DONATONI JET 625

CNC BRIDGE SAW

ƆONATONI
Stone Tech Creators

Highlighting a machine and its potential often means opening the doors both to new opportunities and to new markets

CONTENTS

PRECISE, SIMPLE, COMPLETE

CNC BRIDGE SAW

UNPRECEDENTED QUALITY AND FINISH

The **DONATONI JET 625 CNC** is a simple and compact **5 interpolated axis** numeric control bridge saw, conceived for the production of kitchen and bathroom countertops, shower trays, different kinds of claddings for the building industry, made of marble, granite, artificial stone and ceramic. Being extremely flexible, it offers the user the possibility of carrying out a wide range of work processes, while the accessories and optionals available for the machine allow for fully-automated processes, thus reducing the processing times and increasing productivity. Transport and installation are simple and fast thanks to its monobloc-frame structure and to its compact dimensions, specifically designed to make all these operations easier. The DONATONI JET 625 625, as all of Donatoni products, has been designed to offer maximum quality and reliability over time.
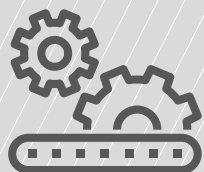
COMPLETE WITH ACCESSORIES
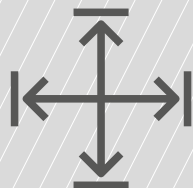
EXTREMELY COMPACT
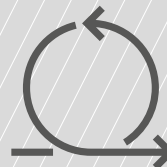
AN AUTOMATED PROCESSING PHASE

SIMPLE AND QUICK TO PROGRAM

A WIDE RANGE OF WORK PROCESSES AVAILABLE

QUALITY AND RELIABILITY OVER TIME

EASY TO TRANSPORT AND TO ASSEMBLY

EASY TO USE, EVEN IN MANUAL MODE

HIGH FLEXIBILITY AND FAST WORK PROCESSES

DONATONI JET 625 performs different types of work processes, thanks to the combined use of 1 or 2 diamond tools with the blade.

The side, **vertical electrospindle TOOL+** allows the operator to use diamond tools (such as milling cutters and drills) with a ½" gas connection for: incremental cutting, flush lowering, blind or through- hole drilling, and combined operations with the blade and milling cutter.

The work process can be carried out without the operator's intervention and without stopping the machine to change the blade or the tool.
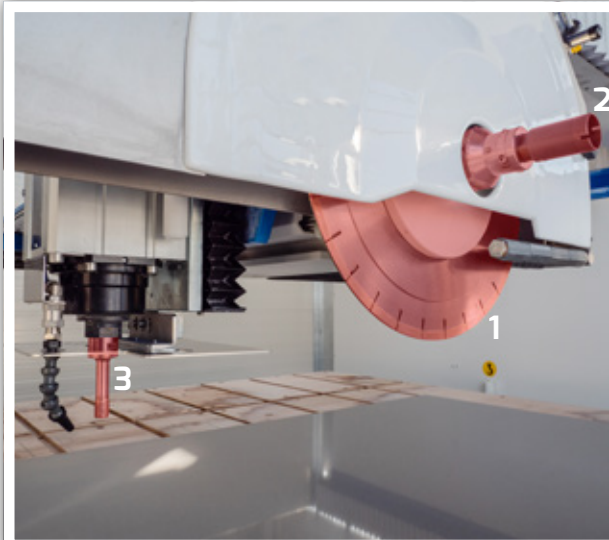
The use of 1/2 tools and the blade, cover 95% of the work processes to be carried out on the slab.
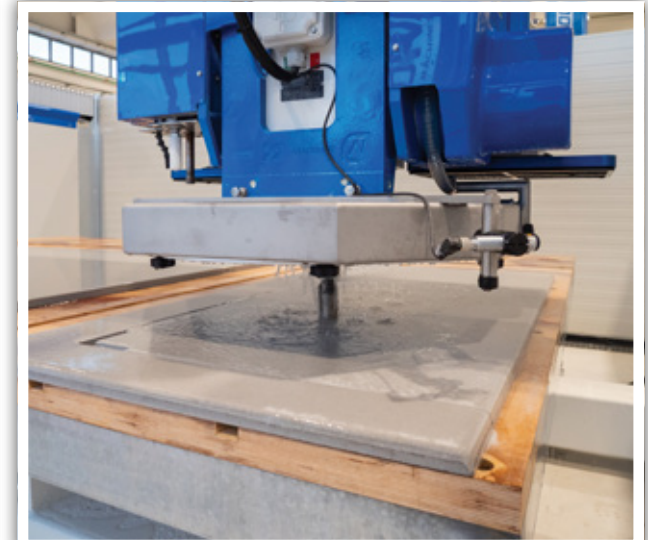
Thanks to the combined use of 1/2 tools and the blade, together with the Move-System to move the pieces, the work process is completely automated.

NO MORE NEED TO MANUALLY MOVE PIECES DURING THE WORK PROCESS

Thanks to the **Move-System**, which uses suction cups to lift and move the pieces that have been cut, it is possible to optimise the use of the slab, avoiding any manual movements.

