
R-QUARTZ
adiatek

Cleaning for Change

Technology is the starting point, but the destination is the person who must use it. With our design floor cleaning machines, we help professionals to clean with more efficiency, **optimising time and consumption**.

We believe in change inspired by people, in innovation that makes *business* and conscience meet.

Powered by

muratec

R-Quartz is the machine that learns from you

The Teaching mode is divided into two phases.

- The machine learns the job to be completed and memorises it as a route.
- The machine covers the route again starting from the point defined during the Teaching mode.

Two learning modes

PLAYBACK

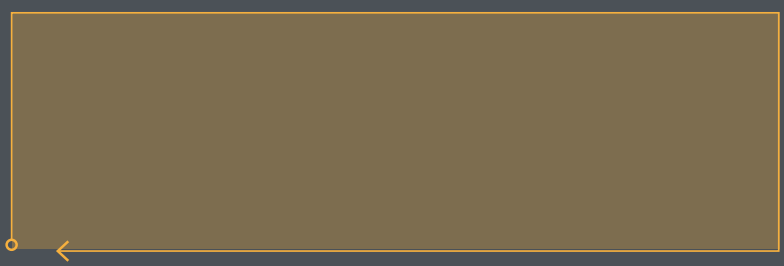
Perform the full cleaning cycle, as the machine would do autonomously. All the details and settings (water flow rate, brush pressure, etc.) will be memorised and reproduced.

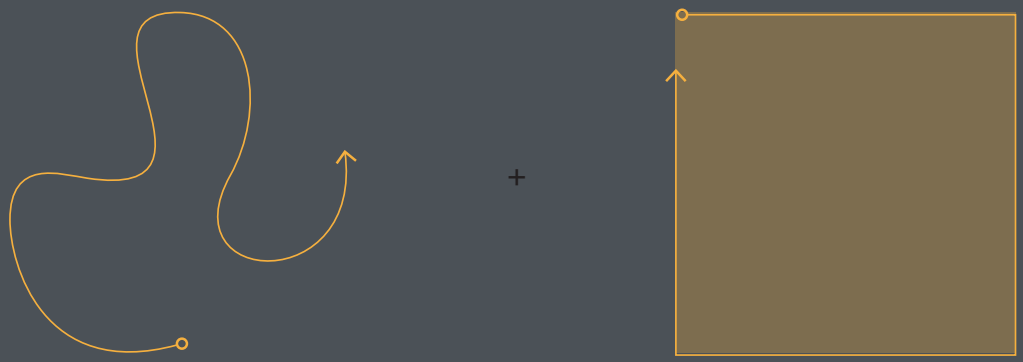
Useful for cleaning tight and congested areas, with few variations in the configuration of the environment.

PERIMETER

Manually define the outer perimeter of the area to be cleaned: the machine will manage the entire process on its own and optimally. This is the fastest learning method.

Suitable for large environments, with few elements inside, where the configuration is regularly modified. The machine starts and arrives in the same point.





Combine the modes and create your own personalised sequence

When an autonomous work cycle starts, you can create a sequence that will automatically combine several memorised routes, even in different modes. The function can be used to define shorter and thus more flexible routes.

R-Quartz will be able to manage new situations that are not integrated in the learning process, so as to guarantee the safety of people and places. The learning or repetition phase can be suspended at any time by the operator, without causing any impact on the rest of the route.

If **R-Quartz** encounters a new obstacle during the job, it tries to avoid it and resume its path as soon as possible. Should this fail to occur, a notification will be sent to the operator via **Telematics**.

Control console

The dashboard is fitted with a 7″ touch screen that ensures easy and intuitive communication between the machine and its operator.

All the functions, in both the “operator” and the “autonomous” modes, are clearly identified by intuitive symbols that make working with **R-Quartz** a quick affair.

Performance

Efficiency and performance.

R-Quartz was designed on the basis of **Quartz 66-80**, a floor-scrubbing machine model boasting excellent technical characteristics and performance.

- Solution tank with 100 l capacity and “3SD” system as a standard feature.
- Specific tank for detergent on board.
- Thanks to the “3SD” system, consumption can be adjusted precisely to up to 4 hours of autonomy.

- Battery pack with 24 V 330 A lithium batteries guaranteeing up to 6 hours of operation.
- Rapid charging in 5 hours.

3 power levels for the suction motor for reducing noise down to 67 dB.

