

# MASTER 850-1200

UNIVERSAL CNC WORKING  
CENTRE FOR STONE



 **INTERMAC**

# THE PERFECT COMBINATION OF POWER AND PRECISION



## THE MARKET CALLS FOR

a change in production processes to meet the ever growing request for personalised products that satisfy customers' specific needs. 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 enhance and support technical expertise and knowledge of processes and materials. The **Master 850-1200** range represents the evolution of large Intermac machining centres for the machining of sheets, slabs and blocks of natural and composite stone. The uniqueness of this machine is that it can achieve a very high quality finish not just on sheets but on slabs and blocks as well. It's the ideal "all in one" solution for marble processing applied to construction, monumental, funerary and architectural projects.



# **MASTER** 850-1200

- **EXTREME POWER AND MAXIMUM PRECISION FINISHING.**
- **STURDY AND ROBUST WITH ELEVATED LOAD CAPACITY FOR BLOCKS OF GRANITE, MARBLE AND STONE.**
- **ELEVATED PERFORMANCE THANKS TO CONTINUED MACHINING OPERATIONS WITH NO INTERRUPTIONS.**
- **MAXIMUM MOVING SPEED TO REDUCE WAIT TIME.**

# MAXIMUM PRECISION FINISHING FOR KITCHEN TOPS

The Master 850-1200 range is the perfect synthesis of extreme power and precise, high-quality finish, an ideal solution that offers the utmost flexibility for machining sheets.



Flutes and recesses on kitchen tops, even with a tilted table.

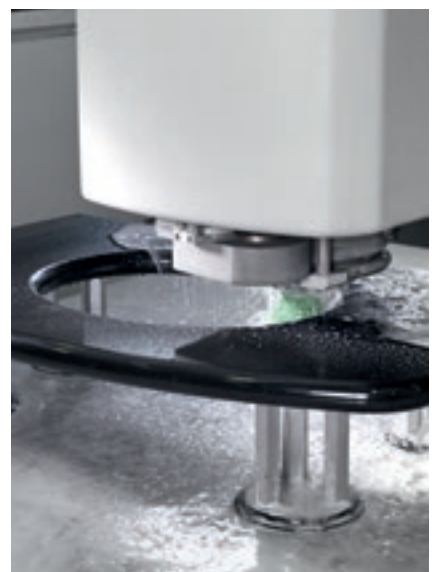
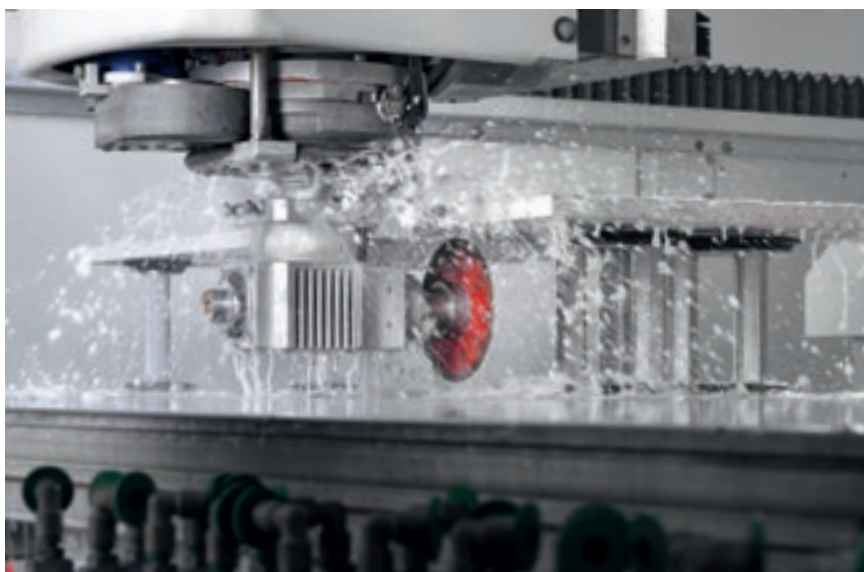


Cup grinding of the external edge.

