

# GENIUS CT-RED

HIGH-PERFORMANCE CUTTING  
TABLES AND LINES FOR FLOAT GLASS



 **INTERMAC**

# LIMITLESS PRODUCTIVITY



## THE MARKET EXPECTS

a change in manufacturing processes, enabling companies to accept the largest possible number of orders. This is coupled with the need to maintain high quality standards while offering product customisation with quick and defined delivery times, as well as satisfying the requirements of even the most highly-automated industries.

## INTERMAC RESPONDS

with technological solutions that guarantee high-quality, reliable performance over time.

**Genius CT-RED** is the range of high-performance cutting tables for both **REGULAR** and **JUMBO** sheets of float glass, for working on cutting lines over two or three shifts. It provides maximum productivity, reliability and durability over time, courtesy of quality components and cutting-edge technological solutions that guarantee continuous cycle, maintenance-free machining precision.



## **GENIUS** CT-RED

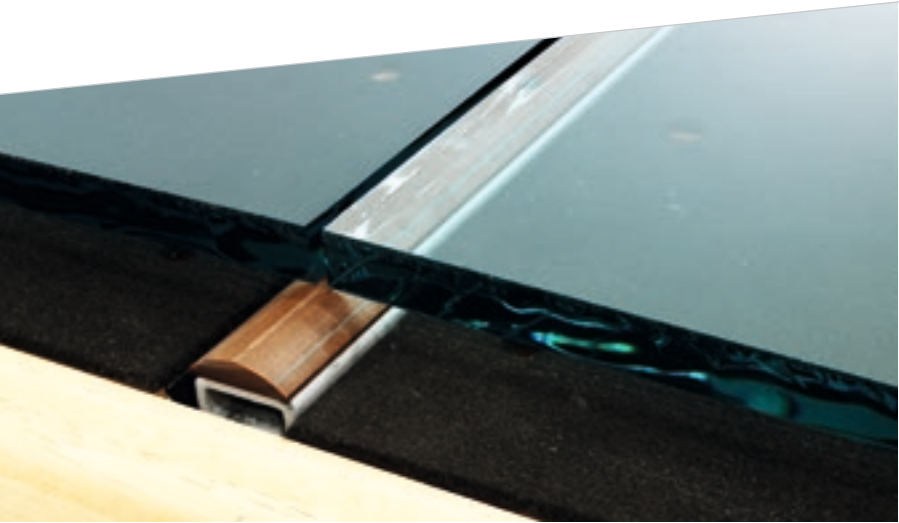
- CUSTOMISABLE SOLUTIONS FOR EVERY CUTTING REQUIREMENT
- GUARANTEED RELIABILITY OVER TIME
- MAXIMUM MACHINING PRODUCTIVITY AND FLEXIBILITY
- HIGH CUTTING PRECISION WITH SIMPLE AND INTUITIVE TECHNOLOGY

# CUSTOMISABLE SOLUTIONS FOR EVERY REQUIREMENT



THE ENTIRE GENIUS RANGE IS DESIGNED FOR CUTTING LINES THAT CAN WORK ON TWO OR THREE SHIFTS, AND WHICH ARE USED TO PROCESS LARGE VOLUMES.

**The Genius CT-RED range of cutting tables is ideal for even the most demanding of glassworks companies, which require machining tools that can withstand high production loads.**



**BREAK-OUT BARS**

The transverse and longitudinal pneumatic bars enable break-out operations to be performed on glass.

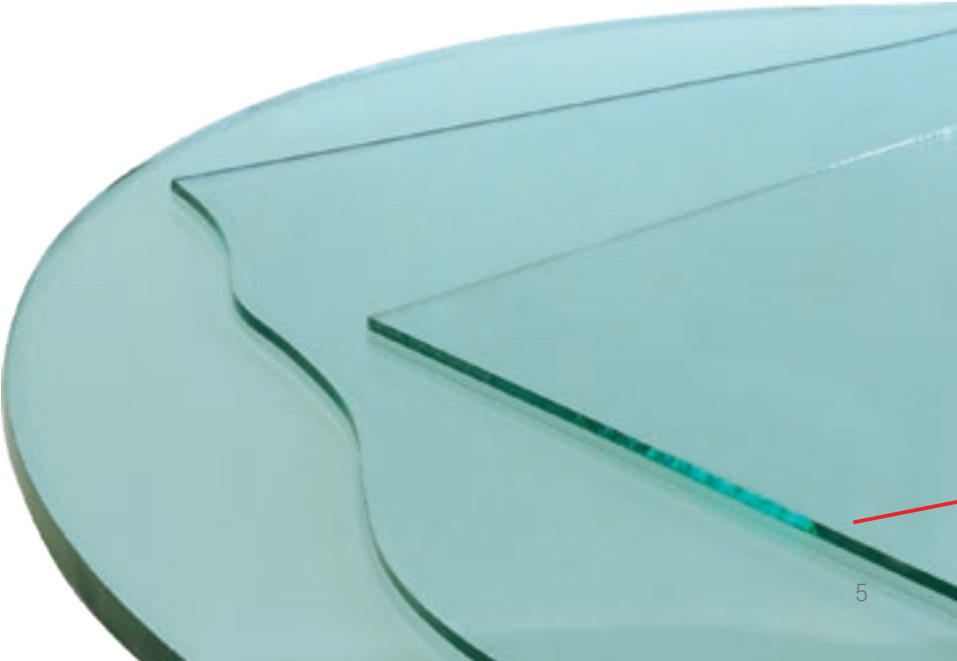


**VINYL CUTTING**

Genius CT-RED cutting tables guarantee superb machining quality, even when cutting vinyl.

