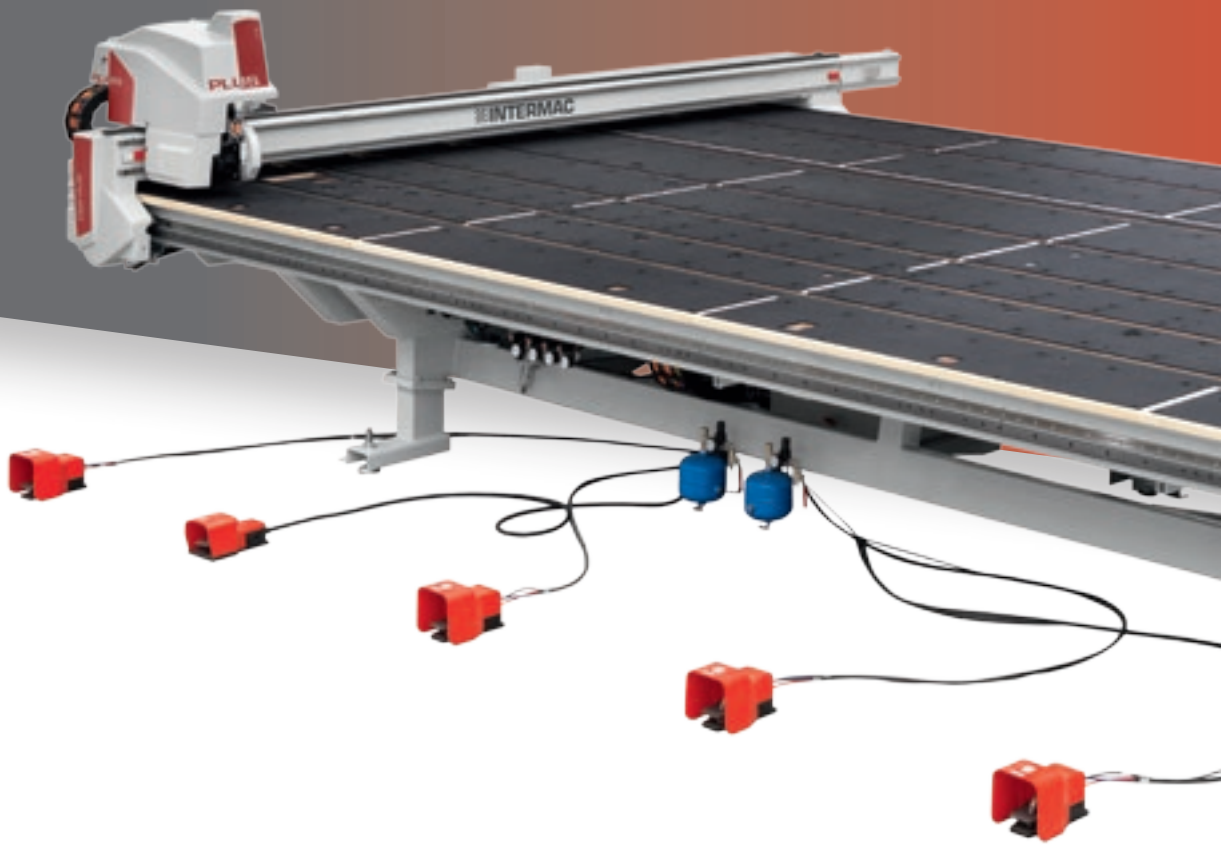
GE NIUS CT-PLUS

HIGH-PERFORMANCE WORK CUTTING TABLES AND CUTTING LINES FOR FLOAT GLASS

INTERMAC

DUAL TECHNOLOGY INTEGRATED IN A SINGLE MACHINE



THE MARKET REQUIRES

a change in production processes to meet the ever growing request for personalised products to satisfy customers' specific needs, along with quick and reliable delivery times. This is coupled with the need to maintain high quality standards whilst offering product customisation with quick and defined delivery times.

INTERMAC RESPONDS

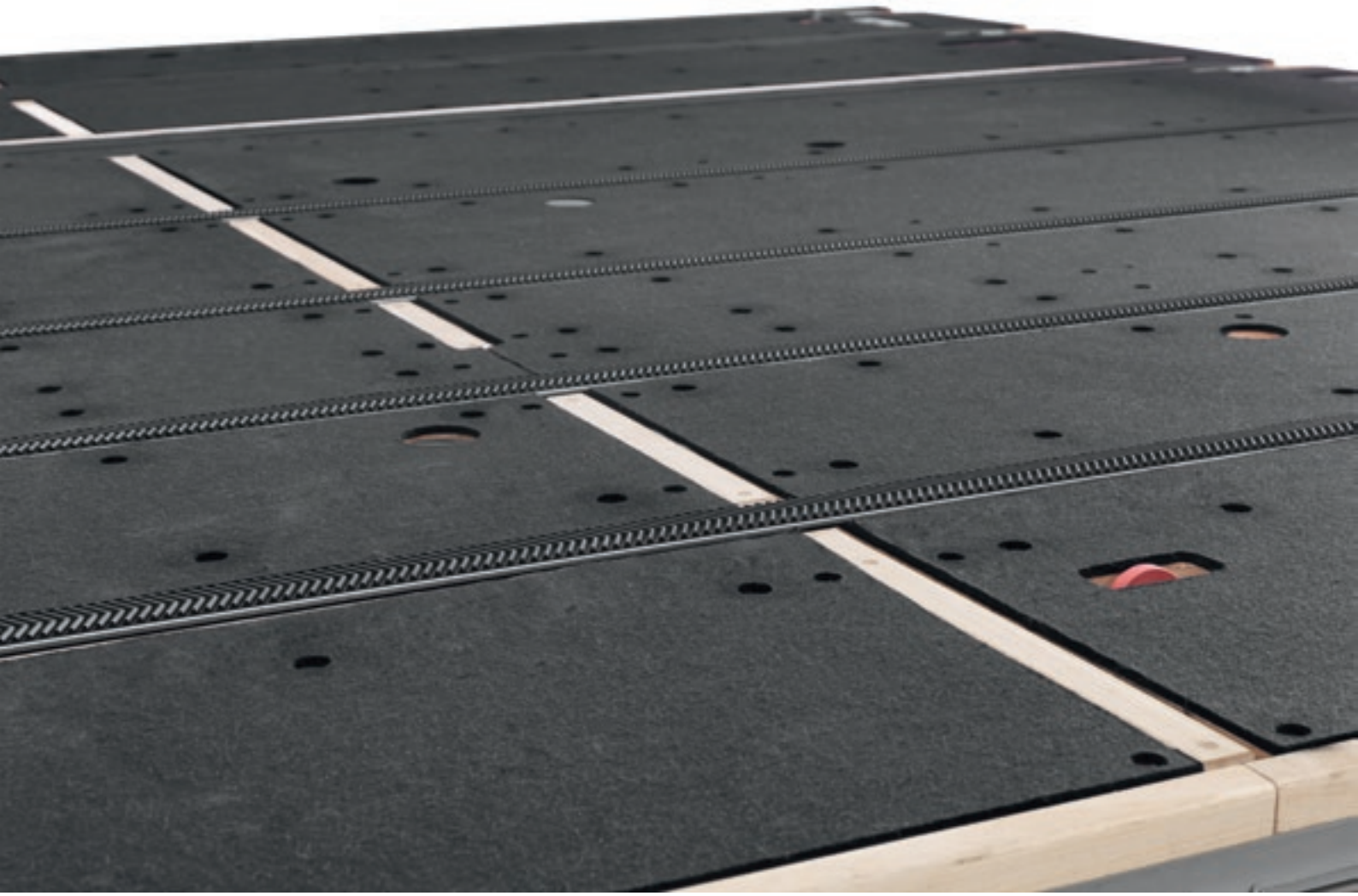
with technological solutions that promote and support technical ability and knowledge of both the processes and the materials. **Genius CT-Plus** is the range of cutting tables for float glass particularly suited to extremely high performance lines. Thanks to the option of being able to integrate the breakout bars with the transport belts, the Genius CT-Plus guarantees maximum productivity and optimisation of the cutting process in small spaces, allowing for handling and breakout to take place on a single work bench without having to resort to the use of service tables.

GENIUS CT-PLUS

- MAXIMUM PRODUCTIVITY AND OPTIMISATION OF PROCESSES THANKS TO HANDLING AND BREAKOUT ON A SINGLE WORK BENCH
- REDUCED SIZES FOR COMPANIES WITH LIMITED SPACE, PERFECT FOR SHORT LINES WITH PRE-EXISTING LOADS
- EASY TO INTEGRATE WITH AUTOMATIC LOADING SYSTEMS

TECHNOLOGY AND PERFORMANCE THANKS TO THE COMBINATION OF BELTS AND BARS

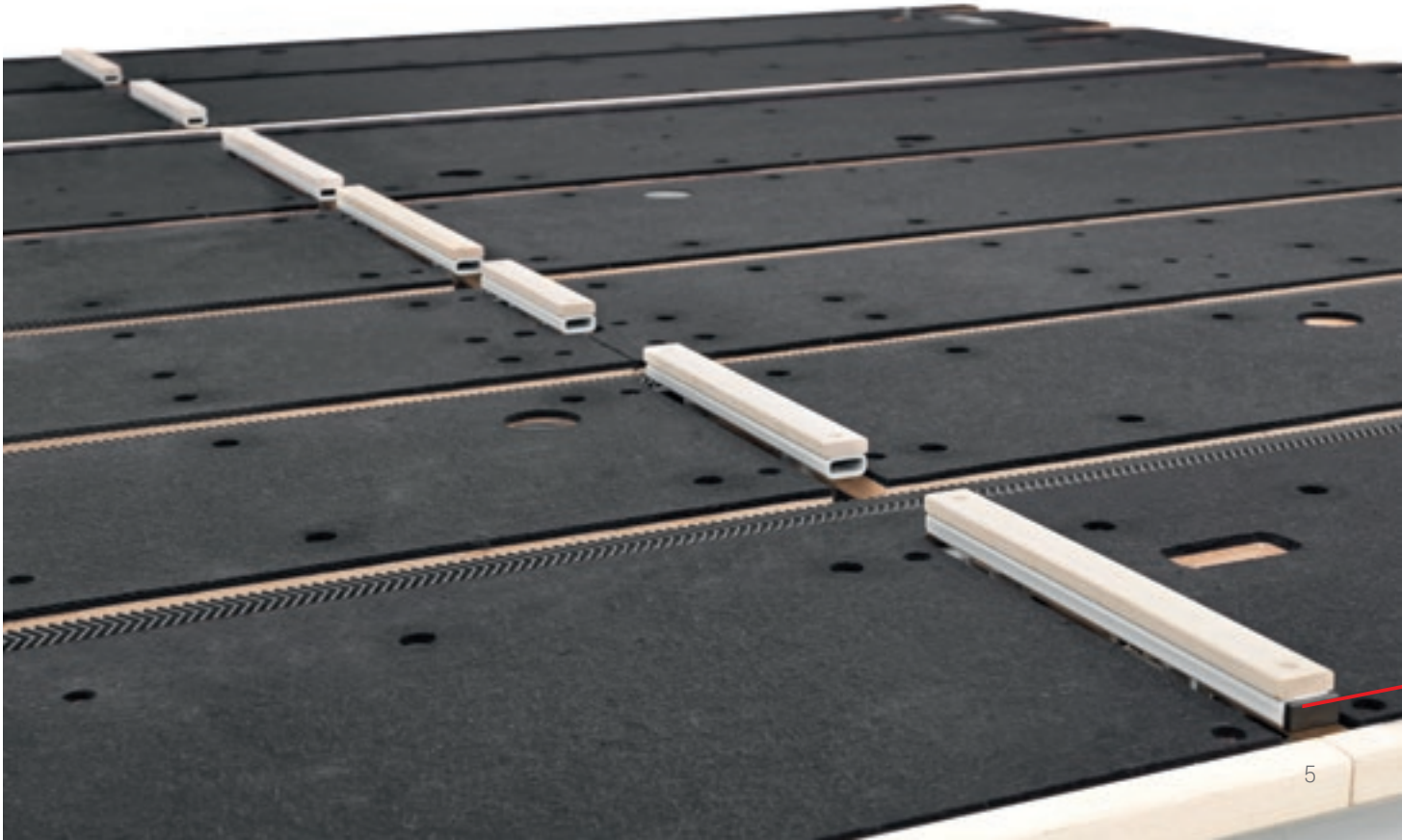
The range of Genius CT-Plus cutting tables is perfect for the most demanding glassworks, which require heightened performance in order to sustain elevated production loads.



