





DONATONI TWIN



UNRIVALLED THROUGHPUT

DONATONI TWIN S2, S3 Q E S4 Q are 5/6 interpolated axes numeric control bridge saws equipped with the TWIN System, the Donatoni Macchine's patented system to fully optmise 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 beches are alternatively moving between cutting and unloading areas. The operator can carryout unlading 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.



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



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%.

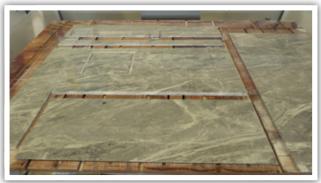
*The data are purely indicative and may vary depending on the type of material, plate thickness, disk used and other factors not directly dependent on the machine.

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		

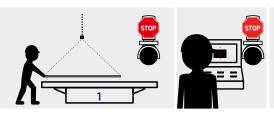
Possibility to use the machine as a traditional bridge saw and to perform shaping processing operations.



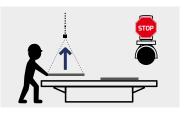


PRODUCTION CYCLE

TRADITIONAL BRIDGE SAW



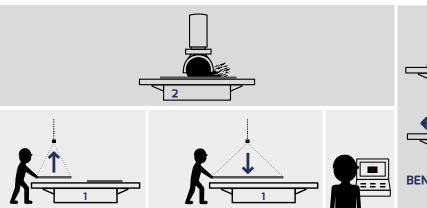


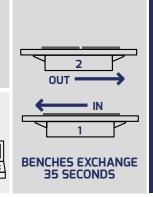


TWIN SYSTEM

Cutting area

Loading/ unloading area







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.





DONATONI TWIN S2

DONATONI TWIN S2 is a **5/6** interpolated axes numeric control bridge saw, Z axis stroke 550 mm equipped with Twin system and electrospindle with maximum power of **17 kW/S6**.

DONATONI TWIN 52 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 form the working bench and without prolonged downtime.



Wheels with locking system that avoids any displacement



MAIN FEATURES

/ 5/6 INTERPOLATED AXES

/ Z-AXIS STROKE: 550 MM

/ DIAMETER MIN / MAX DISKS: 350-625 MM

/ BENCHES EXCHANGE TIME: 35 SEC.

/ STEEL BRIDGE WITH NEW REINFORCED STRUCTURE

FOR GREATER STABILITY

/ TOOLS ELECTROSPINDLE POWER 17 KW / 56

/ SUCTION HANDLING SYSTEM

/ MAXIMUM LIFTING WEIGHT WITH SUCTION CUPS: 500 KG

/AUTOMATIC, CENTRALISED GREASE-LUBRICATION OF SLIDING GUIDES

/ 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



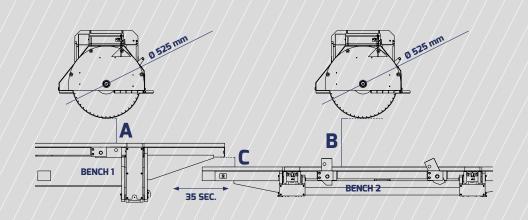
h: 3500 mm



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

BENCHES TECHNICAL DATA

DIMEN:	MAX CUTTING THICKNESS WITH BLADE © 525 MM	
Bench 1 : 3800 X	A: 150 mm	
Bench 2:	With manual front loading	B: 150 mm
3800 X 2300 X H 640	With Twin System working	C: 100 mm



DONATONI TWIN S3 Q

DONATONI TWIN S3 Q 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**.

DONATONI TWIN 53 Q 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 form the working bench and without prolonged downtime.

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 DONATONI TWIN S3 Q allows to obtain products with extremely fine finishes precise.



MAIN FEATURES

/ 5/6 INTERPOLATED AXES

/ Z-AXIS STROKE: 600 MM

/ DIAMETER MIN / MAX DISKS: 350-725 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

BENCH 2

L: 11320 mm

/ 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



h: 3500 mm

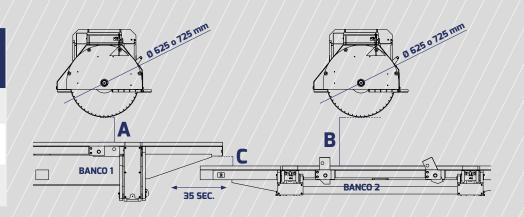




Tilting benches with wood or rubber surface (at customer's choice) with hydraulic lifting system and capacity up to 1650 kg.

