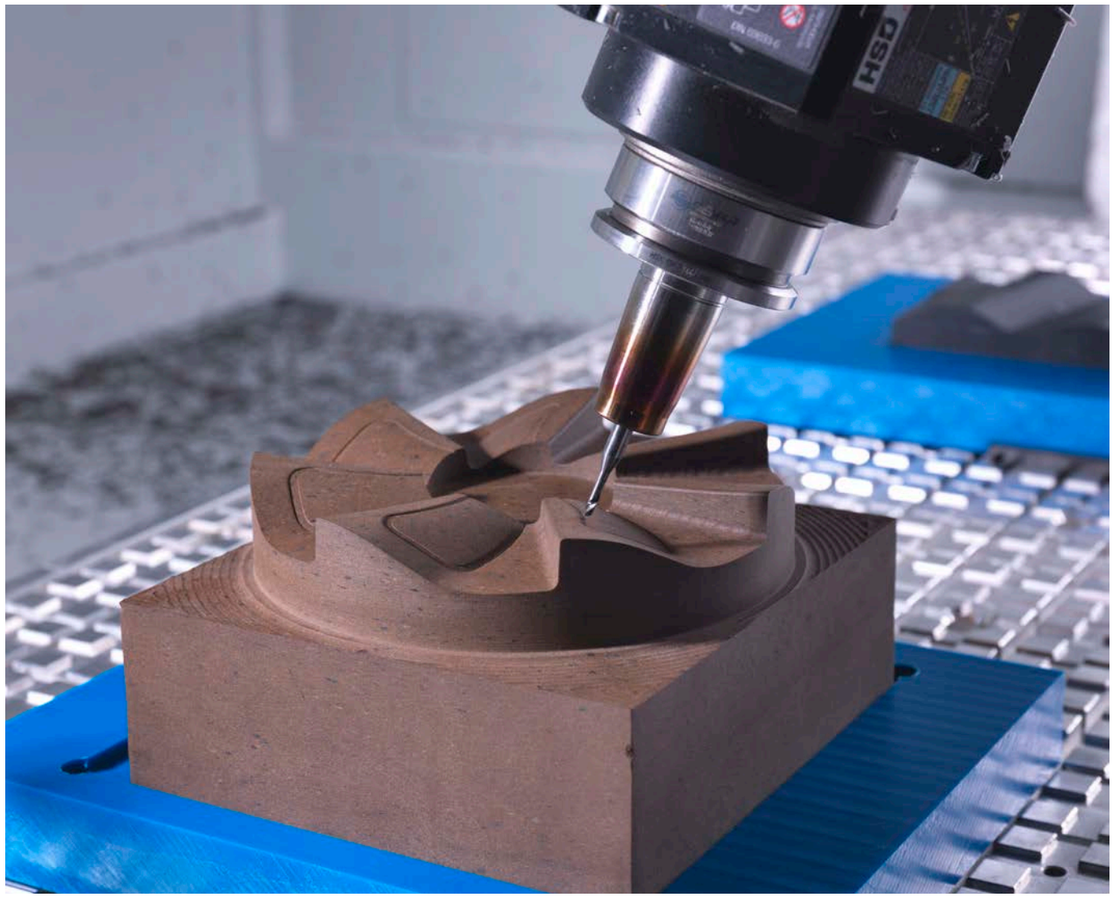
Up

Applications

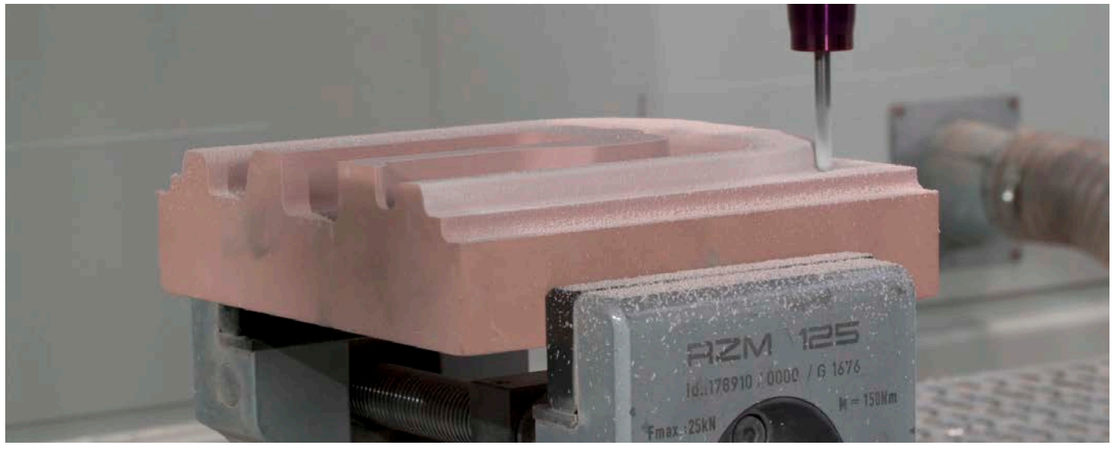
Trimming



Prototypes & Models



Moulds & Resins patterns



Explora

Explora Multi Up M X

Next-level crafting for your vehicle interiors

The Explora Multi Up M X is a high-precision, 5-axis CNC machining centre designed for processing isothermal materials. It is completed with a wire-braided phenolic resin table with a vacuum system ensures secure panel clamping, enhancing stability during machining; furthermore a robust structure minimizes vibrations, ensuring precision and reliability.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Robust by design

At the base of the Explora Multi M X family is a robust supporting structure manufactured in electrowelded steel. The grillage structure supports the vacuum tables and the linear guideways on which the portal runs.

Big head for big power

The operating unit comprises of a 2-axis single-sided milling head and 17 kW electrospindle. The electrospindle is liquid cooled, with a chiller unit included in the machine supply.

