

DONATONI SX-3 Q DONATONI SX-5 Q

CNC CUTTING CENTRE
MULTI-SPINDLE
WITH ROTATING SPINDLES



DONATONI
Stone Tech Creators

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





CONTENTS

05 ADVANTAGES

07 PROCESSING / APPLICATIONS

09 MAIN FEATURES

11 MAIN COMPONENTS

15 GEKO

17 OPTIONALS

19 SOFTWARE

23 AFTERSALES CUSTOMER SERVICES AND ASSISTANCE

25 TECHNICAL DATA

COMPACT DIMENSIONS INFINITE PERFORMANCE CAPABILITIES

MULTI-SPINDLE CNC CUTTING
CENTRE

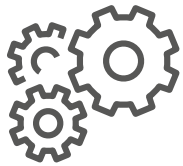


QUALITY AND FINISH WITHOUT PREDECESSORS

DONATONI SX-3 Q and DONATONI SX-5 Q are innovative numerical control multi-spindle cutting centres with **three or five cutting units with interpolated axes**, designed and patented by Donatoni Machine to satisfy those needing a **compact system for large-scale production line of marble, granite and agglomerate flooring and wall coverings of various**

types with different sizes and thickness.

Donatoni Machine were the first to introduce a multi-spindle machine with patented rotating bridge to the market and, rich in the experience they have built up over the years, they can guarantee their customers a **very high level of productivity and at the same time complete optimisation of the slabs.**



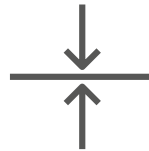
EXTREMELY HIGH
PRODUCTIVITY



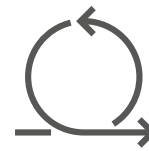
FLEXIBILITY IN
PRODUCTION



OPTIMISATION
OF CUTTING



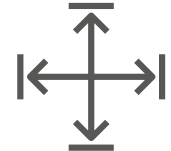
EXTREMELY PRECISE
CUTTING FOR A
PERFECT RESULT



AUTOMATED CUTTING
LINE



SIMPLE AND FAST
TO PROGRAMME



COMPACT
INSTALLATION
SIZE



DONATONI SX-3 Q DONATONI SX-5 Q GUARANTEED RESULTS

MAXIMUM VERSATILITY
IN PRODUCT REALISATION



LARGE-SCALE PRODUCTION IN SMALL SPACES

PROCESSING

Customised cutting (cut to size) to create flooring, interior and exterior wall coverings, including large format, and in general all products used in construction.