Moves at a speed of up to 4.5 km/h (very fast for an autonomous floor-scrubbing machine).

Variable pressure of the brush up to 52 kg.

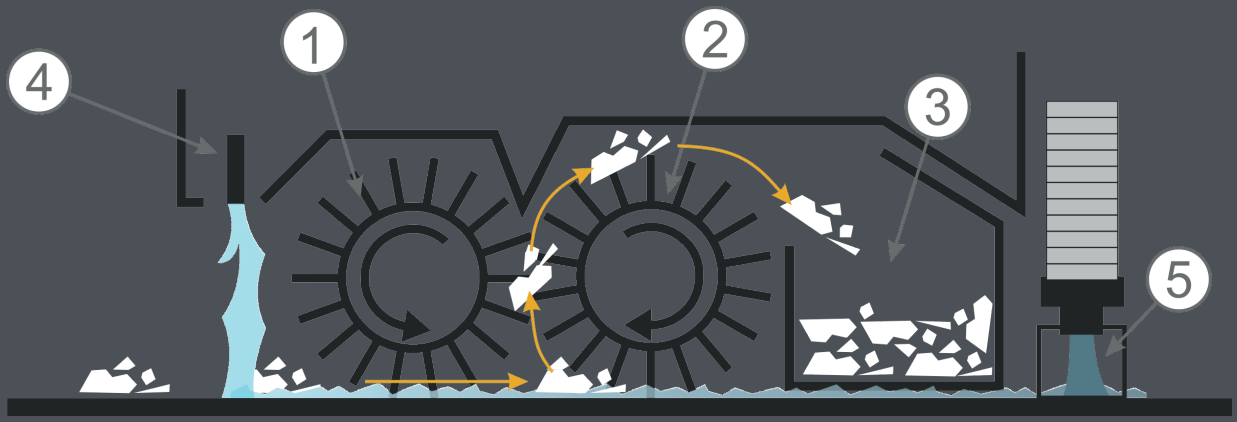
R-Quartz 70s: at the forefront of robotic cleaning

R-Quartz 70s is an automatic washing-brushing floor scrubber.

- The machine learns the job to be completed and memorises it as a route.
- The machine covers the route again starting from the point defined during the Teaching mode.

Washing-brushing base

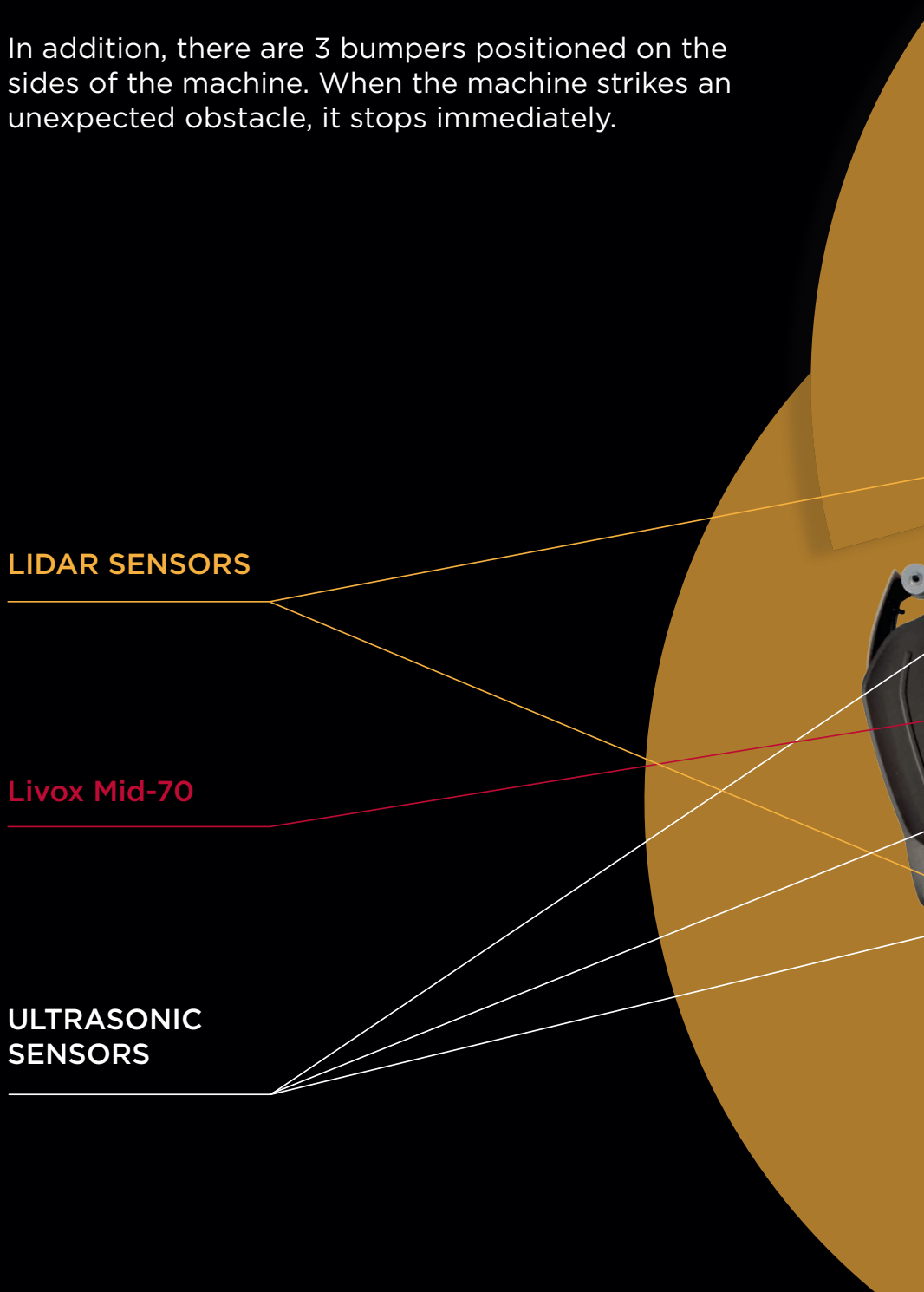
The base fitted on these floor scrubbing machines is designed to ensure brushing and washing with a single passage.
The front brush (1) pushes solid dirt towards the rear washing brush (2). The latter rotates in the opposite direction to the first brush and raises the dirt, conveying it to the recovery box (3) thanks to the specially shaped base.
While this occurs, the water and detergent solution is dispensed in front of the brushes (4). Lastly, the solution itself is collected by the squeegee (5).