## IDEAL FOR MACHINING SLABS AND CREATING KITCHEN TOPS

- ▶ Recesses
- ▶ Polished grinding
- ▶ Milling
- ▶ Cup grinding

## CUP GRINDING POLISHING AND CREATION OF SQUARE HOLES



# EASY AND RAPID SHAPING OF SLABS AND BLOCKS

The extreme ease and speed with which slabs and blocks are shaped - thanks to a powerful electrospindle that can drive a disc with a max diameter of 625 or 1000 mm paired with extra long tools - guarantees a high quality finish even when brushing, milling and polishing shaped or convex profiles and surfaces facing different directions.



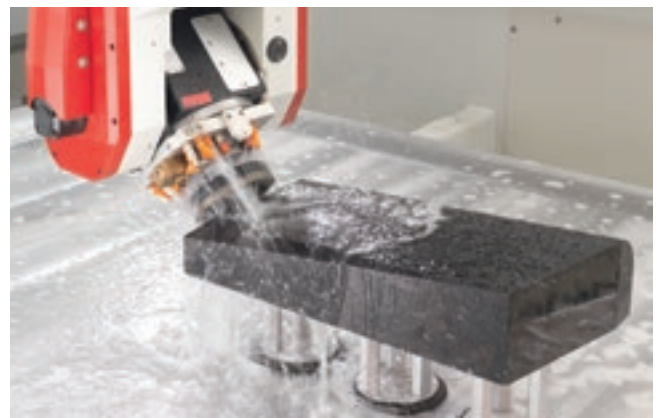
Grinding and polishing the edge of the slab.



5-axis finishing.



Polishing of rounded profiles on slabs.



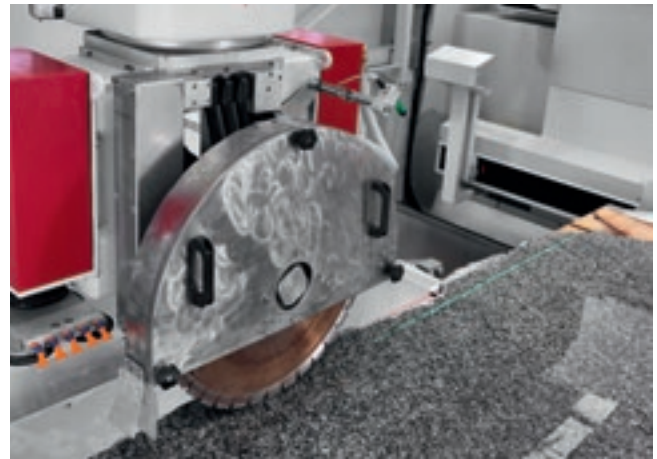
Bevel with variable angle.

## PERFECT FOR 5-AXIS MACHINING ON SMALL SLABS FOR FUNERAL ART

# POWERFUL AND PRECISE FOR MACHINING BLOCKS AND TUBS



Disc cut at any angle.



The solid, hi-tech, 5-axis operating head is perfectly capable of handling more complex machining (e.g. fountains, monuments, tubs, railings and capitals) with disc-shaped milling cutters and can, at the same time, create kitchen tops and handle machining of sheets with the renowned quality of Intermac Machining Centres.