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

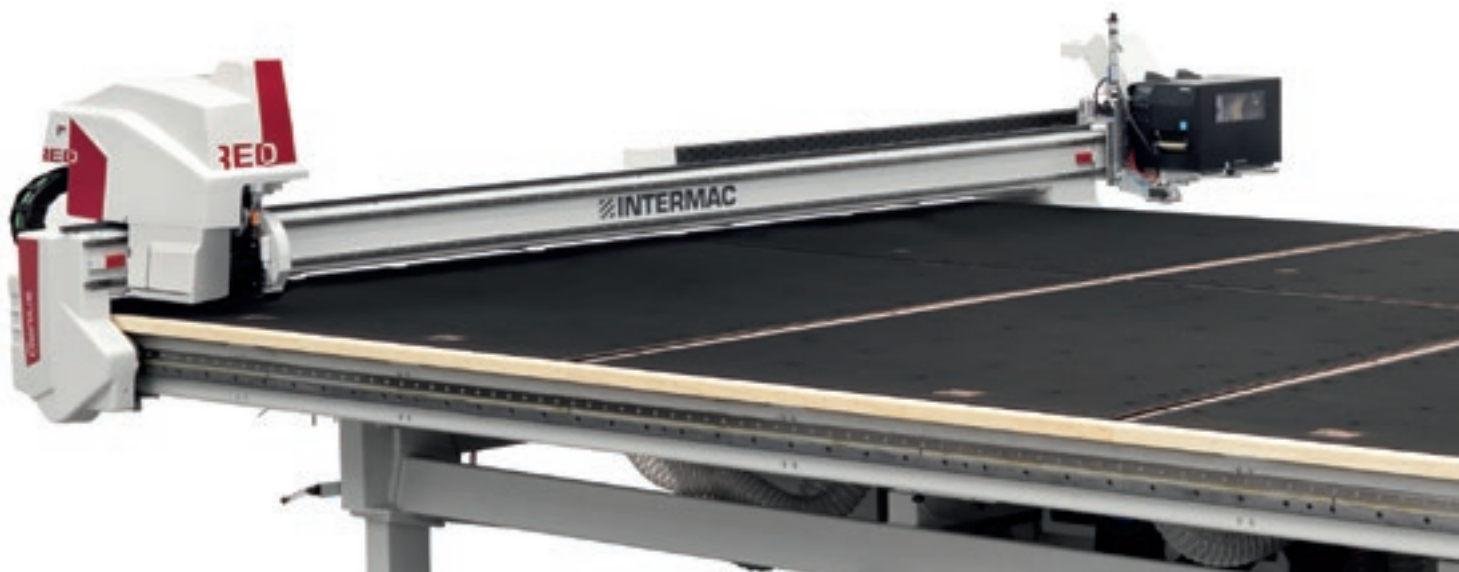
The Genius cutting table ensures that materials are fully optimised, significantly reducing waste.



# GUARANTEED RELIABILITY OVER TIME

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

A motorised gantry axis system moves the cutting bridge, and ensures maximum precision and stability during machining.



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.



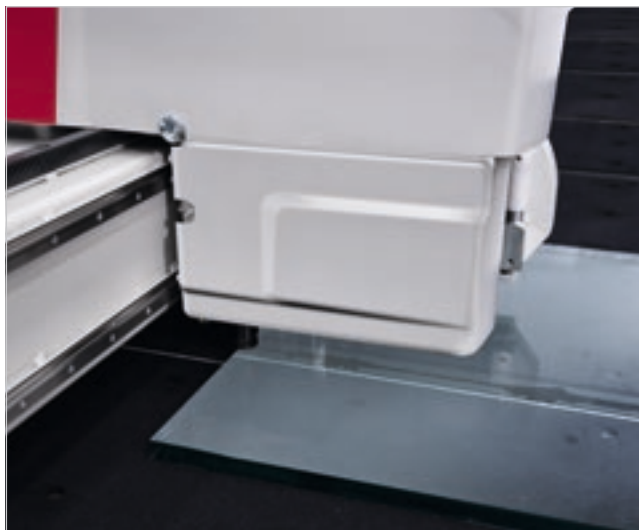
- ▶ Acceleration 10m/sec<sup>2</sup>
- ▶ Speed 200 m/min.
- ▶ Precision  $\pm 0.15$  mm

# MAXIMUM QUALITY OF MACHINING AND RESULTS

The 6-position automatic tool magazine is an Intermac-patented technology that can be used to make different cuts on a single sheet, greatly improving the quality of the end result.



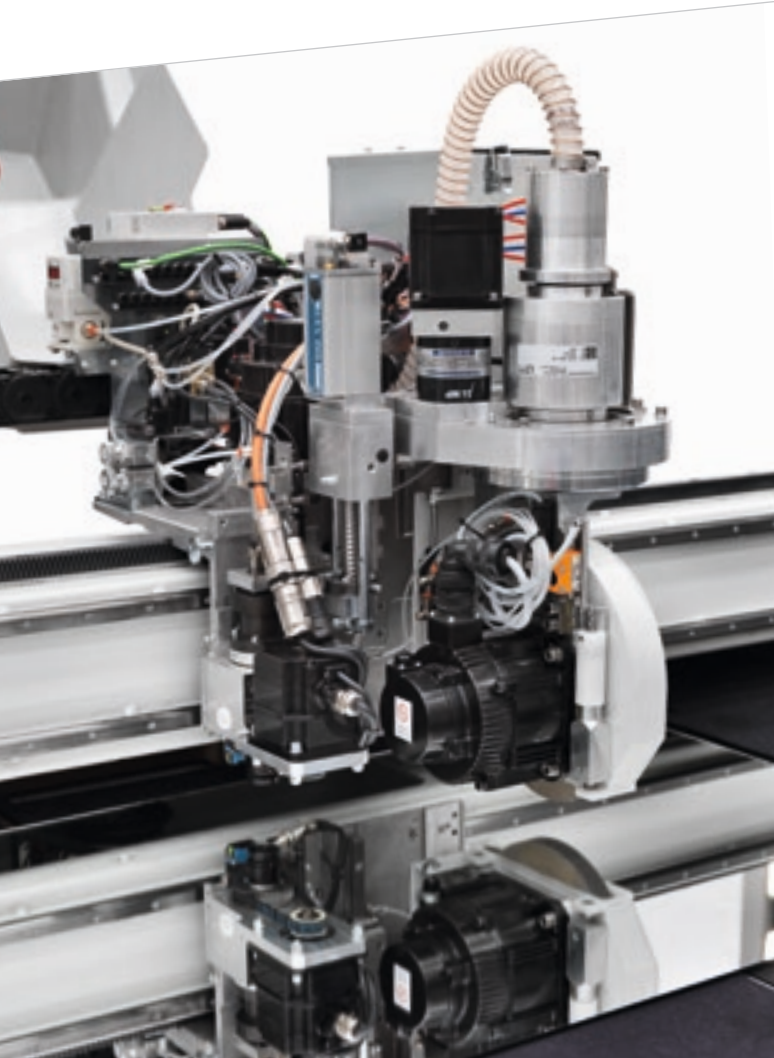
The roller-holder cones allow the cutting tools to be changed automatically.



## 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.

# 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-Red offers a complete range of hi-tech solutions, to maximise the productivity of 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-RED can perform low emissivity (Low-E) removal operations, thanks to a series of optional devices dedicated to the various production requirements.**

## LOW-E REMOVAL



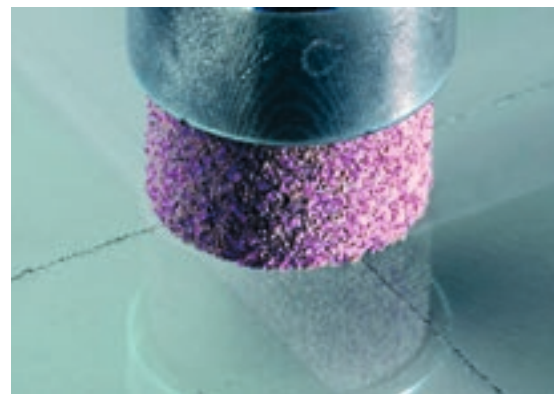
### BCR (BRUSH COATING REMOVAL) DEVICE

For removal of low-emissivity film via a motorised metal brush, with adjustable consumption recovery. Standard removal of 20mm width.