BREAKOUT AND HANDLING OF GLASS ON A SINGLE WORK TABLE: A COMPACT SOLUTION FOR SMALL SPACES.

The integrated belt system makes it possible to easily move the sheet along the production line.

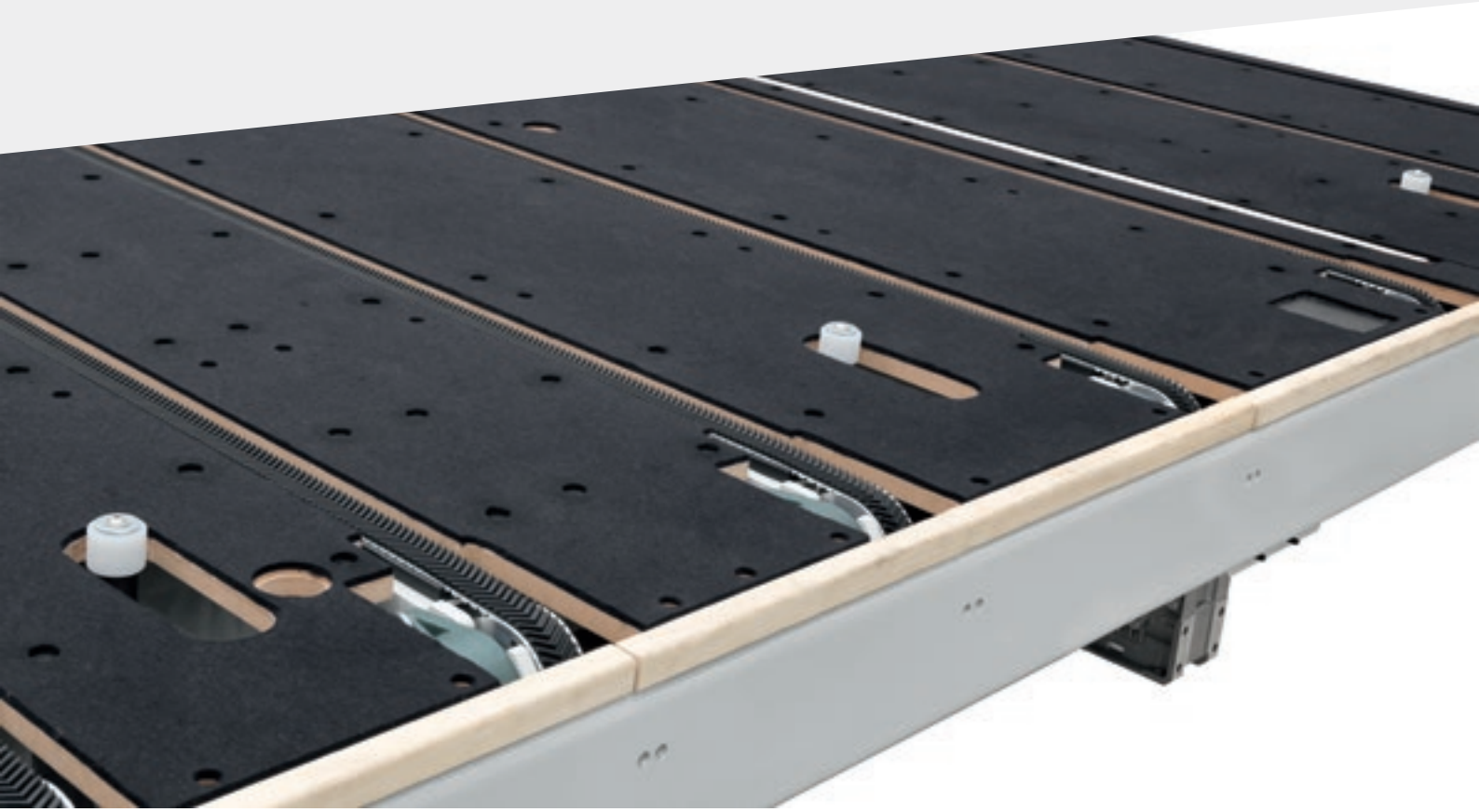
The additional bar system, which can be integrated with the belt system, makes it possible to easily perform the breakout of the glass.



GUARANTEED RELIABILITY OVER TIME

Maximum performance and precision thanks to the planarity of the ground work table.

The base of the machine is made from a rigid, rectangular structure onto which ground wood panels are attached, ensuring maximum planarity of the working area, essential for optimal glass grooving and break-out operations.



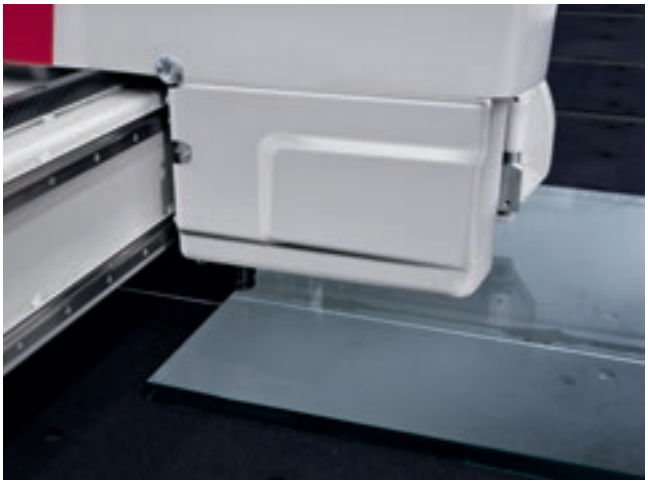
AUTOMATIC SQUARING SYSTEM
Thanks to the pushing devices located on the work table, it is possible to pre-set the sheet for automatic breakouts.

- Acceleration 10m/sec²
- Speed 200 m/min.
- Precision of cut +/-0.15 mm/m.

MAXIMUM QUALITY OF MACHINING OPERATIONS AND RESULTS

Automatic tool change with patented technology.

The roller-holder cones allow the cutting tools to be changed automatically.



CUTTING LUBRICATION
The delivery of lubricant oil is managed electronically, and occurs in line with the speed of execution of the shape and the specific straight cutting requirements, eliminating waste and simultaneously improving machining results. Precise oil stream dosing with no "drop" effect. Pressurised oil lubrication is also available.

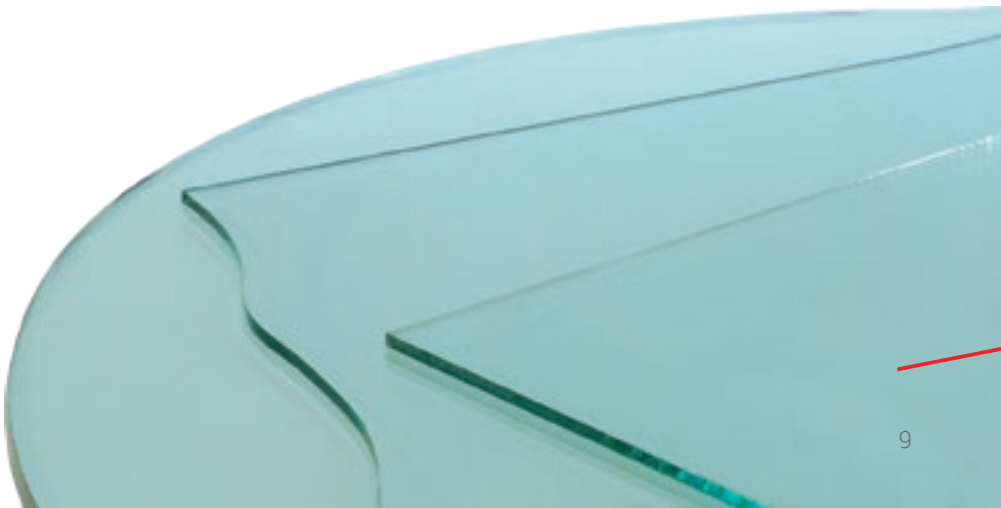
The automatic tool magazine with 6 positions is an Intermac technology that makes it possible to perform various cuts on the same sheet using the most suitable tool at all times, thus substantially improving the quality of the final result.

THE ENTIRE GENIUS RANGE IS CONCEIVED FOR CUTTING LINES THAT PROCESS LARGE VOLUMES IN TWO OR THREE SHIFTS.

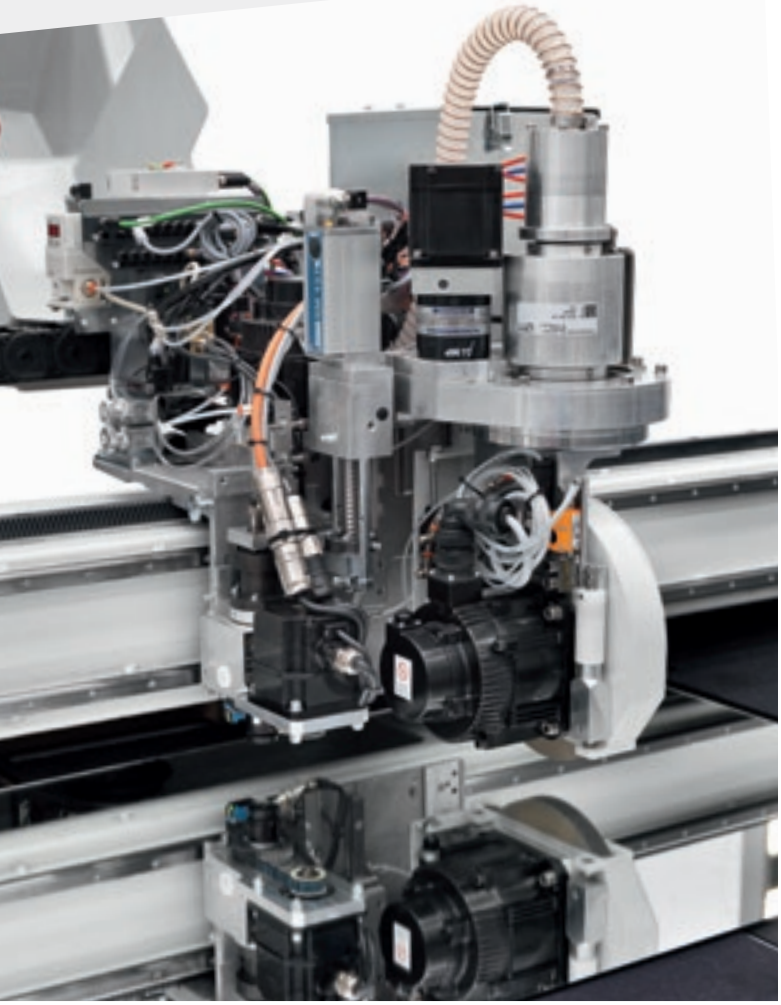
VINYL CUTTING
The Genius CT-PLUS cutting tables guarantee excellent quality of machining operations for the cutting of vinyl as well.

