

TWIN SYSTEM BRIDGE SAWS

PATENTED SYSTEM
2 SAWS IN 1



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





CONTENTS

07 TWIN SYSTEM ADVANTAGES

09 ECHO TWIN

11 SPRINTER TWIN

13 COMPONENTS AND OPTIONALS

17 SOFTWARE

23 SERVICES AND AFTER-SALES SERVICE

25 TECHNICAL DATA

MECHANICAL PERFECTION, TECHNOLOGICAL PRECISION

TWIN SYSTEM



UNRIVALLED THROUGHPUT

Echo Twin and Sprinter Twin are 5/6 interpolated axes numeric control bridge saws equipped with the TWIN System, the Donatoni Machine's patented system to fully optimise a bridge saw performance, by increasing the production capacity up to the 70%.

The **Twin System** consists of a **double bench with automatic system of benches exchange**, it lays on a rails-monoblock frame, on which the two benches are alternatively moving between cutting and unloading areas. The operator can carry-

out unloading and programming operating on the 1st bench while the machine is working on the 2nd bench.

TWIN system advantages:

- Increase of **production capacity**
- **Only 1 operator** needed
- **2 saws in 1**: possibility to use the machine as a traditional bridge saw and to perform shaping operations of workpieces having up to 300 mm thickness.



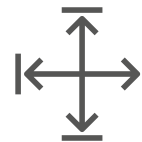
HIGH
PRODUCTIVITY



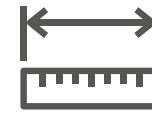
ONLY ONE
OPERATOR
NEEDED



NO NEED OF
FOUNDATION



REDUCED
DIMENSIONS



CNC TECHNOLOGY
PRECISION AND
PRODUCTIVITY



CUTTING
OPTIMIZATION



SIMPLE AND EASY
TO PROGRAM

TYPES OF WORKINGS



LONGITUDINAL
CUTS



0-90° INCLINED
CUTS



ELLIPTICAL
CUTS



CROSS
CUTS



ORTHOGONAL CUTS
UP TO 250MM



SHAPES



OBLIQUE
CUTS



EXCAVATION
OF BLOCKS



A PATENTED SYSTEM FOR INCREASED PRODUCTIVITY

THE SOLUTION FOR
GROWING COMPANIES

PRODUCTIVITY COMPARISON*

The following sketch is showing a production process comparison between traditional bridge saw and twin-system equipped bridge saw.

Advantages of the last one are reduction of machine's downtime and **production increase up to 70%.**

*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.

Possibility to use the machine as a traditional bridge saw and to perform shaping processing operations.



TRADITIONAL BRIDGE SAW	
N. OPERATORS	1
SURFACE CUTS (8 working hours)	120 SQM

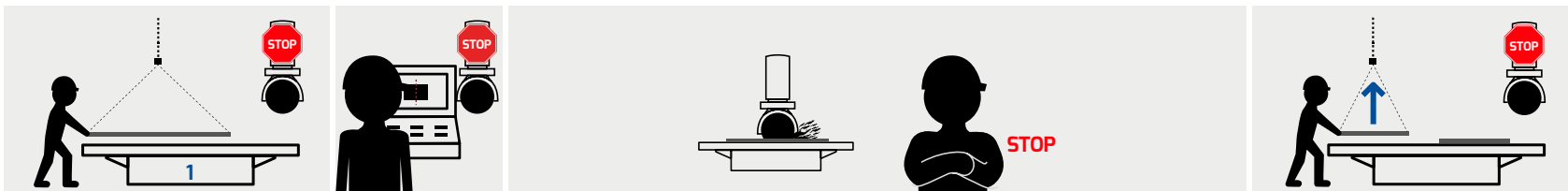
TWIN SYSTEM	
N. OPERATORS	1
SURFACE CUTS (8 working hours)	200 SQM



