

DONATONI Z1000 Z1400 Z1600 Z2000

CNC WORK CENTRE



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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STRENGTH AND FLEXIBILITY WITHOUT COMPROMISE

CNC WORK CENTRE



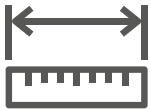
GREAT FLEXIBILITY, GREAT PERFORMANCE

The **DONATONI Z 1000 - 1400 - 1600 - 2000** are large dimension CNC multifunctional work centres with **5/6 interpolated axis** with Z stroke from 1000 up to 2000 mm. These models are greatly used for working profiles and shapes of all types, straight, concave, convex, arches, drilling in 2 and 3 dimensional works, columns, sculptures and all types of cutting process. The **DONATONI Z** are work centres designed to be very versatile with high production capacities. Thanks to its steel briZe and increased dimensions, to all the movements of each axis given by brushless motors and high precision gearboxes running on linear bearings and gears on both X and Y axis in oil bath, it is possible to produce precise various types of forms, sizes and objects.

The machines work with an electro-spindle controlled by inverter with an ISO 50 connection which can hold disks from 500 mm diam to 1200 mm and diamond tools such as router bits and drill bits to perform a wide range of processing.

The machines can be equipped with lathe and rotating platform controlled by CNC control, so bringing the axis controlled to 6. It is also possible to fit the machine as a briZe saw or as a complete CNC work centre thanks to the wide range of accessories available.

The **DONATONI Z** are suited for the customer who wants to grow the company in order to open new doors and projects from an always demanding market of designers and architects.



**PRECISE FOR A
PERFECT RESULT**



EXTREMELY STRONG



**FLEXIBLE AND
REALIABLE**



**SHAPING AND DRILLING
SPECIFIC**



**ABLE TO CUT THICK
PIECES**



EASY TO USE



**WIDE RANGE OF
ACCESSORIES**



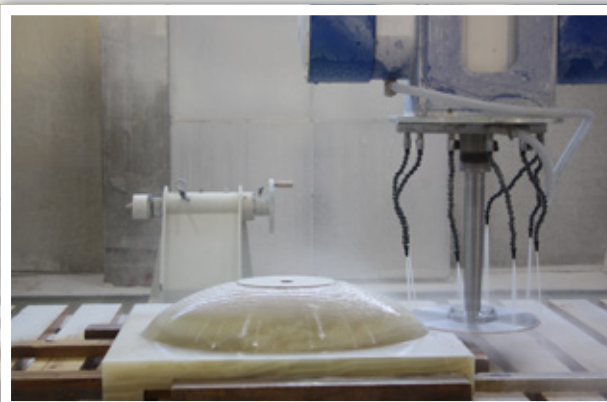
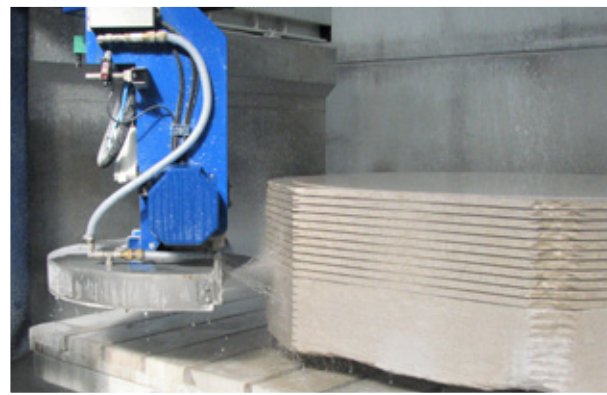
TECHNOLOGY AT THE SERVICE OF DESIGN AND ART

EFFICIENCY AND
FLEXIBILITY



PROCESSING

Columns, sculptures, bath tubs, wash basins, shower plates, panels for internal and external cladding, steps, window dressings, building material, monuments and head stones.



THE SOLUTION FOR GREAT CHALLENGES

MAIN FEATURES



TYPE OF PROCESSING



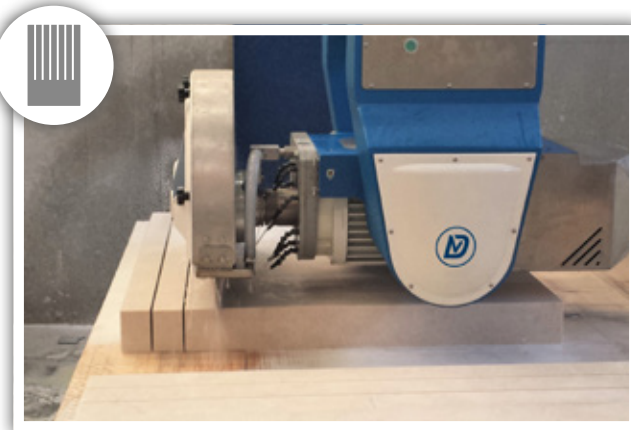
SHAPES



DRILLING



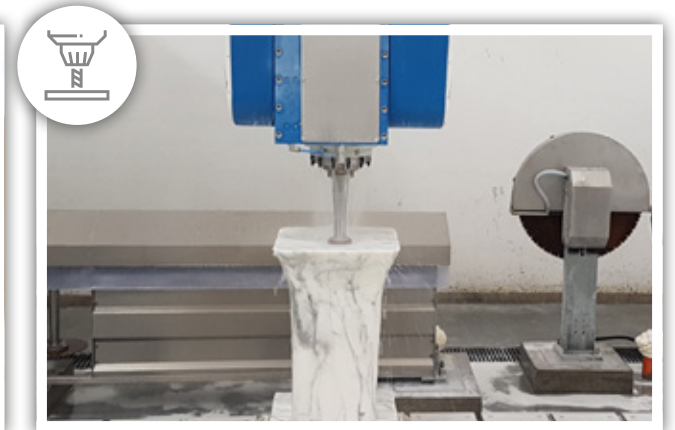
STATUES



CUTTING



LATHE



MILLING

MAIN FEATURES



Z 1000

5/6 interpolated axis

Diameter min/max blade:
500 - 1000 mm (opt. 1100 mm)