The cutting quality is guaranteed by the proportional electro-pneumatic control system that enables the power/ speed ratio to be measured correctly.

The Genius cutting table ensures that materials are fully optimised, significantly reducing waste.



REDUCED CYCLE TIMES



The PC-managed axle speed and the high quality of all of the electronic and mechanical components enable machining times to be optimised, ensuring flexible, dynamic production.

The working head is equipped with an automatic cutting pressure management mechanism that enables the force exerted by the wheel to be adjusted correctly, from the beginning to the end of the cutting operation.

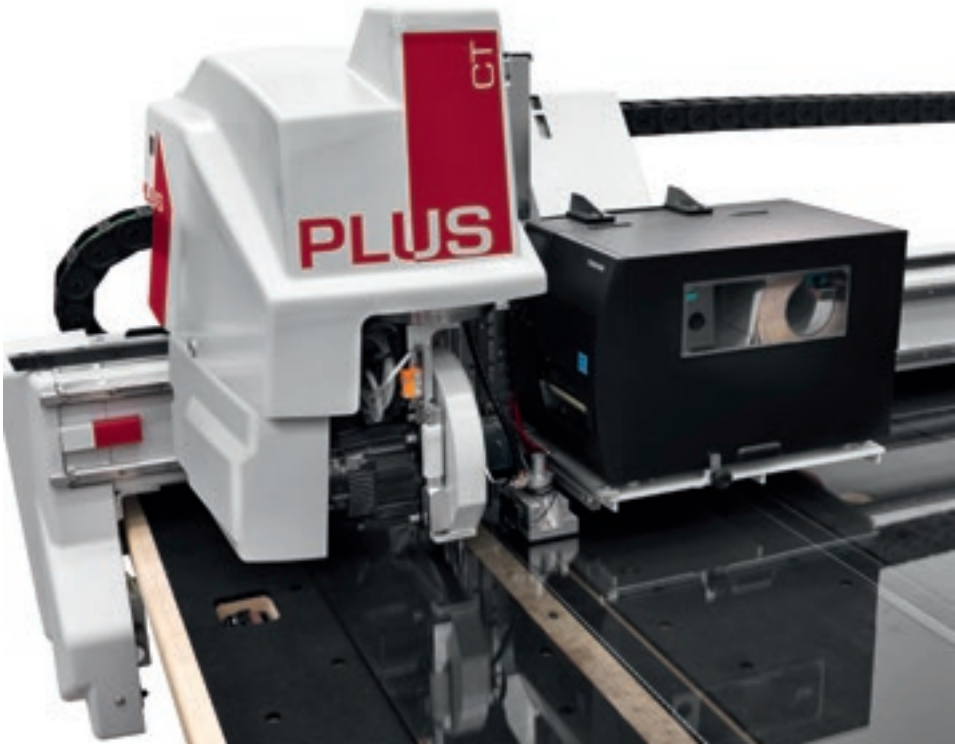
The working head is equipped with a laser reader that automatically detects the position of the sheet on the work table and also acts as a double zero for cutting laminated glass. In addition, it can be used for digitalising templates and models positioned on the work table.

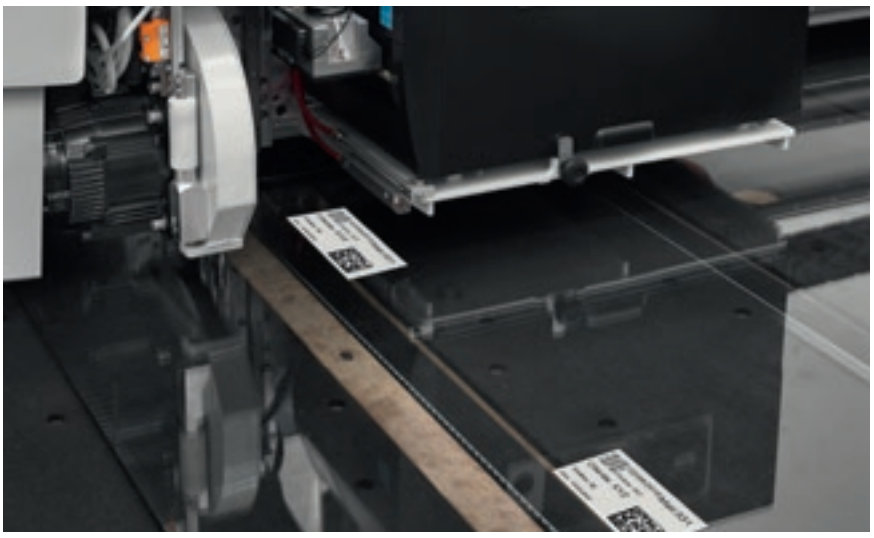
MAXIMUM PRODUCTIVITY

Genius CT-PLUS offers a complete range of hi-tech devices which allow for maximum productivity along the cutting line.

A digital printer (600 dpi) mounted on an independent carriage for automatic label application helps to guarantee maximum cutting performance.

Standard label 100x70mm.
Available labels 100x100 mm.



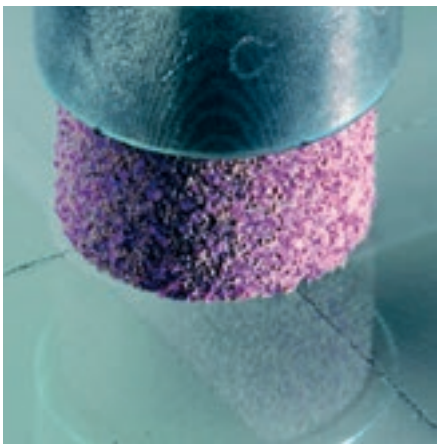


Automatic system for applying labels on the surface of the glass.
Compatible with all glass thicknesses and types.

Customisable label containing information that is useful in the production processes typical of glassworks companies.

DEDICATED TECHNOLOGIES FOR EVERY REQUIREMENT

Genius CT-PLUS is capable of performing Low-E removal thanks to specially designed optional devices for each specific manufacturing need.

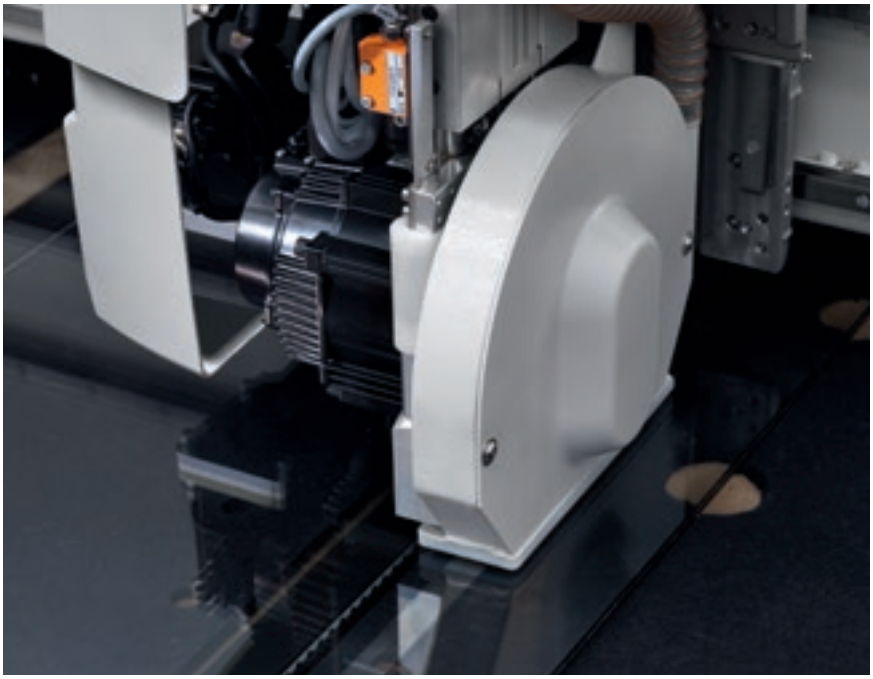


LOW-E REMOVAL

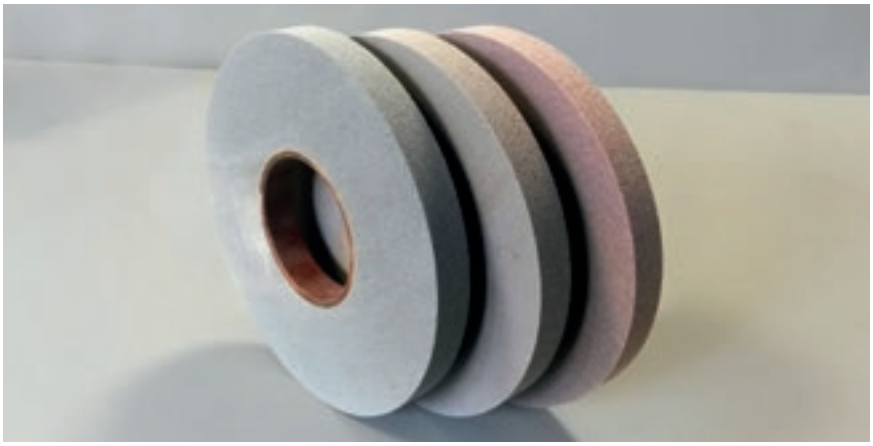
BCR (BRUSH COATING REMOVAL) DEVICE
For removal of low-emissivity film via a motorised metal brush, with adjustable consumption recovery. Standard removal of 20mm width.

ALTERNATIVE TOOL
20mm hollow grinding wheel for abrasive material.

TCR DEVICE
(TANGENTIAL COATING REMOVER)
for removing the low emissivity film with a 200 mm-diameter abrasive grinding wheel. Ensures top productivity and a long lifespan.
Infinite spinning axle guaranteed.



MAXIMUM QUALITY OF CONSTANT REMOVAL
thanks to:
- Hood positioning at 1mm from the glass surface, with automatic grinding wheel wear compensation
- Suction tool with collection tank for residue positioned on the cutting carriage.