BENCHES TECHNICAL DATA

DIMEN:	SIONS	MAX CUTTING THICKNESS WITH BLADE ©625 MM	MAX CUTTING THICKNESS WITH BLADE ©725 MM
Bench 1 : 3800 X	2400 X H 900	A: 170 mm	A:120 mm
Bench 2:	With manual front loading	B: 200 mm	B: 250 mm
3800 X 2300 X H 640	With Twin System working	C: 100 mm	C: 100 mm



DONATONI TWIN 54 Q 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.

DONATONI TWIN 54 0 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 form the working bench and without prolonged downtime.

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 DONATONI TWIN S4 Q allows to obtain products with extremely fine finishes precise.



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 / 56

/ 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



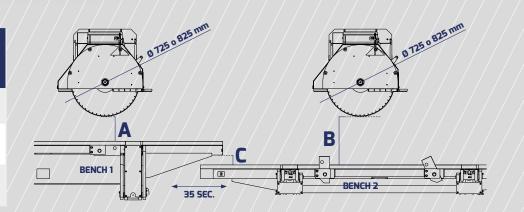




Tilting benches with wood or rubber surface (at customer's choice) with hydraulic lifting system and capacity up to 1650 kg.

BENCHES TECHNICAL DATA

/	DIMEN:	SIONS	MAX CUTTING THICKNESS WITH BLADE ©725 MM	MAX CUTTING THICKNESS WITH BLADE 0825 MM
	Bench 1: 3800 X	2400 X H 900	A: 250 mm	A:270 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



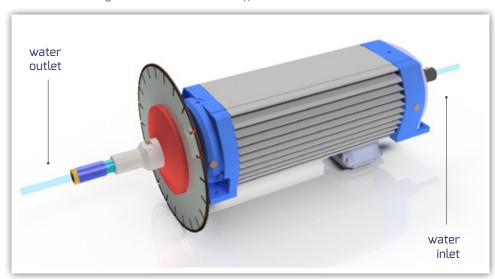
h: 3950 mm



Control console: made of double jointed supporting arm, manual controls, 21" colour touch-screen video, keypad and usb port to import DXF files.



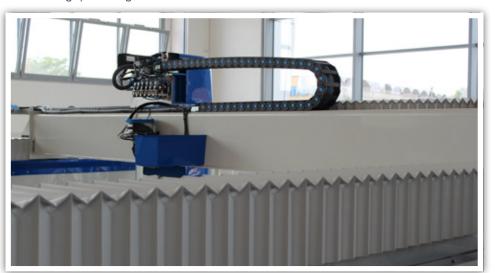
High quality electro-spindles controlled by an inverter allowing the adjustment of the nr. of revolutions from 0 to 5500/7500 rpm, so granting the use of blade and diamond tools such as a core drill or milling cutter. The tool change is of manual or automatic type.



Laser cut marking



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.



NO MORE NEED TO MANUALLY MOVE PIECES DURING THE WORK PROCESS

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

MOVE-SYSTEM BENEFITS

- / INCREASED EFFICIENCY AND REDUCED DOWNTIMES
- / MOVEMENT OF PIECES WITHOUT REQUIRING THE OPERATOR TO INTERVENE
- / EASY TO USE, EVEN FOR OPERATORS WITH NO EXPERIENCE
- / MAKES THE MACHINE TOTALLY AUTOMATIC
- / OPTIMISES THE USE OF THE OF SLAB'S SURFACE LESS MANUFACTURING WASTE
- / CAN LIFT OF PIECES
 OF UP TO 500 KG

2 aluminium suction cups, fitted with 6 sectors of various sizes, which allow both small and large pieces to be lifted, provided these have a maximum weight of 500 / 600 kg.



It can be used with ${\bf blades}$ having a maximum diameter of 525/725 mm.



Disk presetting unit: measurement system of blade diameter.



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



Ball recirculating sliding crosspieces and helical toothed racks for sliding the Y axis, **with oil bath lubrication** and protected by bellows with labyrinth closure (only for S3 Q and S4 Q versions).



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



Tool+: vertical lateral electrospindle, allows the operator the use of small diameter diamond tools with ½ "gas connection for incremental cutting / blind or through hole drilling and the execution of combined operations with disk and milling cutter.

