

ECHO 725 CNC

BRIDGE SAW CNC



DONATONI
HIGH INNOVATION STONE MACHINES

Highest quality For your skill

To highlight a machine and its potential often means to open the doors to new opportunities and markets





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MECHANICAL PERFECTION, TECHNOLOGICAL PRECISION

BRIDGE SAW CNC



QUALITY AND FINISH WITHOUT PREDECESSORS

The **ECHO 725 CNC** is a **5 axis interpolated** milling machine particularly flexible, suitable for the production of different types of products such as kitchen tops, bathroom tops, shower trays, engravings, bas-reliefs and various coatings for the building industry.

It is a machine that allows a wide range of processes, from cutting, to milling, drilling, shaping and, thanks to the countless accessories, it is possible to carry out these operations simultaneously without moving the piece from the bench or prolonged machine stops. Thanks to the sliding of the X and Y axes that

occur on linear guides with recirculating balls and racks both with oil bath lubrication and with the new structure of the bridge and the steel carriage, the **ECHO 725 CNC** allows to obtain products with extremely fine finishes precise.

ECHO 725 CNC is suitable for those in need of power, high output and small footprint. The different levels of customization of the machine make it possible to satisfy the most demanding customer requirements and this is made possible by the wide range of accessories available.



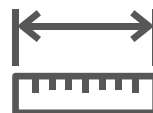
HIGH QUALITY OF
THE MATERIALS
USED



EXTREMELY
FLEXIBLE



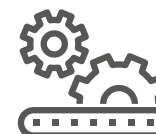
WIDE RANGE OF
ACCESSORIES AND
CONFIGURATIONS



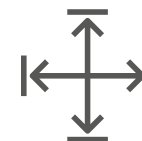
PRECISE FOR A
PERFECT RESULT



SIMPLE AND QUICK
TO PROGRAM



WIDE RANGE OF
PROCESSES



REDUCED
DIMENSIONS



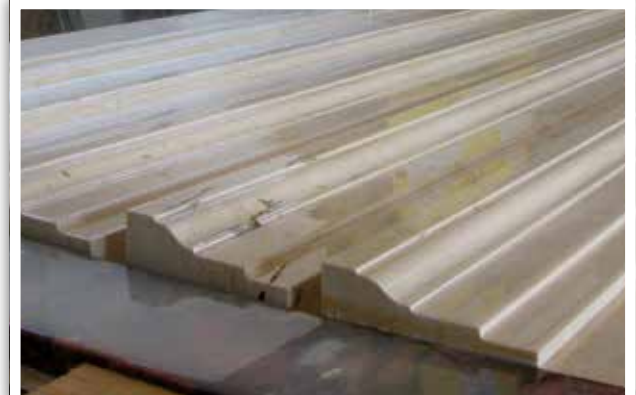
HIGH QUALITY COMPONENTS FOR A PERFECT RESULT

EFFICIENCY AND FLEXIBILITY



PROCESSING

Kitchen tops, bathroom tops, floors, panels for exterior and interior cladding, stair steps, window frames, shower trays, building products, artefacts for funerary art.



PERFECT FLEXIBILITY AND HIGH PERFORMANCE

MAIN FEATURES



- / 5 INTERPOLATED AXES
- / Z-AXIS STROKE: 600 MM
- / DIAMETER MIN / MAX DISKS: 350-750 MM
- / MAXIMUM CUTTING DEPTH: 260 MM
- / STEEL BRIDGE WITH NEW REINFORCED STRUCTURE FOR GREATER STABILITY
- / MOVE-SYSTEM - SUCTION HANDLING SYSTEM
- / MAXIMUM LIFTING WEIGHT WITH SUCTION CUPS: 600 KG.
- / OIL BATH SLIDING GUIDES LUBRICATION
- / BRUSHLESS MOTORS AND HIGH-PRECISION GEARBOXES CONTROLLED BY INVERTER FOR X-Y-Z AXIS SLIDING

