



BATTERY LASER CLEANING MACHINE

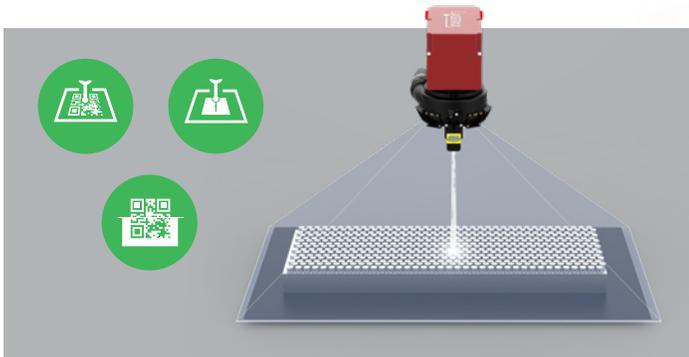
The Battery Cleaning Machine is a complete solution for battery-module-related applications running on conveyors. You can use it to clean, texture and mark battery components in a single operation. Vision cameras can also be included to control quality.

The machine is highly customizable to accommodate for various requirements, such as manual, robot, or conveyor part loading, or large modules with several areas to process. Certified Class-1, it includes everything you need to ensure safety.



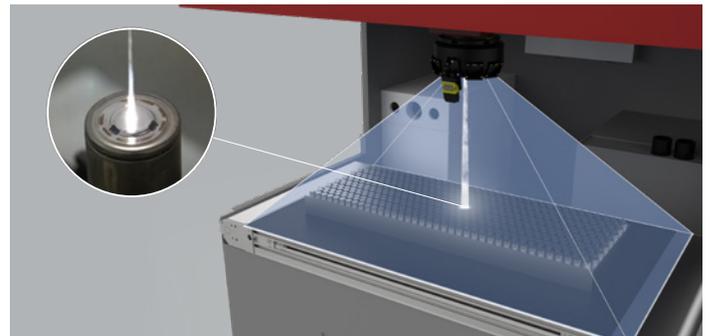
FLEXIBLE INTEGRATION

Our adaptable door system allows loading parts manually, with a robot, or via conveyor. You can even start with a manually loaded machine during ramp up, then automate the machine later with minimal upgrade. Our team will customize the machine for an easy integration and optimal production.



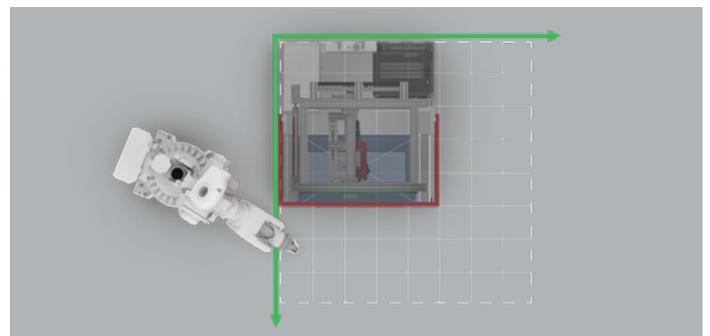
FAST AND PRECISE CLEANING

Our laser is preprogrammed to only clean battery pole areas needed for welding, minimizing the total cleaning time. Our vision system also detects module positioning errors and adjusts laser cleaning accordingly.



CLEAN, MARK, VALIDATE

Laserax is the only one that offers a solution to perform multiple operations at the same time. You can clean and texture surfaces, etch barcodes, and use our integrated vision cameras to control quality—all of this with a single unit.



ADAPTED TO YOUR CUSTOM REQUIREMENTS

Laserax is an agile company and so is our machine design, which can be adapted to meet specific requirements such as footprint limitations and different part sizes. A gantry option is also available to move the laser head as needed when processing large modules.

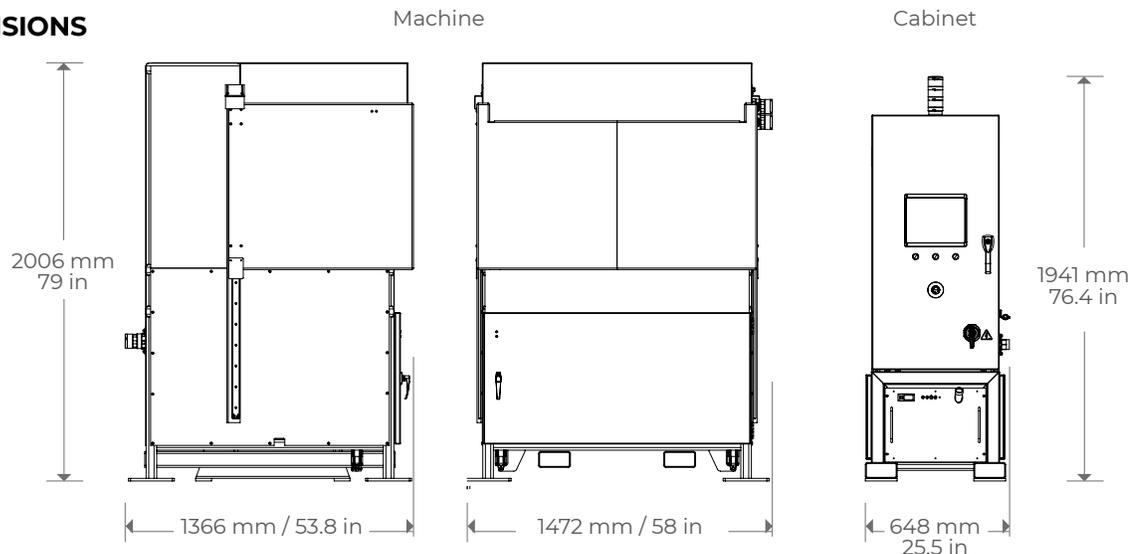
TECHNICAL SPECIFICATIONS

BATTERY LASER CLEANING MACHINE

Laser Power	20W, 30W, 50W, 100W, 200W, 300W, 500W
Laser Type	Ytterbium-doped fiber
Wavelength	1064 nm
Laser Source MTBF	100,000 hours
Marking Process	Laser cleaning, laser texturing
Typical Weight	770 kg
Cooling	Air cooling (20W to 300W); water cooling (500W)
Power Requirements	120V, 230V, 240V / 15-40 AMP
Power Consumption	1.5 kW to 5.8 kW
Operating Temperature	10°C to 45°C
Communications	Ethernet/IP, PROFINET, Profibus
Multi-Parts Cleaning	Manually loaded Robot loaded Directly on conveyor
Part Size (W x D x H)	1000 mm x 920 mm x 230 mm Larger sizes are possible by scaling up the machine.
Part Material	Aluminium, Zinc, Magnesium, Steel, Iron (All Metals)
Part Positioning Tolerance	Cleaning: +/- 3 mm (+/- 70 mm with autofocus) Texturing (engraving): +/- 1 mm (+/- 30 mm with autofocus)
General Dimensions (W x D x H)	1400 x 1270 x 2000 mm The machine's dimensions can be scaled to your part dimension requirements if required.



TYPICAL DIMENSIONS



INDUSTRIAL LASER SOLUTIONS
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