

DONATONI TWIN-SERIES

Bridge saw with double bench

DONATONI
Stone Tech Creators



**Productive.
Precise.
Innovative.**



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Advantages

- Increased **production capacity**
- Maximum **cutting precision**
- Work time **optimisation**
- **User-friendly** programming
- **Reduced** machine **downtime**

Main characteristics

- **DONATONI Twin S2, S3Q and S4Q** are 5/6 interpolated axes numeric control bridge saws equipped with the TWIN System; a unique technical solution that was designed to maximise the operating efficiency of this type of machine.
- This innovative system is based on a **double bench** with **automatic exchange** sitting on a strong monobloc frame with rails. The two benches alternate between the cutting area and the loading/unloading area, allowing the operator to load and unload at the first bench while the machine is in full operation at the second.
- Thanks to this extraordinary technology, production can reach unprecedented **levels of efficiency**. Operators can easily manage the different process phases, making best use of the processing time and notably **increasing the production capacity**. The precision, speed and reliability of Donatoni Twin S2, S3 Q and S4 Q saws give surprising results. Productivity higher by 70%!

	Traditional bridge saw	TWIN SYSTEM*
Number of operators	1	1
Surfaces cut (in 8 working hours)	120,00 mq	200,00 mq

- **Time gained** • **+70% increase in productivity** • **- machine downtime**

**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 TWIN-Series machines



TWIN S2



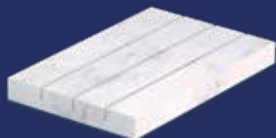
TWIN S3 Q



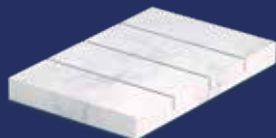
TWIN S4 Q

Machining

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



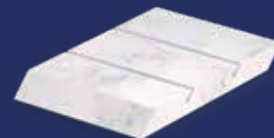
Longitudinal cuts



Transverse cuts



Oblique cuts



Inclined cuts 0-90°



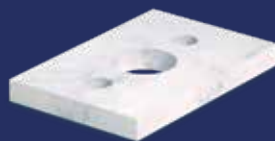
Curved cuts



Elliptical cuts



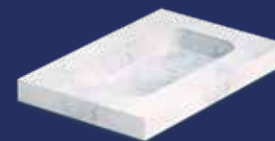
Shaping
(only with Isocam)



Drilling



Milling



Block milling

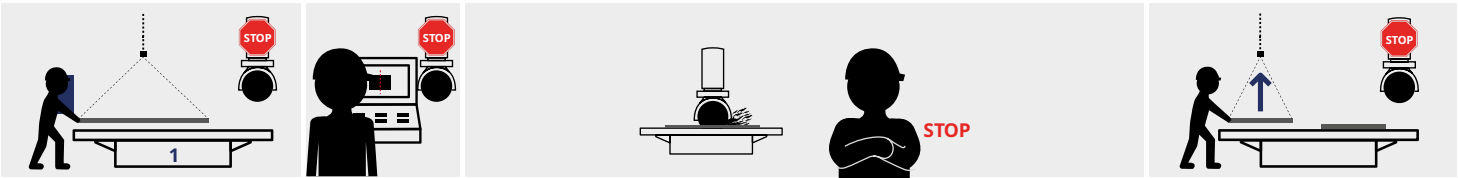
Achievements

The **TWIN SERIES** machines can be used to make different types of product:

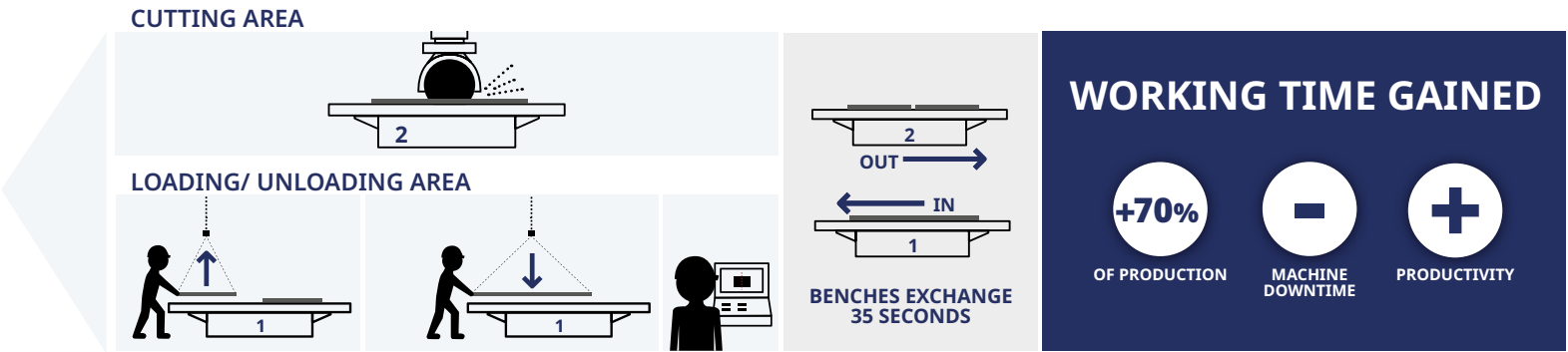


Advantages

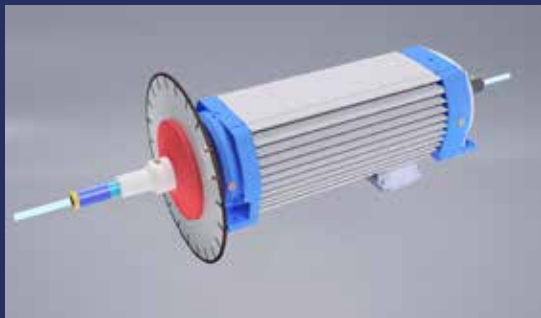
TRADITIONAL BRIDGE SAW



TWIN SYSTEM



Components



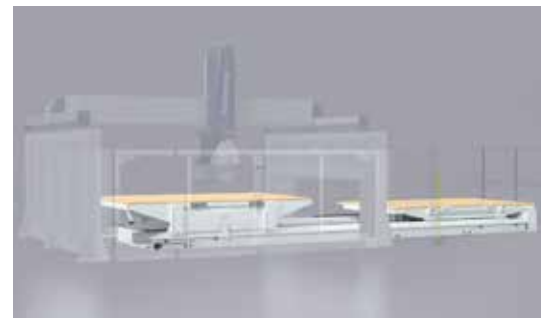
Electrospindle

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 TWIN 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**.



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.



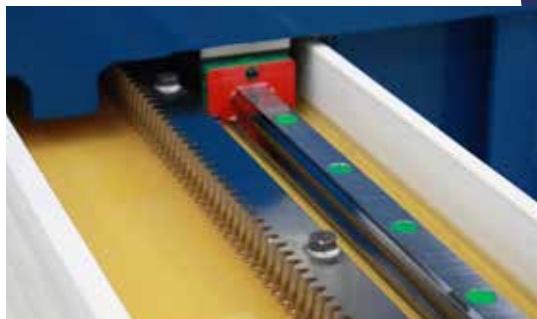
Twin Bench

This innovative structure has a mechanism that activates when one of the benches moves to the cutting area. **Benches 1 and 2 exchange automatically towards** the cutting area and the unloading area, a manoeuvre that is managed by the machine software. The system offers **maximum guarantees in terms of safety**, thanks to a perimeter system of laser photocells. This means that the machine stops automatically if the signal is interrupted because the operator has accessed the work area. The benches can be of rubber or wood.



Automatic greasing

The sliding lines of TWIN 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

TWIN S3Q and S4Q are kept greased by an oil bath, an option that ensures 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.



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.



TOOL+

A vertical side electrospindle, inverter-controlled from 0 to 14,000 rotations, which can be used with small diameter diamond tools with a ½" gas 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.



Steel walls

The Twin 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 that has been heat treated to improve resistance, and painted with a triple layer for **greater protection against external agents**.



Lower-Cut unit

This cutting system is useful for inserting rodding into the lower section of kitchen tops (requires the Y axis to be lengthened). 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.



Tool holder (only with ATC Electrospindle)

In addition to the configuration of the Twin Series machines, DONATONI also **installs a linear tool holder** unit with a stainless steel cover that is raised pneumatically. It is the ideal optional extra for making tool changes faster and more functional during production.



Camera + Photoslab

New high resolution industrial camera with support designed specifically to reduce bulk. Photoslab **automatically detects the surfaces of the slabs** on the work bench. 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.