# INNOVATION

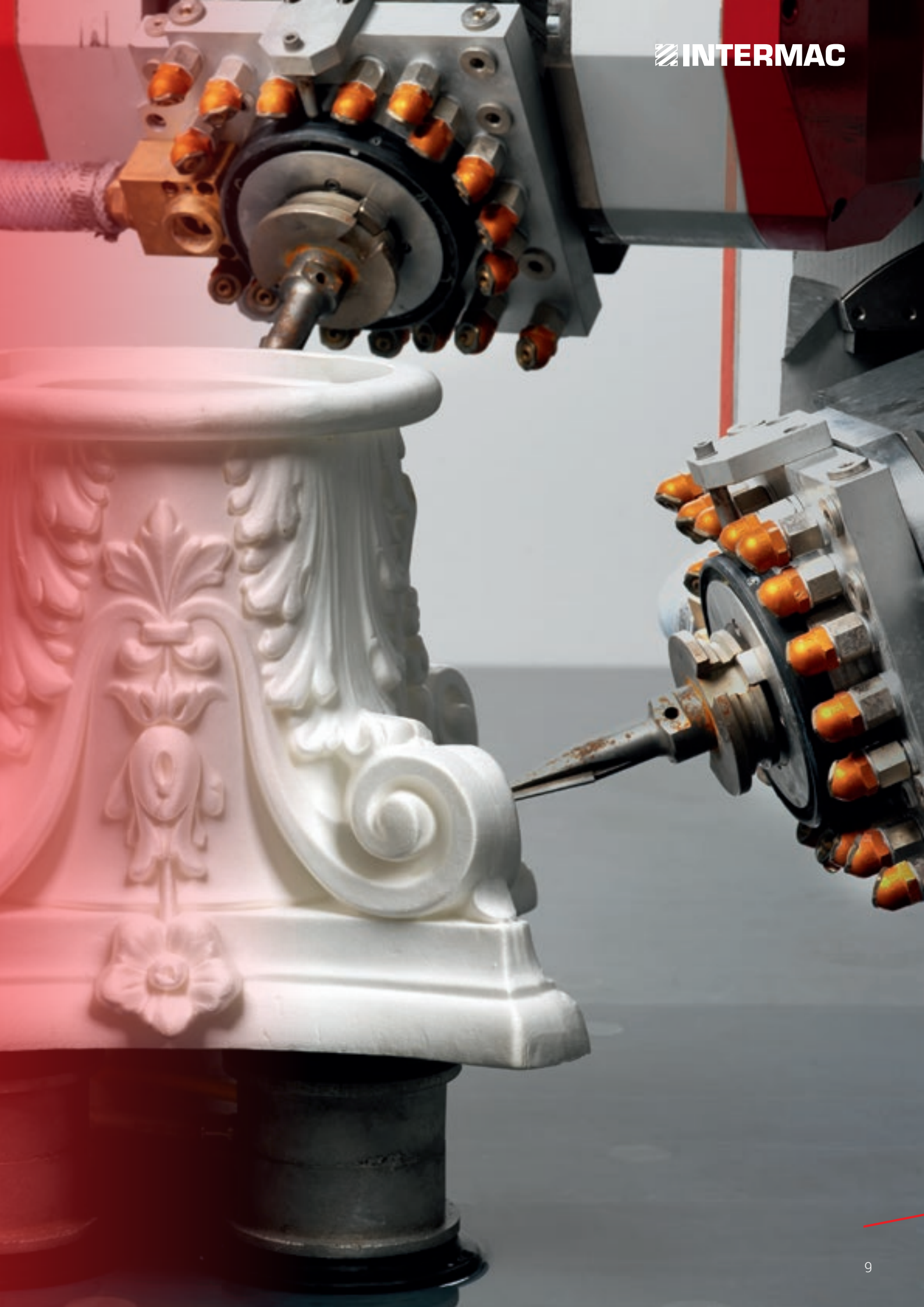


## 5-AXIS TECHNOLOGY

High level technology for the best results and extremely easy to use.

The 5-axis head with endless rotation C axis and tilting A axis (from  $-90^{\circ}$  to  $+90^{\circ}$ ) ensures excellent flexibility and pushes the limit for the execution of complex machining operations.