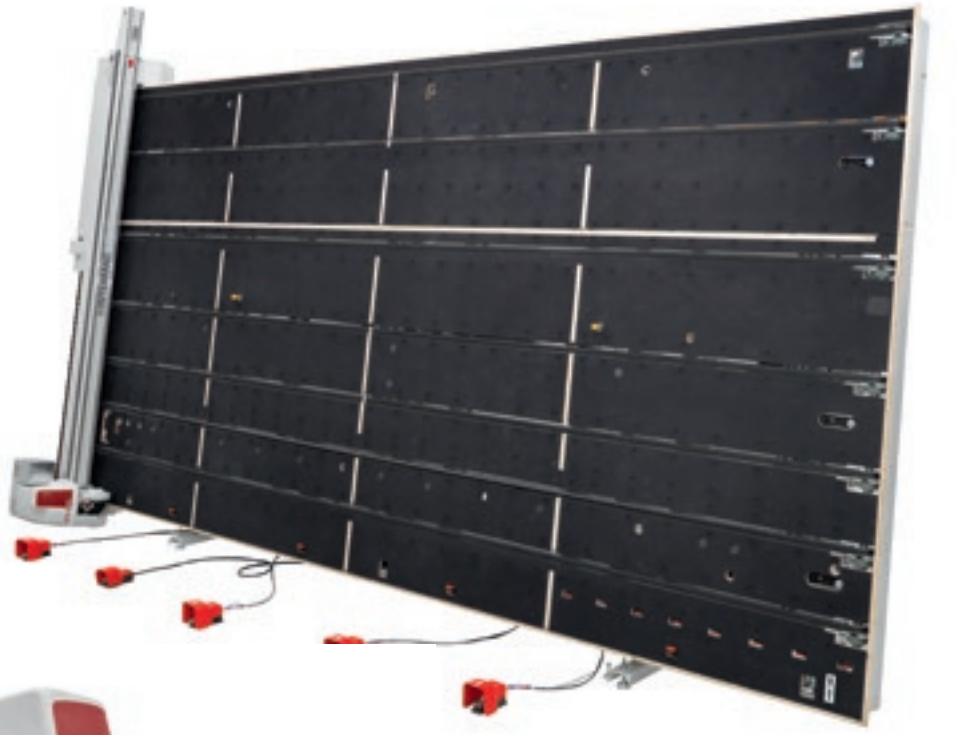


Compatible with 20 and 25 mm thick grinding wheels measuring 200 mm in diameter of varying types depending on the characteristics of the Low-E.

Rectification of the TCR grinding wheel.

ERGONOMICS AND FACILITATED HANDLING

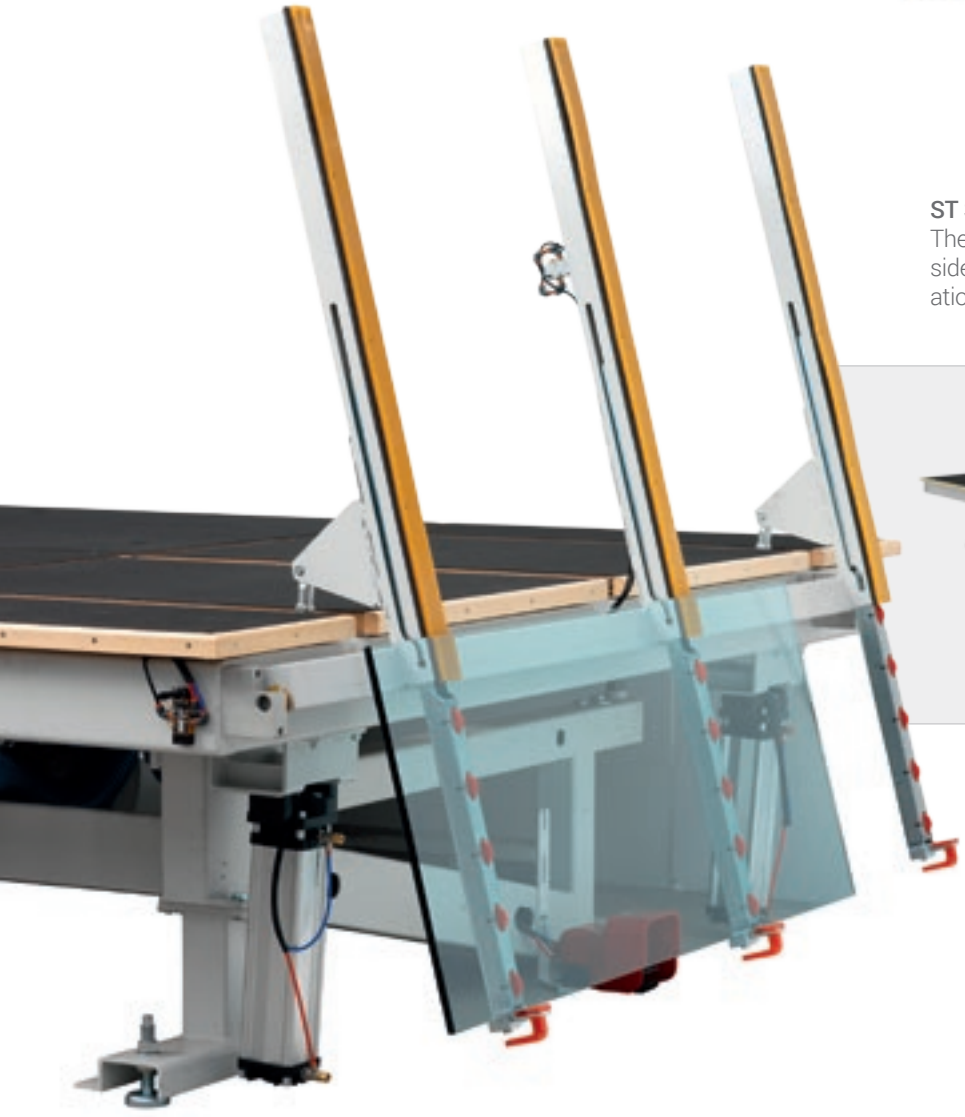
Smooth, even tilting of the table enables large sheets to be loaded.



The automatic feet support the sheet while the table is tilting, acting as mechanical sheet aligners when necessary.

ABSOLUTE MACHINING FLEXIBILITY

Intermac can offer custom solutions in accordance with the specific needs and production specifications of customers.



ST SERVICE TABLES
The Genius ST tables are designed to be used alongside lines for break-out and volume unloading operations.

Genius 61 ST

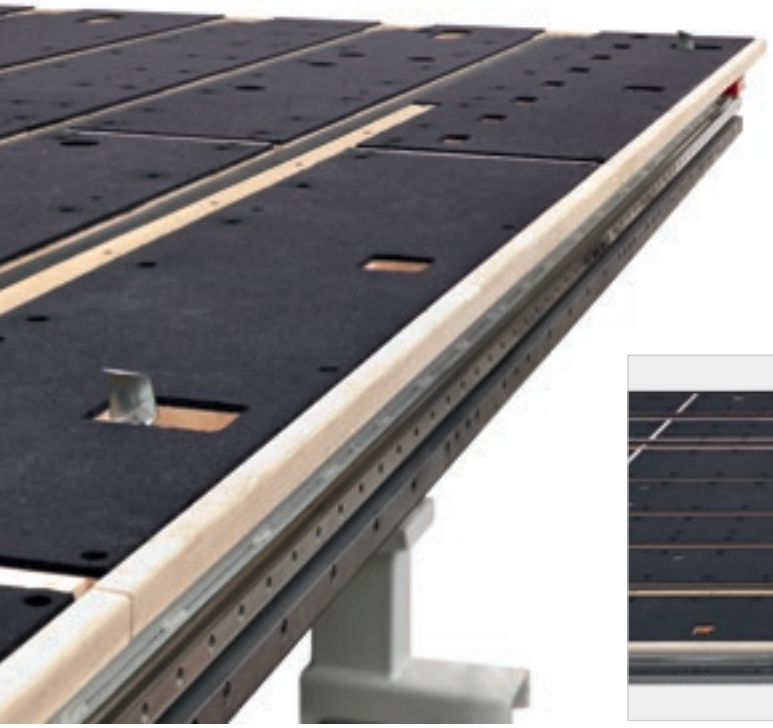
COMBY PLUS

INTERMAC TECHNOLOGY

The Comby PLUS are high productivity lines which are integrated into small spaces for the cutting of both float and laminated glass, and are the product of the intelligent combination of the Genius PLUS cutting table (for cutting float glass) and the Genius LM-A cutting table (for cutting laminated glass).

INTELLIGENT COMBINATIONS

The CombyPlus Lines represent the perfect integration of the two float/laminated cutting tables which guarantee high productivity in small spaces thanks to the addition of:
- **breakout bars on the float table with belts**
- **vertical lung patented by Intermac on the float table**
- **belts on the laminated cutting module**
- **static breakout of crosspieces.**

