

DONATONI BELT-SERIES

Bridge saw with conveyors

DONATONI
Stone Tech Creators



**Performance.
Flexibility.
Efficiency.**



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Main characteristics

- **DONATONI BELT S1, S2 and S3Q** are 5 interpolated axes CNC bridge saws. Thanks to their flexibility they are suitable for **mass production** of different types of products made of marble, granite, natural and artificial stone industry.
- The BELT-Series machines can be used for a wide range of machining operations, for example: cutting, milling, and drilling. Thanks to the wide choice of accessories, it is possible to carry out **different automatically machining** processes without moving the workpiece from the workbench, and avoiding prolonged machine downtime.
- DONATONI BELT S1, S2 and S3Q are particularly suitable for all companies that require high levels of **productivity** and, at the same time, a **machine that is versatile and adaptable** to the customer's production needs. Different levels of customisation and a wide range of accessories ensure that even the most demanding requirements can be met.
- **DONATONI BELT** machines can be customised with different automation levels for each work area: loading, cutting, unloading areas (see more details in the components section).

Advantages

- High productivity
- Non-stop production
- Maximised use of the slabs
- A wide range of accessories and configurations
- Great versatility
- Extreme cutting precision
- User-friendly programming

	Traditional machine	DONATONI BELT-Series machines
Number of operators	1	2
Surfaces cut (in 8 working hours)	120 mq*	310 mq*

**The data are purely indicative and can vary according to the type of material, slab thickness, blade used and other factors that do not depend entirely on the machine.*

The BELT-Series machines



BELT S1



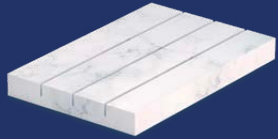
BELT S2



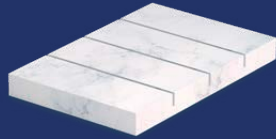
BELT S3 Q

Processing

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



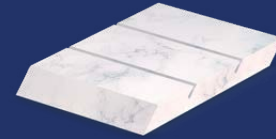
Longitudinal cuts



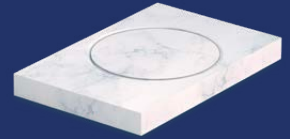
Transverse cuts



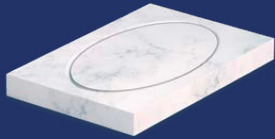
Oblique cuts



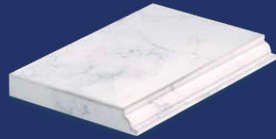
Inclined cuts 0-90°



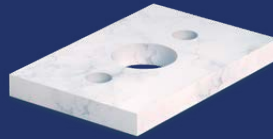
Curved cuts



Elliptical cuts



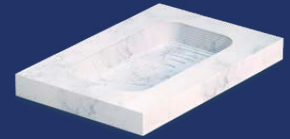
Shaping
(only with Isocam)