Z axis stroke: 1000 mm

Max cutting depth: 360 mm (410 mm)

Tool connection ISO-50

X axis stroke: 3800 mm

Guides of X-Y axis in oil bath

Normalized, sandblasted and painted steel
structure*

Brushless motors and high precision gearbox controlled by inverter for X-Y-Z axis

Electro-spindles with liquid cooling system

Bi-rotary head – Tool head with continuous inclination from -20 to 200 degrees



Z 1400

5/6 interpolated axis

Diameter min/max blade: 500 - 1000 mm
(opt. 1300 mm)

Z axis stroke: 1400 mm

Max cutting depth: 360 mm
(opt. 460 mm)

Tool connection ISO-50

X axis stroke: 4100 mm

Guides of X-Y axis in oil bath

Normalized, sandblasted and painted steel
structure*

Brushless motors and high precision gearbox controlled by inverter for X-Y-Z axis

Electro-spindles with liquid cooling system

Bi-rotary head – Tool head with continuous inclination from -20 to 200 degrees



Z 1600

5/6 interpolated axis

Diameter min/max blade: 500-1000 mm
(opt. 1300 mm)

Z axis stroke: 1600 mm

Max cutting depth: 360 mm
(opt. 500 mm)

Tool connection ISO-50

X axis stroke: 4100/4600 mm

Guides of X-Y axis in oil bath

Normalized, sandblasted and painted steel
structure*

Brushless motors and high precision gearbox controlled by inverter for X-Y-Z axis

Electro-spindles with liquid cooling system

Bi-rotary head – Tool head with continuous inclination from -20 to 200 degrees



Z 2000

5/6 interpolated axis

Diameter min/max blade: 500-1000 mm
(opt. 1300 mm)

Z axis stroke: 2000 mm

Max cutting depth: 360 mm
(opt. 500 mm)

Tool connection ISO-50

X axis stroke: 4100/4600 mm

Guides of X-Y axis in oil bath

Normalized, sandblasted and painted steel
structure*

Brushless motors and high precision gearbox controlled by inverter for X-Y-Z axis

Electro-spindles with liquid cooling system

Bi-rotary head – Tool head with continuous inclination from -20 to 200 degrees

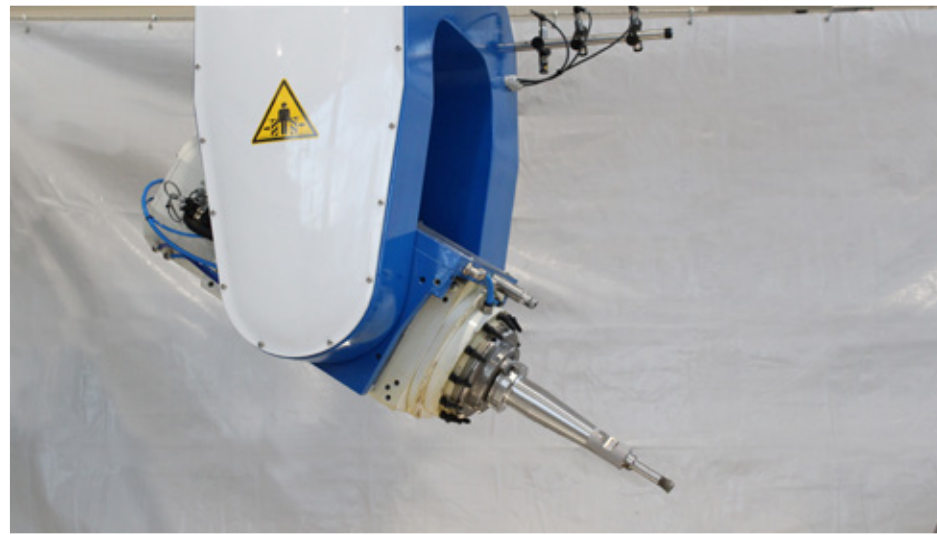
*Each model of the Z range has its own built structure. The briZe and rails are built according to the size of machine to grant rigidity and stability, in order to guarantee high working precision.

INNOVATION IS STANDARD

MAIN COMPONENTS



Electro-spindle of very high quality, with twin rotating head installed on steel carriage controlled by inverter allowing to vary the speed of the blade or tool from 0 to 8000 rpm. Provided with Bi-rotary head – Tool with continuous inclination from -20 to 200 degrees, very useful with 5 axis work with blade or router tool. It is possible to use blades, drilling and router bits. The tools can be changed either manually or automatically.



Sliding cross-beams with linear bearings and helicoidal-teeth racks for the X and Y axis, with automatic grease or oil bath lubrication and bellows and bellows for protection with labyrinth closure.