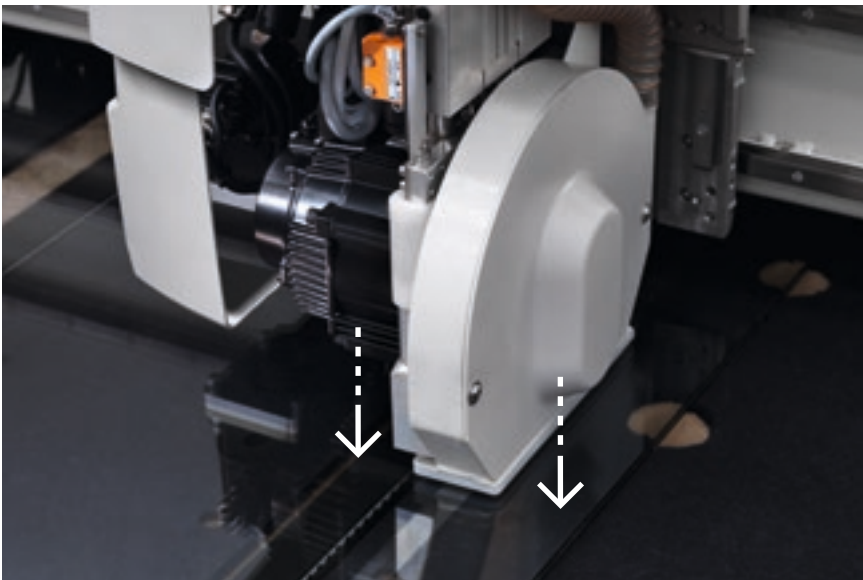
### ABRASIVE TOOL

20mm diameter cup grinder in abrasive material for removing low emissivity film.



**TCR (TANGENTIAL COATING REMOVER) DEVICE**

for removing the low emissivity film with a 200 mm-diameter abrasive grinding wheel. Ensures top productivity and a long lifespan.

**CONSTANT, MAXIMUM QUALITY REMOVAL**

thanks to:

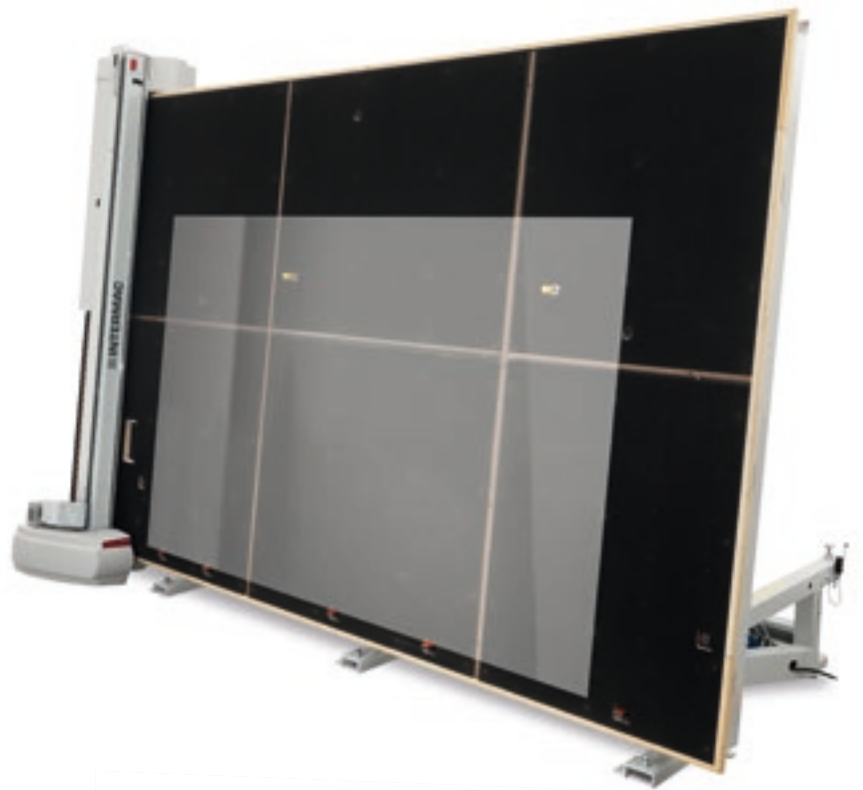
- ▶ Hood positioning at 1 mm from the glass surface, with automatic grinding wheel wear compensation
- ▶ Suction device with a residue collection tank on the cutting carriage.
- ▶ Enhanced suction available for treating special protective materials.



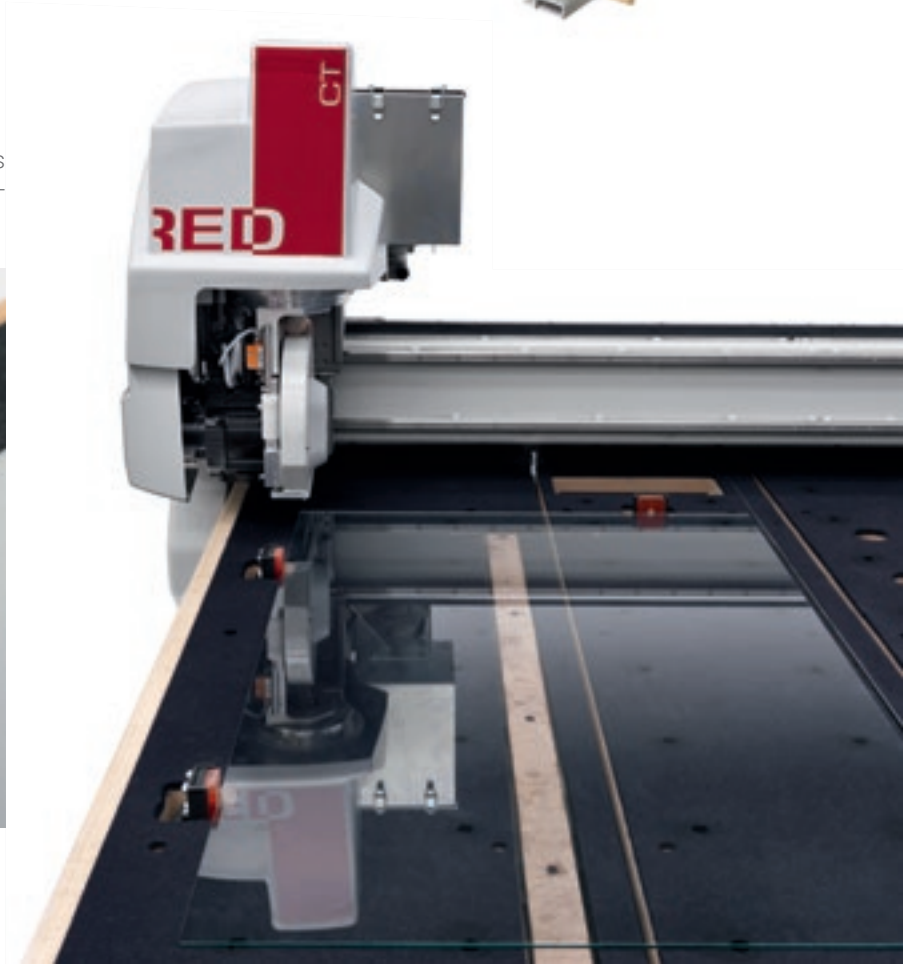
Grinding wheels with a diameter of 200mm and a thickness of 20mm, with varying degrees of hardness depending on the characteristics of the low-emissions film. Automatic grinding wheel removal and dressing system.

