

SX-3 SX-5

CNC CUTTING CENTRE
MULTI-SPINDLE
WITH ROTATING SPINDLES



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.



A photograph of an industrial machine, likely a CNC lathe, in a factory setting. The machine is white and grey, with a blue emergency stop button visible on the left. The background shows a wooden ceiling with exposed beams and industrial lighting. A diagonal white line separates the image from the text on the right.

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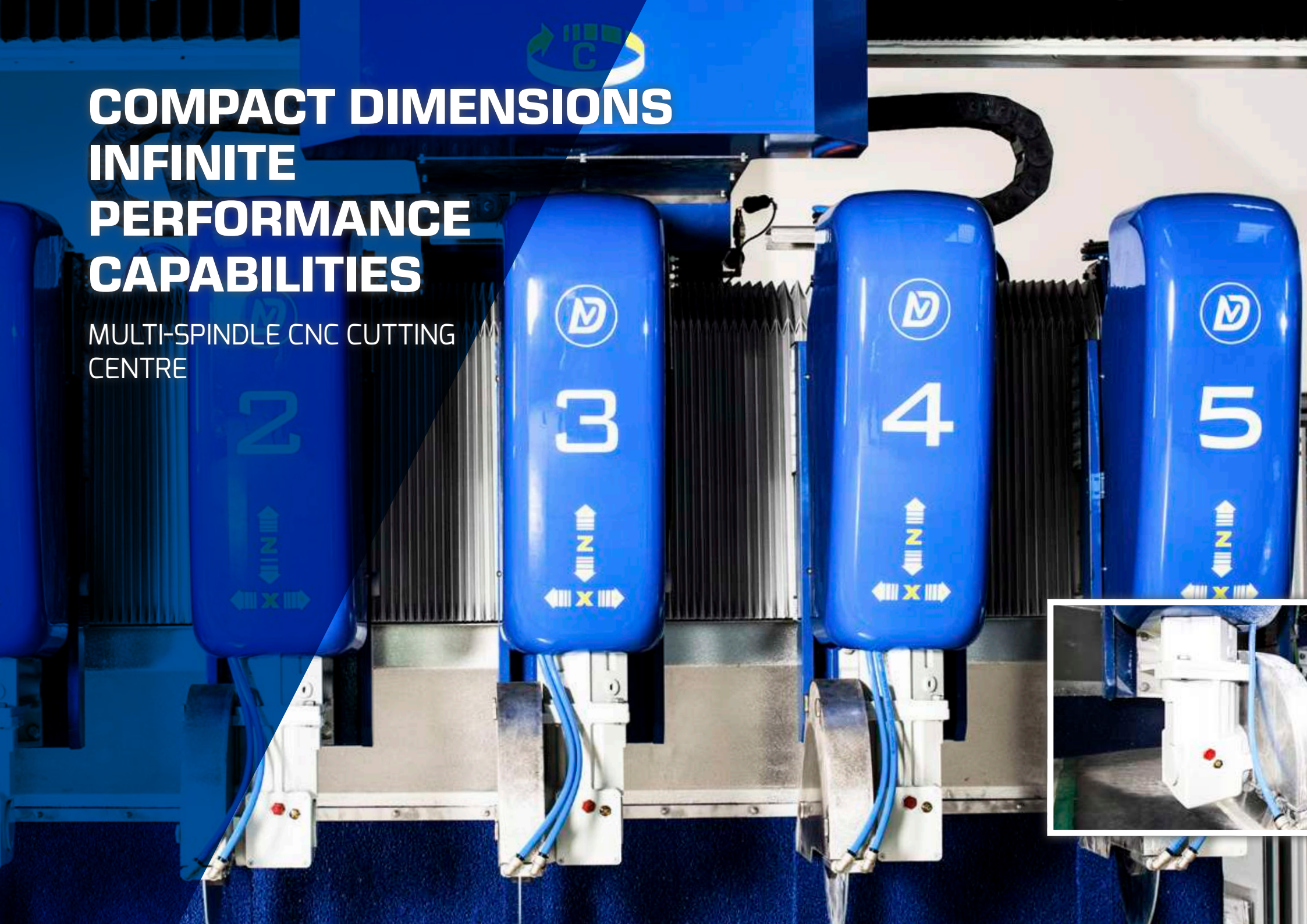
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COMPACT DIMENSIONS INFINITE PERFORMANCE CAPABILITIES

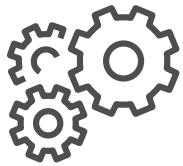
MULTI-SPINDLE CNC CUTTING
CENTRE



QUALITY AND FINISH WITHOUT PREDECESSORS

SX-3 and SX-5 are innovative numerical control multi-spindle cutting centres with **three or five cutting units with interpolated axes**, designed and patented by Donatoni Macchine 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 Macchine 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**.