MOVE-SYSTEM BENEFITS

/ **INCREASED EFFICIENCY AND REDUCED DOWNTIMES**

/ **MOVEMENT OF PIECES WITHOUT REQUIRING THE OPERATOR TO INTERVENE**

/ **EASY TO USE, EVEN FOR OPERATORS WITH NO EXPERIENCE**

/ **MAKES THE MACHINE TOTALLY AUTOMATIC**

/ **OPTIMISES THE USE OF THE OF SLAB'S SURFACE – LESS MANUFACTURING WASTE**

/ **CAN LIFT OF PIECES OF UP TO 500 KG**

2 aluminium suction cups, fitted with 6 sectors of various sizes, which allow both small and large pieces to be lifted, provided these have a maximum weight of 500 kg.
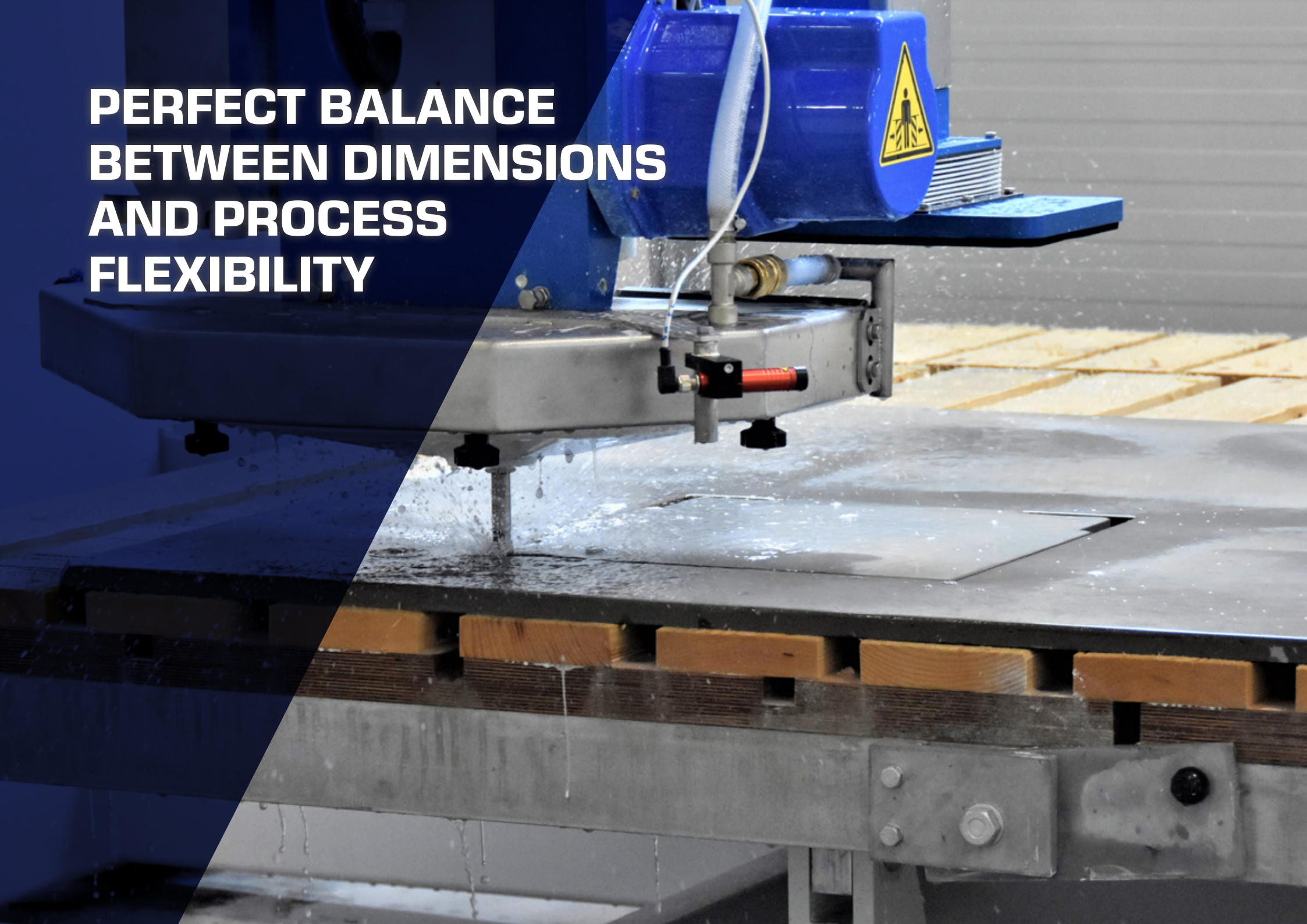

It can be used with **blades** having a maximum diameter of 625 mm.
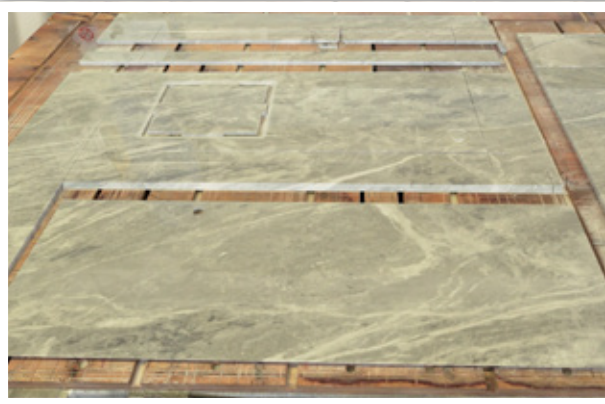
PERFECT BALANCE BETWEEN DIMENSIONS AND PROCESS FLEXIBILITY

WORK PROCESSES

Kitchen tops, bathroom countertops, floors, panels for external and internal cladding, staircase treads and risers, window frames, shower trays, products for the building industry.

QUALITY WITHOUT COMPROMISE

MAIN FEATURES

/ **5 CONTROLLED INTERPOLATED AXES**

/ **Z-AXIS STROKE: 450 MM**

/ **MIN / MAX BLADE DIAMETER: 350-625 MM**

/ **MAXIMUM CUTTING DEPTH: 200 MM**

/ **MOVE-SYSTEM – SUCTION CUP MOTION SYSTEM**

/ **MAXIMUM LIFTING WEIGHT WITH SUCTION CUPS: 500 KG**

/ **AUTOMATIC, CENTRALISED
GREASE-LUBRICATION OF SLIDING GUIDES**

/ **BRUSHLESS MOTORS CONTROLLED
BY INVERTERS AND HIGH-PRECISION GEARBOXES,
FOR THE OPERATION OF THE AXES**

TYPE OF PROCESSING

LONGITUDINAL
CUTS

CIRCULAR
CUTS

CROSS
CUTS

ELLIPTICAL
CUTS

OBLIQUE
CUTS

STRAIGHT, CONCAVE,
CONVEX, ARCHED,
ELLIPTICAL SHAPES

0-90 °INCLINED
CUTS

ORTHOGONAL CUTS,
UP TO 200 MM

A COMPLETE PACKAGE FOR A UNIQUE MACHINE

MAIN COMPONENTS

Monobloc self-supporting structure composed of the supporting walls and the supporting beams of the tilting bench, in hot-galvanized and painted steel.

