

# QUADRIX DV 1100

CNC CUTTING CENTER



**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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**ONATONI**  
INNOVATION STONE MACHINES



# THE SOLUTION FOR THE MOST DEMANDING CUSTOMERS

CNC MACHINING CENTER



# **GREAT FLEXIBILITY, GREAT PERFORMANCE**

**QUADRIX DV 1100** is a medium-sized numeric control cutting and shaping center with **5 interpolated axes** having Z axis stroke 1000mm, rotary head, prepared for single or incremental – pass cutting and shaping processes for the performance of marble, granite, stone and sintered materials products. It is suitable for oblique, circular, elliptical, inclined cuts, rectilinear, concave, convex, arched, elliptic shapes, excavations of two-dimensional and three-dimensional slabs. The possibility to mount blade having max diameter of 1100 mm grants the possibility to cut up to 410 mm thickness .

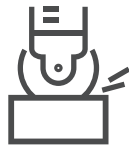
**QUADRIX DV 1100** allows to produce large dimensions items but also to perform extremely precise finishing; a high production is granted by the sliding system of X

and Y axes on linear guides and racks both in oil bath lubrication. The motion is given by brushless motors coupled to high precision gearboxes. It is equipped with a series of electro-spindles controlled by inverter and it can be fitted with ISO 50 type connection diamond tools, such as end mill, milling wheel and a horizontal blade.

The **QUADRIX DV 1100** is suitable for those looking for a powerful and flexible machine; it can be set up as a simple machine for cutting or as a work center, complete with tool holder, automatic tool change and lathe for the performance of shower trays, sinks, window frames, frames, columns, claddings and products in general for furniture and building.



**EXTREMELY  
POWERFUL**



**CUTTING CAPACITY OF  
HUGE THICKNESSES**



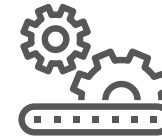
**IDEAL FOR  
SHAPING**



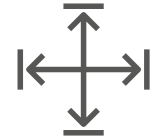
**HIGH  
PERFORMANCE**



**SET UP FOR  
EVERY NEED**



**WIDE RANGE OF  
PROCESSES**



**REDUCED  
DIMENSIONS**



# TECHNOLOGY AT CUSTOMER'S SERVICE

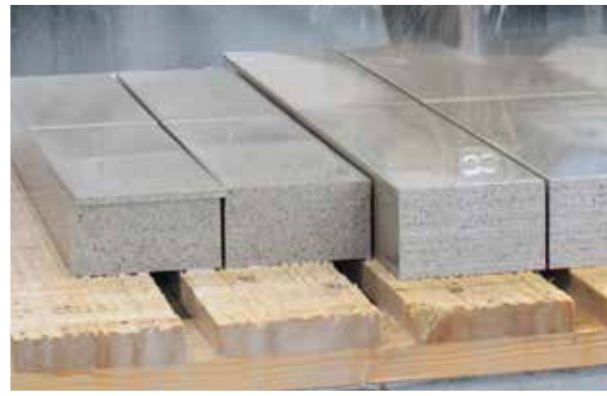
EFFICIENCY AND FLEXIBILITY





# PROCESSING

Columns, sinks, kitchen tops, top sinks, floors, panels for exterior and interior claddings, stair steps, window frames, shower trays, tables, fountains, capitals, sculptures, building products, products for funerary art.



# PERFECT BALANCE BETWEEN POWER AND FLEXIBILITY

MAIN FEATURES





- / 5 INTERPOLATED AXES
- / Z-AXIS TRAVEL: 1000 MM
- / DIAMETER MIN / MAX DISKS: 500-1100 MM
- / MAXIMUM CUTTING DEPTH: 410 MM
- / ISO-50 TOOL CONNECTION
- / CUTTING AND SHAPING MACHINE
- / SLIDING GUIDES LUBRICATION IN OIL BATH
- / NORMALIZED, SANDBLASTED AND PAINTED STEEL STRUCTURE
- / BRUSHLESS MOTORS AND HIGH-PRECISION GEARBOXES CONTROLLED BY INVERTER FOR X-Y-Z AXIS SLIDING