The vacuum table for wide elements

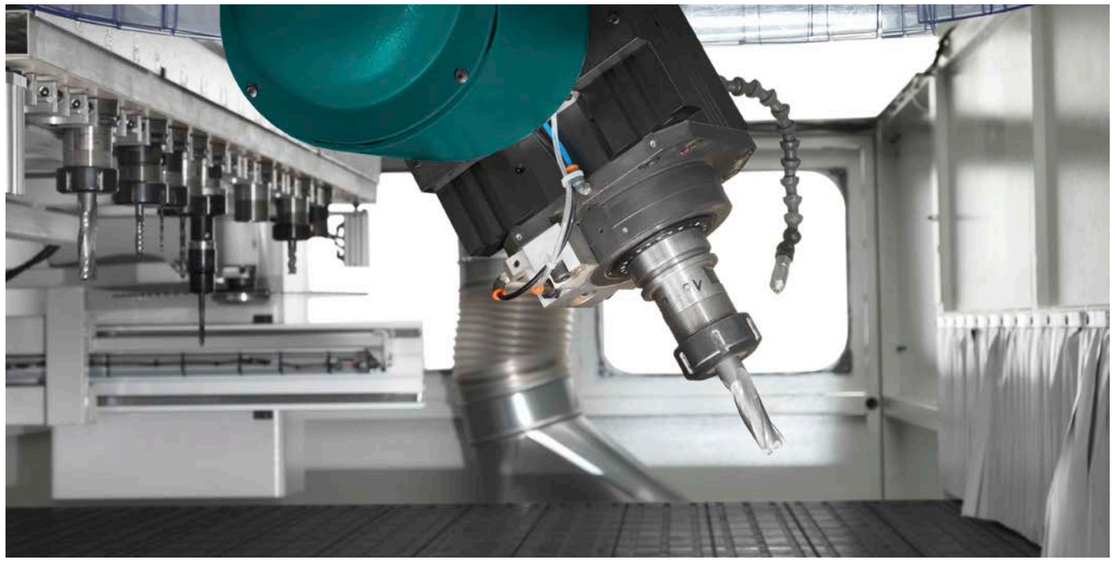
The worktable is constructed in stratified phenolic resin with a gridded surface that allows the operator to insert the gasket in any configuration within the grid creating a dedicated vacuum zone.

TPA NC: simplicity for smart using

TPA is a PC-based NC running on a Windows operating system. (ISO standard programming language). The interface, features a 21.5" monitor is completed with keyboard and mouse. A mobile user smart user panel containing warning lights, joystick, cycle start/stop, is provided.

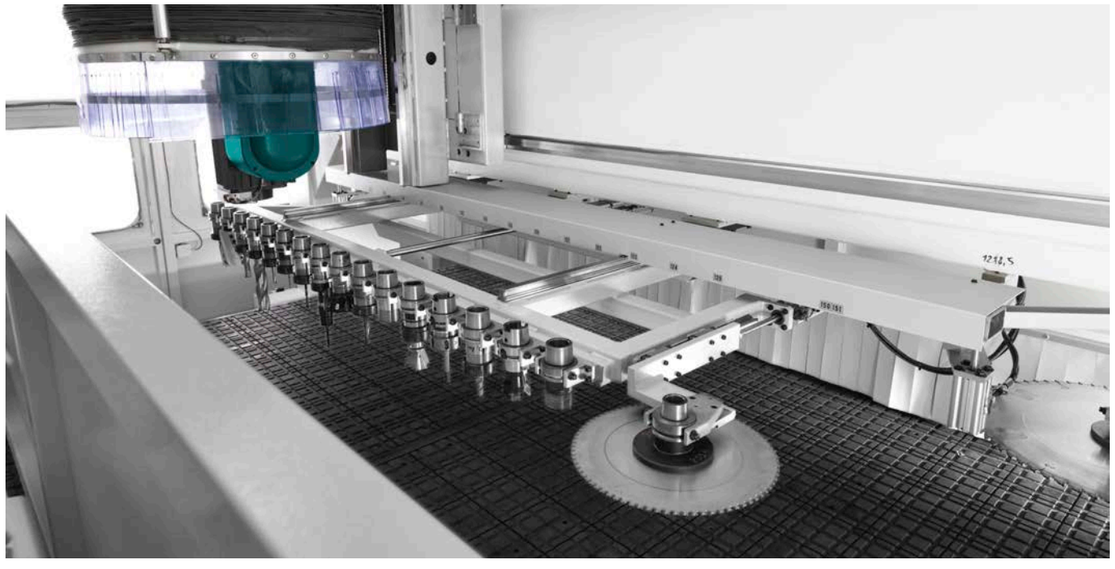
Tool changer

The machine can be equipped with a linear tool changer with 16 tools holding capacity plus a location for a saw blade with a diameter up to 400 mm.