High-quality electrospindles controlled by an inverter that allows the number of revolutions to be adjusted from 0 to 5500/7000 rpm. They allow the use of the blade and diamond tools (such as a drills or milling cutters). The tool change procedure is manual or automatic (ISO 40 tool holder).

internal water passage
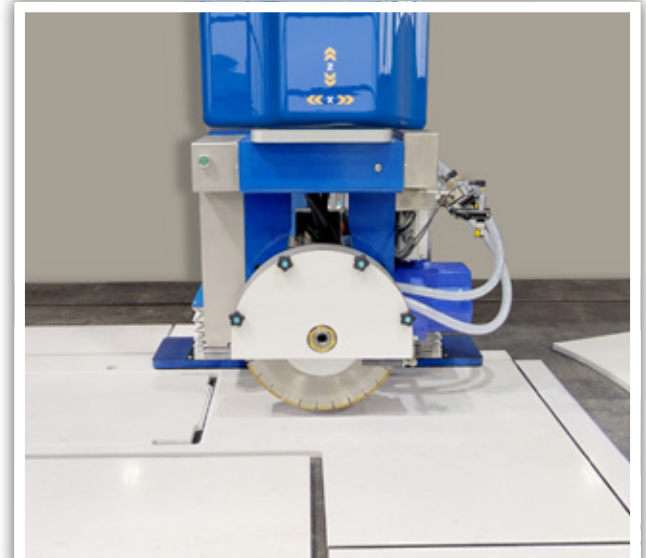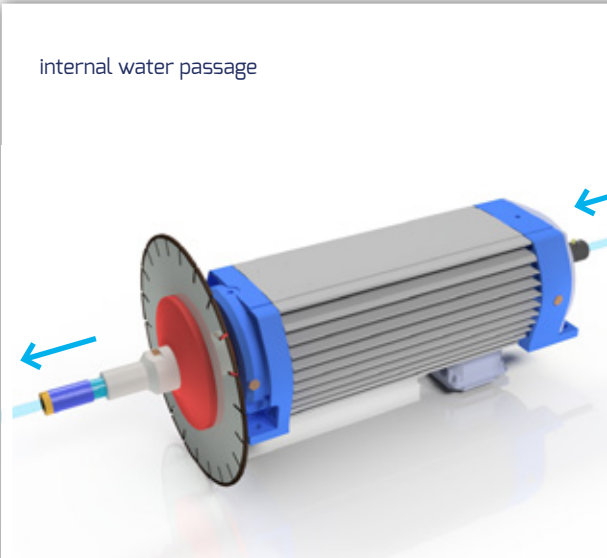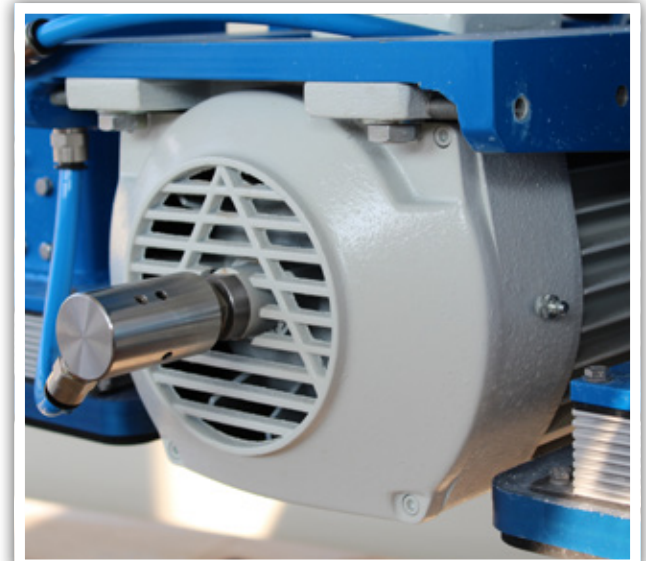
Move-System: System with 2 aluminium suction cups, fitted with 6 sectors of various sizes, which allow both small and large pieces to be lifted, provided these have a maximum weight of 500 kg. It guarantees the optimisation of processing times and the optimal use of the slab, reducing the processing waste.
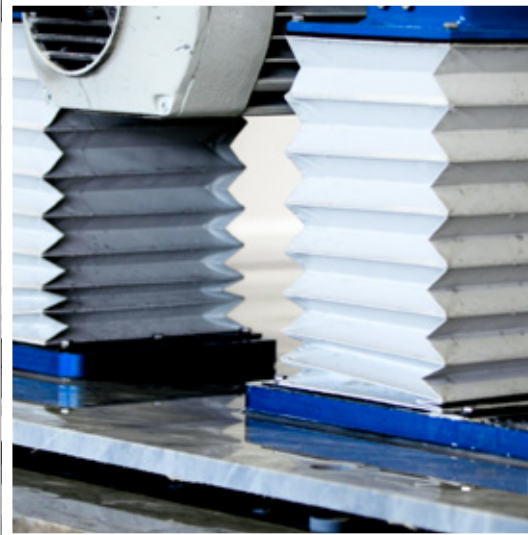
Cross laser
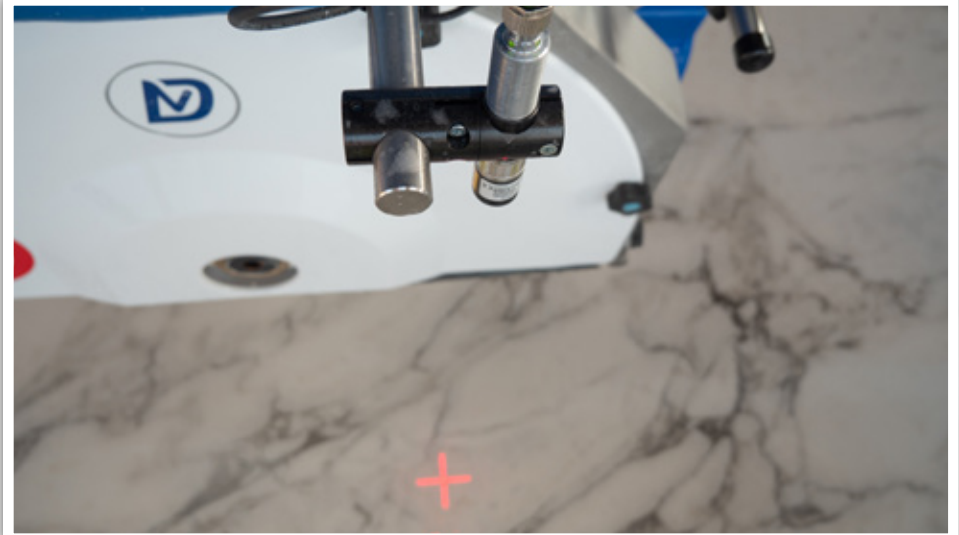
Tilting workbench available with a wooden or rubber surface (according to the user's preference), with maximum tilting capacity of up to 1650 kg.
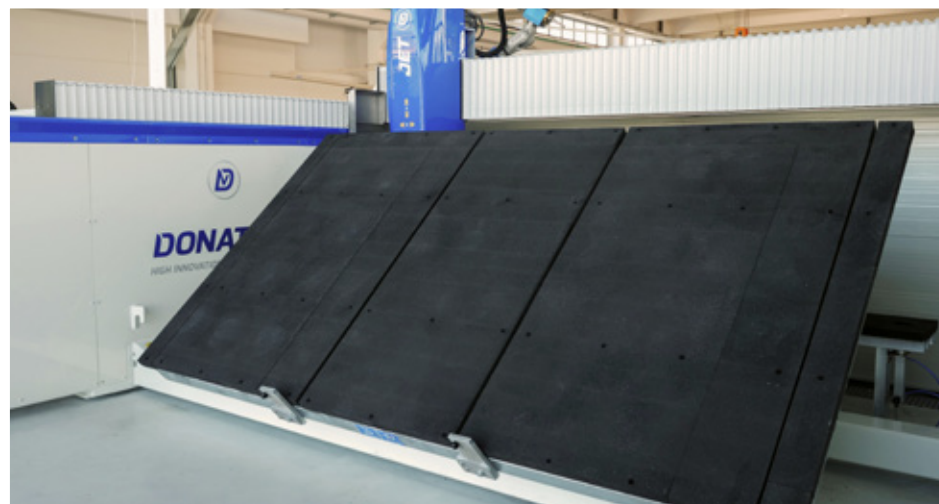
Blade presetting unit: system for measuring the blade diameter.