APPLICATIONS



CUTTING
LONGITUDINAL



CROSS
CUTTING

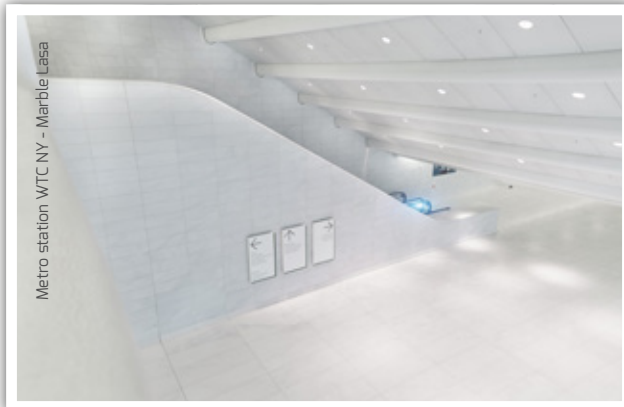


CUTTING
OBLIQUE



INCLINED CUTTING
+/- 47°

Only for DONATONI SX-3 Q
with central spindle



WHEN INNOVATION BECOMES PERFORMANCE

MAIN
FEATURES
DONATONI SX-3 Q
DONATONI SX-5 Q



- / **3 - 5 SPINDLES ON STEEL
ROTATING BRIDGE**
- / **14 CONTROLLED AXES
8 INTERPOLATED AXES - for DONATONI SX-5 Q**
- / **12 CONTROLLED AXES
6 INTERPOLATED AXES - for DONATONI SX-3 Q**
- / **MINIMUM DIAMETER
OF DISKS: 350 MM**
- / **MAXIMUM DIAMETER
OF DISKS: 525 MM**
- / **MAXIMUM DEPTH
OF CUT: 150 MM**
- / **ROTATION OF
HEAD SUPPORT BRIDGE: -182° / +182°**
- / **AXES X AND Y LUBRICATION
IN OIL BATH**
- / **STEEL STRUCTURE, SANDBLASTED
AND PAINTED WITH THREE COATS**
- / **BRUSHLESS MOTORS AND GEARS
WITH HIGH PRECISION CONTROLLED BY INVERTER**
- / **HANDLING BY MEANS OF OUR VACUUM
MOVE-SYSTEM**



INNOVATION IS STANDARD

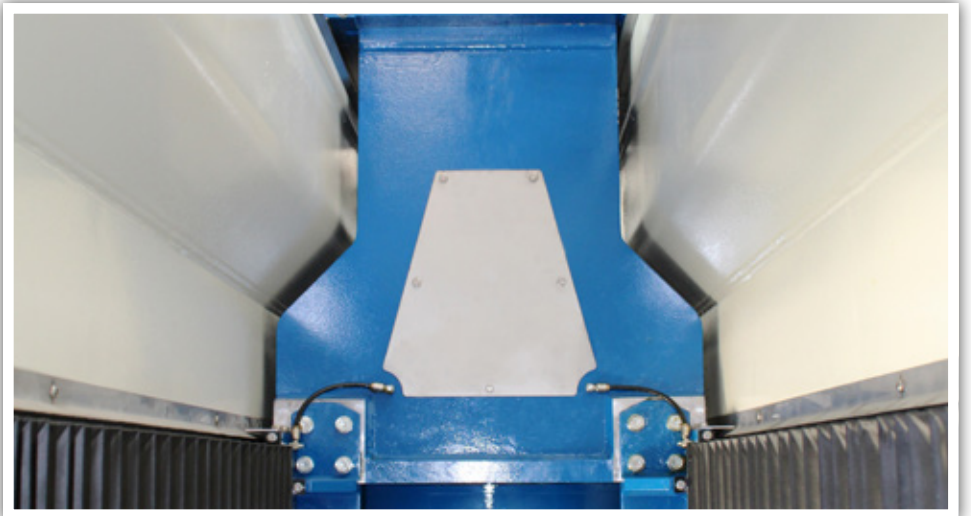
MAIN COMPONENTS
DONATONI SX-3 Q
DONATONI SX-5 Q



Spindle support bridge with 3 or 5 spindles connected to the beam with a large slewing ring which enables rotation of the 3/5 spindle units.



Carriage bridge in fabricated steel structure with double beam that ensures even distribution of the weights and the head support bridge and perfect balancing.



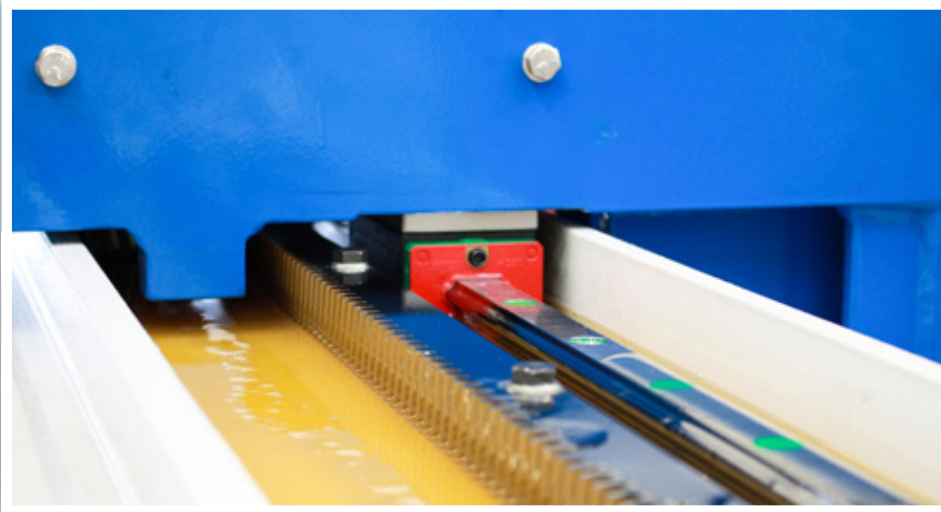
Motorised belts: the machine is equipped with motorised belts for moving the slabs during cutting/offloading.



