
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**.

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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.

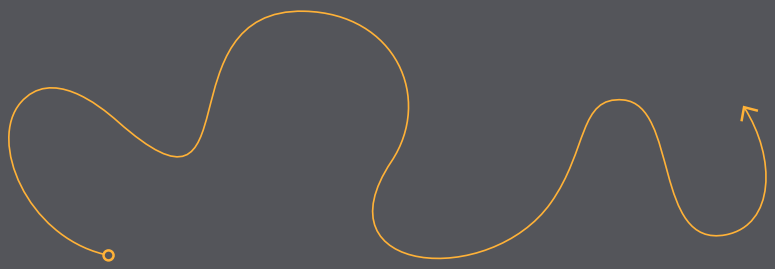
- The machine learns the job to be completed and memorises it as a route.
- The machine covers the route again starting from the point defined during the Teaching mode.

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.

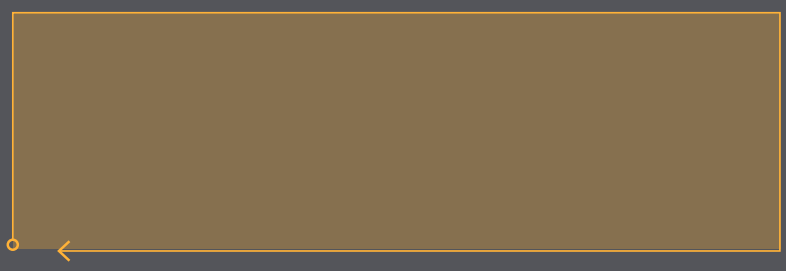
Useful for cleaning tight and congested areas, with few variations in the configuration of the environment.

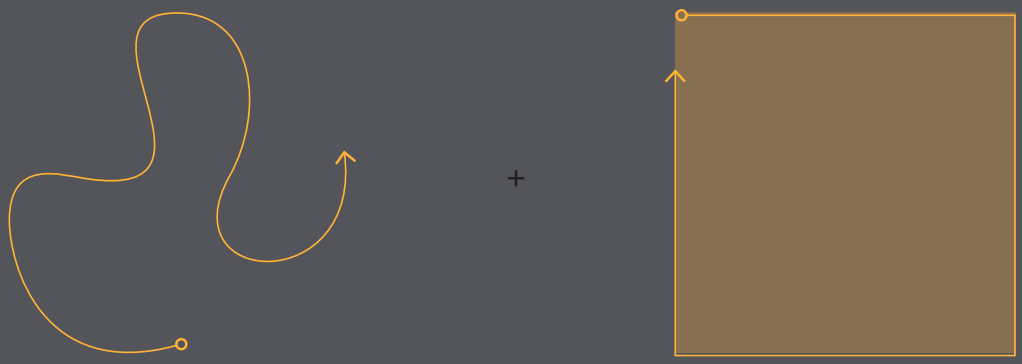


PERIMETER

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.

/ CHARACTERISTICS

- 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.