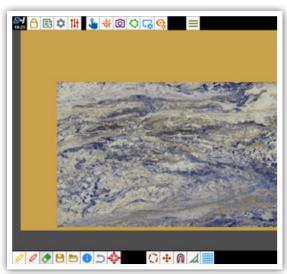




Photoslab: plate detection system, with camera positioned above the workbench and image acquisition software. The application allows to speed up the machine programming.









End of line monitor: system that allows the operator to identify the cut pieces during offloading by the name of the order or with the sizes of the pieces, making it easier for packing operations of the cut material.



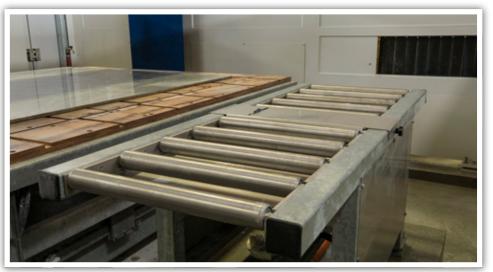
Safety device with roll-up system.



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).





D-INSIDE:

EQUIP YOURSELVES WITH A SUPERIOR FORM OF INTELLIGENCE



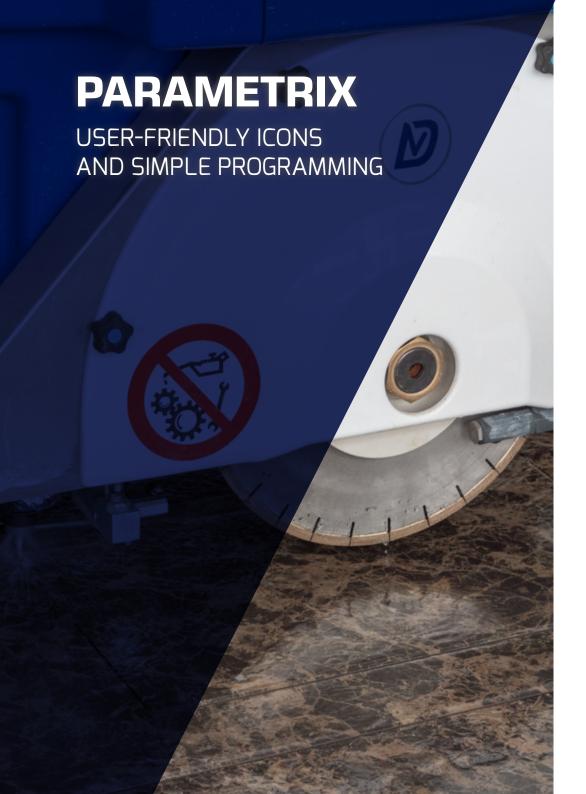


Perfect machining can only be achieved through multiple movements that need to be perfect coordinated. Just as all the movements in the human body are managed through brain impulses, similarly, the movements of our machines are managed by integrating the machine with the programming software.

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.

DONATONITWIN / / / / //

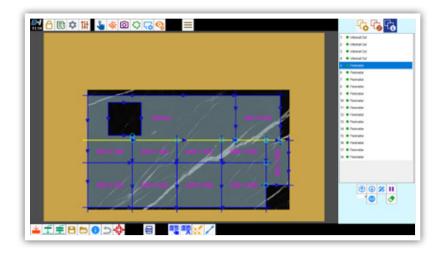


Parametrix is the **simple and user-friendly software** developed by Donatoni Macchine and conceived to **optimise the management of cutting different shaped pieces from slabs**.

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 predefined 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.

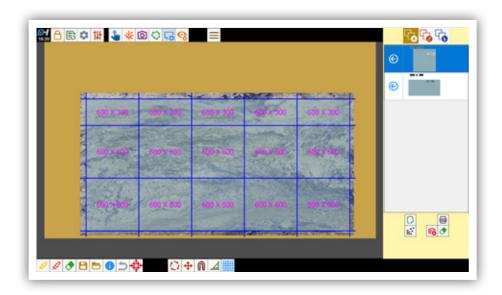
Included in the software are functions for anti-collision of pieces, manual and automatic piece nesting, book matching, managing statistics, production and orders, rendering pieces and holes.