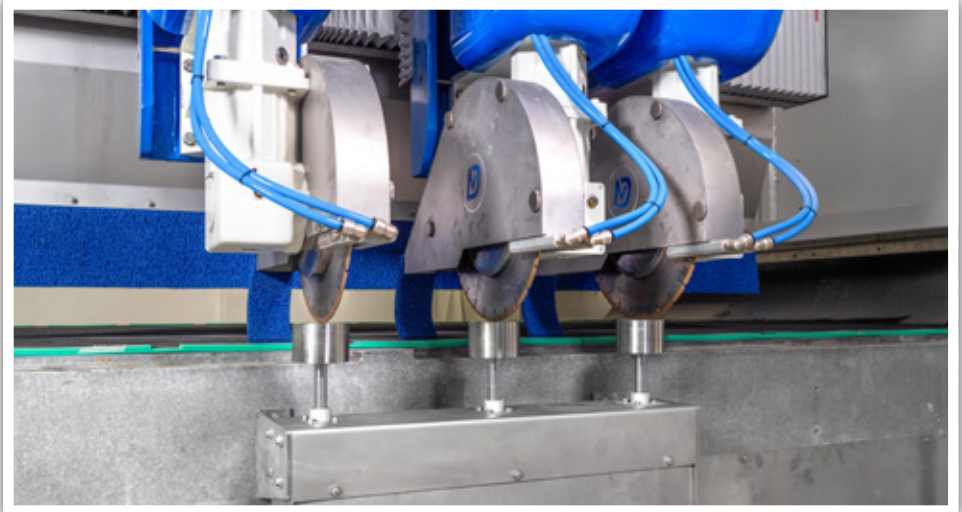
Move-System: suction cups for lifting and positioning the cut pieces in order to exploit the slabs as much as possible.



Sliding crossbeams with recirculating ball and helical toothed rack guides for movement of Y axis, with lubrication in oil bath and protected by bellows with interlocking closure.



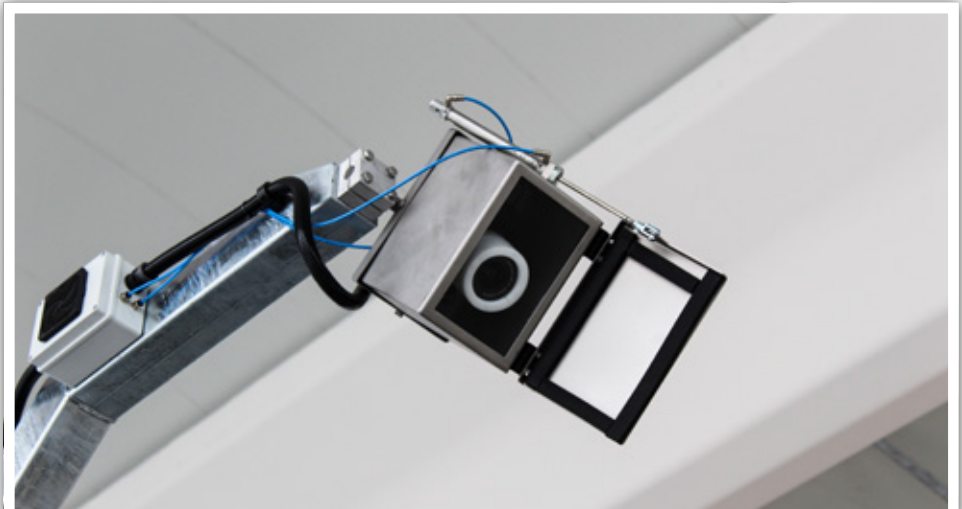
Disk presetting unit composed of 3 or 5 measuring units that detect the actual diameter of the disks before starting the cutting process.