# STURDY AND ROBUST

**Sturdy and extremely robust with elevated load capacity for blocks of granite, marble and stone.**



## Work table

Steel frame and solid refaced aluminium surface. Low surface to simplify loading with a forklift or jumper carriage. Special care for the comfort of the operator, who can access the surface from all sides and easily get to the tool magazine.



## Fast and precise movement of axes

Movements are carried out using a helical rack and double pinion to ensure precision and durability. An automatic device for automatic lubrication of the guides and of the rack guarantees the enduring reliability of all moving parts.

**Maximum speed of movement up to 60 m/min with acceleration to minimise wait times.**



## Disc saw ideal for shaping blocks and for typical machining of slabs

The Master 850 and 1200 can be equipped with one or two discs with a diameter of 625 mm (Master 850) or 1000 mm (Master 1200). The safe and completely automatic disc changing operation and the presence of the disc don't limit the working area in any way.

# ELEVATED PERFORMANCE



Thanks to a completely automatic system, the extremely rapid and simple mechanical presetter allows for the precise and completely updated measurement of tools while machining, thereby avoiding any error by the operator.



### Up to 59 tools

Several configurations are possible for the tool holder magazine, which can be expanded up to 59 positions, thereby ensuring that continuous machining operations can be programmed with no interruptions to load tools.



The cross-hairs laser guides the operator through the positioning of suction cups and stops, speeding up the preparation of the work surface.



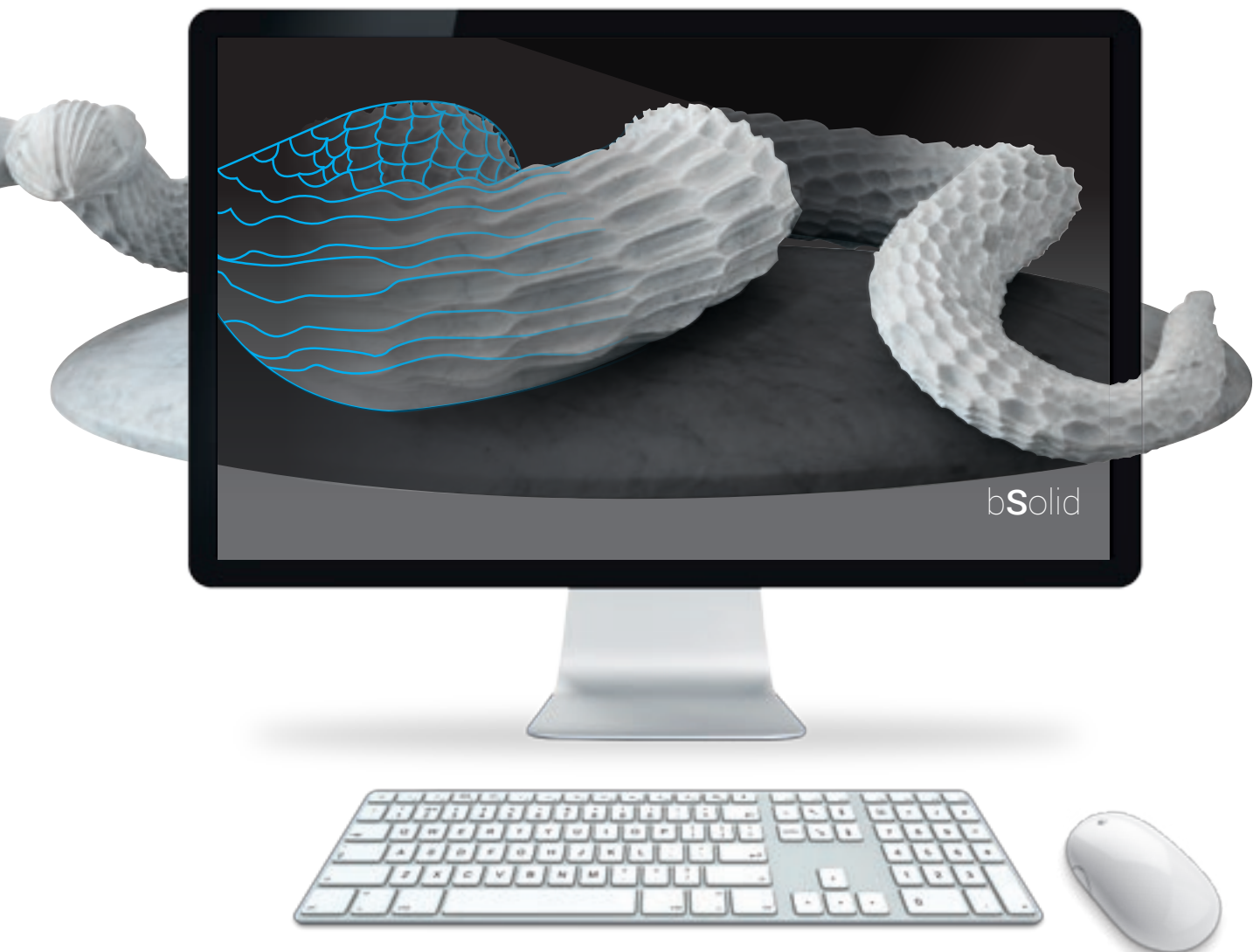
The variable Z thickness tracer maintains a constant machining quality even on pieces with an irregular thickness.