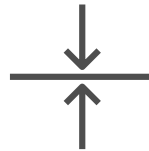
**EXTREMELY HIGH
PRODUCTIVITY**



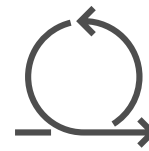
**FLEXIBILITY IN
PRODUCTION**



**OPTIMISATION
OF CUTTING**



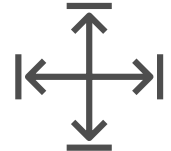
**EXTREMELY PRECISE
CUTTING FOR A
PERFECT RESULT**



**AUTOMATED CUTTING
LINE**



**SIMPLE AND FAST
TO PROGRAMME**



**COMPACT
INSTALLATION
SIZE**



SX-3 / SX-5 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 SX-3
with central spindle



Metro station WTC NY - Marble Lasa



Metro station WTC NY - Marble Lasa



Metro station WTC NY - Marble Lasa

WHEN INNOVATION BECOMES PERFORMANCE

MAIN
FEATURES
SX-3 / SX-5



- / 3 - 5 SPINDLES ON STEEL
ROTATING BRIDGE
- / 14 CONTROLLED AXES
8 INTERPOLATED AXES - for SX-5
- / 11 CONTROLLED AXES
7 INTERPOLATED AXES - for SX-3
- / MINIMUM DIAMETER
OF DISKS: 350 MM
- / MAXIMUM DIAMETER
OF DISKS: 400 MM
- / MAXIMUM DEPTH
OF CUT: 95 MM
- / ROTATION OF
HEAD SUPPORT BRIDGE: -182° / $+182^{\circ}$
- / 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

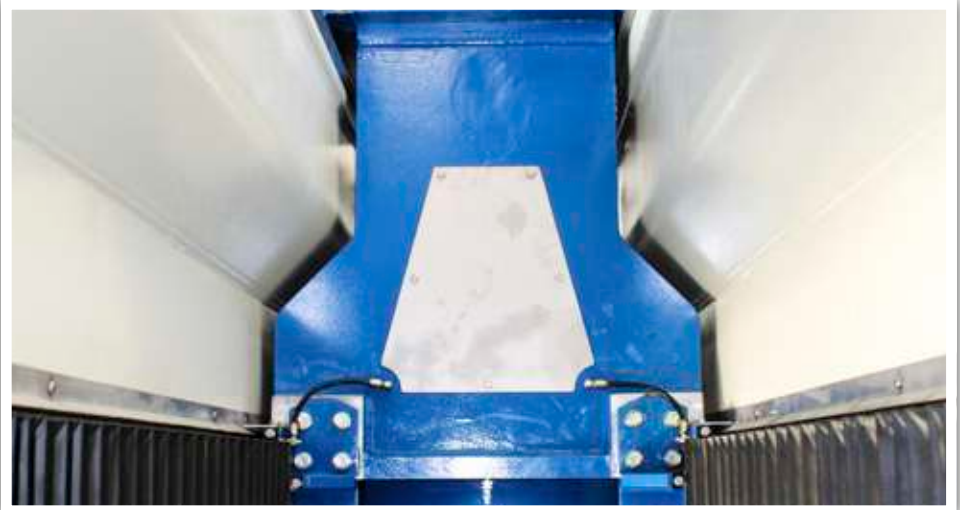
STANDARD COMPONENTS
SX-3 / SX-5



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.



