



CLIIN

ROBOTICS



simple — safe — sustainable



CLIN Robotics ApS
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CLIIN robots are a triple win!

simple — safe — sustainable

Deploying CLIIN robot technology presents a triple win: a win for the environment, a win for improving working conditions, and a win for enhancing the profitability of businesses.

By thoroughly understanding the cleaning challenges of large containers such as tanks, cargo holds, and vessels, CLIIN Robotics has collaborated with leading companies to develop a robot that can navigate effortlessly on all ferro-magnetic surfaces. The magnetic robot is available in a variety of configurations, making it versatile in its applications.

In addition to reducing environmental impact, the CLIIN robot's cleaning process is faster, requires less manual labor, and offers a significantly more efficient cleaning solution. This, in turn, provides businesses with the opportunity for increased productivity and reduced costs. Depending on the operational context, companies can anticipate a return on investment in less than a year.





ROBOTIC CARGO HOLD CLEANING

By using the CLIIN robot for cargo hold cleaning, bulk shipping companies can switch from a complex four-step cleaning procedure that uses large amounts of chemicals and water to a simple one-step process using pure freshwater.

The CLIIN robot cleaning not only reduces environmental impact but also offers faster, less labor-intensive, and more effective cleaning. This benefits shipping companies by increasing laden days, cargo capacity, and cost savings. Depending on their operations, companies can recoup their investment in under a year.

Equipped with high-pressure cleaning tools and magnetic tracks for climbing all parts of the cargo hold, the CHR ensures an efficient and thorough cleaning.

ROBOTIC TANK CLEANING

Robotic tank cleaning eliminates the time needed for setting up scaffolding. The Tank Cleaning Robot (TCR) is equipped with magnetic tracks to reach all areas of the tank, while an operator is controlling the system remotely.

The Robot and High-Pressure System are easy and quick to set up. Overall, the Tank Cleaning Robot will do the job in a matter of days instead of weeks.

The TCR system uses hot water to clean product tanks without chemicals, reducing water usage and the need for post-cleaning pumping. It requires only 2-3 operators who can control it remotely from a safe distance, eliminating the need for scaffolding and the risk of falling.

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ROBOTIC ANTIFOULING

In collaboration with Innovationsfonden, Force Institute, MUDP, Robot Union, and the EU Horizon 2020 programme, CLIIN Robotics will introduce robotic antifouling for optimized hull performance.

CLIIN Robotics' Antifouling system is the winner of the Blue Invest Green Shipping Solutions Prize 2021.