PRODUCTION CYCLE

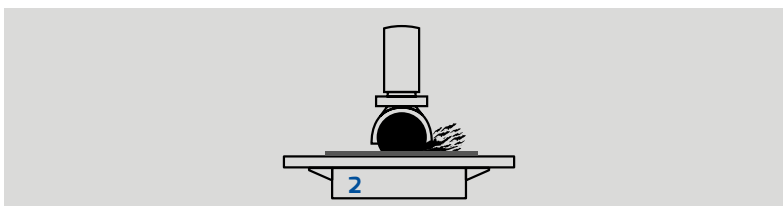


TRADITIONAL BRIDGE SAW

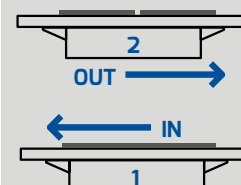
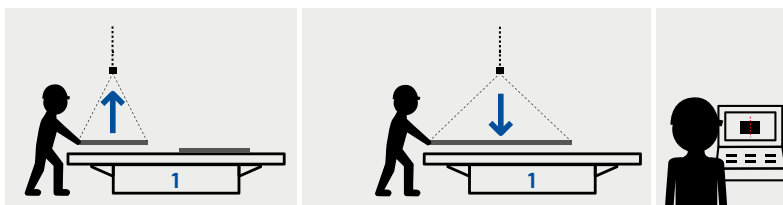


TWIN SYSTEM

Cutting area



Loading/
unloading area



BENCHES EXCHANGE
35 SECONDS

WORKING TIME GAINED

+70%

OF PRODUCTION



MACHINE
DOWNTIME



PRODUCTIVITY

Twin monoblock frame
made in galvanized steel to
avoid concrete foundation
below the floor level, on
which the sliding rails of
the benches are placed.

Benches exchange time:
35 seconds.



ECHO TWIN

ECHO TWIN is a **5/6 interpolated axes numeric control bridge saw**, **Z axis stroke 600 mm** equipped with **Twin system** and **electrospindle** with maximum power of **17 kW/S6**.

ECHO TWIN is suited to produce different kind of products such as kitchen and vanity tops, engraving, bas-reliefs and different coating for building industry. The machine is allowing to perform **a wide range of processings**, like cutting, milling, drilling and shaping. The countless accessories supplied are granting the possibility to perform all these processing without moving the piece from the working bench and without prolonged downtime.