## TYPES OF WORKING



LONGITUDINAL  
CUTS



INCLINED CUTS  
0-90 °



ELLIPTICAL  
CUTS



CROSS  
CUTS



ORTHOGONAL CUTS  
UP TO 250 mm



STRAIGHT, CONCAVE, CONVEX,  
ARCHED, ELLIPTICAL SHAPES



OBLIQUE  
CUTS



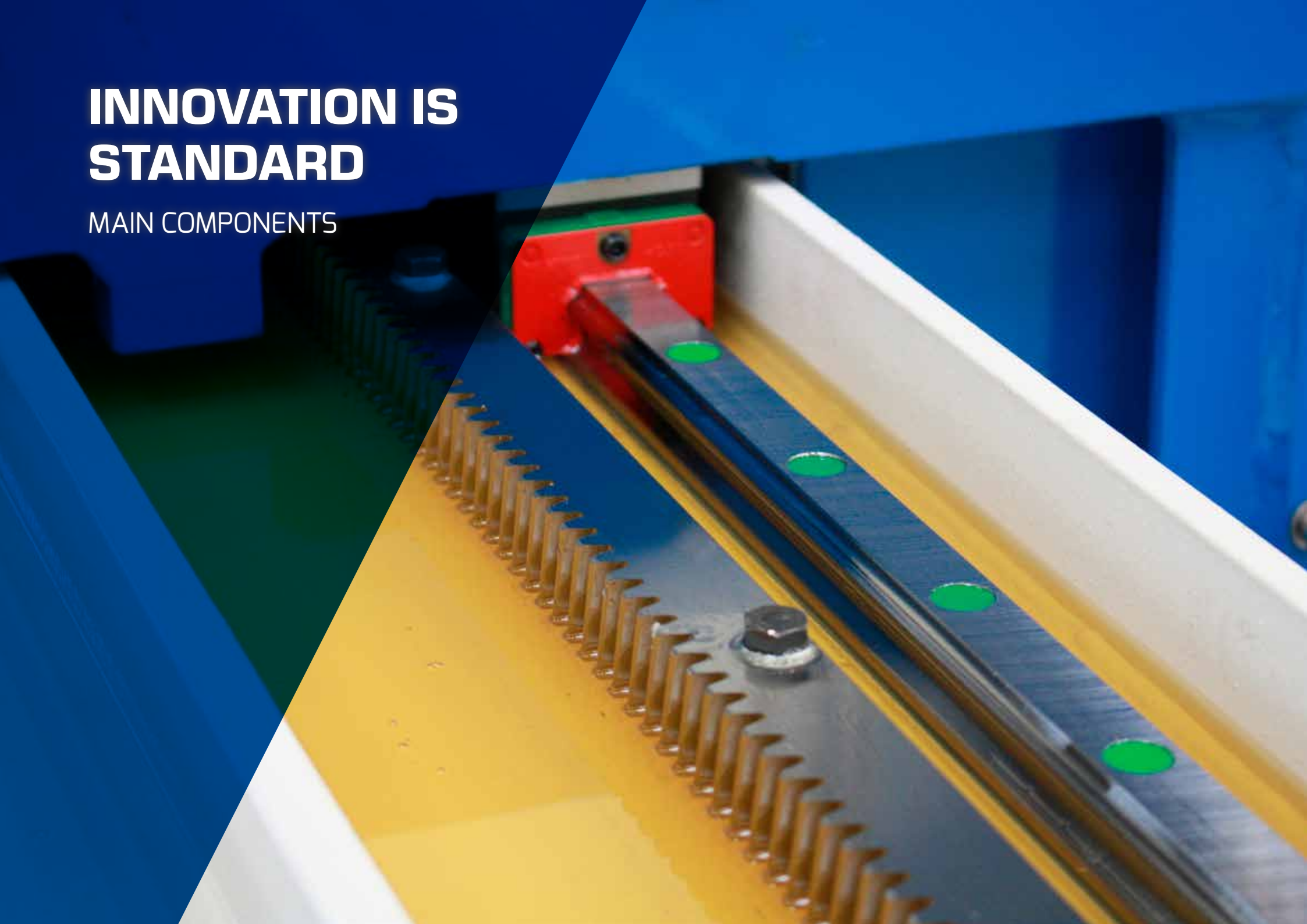
CIRCULAR  
CUTS



EXCAVATION OF  
SOLID STONE

# INNOVATION IS STANDARD

MAIN COMPONENTS



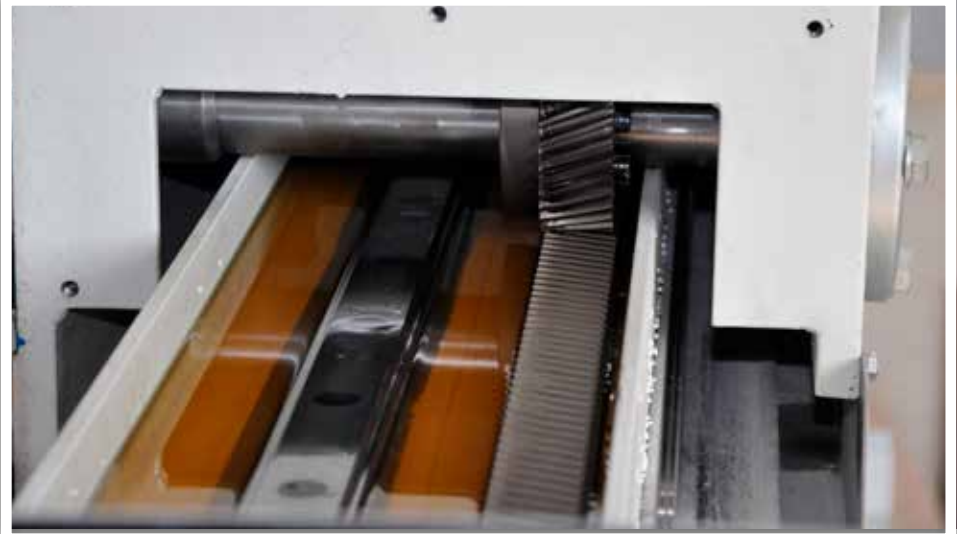
**Electro-spindles:** with high quality inverter produced in Italy, with adjustment of the nr. of revolutions, blade head rotating  $-5^{\circ} + 365^{\circ}$  and inclinable from  $0^{\circ}$  to  $90^{\circ}$ , mounted on steel carriage.



**Control console:** on double-jointed on swing arm, manual controls, video 15" color touch-screen, keyboard and usb port for importing files.



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