TYPES OF WORKINGS



LONGITUDINAL CUTS



0-90° INCLINED CUTS



ELLIPTICAL CUTS



CROSS CUTS



ORTHOGONAL CUTS
UP TO 250 mm



STRAIGHT, CONCAVE,
CONVEX, ARCHED,
ELLIPTICAL SHAPES



OBLIQUE CUTS



CIRCULAR CUTS



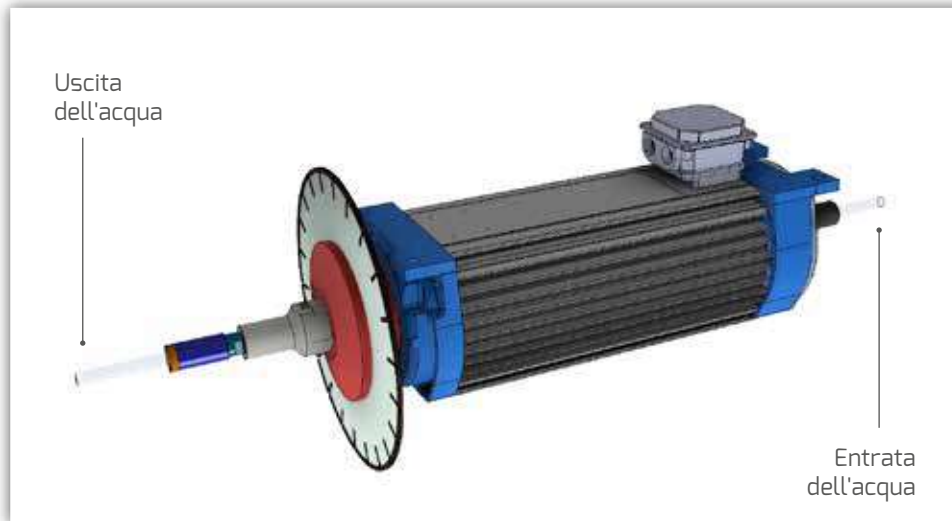
EXCAVATION OF TWO-
DIMENSIONAL AND
THREE-DIMENSIONAL
SECTION BLOCKS

INNOVATION IS STANDARD

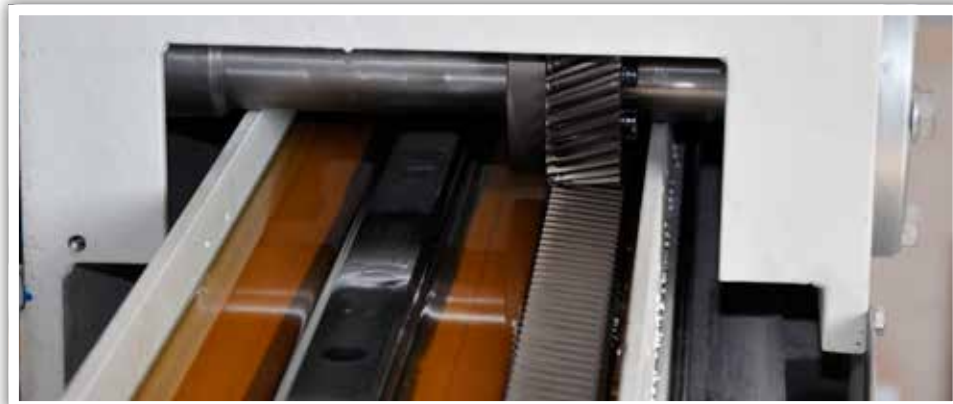
MAIN COMPONENTS



High quality Electro-spindles with inverter produced in Italy, allowing the adjustment of the nr. of revolutions, rotating disc head $-5^{\circ} + 365^{\circ}$ and inclinable from 0° to 90° , mounted on steel carriage. Available in version with M48 tooling connection or ISO 40 automatic tool changer with manual or electronic release.



Ball recirculating sliding crosspieces and helical toothed racks for sliding the Y axis, with oil bath lubrication and protected by bellows with labyrinth closure.



Electric panel cooled by air conditioner to keep the temperature constant during hot periods or in areas where temperatures are always high.



Bridge special profile in steel structure with increased section, normalized, sandblasted and painted in triple layer, with hardened and ground toothed pinions and racks with helical toothing, brushless motor and high precision gearbox.



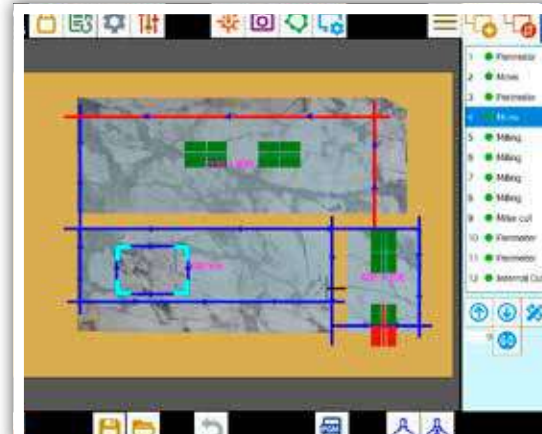
ACCESSORIES AND MECHANICAL COMPONENTS

OPTIONALS



MOVE-SYSTEM

Suction cups system for the automatic lifting and positioning of cut-to-size pieces granting processing times with minimum waste. The 2 aluminum suction cups are equipped with sectors of various sizes allowing lifting operation of large and small pieces, up to a maximum of 600 kg. it can be used with blade up to 725 mm diameter.