Slab thickness detector: system to automatically detect the thickness of the slab.



Photo slab system: system to detect slab, with camera positioned above the machine and image acquisition software. The application enables the slab dimensions to be exploited in the best way possible and allows the cutting to be carried out avoiding any defects or any veins in the material.



Washing unit: allows the upper and lower surface of the cut pieces to be cleaned before they are packed.



Front access guards with sliding doors. Safety system in compliance with safety norms in force regarding safety at work.



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



Foundation walls made of steel which has been sandblasted and then given 3 coats of paint.



Stop&go offload system: system for manual stopping of belt during offloading



GEKO

AUTOMATIC SLAB
LOADING SYSTEM



SIMPLE AND FAST AUTOMATION FOR LARGE PRODUCTIONS

GEKO is an automatic loader/unloader perfect for the automation of marble and granite processing lines. GEKO loads the slabs directly from the storage and places it on the motorized roller conveyor that feeds the processing line, allowing the “Book Match” processing. GEKO is operated by a CNC system and the motion is generated by brushless motors; the suction cups panel is able to perform rotations over 180 degrees.

GEKO is equipped with a motorized roller conveyor.

This machine adopt some particular mechanical solutions, like linear roller guides and 49 anodized aluminum suction cups divided in 5 groups, and its functioning can be programmed with the integrated touch screen through a simple interface. All these features place GEKO amongst the best automatic slab loaders, for speed, precision and safety, also suitable for moving particularly fractured slabs.

Optional, a rotating slab holder platform to allow slab load/unload even when the machine is working.

/ 49 Suction cups

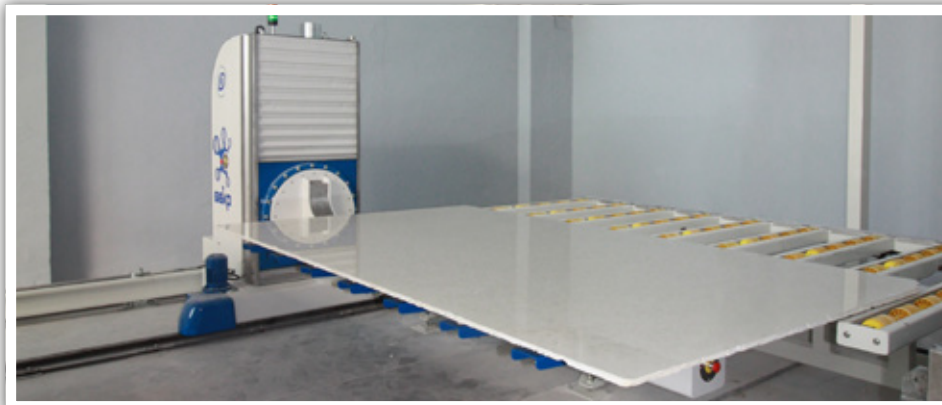
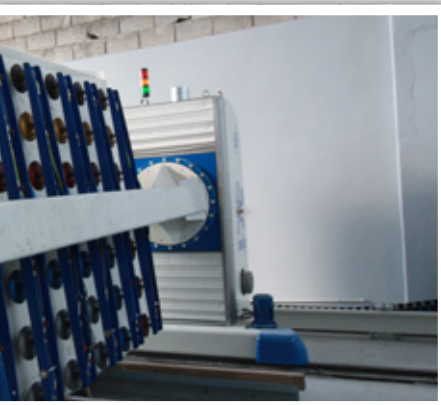
/ Maximum slab size
3500 X 2100 MM