BrZe: designed to assure the best support to the sleeve and the electro-spindle and to guarantee maximum precision. The structure is in zinc-plated normalized steel, sandblasted and painted with 3 coats of paint.

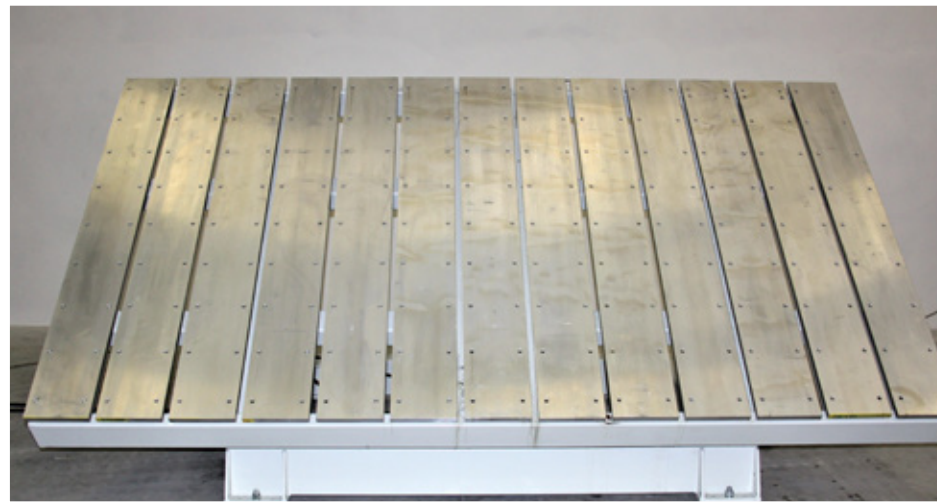


ACCESSORIES AND MECHANICAL COMPONENTS

OPTIONALS



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



Slab thickness detector: automatic detection system of slab thickness.



3d scanner ARTEC: is a professional instrument to scan objects of various sizes such as statues, capitals for columns, objects of high design and any special shapes and forms of various dimensions in various formats.



Camera for slab: Slab detection system, with camera placed above the workbench and image acquisition software. The application allows to speed up the machine programming, to position each piece 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.



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.



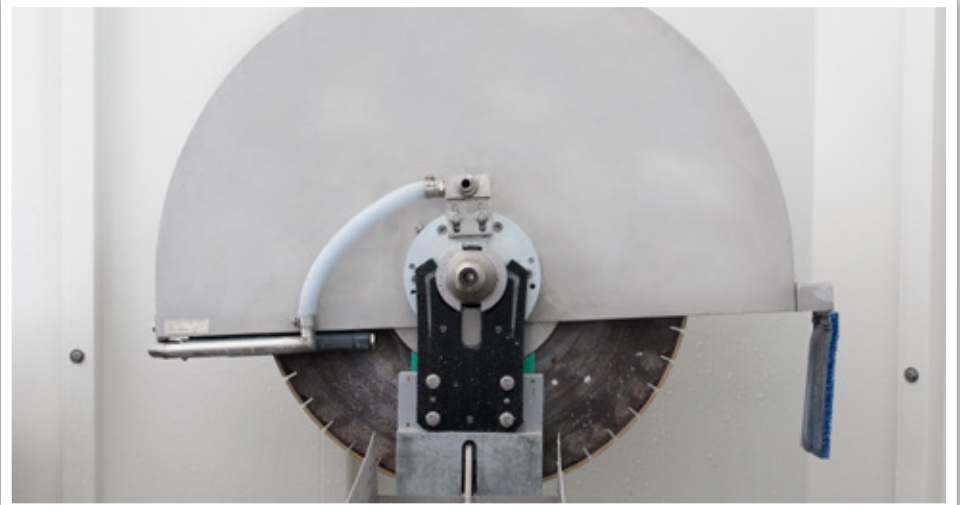
Tool presetting: tool thickness detector, essential for precise processing.



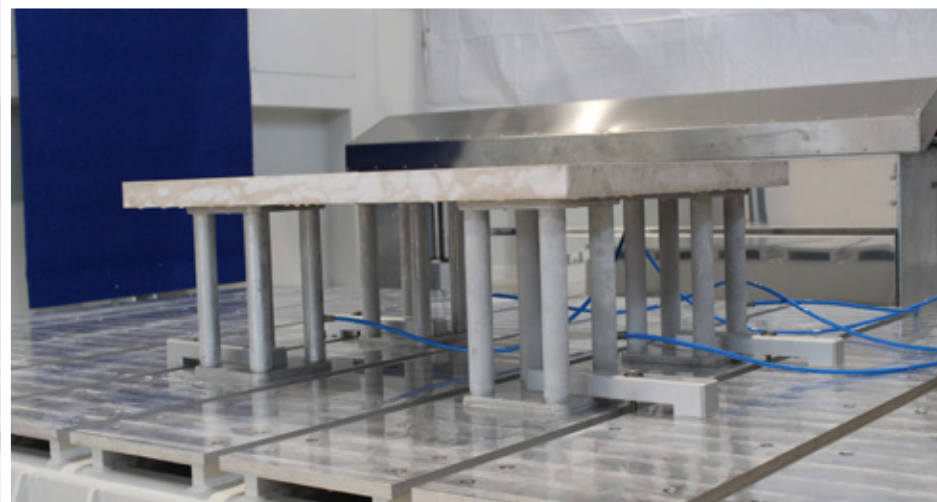
Lathe: interpolated lathe to produce columns of different sizes and complex forms



Automatic blade change: 625 or 825 mm.