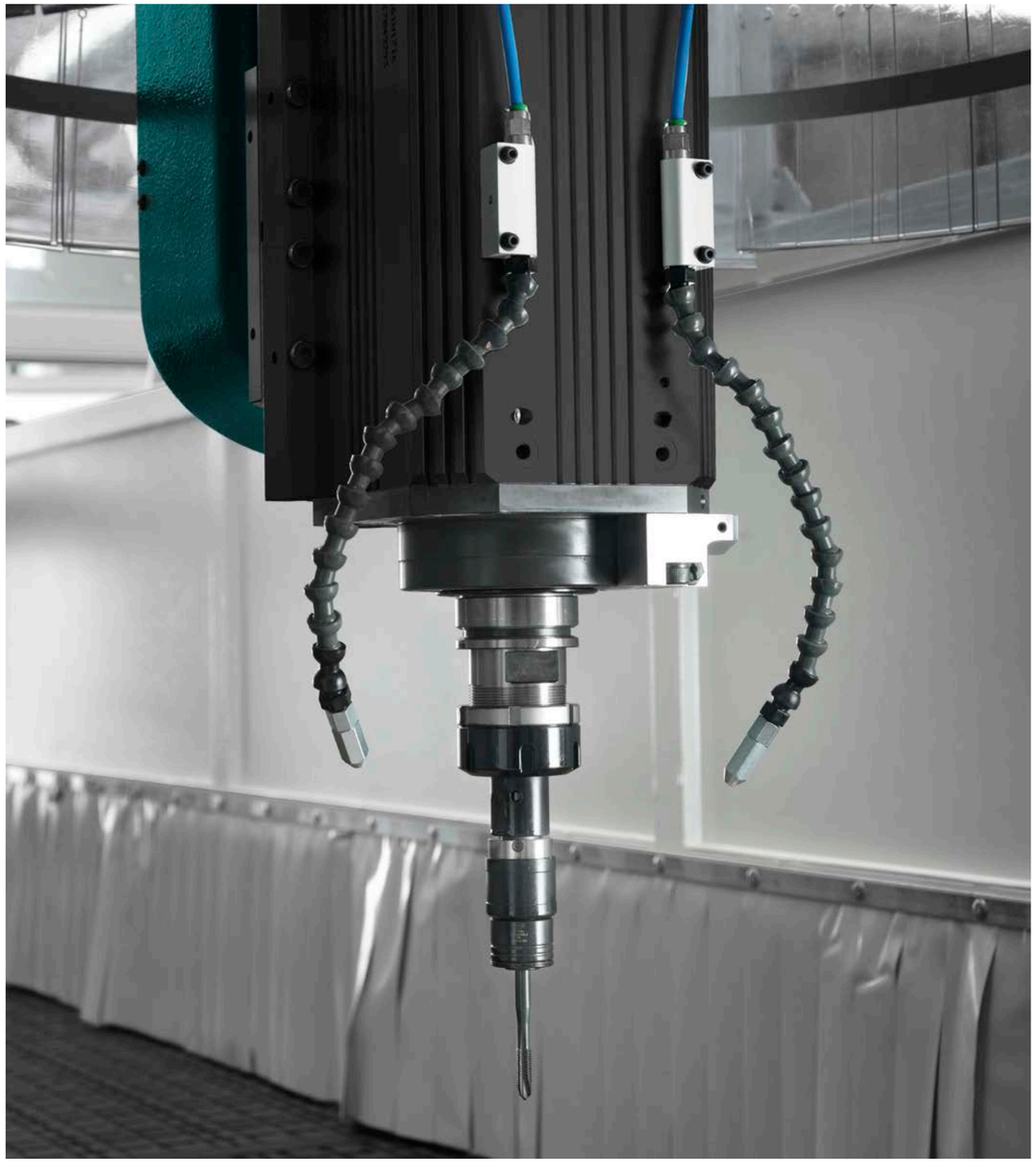
Big head for big power

The operating unit comprises of a 2-axis single-sided milling head and 17 kW electrospindle. The electrospindle is liquid cooled, with a chiller unit included in the machine supply.



Tool changer

The machine can be equipped with a linear tool changer with 16 tools holding capacity plus a location for a saw blade with a diameter up to 400 mm. Dedicated tool changer for a saw blade with a diameter up to 500 mm. The tool changers are located under the gantry bridge for reduced tool changing time.



Dry or wet we have the right tools

The machine can be equipped with dedicated parts in case of both dry and wet machinings. Depending on the material being machined and the cutting strategies employed we have the right solution.
For dry machining:

- air jet with an adjustable nozzles for directing air at the tool tip

For wet machining:

- spray mist with an adjustable nozzles for directing a nebulized air / coolant mixture at the tool tip

Up

Applications

Truck insulation

For further accuracy

To maximize the accuracy of the machining process the work centre can be optioned with a camera system for centering large panels thanks to a rototranslation cycle in the machining program. A laser line projector mounted on the portal aids in the alignment of the panel before processing.

The vacuum table for wide elements

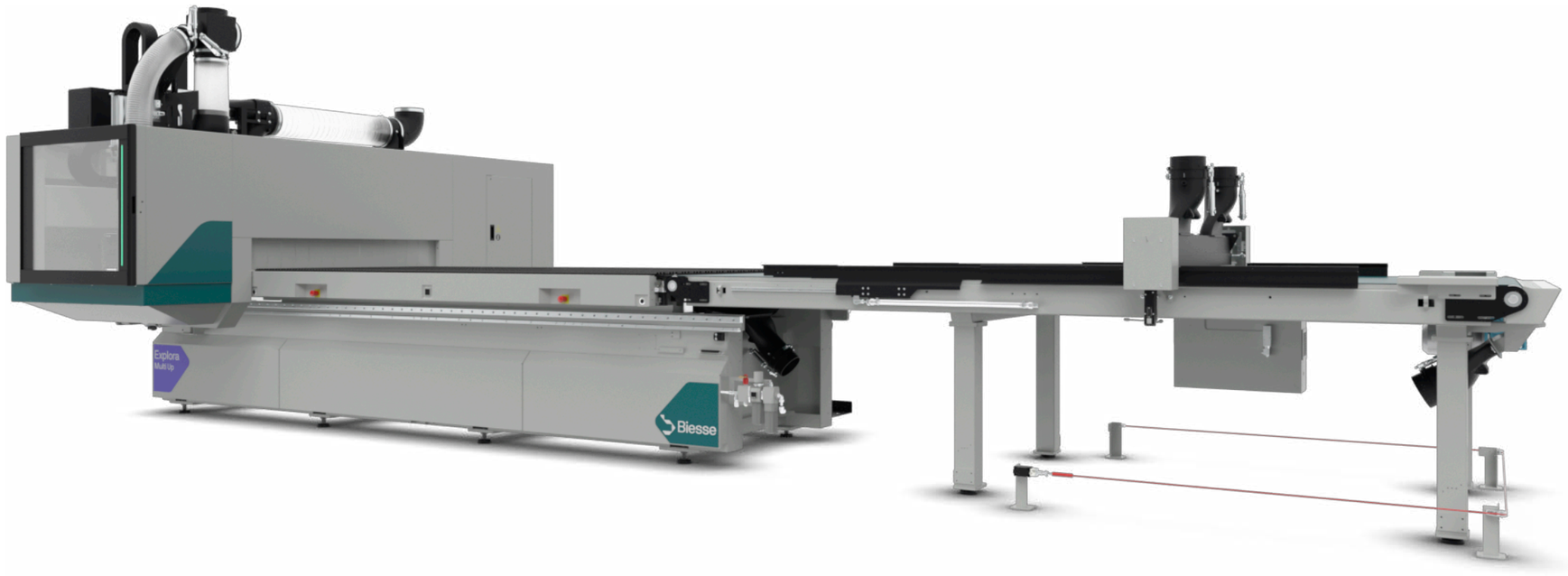
An internal chamber allows a homogenous distribution of the vacuum throughout the table. The worktable is split into multiple independently controlled vacuum zones:

- 6 zones in the M X 10030
- 10 zones in the M X 16030

Up

Explora

Explora Multi Up N A



The suitable partner in shaping engineering plastics, transport interiors and more

Explora Multi Up N A is the flat table machining centre, designed for processing plastics & composite materials. It's the suitable solution for companies that want to turn every challenge into an opportunity for innovation and success: it fits seamlessly into production spaces, allowing operators to move freely and access with ease from all sides.

Safety and versatile, Explora Multi Up N A represents the ideal choice to process component addresing markets such as engineering plastic, transport interiors and packaging.

Modelling technical elements has never been easier.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Speed up the cleaning

The T-Jet is the patented tools for dust cleaning when dusty material are concerned.
It consists of a double nozzle that injects compressed air following the milling path.

Increase the production velocity

An external vertical axis allowing either oscillating cutting system or photo camera to use immediately after a machining cycle, shortening the overall machining process.

