



**Overcoming Poor Manufacturing Facility
Floor Conditions and Low Clearance with
Customized Automation at Parker**

→ Parker



EXECUTIVE SUMMARY

THIRA ROBOTICS recently partnered with Parker, a global manufacturer specializing in motion and control components and fluids. Parker was interested in automating the transportation of boxes in their production facilities. However, Parker sought a unique solution to handle their poor flooring conditions. THIRA ROBOTICS stepped in as a pivotal solution to address challenging facility needs.

CHALLENGES : POOR FLOOR CONDITIONS AND LOW CLEARANCE



Parker's objective was to process logistic automation to improve productivity at their production site. Parker's challenge was deploying AMRs on wet and slippery floors inside their facilities: while manufacturing products, liquid oils dripped all over the floor, making it slippery.

Additionally, Parker was looking for low-clearance AMRs to use the existing very low carts to the ground (200 mm, 7.87 in).

LIMITATIONS OF EXISTING MARKET OFFERINGS



AMRs are less likely to be implemented in premises with oily or wet floors due to the high risk of losing direction while slipping and bumping into surroundings and people.

In Parker Hannifin's factories that produce valves, the floor is greasy from oil dripped from the production process. The AMR of MiR and YUJIN ROBOT were incapable of driving on the slippery floors. THIRA ROBOTICS AMR technology is the only AMR solution that can navigate and function successfully in poor-quality flooring conditions.

In addition, the ground clearance of the cart to transport was low, so MiR and YUJIN ROBOT could not meet the client's need to use the existing cart without a structure change on it.

Current AMR market leaders could not provide the dual benefits of low clearance and oily floor navigation. With the current limitations of AMR technology on the market, THIRA ROBOTICS provided a unique solution, given Parker's floor limitations.





THE SOLUTION: THIRA ROBOTICS L200

The solution for this flooring and AMR specifications was the L200 AMR. The unit was easily integrated to lift heavy cart loads at low ground clearances. THIRA Robotics' proprietary AWG System was also adopted into this model to ensure accurate driving on slippery floors.

L200 was designed to handle rough terrain navigation, including water drains, damaged floors, concrete cracks, surge plates, and braille blocks. L200 can withstand driving through small puddles of liquid or oils on the floor 5/32 inches deep, making it the perfect solution for Parker's flooring. The AWG system allows L200 to drive on rough floors and provides shock absorption to mitigate shocks.



THE RESULTS

The implementation results met manufacturers' expectations and overcame production facility challenges. Despite the oily floors, the AMR integration increased productivity in this company's facilities. Parker's employees and leadership were satisfied with the results, as no other robotics companies had been able to meet their needs given oily and slippery flooring. THIRA ROBOTICS was the only AMR manufacturer to provide the right solution for their specific needs. Parker now expects an increase in productivity per factory worker.

ABOUT PARKER



Parker is a Fortune 250 global leader in motion and control technologies. It owns 46 brands and operates in 46 countries worldwide. The company comprises six product groups spanning core motion technologies, electromechanical, hydraulic, and pneumatic, with a full complement of fluid handling, filtration, sealing and shielding, climate control, process control, and aerospace technologies.

ABOUT THIRA ROBOTICS



THIRA ROBOTICS is the AMR subsidiary of global smart factory solution leader THiRA UTech. It manufactures autonomous mobile robots (AMR) and creates complete automation solutions to meet unmet market needs.

TTHiRA's AMR technology is employee-friendly and optimized to navigate harsh conditions, including damaged floors, changing facility surroundings, slopes, narrow spaces, spills, and elevators.

All THIRA ROBOTICS systems are built in-house, enabling high-quality and unique customization needs for international leaders across multiple industries, including Samsung, the National Cancer Center, LG CNS, and AmorePacific.

ABOUT L200



L200 is designed to lift a cart at a low ground clearance, and the SML System enables the steady lifting of a heavy load.



L200 has a maximum payload of 200 Kg (440.925 lbs) and a maximum speed of 1.1 m/s (2.46063 mph). It operates regardless of floor conditions, including liquids, oils, bumps, cracks, multi-levels, etc. L200 can be customized to any facility's needs.

CONTACT US



To learn more about our AMR solutions, contact sales@thirarobotics.com