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 or platform).



Steel walls: sandblasted and painted with 3 coats of paint.



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



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.



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

PARAMETRIX

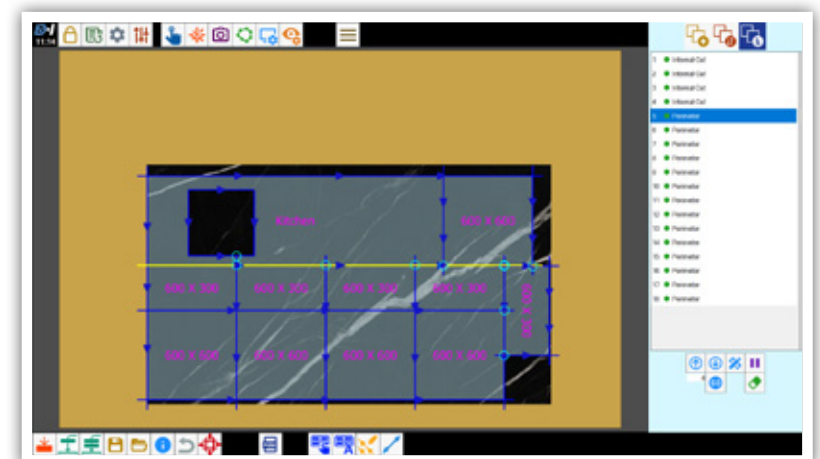
INCLUDED

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

It is a program allowing to manage cutting processes with blades, it enables input of rectilinear as well as curvilinear shapes (steps, kitchen work-tops, rectangles, covers) using pre-defined shapes in the program or imported from DXF files.

Based on the surface available it is possible to automatically set-up the pieces positioning and the sequence of cuts, so optimizing times and reducing material waste.

The software is including functions such as anti-collision of pieces, manual and automatic pieces nesting, book matching, production and orders statistics management, rendering of pieces and holes. Parametrix can be combined with Photoslab.



Automatic nesting (included)

It automatically inserts the pieces in the work area optimizing the exploitation of the slab.

Drilling and cutting with milling tool (included)

It allows to manage the use of tools and automatic change from disk to tool.

Management and modification of cuts (included)

It allows to modify, add and remove the set cuts and to change the order of execution.

Positioning of the pieces on the slab (included)

It helps to optimize the programming and processing phases through some functions.

Book matching (optional)

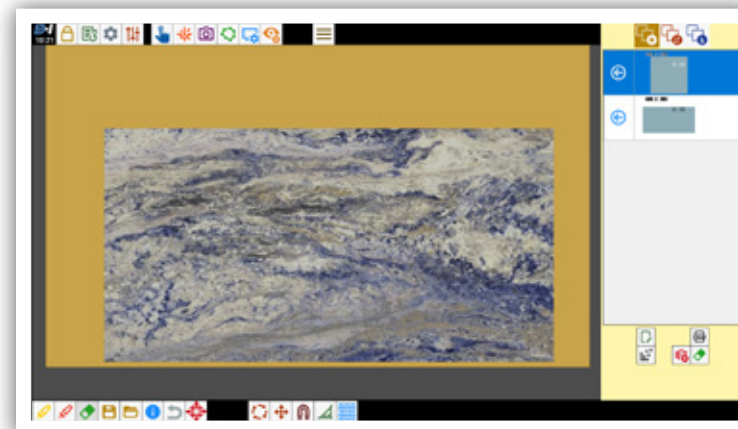
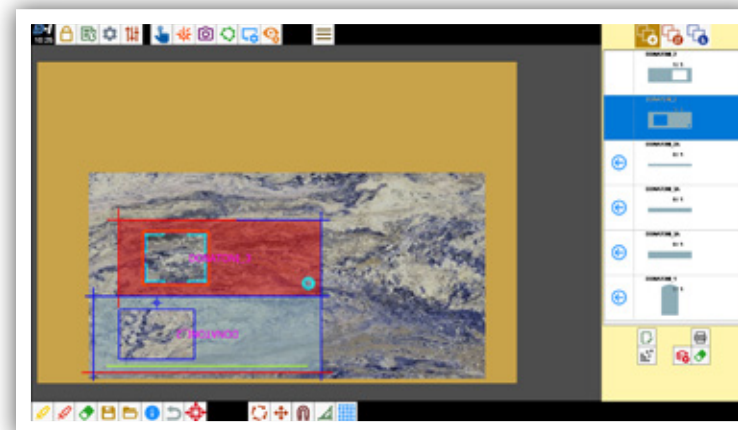
Allows to preview a 2D rendering of the result before the processing is performed.

DM_TL (optional)

Program for smoothing / polishing / brushing.

Photoslab (supplied with camera for slabs)

Through the use of a camera positioned above the machine and the acquisition software, the slab will be detected automatically. The system thus makes it possible to optimize the exploitation of the slab dimensions and to speed up the positioning of the pieces, avoiding possible defects or allowing to perform cuts following the veins of the material. The software is automatically enable with with the installation of the "Camera for slabs" accessory.