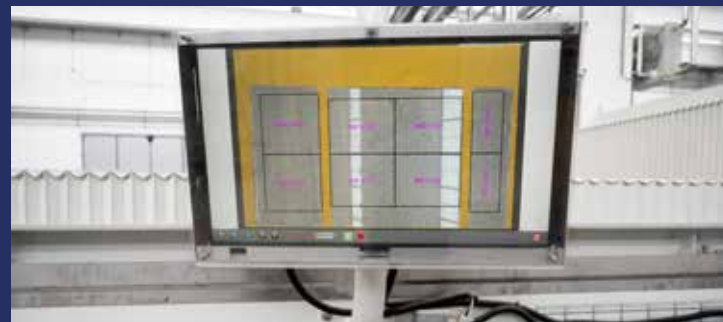
Sliding front guards

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.



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 solution, the upper 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.



End-of-line monitor

Control system made up of a LED monitor placed in the material unloading area. With this monitor, operators can easily identify the cut pieces using the piece code or their size. The system identifies the cut pieces during the unloading phase, supplying information on the job order or the piece size. This makes all material packing activities much easier.

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 take full advantage 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

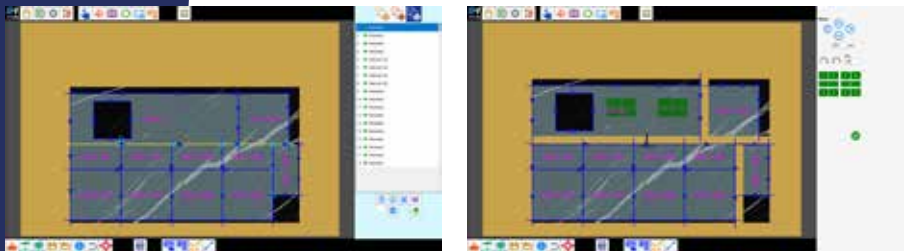


Table of components

	TWIN S2	TWIN S3 Q	TWIN S4 Q
Oil bath lubrication	X	S	S
Automatic greasing	S	X	X
Blade presetting	O	O	O
Slab probe	O	O	O
ATC electrospindle	O	O	O
Twin Bench	S	S	S
Move System	O	O	O
Camera	S	S	S

S Standard
 O Optional
 X Not available

	TWIN S2	TWIN S3 Q	TWIN S4 Q
Lower cut	O	O	O
TOOL+	O	O	O
Tool holder	O	O	O
Lathe	O	O	O
Handheld terminal	O	O	O
Steel walls	O	O	O
Bench washing unit	S	S	S
End-of-line monitor	S	S	S

S Standard **O** Optional

Software

Donatoni Digital Suite

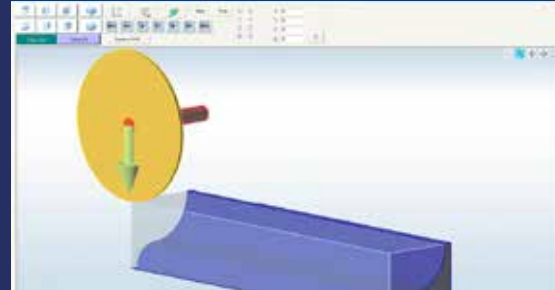
Over the years, DONATONI has developed a network of **software and platforms capable of interacting with each other** and supporting customers towards **complete automation and digitisation** of their production processes. The intention is to harmonise the different digital tools produced over time so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

PARAMETRIX



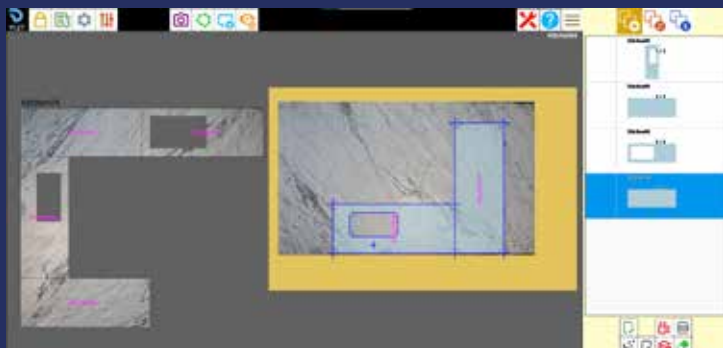
Parametrix is the simple, intuitive software developed by Donatoni Machine created to optimise management of how pieces of different shapes are cut from the slabs. With Parametrix you can manage blade cutting operations and insert straight and curvilinear shapes(stairs, kitchen tops, rectangles, covers) 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. This software includes collision prevention functions for the workpieces, manual and automatic piece nesting, as well as production and job order statistics management.