# ERGONOMICS AND FACILITATED HANDLING

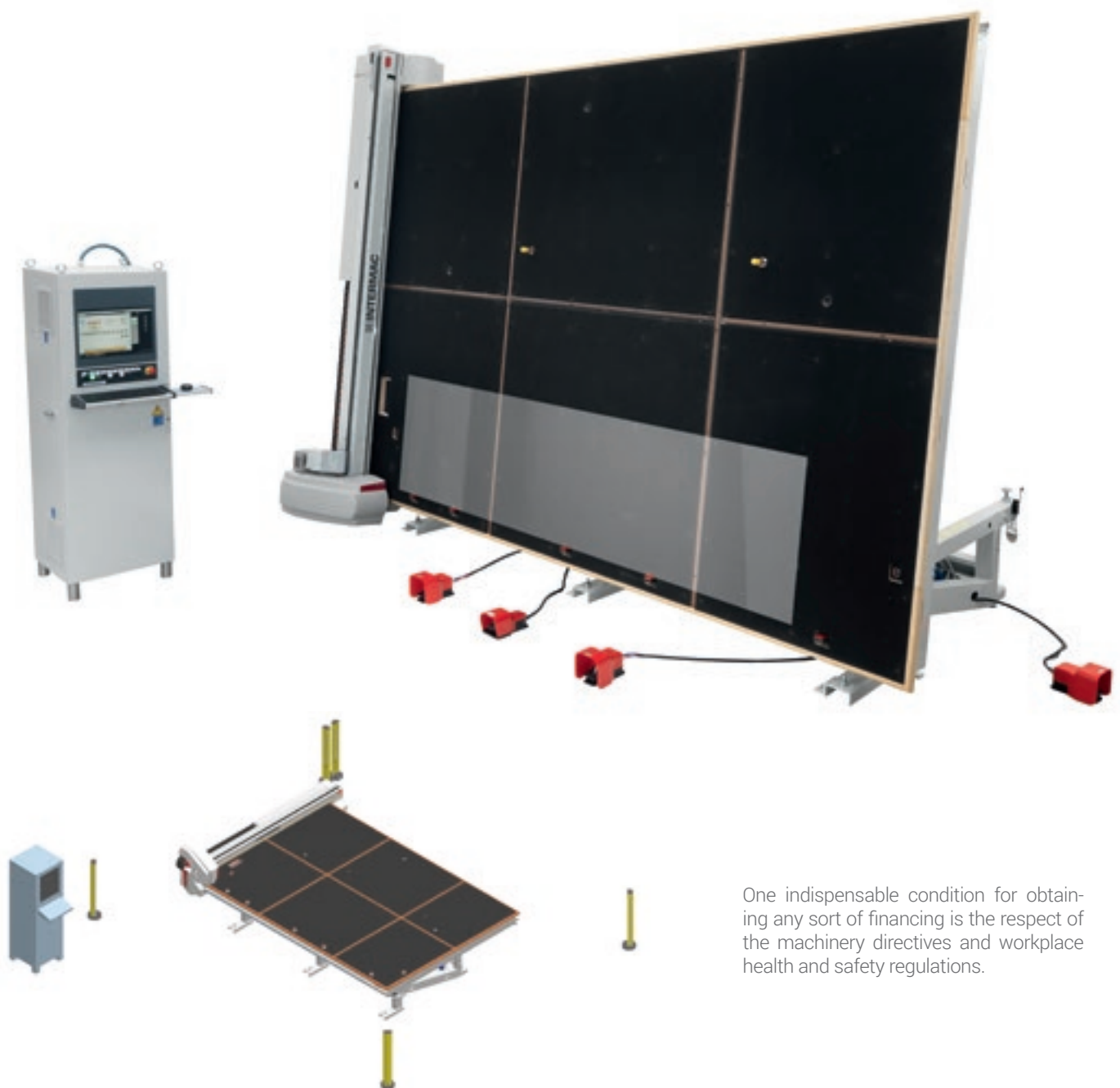
Smooth, even tilting of the table enables large sheets to be loaded.



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



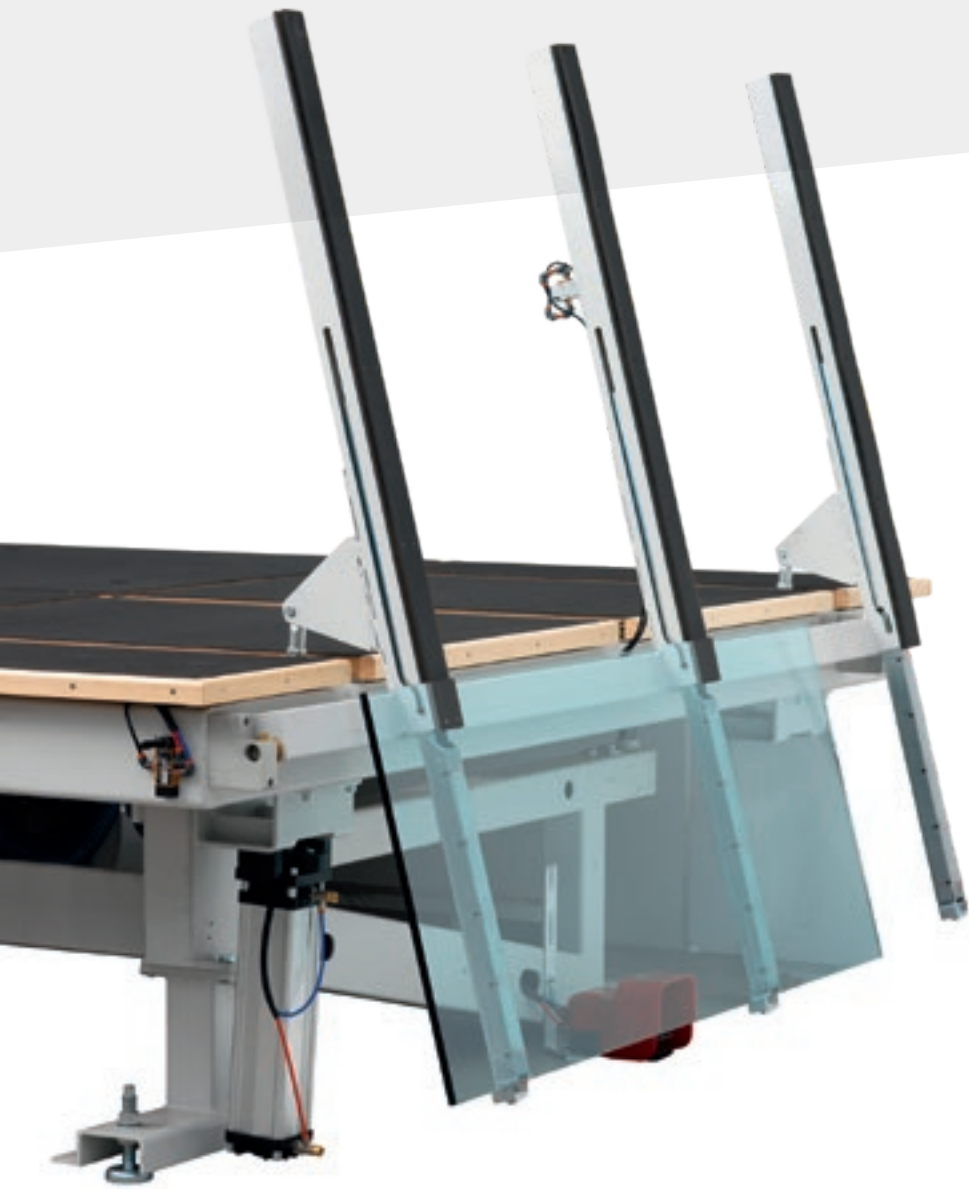
# PROTECTION AND SAFETY FOR ALL MACHINING OPERATIONS