Working safely

R-Quartz moves autonomously thanks to 3 safety systems that work simultaneously.

In addition, there are 3 bumpers positioned on the sides of the machine. When the machine strikes an unexpected obstacle, it stops immediately.



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R-quartz

The LIDAR sensors

R-Quartz is fitted with 2 **LiDAR** (light detection and ranging) sensors, one at the front and one at the back, which are used to generate a highly accurate horizontal 360° map of the environment surrounding the machine, up to a distance of 30 m and at a height of 200 mm above the ground.
The **LiDAR** sensors allow the machine to have a full view around bends. During the learning phase, they allow for generating a precise map of the route's environment. The machine is thus able to position itself in space and rapidly manage any unforeseen events.

Ultrasonic sensors

The 3 ultrasonic sensors, located on the front and side, provide additional safety in managing any unidentified obstacles during the learning phase. They also detect the presence of transparent obstacles such as glass walls and shop windows.

Livox Mid-70

The machine is equipped with 2 LiDAR 3D sensors at the front. Together, they enable a field of view to detect obstacles from **5 cm from the ground up to the maximum height of the machine.** R-Quartz avoids obstacles and returns to the original route.

Ecogreen
- The revolution starts from your work

We want to contribute to change.
For this reason,
R-Quartz
combines the best technologies for a “green” cleaning experience that’s tailored to the person.