Robust structure

The frame of the Explora Multi Up N A gives the machines a high standard of precision and reliability thanks FEM analysis, electro welded steel with a closed ring structure and high precision during machining operations.

Working table multizone

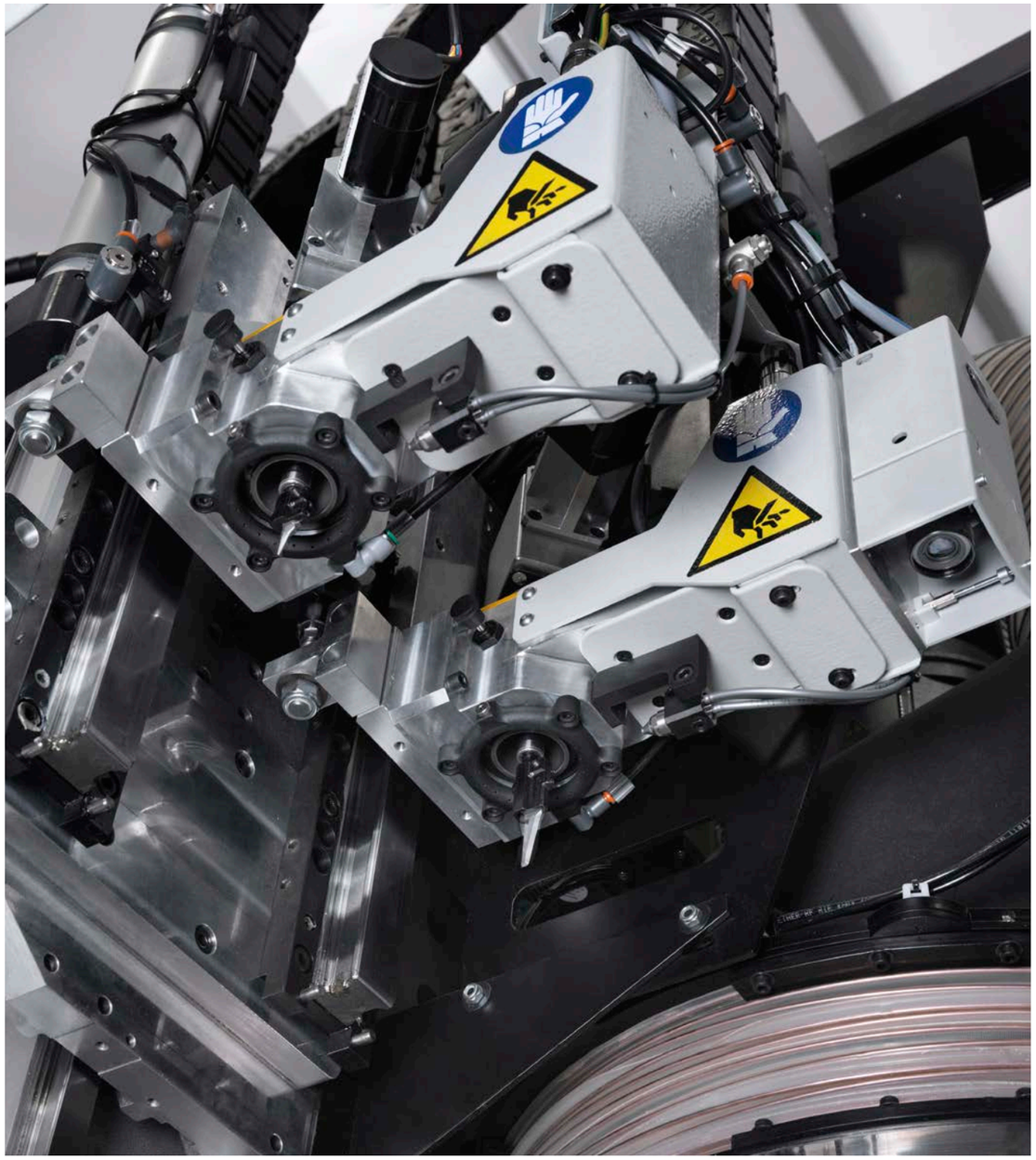
Multizone working table grants perfect component tighting, minimizing processing defects, allowing better final finishing.

Effective tool changer for time saving

Tools and aggregates always available on the machine to reduce setup times thanks to the fixed & revolver tool changers.

Super easy: plug & cut

Explora Multi Up N A has been ideated for an optional additional carriage. This carriage could be equipped with all needed devices and tools for processing rubbers, foam materials, cardboard. The independet Z-axis movement makes possible to speed up the various machinings, minimizing downtime.

