

DONATONI[®] SX-SERIES

Multi-head cutting lines

DONATONI
Stone Tech Creators



**Productive.
Precise.
Automated.**



Table of contents

4	.....	Main characteristics
4	.....	Advantages
5	.....	The SX-Series machines
6	.....	Processing
7	.....	Production
9	.....	Components
13	.....	GEKO
14	.....	Automated unloading
15	.....	MOVE System
16	.....	Components and Optional extras
18	.....	Software
19	.....	Optional - Software
20	.....	Technical data sheet
22	.....	Machine layout SX-3r / SX-5r
24	.....	Machine layout SX-3 Q / SX-5 Q
26	.....	Machine layout SX-5 Q^{xl} / SX-6 Q^{xl}
28	.....	D-MES and D-PORTAL
29	.....	Donatoni Service
30	.....	Donatoni Group
31	.....	Donatoni Academy and showroom



Advantages

- Extremely high **productivity**
- Maximum **automation**
- Production **flexibility**
- Cutting **optimisation**
- **User-friendly** programming

Main characteristics

- DONATONI SX-Series are **revolutionary multispindle CNC-controlled** cutting centres with three and five interpolated axis cutting units. These innovative systems, conceived and patented by DONATONI, are designed to meet the needs of customers looking for a compact solution for the **mass production of marble, granite and agglomerate** floors and claddings of different types, dimensions and thickness.
- DONATONI was the pioneering company in the introduction of this particular type of multispindle machine with **patented rotating bridge**. Thanks to the vast experience built up over the years, DONATONI is able to offer its customers highly **productive** machines and at the same time **maximum precision** when cutting slabs.
- The DONATONI SX-Series cutting centres allow high in-line production rates while still offering a **compact and versatile system**. Offering the possibility of working on floor and claddings of various types, dimensions and thickness, these cutting centres are the ideal choice for customers looking for maximum **production efficiency** in the stone slab cutting sector.
- DONATONI has further expanded the range of options for this machine series by introducing **crosswise versions** of the SX-Series with 5 and 6 spindles. This new version allows for an even greater cutting width **in a single pass**.

The SX-Series machines



SX-5 Q^{XL} / SX-6 Q^{XL}



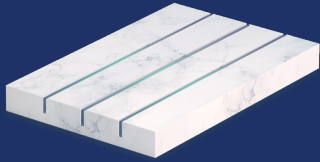
SX-3 Q / SX-5 Q



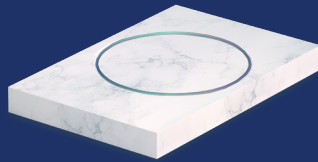
SX-3r / SX-5r

Machining

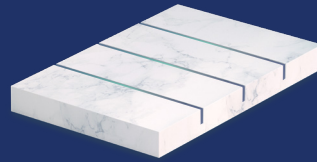
The Donatoni **SX-SERIES** can be used for a wide range of operations, for example:



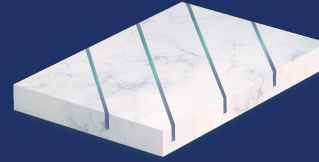
Longitudinal cuts



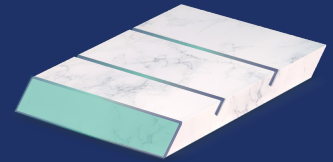
Curvilinear cuts (only
for the SX-3 Q)



Transverse cuts



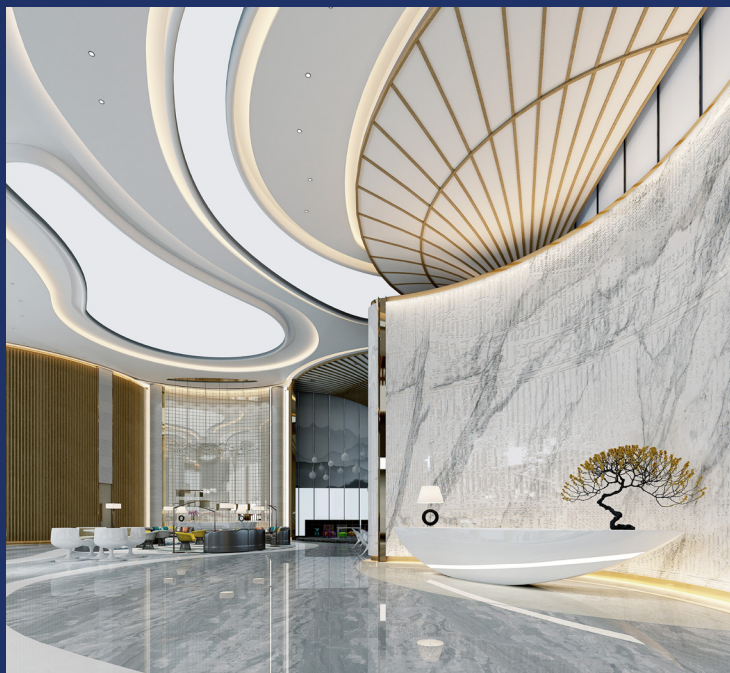
Oblique cuts
(not available
on transversal
versions)



Inclined cuts (up to 47°
for the SX-3 Q,
not available on
transversal versions)

Production

The **SX-SERIES** machines can be used to make different types of products.