The Move-System allows to work **at the same time and in automatic** mode both with a tool and blade, by moving pieces on the bench through the suction cups, with no need to switch off the machine.

- > easy to use even for operators with no experience
- > it makes the machine totally automatic
- > piece motion without operator intervention
- > makes full use of the slab's surface
- > increase the efficiency
- > reduction of downtimes



MOVE-SYSTEM / BLADE / TOOL

Workbench available in different models, sizes and surfaces, based on the selected accessories and customer needs.



Disc presetting unit: measurement system of blade diameter



Slab thickness detector: system for automatic detection of slab thickness.



Photoslab: Plate detection system, with camera positioned above the workbench and image acquisition software. The application allows to speed up the machine programming.



Lower-Cut Group: cutting system for inserting reinforcement bars in the lower part of the kitchen tops.



Tool+: vertical lateral electrospindle managed by inverter with 0-14,000 rpm, allows the operator the use of small diameter diamond tools with 1/2" gas connection for incremental cutting / blind or through hole drilling and the execution of combined operations with disk and milling cutter.



Support walls in standardized steel, sandblasted and painted with triple layer.



Linear tools storage: with 20 stations for ISO 40 cones of max. 600 mm, complete with pneumatic lifting stainless steel cover (only for ATC Electrospindle).



Lathe Lathe for the execution of columns, capitals and elements with circular cross-section or complex shapes (the optional needs the increase of Y axis stroke length).



ECHO TWIN

Automatic bench exchange system: to allow the operator to perform the unloading, loading and programming operations on the 1st bench while the machine is being processed on the 2nd bench, allowing to increase productivity and reduce downtime.



RECOMMENDED FOR:
kitchen floors (simple and complex)
coatings and tiles



Tilting benches with wooden or rubber top (optionally) with hydraulic lifting system, with capacity up to 1650 kg



Wheels with locking system that avoids any displacement



Bank drive and handling system

Monoblock steel structure to avoid concrete foundations below the floor level, on which the sliding rails of the benches are placed

11320 mm

TECHNICAL DATA					
Maximum disk	mm	750	Dimensions bench 1	mm	3800 x 2300 x h 640
Axis Z	mm	600	Dimensions bench 2	mm	3800 x 2400 x h 900
Axis X	mm	3900	Useful space between the two counters	mm	100
Maximum sheet thickness with Twin system	mm	100	Estimated time of passing from one bank to another	sec	35
Loading capacity with tilting system	Kg	1650			

PRODUCTIVITY COMPARISON*		
	ECHO 725 CNC	ECHO TWIN 725 CNC
N. OPERATORS	1	1
SURFACE CUT (8 working hours)	120 SQM	200 SQM
* The data are purely indicative and may vary depending on the type of material, plate thickness, disk used and other factors not directly dependent on the machine.		

RECOMMENDED FOR:
coatings and tiles
kitchen countertops (simple)



ECHO BELT

Plate handling system with rubber conveyor belt. It allows the in-line production system to be applied, with a separate loading and unloading area, while maintaining the flexibility typical of the ECHO model. All belt movements take place automatically and are managed by the machine.

Can be integrated with loading systems **GEKO** or other automatic systems and the revolving plate bearing.

Exit plates washing system

Belt tensioning system positioned on both rollers

Monolithic steel bed structure with recessed steel belt sliding surface, two tapered rollers, one of which is motorized.

10720 mm

PRODUCTIVITY COMPARISON*

	ECHO 725 CNC	ECHO BELT 725 CNC
N. OPERATORS	1	2
SURFACE CUT (8 working hours)	120 MQ	240 MQ

*The data are purely indicative and may vary depending on the type of material, plate thickness, disk used and other factors not directly dependent on the machine.

