



BAKUS

THE VINEYARDS ROBOT
BAKUS-S BAKUS-L



SAFETY

To preserve man and his environment

Active safety :

- 2 GPS RTKs confirms the accuracy of the positioning and alert us of any suspicious movement
- 2 inertial control units detect unusual changes in topography that cause Bakus to slow down and/or stop

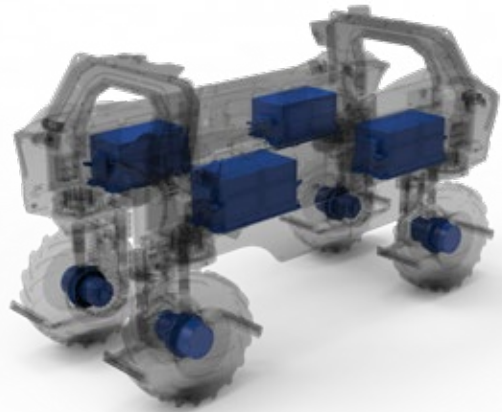
Passive safety :

- 12 mechanical detectors distributed around Bakus cause the instantaneous stop in case of activation. The application also allows Bakus to be stopped remotely
- Equipped with a remote emergency stop, your operator must make sure that the robot is properly controlled during its autonomous mode
- Bakus keeps the operator away from risks due to musculoskeletal disorders, risks of overturning and exposure to phytosanitary treatments

100% ELECTRICAL ENERGY

Leverage performance and electrical power

- the energy reserve of 60 kWh* is stored in 4 Lithium Ion batteries (* According to model)
- the efficiency of the electric energy allows an autonomy of ± 10 hours of work and limits the maintenance
- the time of recharging of the batteries is 2h00 to pass from 0 to 80 % of charge
- the electric energy allows an hourly cost of operation lower than 1 \$
- Bakus improves the CSR of the operation



ECOLOGY

Protect the environment

- Bakus improves the carbon footprint of the operation
- the autonomous straddle allow you to meet the requirements of soil works without herbicides
- weight, weight distribution, surface area and tire pressure help limit soil compaction
- it's 100% electric propulsion allows it to work day and night with a low noise level



THE + OF BAKUS

- | | |
|--------------------------------------|-------------------------------|
| • autonomous in work | • power, handling, simplicity |
| • 100% electric | • interranger from 1m |
| • RTK precision | • regular updates |
| • 1 st electric Intervine | • modular tools |
| | • design |



A RANGE OF ELECTRIC ROBOTS WITH AUTONOMOUS MODE DEDICATED TO THE WORK IN THE VINEYARD



BAKUS-S



BAKUS-L

Why choose Bakus ?

Facing the demands of a society that wants to consume wines that are more respectful of the environment and of people, the winegrower is forced to change his cultivation practices.

This implies more time-consuming mechanical soil work, at a time when the recruitment of qualified staff is complicated.

Thought out and designed to meet these constraints, Bakus relieves the repetitive tasks associated with working in the vineyard while preserving the environment. As a true companion, it allows your teams to concentrate on the noblest tasks..

By choosing Bakus, you make the choice of sustainable viticulture.



Bakus has brought real added value to the operation.

Soil work with the combination of tools is simplified and cleanly executed, without compaction and without herbicides.

I limit the risks incurred by my teams.



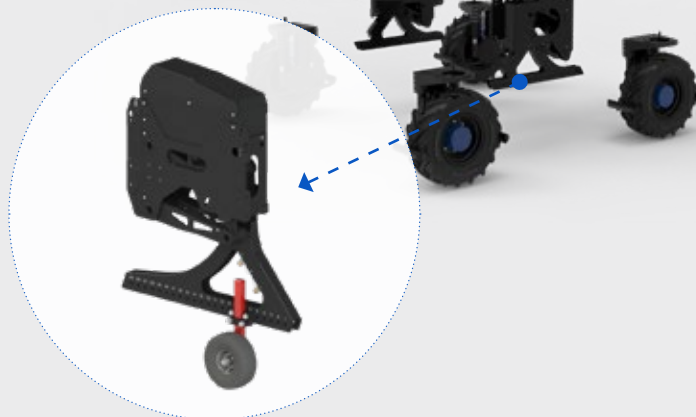
TOOLS

Work intelligently and take advantage of its modularity

- VitiBot has developed a range of electric tools that allow to adjust with precision the work in the vineyard and to preserve as well as possible the feet and young plants
- it's possible to combine up to 2 tools per side and simultaneously
- any abnormal obstacle triggers the robot to stop

Lateral tool holders

- the sturdy tool holders can be easily integrated on either side of the Bakus structure and allow a very precise adjustment of the working height according to the tools
- depending on the tools mounted, you can choose to use the floating or fixed mode



Tools made by VitiBot



< Electric Intervine

Finesse, precision and power.



< Electric crush mower

For a regular and controlled maintenance of your plant cover.