Components



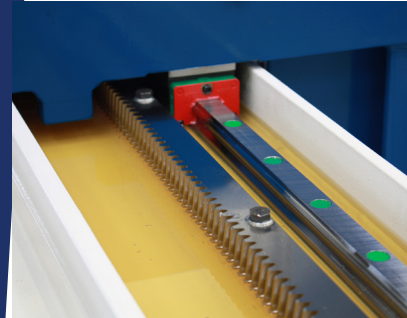
Head support bridge

Head support bridges with 3 or 5 spindles equipped with an innovative **large slewing ring** connecting the carriage, ensuring a smooth rotation of the spindle units. A key element of DONATONI's patented system is the **secondary head/spindle support bridge**, which always guarantees optimum carriage balance during the cutting phase, regardless of the size of the formats.



Inclined cut

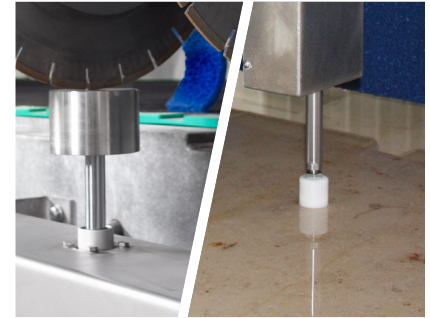
On DONATONI SX-3 Q and SX-3 r machines only, it is possible to implement an advanced machining option that enables **the central head** to perform **inclined cuts**. Thanks to this innovative feature, it is possible to make cuts with an inclination of up to 47°, thus expanding the range of possible machining operations.



Oil bath lubrication

SX-3Q and SX-5Q includes oil-bath lubrication, an optional feature that provides significant efficiency

advantages. In particular, the oil bath keeps **sliding perfect** even with **prolonged machine use**, which means minimum maintenance and maximum precision while working.



Blade presetting + Slab thickness probe

The blade presetting unit is a system dedicated to **detecting the diameter of the blade**.

The slab thickness probe is the system that **automatically detects the slab thickness**, of fundamental importance for 45° cutting.



Sliding front guards

The front safety barriers with closing system offer a higher level of quality for managing safety. These barriers were designed to guarantee their **maximum visibility** in the work area and **reduce bulk to a minimum** at the same time. The front closure of these barriers consists of a 2+2 wings system, allowing easy opening and closing, a solution that ensures **high safety standards**.



Steel walls

The SX Series machines have an optional extra: instead of the client having to make cement walls, steel walls can be installed to fix the Y axis sliding rails.

The structure is made of welded steel which has been heat-treated to improve its **resistance** and painted with three coats for greater **protection against external agents**.



Motorised belt conveyors

The machines are equipped with motorised belt conveyors for handling the slabs during cutting and unloading operations.

This implementation provides a **smooth and precise movement** of the slabs along the processing line, greatly reducing the need for manual intervention and **optimising** the overall production efficiency.



Grease lubrication system

The machines of the SX-Series feature **grease lubrication for the sliding lines**, managed automatically and centrally. Thanks to the innovative linear guide system installed in the side beams, the bridge moves with **ease and precision**, providing **fast and efficient movements**. The digitally controlled brushless motors and the latest generation gearboxes ensure absolute precision and remarkable speed, all while keeping energy consumption to a minimum.



Control panel

Everything within reach. The control panel is the basic instrument for using and programming the machine. This is why it must be as **simple and intuitive** as possible. It is a control unit with an innovative design and a large 21" touch screen. Operators can either program operations in automatic or handle them in manual. Thanks to its ergonomic structure, machine operation is easy and functional.



Camera + Photoslab

New high resolution industrial camera with support designed specifically to reduce bulk. Photoslab **automatically detects the surfaces of the slabs** on the loading area. The images are acquired thanks to integration of the software with Parametrix. The result turns into countless advantages, among which programming and process speed, and the **detection of possible defects in the slab.**



Bench washing unit

Made up of two pressurised water distribution kits; this system is strategically positioned at the exit point of the work area to guarantee that both sides of the workpiece are perfectly clean. Thanks to this innovative solution, both the upper and lower surfaces of each cut piece are **cleaned thoroughly** before being packed. The washing system guarantees an **efficient process and superior quality**, which contribute to production optimisation.



Stop & Go unloading system

An innovative solution, which by means of two lasers, allows automatic feeding and stopping of workpieces on the belt conveyors up to the edge. The Stop&Go Unloading System is a further proof of DONATONI's commitment to **the automation and the optimisation of production processes**. Thanks to this advanced solution, the overall efficiency and productivity of processing lines can be significantly improved.



Super View System

It is an innovative system that makes unloading easier. The Super View System allows the operator to **identify cut pieces** by means of the job name or the dimensions of the pieces, thus simplifying the packaging of the material. Another DONATONI solution designed to optimise the efficiency of the production process.



Automatic loading and unloading systems

Donatoni offers several automated solutions for loading slabs and unloading processed pieces. These systems were designed in order to **maximise the efficiency and automation of slab handling**, reducing manual intervention and operator fatigue. For an increasingly fast and efficient production.

GEKO

GEKO is the ideal solution for the automatic loading of slab processing lines. This system makes it possible to **pick-up the slabs directly from their warehouse and place them on the motorised roller bench**, which then feeds the processing line.

It is therefore also an ideal solution for the so-called “open-book” operations.

