IFOY Innovation Check: The Mobile Robot Company, J1600 self-driving pallet jack

Experts from the International Intralogistics and Forklift Truck of the Year Award, the IFOY AWARD has completed their assessment of the J1600 self-driving pallet jack from The Mobile Robot Company.

Hvidovre, Kobenhavn May 28, 2026 (Issuewire.com) - The IFOY Award, the International Intralogistics and Forklift Truck of the Year Award, recognises outstanding innovation in intralogistics, industrial trucks and warehouse automation.

Functionality / Type of implementation
The Mobile Robot Company presents the J1600, a pioneering self-driving pallet jack that eliminates the boundaries between manual operation and autonomous robotics as a dual-mode solution. The unit is designed for internal material flow and can be commissioned out of the box without complex IT integration. The functionality is based on a state-of-the-art 3D LiDAR SLAM system computed on an industrial NVIDIA Jetson AI computer, ensuring robust navigation even in dynamic environments. Particularly impressive is the simplicity of operation. Using the teach-and-repeat function, the robot learns new destinations in a very short time simply by being manually guided to the target point. It can then autonomously travel to these destinations while independently avoiding obstacles. Primary travel zones can also be defined to increase safety in production environments.

Novelty / Innovation
The J1600 defines a new product level between classic AGVs and manual pallet jacks. The key innovation lies in its safety architecture, which combines 3D LiDAR mapping with 2D safety sensors to create a complete 360-degree protective field. This enables, for the first time, certified safe reverse travel without the need to specially mark target areas in the warehouse. The technological implementation with LiFePO4 battery technology and VDA 5050 support also ensures high industrial endurance and fleet capability, while seamless human takeover remains possible at any time. A simple movement of the tiller handle is sufficient.

Customer benefit
Customer benefit is reflected in a reduction of manual labor by up to 80 percent for repetitive transport tasks. By eliminating complex IT setups and mandatory Wi-Fi, the risk of an automation project is minimal, leading to a rapid return on investment (ROI) – even for small single-shift operations. The flexibility of the dual-mode solution allows employees to perform difficult load handling manually while leaving the time-consuming transport route to the robot. This significantly increases productivity and frees skilled workers for higher-value tasks.

Market relevance
Market relevance is unquestionably high, as the J1600 addresses a huge market that has so far hardly been reached by automation. More than one million hand pallet jacks are sold worldwide every year, underlining the enormous potential for this affordable entry-level automation. Especially for small and medium-sized manufacturing companies, the J1600 offers an economically viable solution for introducing initial automated processes without changing workflows.

IFOY verdict
The J1600 is a game changer for low-threshold automation in intralogistics. Its combination of industrial AI performance and highly intuitive operation makes it a compelling solution for a wide range of companies.

Media Contact

The Mobile Robot Company ApS

*********@mobilerobot.com

+45 88 10 90 12

Kettevej 45

https://www.mobilerobot.com

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