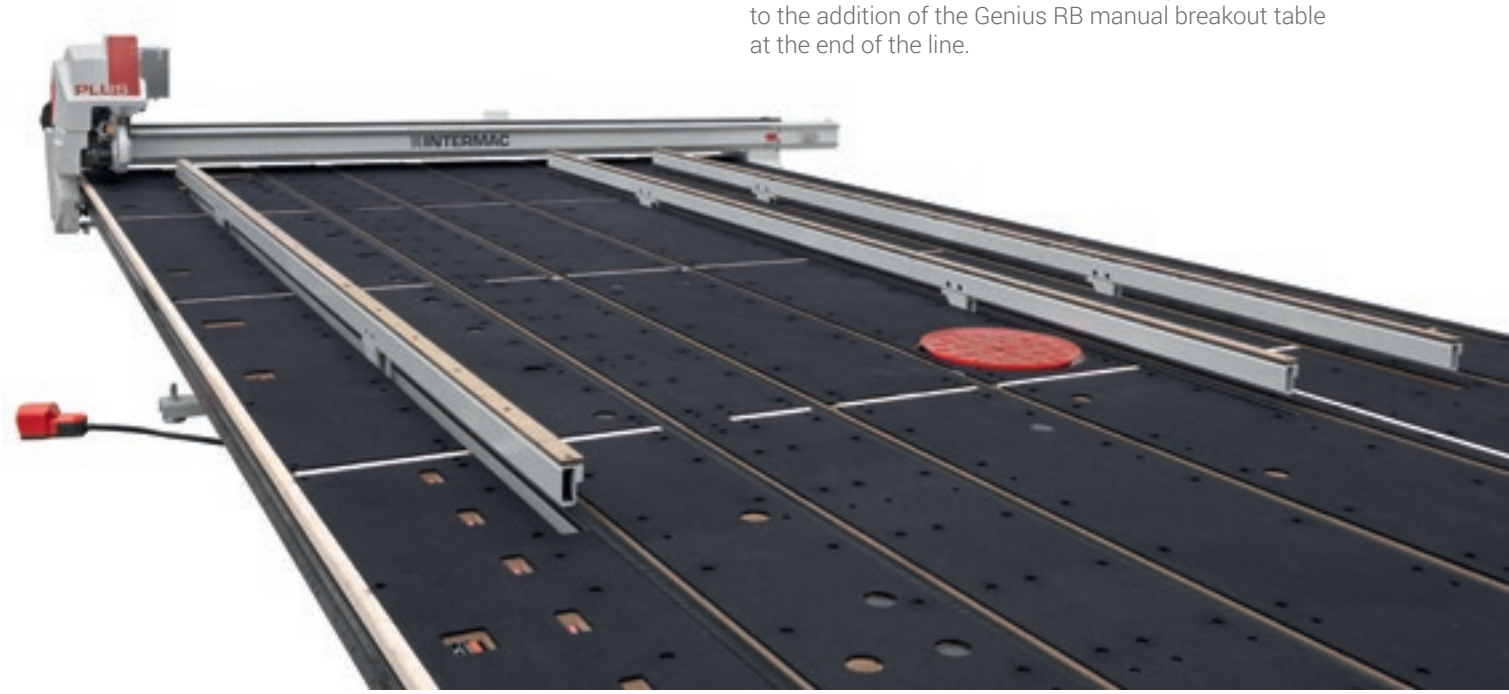


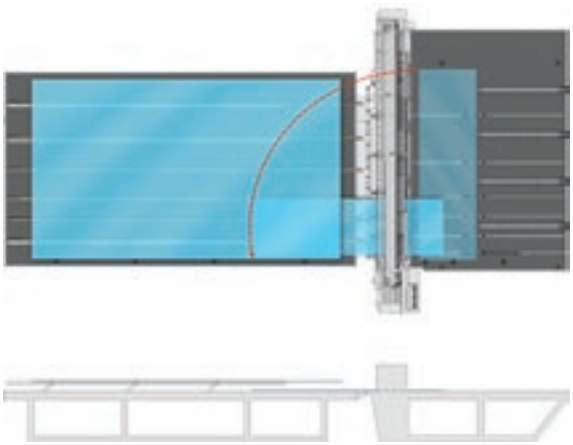
AUTOMATIC REMOVAL OF PVB

SHEET ROTATOR

OPTIMISATION OF SPACE WITHOUT COMPROMISING ON PRODUCTIVITY

- Maximum automation of processes, enabling high volumes of laminated glass to be produced during every shift, within a limited space.
- The movement of the glass is automated.
- The chance to perform static X breakout on float glass.
- The chance to increase float productivity thanks to the addition of the Genius RB manual breakout table at the end of the line.





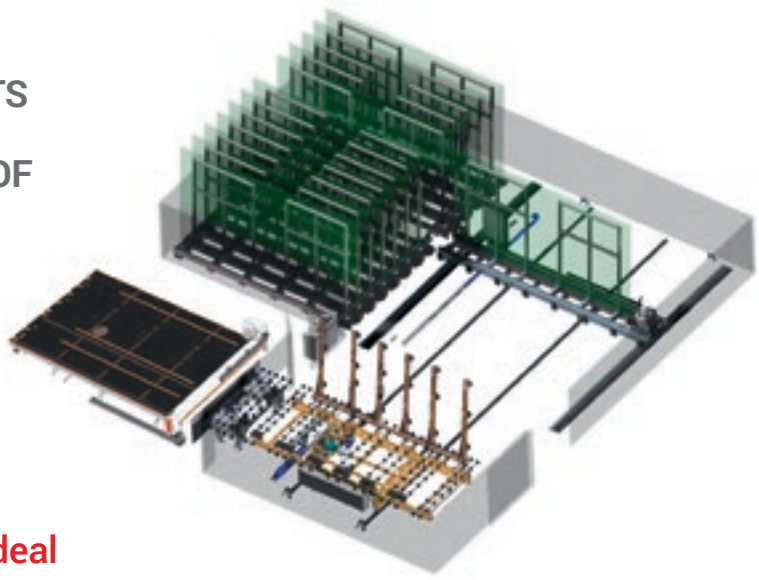
VERTICAL BUFFER

This patented Intermac solution serves to lift the remains of the sheet, enabling the crosspiece to be positioned underneath so that Y-Z-W cuts can be performed. Significant reductions in overall dimensions, without compromising productivity.

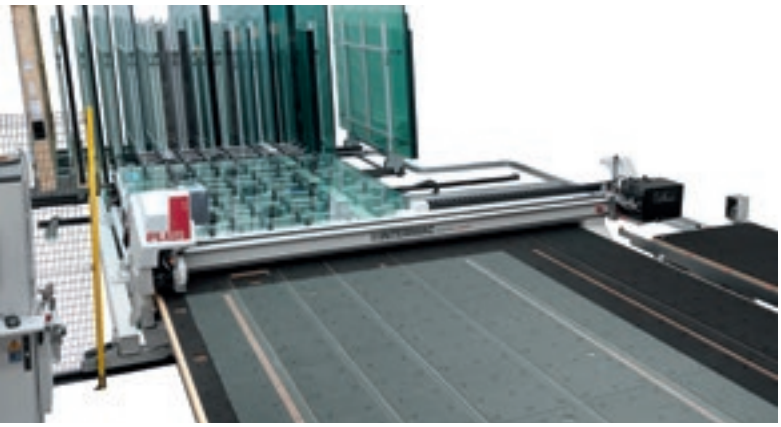
HEIGHTENED PERFORMANCE THANKS TO PERFECT INTEGRABILITY ALONG THE LINE

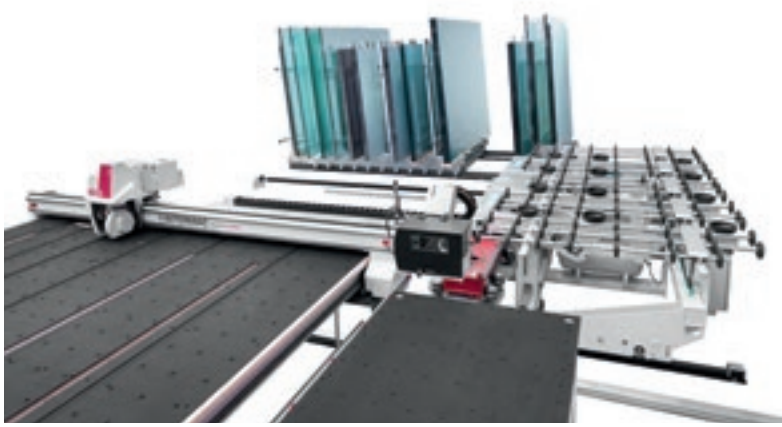
The stand-alone solutions or those along the automated line are managed by software that optimises the processes and are applied to a complete range of machinery that includes the Movetro intelligent storage and handling systems integrated with the range of Intermac Genius cutting tables.

INTERMAC AND MOVETRO GLASS MACHINING TECHNOLOGIES INCORPORATE THE KEY CONCEPTS OF INDUSTRY 4.0, PROPELLING OUR CUSTOMERS INTO THE ERA OF DIGITAL MANUFACTURING



The combination of Intermac and Movetro technologies generates ideal solutions for every need.





PROTECTION AND SAFETY FOR ALL MACHINING OPERATIONS

One indispensable condition for obtaining any sort of financing is the respect of the machinery directives and workplace health and safety regulations.

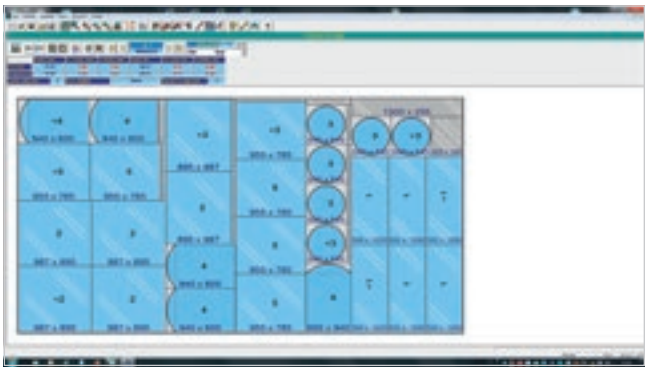
Intermac has always paid the utmost attention to the health and safety of its customers.
The protection of every operator during the use of the machine is of vital importance, preventing any possible distraction or error that could lead to inconvenience or even accidents.

MAXIMUM EASE OF USE

The operator interface is simple, intuitive and compatible with the optimisers available on the market.

PC IWNC-based numerical control system (IWNC - Intermac Windows Numerical Control)

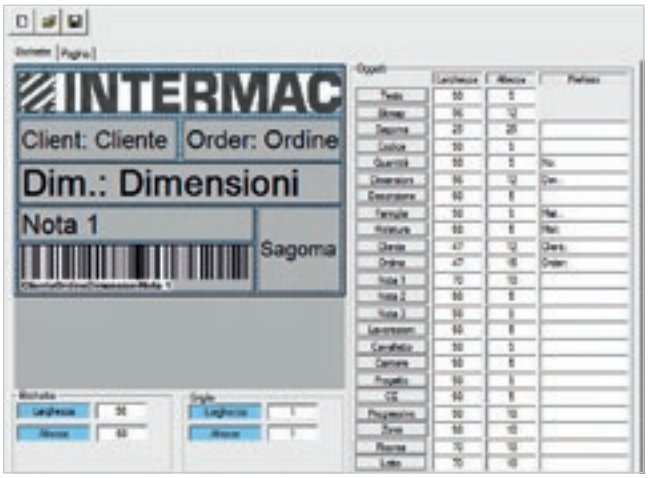
- Ideal both for those using CNC machines for the first time and operator who already have programming experience.
- Management of the working parameters of the machine.
- Creation and modification of cutting patterns and/or of geometric or non-geometric shapes.
- Modules for production report management.

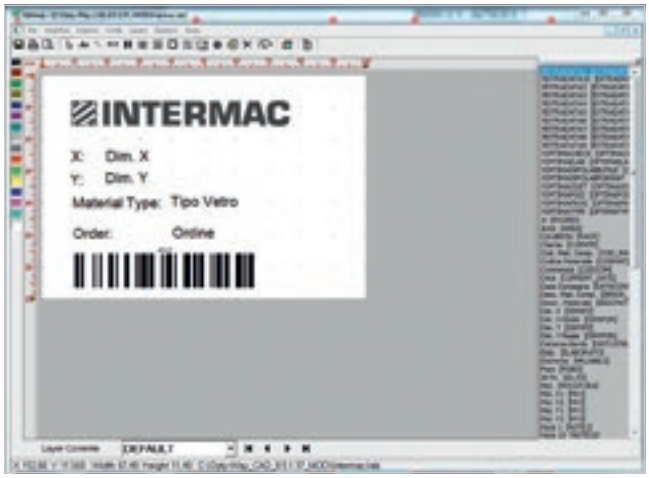


OPTIMISATION SOFTWARE

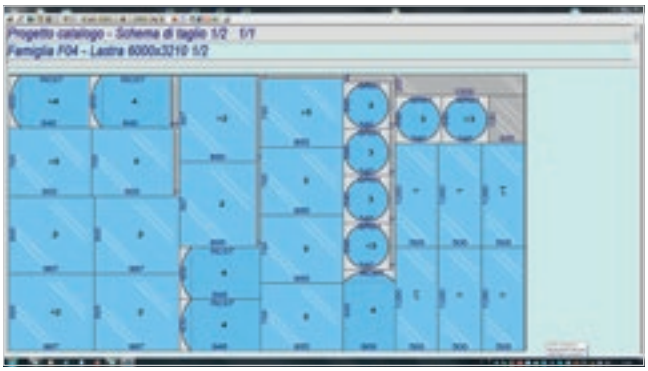
Optimiser for straight and shaped cuts, enabling the following advantages to be achieved:

- Minimises waste.
- Meets the production requirements of glassworks companies.
- Enhances the performance of the machine.