**Electric panel cooled by air conditioner** to keep the temperature.



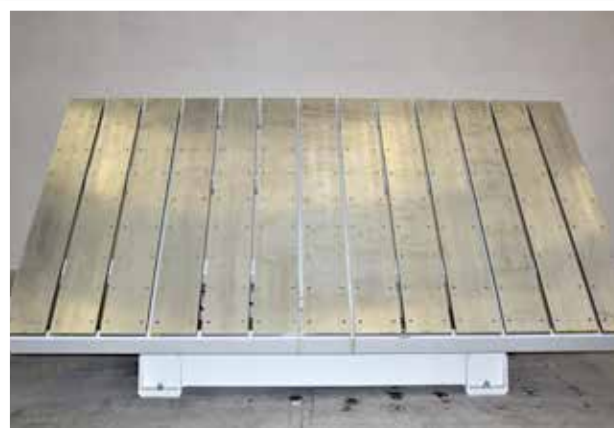


# ACCESSORIES AND MECHANICAL COMPONENTS

OPTIONAL



**Working bench:** available in different models, sizes and surfaces, with top in wood, steel, aluminum, with overbench, based on the selected accessories and on customer needs.



**Blade presetting:** system for measuring the diameter of the blade that detects its real diameter.

**Move-System:** Suction cup system for the automatic lifting and positioning of the cut pieces that grants the reduction of processing times. The 2 aluminum plates are equipped with suction cups of various sizes to take pieces of large and small dimensions, up to a maximum of 600 kg. Can be used with a blade up to 725 mm in diameter.