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 and/or accidents.**

# ABSOLUTE MACHINING FLEXIBILITY



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

## ST SERVICE BENCHES

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



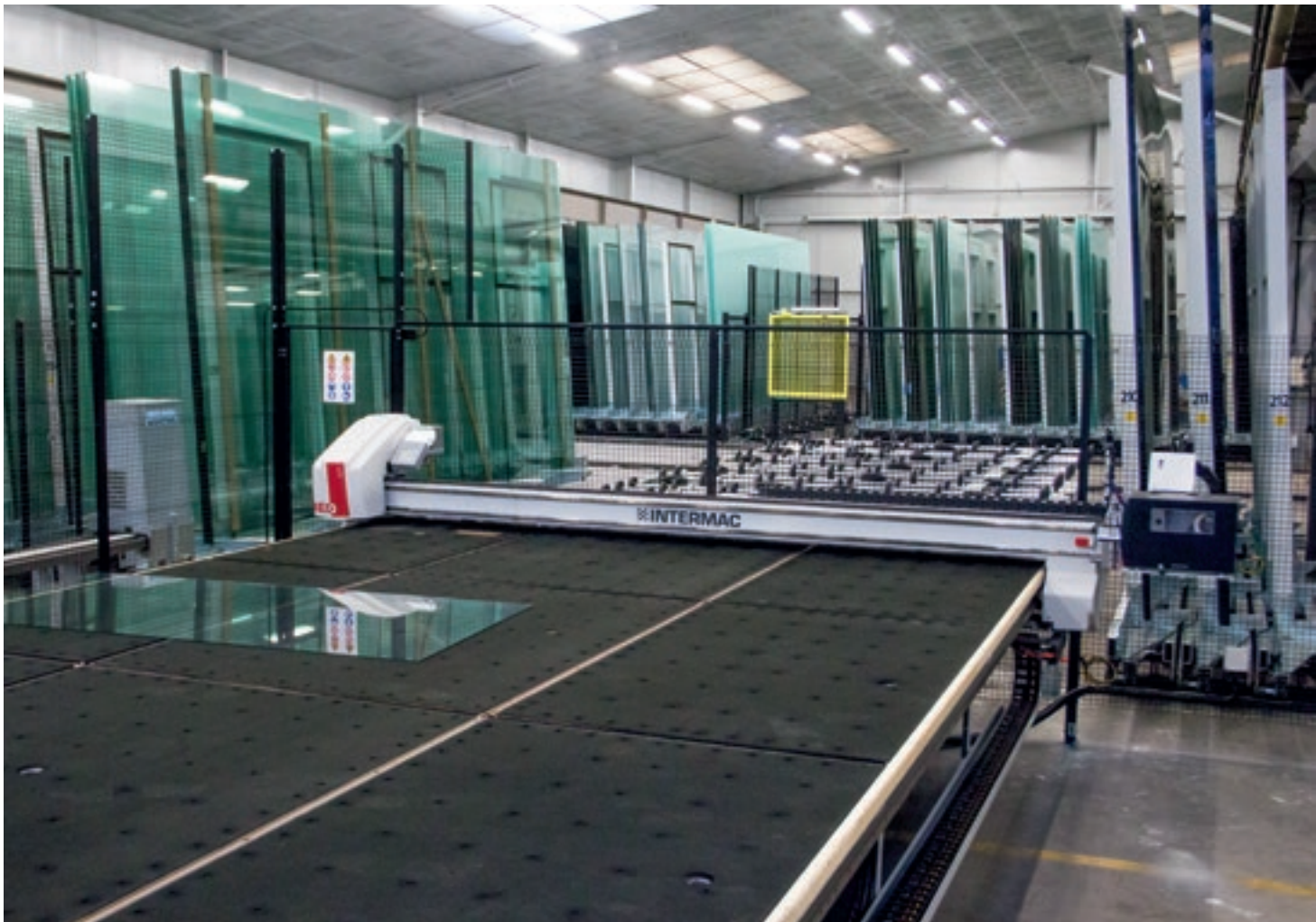
Thanks to the perfect integrability of Intermac's machines, and depending on production requirements, Genius cutting benches can be combined with ST shearing service benches.



Genius 61 ST

# HIGH PERFORMANCE THANKS TO PERFECT IN LINE INTEGRABILITY

Both the stand-alone and automated in line solutions are governed by process optimisation software, with a complete range of technologies that includes Movetro intelligent storage and handling systems, integrated with the Intermac Genius range of 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.

# CO MIBY

## INTERMAC TECHNOLOGY

Comby lines can be integrated into small spaces for cutting both float and laminated glass, for high productivity cutting operations. They are the result of a clever combination between the Genius CT-RED cutting tables (for float glass cutting) and the Genius LM-A tables (for laminated glass cutting).