TECHNICAL DATA

Maximum disk	mm	750	Version 1: with 1 a belt for cutting and unloading	mm	L. 10720
Axis Z	mm	600			
Axis X	mm	3900			
Maximum cutting depth	mm	260	Version 2: with 2 tapes, 1 for cutting and 1 for unloading (Reading for those who produce coverings and tiles of medium / small size)	mm	L. 6200 L. 4000
Belt transport width	mm	2400			

AN INTELLIGENT SYSTEM TO MAKE YOUR WORK EASIER

LET US DRIVE YOU TOWARDS
AN INTELLIGENT CHOICE OF
MACHINE



D-INSIDE:

EQUIP YOURSELVES WITH
A SUPERIOR FORM OF
INTELLIGENCE



OPERATOR INTERFACE WITH PC AND 15" VIDEO

COLOUR TOUCH-SCREEN

PRECISION OF MOVEMENTS WHICH ENABLES
COMPLEX AND INTRICATE PROCESSING

USB PORT FOR TRANSFERRING FILES

CONTROLS FOR MANUAL MOVEMENT OF AXES



Perfection in the machining is achieved through multiple movements that need perfect coordination between them. While in the human body all movements are managed through brain impulses, similarly in our machines the management of movements takes place through the **integration of the machine with the programming software.**

Every Donatoni machine is born with an intelligent work management system, integrated with all the parts that manages its movements; we call this system **D-Inside**, the real brain of the machine; it is an advanced but simple interface in terms of its usability, even for inexperienced operators, which enables the machine software system to be coordinated.

The D-Inside system offers many programming options and can be interfaced with the different kinds of Donatoni software, such as Parametrix and all additional modules, or the CAD-CAM DDX EasySTONE, in such a way as to make it possible to adapt the machine in the best way to suit the requirements of the customer.

PARAMETRIX

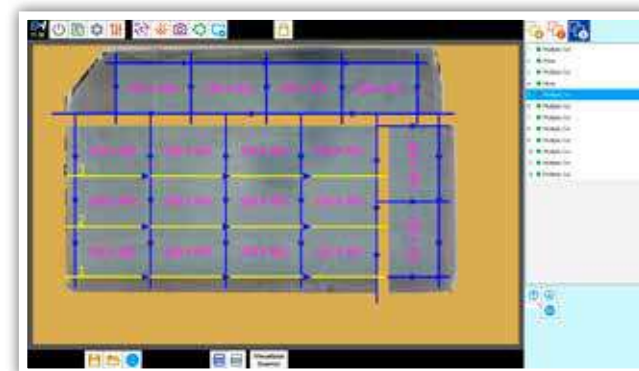
USER-FRIENDLY ICONS AND SIMPLE PROGRAMMING

Parametrix is the **simple and user-friendly software** developed by Donatoni Macchine and conceived to **optimise the management of cutting different shaped pieces from slabs**.

It is a programme which allows you to manage cutting processes with disks, **it enables input of rectilinear shapes as well as curvilinear shapes** (steps, kitchen work-tops, rectangles, covers) using pre-defined shapes in the programme or imported from DXF files. Depending on the surface available it is possible to automatically set the position of the pieces and the sequence of cuts, optimising the times and reducing material waste.

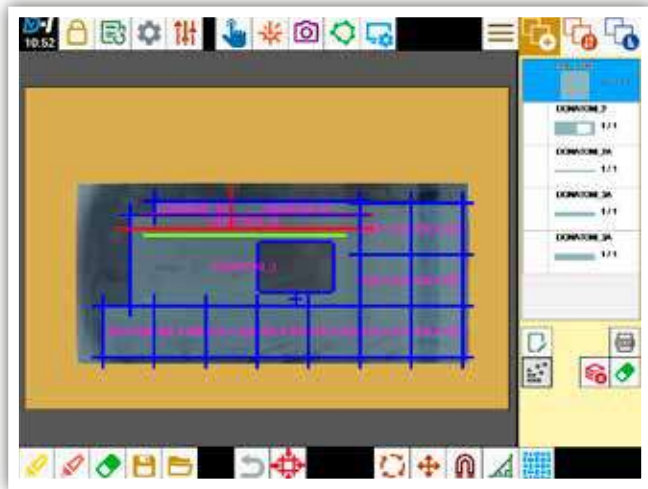
Included in the software are functions **for anti-collision of pieces, manual and automatic piece nesting, book matching, managing statistics, production and orders, rendering pieces and holes**.

Parametrix can be combined with Photoslab and Move-System, which allow automatic detection of the slab and movement, via a suction cups system, of the cut pieces **reducing operator intervention to a minimum**.