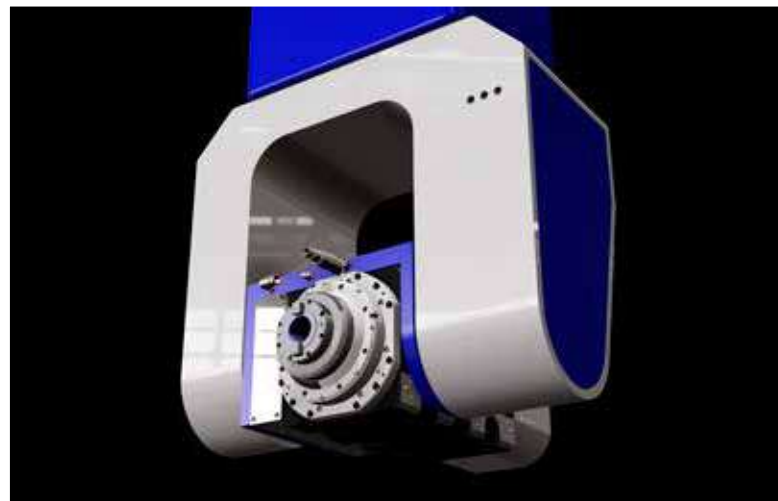
**Slab detector:** system for automatic detection of slab thickness.



**Retaining walls** in sandblasted steel and painted with triple layer.



**Bi-rotary head:** bi-rotary tool holder head with continuous inclination of the axis from  $-20^{\circ}$  to  $200^{\circ}$ , useful for 5-axis processing with blade or diamond wheel. Maximum diameter of the disc 1000 mm (not for use with Move-System).



**Camera for slabs:** Slab detection system, with camera placed above the workbench and image acquisition software. The application allows to speed up the machine programming and detect any slab defects.





**Linear tool storage** at 10 positions for ISO 50 cones with max. length 600 mm, complete with pneumatic- lifting stainless steel cover (only for ATC or MTB electrospindle).



**Tool presetting:** tool thickness detector, essential for precise processing.



**Rotary tool storage** at 16 positions for ISO 50 cones and two positions for vertical blade diam. 625 and 825 mm. The tool holder is placed alongside the machine and moves through a mobile base allowing to be placed within the working area to change the tool/blade. (Only for ATC or MTB electrospindle).



**Lathe (fixed and mobile)** allowing to perform columns with circular section or with complex shapes.



**Automatic blade change** to be combined with the ATC or MTB electrospindle.



**Suction Cups Kit:** system for fixing the pieces by means of suction cups and vacuum pump (to be combined with fixed or tilting aluminum bench).



# **AN INTELLIGENT SYSTEM TO MAKE YOUR JOB 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

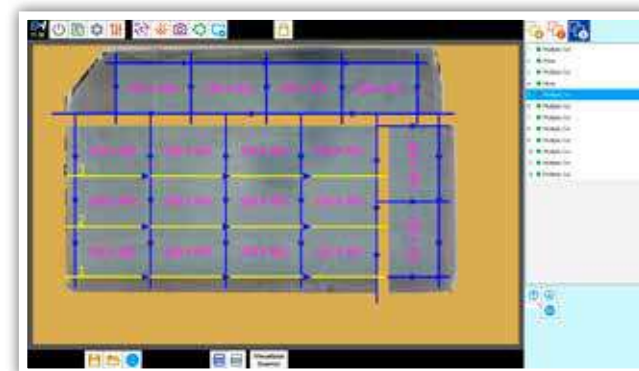
## USER-FRIENDLY ICONS AND SIMPLE PROGRAMMING

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.

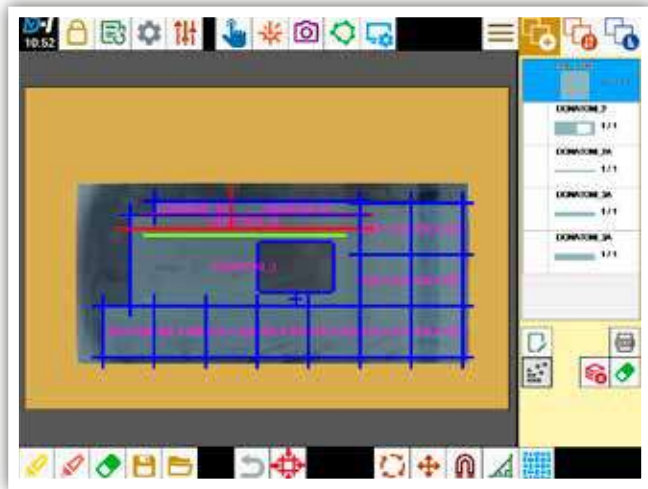
Included in the software are functions **for anti-collision of pieces, manual and automatic piece nesting, book matching, managing statistics, production and orders, rendering pieces and holes**.