Slab thickness detector: system for the automatic detection of the slab thickness, for use with a blade diameter of max. 625 mm.

Sliding front safety guards with locking system: have a small footprint and allow maximum visibility of the work area, while guaranteeing high safety standards.

Laser cut marking

ACCESSORIES AND OPTIONALS

Tool storage unit with 5 positions for ISO 40 cones + 1 blade, complete with ISO 40 extension. Stainless steel cover lifted pneumatically and automatic blade change.
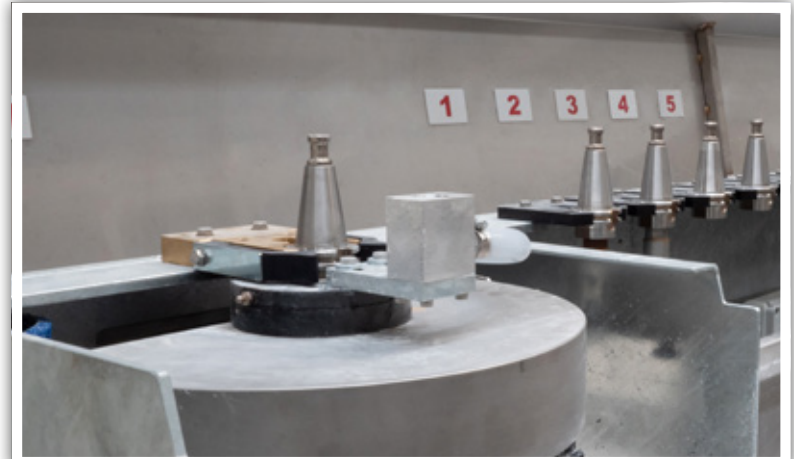
Bench extension, available in 3 versions: 1 fixed version and 2 versions that can be adjusted to 2-positions: the 1st position at bench level and the 2nd position lowered to -200 mm (ideal for processing higher blocks such as sinks, trays and funerary items).

Photoslab: a slab detection system, with the camera located above the workbench and complete with image acquisition software. This application speeds up the machine programming phase, allows the pieces to be positioned and the slab defects to be detected.
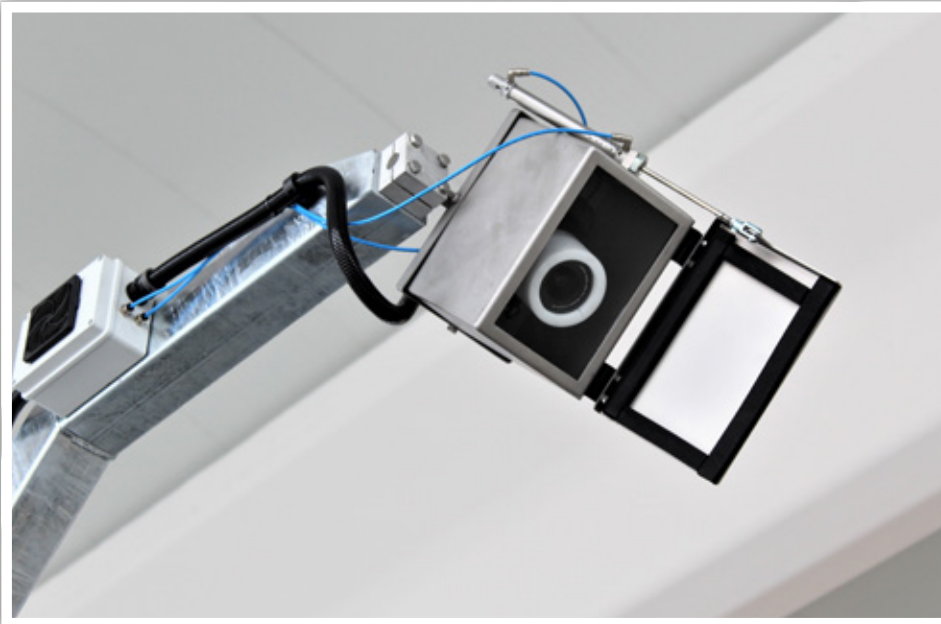
Tool+: Side, vertical electrospindle, controlled by an inverter with 0-15.000 rpm, that allows the operator to use small-diameter diamond tools with ½ "gas connections for incremental cutting / blind or through-hole drilling, as well as combined operations with the blade and milling cutter.
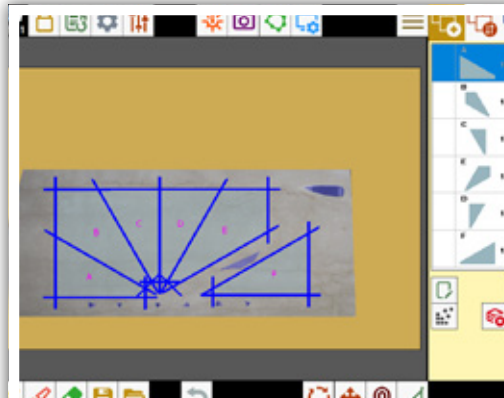
AN INTELLIGENT SYSTEM TO MAKE YOUR WORK EASIER