# HIGH-TECH BECOMES ACCESSIBLE AND USER-FRIENDLY

**BSOLID IS A 2D/3D CAD-CAM SOFTWARE APPLICATION THAT'S COMPLETELY PARAMETRIC. WITH A SINGLE PLATFORM, IT SUPPORTS EVERY TYPE OF MACHINING OPERATION THANKS TO THE USE OF PACKAGES CREATED FOR SPECIFIC PRODUCTION NEEDS.**

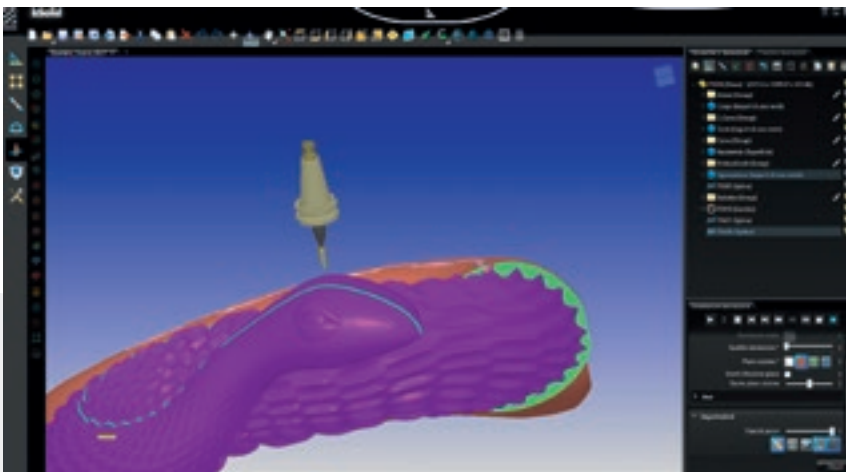
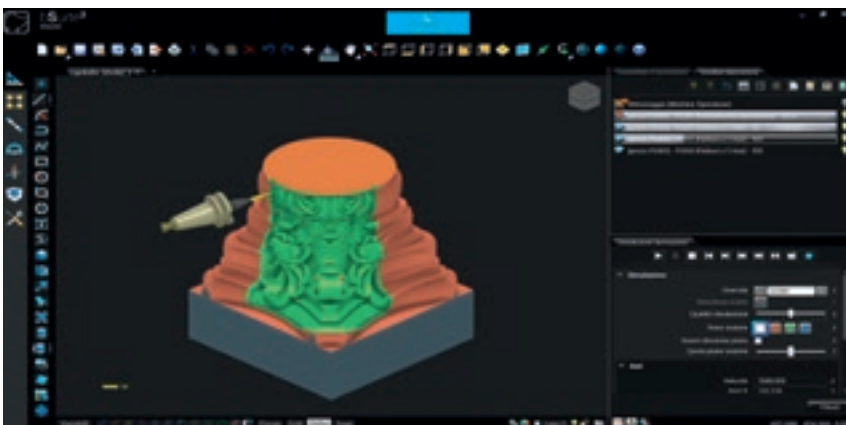
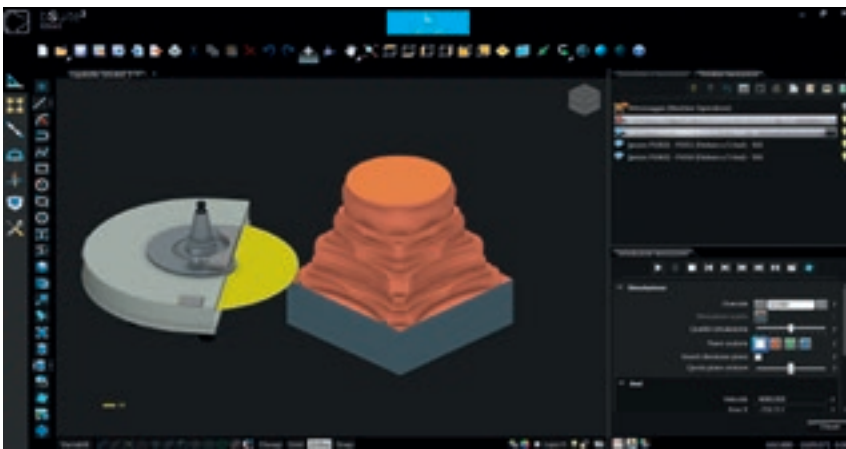