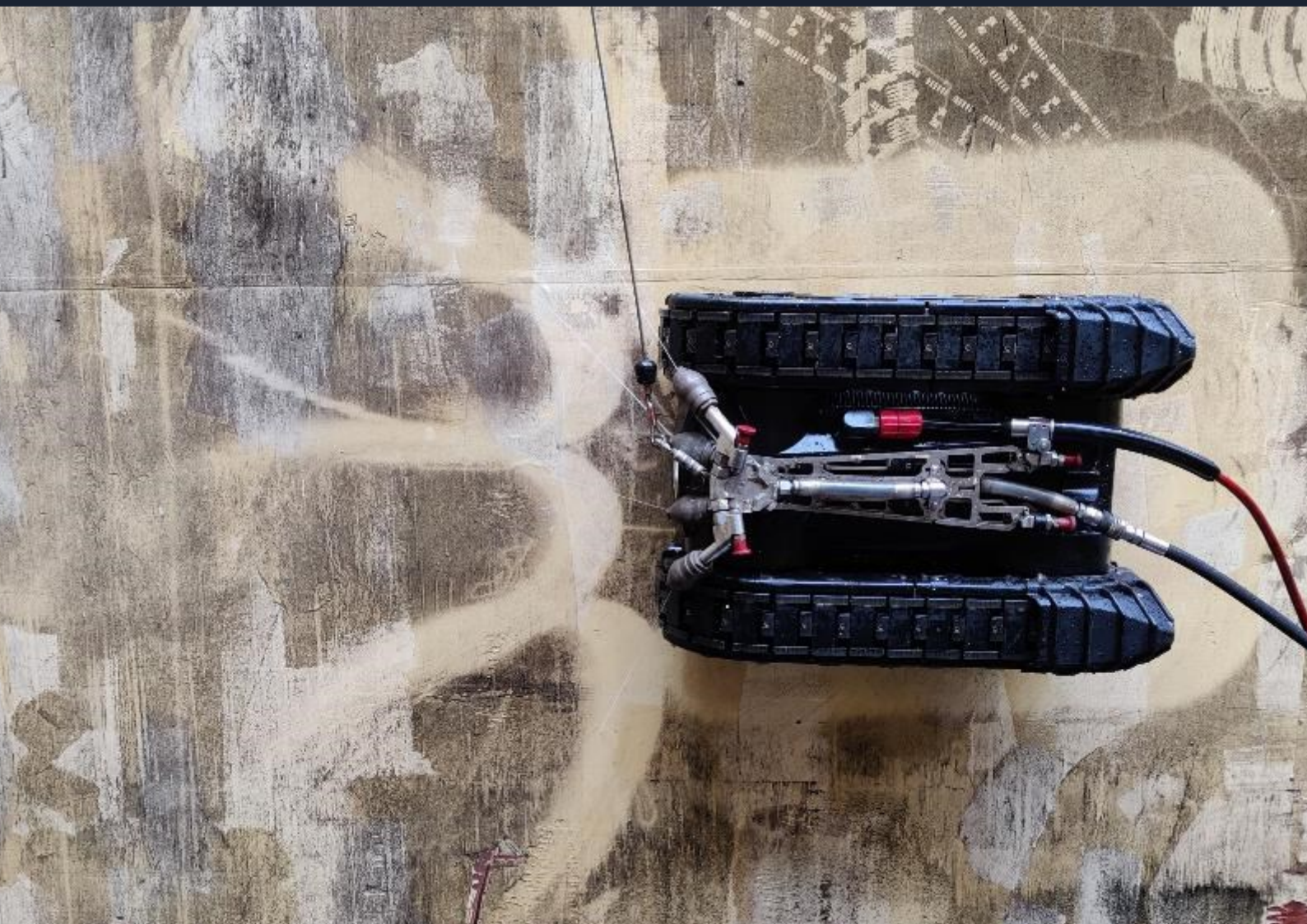
MAGNETIC UNIVERSAL CRAWLER

Customize your own application

CLIN Robotics' ROV is a versatile magnetic crawler suitable for an endless number of applications.

The robot is no larger than a regular check-in suitcase and equipped with strong magnets to ensure adhesion and a tooling plate for attaching any sort of tool or gear on top.

The robot is fit for industrial cleaning and inspection jobs which require working in heights, and with your own customized tools, the robot can simplify jobs across industries. It will make it easier to access hard-to-reach areas and can improve safety and reduce manpower.