GEKO is driven by a CNC-controlled system and its movements are ensured by brushless motors. The suction cup panel is able to rotate over 180 degrees. GEKO is supplied complete with motorised one side open roller conveyor.

The system is equipped with an intuitive touch screen interface for **quick and easy programming**. As an optional extra, a rotating slab supporting platform is available, which allows the loading and unloading of slabs even while the machine is working.

GEKO is therefore the perfect addition to the SX-Series machines with a view to ever increasing speed, precision and safety of the production process.



Automated unloading

DONATONI has developed various **automated unloading solutions** for high-performance cutting machines such as those of the SX-Series, with a view to **optimising production processes**.

These systems (called DONATONI ARM) allow automatic unloading and palletising of workpieces, thus reducing the need for operator intervention as much as possible.



Advantages

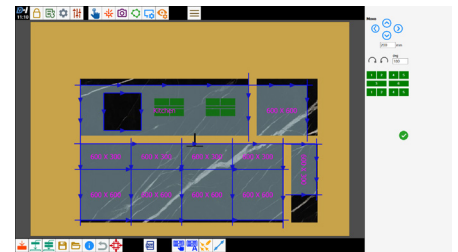
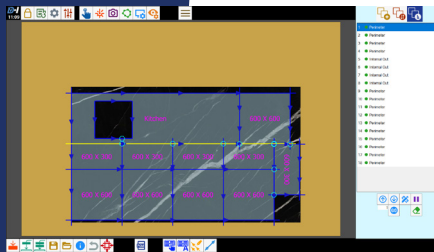
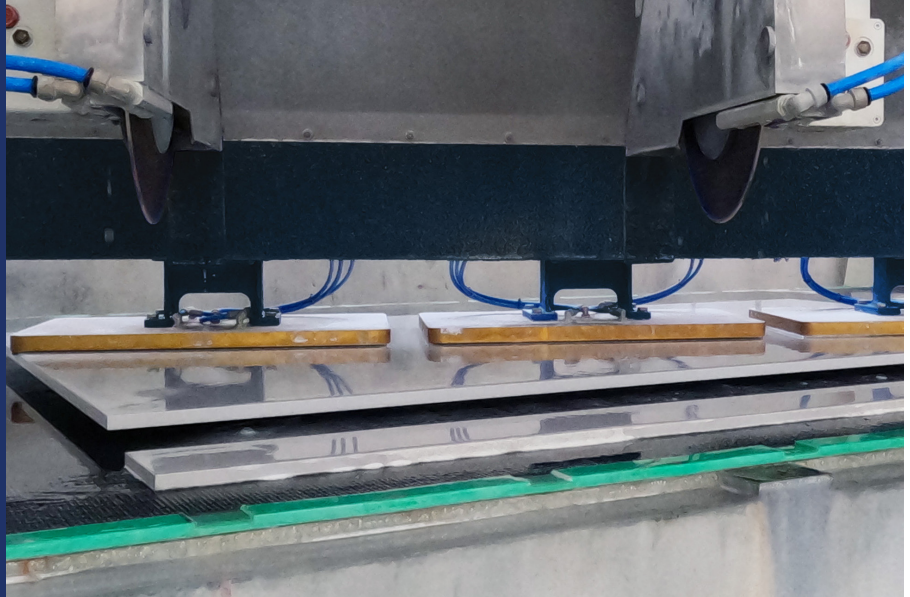
- Cost reduction
- Schedule compliance
- Production optimisation
- Workpiece palletisation in pallets, platforms or crates
- Insertion of workpiece separators (intersheets) with smart solutions
- Production of several formats at the same time
- System modularity to allow a quick configuration of the line
- Optional unloading in traditional manual mode
- Pieces tracking with Inkjet marking

MOVE System

The newly designed MOVE System with 9 excludable picking-up zones for lifting even small pieces. Thanks to the MOVE System you can **take full advantage of slabs**, avoiding their manual movement.

Advantages

- Increased efficiency and reduced downtimes
- No operator required for slab handling
- Easy to use, even for operators with no experience
- Makes the machine totally automatic
- It makes the most of the slab surface, reducing processing waste.



Components and Optional extras

	SX-3r	SX-5r	SX-3 Q	SX-5 Q	SX-5 Q ^{XL}	SX-6 Q ^{XL}
Head support bridge	S	S	S	S	S	S
Inclined cut	O	X	O	X	X	X
Oil bath lubrication	X	X	S	S	S	S
Blade presetting	S	S	S	S	S	S
Slab thickness probe	S	S	S	S	S	S
Steel walls	S	S	S	S	S	S
Camera	S	S	S	S	S	S

S Standard
 O Optional
 X Not available

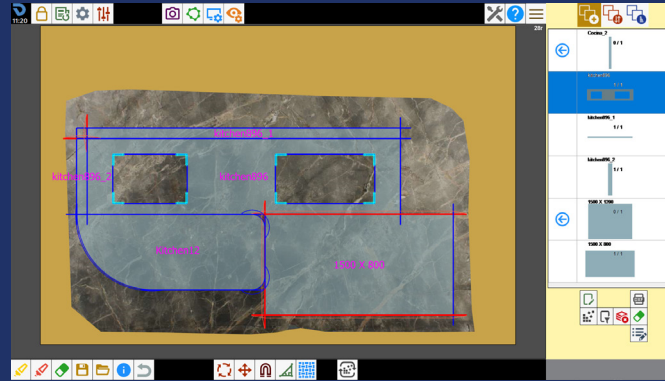
	SX-3r	SX-5r	SX-3 Q	SX-5 Q	SX-5 Q ^{XL}	SX-6 Q ^{XL}
Motorized belt conveyors	S	S	S	S	S	S
Bench washing unit	S	S	S	S	S	S
Stop & Go unloading system	S	S	S	S	S	S
Super View System	O	O	O	O	O	O
Automatic loading and unloading systems	O	O	O	O	O	O
GEKO	O	O	O	O	O	O
Move System	S	S	S	S	S	S