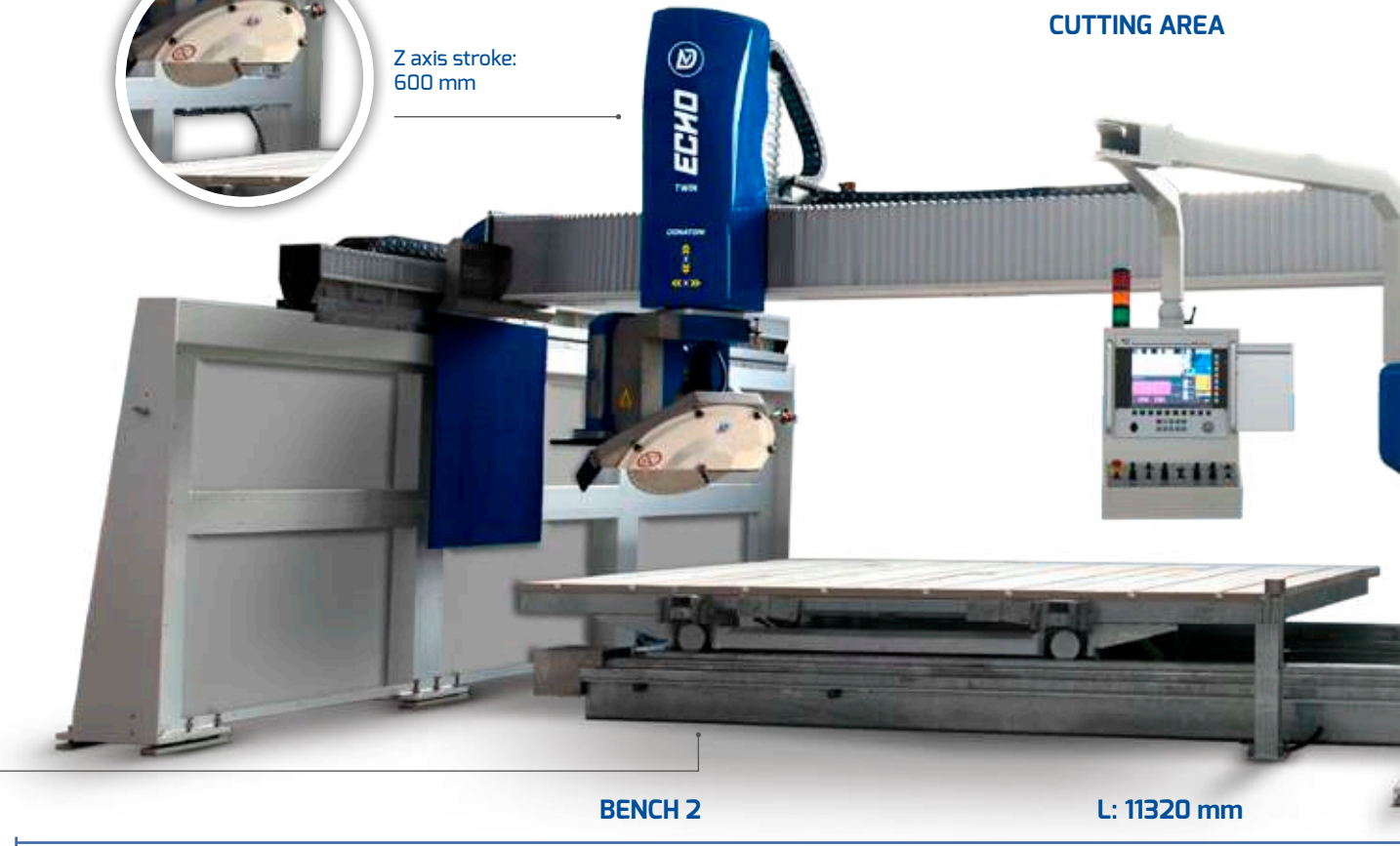


Wheels with locking system that avoids any displacement



Z axis stroke: 600 mm

CUTTING AREA



BENCH 2

L: 11320 mm

MAIN FEATURES

- / 5/6 INTERPOLATED AXES
- / Z-AXIS STROKE: 600 MM
- / DIAMETER MIN / MAX DISKS: 350-750 MM
- / BENCHES EXCHANGE TIME: 35 SEC.
- / STEEL BRIDGE WITH NEW REINFORCED STRUCTURE FOR GREATER STABILITY
- / TOOLS ELECTROSPINDLE POWER 17 KW / S6
- / 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
- / TILTING BENCHES WITH WOODEN OR RUBBER TOP

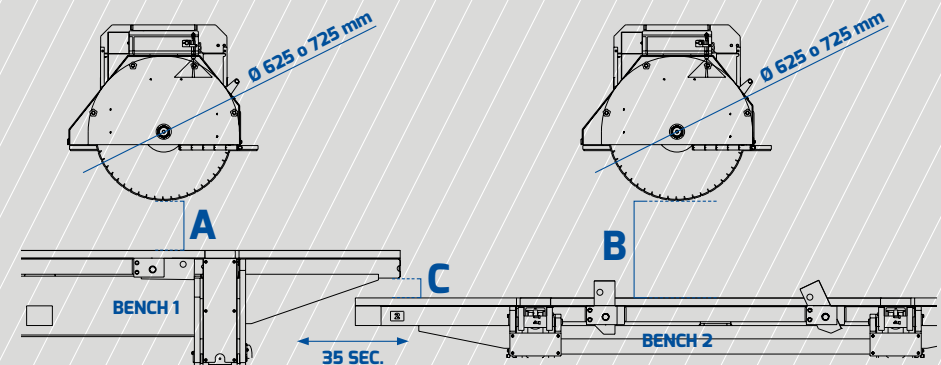
LOADING/UNLOADING AREA



Tilting benches with wood or rubber surface (at customer's choice) with hydraulic lifting system and capacity up to 1650 kg.

BENCHES TECHNICAL DATA

DIMENSIONS		MAX CUTTING THICKNESS WITH BLADE Ø625 MM	MAX CUTTING THICKNESS WITH BLADE Ø725 MM
Bench 1: 3800 X 2400 X H 900		A: 180 mm	A: 130 mm
Bench 2: 3800 X 2300 X H 640	With manual front loading	B: 200 mm	B: 250 mm
	With Twin System working	C: 100 mm	C: 100 mm



SPRINTER TWIN

SPRINTER TWIN is a **5/6 interpolated axes numeric control bridge saw**, **Z axis stroke 800 mm** equipped with **Twin system** and **electrospindle** with maximum power of **22 kW/S6**.

SPRINTER TWIN is suited to produce different kind of products such as kitchen and vanity tops, engraving, bas-reliefs and different coating for building industry. The machine is allowing to perform **a wide range of processings**, like cutting, milling, drilling and shaping. The countless accessories supplied are granting the possibility to perform all these processing without moving the piece from the working bench and without prolonged downtime.