Drilling



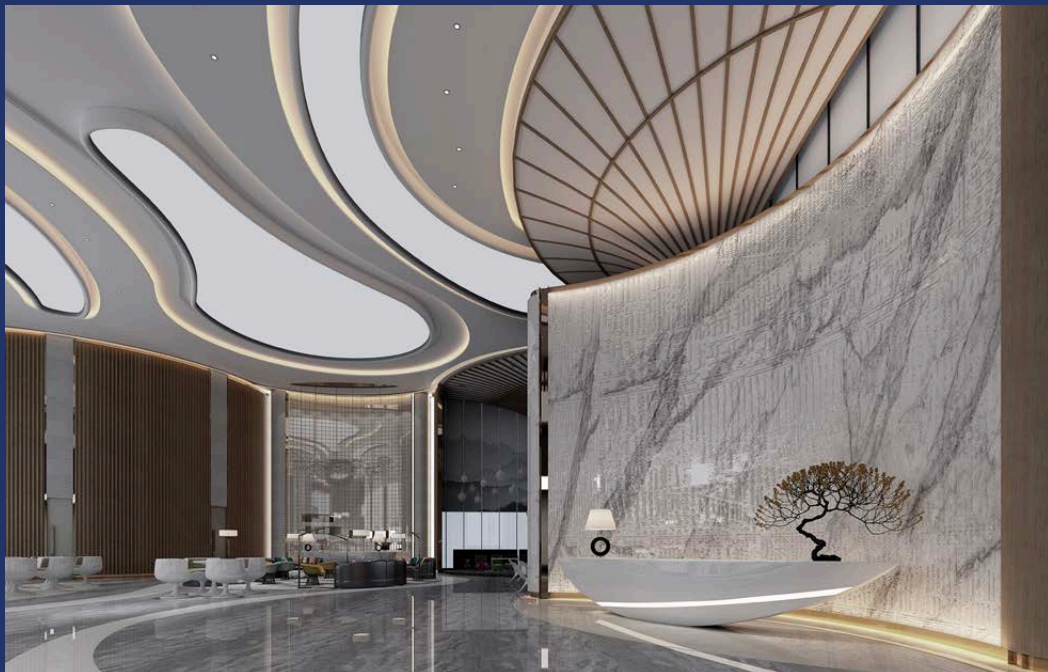
Milling

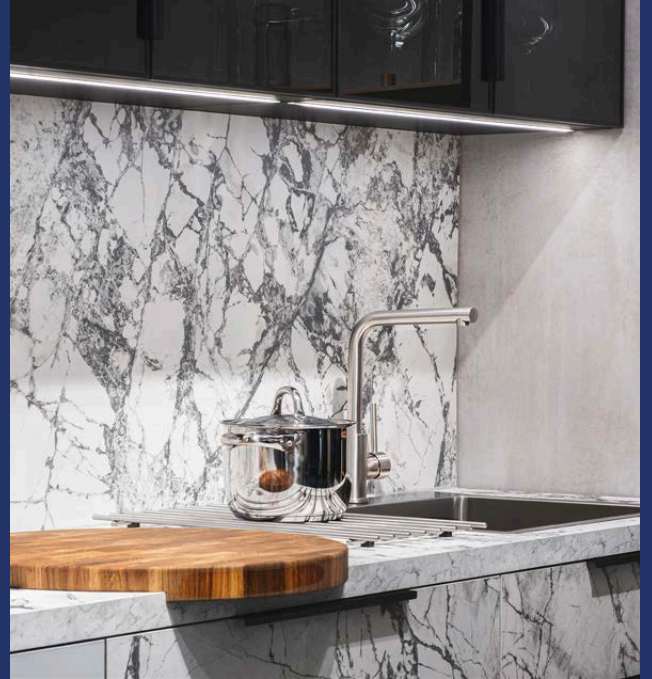


Block milling

Production

The **BELT-SERIES** machines can be used to make different types of product.





Components



Electrospindle

Top quality inverter-controlled electrospindles that make it possible to use the blade and diamond tools of the core bit or milling cutter type. Each Belt-Series machine has a **wide range** of electrospindles to choose from according to the specific requirements of the client. Tool changing can be **automatic or manual**.



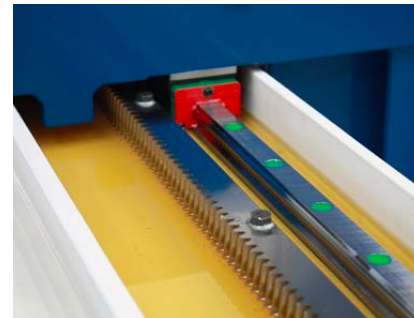
Blade presetting + Slab thickness probe

The blade presetting unit is a dedicated system for detecting **the blade diameter or the length of a tool** mounted on the main spindle or TOOL+ spindle. The slab thickness probe is the system that automatically detects the slab thickness, of fundamental importance for 45° cutting.