CAD-CAM

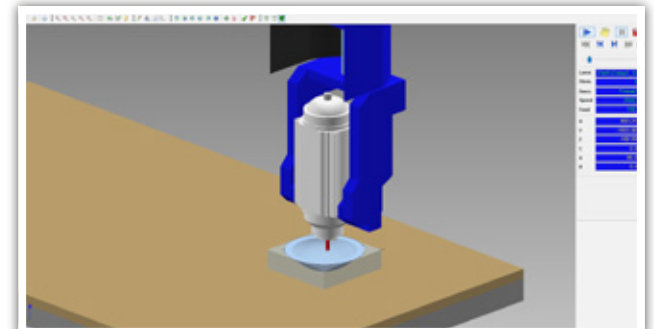
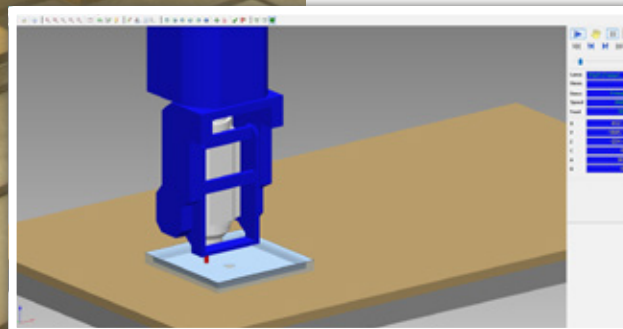
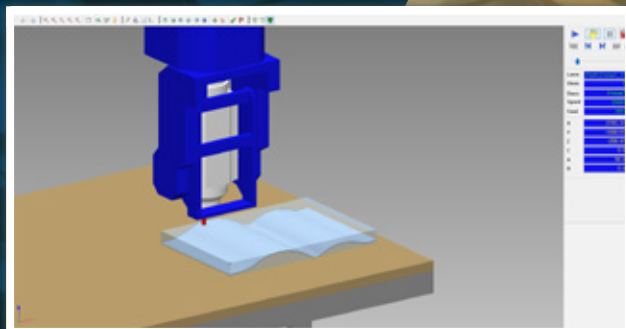
OPTIONAL

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.

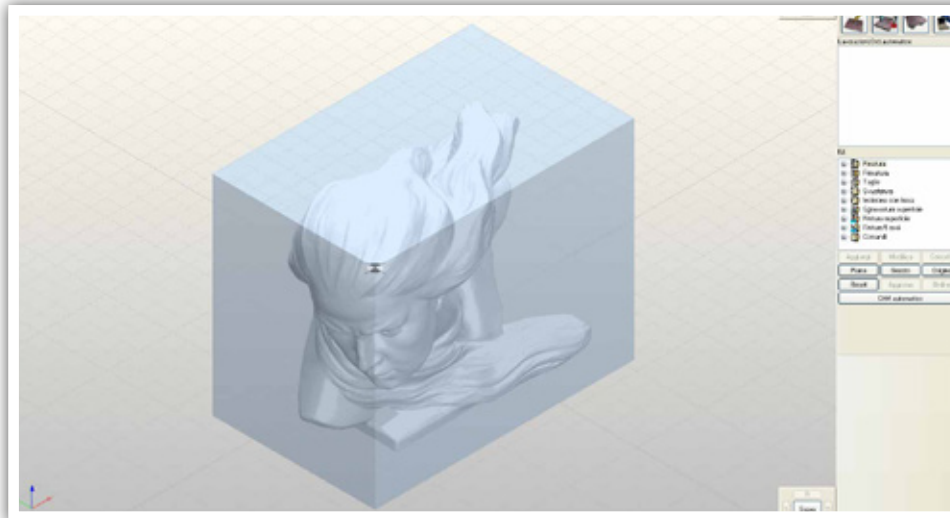
After the import, the software optimizes processing paths, performs roughing / finishing taking into account the raw material resulting after processing.

With CAD-CAM 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 .

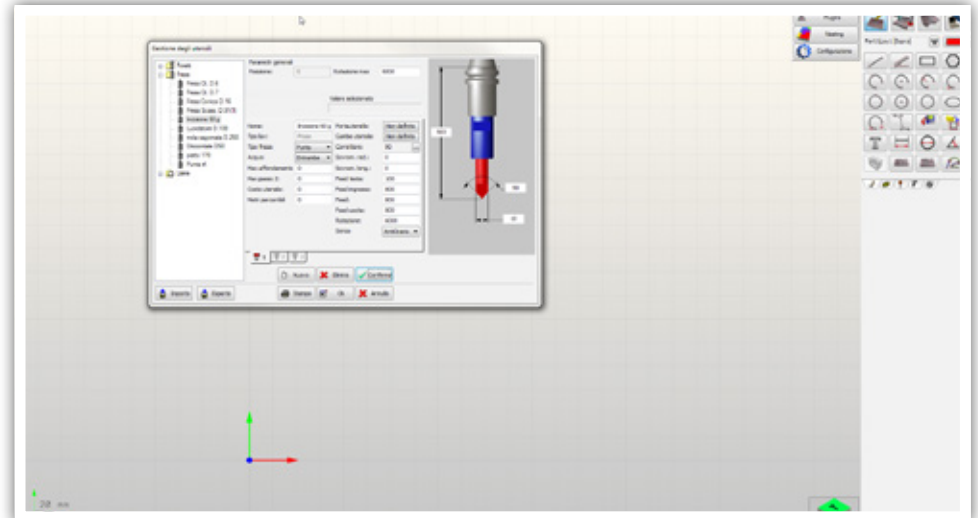
Once the design phase is completed, CAD-CAM generates the piece-programs and sends it directly to the Customer's working center. Finally, it calculates times, lengths and processing costs, allowing accurate reporting of the work performed.