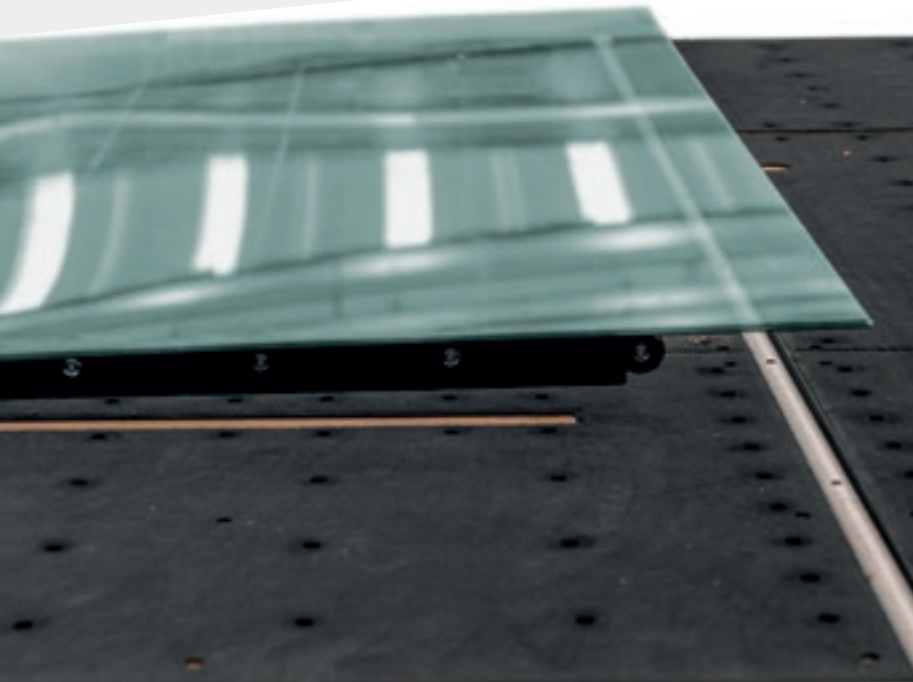
# INTELLIGENT COMBINATIONS

Comby Lines represent a perfect combination of the two float/laminated glass cutting tables that guarantee high productivity, thanks to the addition of:

- bars on float table
- suction cups on float cutting bridge
- Intermac-patented vertical buffer on float table
- large belts on laminate cutting module
- break-out bar on laminate table.



# OPTIMISATION OF SPACE WITHOUT COMPROMISING ON PRODUCTIVITY



## 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.

- ▶ Maximum process automation, enabling high volumes of laminated glass to be produced every shift, within a limited space.
- ▶ The movement of the glass is automated.
- ▶ Option to perform static "X" break-out operations on float glass.



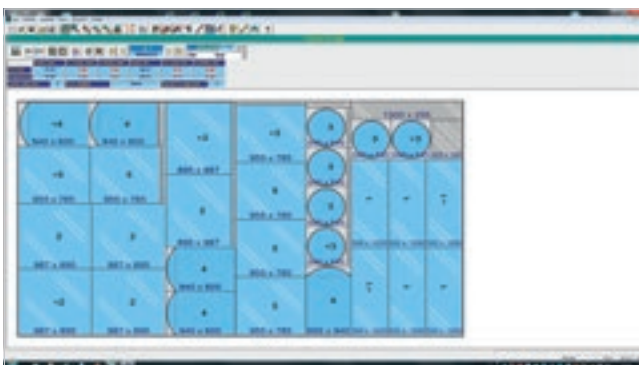
# MAXIMUM EASE OF USE

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



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

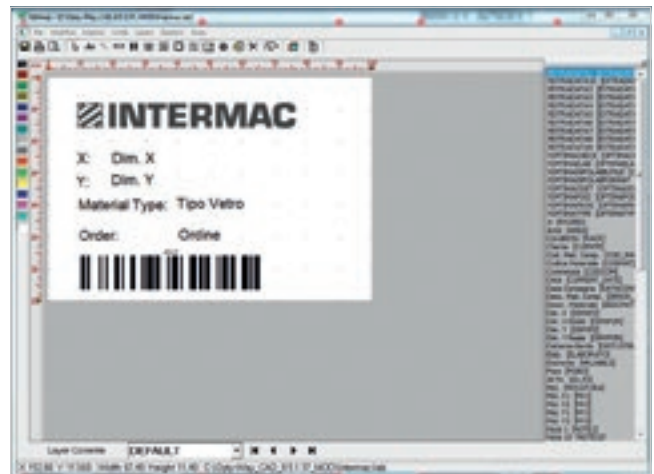
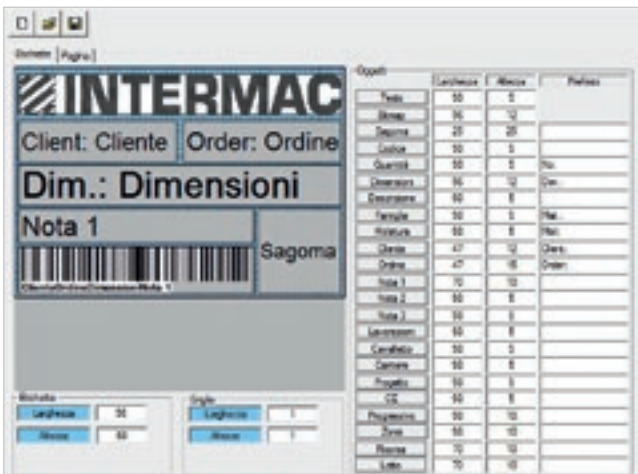
- Ideal both for those using CNC machines for the first time and operator who already have programming experience.
- Management of the working parameters of the machine.
- Creation and modification of cutting patterns and/or of geometric or non-geometric shapes.
- Modules for production report management.