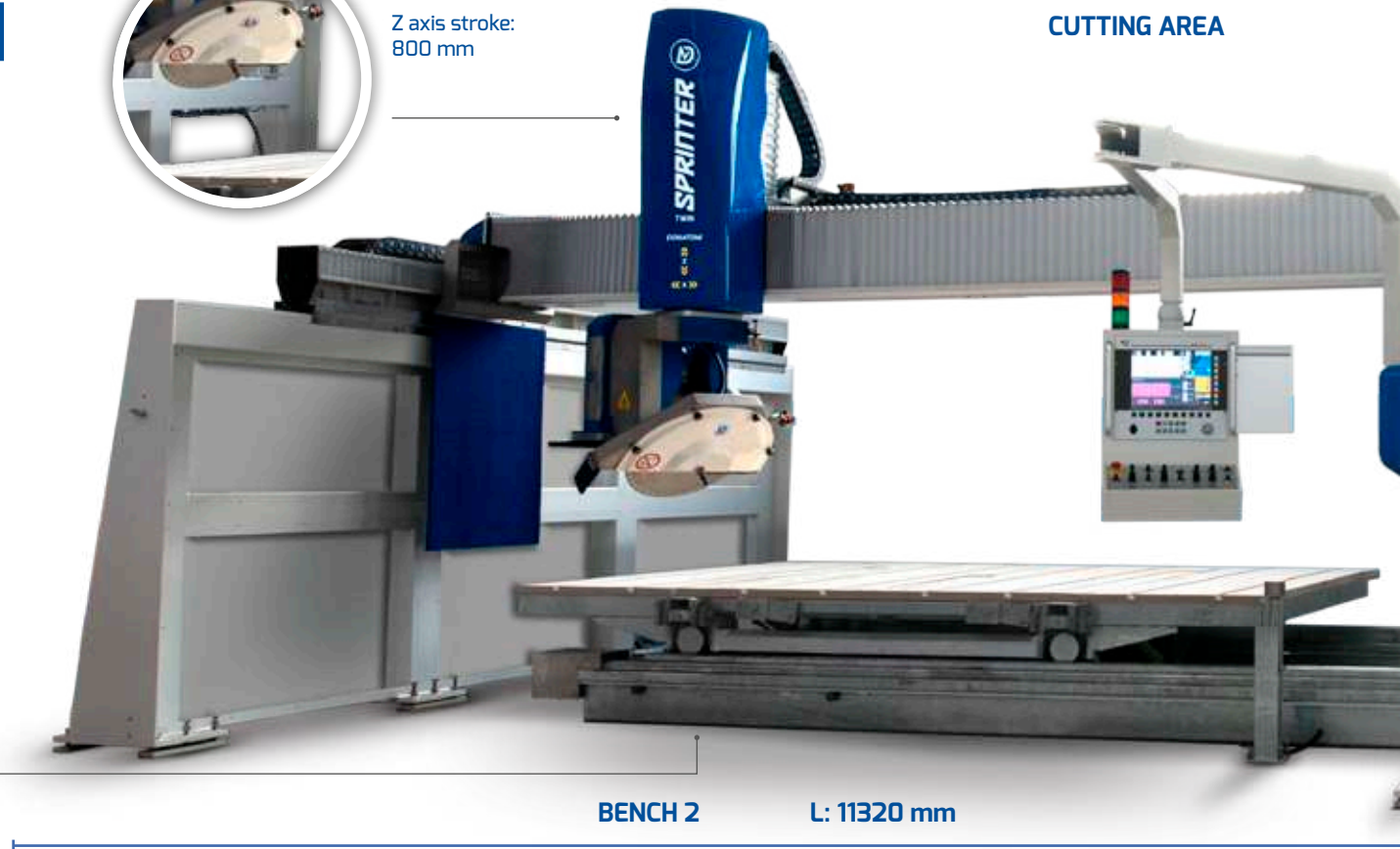


Wheels with locking system that avoids any displacement



Z axis stroke: 800 mm

CUTTING AREA



BENCH 2

L: 11320 mm

MAIN FEATURES

- / 5/6 INTERPOLATED AXES
- / Z-AXIS STROKE: 800 MM
- / DIAMETER MIN / MAX DISKS: 350-825 MM
- / BENCHES EXCHANGE TIME: 35 SEC.
- / STEEL BRIDGE WITH NEW REINFORCED STRUCTURE FOR GREATER STABILITY
- / TOOLS ELECTROSPINDLE POWER 22 KW / S6
- / 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
- / TILTING BENCHES WITH WOODEN OR RUBBER TOP