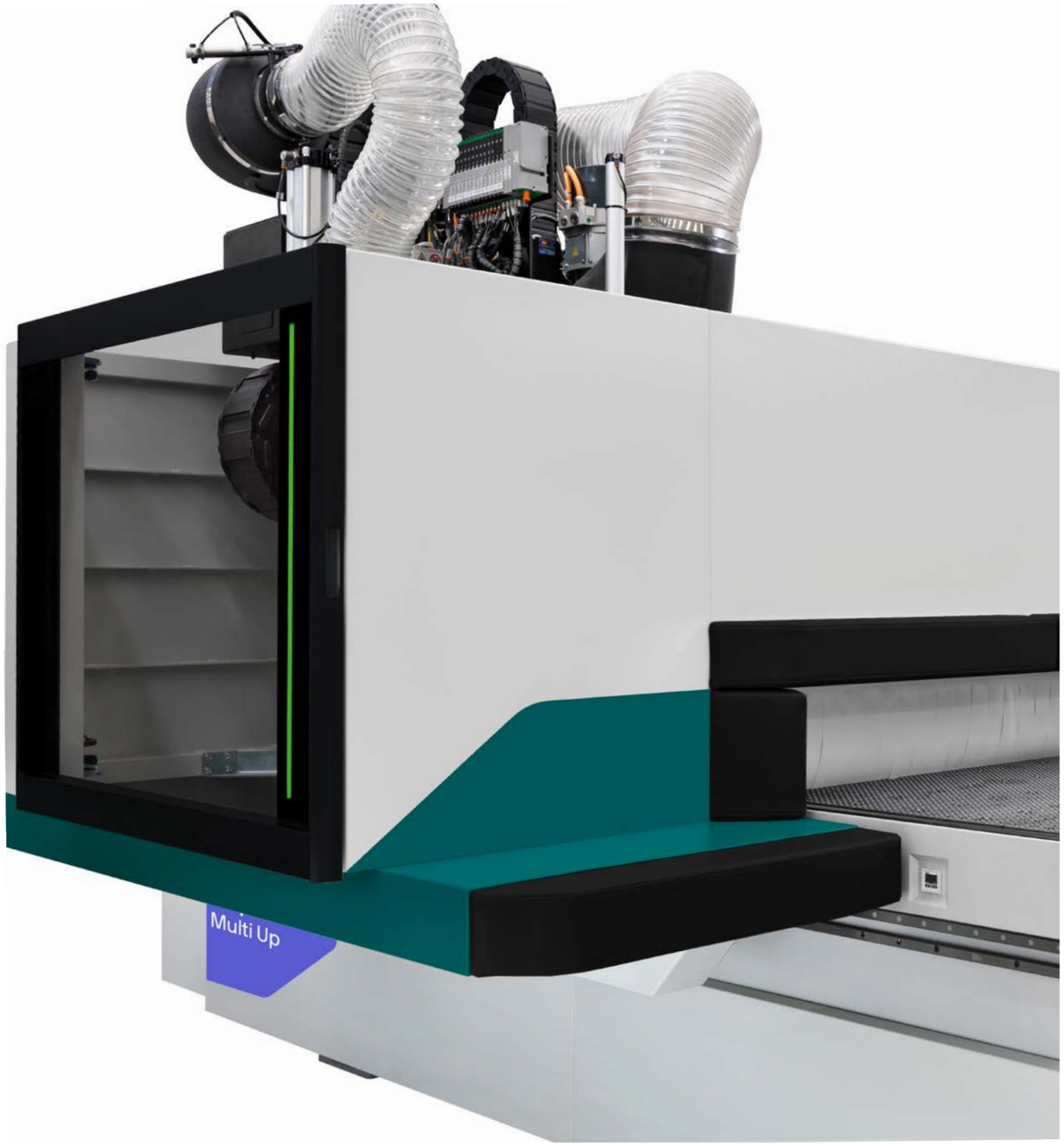


Speed up the cleaning

The T-Jet is the patented tools for dust cleaning when dusty material are concerned. It consists of a double nozzle that injects compressed air following the milling path.

Convenient front openable door

The front openable door is a distinctive feature in this machine range: this door let the operator to have an easy access to the operating groups and also to have maximum visibility of the machining.



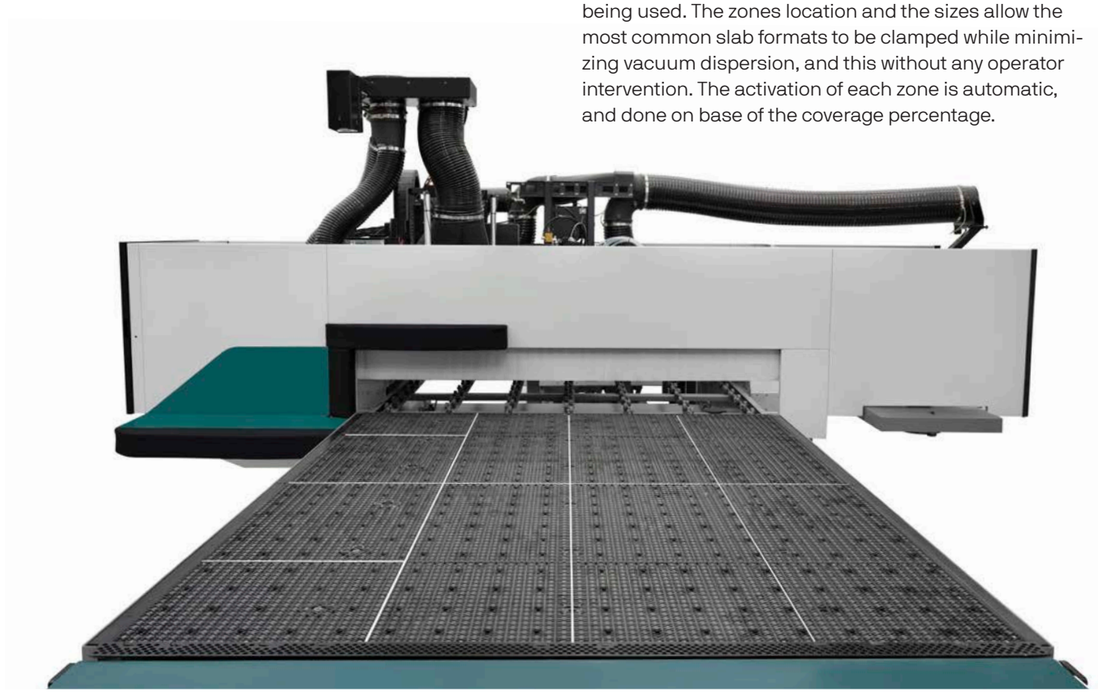
No operator intervention for tool changing

The machine can be equipped with three different tool changers:

- fixed tool changer (rack model) with capability up to 16 different tools, fixed on the left side of the machine basement
- revolver tool changer with capability up to 16 different tools fixed to the X-carriage
- revolver tool changer with up to 8 tools installed on the Y-carriage (close to the spindle) to let the machine change the tools during positioning

Working table multizone

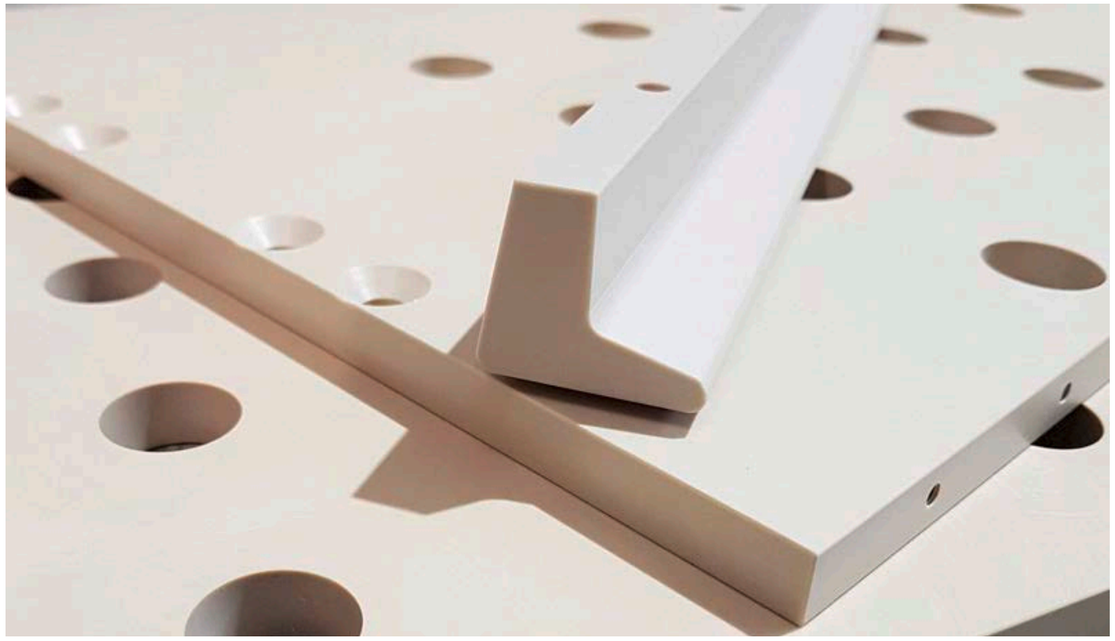
The multizone vacuum system is designed to hold in an efficient way the various component processed on the table. The FT Plus version worktable, is divided into different zones activated independently by the NC, ensuring the best vacuum optimization depending on the slabs being used. The zones location and the sizes allow the most common slab formats to be clamped while minimizing vacuum dispersion, and this without any operator intervention. The activation of each zone is automatic, and done on base of the coverage percentage.