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).

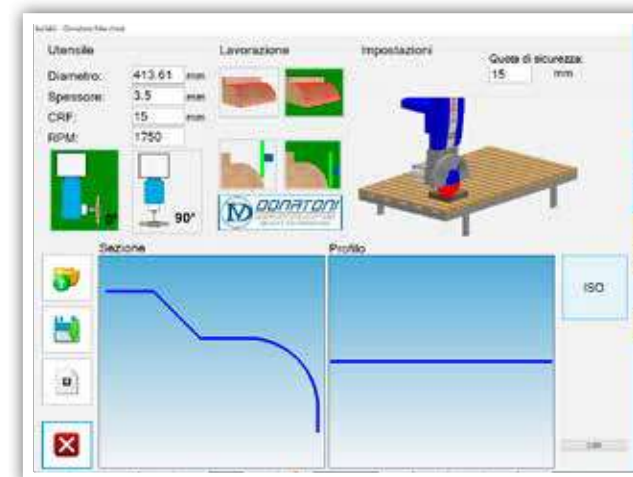
## DM\_TL (optional)

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.





# SCAN-CNC

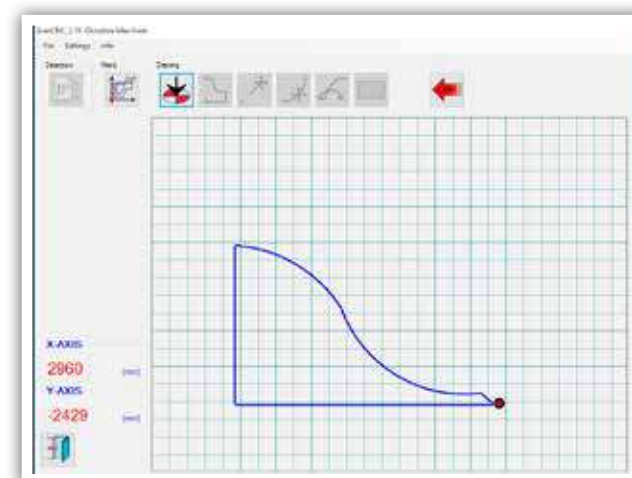
OPTIONAL



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.



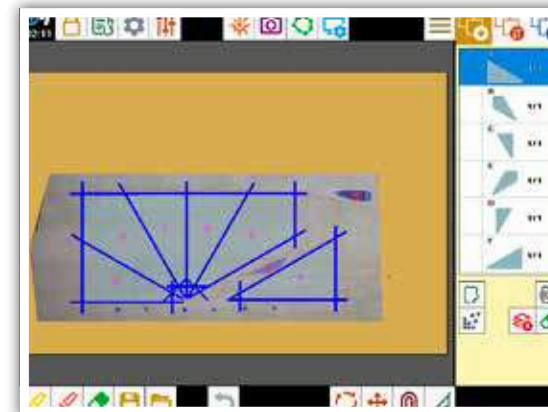
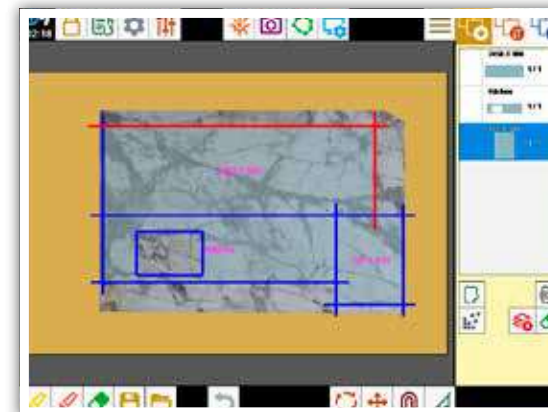
# PHOTOSLAB

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".