LOADING/UNLOADING AREA



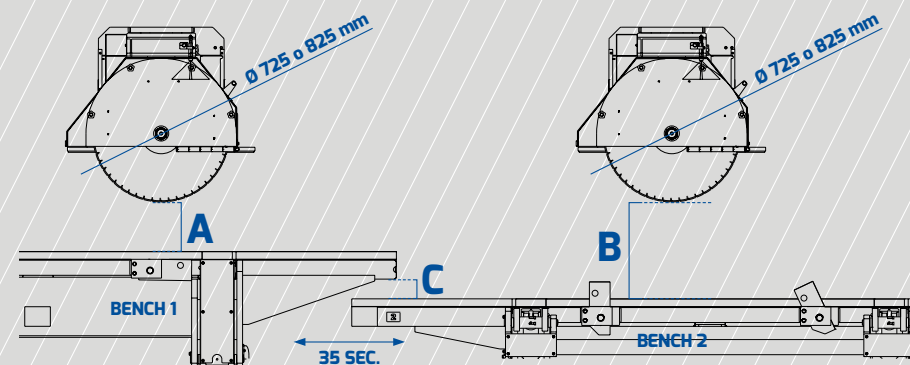
h: 3950 mm



Tilting benches with wood or rubber surface (at customer's choice) with hydraulic lifting system and capacity up to 1650 kg.

BENCHES TECHNICAL DATA

DIMENSIONS		MAX CUTTING THICKNESS WITH BLADE Ø725 MM	MAX CUTTING THICKNESS WITH BLADE Ø825 MM
Bench 1: 3800 X 2400 X H 900		A: 250 mm	A: 280 mm
Bench 2: 3800 X 2300 X H 640	With manual front loading	B: 250 mm	B: 300 mm
	With Twin System working	C: 100 mm	C: 100 mm



COMPONENTS AND 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.



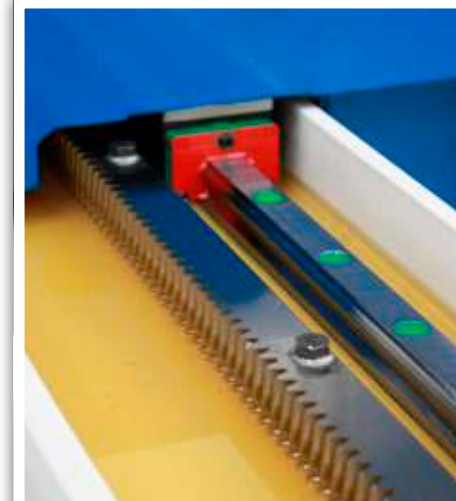
ADVANTAGES

- > 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



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

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.



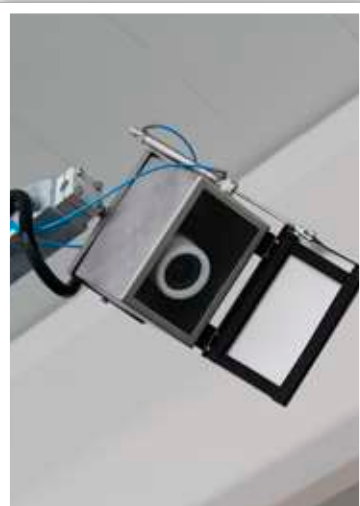
Disk presetting unit: measurement system of blade diameter.



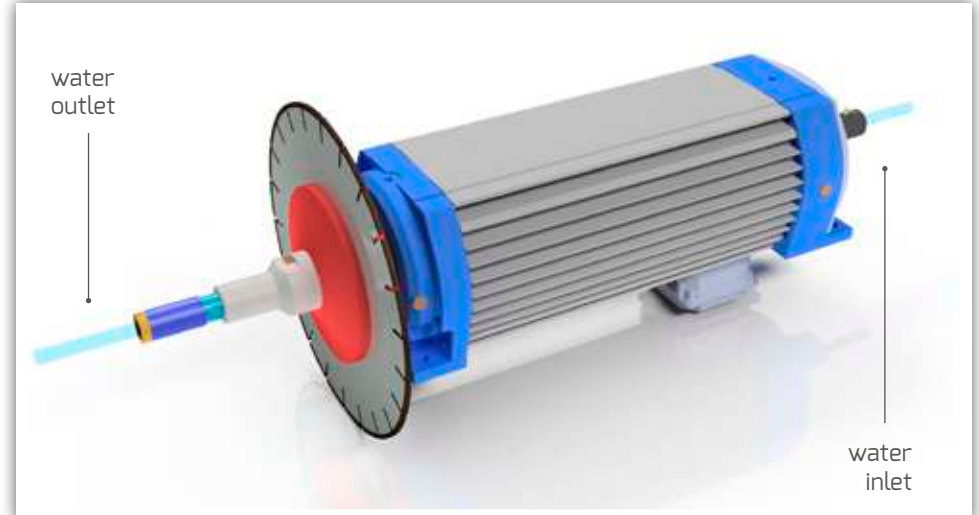
Slab thickness detector: system for automatic detection of slab thickness.