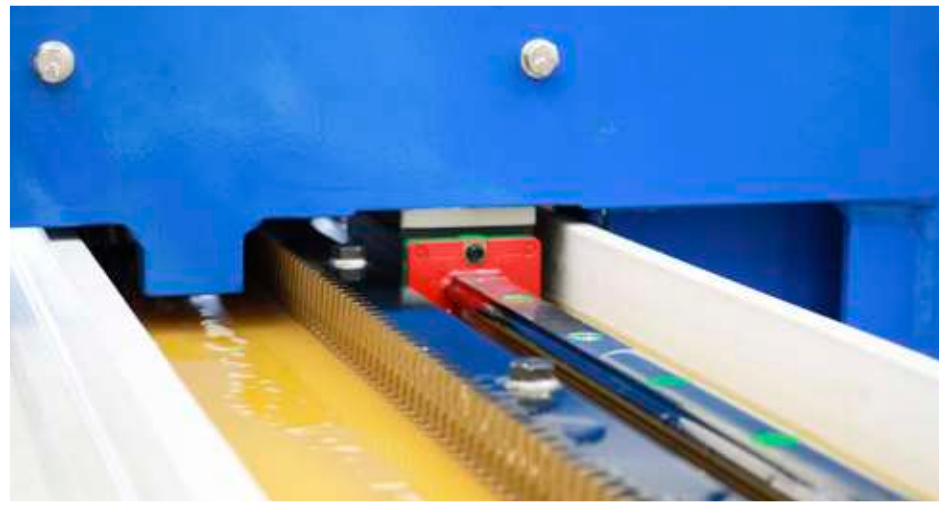
Motorised belts: the machine is equipped with motorised belts for moving the slabs during cutting/offloading.



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.



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



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



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, 15" 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



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.



Office Box: office for managing the machine and the cutting files after acquisition of the photo slab device. Box complete with glass windows, access door, desk, chair and pc on which the machine management software will be installed. Dimensions 2500 x 2000x h 2350 mm.



GEKO: automatic robot with vacuum cups for loading slabs, designed specifically for the automation of work lines for marble, granite and engineered stone. Supplied with motorised roller conveyor and side guide (8mt of rail) where the structure which carries the sucker holder arm runs.



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



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



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).



AN INTELLIGENT SYSTEM TO MAKE YOUR JOB EASIER

LET US DRIVE YOU
TOWARDS AN INTELLIGENT
CHOICE OF MACHINE



D-INSIDE:

EQUIP YOURSELVES WITH
A SUPERIOR FORM OF
INTELLIGENCE



OPERATOR INTERFACE WITH PC AND 15" VIDEO

COLOUR TOUCH-SCREEN

PRECISION OF MOVEMENTS WHICH ENABLES
COMPLEX AND INTRICATE PROCESSING

USB PORT FOR TRANSFERRING FILES

CONTROLS FOR MANUAL MOVEMENT OF AXES



Perfection in the machining is achieved through multiple movements that need perfect coordination between them. While in the human body all movements are managed through brain impulses, similarly in our machines the management of movements takes place through the **integration of the machine with the programming software.**

Every Donatoni machine is born with an intelligent work management system, integrated with all the parts that manages its movements; we call this system **D-Inside**, the real brain of the machine; it is an advanced but simple interface in terms of its usability, even for inexperienced operators, which enables the machine software system to be coordinated.

The D-Inside system offers many programming options and can be interfaced with the different kinds of Donatoni software, such as Parametrix and all additional modules, or the CAD-CAM DDX EasySTONE, in such a way as to make it possible to adapt the machine in the best way to suit the requirements of the customer.



PARAMETRIX

USER-FRIENDLY ICONS
AND SIMPLE PROGRAMMING

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

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

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

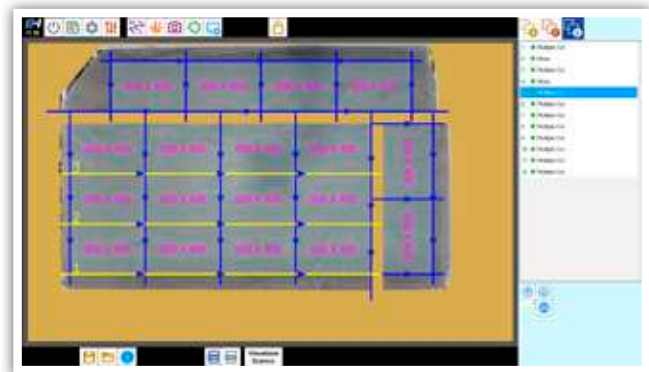
Included in the software are functions **for anti-collision of pieces, manual and automatic piece nesting, book matching, managing statistics, production and orders, rendering pieces and holes**.

Parametrix can be combined with Photoslab and Move-System, which allow automatic detection of the slab and movement, via a suction cups system, of the cut pieces **reducing operator intervention to a minimum**.