# DDX Easystone

OPTIONAL

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

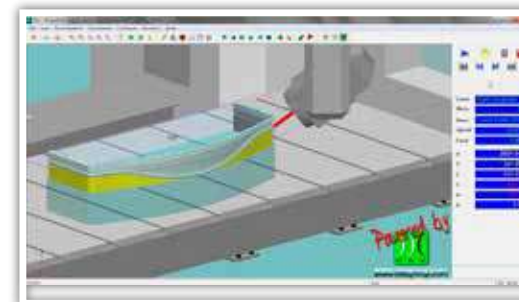
The software allows to design, import and execute 2D and 3D files in DXF, IGES, STL, PNT, STEP and RHINO formats and to define surfaces and shapes through laser scanning. Multiple processes can be set: roughing, drilling, profiling, emptying and polishing, which can be carried out by optimizing the execution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

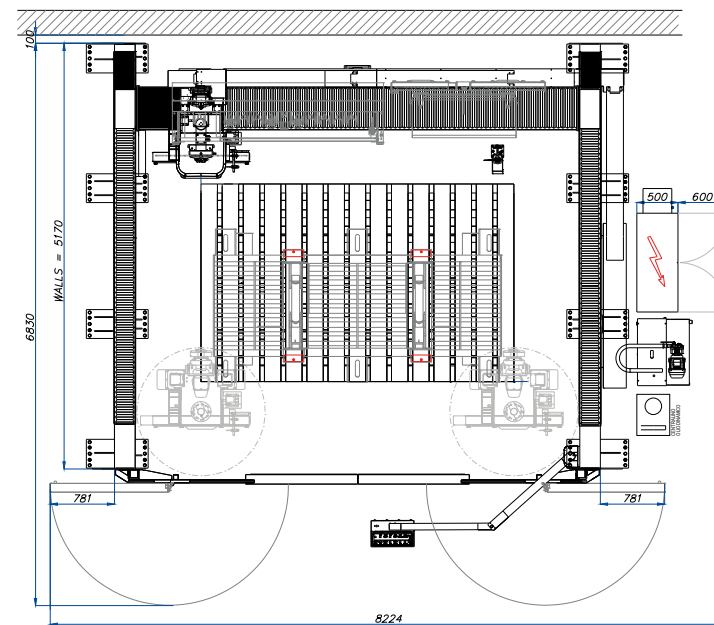
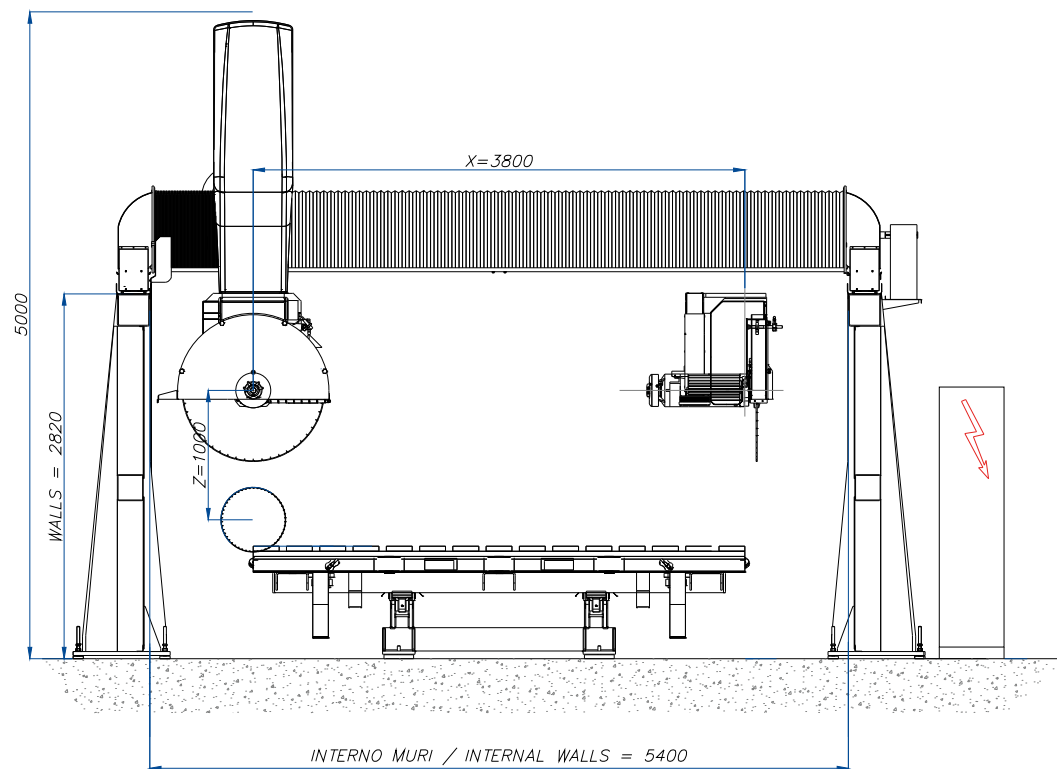
Donatoni is present in many countries worldwide thanks to a structure of reliable and competent partners and agents, among which the Biesse group Intermac branches.