Nesting (included)

Automatically inserts squared or rectangular pieces in the working area optimizing the exploitation of the slab and automatically avoiding highlighted defects.



Drilling and processing with milling cutter (included)

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 processing with blade, such as "L-shaped" internal corners, or to make reductions for recesses. The change from disc to core during processing is automatically managed by the program.

(only for machines version tools, top, mtc, atc, and with tool+ accessory).

Positioning of the pieces on the slab (included)

With the manual nesting program it is possible to preview any collisions between parts so making easier the piece best positioning. The "magnet" function helps the operator to align the pieces one next to the other in order to reduce the number of cuts.

Managing and changing of cuts (included)

After positioning the pieces, cuts can be modified: it is possible lengthen it, to change order of cuts, to disable it, to add pauses; other types of modification before pressing the start button to process the cuts can be made.

Book matching (optional)

Starting from a project in DXF format, it allows to have a 2D image of the parts to be cut and therefore to appreciate before the cut the aesthetic result obtained by the combination of the pieces, evaluating overall and in full the "bookmatching" type processing.

Piece unloading Module (optional)

The program allows to unload the piece in a predefined area; the operator can select on the screen the cut pieces to be unloaded with the Move System of the machine (the software needs the increase of Y axis stroke length).

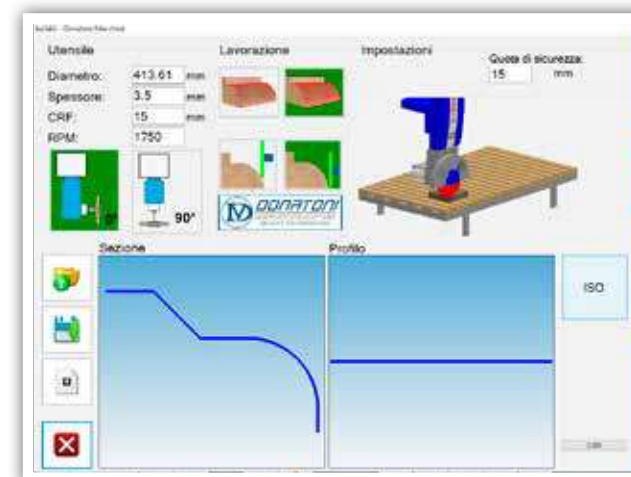
DM_TL (optional)

Program for slabs smoothing / polishing / brushing by means of plate carrying FRANKFURT abrasives

ISOSAG

ISOSAG is the software allowing to create files for the performance of rectilinear or concave shapes and convex arc both with vertical and horizontal blade. The shaping process can be performed both in roughing (combing) and finishing (brushing) or in combined mode.

The program is supplied with a library of profiles that can be quickly modified in size, by the machine operator and saved as a new profile.



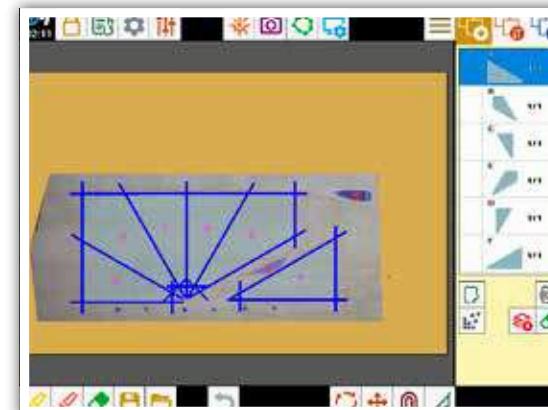
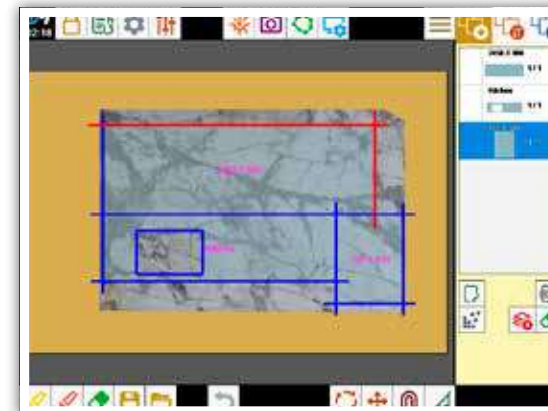
PHOTOSLAB

SUPPLIED WITH CAMERA
FOR SLAB

By means of a camera placed above the machine and the related record software, the slab being cut is automatically detected.