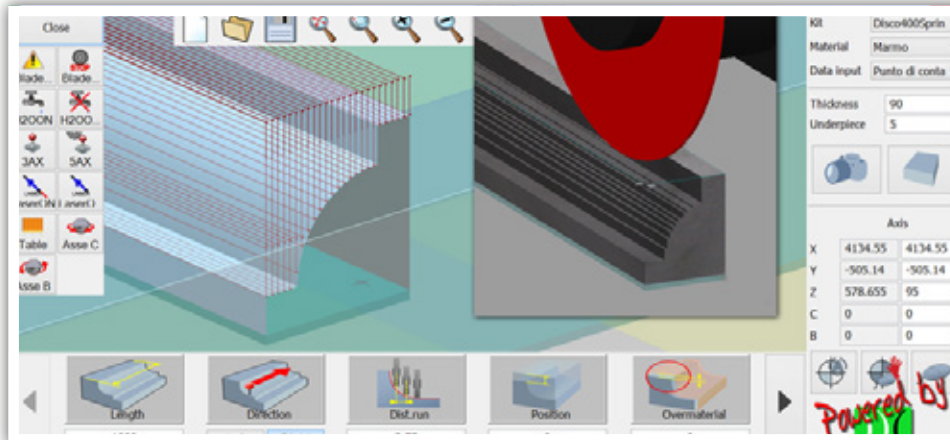
Drawing: the software provides drawing tools allowing to easily create 2D shapes and even complex 3D surfaces. It is also possible to import surfaces produced with other modeling software or coming from the scanning of real objects.



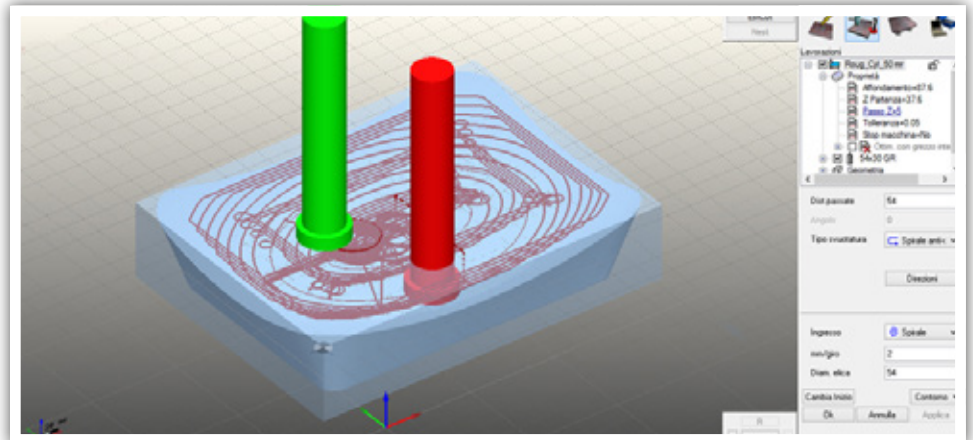
Tool storage management: the software manage tool magazine and creates working kits. This allows to create a database by type of processing, containing all the necessary tool parameters already set, saving time for programming.



Working management: the project that has to be realized out often requires the use different processes (finishing, roughing ...), which have to be carried out using different tools. The application of these processes is done directly on 3D model and the operator immediately has feedback on the tool paths and uptake so allowing you to deal with the process in the most congenial way.



Simulation: the program allows to simulate the operations that will be actually performed by providing a model of the machine, tools and the material processed. In the simulator, during the movement of the tool on the material, it will be possible to display the actual material removal and to have a preview vision of the final result.



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

Donatoni Service is the company department that is totally devoted to our customers and their needs; it provides a wide range of **services aimed at meeting our customers' all-round requirements**, before, during and after the delivery and installation of the machine and throughout its useful life.

Our highly-qualified personnel have sound experience and are capable of responding to any question or request. We use an open approach that is attentive to specific individual needs since our objective is

to cooperate with and support the customer in its production activities, not only through assistance but also with **technical services and advice** which allow operators to improve their know-how and enhance their production. Speed, reliability and professionalism are the strengths that allow us to ensure an efficient response to your requests; our Service uses the latest generation communication tools and **a global network of partners** so as to provide prompt answers and solutions.

WORLDWIDE 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.

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.

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.