## **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





# DV 1100

Maximum number of interpolated axis	N°	5
X axis stroke	mm in	3800 149,6
Y axis stroke	mm in	3200 125,9
Z axis stroke (head high/low motion)	mm in	1000 39,3
C axis blade-carrying head rotation	degrees °F	-5° / +365° 23° / 689°
A axis blade-carrying head inclination	degrees °F	0° / 90° 32° / 194°
Working bench dimensions*	mm in	2000 x 3500 2400x3800 (with Move-System) 78,7x137,7 94,4x149,6 (with Move-System)
Minimum blade diameter	mm in	500 19,6
Maximum blade diameter	mm in	1100 43,3
Max cutting depth	mm in	410 16,1
Electro spindle motor power	kW Hp	31 / 56 41,5 / 56
Blade rotation with inverter (standard)	RPM	0 / 6000

Tool rotation with motor Top/MTC/ATC ISO-50 rpm	RPM	0 / 6000 0 / 8000 (with motor MTB)
Spindle shaft diameter	mm in	50-65 1,9-2,5
Max speed axis X	m / min ft / min	0 – 45 0 – 147,6
Max speed axis Y	m / min ft / min	0 – 40 0 – 131,2
Max speed head axis Z	m / min ft / min	0 – 13 0 – 42,6
Max speed of X Y axes positioning	m / min ft / min	0 – 40 0 – 131,6
Water consumption	l / min gal / min	50 13,2
Air consumption	l / min gal / min	20 5,2
Standard voltage	Volt / Hz	400 / 50
Max blade dia. with move system (stroke 295 mm)	mm in	725 28,5
Max lifting capacity with Move system	kg lb	600 1322,7
Max blade dia. with thickness detector (stroke 200 mm)	mm in	525 20,6
Total weight of the machine	kg lb	7200 15873,2

# RANGE OF PRODUCTS

## BRIDGE SAWS



Spin 625 cnc



Jet 625 cnc



Echo 725 cnc



Sprinter 825 cnc



Quadrix DV 1100



Quadrix XL 1600



**DONATONI**  
HIGH INNOVATION STONE MACHINES

### MULTI-FUNCTIONAL CUTTING CENTRE



Quadrix DG  
1300/1600/2000

### ROBOT



Cyberstone CR01

### POLISHING AND CALIBRATION SYSTEMS



Zenit

### UNIVERSAL CUTTING CENTRE



Kronos 500/650/900

### CUTTING LINES



SX3/SX-5

### SLAB LOADING / UNLOADING



Geko Loader



## NOTE

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# 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](http://INTERMAC.COM)  
[DONATONIMACCHINE.EU](http://DONATONIMACCHINE.EU)  
[MONTRESOR.NET](http://MONTRESOR.NET)

### **Donatoni Macchine Srl**

Via Napoleone 14, 37015 Domegliara - Sant'Ambrogio di Valpolicella / Italy

Tel. +39 045 6862548

Fax +39 045 688 43 47

info@donatonimacchine.eu

www.donatonimacchine.eu

**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**.