/ Maximum capacity 1500 KG

/ Electrical capacitance
tot. 9,7 KW

/ Vacuum pump capacity 100 M³/H

/ Approx. total weight of
the machine 2300 KG



ACCESSORIES AND SYSTEMS FOR LOADING / OFFLOADING

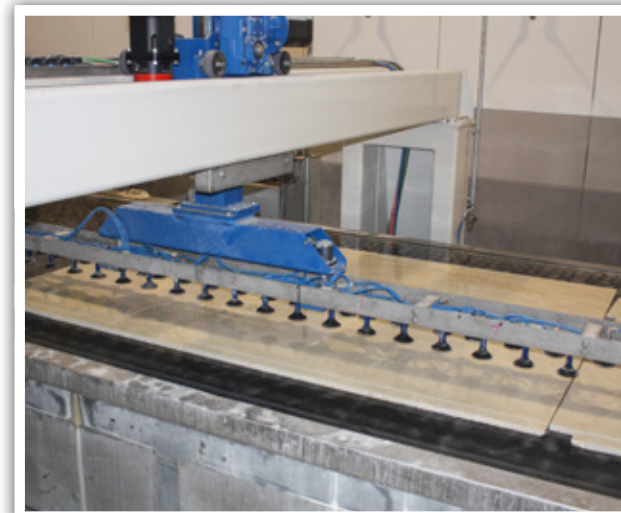
OPTIONALS



Super-View System: 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.



Automatic unloading device: system composed of bridge and supporting structure made from steel on which an arm with suction cups which transports the pieces from the cutting belt to the offloading belt (included in the accessories).



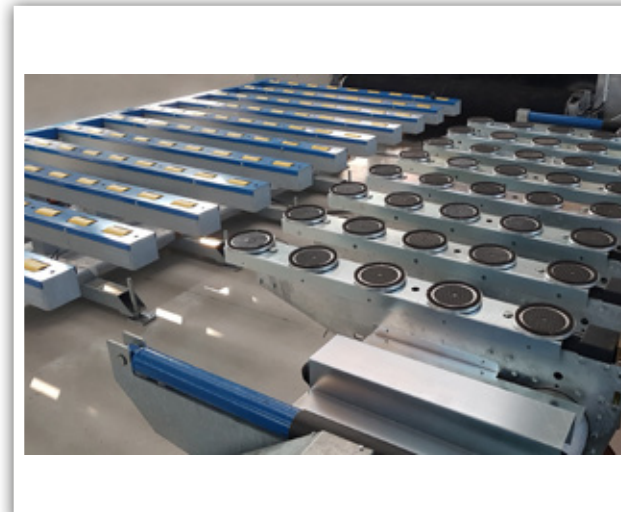
Rotating A frame platform: slab loading system to be combined with the GEKO system.



Inclined cutting: (only for DONATONI SX-3 Q) central head inclined to carry out cuts with an angle of up to 45°.



Automatic system for slabs loading: a suction cups-equipped trolley with motorized base on wheels and a motorized – rollers bench fixed to the ground.



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



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

Perfect machining can only be achieved through multiple movements that need to be perfectly 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.