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



High quality electro-spindles controlled by an inverter allowing the adjustment of the nr. of revolutions from 0 to 5500/7500 rpm, so granting the use of blade and diamond tools such as a core drill or milling cutter. The tool change is of manual or automatic type.



Tool+: vertical lateral electrospindle, 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.



Lower-Cut Group: cutting system for inserting reinforcement bars in the lower part of the kitchen tops (the optional needs the increase of Y axis stroke length).



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

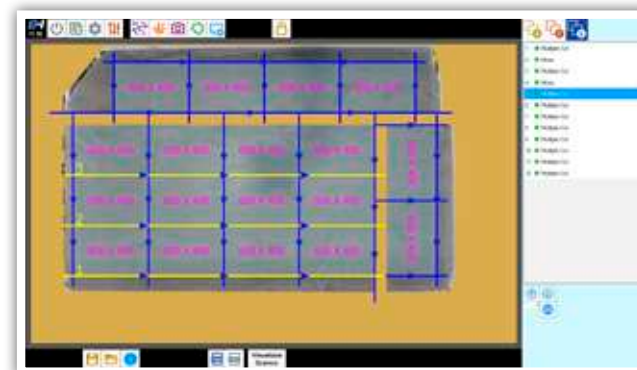


Parametrix is the **simple and user-friendly software** developed by Donatoni Macchine and conceived to **optimise the management of cutting different shaped pieces from slabs**.

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 or to make reductions for recesses.

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.

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 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.

DM_TL (optional)

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

SCAN-CNC (optional)

A software to detect two-dimensional shapes, thanks to the laser pointer mounted on the machine head, and to create in real time the drawing (DXF file) on the machine monitor. Once the survey operation is completed, the operator can process the template on the machine monitor with optional software, to file it on the machine's PC or on an external PC using a USB key.



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.



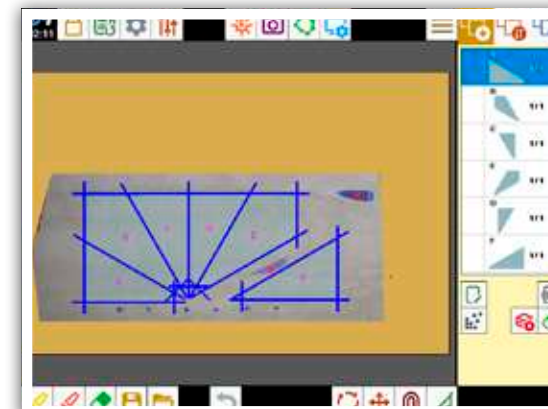
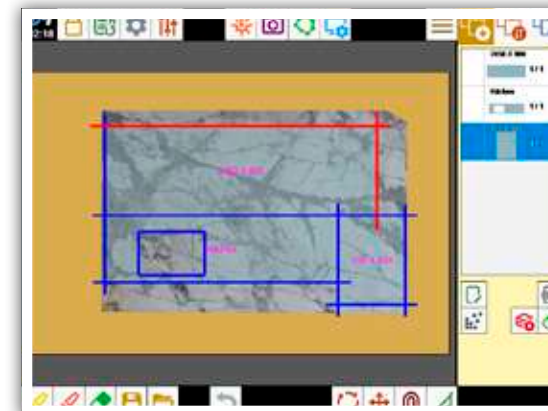
PHOTOSLAB

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".



CAD-CAM

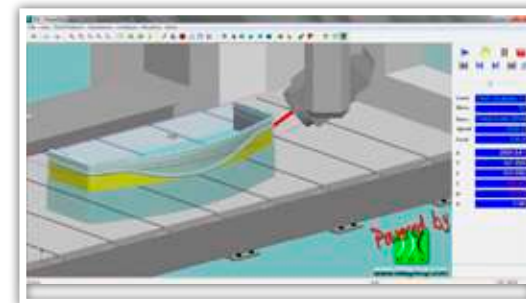
OPTIONAL

The software CAD-CAM 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.