Automatic greasing

The sliding lines of BELT S1 and S2 are lubricated automatically and in a centralised manner with grease. Thanks to the innovative linear guiding systems installed on the lateral crossbeams, the bridge travels easily and precisely, offering fast, efficient movements. The digitally controlled brushless motors and cutting-edge gearboxes guarantee absolute precision and a surprising speed, with the **energy consumption** being reduced to a minimum.



Oil bath lubrication

The BELT S3 Q includes oil-bath lubrication, an optional feature that provides additional advantages in terms of **efficiency**. In particular, the oil bath keeps sliding perfect even with **prolonged machine use**, which means minimum maintenance and maximum precision while working.



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 close of these barriers is made up of a 2+2 wings system, which makes them easy to open and close. A solution that guarantees **extremely high safety standards**.



Steel walls

The Belt-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**.



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.

Optional



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**.



TOOL+

A vertical side electrospindle, inverter-controlled from 0 to 15,000 rotations, which can be used with **small diameter diamond tools** with a $\frac{1}{2}$ " as connection for incremental cutting / blind or through-hole drilling and operation combinations with the blade and milling cutters. Thanks to TOOL+ the range of possible operations increases staggeringly.



Gruppo Lower-Cut

This cutting system is useful for inserting **rodding** into the lower section of kitchen countertops (requires the Y-axis to be lengthened) and cuts for drip rails. The Parametrix software manages the position of the material being held by the suction cups system (MOVE System) and cutting. The ideal solution for marble workers specialised in such kind of machining operations.



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.

Load, cut and unloading areas

The slab loading system can be **custom-designed** according to the specifications of the customer, offering a variety of options ranging from a simple roller conveyor for loading using a jib or suction crane, to a fully automated solution. The solution is customised to suit the customer's specific needs.

Machining stages can be **fully automated** by means of the various optional extras available, including Move System, Tool+ and other accessories. Each machining process can be programmed directly from the console on the machine or via the office workstation.

There are two solutions available for the unloading phase, tailored to work requirements:



SINGLE BELT CONVEYOR:

the cutting area and the unloading area are equipped with a single belt conveyor. This option is recommended when it is **necessary to detect the position of the cut pieces** in the unloading area (for automatic unloading of pieces) or when unloading operations do not require movement of the belt conveyor.



DOUBLE BELT CONVEYOR:

the cutting area and the unloading area are equipped with two separate belt conveyors. This option is recommended when the **unloading of pieces is done manually**, as it allows the unloading belt conveyor to run while the cutting belt conveyor is not running.

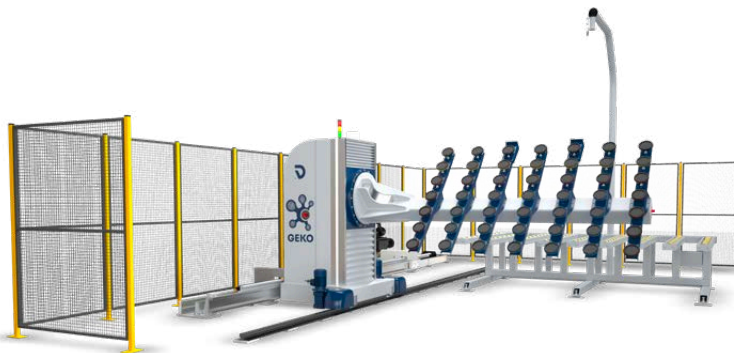
GEKO

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 Belt-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 machines used for machining pieces in different formats such as those of the Belt-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 of several formats at the same time
- Workpiece palletisation in pallets, platforms or crates
- Insertion of workpiece separators (intersheets) with smart solutions
- 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 6 excludable picking-up zones for lifting even small pieces and a load capacity of up to 600 kg. Thanks to the MOVE System you can **optimise the use of slabs**, avoiding their manual movement.