- **Parametric design**  
in just a few clicks, with endless possibilities.
- **Configuration and management of tools**  
with complex shapes.
- **Machining operation simulation**  
and piece preview.



# MACHINING OPERATIONS WITH 5 INTERPOLATED AXES

bSolid's evolved engine for calculations helps make the most of the capacity provided by 5-axis machining centres, allowing for the programming of machining operations using 5 interpolated axes.



# DESIGNING IN JUST A FEW CLICKS AND WITH NO LIMITS

## Specifically designed technology, ideal for the funerary sector.

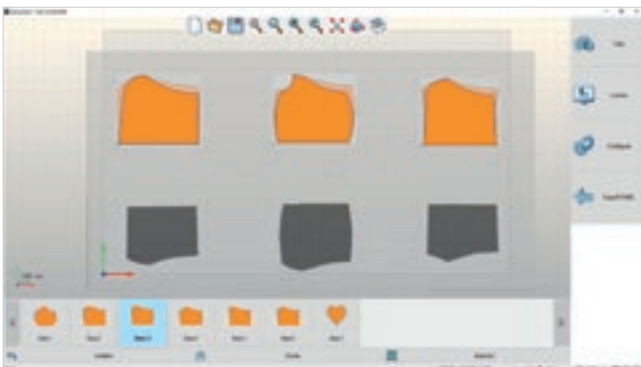
The Master 850 and Master 1200 are equipped with technology specifically designed for the production of funerary works, based on:

- ▶ being able to carry out the typical machining operations
- ▶ video camera recognition of the distribution of pieces on the surface of the machine
- ▶ simple programming through dedicated CAD/CAM software
- ▶ maximised productivity by machining more than one piece in a single program.