PARAMETRIX

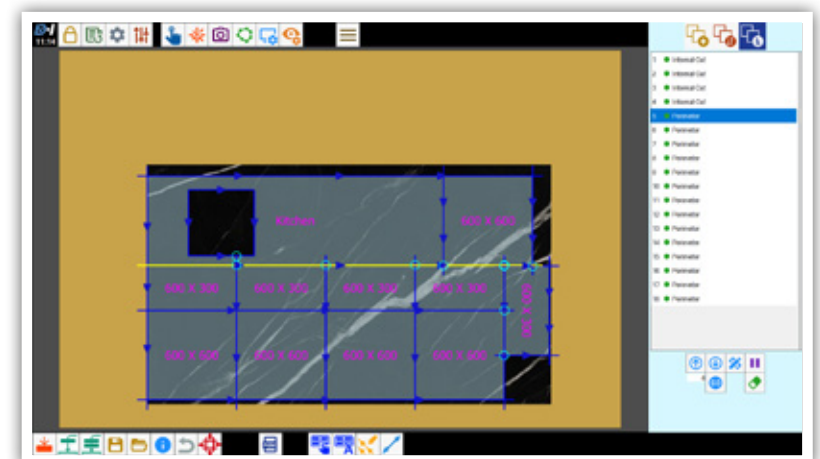
Parametrix is the **simple and user-friendly Software** developed by Donatoni Macchine that was conceived to optimise cutting different shaped pieces from slabs.

It is a software which **allows you to manage cutting processes using a blade, it allows the user to input both rectilinear and curvilinear shapes** (steps, kitchen worktops, rectangles, covers) using pre-defined shapes in the program or shapes imported from DXF files.

Depending on the surface available, it is possible to set the position of the pieces and the sequence of the cuts, optimising the times and reducing the material waste.

The software includes the following functions: **for preventing the collision of pieces, manual and automatic piece nesting, managing production and order statistics.**

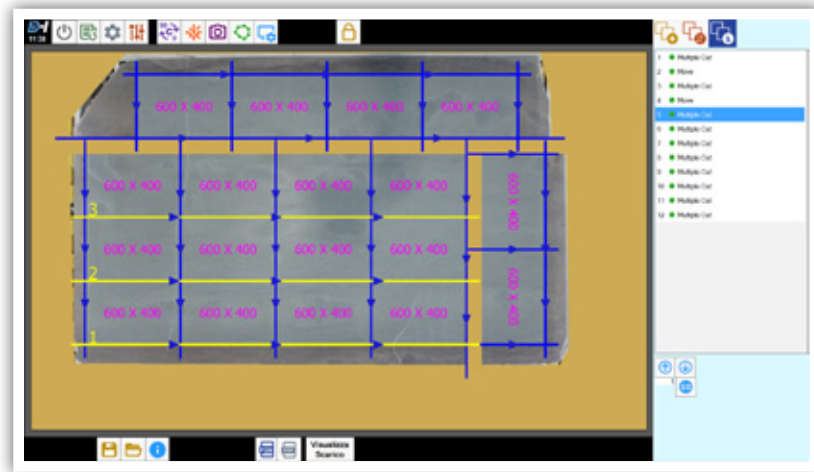
Parametrix can be used together with Photoslab and Move-System, which allow the slab to be detected automatically and the cut pieces to be moved using a suction cup system, thereby **reducing operator intervention to a minimum.**



PARAMETRIX – for DONATONI SX-3 Q and DONATONI SX-5 Q

This function enables strip or rectangle cuts by setting the dimensions of the pieces which you want to obtain in a tabular form.

- It is possible to update the position of the cuts in order to align them with that of the machine
- Possibility of any rotation
- Symbols + and - to decide the direction of movement
- Need to set the perimeter of the slab before selecting the cutting to be carried out
- Possibility of managing individual cuts as described above