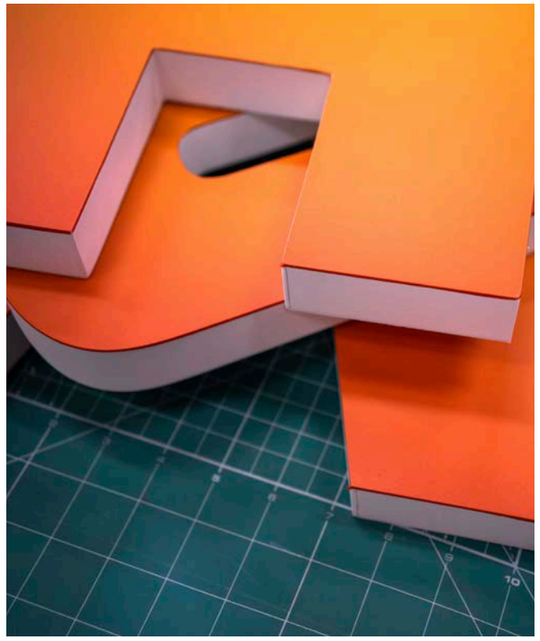
Up

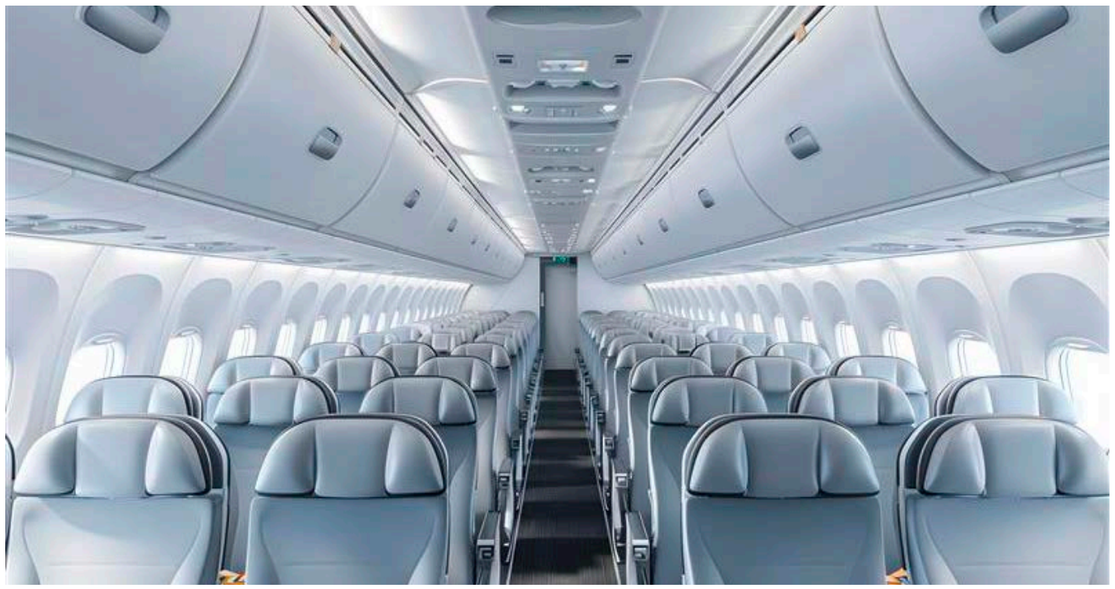
Applications

Engineering plastics



Signage & Advertising





Transportation interior

Explora

Explora Multi Up N B

High precision and reliability over time

Explora Multi Up N B is the flat table machining centre, designed for processing epoxy resin, galssfibers, laminate fibers plastics, composite materials & gasket.

It's the suitable solution for a company that wants to turn every challenge into an opportunity for innovation and success: it fits seamlessly into production spaces, allowing operators to move freely and access with ease from all sides.

Safety and versatile, Explora Multi Up N B represents the ideal choice to process components addressing markets such as wind energy components, industrial & technical components, packaging & gaskets.

Modelling technical elements has never been easier.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Advanced 1h

Ordinary 4h

Hit the dust towards your path

The T-Jet is the patented tools for dust cleaning when dusty material are concerned.
It consists of a double nozzle that injects compressed air following the milling path.

Speed up the production

This machine winkles the eye, to the Pro segment, thanks the double carriage. Explora Multi Up N B can be provided in standalone version or completed with automatic loading/unloading system.

Robust structure

The frame of the Explora Multi Up N B gives the machines a high standard of precision and reliability thanks FEM analysis, electro welded steel with a closed ring structure and high precision during machining operations.

Working table multizone

Multizone working table grants perfect component tighting, minimizing processing defects, allowing overall better finishing.

Gear up the components finishing

Yaskawa new generation axis drives allow to reach higher speeds and accelerations without losing machining precision and finishing quality.