LABEL MANAGEMENT



CUTTING PATTERN DISPLAY

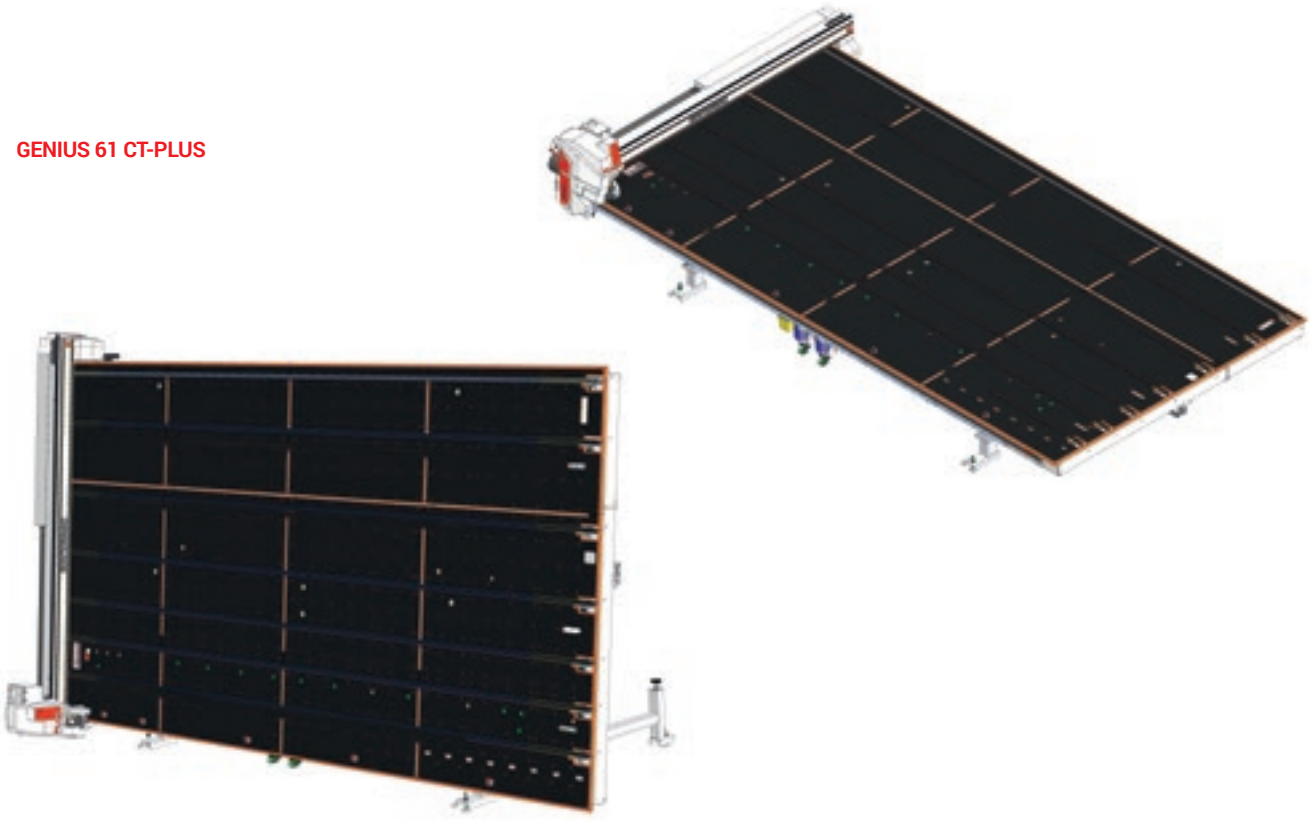
- Cutting pattern displayed on monitor.
- Module for managing volumes at the end of the line.

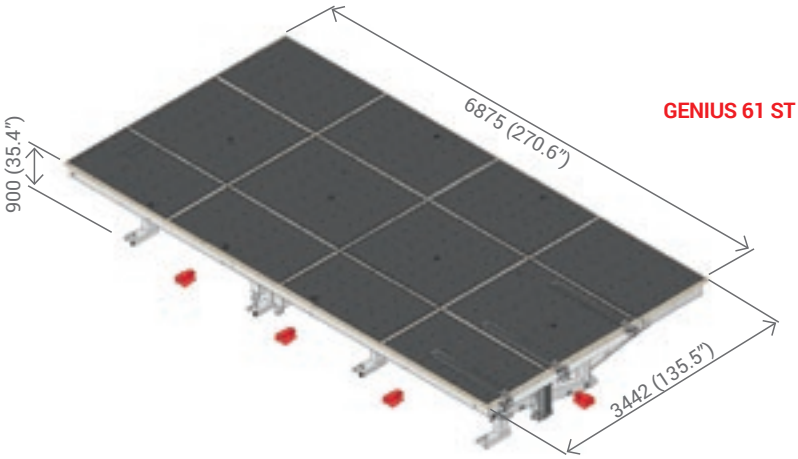
TECHNICAL SPECIFICATIONS

IN LINE CONFIGURATION

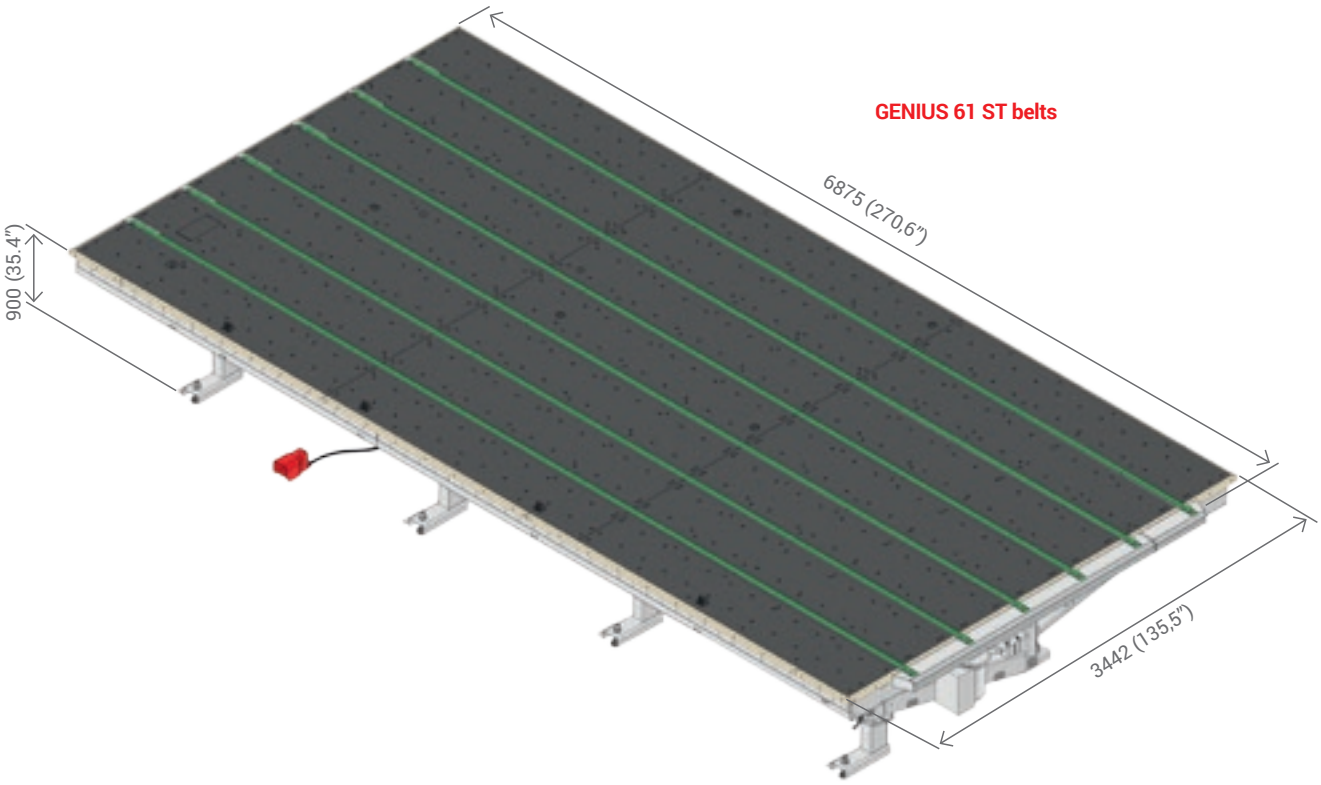
		GENIUS 61 CT-PLUS	GENIUS 61 CT-PLUS C
Machinable dimensions	mm	6100 x 3355	6100 x 3355
Machinable thickness	mm	3 - 19 / 2 - 25 (opt.)	3 - 19 / 2 - 25 (opt.)
Max axle movement speed	m/min	200	200
Max acceleration	m/sec2	10	10
Precision of cut according to specifications	mm/m	± 0,15	± 0,15
Straight and shaped optimisation (optional)		yes	yes
Sheet transfer speed	m/min	40	40
Work table height	mm	900 (-15 / +40)	900 (-15 / +40)
Dimensions for shipment (LxWxH)	mm	7900 x 2275 x 2000	7900 x 2275 x 2000
Installed power	kW	15	20
Overall weight	Kg	4150	4500