Advantages

- It makes the most of the slab surface, reducing processing waste
- 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

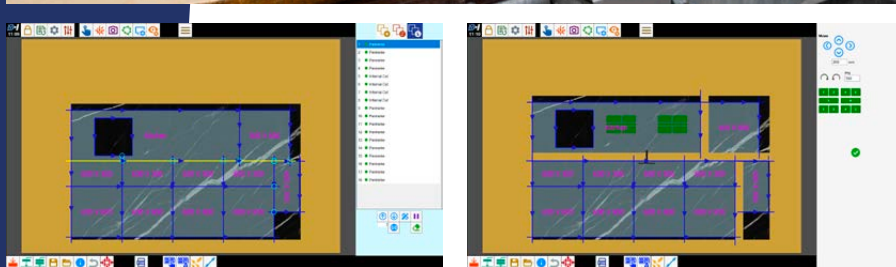


Table of components

	BELT S1	BELT S2	BELT S3 Q
ATC electrospindle	O	O	O
Blade presetting	O	O	O
Slab thickness probe	O	O	O
Automatic greasing	S	S	X
Oil bath lubrication	X	X	S
Camera	S	S	S

S Standard **O** Optional **X** Not available

	BELT S1	BELT S2	BELT S3 Q
TOOL+	O	O	O
Lower-Cut Unit	O	O	O
Super View System	S	S	S
Steel walls	O	O	O
Load, cut and unloading areas	S	S	S
GEKO	O	O	O
MOVE System	S	S	S

S Standard **O** Optional

Software

Donatoni Digital Suite

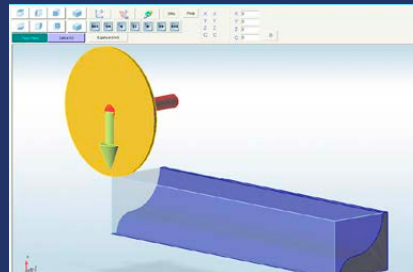
Over the years, DONATONI has developed a network of software and platforms capable of interacting with each other and supporting customers towards complete automation and digitalisation of their production processes. The intention is to harmonise the different digital tools produced over the years so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

PARAMETRIX



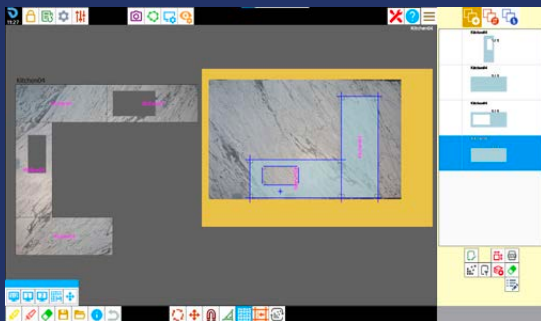
PARAMETRIX is the simple and user-friendly Software developed by Donatoni Machine that was conceived to **optimise cutting different shaped pieces from slabs.** It is a software which allows you to manage cutting processes using a blade, it allows the user to input both rectilinear and curvilinear shapes (steps, kitchen worktops, rectangles, covers) using pre-defined shapes or shapes imported from DXF files. 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. This software includes collision prevention functions for the workpieces, manual and automatic piece nesting, as well as production and job order statistics management.

Optional – Software



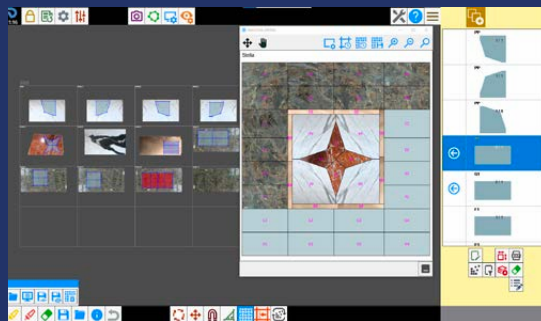
ISOCAM

DONATONI Isocam allows files to be created for the execution of straight or concave and convex arc shapes, with vertical and horizontal blades. Shaping can be done in the **roughing (combing) and the finishing (brushing) modes, also in the combined mode.** Importing from DFX, modifying the designed shapes and repeating the design of the same shape are some of its other functions.