ISOCAM



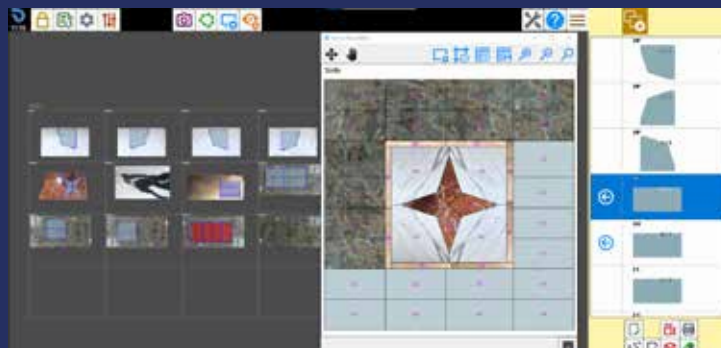
DONATONI ISOCAM allows files to be created for the execution of straight or concave and convex arc shapes, with vertical and horizontal blades. With DONATONI Isocam, shaping can be done in the roughing (combing) and the finishing (brushing) modes, but also in the combined mode. This lets the operator create frames, window sills, and building products in general with simple, regular shapes. Importing from DFX, modifying the designed shapes and repeating the design of the same shape are some of its other functions.

Optional – Software



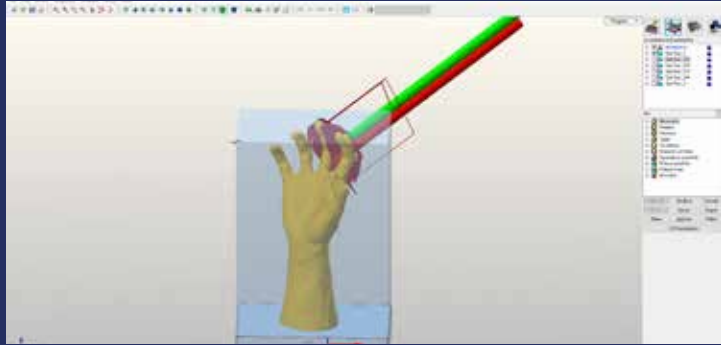
EASY MATCH

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.



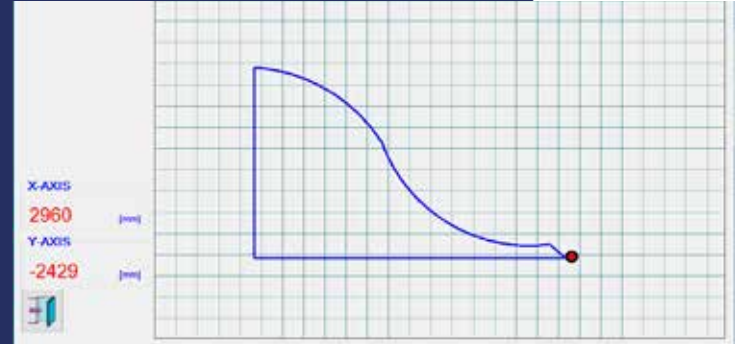
PROJECT MATCH

With **PROJECT MATCH** you can actualise **complex open-book projects**, working 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.



SCAN CNC

Detection system made up of a laser pointer mounted on the machine head and a software program integrated with Parametrix that **identifies two-dimensional shapes**. When detection has ended, the operator elaborates the shape on the machine display with Parametrix, and can either archive the file in the on-board machine pc or on an external pc.