PARAMETRIX – module for SX-3 and SX-5

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

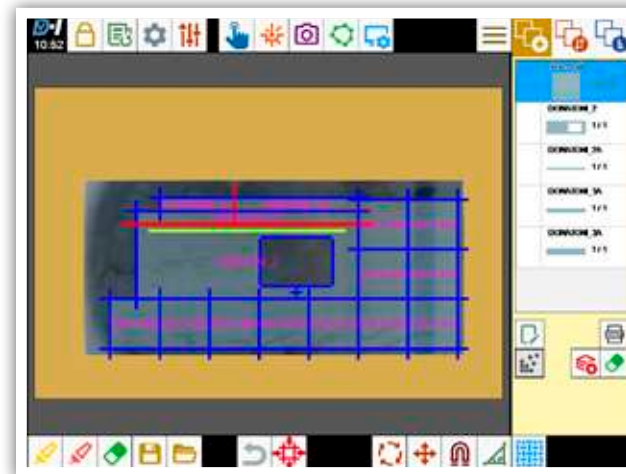


Managing and changing cuts (included)

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 (included)

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

The commitment to our Customers continues even after delivery of the machine, offering a service of support and aftersales service of utmost quality. For Donatoni Machine the best service is to supply **efficient and long-lasting machines which require little maintenance and aftersales assistance.**

We believe that **the added value that we can offer customers is a series of services including technical advice and support and training activities** for operators regarding technical aspects or the software.

MACHINE INSTALLATION

Our machine are installed by highly specialized technicians granting extraordinary levels of professional work. Installation includes a careful installation service, commissioning of the machine and training of operators according to the model of machine installed.

ON SITE ASSISTANCE

We provide on site assistance at the clients premises if not possible to use the Tele Assistance by modem.

CAD-CAM TECHNICAL ADVICE

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

DIRECT CONNECTION - ON-LINE ASSISTANCE

Each machine is supplied with a system that enables it to be connected by Tele-Assistance to our After-sale service (we require connection to the network via a cable). This service enables our technical staff to virtually access the customer machine and to carry out checks, updates and to provide technical assistance as if they were there at the machine location in person.

PARTS AND REPLACEMENTS SERVICE

We handle requests for parts and replacements in any part of the world, in short time frames in order to minimise machine down-time.

EXTENSIVE SALES AND ASSISTANCE STRUCTURE

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

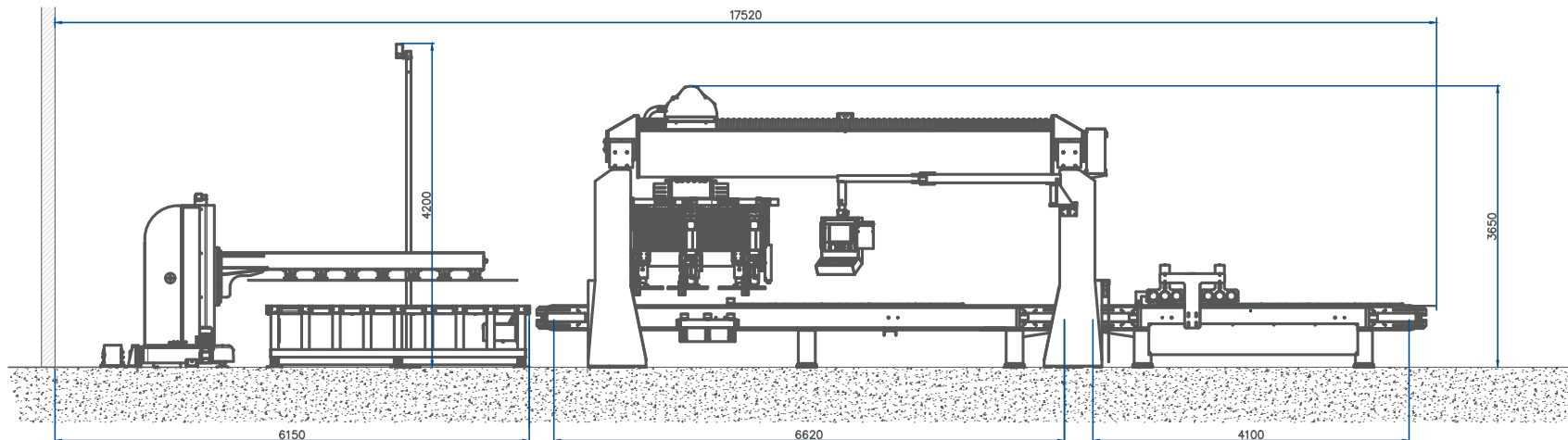
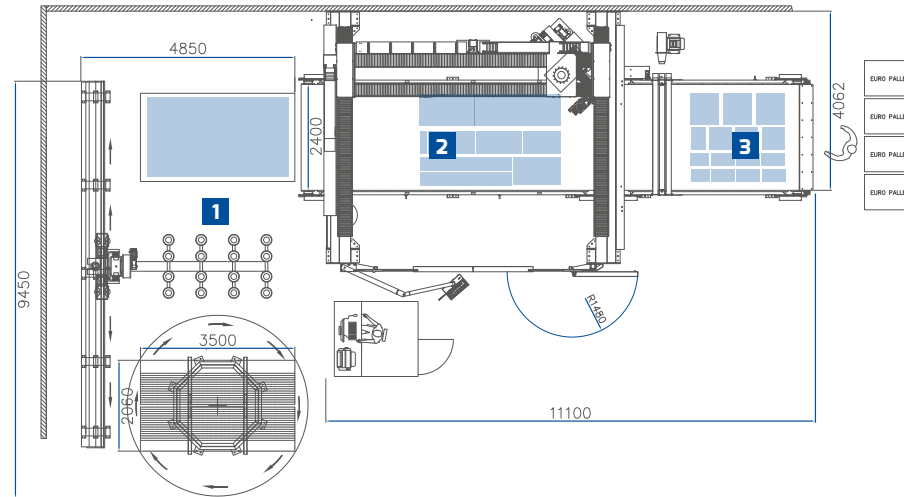
THEORETICAL/PRACTICAL TRAINING