S Standard **O** Optional

Software

Donatoni Digital Suite

Over the years, DONATONI has developed a network of software and platforms capable of interacting with each other and supporting customers towards **complete automation and digitisation** of their production processes. The intention is to harmonise the different digital tools produced over time so as to make the daily life of those who use the machines **simpler and less costly. More automation means more efficiency.**



PARAMETRIX

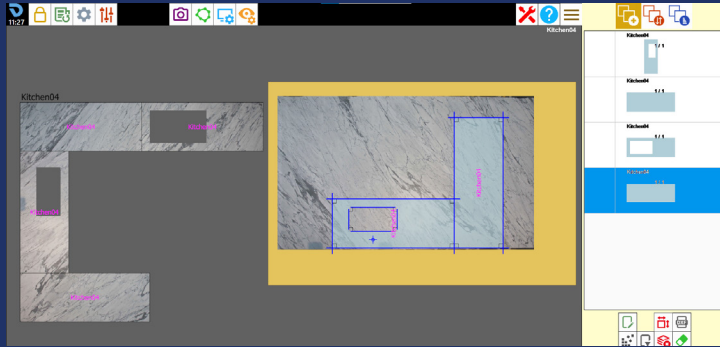
Optimising operations such as cutting, drilling and milling becomes simple and intuitive with Parametrix, the software that was designed by DONATONI in 2006 and which was improved over the subsequent years. With Parametrix you can manage **blade cutting operations and insert straight and curvilinear shapes** (stairs, kitchen countertops, rectangles, covers) using forms that are pre-set or which have been imported from a DXF file.

Depending on the surface it is possible to set the position of the pieces and the sequence of

the cuts, optimising the times and reducing the material waste. Arc cutting can only be performed with the SX-3's central spindle. This software includes collision prevention functions for the workpieces, manual and automatic nesting, as well as production and job order statistics management.

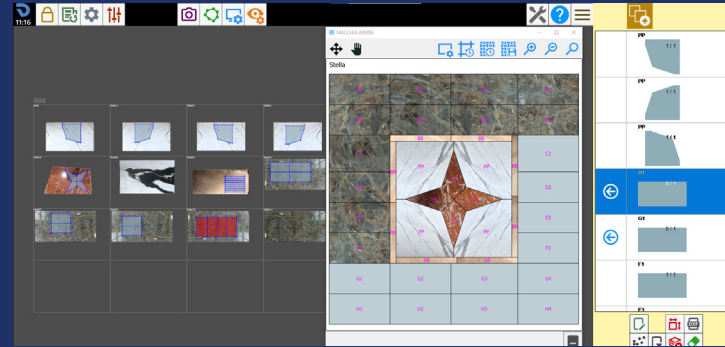
Parametrix can be used together with **Photoslab and Move-System**, which allow the slab to be detected automatically and the cut pieces to be moved using a suction cup system, thereby reducing operator intervention to a minimum.

Optional – Software



EASY MATCH

EASY MATCH is a programming software developed by DONATONI specifically for the realisation of **simple open-book projects**. It is an extension of the Parametrix software and gives a preview of the final result and slab cutting.



PROJECT MATCH

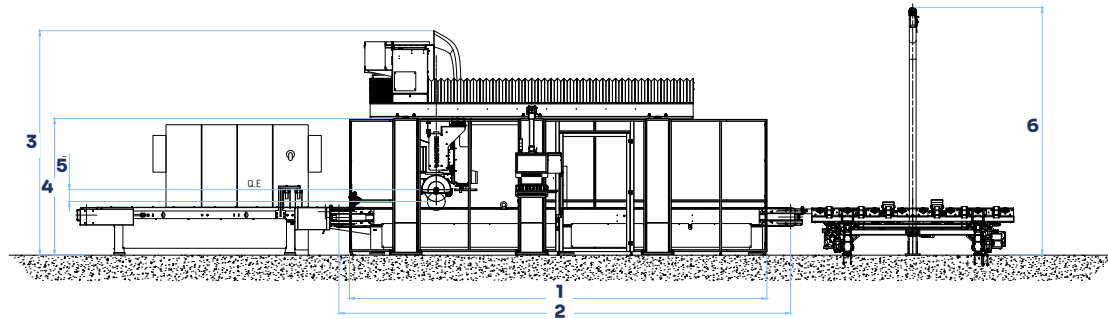
PROJECT MATCH allows **complex open-book projects** to be realised on several slabs simultaneously. It is a highly professional tool, ideal for companies that actualise contract projects for designers and architects, where the aesthetics have to be high level. This function has been designed for the office workstation.