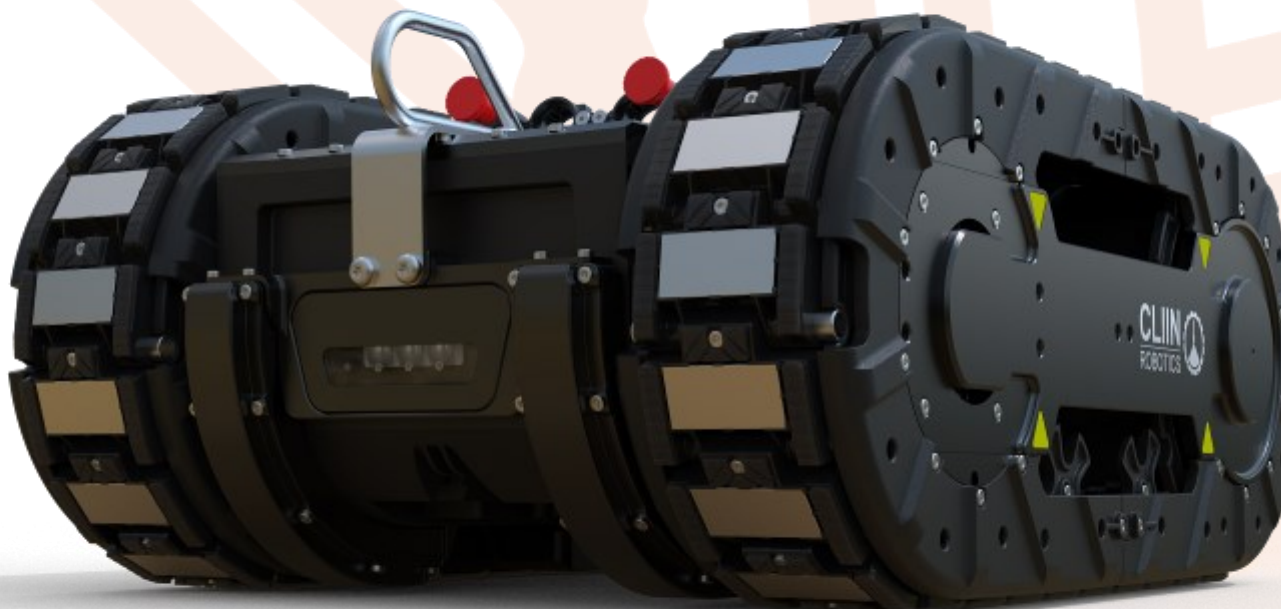
The CLIIN Robot

Key Features

- Robot [RAW0010] with permanent magnetic tracks for cleaning in high areas
- In combination with High Pressure System [HPS0004/5]: One step cleaning operation with high pressure water only
- Less cleaning water - less sludge
- Superior in cleaning frames, topside tank, bulkheads and pipes
- Environmentally friendly - reduces chemical usage significantly
- High pressure nozzles close to surface for superior cleaning quality
- 2-3 persons are required for cleaning operation
- Much faster cleaning in hard-to-reach areas
- Easy to operate - improves safety of crew

Technical Data

- Cleaning ability: 500-800 m²/ h
- Weight: 80 kg
- Dimensions: L747 mm, W562 mm, H310 mm
- Powered by 100-240V, 13A+, 50-60 hz at High Pressure System [HPS0004/5]
- Robust design of non-corrosive materials



The Attachements to the CLIIN Robot

High-Pressure Tools

Standard tools are equipped with turbo nozzles for cleaning

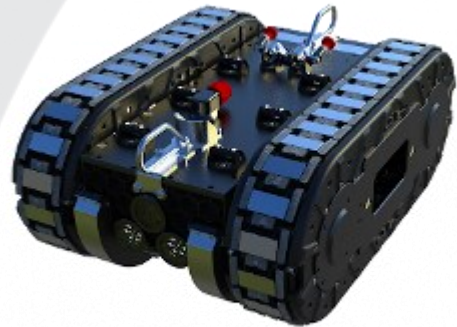
- Cleaning tool for cleaning frames, pipes and bulkhead [HPT0009]
- Cleaning tool for inaccessible areas [HPT0010]
- Air cleaning tool for dry cleaning of cement [HPT0011]



The complete CLIIN Package

The Robot

Standard tools are equipped with turbo nozzles for cleaning. The Robot is a highly versatile remote-controlled magnetic crawler designed to access hard-to-reach areas and to carry tools effectively. With a cleaning capacity of 500-800 square meters per hour and a sturdy construction using non-corrosive materials, it weighs 80 kg and measures L747 mm x W562 mm x H310 mm.



The Spare Part Box

The Box weighs 14 kg, has physical dimensions of L540 mm, W450 mm, and H250 mm and includes among others the Manual, the Control Box and Tools for repair and maintenance.



Control Box

The Control Box

You can retrieve the full log of the system through Control Box [MA00002] in case of a malfunction. All software is designed to run on an automotive protocol. Furthermore, you can upgrade the entire system directly from Control Box [MA00002].

The High-Pressure System

The High-Pressure System is custom designed for the shipping industry. Materials and special functions are selected accordingly.



The in-line Heater

The in-line heater is an add-on product to increase value for the Cargo Hold Robot and Tank Cleaning Robot Cleaning Solutions. [CHR and TCR-Solutions]

The Lances

- Lance [MA00049], with turbo nozzle for deep cleaning and removal of rust and loose paint
- Lance [M000494], 2 m long, for hatch coaming
- Lance [M000217], double pipe with adjustable flat jet nozzles for fast sweeping





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