LET US GUIDE YOU TOWARDS THE FUTURE OF INTELLIGENT MACHINES

D-INSIDE:

EQUIP YOURSELVES WITH
A SUPERIOR FORM OF INTELLIGENCE

OPERATOR
INTERFACE WITH
PC AND 21" TOUCH
SCREEN MONITOR

HIGH PERFORMANCE
THANKS TO THE
NEW POWERFUL PC

USB
PORTS FOR
TRANSFERRING
FILES

CONTROLS FOR
THE MANUAL
MOVEMENTS
OF EACH AXIS

MOBILE, STIFF ARM
THAT ALLOWS
THE OPERATOR TO
PROGRAM WITH 1
HAND

Perfect machining can only be achieved through multiple movements that need to be perfect coordinated. Just as all the movements in the human body are managed through brain impulses, similarly, the movements of our machines are managed by **integrating the machine with the programming software.**

Every Donatoni machine is born with an intelligent work management system, integrated with all the parts that manage its movements; we call this system **D-Inside**, the real brain of the machine. It is an advanced interface that is simple to use, even for inexperienced operators, which allows the machine-software system to be coordinated.

The D-Inside system offers many programming options and can be interfaced with the different types of Donatoni software, such as Parametrix and all the additional modules, or with CAD-CAM DDX EasySTONE, so as to customise the machine to meet the customer's requirements.

PARAMETRIX

Parametrix is the **simple and user-friendly Software** developed by Donatoni Macchine that was conceived to optimise cutting different shaped pieces from slabs.

It is a software which **allows you to manage cutting processes using a blade, it allows the user to input both rectilinear and curvilinear shapes** (steps, kitchen worktops, rectangles, covers) using pre-defined shapes in the program or shapes imported from DXF files.
Depending on the surface available, it is possible to set the position of the pieces and the sequence of the cuts, optimising the times and reducing the material waste.

The software includes the following functions: **for preventing the collision of pieces, manual and automatic piece nesting, managing production and order statistics.**

Parametrix can be used together with Photoslab and Move-System, which allow the slab to be detected automatically and the cut pieces to be moved using a suction cup system, thereby **reducing operator intervention to a minimum.**
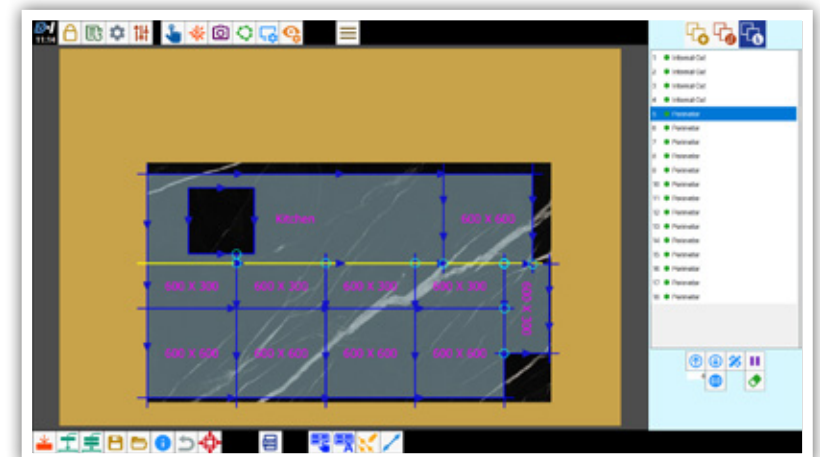
Automatic nesting

Automatically inserts the square or rectangular pieces into the work area, optimizing the use of the slab and automatically avoiding any highlighted defects.
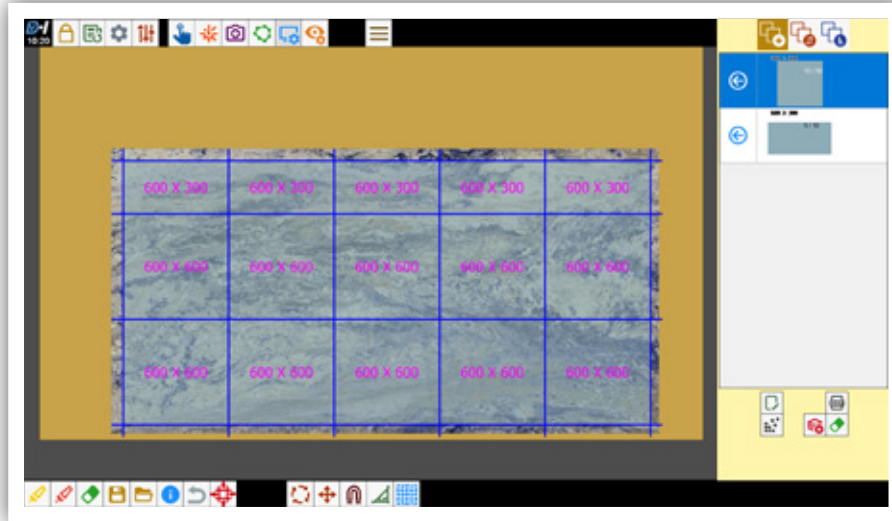
Drilling and processing with the milling cutter

It allows you to manage the use of tools, drills and milling cutters, with which it is possible to cut pieces or parts of the slab, to complete the initial work process with the blade, such as "L-shaped" internal corners, or to make the lowering for built-in parts. The change from blade to drill during the work process is automatically managed by the program. (Only for the following machines versions: tools, top, mtc, atc, and with the tool+ accessory).

Positioning of the pieces on the slab

With the manual nesting function, it is possible to preview any collisions between the parts, thereby making it easier to position the pieces in the best possible way. The "magnet" function helps the operator align the pieces one next to the other, in order to reduce the number of cuts. It is possible to save the partial layout and then complete the required positioning layout later.