Technical data sheet

		SX-3r	SX-5r	SX-3 Q	SX-5 Q	SX-5 Q ^{XL}	SX-6 Q ^{XL}
Number of electrospindles	N°	3	5	3	5	5	6
Number of controlled axes	N°	11	14	12	14	14	16
Number of interpolated axes	N°	6	8	6	8	8	9
Stroke - X axis	mm	4100	4100	3800	3800	3800	3800
Stroke - y axis	mm	2850	2850	2800	2800	2800	2800
Stroke - Z axis	mm	200	200	300	300	300	300
Maximum carriage speed	m / min	52	52	40	40	40	40
Maximum bridge speed	m / min	33	33	35	35	35	35
Z-axis positioning speed	m / min	4	4	8	8	8	8
Interpolated axes speed – X/Y axis	m / min	33	33	35	35	35	35
Bridge rotation for positioning – C axis	grades	-182° / +182°	-182° / +182°	-182° / +182°	-182° / +182°	0° e +90°	0° e +90°
Minimum/maximum distance between the discs	mm	250 / 2020	250 / 2020	90 / 1820	300 / 2040	300 / 3635	300 / 3635

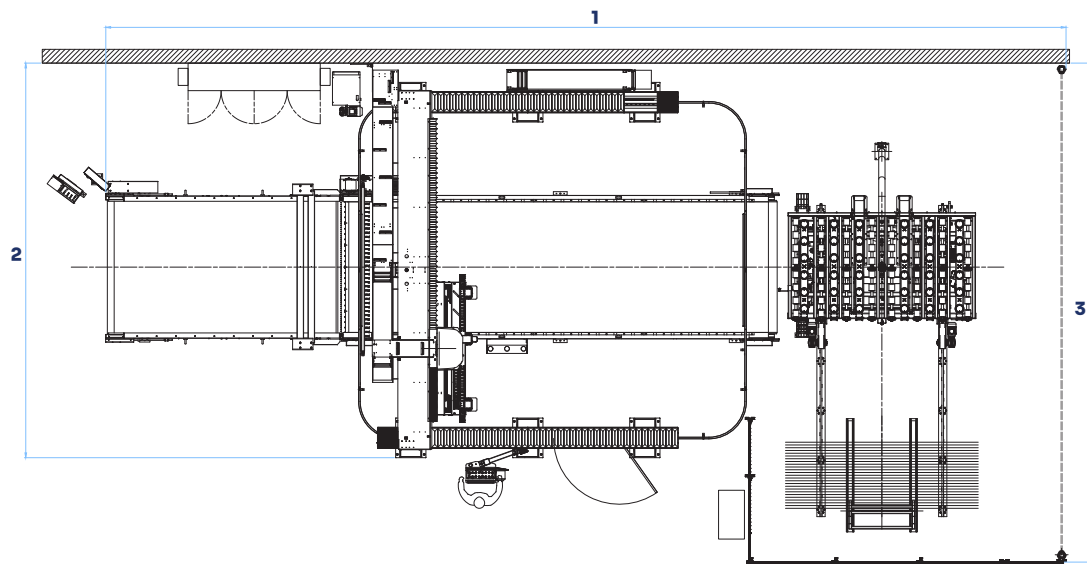
		SX-3r	SX-5r	SX-3 Q	SX-5 Q	SX-5 Q^{XL}	SX-6 Q^{XL}
Move-System lifting capacity	kg	500	500	600	600	600	600
Disc diameter min/max	mm	400/300	400/300	525 / 350	525 / 350	525 / 350	525 / 350
Max cutting depth	mm	60	60	150 / 65	150 / 65	150 / 65	150 / 65
Electrospindles power	kW	15 / S6	15 / S6	17 / S6	17 / S6	17 / S6	17 / S6
Central disc max rotation* (opt)	grades	47°	-	47°	-	-	-
Water consumption	l / min	200	230	200	230	230	250
Air consumption	l / min	20	20	20	20	20	20
Voltage	V / Hz	400±10% / 50	400±10% / 50	400±10% / 50	400±10% / 50	400±10% / 50	400±10% / 50
Total installed power (S1)	kW	84	110	90	120	120	135
Approximate total weight	kg	19.500	20.000	19500	20000	19600	19850
Lubrication system		grease	grease	oil/grease	oil/grease	oil/grease	oil/grease

Machine Layout **SX-3r / SX-5r**



	SX-3r	SX-5r
1	7042	7042
2	7620	7620
3	3786	3786
4	2305	2305
5	200	200
6	4180	4180

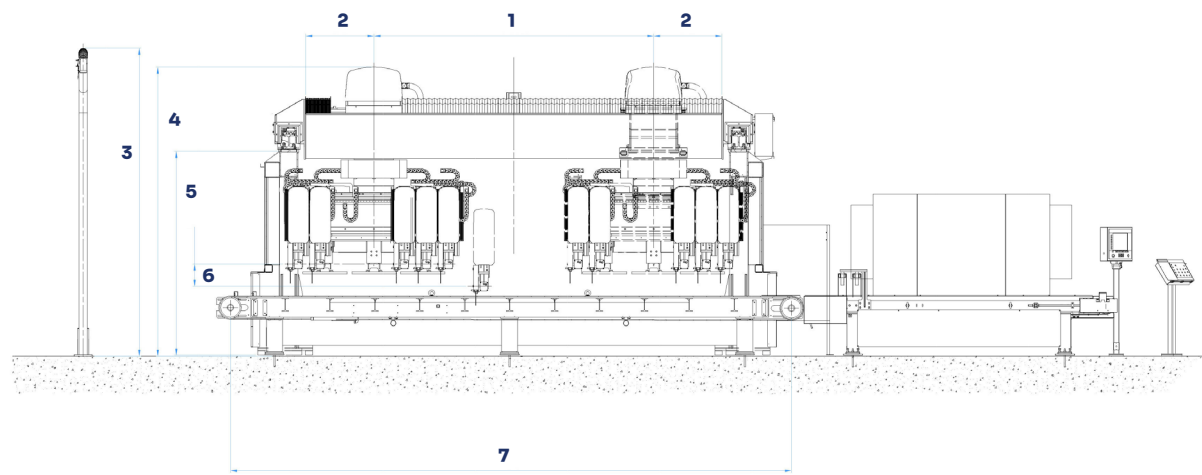
All values are in **millimetres**.