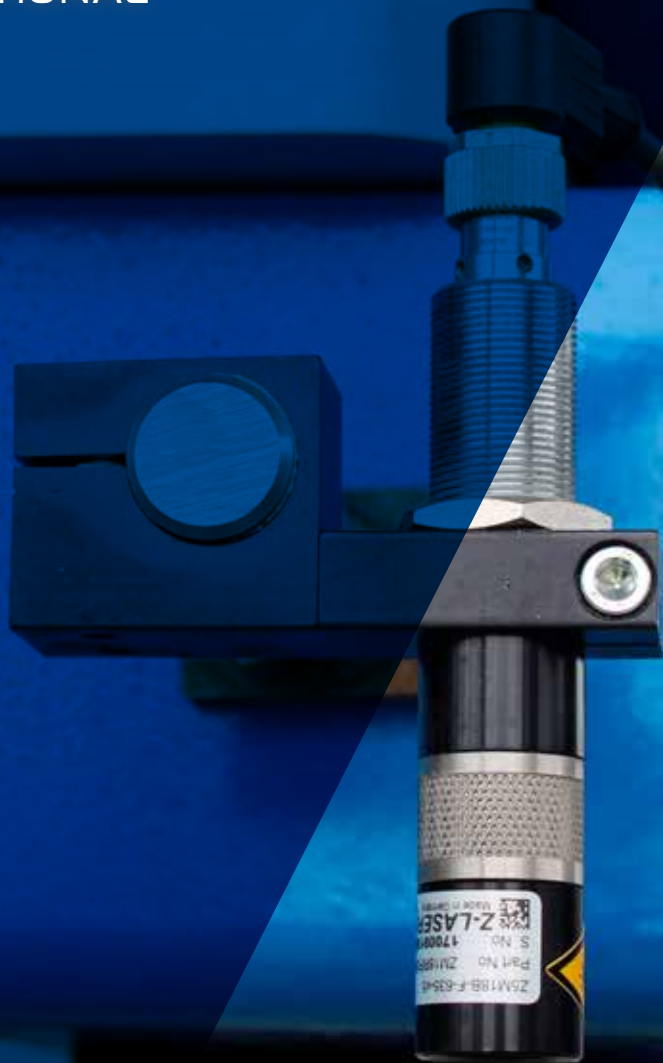
The system allows the optimization and the exploitation of the slab dimensions, the speeding of pieces positioning, avoiding possible defects or enabling to perform cuts by following the veins of the material.

The software is automatically enabled with installation of "camera for slabs".



SCAN-CNC

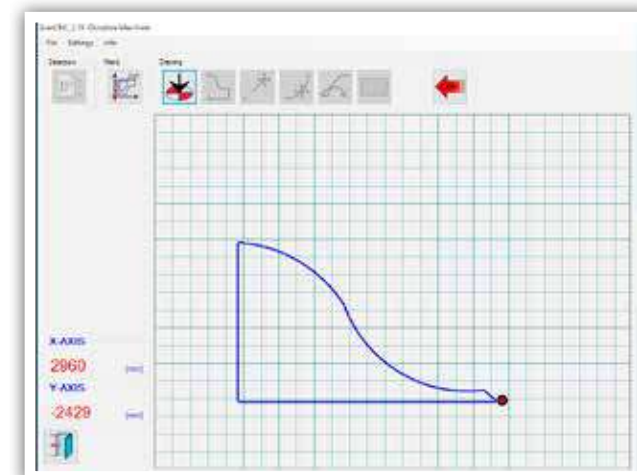
OPTIONAL



Detection system composed of a laser pointer mounted on the machine head, allowing to detect two-dimensional profiles with linear or curvilinear shape. In real time the software creates the drawing (file dxf) on the machine monitor.

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

- Process the template on the touch screen of the machine using the optional Parametrix or Easycut, Easystone Basic or Premium.
- Store the template file in the machine's PC archive.
- Store the file on an external PC, using a USB key, to create possible processing and association with other files by using external CAD CAM software.



DDX EasySTONE

OPTIONAL

DDX Easystone is powerful, simple and intuitive CAD / CAM software for machines Donatoni.

