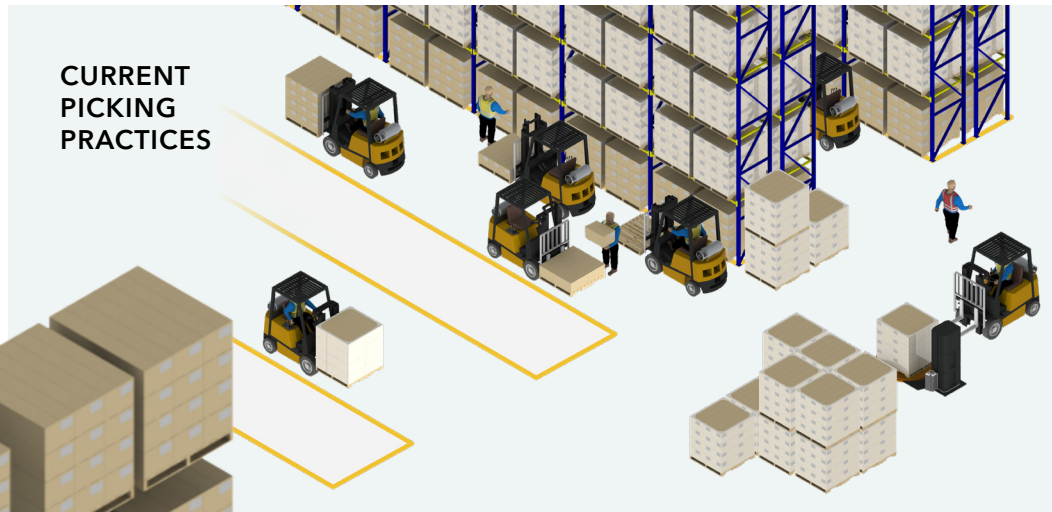




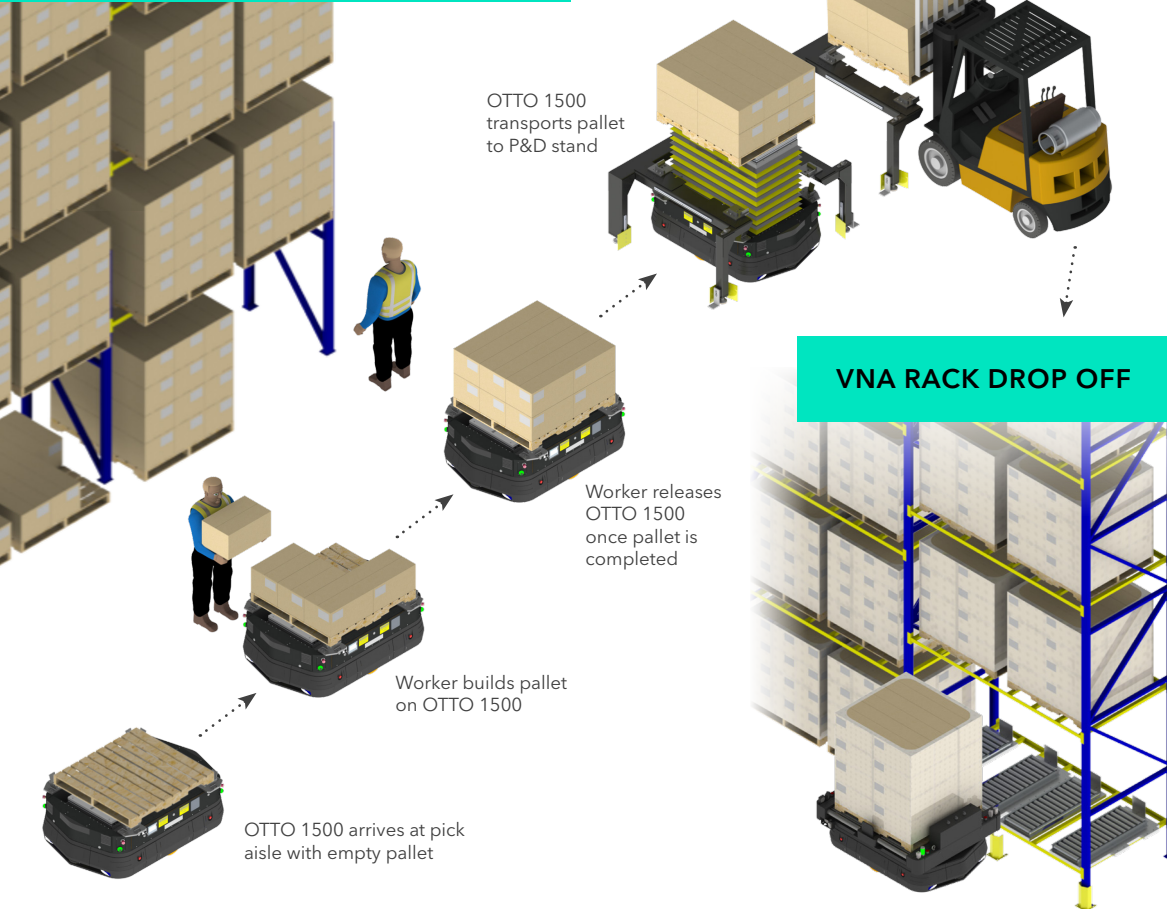
Automate Workflows in Your Facility

The OTTO 1500 is a workhorse Autonomous Mobile Robot (AMR) that moves heavy payloads through demanding environments faster than any AMR on the market, with zero compromise to safety.