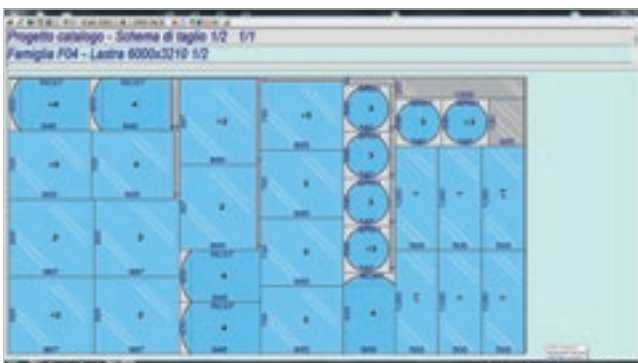
## OPTIMISATION SOFTWARE

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



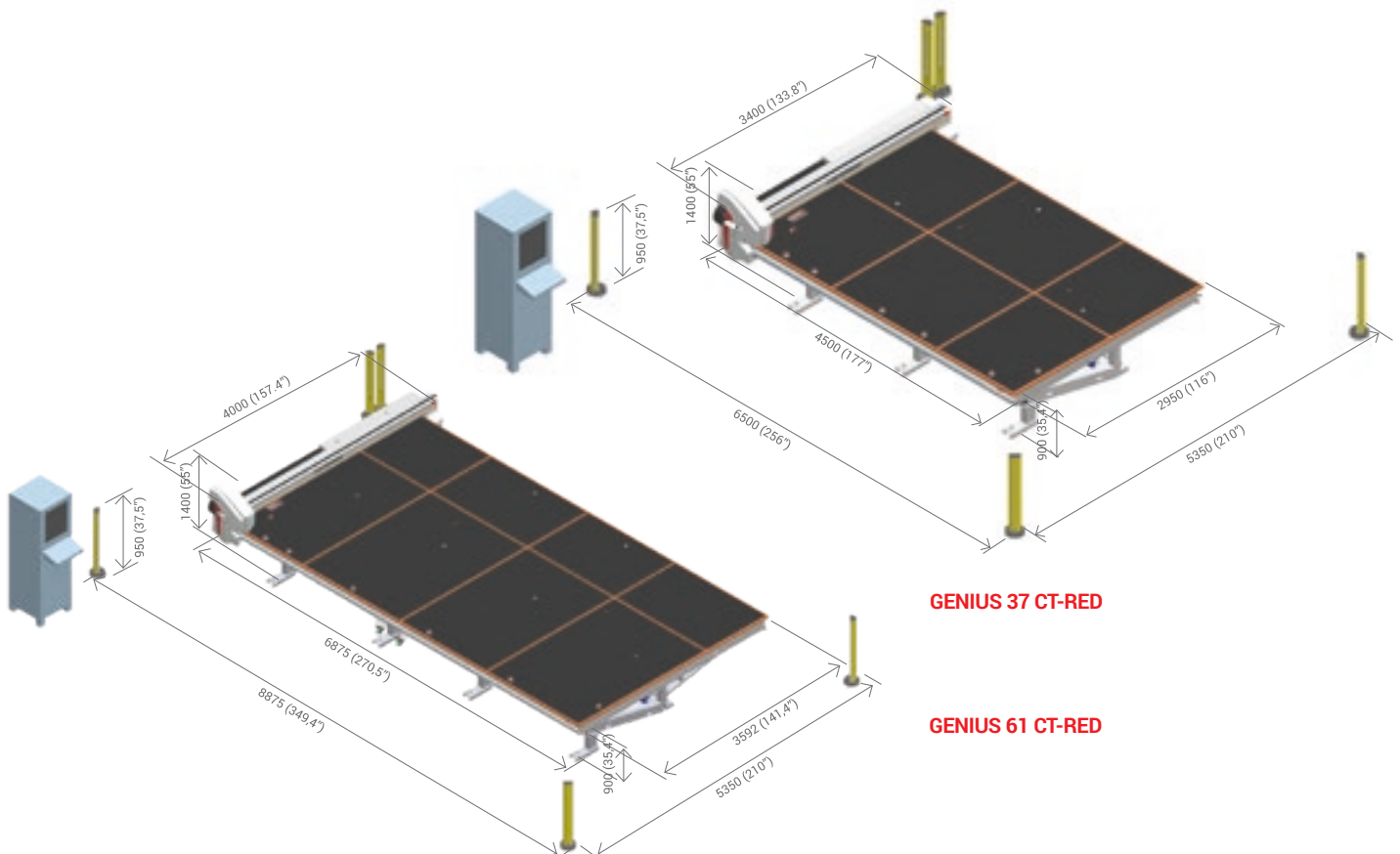
## CUTTING PATTERN DISPLAY

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

# TECHNICAL SPECIFICATIONS

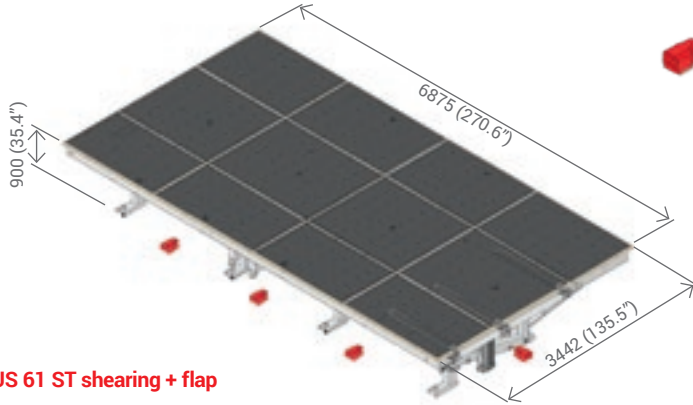
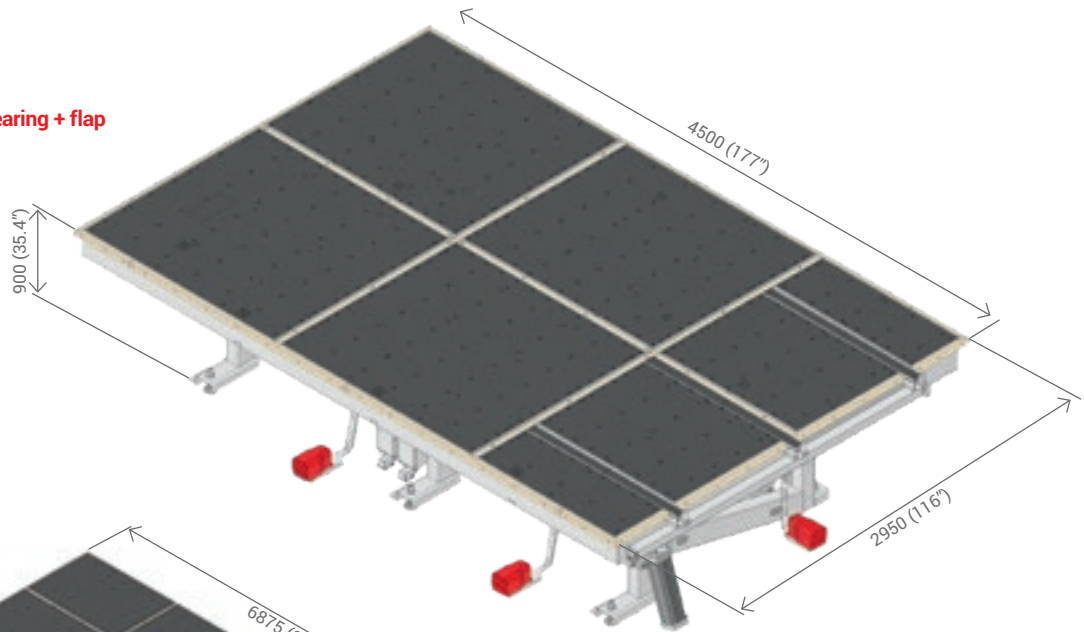
## STAND ALONE CONFIGURATION

		GENIUS 37 CT-RED	GENIUS 61 CT-RED
Machinable dimensions	mm	3710 x 2760 3810 x 2750 (opt.)	6100 x 3350
Machinable thickness	mm	2-19 (25 opt)	2-19 (25 opz / max 1000 kg)
Max axle movement speed	m/min	200	200
Max acceleration	m/sec <sup>2</sup>	10	10
Positioning precision of the working head	mm	± 0,15	± 0,15
Straight and shaped optimisation (optional)		yes	yes
Shearing bars (optional)		2 + 1	3 + 1/ 3 + 2 (opt.)
Table tilting time (optional)	sec	30 (1 stroke)	30 (1 stroke)
Work table height	mm	900 (-15 / +40)	900 (-15 / +40)
Installed power: fixed table/ tilting table (opt.)	kW	8.8 / 9.57	10.4
Overall weight	Kg	2400	3800



# MACHINE DIMENSIONS IN LINE CONFIGURATION

**GENIUS 37 ST shearing + flap**



**GENIUS 61 ST shearing + flap**

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.