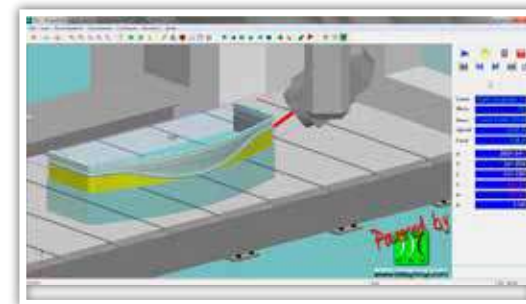
The software allows to design, import and execute 2D and 3D files in DXF, IGES, STL, PNT, STEP and RHINO formats and to define surfaces and shapes through laser scanning. Multiple processes can be set: roughing, drilling, profiling, emptying and polishing, which can be carried out by optimizing the execution process.

After the import, the software optimizes processing paths, performs roughing / finishing taking into account the raw material resulting after processing.

With EasySTONE it is possible to display the processing 3D image with virtual milling and to modify it if required. The 3D simulation of the processing, including free displacements, is realistic as it is based on the Customer's machine model and shows the three-dimensional model of the working center, of the bench, of the motors, the tools, the sub-pieces and the pieces .

Once the design phase is completed, EasySTONE generates the piece-programs and sends it directly to the Customer's working center.

Finally, it calculates times, lengths and processing costs, allowing accurate reporting of the work performed.



WITH DONATONI YOU ARE NEVER ALONE

AFTERSALES
SERVICE AND ASSISTANCE

The relationship with the customer does not end with the supply of the product but continues and is strengthened through a reciprocal collaboration which creates value for both customer and supplier.



DIRECT CONNECTION WITH OUR TECHNICIANS

The commitment to our Customers continues even after delivery of the machine, offering a service of support and aftersales service of utmost quality. For Donatoni Macchine the best service is to supply **efficient and long-lasting machines which require little maintenance and aftersales assistance.**

We believe that **the added value that we can offer customers is a series of services including technical advice and support and training activities** for operators regarding technical aspects or the software.

MACHINE INSTALLATION

Our machine are installed by highly specialized technicians granting extraordinary levels of professional work. Installation includes a careful installation service, commissioning of the machine and training of operators according to the model of machine installed.

ON SITE ASSISTANCE

We provide on site assistance at the clients premises if not possible to use the Tele Assistance by modem.

CAD-CAM TECHNICAL ADVICE

we help our customers in creating and designing projects and objects.

DIRECT CONNECTION - ON-LINE ASSISTANCE

Each machine is supplied with a system that enables it to be connected by Tele-Assistance to our After-sale service (we require connection to the network via a cable). This service enables our technical staff to virtually access the customer machine and to carry out checks, updates and to provide technical assistance as if they were there at the machine location in person.

PARTS AND REPLACEMENTS SERVICE

We handle requests for parts and replacements in any part of the world, in short time frames in order to minimise machine down-time.