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

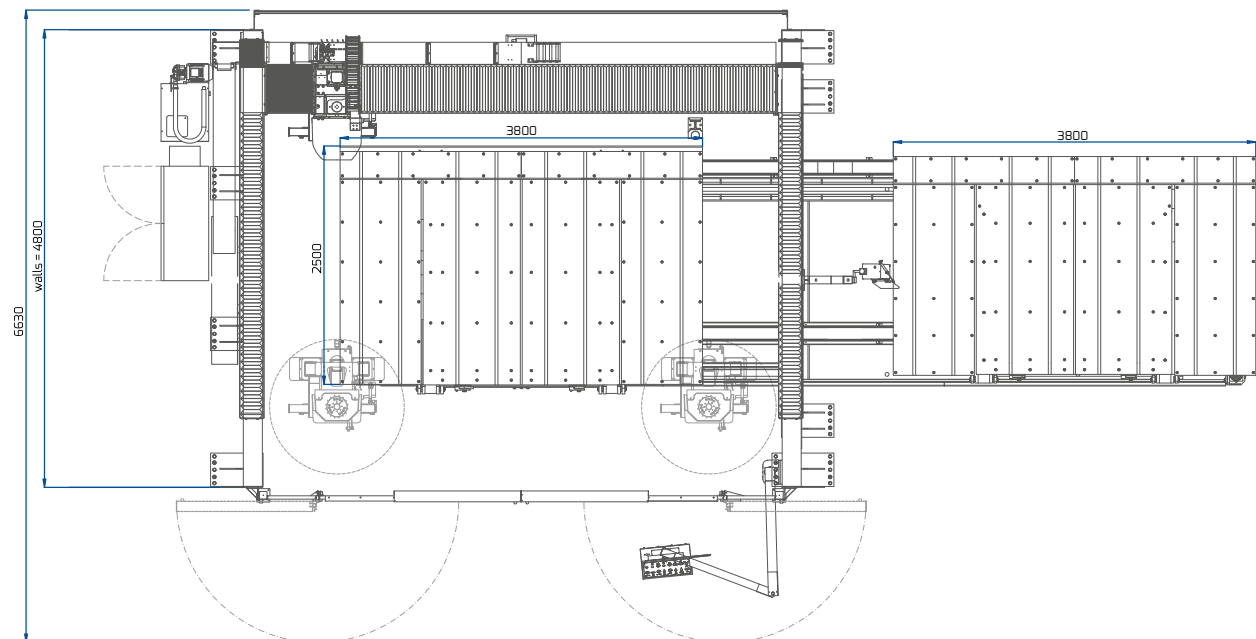
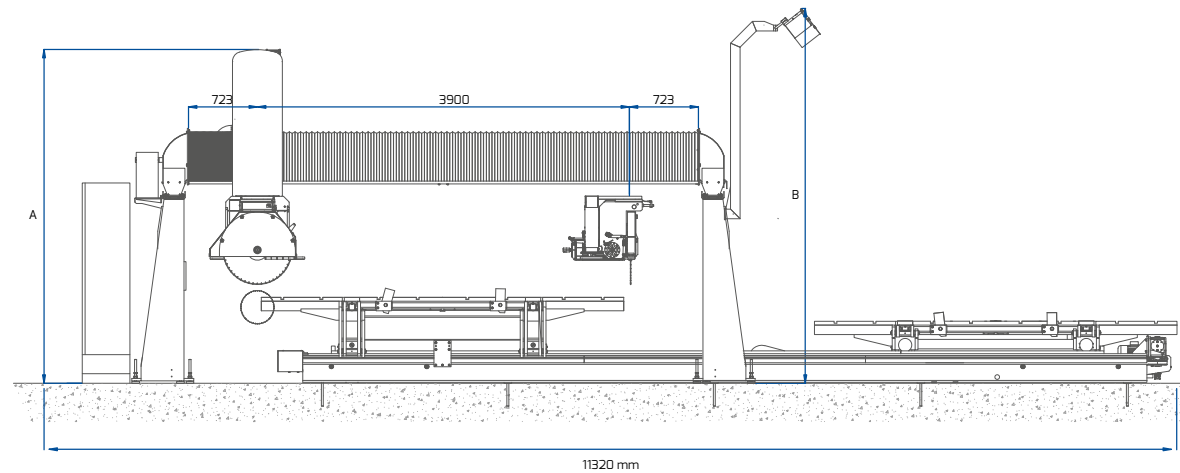
Training courses and update courses regarding new applications and software at our offices or at customer premises. Our offices are equipped to host courses for technicians and operators. The rooms are next to the machines on display in our show room and therefore this allows tests and checks to be carried out directly on the console of the machine and the level of learning can be evaluated.