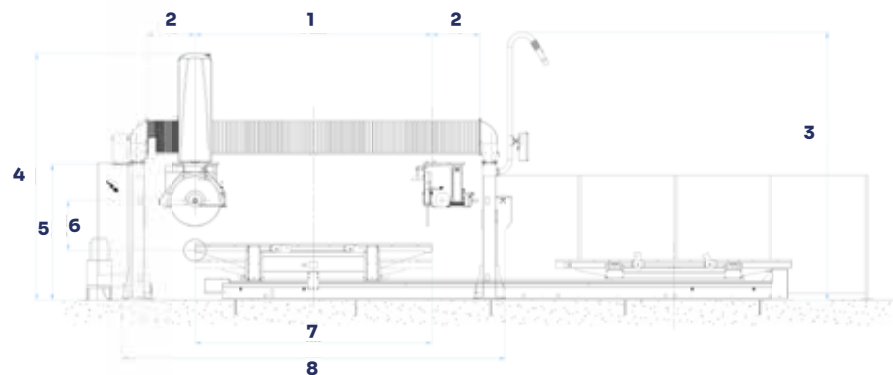
Technical Data Sheet

		TWIN S2	TWIN S3 Q	TWIN S4 Q
Max. number of interpolated axes	No.	5	5	5
Carriage stroke (X axis)	mm	3700	3900	3800
Bridge stroke (Y axis)	mm	2900	2950	2950
Head up / down stroke (Z axis)	mm	550	600	800
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°
Blade motor	kW	17 / S6	17 / S6 (22 opt)	22 / S6
Tool rotation with inverter	Rpm	0-5500	0 / 5500	0 / 5500
Carriage speed (X axis)	m / min	0 – 40	0 – 45	0 – 45
Bridge speed (Y axis)	m / min	0 – 30	0 – 45	0 – 45
Minimum blade diameter	mm	350	350	350
Maximum blade diameter to work on both benches	mm	525	625	725
Maximum blade diameter to work on the low bench	mm	525	725	825

		TWIN S2	TWIN S3 Q	TWIN S4 Q
Head speed (Z axis)	m / min	0 – 5	0 – 6	0 – 6
Speed of X-Y axes positioning	m / min	0 - 30	0 - 45	0 - 45
Water consumption	l / min	50	50	50
Air consumption	l / min	20	20	20
Standard electrical voltage	Hz	400±10% / 50	400 / 50	400 / 50
Max blade diameter with suction cups	mm	525	725	725
Max total weight that can be lifted with suction cups	kg	500	600	600
Total machine weight	kg	9900	10050	10350
Bench exchange time	sec	35	35	35
Max cutting depth	mm	150 (disco Ø525 mm)	260 (disco Ø725 mm)	310 (disco Ø825 mm)

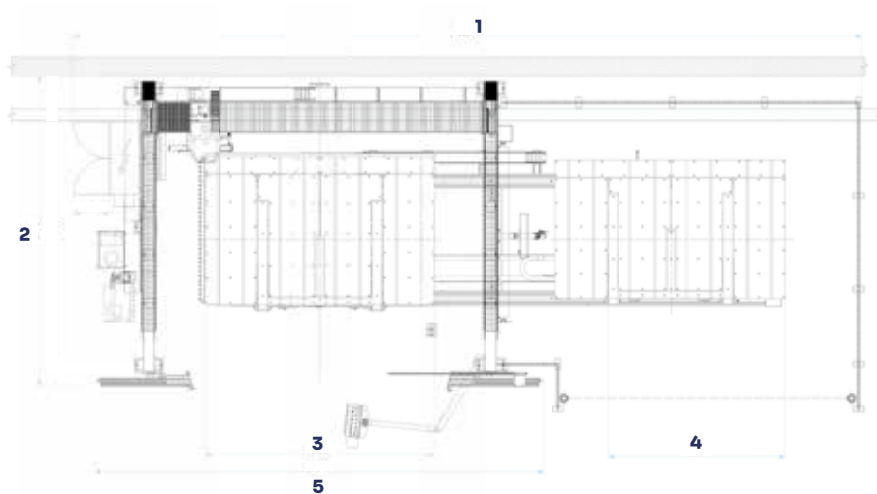
Electrospindle	TWIN S2	TWIN S3 Q	TWIN S4 Q
ST (Cut Only)	available	available	available
TOOL (M48 tool holder)	base	base	base
TOP (ISO 40 with manual tie rod)	available	available	available
MTC / ATC (ISO 40 pneumatic-automatic tool coupling)	available	available	available

Machine layout



	TWIN S2	TWIN S3 Q	TWIN S4 Q
1	3800	3900	3800
2	635	723	773
3	4300	3950	4221
4	3268	3536	3963
5	2200	1930	2180
6	550	600	800
7	3800	3800	3800
8	5175	5450	5450

All values are in **millimetres**



	TWIN S2	TWIN S3 Q	TWIN S4 Q
1	12970	13073	12980
2	5190	5164	5134
3	3800	3800	3800
4	3800	3800	3800
5	7230	7406	7412

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 with 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



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

Please contact our customer service department for all your needs. This way we can detect any kind of problem and solve it as soon as possible, finding the quickest and most effective solution. Our telephone service department is available to support you in all aspects concerning the functionality of your machine. 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 support service does not only mean solving mechanical or software problems, but also providing **tools and knowledge** to find solutions and manage all production needs independently.

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Friday: 8:00 - 14:00

Donatoni Group

The Donatoni Group was established after **long 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.

To whom

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.

Courses 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 Macchine 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 a contractual obligation of Donatoni Macchine Srl in any way.

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