	SX-3r	SX-5r
1	17436	17436
2	7164	7164
3	9059	9059

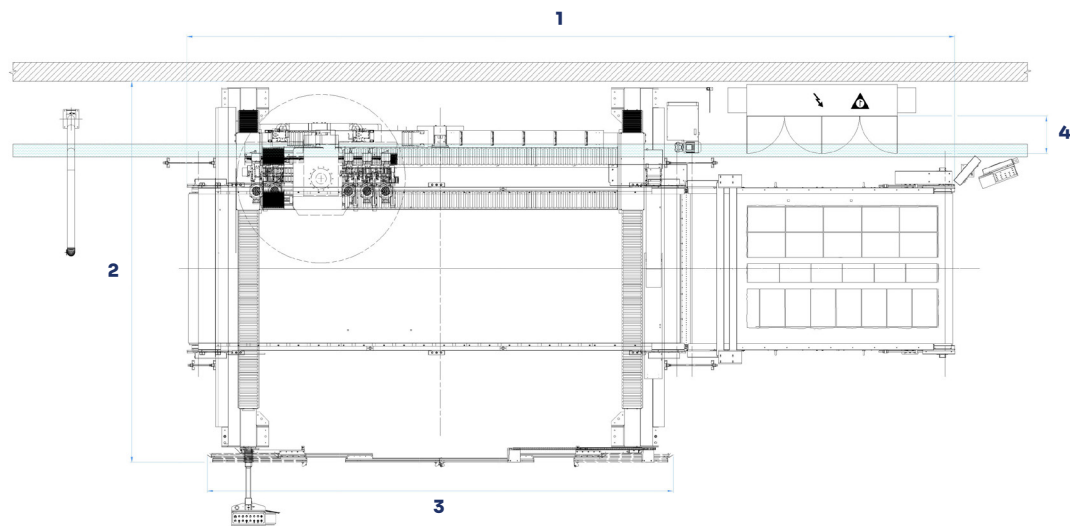
All values are in **millimetres**.

Machine Layout sx-3 Q / SX-5 Q



	SX-3 Q	SX-5 Q
1	3800	3800
2	930	925
3	4180	4180
4	3922	3925
5	2765	2765
6	300	300
7	7620	7620

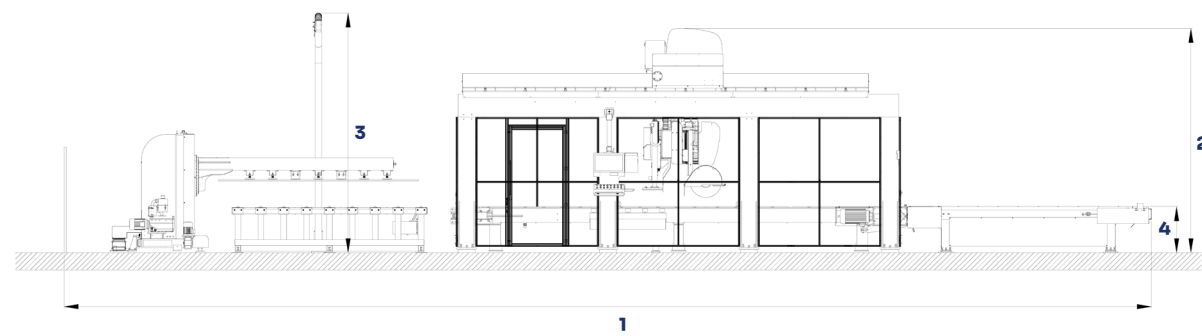
All values are in millimeters.