CAD-CAM TECHNICAL ADVICE

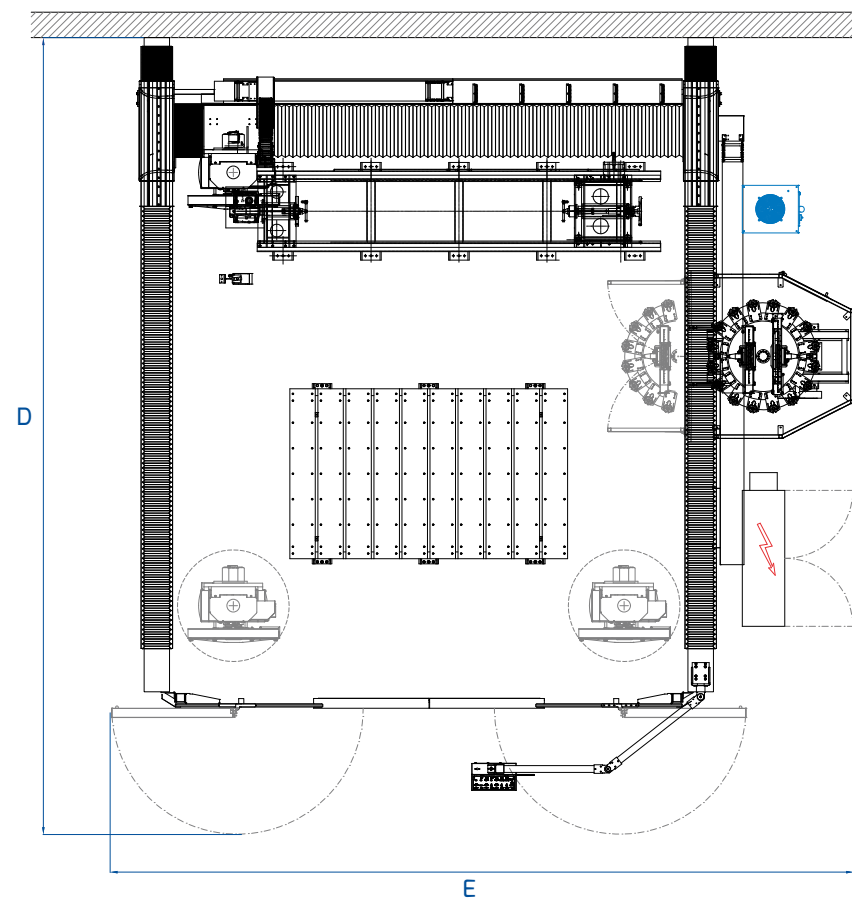
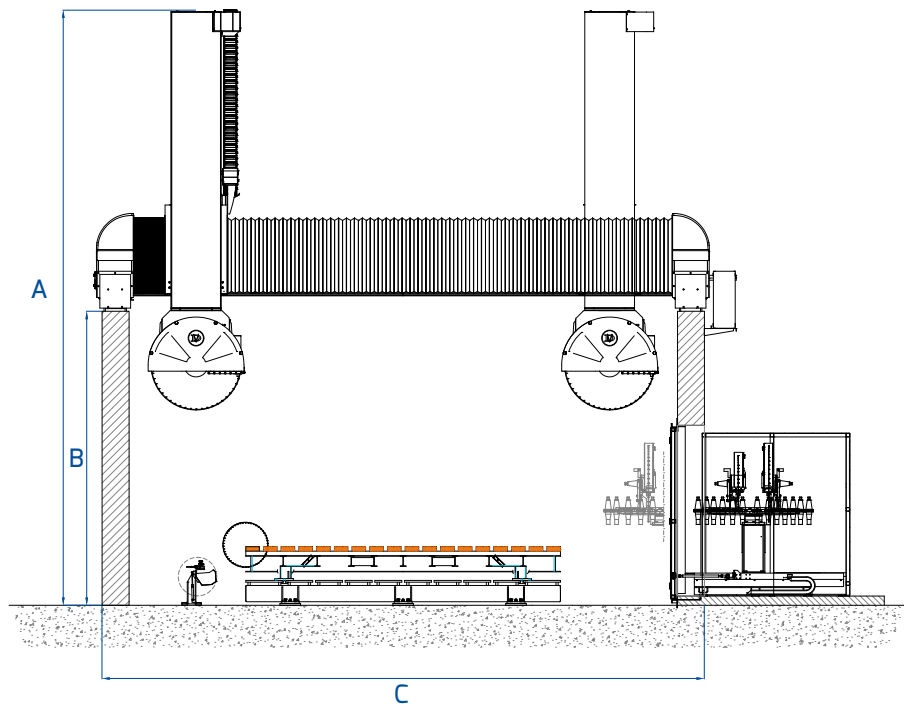
we help our customers in creating and designing projects and objects.