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 disk 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)

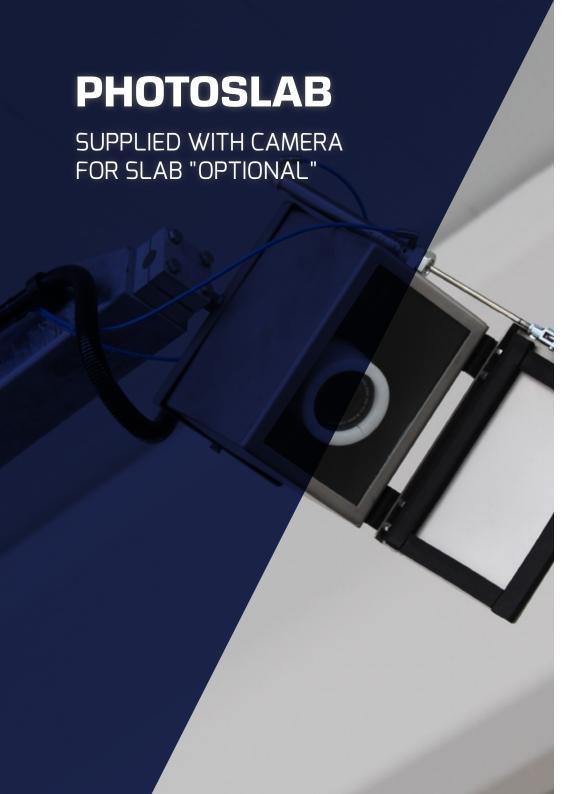
Starting from a project in DXF format, it allows to have a 2D image of the parts to be cut and therefore to appreciate before the cut the aesthetic result obtained by the combination of the pieces, evaluating overall and in full the "bookmatching" type processing.

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)

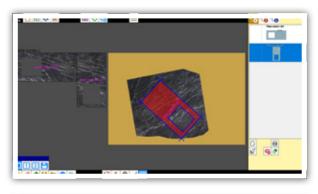
Program for slabs smoothing / polishing / brushing by means of plate carrying FRANKFURT abrasives.

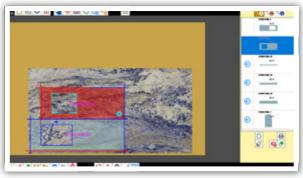


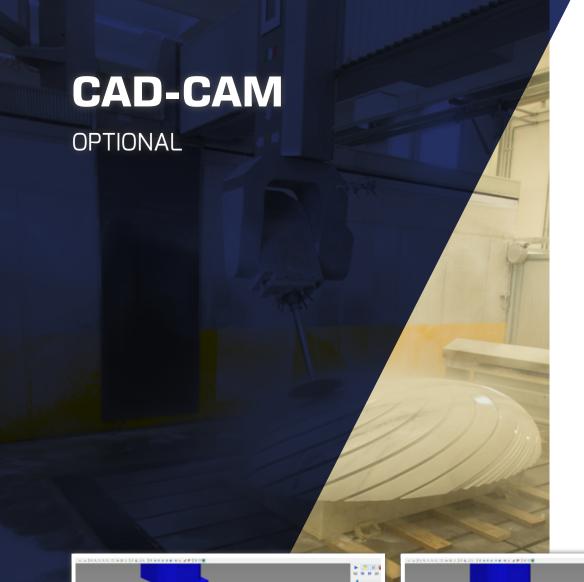
By means of a camera placed above the machine and the related record software, the slab being cut is automatically detected.

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 automaticlly enabled with installation of "camera for slabs".







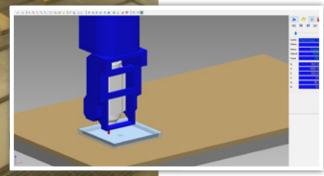
The software allows to design, import and execute 2D and 3D files in DXF, IGES, STL, PNT, STEP and RHINO formats and to define surfaces and shapes through laser scanning.

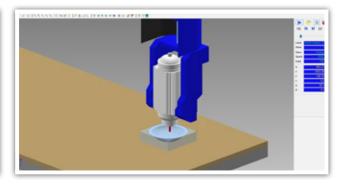
Multiple processes can be set: roughing, drilling, profiling, emptying and polishing, which can be carried out by optimizing the execution process.

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 pieceprograms 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.







DIRECT CONNECTION WITH OUR TECHNICIANS

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.

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

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.

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.