	SX-3 Q	SX-5 Q
1	17880	17963
2	12365	12340
3	5660	6838
4	1100	1100

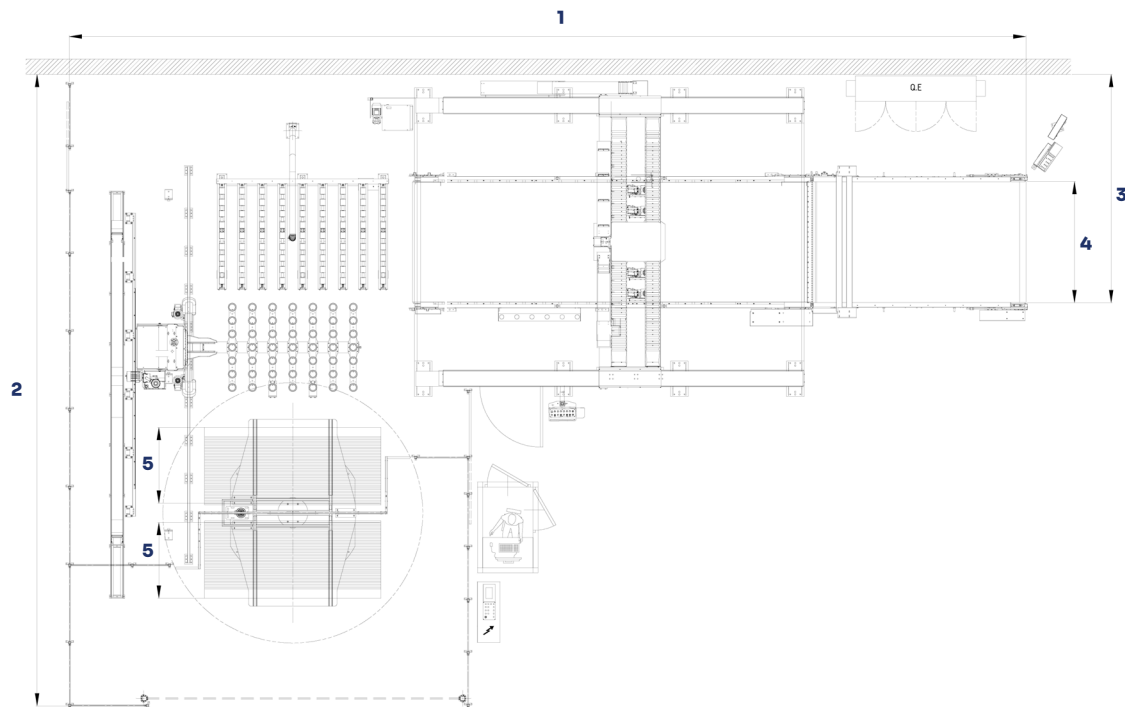
All values are in **millimeters**.

Machine Layout SX-Series transversal sx-5 Q^{XL} / sx-6 Q^{XL}



	SX-5 Q ^{XL}	SX-6 Q ^{XL}
1	19000	19000
2	3900	3900
3	4200	4200
4	800	800

All values are in **millimeters**.



	SX-5 Q ^{XL}	SX-6 Q ^{XL}
1	19000	19000
2	12500	12500
3	4500	4500
4	2400	2400
5	1500	1500

All values are in **millimeters**.

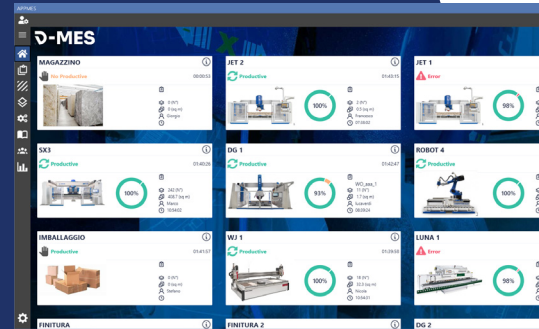
D-MES

DONATONI MES is the first MES system on the market specifically designed for the stone industry.

More than just software, DONATONI MES is a **complete Manufacturing Execution System** capable of managing and scheduling the entire production workflow—from slab acquisition and cataloging in the warehouse to final processing, packaging, and shipping.

It includes instant reporting features for production statistics, consumption tracking, and detailed reports on each production cycle.

The D-MES system provides a comprehensive solution to streamline production management, improve process traceability, and integrate all business areas into a single, unified workflow.



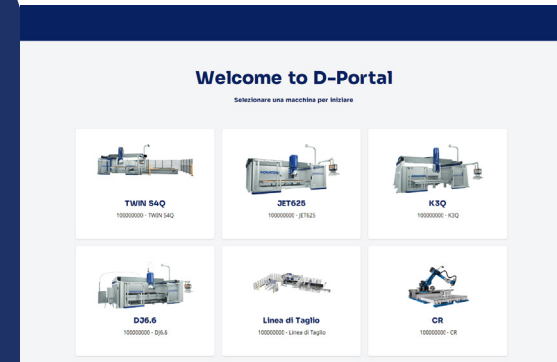
What needs does D-MES address?

- Support for preparing quotes thanks to the ability to program the entire work cycle.
- Real-time and final production monitoring.
- Management of slab inventory with all properties, dimensions, and associated job orders.
- Optimization and reuse of scrap materials.
- Centralized management of all production files—from job order to cutting and processing programs—in a single database.

D-PORTAL

D-Portal is an exclusive, completely free platform designed for Donatoni customers. Through D-Portal, users can access all documentation related to their Donatoni machines, including manuals, electrical diagrams, CE declarations, and layout drawings. In the **Interactive Manuals** section, machine information is easily accessible and enriched with an **interactive spare parts catalogue**.

The platform also features a collection of short video tutorials covering maintenance and machine programming tasks, helping operators independently resolve common operational questions. Finally, **D-Portal allows users to open support tickets directly**, ensuring fast and efficient customer service.



Donatoni Service

Specialized Support and Rapid Solutions to Maximize Machine and Plant Efficiency.

Support

For any need, our customer service department can be contacted to promptly identify and resolve any issue, offering the fastest and most effective solution. Our support team is always available to assist customers with all aspects related to machine functionality.