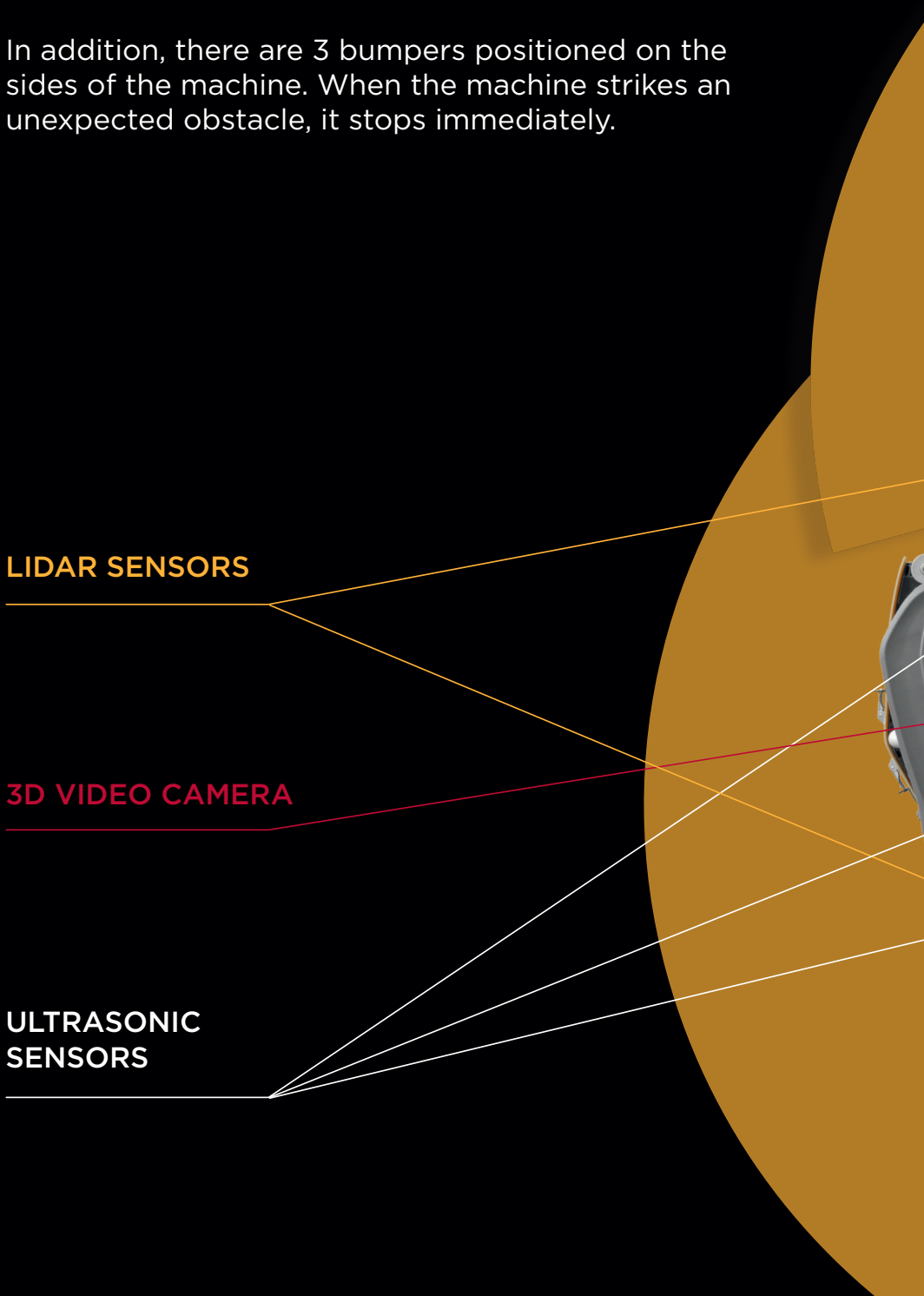
Moves at a speed of up to 4.5 km/h (very fast for an autonomous floor-scrubbing machine).

Variable pressure of the brush up to 52 kg.

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.



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.

3D video camera

A 3D video camera is positioned in the front part of the machine. Its broad range if vision detects obstacles up to a height of 700 mm. **R-Quartz** will avoid them and resume its path.

Hypersense
- Smart sensitivity

R-Quartz can be integrated with the low object detector, which can detect obstacles at least 60 mm above the ground.

The (optional) kit is made up of two ultrasonic sensors with a 3-metre radius of action and a pressure sensor.

/ HYPERSENSE OPTIONAL KIT

R-Quartz stops when necessary

When it detects an object, **R-Quartz** reduces its speed by 2/3 at a distance of 1000 mm, and stops at a distance of 500 mm.

If no obstacle is detected, the pressure sensor intervenes to immediately stop the machine. Even safer, even smarter.

(With this kit installed, the machine's maximum speed drops from 4.5 km/h to 4 km/h.)

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.