GENIUS 61 CT-PLUS



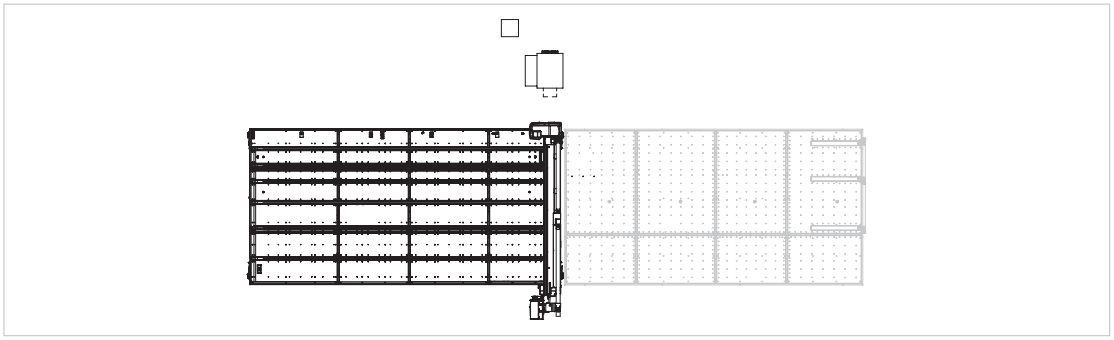


GENIUS 61 ST shearing+ flap

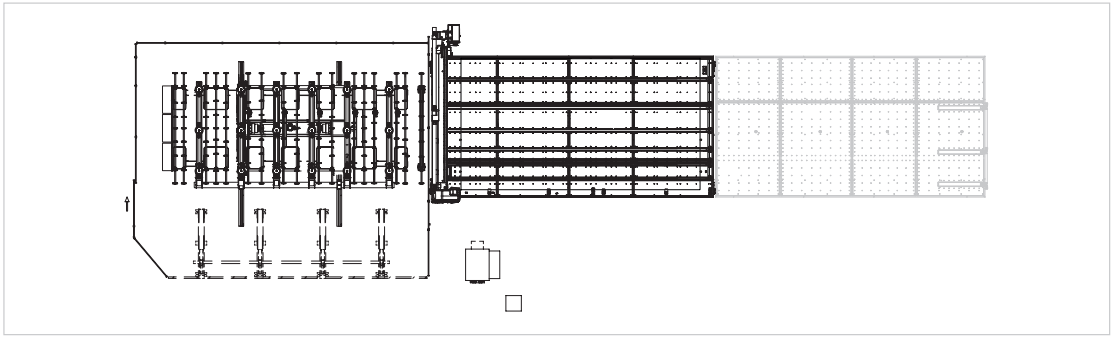


GENIUS 61 ST belts

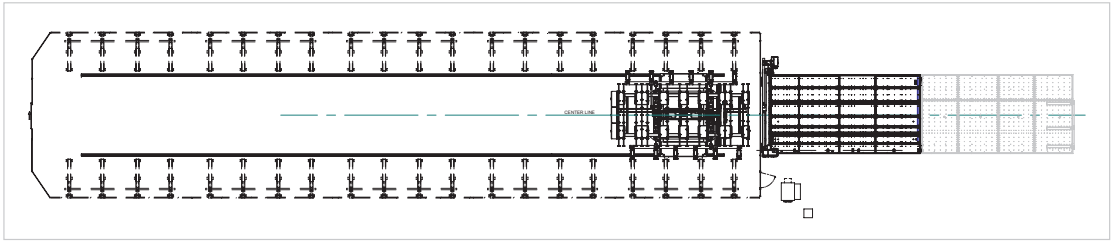
LINE EXAMPLES



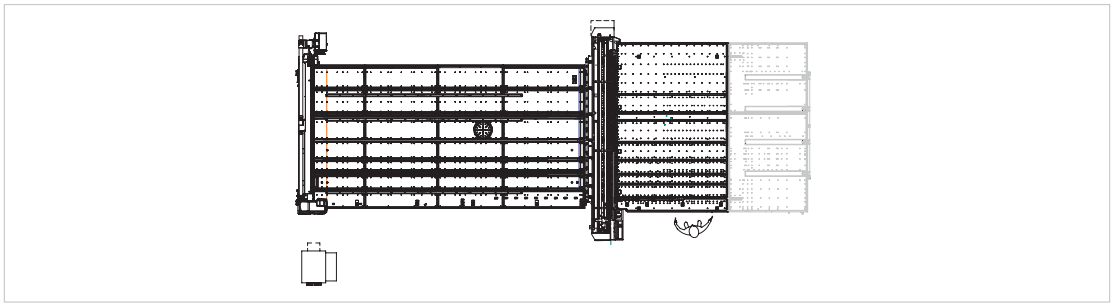
61 CT-PLUS belts / bars cutting table.



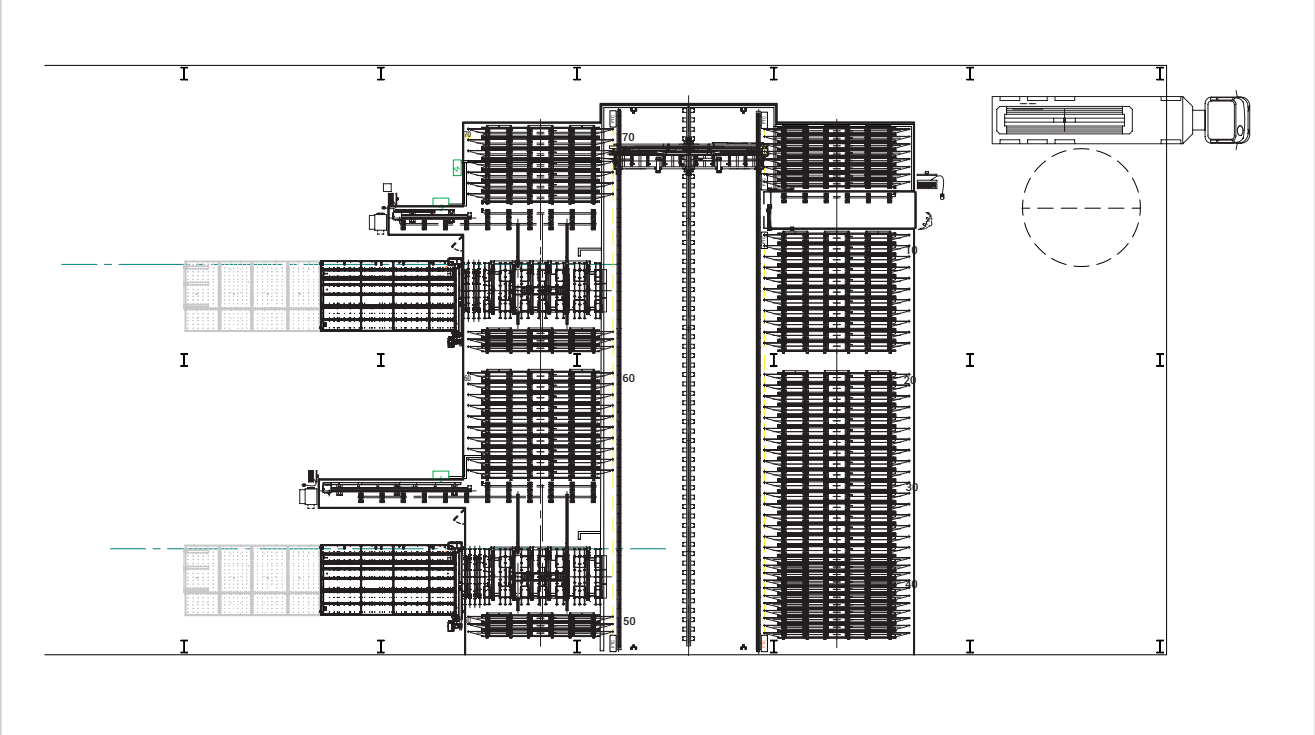
2 piece unilateral fixed Genius LS line + Genius CT-PLUS.



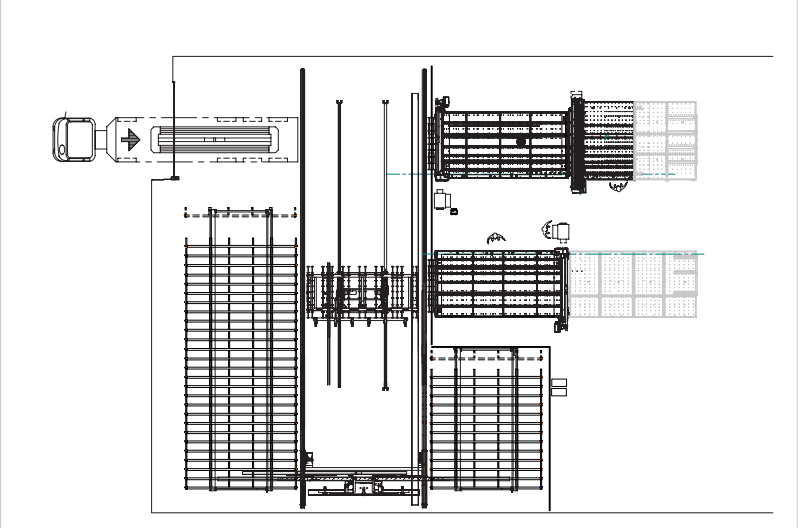
2 piece bilateral mobile Genius LS line + Genius CT-PLUS.



CombyPLUS J-A37.

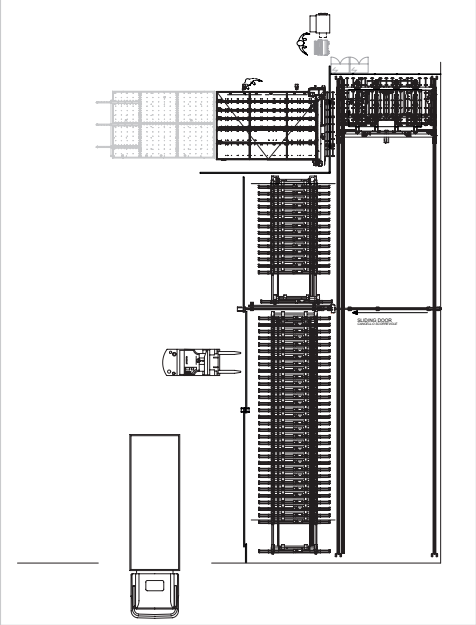


PRIME storage shuttle on two float exits with CT-PLUS.

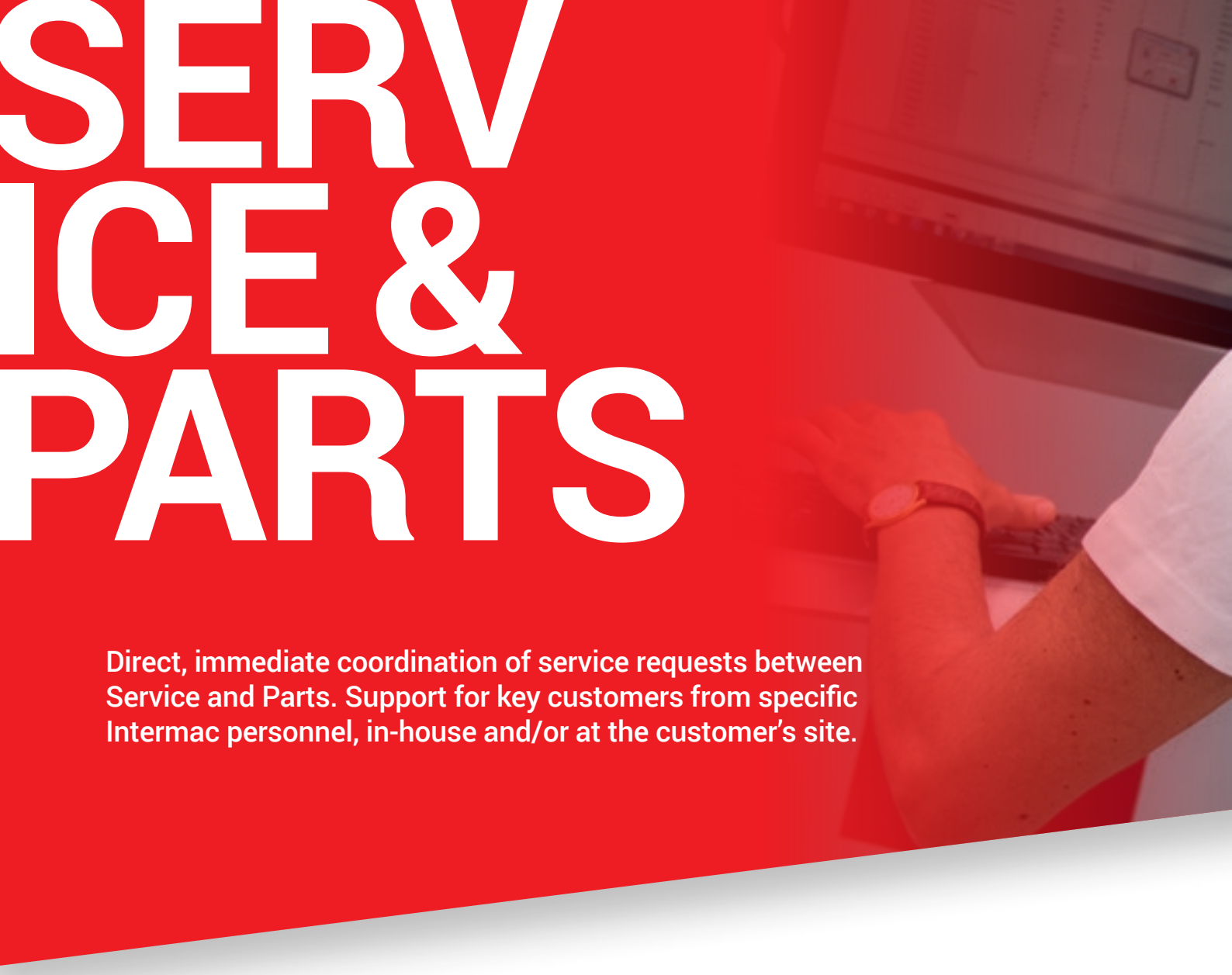


Automatic storage + CAM-J aerial loading device on CT-PLUS float exit and Comby-PLUS J-A.