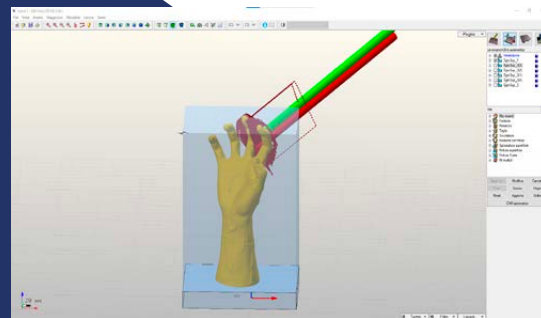
EASY MATCH

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.



EASYSTONE

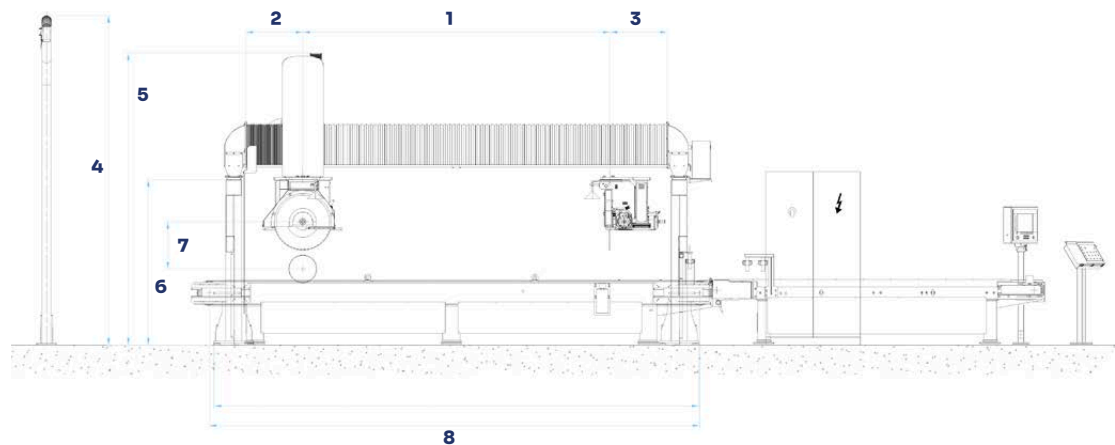
EASYSTONE is the CAD/CAM software specifically for the marble processing sector. It is a simple, intuitive software program: all the functions are “click-friendly” and can be used even by people with no specific computer skills. The software can be used to design or import 2D and 3D files in different formats, or to define surfaces and shapes through laser scanning. Ideal for **shaping, drilling, profiling, emptying, polishing and 5-axis machining** because it optimises the execution process.

Technical Data Sheet

		BELT S1	BELT S2	BELT S3 Q
Max. number of interpolated	No	5	5	5
Carriage stroke (X-axis)	mm	3800	3800	3900
Bridge stroke (Y-axis)	mm	2900	2900	2950
Head up / down stroke (Z-axis)	mm	450	550	600
Blade-carrying head rotation (C-axis)	degrees	-5° / 365°	-5° / 365°	-5° / 365°
Blade-carrying head inclination (A-axis)	degrees	0° - 90°	0° - 90°	0° - 90°
Single belt conveyor dimensions	mm	10700 x 2400	10700 x 2400	10700 x 2400
Double belt conveyor dimensions	mm	6200 x 2400 / 4000 x 2400	6200 x 2400 / 4000 x 2400	6200 x 2400 / 4000 x 2400
Double belt conveyors dimensions for unloading system	mm	7000 x 2380 / 4000 x 2400	7000 x 2400 / 4000 x 2400	7000 x 2400 / 4000 x 2400
Minimum blade diameter	mm	350	350	350
Maximum blade diameter	mm	625	750	750
Maximum cutting depth	mm	200	250	260
Blade motor power	kW	13 / S6 - 13 / S6 (ATC e MTC)	17 / S6 - 13,2 / S6 (ATC e MTC)	17/S6 - 13,2/S6 (ATC e MTC) 22 (opt)