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



TECHNICAL SPECIFICATIONS

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



SX-3 / SX-5

		SX-3	SX-5
Number of axes controlled	N°	12	14
Number of interpolated axes	N°	6	8
Bridge crane stroke - X axis	mm in	3600 141,7	3800 149,6
Bridge stroke - Y axis	mm in	2800 110,2	2800 110,2
Stroke - Z axis	mm in	200 7,9	200 7,9
Rotation of head support bridge - C Axis	degrees	-182° / +182°	-182° / +182°
Distance between disks min/max	mm in	80 / 1620 3,15 / 63,8	290 / 2050 11,4 / 80,7
Load capacity	kg	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	2,400 x 4000 94,5 x 157,5
Disk diameter min/max	mm in	400 / 350 15,7 / 13,8	400 / 350 15,7 / 13,8
Maximum depth of cutting	mm in	90 / 65	90 / 65

		SX-3	SX-5
Electro-spindle power	kW	17 / 56	17 / 56
Shaft diameter of spindle motor	mm in	40 3,5 / 2,5	40 3,5 / 2,5
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	100 26,4	100 26,4
Air consumption	l / min	20 5,3	20 5,3
Voltage	Volt / Hz	400 / 50	400 / 50
Total power	kW hp	60 / 56 80,5	100 / 56 134,1
Total weight approximation	Kg lb	19.500 42.299	20.000 44092

RANGE OF PRODUCTS

BRIDGE SAWS



Spin 625 cnc



Jet 625 cnc



Echo 725 cnc



Sprinter 825 cnc



Quadrix DV 1100



Quadrix XL 1600

MULTI-FUNCTIONAL CUTTING CENTRE



Quadrix DG
1300 / 1600 / 2000

ROBOT



Cyberstone CR01

POLISHING AND CALIBRATION SYSTEMS



Zenit

UNIVERSAL CUTTING CENTRE



Kronos 500 / 650 / 900

CUTTING LINES



SX3 / SX-5

SLAB LOADING / UNLOADING



Geko Loader

NOTES

NOTES

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NOTES

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NOTES

[illegible]

NOTES

[illegible]

ALL IN ONE



THREE EXCELLENCES,
ONE PARTNER.



Three leaders in the stone machining sector, combine skill, technology and a widespread distribution network to support customers in the creation of the intelligent factory, elevating the service provided in order to ensure 360° customer care.



INTERMAC.COM
DONATONIMACCHINE.EU
MONTRESOR.NET

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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**.