CURRENT PICKING PRACTICES

LIFT/P&D PALLETIZING WORKFLOW



VNA RACK DROP OFF



REDUCE COSTS

OTTO reduces time wasted and variability with manual material handling by operating on a lean approach.



ADDRESS LABOR SHORTAGES

At up to 10% the cost of an FTE, OTTO AMRs enable businesses to address labor shortages and eliminate FTE spend on low value and repetitive work.



ACHIEVE ENTERPRISE SCALE

Unlike other AMR providers, OTTO Motors' customers are able to operate at scale with 1 to 100 robots to optimize productivity.



OPTIMIZE PRODUCTION

OTTO enables flexibility in materials handling and faster product cycles that can ramp up and down based on demand.



IMPROVE SAFETY

OTTO Motors AMRs are uncompromising when it comes to safety with customers reporting a 100% safety rating.

OTTO 1500 v2



The new OTTO 1500 is a workhorse AMR that moves heavy payloads through demanding environments faster than any AMR on the market, with zero compromise to safety. OTTO 1500 is durable like a forklift, and is designed to move pallet-scale loads up to 1900 kg.

PERFORMANCE

Max. Payload	1900 kg (4190 lbs)	Max. Turning Speed	1.5 rad/sec (90°/sec)
Max. Speed	2.0 m/s (4.5 mph)	Max. Docking Speed	0.3 m/sec (0.7 mph)
Docking Accuracy Standard	± 10mm (x,y), ± 1°φ (yaw) Repeatable to 3σ	Min. Aisle Width (One Way)	1915 mm (78 in)
Docking Accuracy Precision Upgrade[1]	± 5mm (x,y), ± 1°φ (yaw) Repeatable to 3σ	Min. Aisle Width (Two Way)	3570 mm (146 in)

CHASSIS

Dimensions	1837 x 1283 x 351 mm (72.3 x 50.5 x 13.85 in)	Suspension	Passive, Rocker
Mass	627kg (1382 lbs)	Ground Clearance	16 mm (5/8 in)
Turning Radius	Turn in place	Traversable Gap	16 mm (5/8 in)

ENERGY SYSTEM

Battery Capacity	80 Ah	Battery Voltage	52.8 V
Runtime (10% to 90%)	10 hr	Battery Life	3,000 full charge cycles
Max. Charge Rate	80 A	Battery Charging Options	Autonomous Opportunity Charging (Default) Manual Charging
Charge Time (10% to 90%)	60 min		

SAFETY SYSTEM

Intelligent Braking	Redundant monitoring with safety-system interlock	Standards Compliance	ISO EN 12100, ISO EN 13849-1, ISO 3691-1 (supercedes EN 1525), EN 60204-1, CE, FCC
Adaptive Fieldsets	Intelligent PL-d rated switching fieldsets (patent-pending)	Manual Control	Pendant-based manual control. Guided autonomous control available via OTTO software interface.
E-Stop	4 E-Stops (1 per side) + user E-Stop circuit interface		

AUTOMATION INTERFACE

Power Interface	24 VDC, 10A, regulated, unswitched 52.8 VDC nominal, 50A, unregulated
Signal Interface	1x Ethernet, 1x USB 3.1, 1x HDMI 1 CAN Bus, 5 GPIO (2 safety rated) 1 interface control line
Safety Interface	Dual-channel E-Stop breakout, 2 safety-rated GPIO, 1 interface fault line

CONTROL SYSTEM

Sensors	4x Intel RealSense Cameras 2x SICK Microscan3 (360° FOV) Embedded 6-axis IMU
Computer	Solid-state Military Spec Computer with dedicated GPU
Communication	802.11 a/b/g/n/ac/ax, 2.4 Ghz & 5 Ghz 2x Long-range Omnidirectional Antennae

ACCESSORIES (Sold Separately)

Load-Handling	1500 kg (3300 lbs) Hydraulic Lift 1500 kg (3300 lbs) In-line Conveyor 1900 kg (4190 lbs) Load plate
Charging	Autonomous Supercharger (80 A) Manual Trickle Charger (25 A)

ENVIRONMENTAL

IP Classification	IP20
Temperature	0 to 40°C
Max. Humidity	95%, non-condensing

Footnotes:

[1] Requires OTTO High Accuracy Docking System (HADS) upgrade, sold separately

For more information visit www.ottomotors.com
or call us toll-free at **1-844-733-6886**