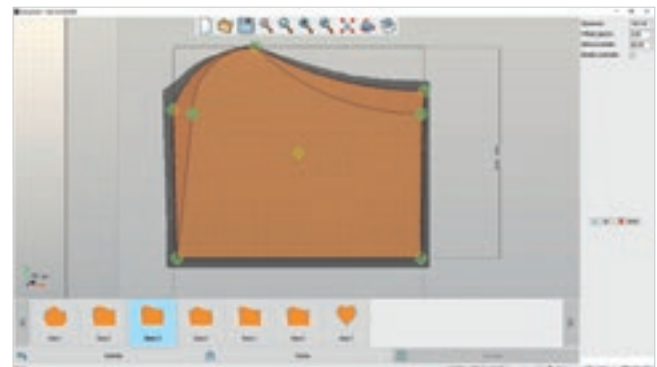
### Scanning of the machine's work surface by video camera

- ▶ scanning of the machine surface by means of a video camera on the edge of the head
- ▶ recognition of the size and position of pieces on the plane
- ▶ generation of an image to be imported in CAD/CAM



### Software - parametric Library of models and machining operations

- ▶ models of the most widely used tombstones: design isn't necessary
- ▶ machining technology for typical funerary projects: planning isn't necessary
- ▶ option of personalising the library by creating and adding new models and technology for machining operations

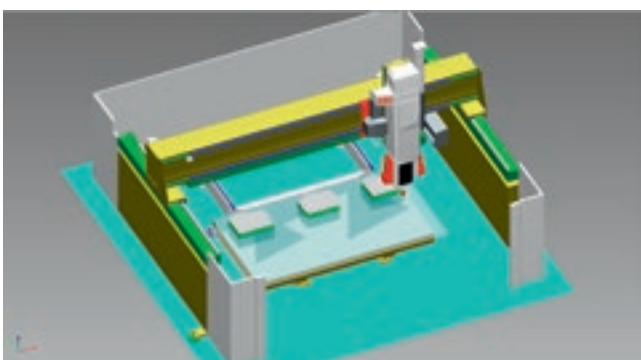


### Software - Simplified design phase

- ▶ models from the library associated with the images imported
- ▶ specific adapting of the shapes to the shape of the pieces present on the imported image: no need to measure the pieces
- ▶ automatic application of the machining operations to the models



### 3D Simulation Software



# SIMPLE AND INTUITIVE

The new, lightweight integrated console is easy to handle and extremely powerful and allows for rapid positioning of the head.



The use of a PC with Windows guarantees a particularly easy, user-friendly approach for the operator and full connectivity with network systems and the optic/magnetic supports available on the market.



## INDUSTRY 4.0 READY

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



Intermac's commitment is to transform our customers' factories into real-time factories 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 who machine 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.**

# SERV ICE & 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 system 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 manning a Teleservice Centre.

**35**

certified dealer technicians.

**50**

training courses in a variety of languages every year.



**SERVICE TEAM**

Intermac promotes, nurtures and develops direct, constructive relationships with customers in order to better understand their needs and improve its products and after-sales service via 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.

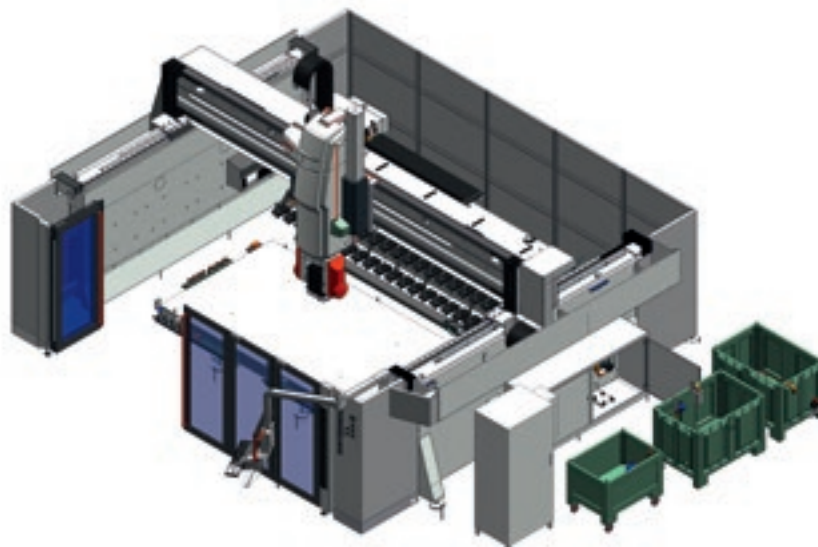
**95%**  
of machine downtime orders dispatched within 24 hours.