Automatic storage + CTB-R telescopic loading device on CT-PLUS float exit.



SERVICE & PARTS



Direct, immediate coordination of service requests between Service and Parts. Support for key customers from specific Intermac personnel, in-house and/or at the customer's site.

INTERMAC SERVICE

- Machine and line installation and start-up.
- Training centre for Intermac field technicians and subsidiary/dealer personnel; customer training directly at the customer's site.
- Overhaul, upgrade, repairs and maintenance.
- Remote diagnostics and troubleshooting.
- Software upgrade.

85
Intermac field technicians in Italy and worldwide.

20
Intermac technicians working in Teleservice Centre.

35
certified dealer technicians.

50
training courses in a variety of languages every year.

The Biesse Group promotes, cares and develops direct and constructive relationships with the customers to meet their needs, improve after-sales products and services through two dedicated areas: Intermac Service and Intermac Parts. With its global network and highly specialised team, the company offers on-site and on-line assistance and spare parts for machines and components anywhere in the world, 24/7.

INTERMAC PARTS

- Original Intermac spare parts and spare parts kits customised to suit the machine model.
- Spare part identification support.
- Offices of DHL, UPS and GLS couriers located within the Intermac spare parts warehouse, with multiple daily pick-ups.
- Optimised order dispatch time, thanks to a global distribution network with de-localised, automated warehouses.

95%
of machine downtime orders dispatched within 24 hours.

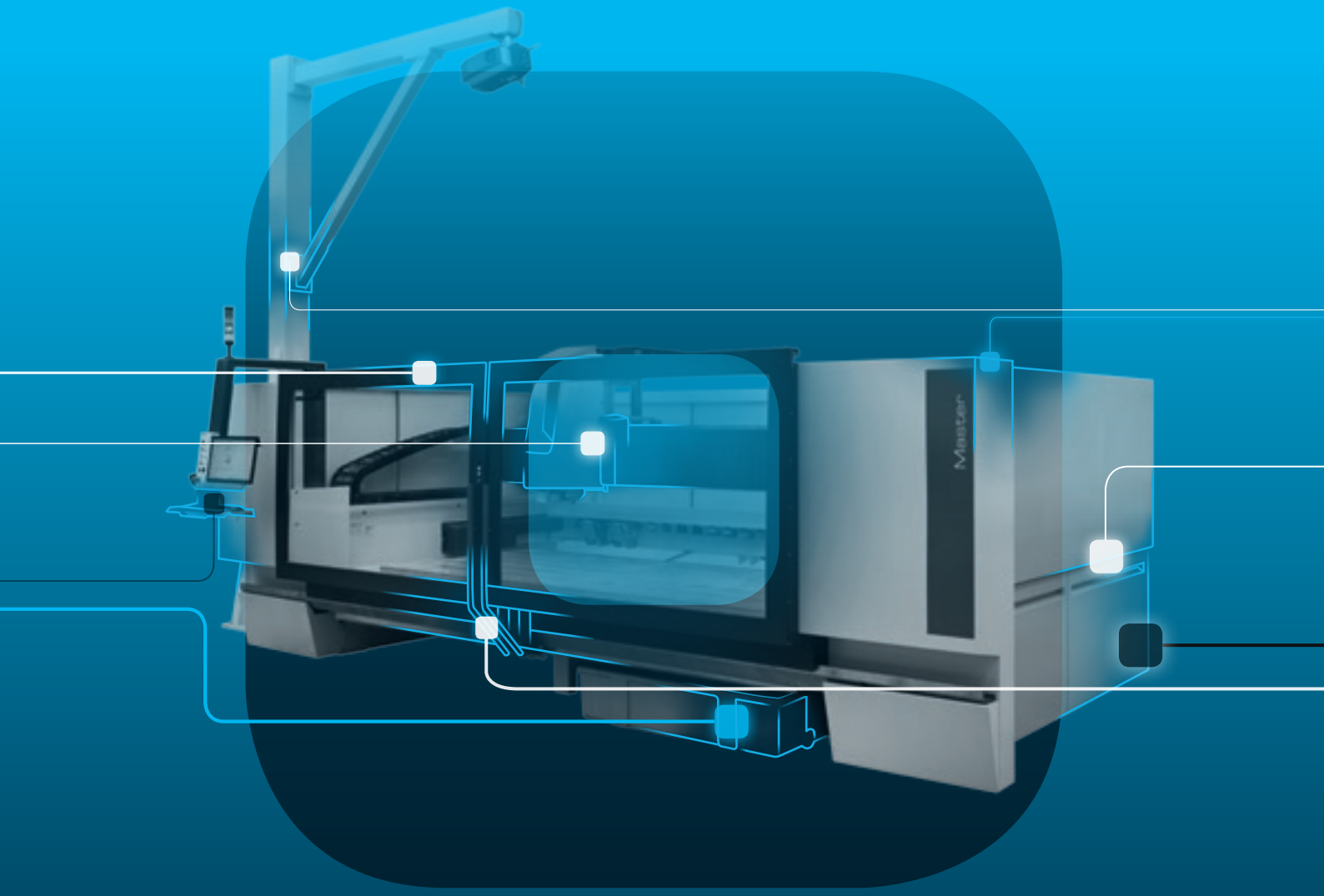
95%
of orders dispatched on time.

30
spare parts staff in Italy and worldwide.

150
orders processed every day.

SOPHIA

GREATER VALUE FROM MACHINES



SOPHIA is the IoT platform created by Intermac in collaboration with Accenture which enables its customers to access a wide range of services to streamline and rationalise their work management processes.

It allows alerts and indicators to be sent to the customer in real time, in relation to production, the machines used and the type of process carried out. These are detailed instructions for more efficient use of the machine.

- 10% CUT IN COSTS
- 50% REDUCTION IN MACHINE DOWNTIME
- 10% INCREASE IN PRODUCTIVITY
- 80% REDUCTION IN PROBLEM DIAGNOSTICS TIME

SOPHIA TAKES THE INTERACTION BETWEEN CUSTOMER AND SERVICE TO A HIGHER LEVEL.

IoT SOPHIA

IoT - SOPHIA provides a comprehensive overview of the specific machine performance features, with remote diagnostics, machine stoppage analysis and fault prevention. The service includes a continuous connection with the control centre, the option of calling for assistance from within the customer app (such calls are managed as priorities), and an inspection visit for diagnostic and performance testing within the warranty period. Through SOPHIA, the customer receives priority technical assistance.

PARTS SOPHIA

PARTS SOPHIA is the easy new, user-friendly and personalised tool for ordering Intermac spare parts. The portal offers customers, dealers and branches the chance to navigate within a personalised account, consult the constantly updated documentation of the machines purchased, and create a spare parts purchase basket indicating the real time availability in the warehouse and the relative price list. In addition, the progress of the order can be monitored at all times.

INTERMAC

in collaboration with accenture

INDUSTRY 4.0 READY

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

Intermac'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.

COMPLETE RANGE OF SOLUTIONS FOR GLASS

INTERMAC

CUTTING TABLES FOR FLOAT GLASS


Genius RS-A


Genius CT-A series


Genius CT-Plus series


Genius CT-RED series

CUTTING TABLES FOR LAMINATED GLASS


Genius LM series


Genius LM-A series

COMBINED CUTTING LINES FOR LAMINATED AND FLOAT GLASS


Genius Comby Lines

COMBINED CUTTING LINES FOR LAMINATED AND FLOAT GLASS


Genius Lines & Systems

WATERJET


Primus series

DOUBLE EDGING MACHINES AND LINES


Busetti FK


Busetti F series


Busetti P series


Made-to-measure solutions

WORK CENTRES


Master 23


Master One


Master 33.3-38.3-45.3


Master 33.5-38.5-45.5- 45.5Plus

OVERSIZE WORK CENTRES AND AUTOMATIC CELLS


Master 63-65


Master 95


Master 185


Master with belts

OVERSIZE WORK CENTRES AND AUTOMATIC CELLS


Master work cells

WORK CENTRES ENGRAVING


Master 34

VERTICAL WORK CENTRES


Vertmax series


V-Loader

TOOLS FOR GLASS


Diamut tools

MOVETRO

STORAGE SYSTEMS


Classifiers

HANDLING


Loading devices


Arpa


Telescopic loading devices

HANDLING


Shuttles


Lite shuttle

MADE WITH INTERMAC

EVERYTHING IN LINE WITHOUT TOUCHING THE GLASS

Right in front of the current TIV (Tout l'Intérêt du Vitrage Isolant) facility with offices in Treize-Septiers (in the small French city of Nantes) the ambitious project of Jean Yves Glumineau becomes a reality: an all new system for transforming flat glass "TAV" (Tout l'art du verre). An innovative project characterised by the maximum automation of processes, aimed at creating a true Smart Factory. The new facility is equipped with specialised technology for cutting, grinding/polishing, ceramic moulding, glazing, and tempering of glass: new machining operations that have increased the range of products already available from the parent company TIV.
An impeccable technological partner which the company could entrust with meeting this challenge was needed. "Our objective with this new facility was to have everything along the production line and to not have to manipulate the glass. We needed new, technologically advanced instruments in order to eliminate the dispersions caused by the transfer of glass sheets from one machine to another, minimising as much as possible the manual handling of the glass, and thus avoiding that operators spend most of their time pushing carriages rather than being efficient and productive on the machines."
Advanced machining operation technology, connectivity, tools for the simulation of products and processes, preventive traceability: these are the primary themes undertaken by Intermac and TAV in their ambitious pursuit of automation, integrating innovative resources and know-how.
The challenge of the TAV project was that of combining a wide range of skills and developing a high level of automation through the integration of robotics. The machines inserted in the automation process continuously and constantly optimise their performance. The solutions developed by Intermac give clients the certainty that they know precisely what is being produced and what level of efficiency is being achieved. Automation reduces the risk of error and the need for manual intervention to zero, so much so that productive output approaches perfection. But that's not all: now clients can know the processing time for an order and be able to maximise it in order to satisfy market demands as quickly as possible. In particular, to respond to the need for maximum flexibility, a Batch-One process was developed that optimises production and personalises large production batches as well. In this way TAV is able to rapidly adapt its production to trends in demand and to market needs. "We wanted all of our machines to be able to communicate with one another, working in a coordinated way without the need for operator intervention. We have succeeded brilliantly."

LIVE THE EXPERIENCE

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