Managing and changing of cuts

After having positioned the pieces, the cuts can be modified: it is possible to lengthen them, to change their order, to disable them, to add pauses, as well as other types of modifications, before pressing the start button to start the cutting phase.

Bookmatching (optional)

Starting from a project in DXF format and slab photo, it supplies the user with a 2D image of the parts to be cut and, therefore, allows the user to see the aesthetic result obtained by combining the pieces and to fully evaluate the "bookmatching"-type process.

Piece unloading module (optional)

The program allows the pieces to be unloaded in a predefined area; the operator uses the screen to select the cut pieces to be unloaded with the Move System of the machine (the software requires an increase of the Y-axis stroke length).

DM_TL (optional)

Program for honing / polishing / brushing slabs by means of the plate carrying Frankfurt abrasives.

ISOSAG

ISOSAG is the software that allows the user to create files for carrying out rectilinear or concave/convex arc shapes with both a vertical and a horizontal blade. The shaping process can be performed in roughing mode (combing) or in finishing mode (brushing), or in combined mode.
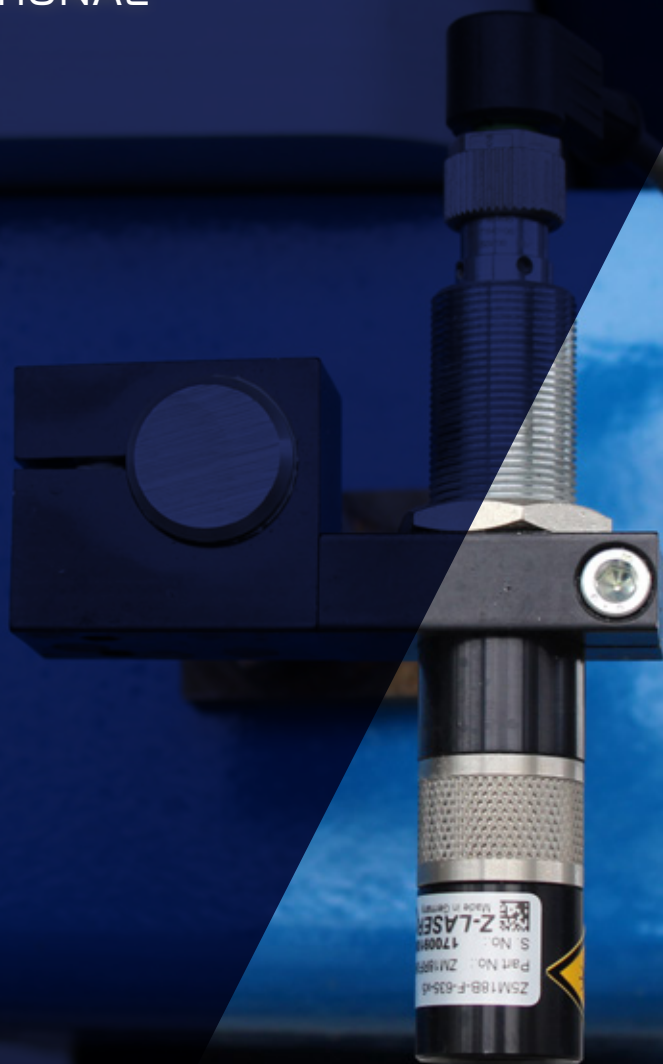
The program is supplied with a library of profiles that can be quickly modified (in terms of size) by the machine operator and saved as a new profile.
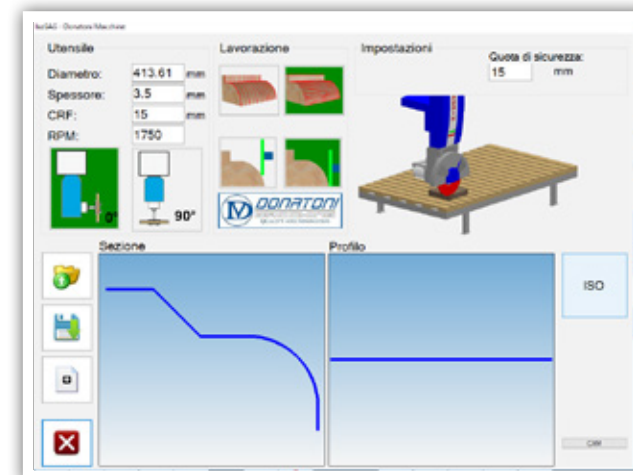
SCAN-CNC
OPTIONAL

It is a detection system composed of a laser pointer mounted on the machine head, which allows the detection of two-dimensional profiles with a linear or curvilinear shape. The software creates the drawing (file DXF) in real time and displays it on the machine monitor.

Once the detection procedure has been completed, the operator can:

· Process the template on the touch screen of the machine using Parametrix software.

· Store the template file in archive of the machine's PC.

· Store the file on an external PC, using a USB key, to allow it to be further processed or associated with other files by using external CAD-CAM software.
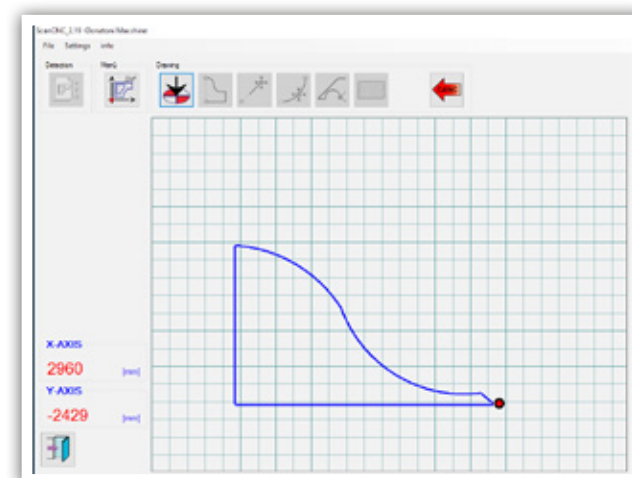
PHOTOSLAB

SUPPLIED WITH THE CAMERA FOR SLABS

By means of a camera placed above the machine and the related software, the dimensions of the slab being cut are automatically detected, and thanks to the high quality of the image, it is possible to see blemishes, veins and any cracks that are present.