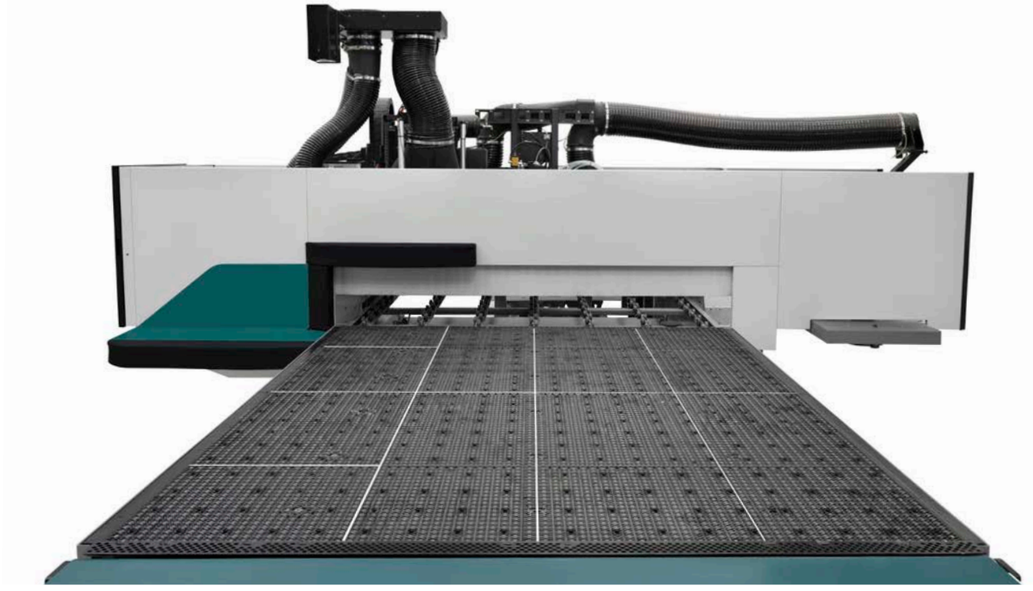
Convenient front openable door

The front openable door is a rare features in this machine range: this door let the operator to have an easy access to the operating groups and also to have maximum visibility of the machining.

No operator intervention for tool changing

The machine can be equipped with three different tool changers:

- chain type automatic tool changer with capability up to 33 different tools, placed on the X-carriage
- revolver tool changer with capability up to 16 different tools fixed to the X-carriage
- revolver tool changer with up to 12 tools installed on the Y-carriage (close to the spindle) to let the machine change the tools during positioning



Working table multizone

The multizone vacuum system is designed to hold in an efficient way the various component processed on the table. The FT Plus version worktable, is divided into different zones activated independently by the NC, ensuring the best vacuum optimization depending on the slabs being used.

The zones location and the sizes allow the most common slab formats to be clamped while minimizing vacuum dispersion, and this without any operator intervention. The activation of each zone is automatic, and done on base of the coverage percentage.

Speed up the production

The double carriage provides unparallel flexibility:

- in case of production of a single component, it can be done by using two heads minimizing the tool changing or in other words guaranteeing higher production
- in case of a nesting process or identical components must be shaped (a mirroring process) this can be quickly done by using a single head to shape each part at the same time

Hit the dust towards your path

The Tracker Jet (Biesse patent) better known as T-Jet, it consists of a double nozzle that delivers compressed air, that follows the milling path by the C-axis rotation.
The key point of this feature is that the best cleaning effects is achieved with higher feed speed.
Good results are also achieved with the suction hood in high position to avoid sucking up small scraps.
Programming in CAM environment for each milling:

- it is possible to program an angle of displacement respect to the trajectory
- distances of start and end of blowing respect to the trajectory
- use of an axis dataset that “softens” movements in direction reversals (slight slowdown in cycle times)

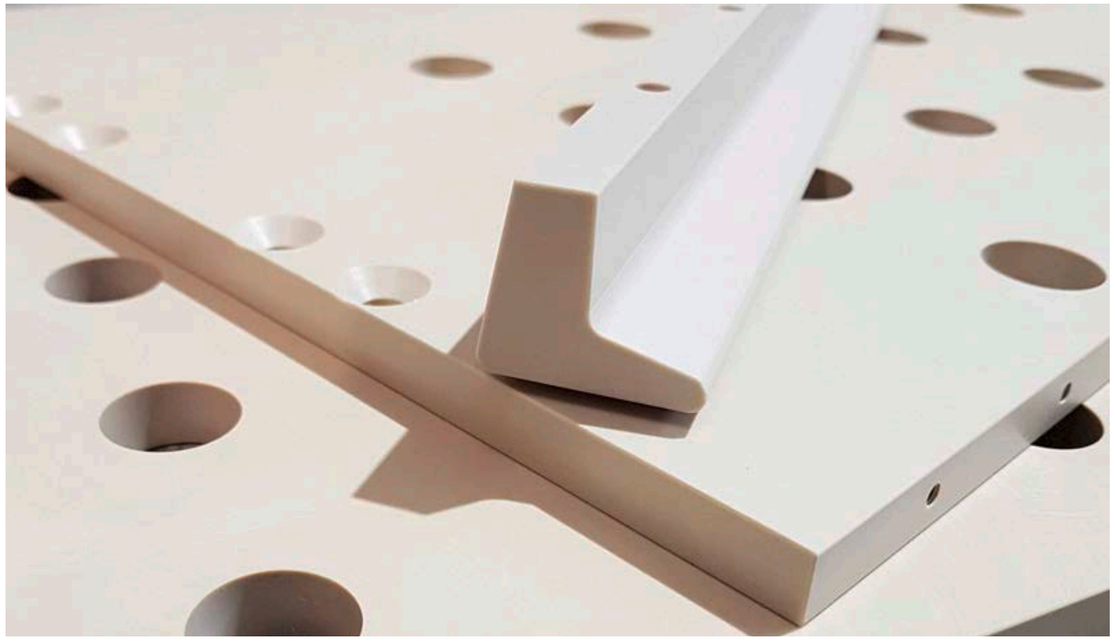
Not compatible with aggregates
Not compatible with cruing

Efficient contact presetter

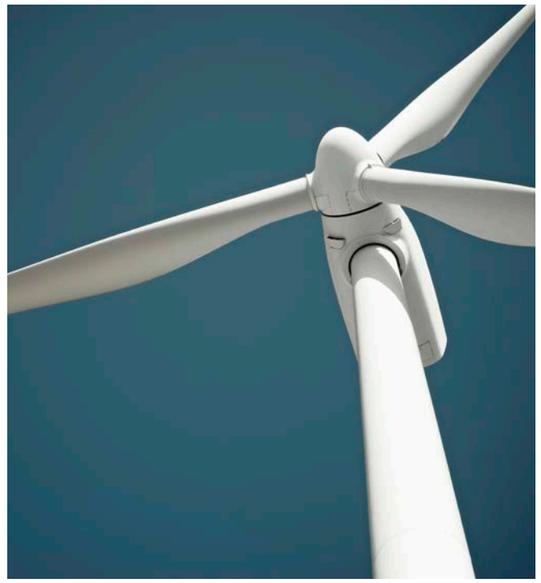
The contact presetter allow to automatically measure the tool’s length. Making this operation automatic helped in dramatically reducing setup time and minimize the chance of human errors. The diameter of the measuring plate is 130 mm.