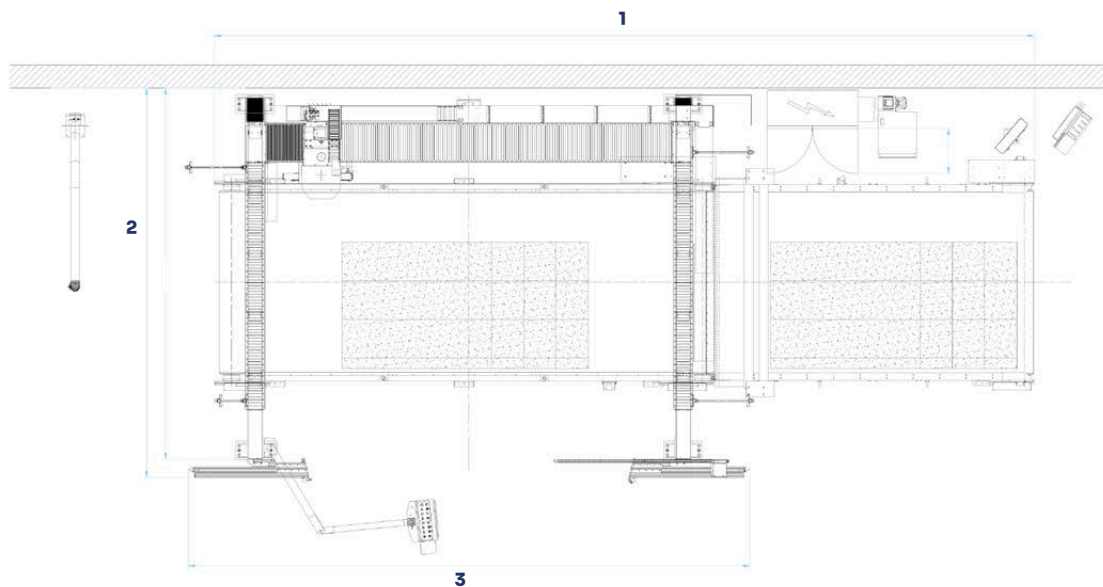
		BELT S1	BELT S2	BELT S3 Q
Blade rotation with inverter (standard)	Rpm	0 / 2400	0 / 2400	0 / 2400
Tool rotation with optional Tools/ISO 40	Rpm	0 / 5500 - 0 / 7500 (ATC e MTC)	0 / 5500 - 0 / 7500 (ATC e MTC)	0 / 5500 - 0 / 7500 (ATC e MTC)
Spindle shaft diameter	mm	50	50 (65 opt.)	50 (65 opt.)
Carriage speed (X-axis)	m / min	0 - 40	0 - 40	0 - 45
Bridge speed (Y-axis)	m / min	0 - 30	0 - 30	0 - 45
Head speed (Z-axis)	m / min	0 - 5	0 - 5	0 - 5
Speed of X-Y axes positioning	m / min	0 - 30	0 - 30	0 - 45
Water consumption	l / min	50	50	50
Air consumption	l / min	20	20	20
Standard electrical voltage	V / Hz	400±10% / 50	400±10% / 50	400±10% / 50
Max blade diameter with suction cups (295 mm stroke)	mm	625	725	725
Max total weight that can be lifted with suction cups	kg	500	500	600
Total machine weight	kg	13700	13800	14000

Machine layout



	BELT S1	BELT S2	BELT S3 Q
1	3800	3800	3900
2	605	649	723
3	686	632	723
4	4230	4100	4120
5	3080	3428	3875
6	1850	2050	2100
7	450	550	600
8	6220	6220	6220

All values are in **millimetres**.