1st electrical and connected intervene that gives you the possibility to adjust the sensitivity of the probe and the power of the blade

Modularity with your passive tools

It is possible to use most of your tools (lump breakers, finger weeders, scrapers, ploughs, etc...) combined, or not, with VitiBot electric tools.



Simple disc harrow



Rotary star tiller



Plough



Pack agromy (by Boisselet)



Mechanical plough



Kress fingers



Vineyards ploughshares

Other tools under study

Trimmer, stripper and pre-pruner... for 2023

Confined spraying with recovery panel

Interchangeable with the tool holder pole, this innovative spraying system will allow you to manage the treatment of your vines in an intelligent, secure and autonomous way.

Available soon



Confined : An on-board containment system against drifting.

Advanced technology : Considered the most virtuous by the experts.

Recovery : From 20 to 80% recovery of sprayed products depending on the season and vegetation.

TECHNICALS DATAS

BAKUS-S

Dimensions	(L) 3,50 m x (W) 1,75 m x (H) 2 m
Passage H and W	(H) 1,75 m x (W) 0,60 m
Way	1,10 m
Empty weight	P60S : 2050 kg
Pneumatics	Michelin Multibib 320/65 R16 - Low pressure 0.9 bar (Low compaction and respect of the soil)
Chassis	Welded mechanics - powder coated finish
Suspensions	Front shock absorbers and rear fixed wheel struts

BAKUS-L

Dimensions	(L) 3,50 m x (l) 1,95 m x (H) 2,50 m
Passage H and W	(H) 2,20 m x (l) 0,80 m
Way	1,30 m
Empty weight	P60L : 2100 kg
Pneumatics	Michelin Multibib 320/65 R16 - Low pressure 0.9 bar (Low compaction and respect of the soil)
Chassis	Welded mechanics - powder coated finish
Suspensions	Front shock absorbers and rear fixed wheel struts

Safety & Guidance Elements

Control	1 smartphone to control the Bakus via 4G
Safety	Bumpers, in front and behind each wheel Multiple under-body sensors 6 emergency stop buttons all around the Bakus
Navigation	2 inertial units 2 RTK GPS, centimeter accuracy

100% electrical energy - Batteries

Batteries	4 Lithium Ion batteries for a total of 60kWh*, 600Ah*, 100 V (* According to model)
Weight	4 blocks of 90 kg* evenly distributed on each axle (* According to model)
Autonomy	Approximately 10 hours, depending on the slope, the nature of the terrain and the tools.
Lifespan	7 years at 70% of its nominal capacity. Minimum values expected in case of compliance with the recommendations. As an indication, this represents more than 10,000 hours of work.
Electrical safety	Protection against: short circuits, overcurrents, deep discharges, thermal abnormalities

Chargers

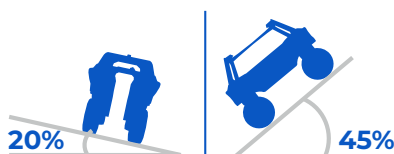
Chargers	A range of chargers in 220V or 380V Recharge from 0% to 80% in less than 2 hours or full recharge in 10 hours. According on the model
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Performances

Wheel engines	4 brushless electric motors (maintenance-free) with energy recovery on descent
Geared motors	4 planetary gearboxes integrated in each wheel (low maintenance) - high torque
Direction	4 steering motors, electric and independent, pivot to $\pm 120^\circ$ (allowing all the desired movements)
Speed	6 km/h Maximum speed (3.1 Miles/h)
Pulling force	1800 Kg
Power	48 kw

Connected tool holder for soil works

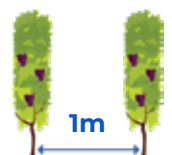
Dimensions	(L) 118 cm x (H) 107 cm
Weight	160 kg
Lifting system	Hydro-electric cylinder, maintenance-free
Stroke	680 mm



Side slopes and slopes
(depending on adhesion)



Minimum headland space
4 meters thanks to its
4 wheel drive & steering



Minimum space
of interrang
(1.20m model L)

*(L) Length
*(W) Width
*(H) Height

LET'S MAKE THE CHOICE TOGETHER OF SUSTAINABLE VITICULTURE



Increase security
of the operators



Protect vineyards
and biodiversity



Optimize profitability

VitiBot in few words

Designing, producing and realizing viticultural robots: VitiBot's ambition is to make viticultural practices evolve towards sustainable viticulture with practical and concrete answers to today's major challenges: increase the safety of operators, protect the vineyard and biodiversity, reduce the environmental footprint of viticulture.

The company designs and builds Bakus, a 100% electric vineyard robot designed to work in complete autonomy. Capable of carrying out most of the viticultural work, nowadays carried out by conventional tractors, in the best conditions of safety and security. Optimal quality.



SERVICES

If troubleshooting cannot be performed remotely or by yourself

In case an anomaly could not be solved remotely or by yourself, the VitiBot technicians present on the sector will intervene as soon as possible.

Performance Improvement

Regular software new releases (or updates) are downloaded to bring new functionalities.

Warranty

2 years parts and labor or 2,000 hours of use

