Technical Specifications

OTTO 100

OTTO 100 is a compact and powerful autonomous mobile robot (AMR), designed to move boxes, bins and carts up to 150 kg across countless person-to-person applications. With a durable all-metal body and the latest safety-rated equipment, OTTO 100 is built to operate safely and effectively in the toughest manufacturing environments.



RELIABLY RUGGED

With an all-metal body, rely on OTTO 100 to continue moving your materials in challenging environments, year after year.

INTEGRATED LIFT

Carry a wide range of items in a simple, economical way by seamlessly pairing its integrated lift with an OTTO Cart.

DIVERSE WORKFLOWS

From lineside delivery to work-in-progress transport, OTTO 100 can easily shift between workflows.

PERFORMANCE

Max. Capacity	150 kg (331 lb) Includes payload, attachments, and cart, if any
Max. Speed	2.0 m/sec (4.5 mph)
Docking Accuracy Standard	± 10 mm (x,y), ± 1º φ (yaw) Repeatable to 3σ
Docking Accuracy Precision Upgrade[1]	± 5 mm (x,y), ± 1ºφ (yaw) Repeatable to 3σ

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

Max. Turning Speed	1.25 rad/sec (75º/sec)
Max. Docking Speed	0.3 m/sec (0.7 mph)
Min. Aisle Width (one way, no payload)	1,099 mm (43 in)
Min. Aisle Width (two way, no payload)	1,975 mm (78 in)
Integrated Lift	62 mm (2.44 in) stroke, 150 kg capacity

CHASSIS

Dimensions	740 x 550 x 308 mm (29.1 x 21.7 x 12.1 in)
Mass	107 kg (236 lb)
Turning Radius	Turn in place

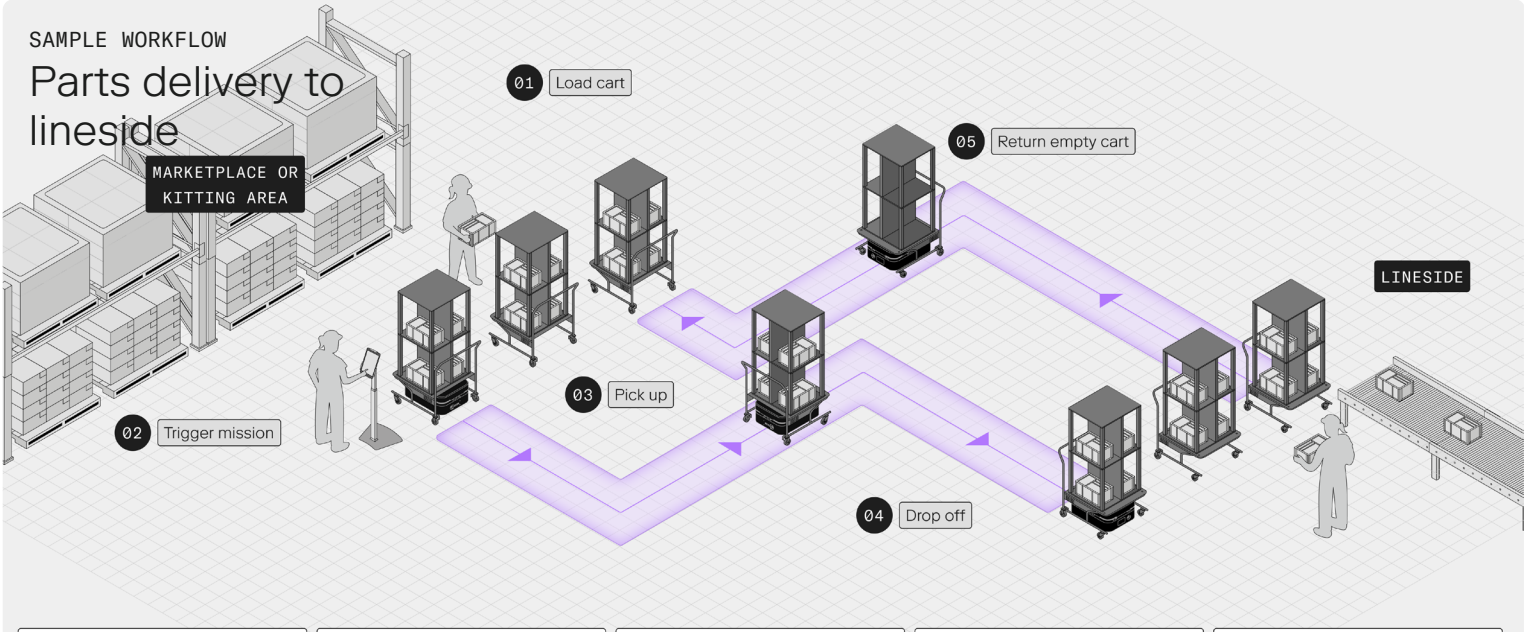
Suspension	Fixed, Rigid
Ground Clearance	6 mm (0.25 in)
Floor Obstacle	13 mm (0.5 in)

ACCESSORIES (SOLD SEPARATELY)

Charging	Autonomous Supercharger (98 A) Manual Trickle Charger (25 A)

SAMPLE WORKFLOW

Parts delivery to lineside



01 Load cart
An operator loads parts into the cart in the marketplace or kitting area.

02 Trigger mission
Operator calls an OTTO through a tablet or push button to transport a full cart to the line.

03 Pick up
OTTO drives to the marketplace or kitting area to pick up a full cart.

04 Drop off
OTTO transports the full cart to an empty position at lineside.

05 Return empty cart
OTTO picks up an empty cart from lineside and returns it to the marketplace or kitting area.

ENERGY SYSTEM

Battery Capacity	35 Ah
Runtime (90% to 10%)	6 hr
Max. Charge Rate	98 A
Charge Time (10% to 90%)	18 min
Battery Voltage	26.4 V
Battery Life	10,000 full charge cycles
Battery Charging Options	Autonomous Opportunity Charging (Default) Manual Charging

SAFETY SYSTEM

E-Stop	2 E-Stops (front and back) + user E-Stop circuit interface
Manual Control	Guided autonomous control available via OTTO software interface.
Standards Compliance	CE marked, ANSI/ITSDF B56.5, RIA R15.08-1, ISO 12100/13849-1/3691-4, FCC Part 15 Subpart B / ICES-003, ICES-002, EN 1175-1/60204-1

AUTOMATION INTERFACE

Power Interface	26.4 VDC, 12 A max, unregulated
Signal Interface	1x Ethernet, 1x USB 3.0, 1x serial RS-232
Safety Interface	2x E-stop extension, 8x Digital IO, 2x dry contact relays, 1x Auxiliary Monitor Contact

CONTROL SYSTEM

Sensors	Hokuyo Safety Laser Scanner, 3D Camera with 90° front coverage, ToF rear sensor with 90° reverse coverage Inductive cart detect sensor
Communication	WiFi 2.4 / 5 GHz (802.11 a/b/g/n/ac)

ENVIRONMENTAL

IP Classification	IP20
Ambient Temperature	20 to 40° C (66 to 104°F)
Humidity	0-95% non-condensing

For more information visit ottomotors.com/100

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