Tel. +39 - 045 6862899

From Monday to Friday, 7.30-18.30

Saturday 8.00 - 12.00

(UTC +1 CET – Central European Time)

Maintenance

Donatoni's ordinary and extraordinary maintenance service is entrusted to our specialized technicians, who ensure long-term reliability and efficiency of our customers' machines, both in Italy and abroad.

Our highly qualified experts are trained to quickly identify and resolve faults, optimizing response times and ensuring longer life for machines and systems.

Whatsapp: + 39 0457740052

Telegram: @donatonimacchine_bot

Installation and more

Donatoni Service is not only support—it also includes installation, commissioning, and training on machines and systems.

Our highly qualified technicians assist customers through every phase, ensuring a smooth start-up and providing comprehensive training to guarantee optimal and independent use of the technologies.



assistenza@donatonimacchine.eu
service@donatonimacchine.eu



ricambi@donatonimacchine.eu
parts@donatonimacchine.eu

DONATONI MACCHINE SRL

T +39 045 686 28 99

M assistenza@donatonimacchine.eu

DONATONI AMERICA Inc.

T +1 3367905056

M service@donatoniamerica.com

DONATONI DEUTSCHLAND GmbH

T +49 0821 207176-0

M service@donatonideutschland.de

DONATONI ESPAÑA

T +34 919032479

M service@donatoniespana.es

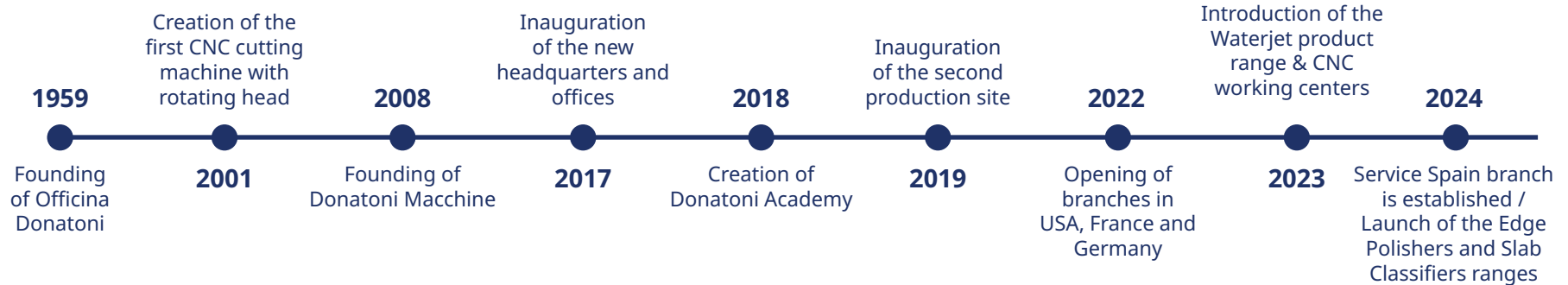
Donatoni Group

Donatoni Group stems from a **long-standing experience** that began in the late 1950s and has since evolved within the stone processing industry.

Today, it is recognized as one of the world's leading companies in the production of high-quality machinery for stone processing.

Ongoing research, technological innovation, and a strong focus on customer service are the pillars on which the company is founded. A highly qualified team ensures that customers receive products that fully meet their expectations in terms of quality and performance.

Supporting its global growth, **Donatoni Group** is present in international markets through a network of agents and direct branches.



Donatoni Academy

Training as a tool for success

Since 2018, Donatoni Academy has supported professionals in the stone industry by offering continuous training on new technologies for marble processing. The Academy combines traditional know-how with innovation, offering both practical and theoretical courses on Donatoni machines and software, and more. Training for CNC operators ensures customers receive complete and qualified preparation to face the challenges of the sector.

Contacts:

info@donatoniacademy.eu

Donatoni Showroom

A space dedicated to the customer

The Donatoni Machine showroom is always available to customers for private demos, refresher courses, and in-depth training on the use of Donatoni machines and software. It also offers customized machining tests and specific consultations on materials and special requests. An excellent service that provides a valuable opportunity to explore the machines' features in detail and optimize production processes through hands-on sessions and personalized consulting.

Contacts:

showroom@donatonimacchine.eu





Donatoni Macchine Srl si riserva il diritto di apportare alle proprie macchine qualsiasi modifica tecnica che, a suo insindacabile giudizio, sia considerata un miglioramento. Pertanto, tutte le informazioni, i dati o le immagini presenti in questo catalogo hanno solo valore indicativo e non costituiscono in alcun modo un impegno contrattuale da parte di Donatoni Macchine Srl.

CL_A08_00_EN 08/25

Donatoni Macchine srl

T +39 045 686 25 48
M info@donatonigroup.com

Via Napoleone, 14
37015 Sant'Ambrogio di Valpolicella (VR)
ITALY

Donatoni America Inc

T +1 3367904910
M info@donatoniamerica.com

4214 Beechwood Dr, 104
27410 Greensboro, North Carolina
USA

Donatoni Deutschland GmbH

T +49 (0)821-207176-0
M info@donatonideutschland.de

Am mittleren Moos, 39
86167 Augsburg
GERMANY

Donatoni France EURL

M commercial@donatonifrance.fr

33 Rue de la Republique, Allé B
69002 Lyon
FRANCE

donatonigroup.com