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:

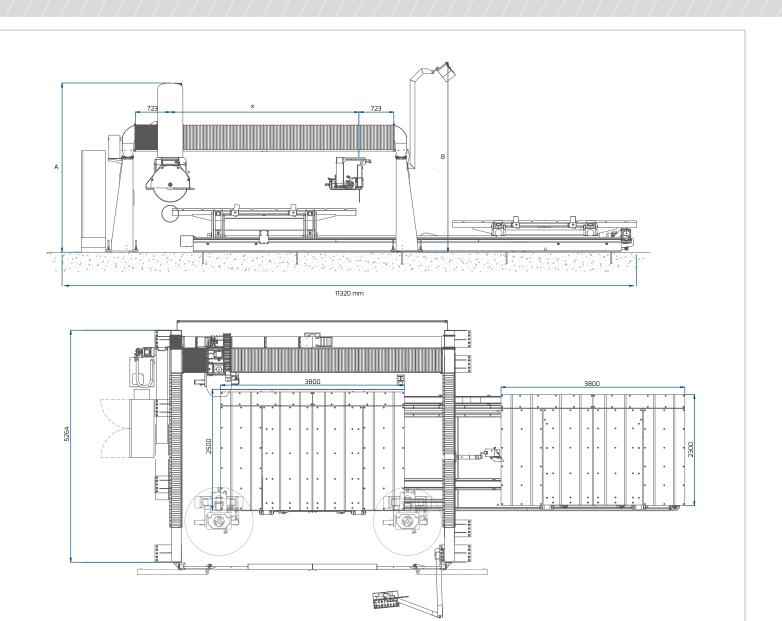
DONATONI TWIN 52: 2965 mm DONATONI TWIN 53 Q: 3500 mm DONATONI TWIN 54 Q: 3950 mm

B:

DONATONI TWIN 52: 3750 mm DONATONI TWIN 53 Q: 3930 mm DONATONI TWIN 54 Q: 4200 mm

X:

DONATONI TWIN 52: 3800 mm DONATONI TWIN 53 Q: 3900 mm DONATONI TWIN 54 Q: 3900 mm



DONATONI TWIN

		DONATONI TWIN 52	DONATONI TWIN 53 Q	DONATONI TWIN 54 Q
Max number of interpolated axes	N°	5	5/6	5/6
Carriage stroke axis X	mm - in	3800 - 149,6	3900 - 153,5	3900 - 153,5
Bridge stroke axis Y	mm - in	2900 - 114,2	2950 - 116,1	2950 - 116,1
Vertical stroke of the head axis Z	mm - in	550 - 21,6	600 - 23,6	800 - 31,5
Disk head rotation axis C	degrees	-5° / 365°	-5° / +365°	-5° / +365°
Disk head tilting movement axis A	degrees	0 / 90°	0°/90°	0°/90°
Disk motor power	kW	17/S6 - 13,2/S6 (models ATC e MTC)	17/56 - 13,2/56 (models ATC e MTC)	22/S6 - 17/S6 (models ATC e MTC)
Tools rotation with inverter (vs Tools/Top) (vs MTC/ATC)	RPM	0-5500 - 0-7500	0/5500 -0/7500	0/5500-0/7500
Speed axis X	m / min - ft / min	0 / 40 - 0 / 1,57	0 / 45 - 0 / 147,6	0 / 45 - 0 / 147,6
Speed axis Y	m / min - ft / min	0 / 30 - 0 / 1,18	0 / 45 - 0 / 147,6	0 / 45 - 0 / 147,6
Minimum disk diameter	mm - in	350 - 13,78	350 - 13,8	350 - 13,8
Maximum disk diameter	mm - in	625 - 24,61	725 - 28,5	825 - 32,4
Speed axis Z	m / min - ft / min	0 / 5 - 0 / 0,20	0 / 6 - 0 / 19,7	0 / 6 - 0 / 19,7
Speed of axes X Y	m / min - ft / min	0 / 30 - 0 / 1,18	0 / 45 - 0 / 147,6	0 / 45 - 0 / 147,6
Water consumption	l / min - gal / min	35 - 1,38	50 - 13,2	50 - 13,2
Air consumption	l / min - gal / min	20 - 0,79	20 - 5,3	20 - 5,3
Standard voltage	Volt / Hz	400±10% / 50	400 / 50	400 / 50
Max disk with suction cups	mm - in	525 - 20,7	725 - 28,5	725 - 28,5
Total weight max lifting with suction cups	Kg -lb	500 - 1102	600 - 1322,7	600 - 1322,7
Approx total weight of the machine	Kg -lb	4500 - 9920	4500 - 9920,8	4800 - 10582,1
Benches exchange time	sec	20	35	35
Max cutting thickness	mm	150 (BLADE © 525 MM)	250 (BLADE \$725 MM)	300 (BLADE 8 825 MM)

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.

NOTES

NOTES



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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.