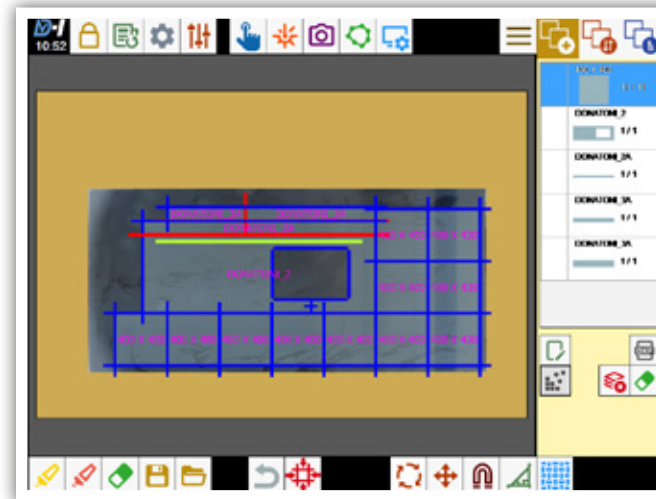


Managing and changing cuts (included)

After positioning the pieces, modifications can be made to cuts; they can be lengthened, order of cuts can be changed, certain cuts can be disabled, pauses can be added and other types of modification can be made before pressing the start button to process the cuts.

Nesting (included)

Automatically inserts square or rectangular pieces in the work area optimising the exploitation of the slab and automatically avoiding highlighted defects.



Book matching software (optional)

Starting from the actual project drawn in DXF, which allows you to have a 2D image of the parts which are to be cut and therefore check the result before final process, evaluating the process of bookmatching.

Positioning of the pieces on the slab (included)

With the manual nesting program we can foresee any collisions between parts helping us to optimize positioning of the same. The "magnet" function helps the operator to align the pieces one next to the other in order to reduce the number of cuts.

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

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 Interamac 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.

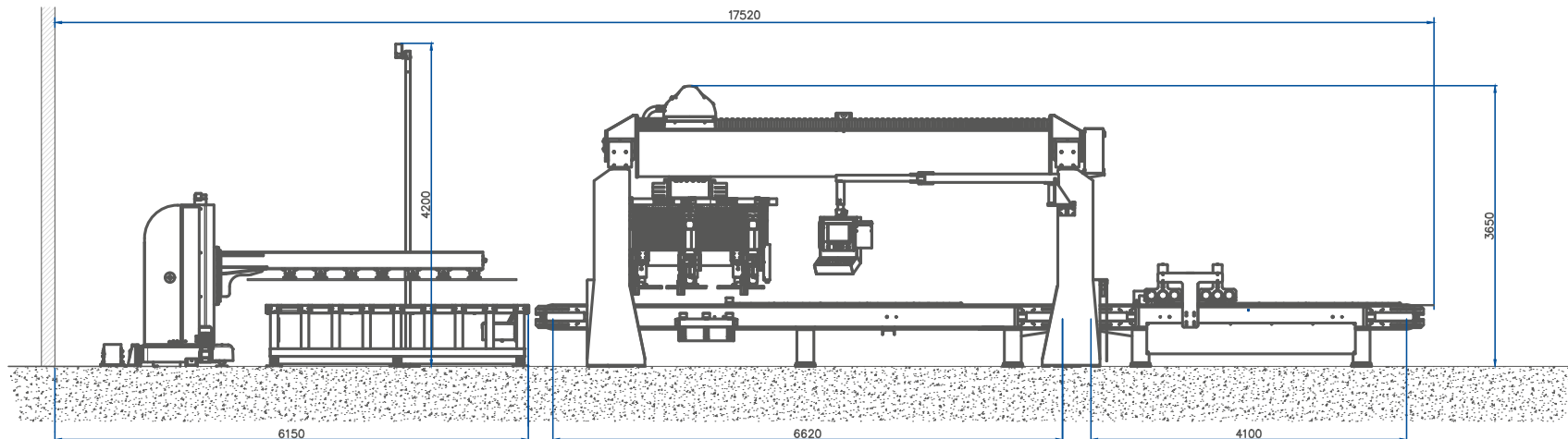
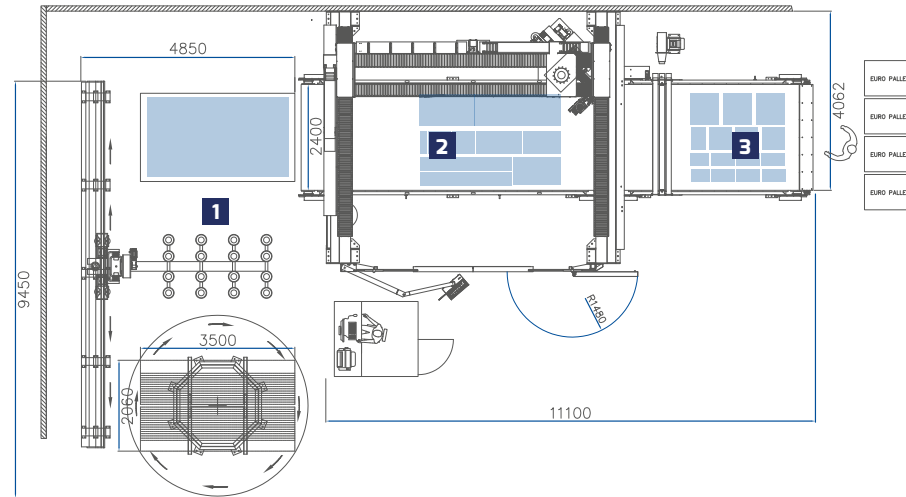
THEORETICAL/PRACTICAL TRAINING