Weighted sound pressure level A (LpA) 77 dB  
Genius 37 CT RED, Genius 61 CT RED  
Uncertainty of measurement K = 4dB (A)

The measurement was carried out in compliance with UNI EN ISO 3746, UNI EN ISO 11202 and subsequent amendments. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Even though there is a relation between emission levels and exposure levels, this cannot be used reliably to establish whether or not further precautions are necessary. The factors determining the actual noise levels to which the operating personnel are exposed include the length of exposure, the characteristics of the work environment, other emission sources (e.g. the number of machines and machining operations nearby). At any rate, the above information allows the operator to better evaluate dangers and risks.

# 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

### TABLES FOR FLOAT GLASS CUTTING



Genius RS-A

Genius CT-A series

Genius CT-PLUS

Genius CT-RED series

### TABLES FOR LAMINATED GLASS CUTTING



Genius LM series

Genius LM-A series

### MACHINES FOR LAMINATED AND FLOAT GLASS CUTTING



Genius Comby Lines

### LINES FOR LAMINATED OR FLOAT GLASS CUTTING



Genius Lines & Systems

### WATERJET



Primus series

### DOUBLE ENDING MACHINES AND SYSTEMS



Busetti FK series



Busetti F series



Busetti P series



Customised solutions

### WORK CENTRES



Master 23



Master ONE



Master 33.3-38.3-45.3



Master 33.5-38.5-45.5-45.5 Plus

### SPECIAL WORK CENTRES AND AUTOMATIC CELLS



Master 63-65



Master 95



Master 185

### SPECIAL WORK CENTRES AND AUTOMATIC CELLS



Master with belts



Master working cell



Master 34

### WORK CENTRES ENGRAVING



Vertmax ONE

### VERTICAL MACHINES



Vertmax series



V-Loader

### VERTICAL WASHING MACHINES



Aqua series

## MOVETRO

### STORAGE & HANDLING SYSTEMS

#### STATIC STORAGE



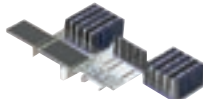
MOVETRO SERIES Classifiers

#### CLASSIC DYNAMIC STORAGE



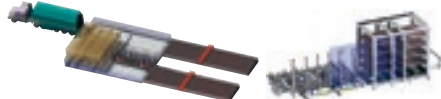
MOVETRO SERIES Loading machines

#### INNOVATIVE DYNAMIC STORAGE FOR MASS PRODUCTION



MOVETRO SERIES Shuttle storage systems

#### INNOVATIVE DYNAMIC STORAGE FOR DYNAMIC PRODUCTION



MOVETRO SERIES Overhead crane - Telescopic loading machines - Arpa

### TOOLS FOR GLASS



Diamut tools

# 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.



## **ADVANCED DIAGNOSTICS**

Digital channels for remote interaction online 24/7. Always ready to intervene on-site seven days a week.



## **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%**

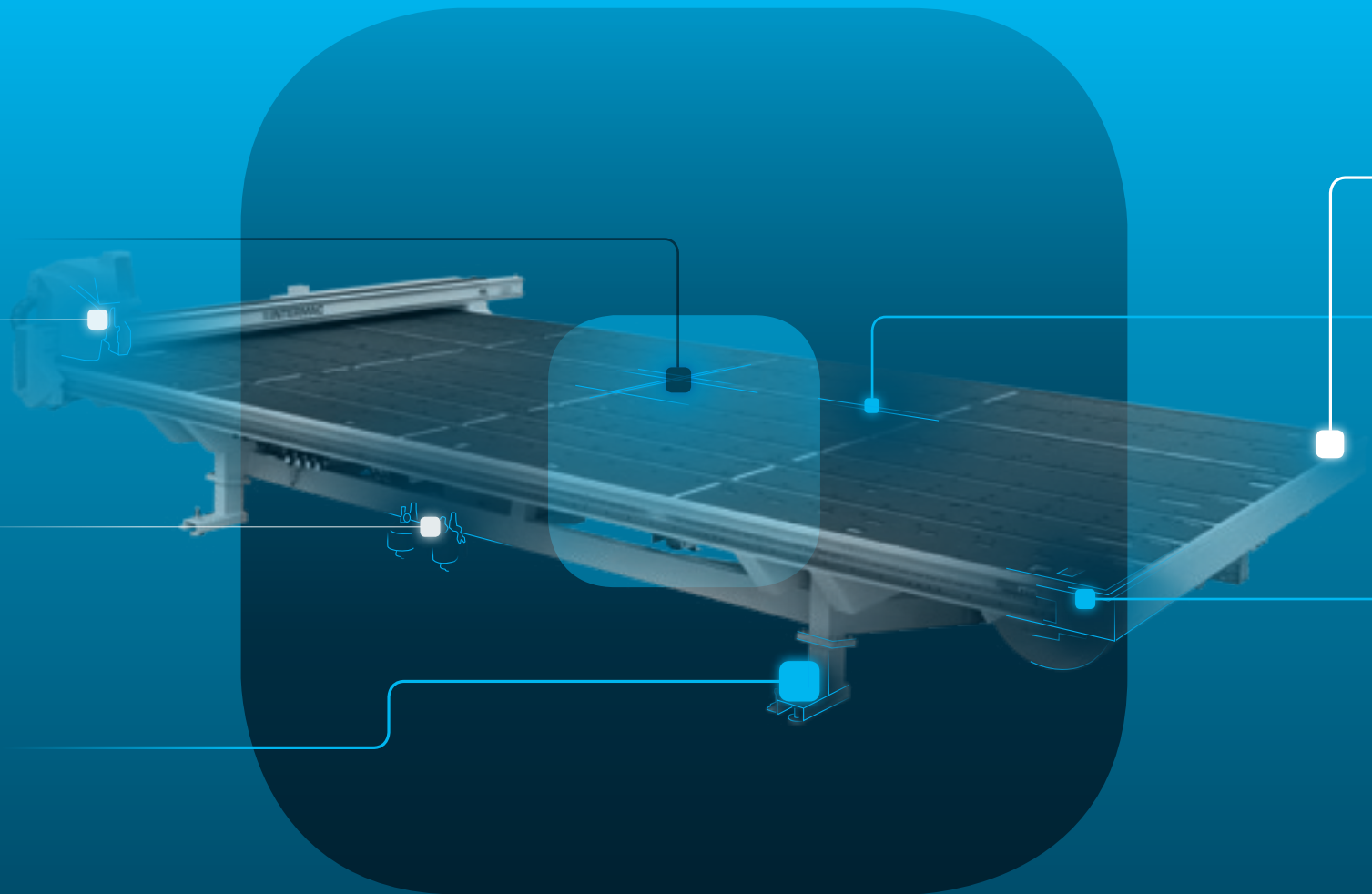
OF SPARE PARTS ORDERS  
DELIVERED IN FULL ON TIME

**88%**

OF CASES SOLVED WITH THE  
FIRST ON-SITE VISIT

# 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**

# 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, technologi-

cally 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



Interconnected technologies and advanced services that maximise efficiency and productivity, generating new skills to serve better our customer.

**LIVE THE BIESSE GROUP  
EXPERIENCE AT OUR CAMPUSES  
ACROSS THE WORLD**