TECHNICAL DATA

A:
ECHO TWIN: 3500 mm
SPRINTER TWIN: 3950 mm

B:
ECHO TWIN: 3930 mm
SPRINTER TWIN: 4200 mm



TWIN SYSTEM BRIDGE SAWS

		ECHO TWIN	SPRINTER TWIN			ECHO TWIN	SPRINTER TWIN
Max number of interpolated axes	N°	5/6	5/6	Maximum disk diameter	mm in	725 28,5	825 32,4
Carriage stroke axis X	mm in	3900 153,5	3800 149,6	Speed axis Z	m / min ft / min	0-6 0-19,7	0-6 0-19,7
Bridge stroke axis Y	mm in	2950 116,1	2950 116,1	Speed of axes X Y	m / min ft / min	0-45 0-147,6	0-45 0-147,6
Vertical stroke of the head axis Z	mm in	600 23,6	800 31,5	Water consumption	l / min gal / min	50 13,2	50 13,2
Disk head rotation axis C	degrees	-5° / +365°	-5° / +365°	Air consumption	l / min gal / min	20 5,3	20 5,3
Disk head tilting movement axis A	degrees	0° / 90°	0° / 90°	Standard voltage	Volt / Hz	400 / 50	400 / 50
Disk motor power	kW	17/56 13,2/56 (models ATC e MTC)	22/56 17/56 (models ATC e MTC)	Max disk with suction cups	mm in	725 28,5	725 28,5
Tool rotation with inverter (vs ST)	RPM	0 / 2400	0 / 2400	Total weight max lifting with suction cups	Kg lb	600 1322,7	600 1322,7
Tools rotation with inverter (vs Tools/Top) (vs MTC/ATC)	RPM	0 / 5500 0 / 7500	0 / 5500 0 / 7500	Approx total weight of the machine	Kg lb	4500 9920,8	4800 10582,1
Speed axis X	m / min ft / min	0-45 0-147,6	0-45 0-147,6	Benches exchange time	sec	35	35
Speed axis Y	m / min ft / min	0-45 0-147,6	0-45 0-147,6	Max cutting thickness (on bench 2)	mm in	250 9,8	300 11,8
Minimum disk diameter	mm in	350 13,8	350 13,8	Slab max thickness with Twin System	mm in	100 3,9	100 3,9

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

BRIDGE SAWS



Spin 625 cnc



Jet 625 cnc



Echo 725 cnc



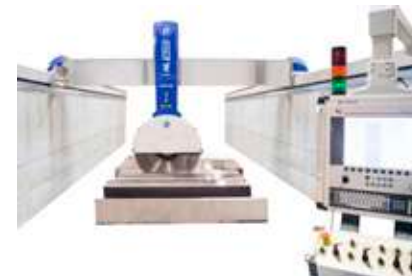
Twin



Sprinter 825 cnc



Quadrix DV 1100



Quadrix XL 1600



DONATONI
HIGH INNOVATION STONE MACHINES

MULTI-FUNCTIONAL CUTTING CENTRE



Quadrix DG 1000/1300/1600/2000

ROBOT



Cyberstone CR01 / CR02

POLISHING AND CALIBRATION SYSTEMS



Zenit

DRILLING MACHINE



KSD 1

UNIVERSAL CUTTING CENTRE



Kronos 600/800

CUTTING LINES



SX-3 / SX-5



Belt

SLAB LOADING / UNLOADING



Geko Loader

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

WATERJET CUTTING SYSTEMS



Primus 184



Primus series



Master 850-1200



Mastersaw 625 Double Table



Genius RS-A

DOUBLE-EDGER FOR SINTERED MATERIALS



Busetti F series

STORAGE AND HANDLING SYSTEMS FOR SINTERED MATERIALS



Navetta Lite

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

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 or other markings on the paper.

NOTE

[illegible]

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**.