**95%**  
of orders dispatched on time.

**30**  
spare parts staff in Italy and worldwide.

**150**  
orders processed every day.

# TECHNICAL SPECIFICATIONS



		<b>MASTER 850</b>	<b>MASTER 1200</b>
Work table size	mm	3500 x 2000	3500 x 2000
Work table height	mm	470	470
Z axis stroke	mm	850	1200
Axis runs for the spindle (X - Y)	mm	4200 x 2700	4200 x 2700
A axis rotation		-100° ÷ +100°	-100° ÷ +100°
C axis rotation		unlimited	unlimited
Maximum velocity for axes (X - Y - Z)	m/min	60 - 50 - 15	60 - 50 - 15
Maximum disc diameter	mm	625 (optional)	1000 (optional)
Tool holder connection		ISO 50	ISO 50
Tool magazine capacity		39 - 59 (optional)	33 - 42 (optional)
Engine power	kW	20 (S1)	30 (S1)
Max electrospindle rotation	rpm	10000	8000
Power required	kW	45	55

# RANGE OF INTERMAC WORKING CENTRES FOR MACHINING STONE

## MACHINING CENTRES



Master 23



Master 30

## MACHINING CENTRES



Master 33.3-38.3-45.3



Master 33.3 Plus-38.3 Plus-45.3 Plus



Master 33.5 Plus-38.5 Plus-45.5 Plus

## UNIVERSAL MACHINING CENTRES



Master 850-1200

## UNIVERSAL AUTOMATIC MACHINING CENTRES



Mastersaw 625 Double Table

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) during machining at the operator's workstation on the vane-pump machine LpA=79dB(A) Lwa=96dB(A) Weighted sound-pressure level A (LpA) at the operator's workstation and sound power level (Lwa) during machining on the cam-pump machine Lwa=83dB(A) Lwa=100dB(A) Measurement uncertainty K dB(A) 4.

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

# MADE WITH INTERMAC

## INDUSTRY AND ARTISANSHIP JOIN FORCES

The Bicefalo is a sculpture in white Carrara marble which was created in the spring of 2015, exclusively using a latest-generation Intermac machining centre with five axes: the Master 850. The work was created by Marmi Fontanelli, from Reggio Emilia, commissioned by Raffaello Galiotto, a renowned designer from Vicenza.

The final product was subject to 223 hours of machining (which corresponds to 38 km in total travelled by the Master 850 machine tools), not including the time spent on manual finishing. The end result is the most effective example of the enormous potential that Italian en-

trepreneurs represent, and their ability to foster surprising synergies between industry and crafts, design and art.

The Bicefalo, measuring around two and a half metres in length, made its first public appearance at the Fuorisalone event in Milan, during the Lithic Digital Design exhibition. It was subsequently installed within the Expo Milano 2015 area.

"In order to carry out this project," commented Claudio Fontanelli, "we pushed the Master 850 to new limits, placing the machining centre's five axes in positions that we thought were impossible. We worked in synergy with Intermac,

and the company provided fundamental support for setting the 54 programs used for grooving and finishing. We had never carried out a project of this type before: a process of continuous consultation was therefore necessary in order to help us to fully exploit this machine's enormous potential.

What's more, Intermac's technology can be used by everyone: speaking from personal experience, I can guarantee that the machinery's bSolid management software allows any operator, even those without any particular computer skills, to get the most out of these systems with minimal effort."