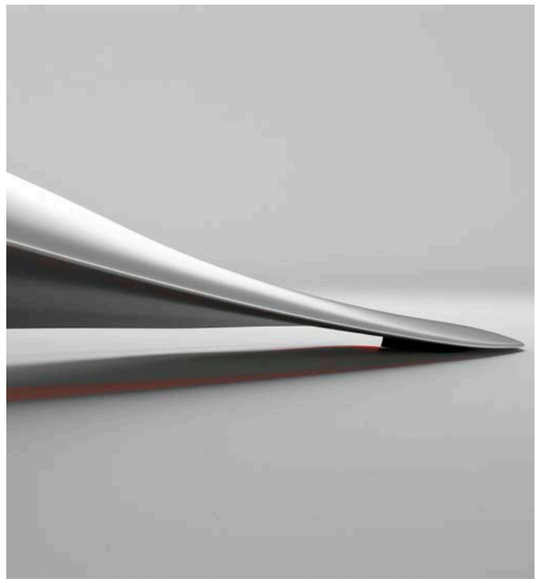
Applications

Engineering plastics



Technical packaging & Gaskets

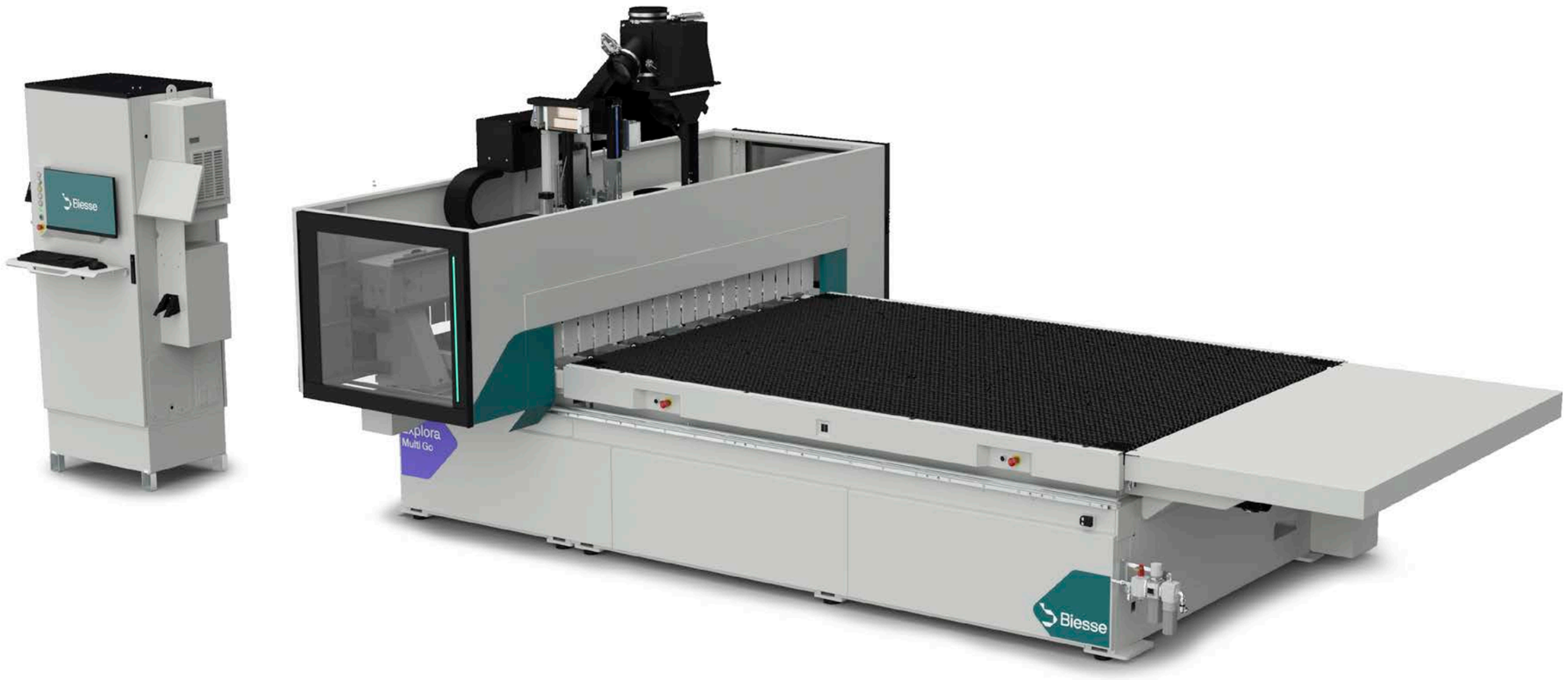




Wind energy

Explora

Explora Multi Go N K



Easy and compact flat table machine for processing slabs of plastics and composites materials

Experience unmatched ease of use with our advanced machine features.

An extremely compact machining centre designed to adapt to the production space in which it is installed.

This compact and easy to use numerical control machining centre is the ideal solution for processing plastic materials, composites, and other non-ferrous materials.

Guaranteed response: **Remote Assistance** you can rely on

Remote assistance packages ensure fast technical response times and seamless. Machine Connectivity services to keep your operations running smoothly.

Simplify, why not?

From CAD-CAM to finished piece, with this automatic CNC machine.
Interactive 3D simulation allows for production time calculation and improved planning, keeping costs under control.

Safety first

Biesse applies all needed safety devices to ensure high safety standard.
Explora Multi Go N K can be provided both in CE certified (according UNI EN ISO19085*) version and non-CE.
A dedicated safety control unit manages high reliability safety sensors to ensure the highest safety standard.

Quality as target

Finished parts produced with precision, minimizing the possibility of errors to avoid unpleasant surprises at the end of processing.
This CNC machine, suitable for plastic materials, composites, and other non-ferrous materials, ensures maximum repeatability of the finished pieces.

Super easy plug & play tools

Tools and aggregates always available on the machine to reduce setup times for any operation. No operator intervention needed to change tools between different types of operations.

Design without limits

Thanks to B_SOLID, Explora Multi Go N K can interface with all the best design software on the market. You can design your pieces and produce them immediately.

Note

Note

biesse.com

Biesse

biesse.com