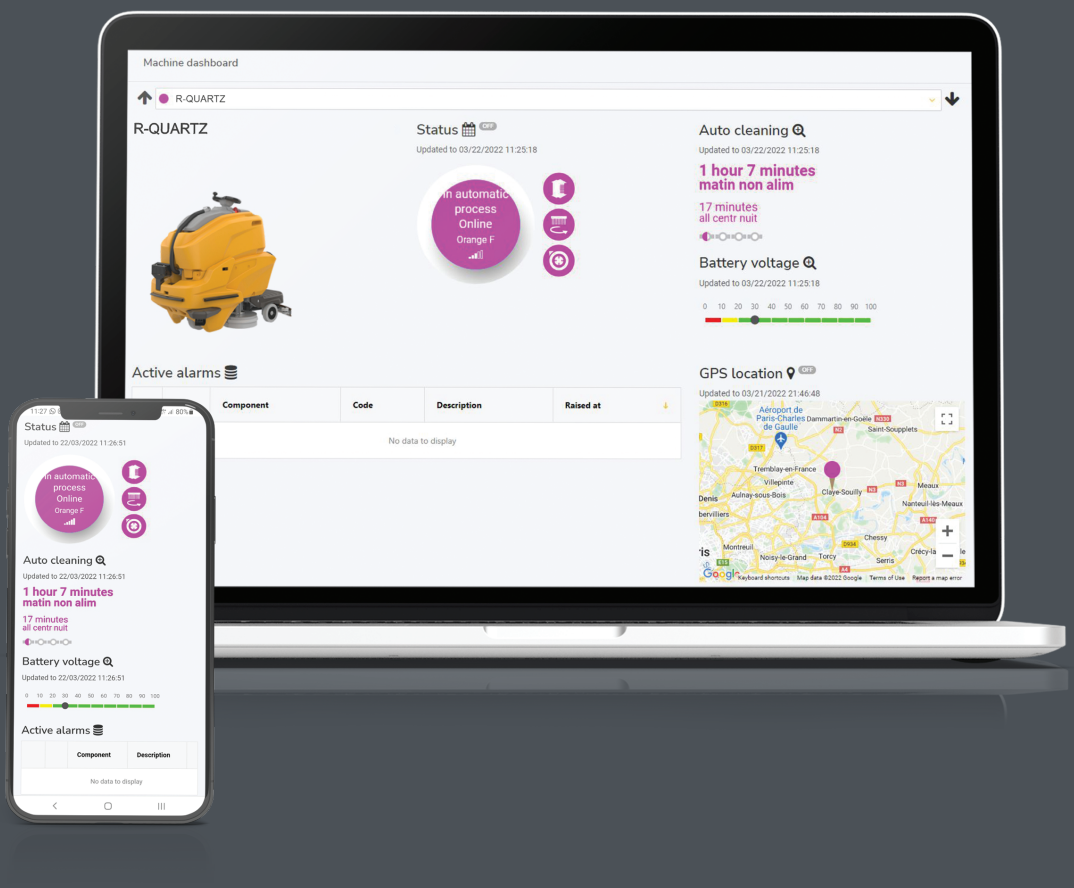
3SD - Solution Saving System + Ozone

3SD Greater control, less wastage. With **3SD** you can adjust the amount of detergent and, separately, also the water flow. **R-Quartz** adapts to your work, not vice versa.

OZONE Forget detergents: with **Ozone** you can sanitise safely and naturally, without generating pollution nor plastic containers to be disposed of.

Telematics, control in your hands.

Manage **R-Quartz** at any time through the **Telematics** Web interface. You can view the sequence of the map that the machine is covering, the time remaining to the end of the job and the indications of any problems, errors or warnings. In case of problems, you will be notified in real time by the notifications transmitted directly on the smartphone.



Technical data

	R-QUARTZ 80	R-QUARTZ 70S
Theoretical productivity:	3645 m^2/h	3150 m^2/h
Estimated run time (in hours):	6 h	6 h
Working width:	810 mm	700 mm
Squeegee width:	965 mm	965 mm
Brush motor:	2x350 Watt	2x600 Watt
Brush pressure:	max 52 Kg	---
Brush speed:	160 giri/min	765 giri/min
Brush diameter:	2x406 mm	2x150 mm
Traction motor:	500 Watt	500 Watt
Speed of progress:	5 km/h	4.5 km/h
Maximum gradient:	10%	10%
Suction motor:	570 Watt	570 Watt
Suction vacuum:	160 mbar	160 mbar
Solution tank:	100 l	100 l
Recovery tank:	106 l	106 l
Detergent tank:	7 l	7 l
Machine dimensions:	L: 1597 mm W: 922 mm H: 1350 mm	L: 1597 mm W: 922 mm H: 1350 mm
Machine weight (with Li batteries):	277 kg	302 kg
Power source:	24V / 330 Ah	24V / 330 Ah
Battery (x2) compartment:	L: 535 mm W: 190 mm H: 325 mm	L: 532 mm W: 187 mm H: 325 mm
Class:	III	III
Protection rating:	IP X3	IP X3
Noise level:	liv 1: 60 dB (A) liv 2: 66 dB (A) liv 3: 68 dB (A)	liv 1: 60 dB (A) liv 2: 66 dB (A) liv 3: 68 dB (A)

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Design and innovation

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