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



A:
 Z 1000: 4690 mm
 Z 1400: 5160 mm
 Z 1600: 5800 mm
 Z 2000: 6620 mm

B:
 Z 1000: 2570 mm
 Z 1400: 2800 mm
 Z 1600: 2900 mm
 Z 2000: 3270 mm

C:
 Z 1000: 5400 mm
 Z 1400: 5800 mm
 Z 1600: 6100 mm
 Z 2000: 6100 mm

D:
 Z 1000: 8010 mm
 Z 1400: 7700 mm
 Z 1600: 7700 mm
 Z 2000: 7700 mm

E:
 Z 1000: 7880 mm
 Z 1400: 8540 mm
 Z 1600: 8700 mm
 Z 2000: 8700 mm

DONATONI Z 1000 / 1400 / 1600 / 2000

		1000	1400	1600	2000
Max number of interpolated axes	N°	5 / 6	5 / 6	5 / 6	5 / 6
Carriage stroke axis X	mm in	3800 149,6	4100 161,4	4100 (4600 opt.) 161,4 (181,1 opt.)	4100 (4600 opt.) 161,4 (181,1 opt.)
BriZe stroke axis Y	mm in	3000 118,1	3000 118,1	3500 (3000 opt.) 137,8 (118,1 opt.)	3500 (3000 opt.) 137,8 (118,1 opt.)
Vertical stroke of the head axis Z	mm in	1000 39,3	1400 51,1	1600 62,9	2000 78,7
Disk head rotation (axis C)	degrees	-5° / +545°	-5° / +545°	-5° / +545°	-5° / +545°
Disk head tilting movement (axis A)	degrees	-20° / +200°	-20° / +200°	-20° / +200°	-20° / +200°
Working table dimensions	mm in	2000 x 3500 78,7 x 137,7	2000 x 3500 78,7 x 137,7	2000 x 3500 78,7 x 137,7	2000 x 3500 78,7 x 137,7
Minimum disk diameter	mm in	500 19,6	500 19,6	500 19,6	500 19,6
Max disk diameter	mm in	1000 (opt. 1100) 39,3 (opt. 43,3)	1000 (1300 opt.) 39,3 (51,1 opt.)	1000 (1200 opt.) 39,3 (51,1 opt.)	1000 (1300 opt.) 39,3 (51,1 opt.)
Max cutting depth	mm in	360 (opt. 410) 14,1 (opt. 16,1)	360 (500 opt.) 14,1 (19,7 opt.)	360 (500 opt.) 14,1 (19,7 opt.)	360 (500 opt.) 14,1 (19,7 opt.)
Electro-spindle motor power	kW	40 / 56	40 / 56	40 / 56	40 / 56
Tools rotation with inverter	Rpm	0 - 8000	0 - 8000	0 - 8000	0 - 8000
Tool connection cone	ISO	50	50	50	50
Speed axis X	m / min ft / min	0 - 40 0 - 131,2	0 - 40 0 - 131,2	0 - 40 0 - 131,2	0 - 40 0 - 131,2
Speed axis Y	m / min ft / min	0 - 40 0 - 131,2	0 - 40 0 - 131,2	0 - 40 0 - 131,2	0 - 40 0 - 131,2
Speed axis Z	m / min ft / min	0 - 13 0 - 42,6	0 - 13 0 - 42,6	0 - 15 0 - 49,2	0 - 15 0 - 49,2
Speed of axes X Y	m / min ft / min	0 - 40 0 - 131,2	0 - 40 0 - 131,2	0 - 40 0 - 131,2	0 - 40 0 - 131,2
Water consumption	l / min gal / min	50 13,2	50 13,2	50 13,2	50 13,2
Air consumption	l / min gal / min	20 5,2	20 5,2	20 5,2	20 5,2
Standard voltage	Volt / Hz	400 / 50	400 / 50	400 / 50	400 / 50
Total weight standard machine	kg lb	9300 20502,9	11000 24250,8	11800 26014,5	12000 26455,4

The technical data and images in this catalog are indicative and do not constitute a constraint. The manufacturer reserves the right to make changes to the product, technical data and images without prior notice.

RANGE OF PRODUCTS



DONATONI
HIGH INNOVATION STONE MACHINES

BRIDGE SAWS



Spin



Jet



Echo



Sprinter

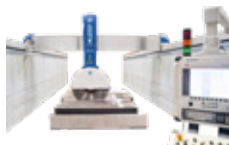


Twin

BRIDGE SAWS



Quadrix DV 1100



Quadrix XL

MULTI-FUNCTIONAL CUTTING CENTRE



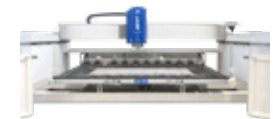
Z 1000 / 1400 / 1600 / 2000

UNIVERSAL CUTTING CENTRE



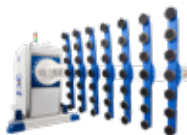
Kronos

POLISHING AND CALIBRATION SYSTEMS



Zenit

SLAB LOADING / UNLOADING



Geko

ROBOT



Cyberstone CR01 / CR02

DRILLING MACHINE



KROSS

CUTTING LINES



SX-3 / SX-5



Belt

RANGE OF PRODUCTS

INTERMAC

CNC WORKING CENTRES



Master 23



Master One



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

DOUBLE-EDGER FOR SINTERED MATERIALS



Busetti F series

WATERJET CUTTING SYSTEMS



Primus 184



Primus series



Master 850-1200

UNIVERSAL CNC WORKING CENTRES



Mastersaw 625 Double Table

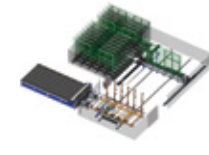
AUTOMATIC UNIVERSAL CNC WORKING CENTRES



Genius RS-A

CUTTING TABLES FOR SINTERED MATERIALS

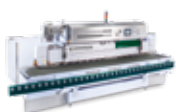
STORAGE AND HANDLING SYSTEMS FOR SINTERED MATERIALS



Navetta Lite

MONTRESOR EDGE POLISHERS - SINCE 1958

HORIZONTAL EDGE POLISHER STRAIGHT EDGE



Lola 6.4



Lola 8.6



Lola 10.8

HORIZONTAL EDGE POLISHER STRAIGHT EDGE AND BULLNOSE EDGE



Luna 7.4



Luna 8.6

VERTICAL EDGE POLISHER STRAIGHT EDGE



Vela 7.2

V-GROOVE



Viva 3.2

NOTES

[illegible]

NOTES

This image shows a blank 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.

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-eZe 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**.