Therefore, this system allows the user to optimise the use of the slab, the speed with which the pieces are positioned, while avoiding possible defects and enabling the cuts to be carried out following the veins of the material.

The software is automatically enabled when the "camera for slabs" is installed
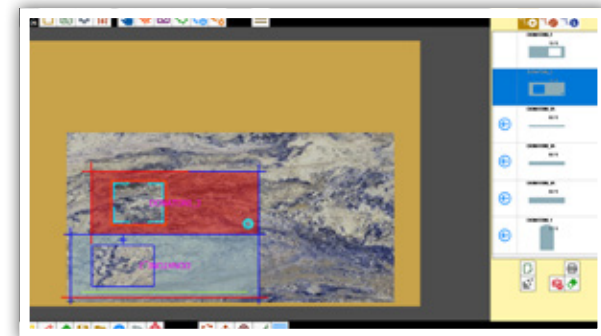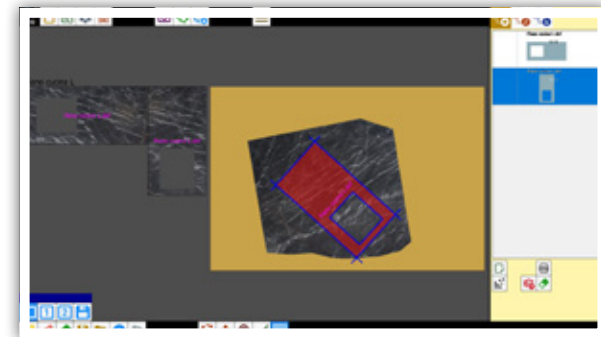
CAD-CAM
OPTIONAL

The CAD-CAM software designs, imports and executes 2D and 3D files in DXF, IGES, STL, PNT, STEP and RHINO formats, and also defines surfaces and shapes using laser scanning. Multiple work processes can be set: roughing, drilling, profiling, emptying and polishing, which can be carried out, thereby optimising the execution process.

After having been imported, the software optimises the work process sequence, performs the roughing / finishing process, taking into account the raw material left over after processing.

With CAD-CAM it is possible to display the3D image of the work process with virtual milling and to modify it, if required. The 3D simulation of the work process, including empty movements, is realistic because it is based on the Customer's machine model and shows the three-dimensional model of the work centre, the bench, the motors, the tools, the sub-pieces and the pieces.

Once the design phase has been completed, CAD-CAM generates the piece-programs and sends them directly to the Customer's work centre. Finally, it calculates the processing times and costs, supplying an accurate report of the work performed.
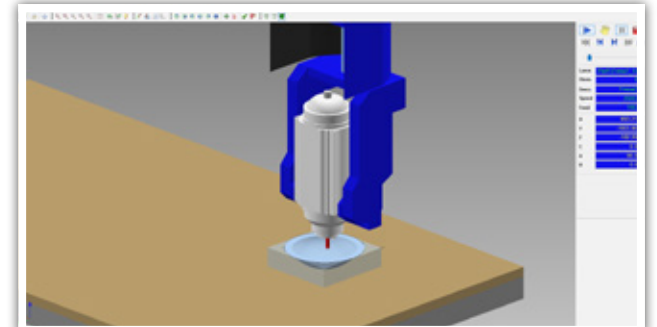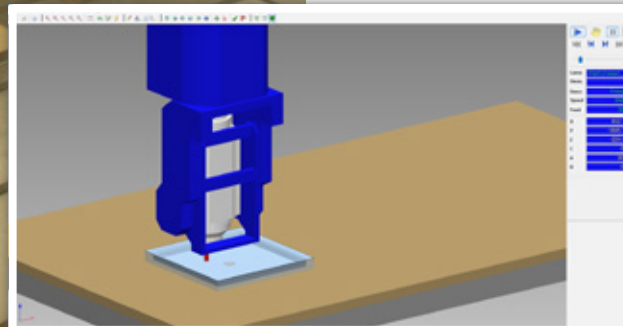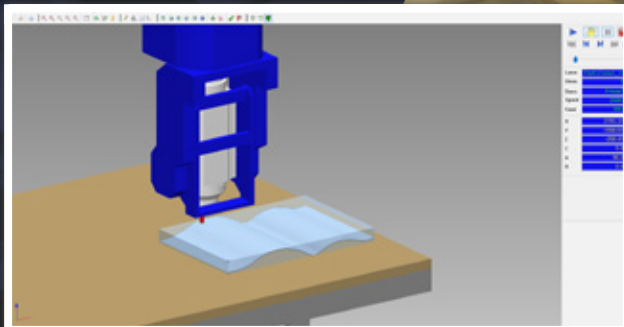
WITH DONATONI YOU ARE NEVER ALONE

SERVICES AND AFTER-SALES SERVICE

The relationship with our Customer does not end with the supply of the product, but continues and is strengthened through a reciprocal collaboration, which is of value for both our Customer and us

DIRECTLY CONNECTED WITH OUR TECHNICIANS

Donatoni Service is the company department that is totally dedicated to our customers and their needs; it provides a wide range of **services aimed to meet all of our customers' requirements**, before, during and after the delivery and installation of the machine and throughout its life cycle. Our highly qualified personnel have long-standing experience and are capable of responding to any question or request.

We use an open approach that pays careful attention to specific individual needs, because our objective is to cooperate with and support our customers in their production activities, not only by offering them assistance but also by offering them **technical services and advice**, which allow the operators to improve their know-how and enhance their production. Speed, reliability and professionalism are the strengths that allow us to guarantee an efficient response to your requests; our Service uses state-of-the-art communication tools and a **global network of partners** so as to provide prompt answers and solutions.

WORLDWIDE SALES AND ASSISTANCE STRUCTURE

Donatoni is present in many countries worldwide thanks to a structure of reliable and competent partners and agents, among which the Intermac branches of the Biesse group.

MACHINE INSTALLATION

Our machines are installed by highly specialised technicians with long-standing experience, thanks to whom we can guarantee a high level of service. The Installation not only includes the careful installation of the machine, but also its commissioning and the training of operators, according to the machine model that has been installed.

ON-SITE ASSISTANCE

We provide on-site technical assistance at the customer's premises if it is not possible to use Remote Assistance.

DIRECTLY CONNECTED - ON-LINE ASSISTANCE

Each machine is supplied with a system that enables it to be connected by remote assistance to our after-sales service (this requires a connection to the network via cable). This service enables our technical staff to virtually access the customer's machine and to carry out checks and updates, but also to provide technical assistance just as if they were right there at the machine's location.