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

- 1** LOADING AREA
- 2** CUTTING BELT
- 3** OFFLOADING BELT



DONATONI SX-3 Q / DONATONI SX-5 Q

DONATONI SX-3 Q DONATONI SX-5 Q

Number of axes controlled	N°	12	14
Number of interpolated axes	N°	6	8
Bridge crane stroke - X axis	mm in	3800 149,6	3800 149,6
Bridge stroke - Y axis	mm in	2800 110,2	2800 110,2
Stroke - Z axis	mm in	300 11,8	300 11,8
Rotation of head support bridge - C Axis	degrees	-182° / +182°	-182° / +182°
Distance between disks min/max	mm in	80 / 1820 3,1 / 71,6	290 / 2050 11,4 / 80,7
Move-System lifting capacity	kg lb	600 1322	600 1322
Cutting belt dimensions	mm in	2400 x 7620 94,5 x 300	2400 x 7620 94,5 x 300
Dimensions of offloading belt	mm in	2400 x 4000 94,5 x 157,5	2400 x 4000 94,5 x 157,5
Disk diameter min/max	mm in	350 / 525 13,8 / 20,7	350 / 525 13,8 / 20,7
Maximum depth of cutting	mm in	150 / 65 5,9 / 2,5	150 / 65 5,9 / 2,5

DONATONI SX-3 Q DONATONI SX-5 Q

Electro-spindle power	kW	17 / 56	17 / 56
Shaft diameter of spindle motor	mm in	40 1,6	40 1,6
Max. speed - X Axis	m / min ft / min	40 131,2	40 131,2
Max. speed - Y Axis	m / min ft / min	35 114,8	35 114,8
Max. speed - Z Axis	m / min ft / min	8 26,2	8 26,2
Max. Speed - X/Y Axis	m / min ft / min	35 114,8	35 114,8
Maximum conveyor belt speed	m / min ft / min	20 65,6	20 65,6
Water consumption	l / min gal / min	200 52,8	230 60,7
Air consumption	l / min gal / min	20 5,3	20 5,3
Voltage	Volt / Hz	400 / 50	400 / 50
Total installed power (S1)	kW Hp	90 120,7	120 160,9
Total weight approximation	Kg lb	19.500 42990,1	20.000 44092,4

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.

Member of:



CONFINDUSTRIA MARMOMACCHINE
ASSOMARMOMACCHINE

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

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.**

Diamente.it

DONATONI
Stone Tech Creators