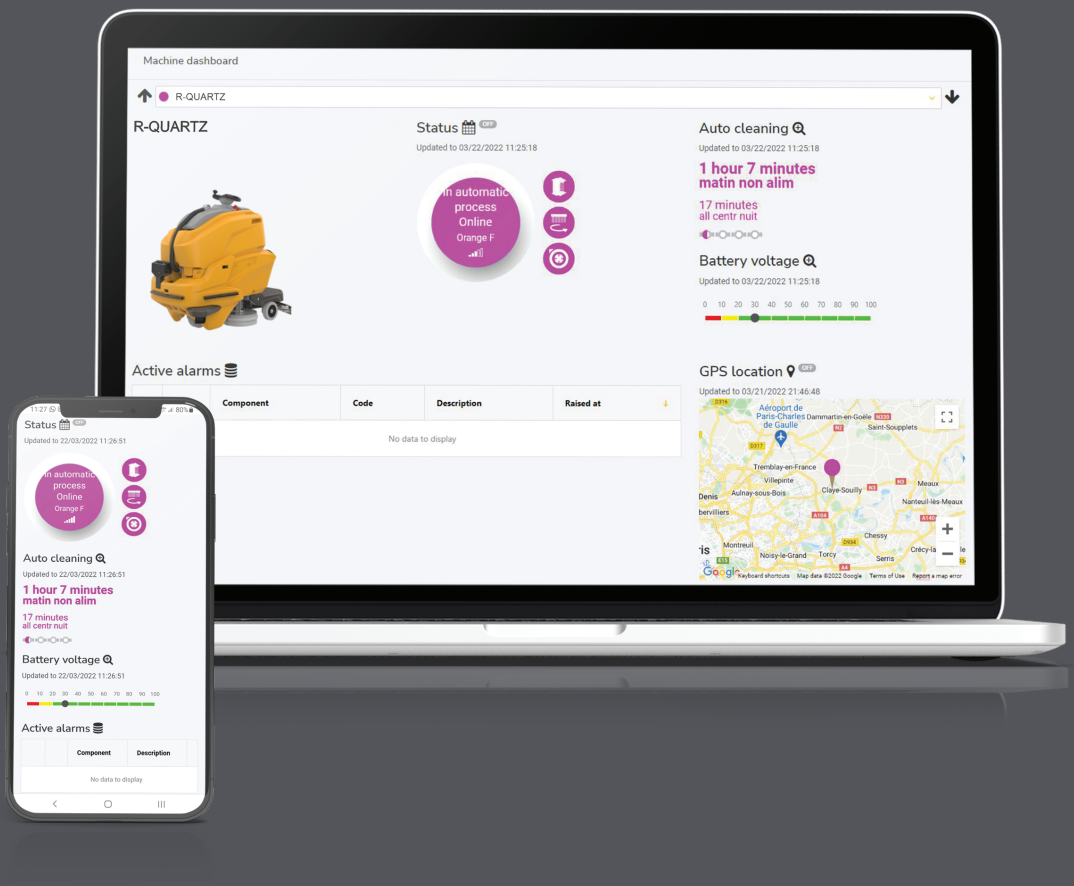
3SD - Solution Saving System + Ozone

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

Theoretical productivity:	3425 m^2/h
Estimated run time (in hours):	6 h
Working width:	685 mm
Squeegee width:	900 mm
Brush motor:	2x350 W
Brush pressure:	52 kg max
Brush speed:	160 rpm
Brush diameter:	2x355 mm
Traction motor:	500 W
Speed of progress:	4.5 km/h
Maximum gradient:	10%
Suction motor:	570 W
Suction vacuum:	160 mbar
Solution tank:	100 l
Recovery tank:	106 l
Detergent tank:	7 l
Machine dimensions:	L: 1634 mm W: 922 mm H: 1350 mm
Machine weight (with Li batteries):	340 kg
Power source:	24 V / 330 Ah
Battery (x2) compartment:	L: 532 mm W: 187 mm H: 325 mm
Class:	III
Protection rating:	IP X3
Noise level:	lev. 1: 67 dB (A) lev. 2: 70 dB (A) lev. 3: 76 dB (A)

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Design and innovation

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