PARTS AND REPLACEMENTS SERVICE

We handle requests for parts and replacements in any part of the world, promptly in order to minimise machine downtimes.

CAD-CAM TECHNICAL ADVICE

We help our customers with the creation and design of complex projects and objects using their machines.

THEORETICAL/PRACTICAL TRAINING

Training courses and update courses regarding new applications and software are carried out at our offices or at our customers' premises. Our offices are equipped to host courses for technicians and operators. The rooms are next to the machines on display in our show room and, therefore, this allows tests and checks to be carried out directly on the console of the machine as well as the evaluation of the level of learning achieved by the participants.

TECHNICAL DATA
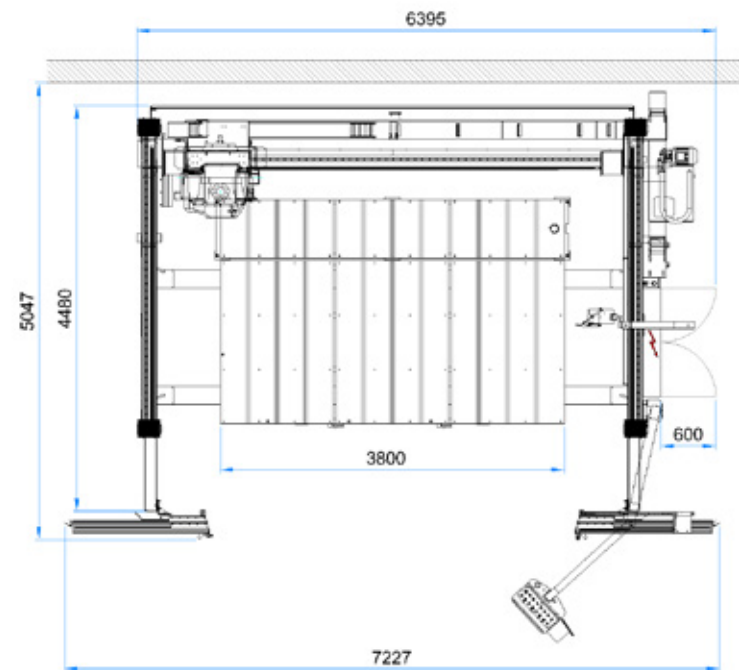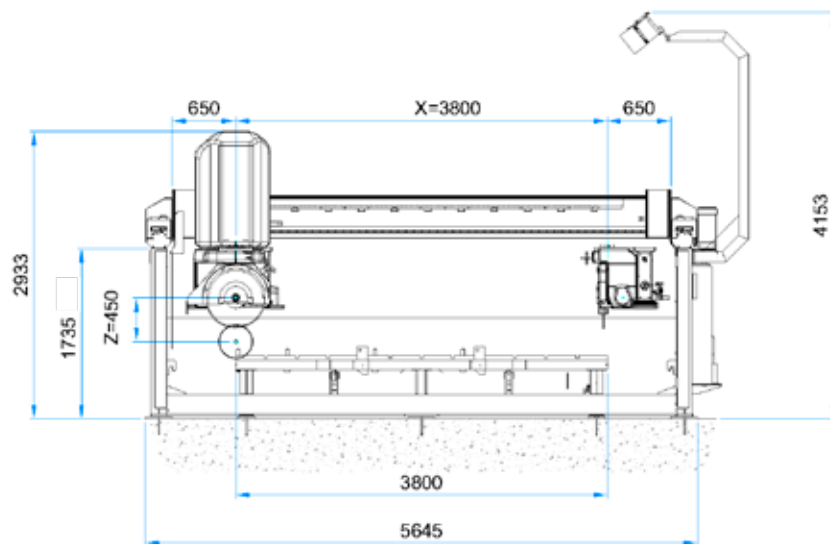
DONATONI JET 625

Number of interpolated axes	No.	5
Carriage stroke (X-axis)	mm in	3800 149,6
Bridge stroke (Y-axis)	mm in	2780 109,4
Vertical stroke of the head (Z-axis)	mm in	450 17,7
Blade holder head rotation (C-axis)	degrees	-5° / 365°
Blade inclination (A-axis)	degrees	0 / 90°
Workbench dimensions + table extension	mm in	3800 x 2450 149,6 x 96,4
Minimum blade diameter	mm in	350 13,7
Maximum blade diameter	mm in	625 24,6
Max cutting depth	mm in	200 7,87
Electrospindle motor power (TOOL and ISO 40 versions)	kW	13 / S6
Tool rotation with inverter (TOOL version) (ISO 40 version)	rpm	0 / 5500 0 / 7000

Maximum carriage speed (X-axis)	m / min ft / min	0 – 40 0 - 131,2
Maximum bridge speed (Y-axis)	m / min ft / min	0 – 30 0 – 98,4
Maximum head speed (Z-axis)	m / min ft / min	0 – 5 0 – 16,4
Cutting speed (adjustable)	m / min ft / min	0 – 25 0 - 82
Water consumption (3 bar)	l / min gal / min	35 9,2
Air consumption	l / min gal / min	20 5,2
Standard electrical voltage	Volt / Hz	400/50
Max blade diameter with suction cups	mm in	625 24,6
Max blade diameter with thickness detector	mm in	625 24,6
Max blade diameter with Tool+	mm in	425 16,7
Max total weight that can be lifted with suction cups	Kg lb	500 1102,3
Approx. overall weight of the machine	Kg lb	5200 11464

The technical data and the images in this catalogue are indicative and are not legally binding. The manufacturer reserves the right to make changes to the product, technical data and images without prior notice.

NOTE

NOTE

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Donatoni Macchine, founded by Vittorio Donatoni
in 1959 in Domegliara, one of the main marble and
granite processing districts, is recognised, thanks to
their years of experience gained in the natural stone
industry during this time, as one of the world leaders
in manufacturing **cutting-edge machines
of very high quality for working stone.**

**Constant research, technological innovation and
customer service** are key concepts for the company
and in order to pursue them the company employs
highly qualified technical and commercial personnel,
in order to guarantee the end customer a **product
that reflects their expectations in terms of quality
and performance.**

Diamente.it

DONATONI
Stone Tech Creators