EXTENSIVE SALES AND ASSISTANCE STRUCTURE

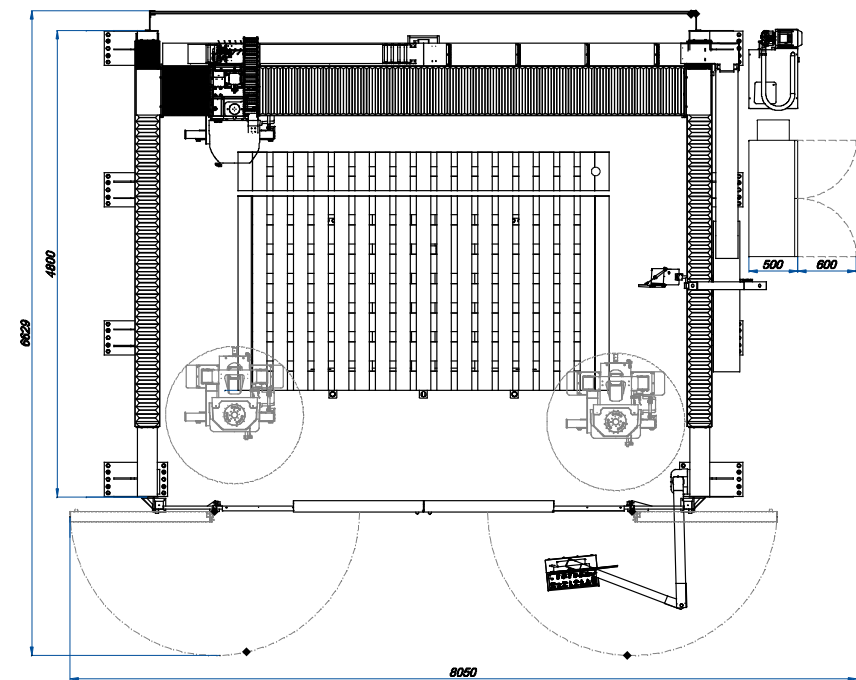
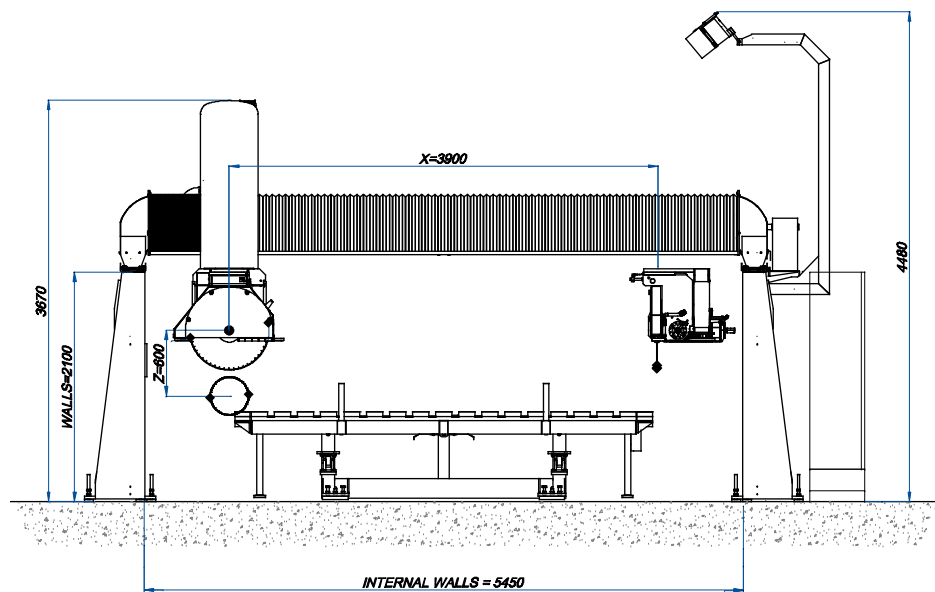
Donatoni is present in many countries worldwide thanks to a structure of reliable and competent partners and agents, among which the Biesse group Intermac branches.

THEORETICAL/PRACTICAL TRAINING

Training courses and update courses regarding new applications and software at our offices or at customer 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 and the level of learning can be evaluated.



TECHNICAL DATA



ECHO 725 CNC

Max number of interpolated axes	N°	5
Carriage stroke axis X	mm in	3900 153,5
Bridge stroke axis Y	mm in	2450 96,5 2950 (with Move-System) 116,2
Vertical stroke of the head axis Z	mm in	600 23,6
Disc head rotation (axis C)	degrees	-5° / +365°
Disc head tilting movement (axis A)	degrees	0° / 90°
Working table dimensions	mm in	2000 x 3500 78,7 x 137,8 2400 x 3800 (with Move-System) 94,5 x 149,6
Minimum disc diameter	mm in	350 13,8
Maximum disc diameter	mm in	750 29,5
Disc motor power	kW	17 / 56
Disc rotation with inverter (standard)	RPM	0 / 2400

Tools rotation with optional Tools / Top ISO 40	RPM	0 / 5500 0 / 9000 (models ATC and MTC)
Spindle shaft diameter	mm in	50 2 65 (models ATC and MTC) 2,5
Max speed axis X	m / min ft / min	0 – 45 0 – 147,6
Max speed axis Y	m / min ft / min	0 – 45 0 – 147,6
Max speed axis Z	m / min ft / min	0 – 6 0 – 19,7
Max speed of axes X Y	m / min ft / min	0 – 45 0 – 147,6
Water consumption	l / min gal / min	50 13,2
Air consumption	l / min gal / min	20 5,3
Standard voltage	Volt / Hz	400 / 50
Max Disc with suction cups (stroke 295 mm)	mm in	725 28,5
Total weight max lifting with suction cups	Kg lb	600 1322
Approx total weight of the machine	Kg lb	4500 9920

NOTE

[illegible]

ALL IN ONE



THREE EXCELLENCES,
ONE PARTNER.



Three leaders in the stone machining sector, combine skill, technology and a widespread distribution network to support customers in the creation of the intelligent factory, elevating the service provided in order to ensure 360° customer care.



INTERMAC.COM
DONATONIMACCHINE.EU
MONTRESOR.NET

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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**.