	BELT S1	BELT S2	BELT S3 Q
1	10464	10464	10825
2	5115	5142	5142
3	7227	7409	7409

All values are in **millimetres**.

D-MES

DONATONI MES is the first MES system on the market designed and manufactured exclusively for the stone industry. DONATONI MES is not just a software: it is a complete MES (Manufacturing Execution System) system that can support your company's growth.

The company of the future is digital and connected.

Advantages

- Production monitoring
- Real-time data
- Integration with working areas
- Improved efficiency and profits
- Reduced waste and time
- One single database for the whole company



Welcome to D-Portal

Selezionare una macchina per iniziare



D-PORTAL

The D-Portal platform can be considered as a **library for all your DONATONI machine** documents and has direct channels for contacting our After Sales service, which means that clients can do ordinary maintenance easily and precisely.

Donatoni Service

Donatoni service offers a wide range of consulting services to meet the different needs of customers, wherever they are.

After-Sales Service

You can contact our **after-sales service** for any requirement. In this manner, any type of problem can be identified and solved asap, finding the fastest, **most efficient solution**.

Our telephone assistance department is available for giving support to clients on everything about machine functionality.

Telephone support is available from Monday to Friday, 7.30 a.m. to 6.30 p.m., and on Saturdays from 8 a.m. to 12 p.m. (UTC +1 CET - Central European Time).

Tel. +39 – 045 6862899

Donatoni support is also available by e-mail at the following addresses:

For assistance

assistenza@donatonimacchine.eu / service@donatonimacchine.eu

Whatsapp: + 39 0457740052 **Telegram:** @donatonimacchine_bot

For spare parts

ricambi@donatonimacchine.eu / parts@donatonimacchine.eu

Maintenance

Donatoni's routine and special maintenance service is entrusted to its own specialist **technicians** to guarantee **the reliability and efficiency of our clients' machines**, no matter whether in Italy or the rest of the world. Our technicians are prepared to recognise and solve problems quickly, optimise problem solving times and keep the machines - as well as the systems - longer lasting.

Consultancy service

To support and enable our customers to meet the demands of the market, we offer **consultancy services** that can widen and **deepen your awareness and skills**. Offering a complete after-sales service does not just mean solving mechanical or software problems, but also includes **finding solutions** and managing any production requirement independently.

DONATONI MACCHINE SRL

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Monday – Thursday: 8:00 - 17:30

Friday: 8:00 - 14:00

Donatoni Group

The Donatoni Group was established after **along experience** in the natural stone industry, a process that began in the 50s and developed over the years. Today, **Donatoni Group** is recognised as one of the world's leading manufacturers of high-quality stone processing machines.

Constant research, technological innovation, and customer service are key values for the company, which employs highly qualified personnel in order to guarantee the end customer a product that best reflects their expectations in terms of quality and performance.

To support its global development, **Donatoni Group** operates in international markets with its own agents and direct overseas branches.



Donatoni Academy



Donatoni Academy supports the marble industry through technical and practical training courses, conferences, events and activities aimed at developing skills and know-how for companies and operators in the sector.

About us

We rely on qualified teachers and speakers to develop technical courses with specific content and linked to the real needs of the industry.

Our addressees

Donatoni Academy provides services for companies in the stone industry that want to train, perfect or expand the skills of their operators. Our courses are also addressed to students and anyone wishing to update and expand their skills.

Training course location

Courses are held either face-to-face or remotely. We have 3 training rooms for theoretical classes and one showroom for hands-on sessions with 5 machines.



Donatoni Machine Srl reserves the right to make any technical modification which, under its own incontestable opinion, improves its machines. As a result, all information, data or images in this catalogue are indicative and are not in any way a contractual obligation of Donatoni Machine Srl.

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