

## **Unmatched Productivity**

OTTO 1500 delivers a classleading 1900kg of material at top speeds of 2m/s with an agility unlike any other AMR. Every detail of OTTO 1500 has been crafted to maximize productivity.

#### **Proven Reliability**

The new OTTO 1500 builds upon over 1,000,000 hours of driving experience and more than 5 years of refinement on its powertrain and chassis. OTTO 1500 is the AMR of choice for mission-critical work.

#### **Comprehensive Service**

Comprehensive 24/7 fleet service plans ensure your AMRs are always operating at peak performance. Managed service plans are also available for improved planning and predictability.

# **Technical Specifications**





### 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<br>Standard           | $\pm$ 10mm (x,y), $\pm$ 1° $\varphi$ (yaw)<br>Repeatable to 3 $\sigma$<br>$\pm$ 5mm (x,y), $\pm$ 1° $\varphi$ (yaw)<br>Repeatable to 3 $\sigma$ | Min. Aisle Width (One Way)      | 1915 mm (78 in)  |
| Docking Accuracy Precision Upgrade [1] |   | Min. Aisle Width (Two Way)      | <b>3570 mm</b> (146 in)  |
| CHASSIS                                |   |                                 |  |
| Dimensions                             | <b>1837 x 1283 x 351 mm</b> (72.3 x 50.5 x 13.85 in)  | Suspension                      | Passive, Rocker  |
| Mass                                   | 627kg (1382 lbs)  | Ground Clearance                | <b>37.5 mm</b> (1.5 in)  |
| Turning Radius                         | 0 mm (0 in)   | Traversable Gap                 | <b>31 mm</b> (1.25 in)   |
| ENERGY SYSTEM                          |   |                                 |  |
| Battery Capacity                       | 70 Ah   | Battery Voltage                 | 52.8 V   |
| <b>Runtime</b> (10% to 90%)            | 10 hr   | Battery Life                    | 10,000 full charge cycles  |
| Max. Charge Rate                       | 98 A  | Est. Battery Replacements (5yr) | 0  |
| Charge Time (10% to 90%)               | 34 min  | Battery Charging Options        | Autonomous Opportunity Charging (Default)<br>Manual Charging   |
| SAFETY SYSTEM                          |   |                                 |  |
| Intelligent Braking                    | Redundant monitoring with safety-system interlock   | Standards Compliance            | ANSI B56.5, ISO EN 12100, ISO EN<br>13849-1, ISO 3691-1 (supercedes EN 1525),<br>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                                    |
| E-Stop                                 | 4 E-Stops (1 per side)<br>+ user E-Stop circuit interface   |                                 | via OTTO software interface.   |
| AUTOMATION INTERFACE                   |   | CONTROL SYSTEM                  |  |
| Power Interface Signal Interface       | 24 VDC, 10A, regulated, unswitched  1x Ethernet, 1x USB 3.1, 1x HDMI  | Sensors                         | 4x Intel RealSense Cameras<br>2x SICK Microscan3 (360° FOV)<br>Embedded 6-axis IMU                   |
| Safety Interface                       | 1 CAN Bus, 5 GPIO (2 safety rated) 1 interface control line  Dual-channel E-Stop breakout,  | Computer                        | Solid-state Military Spec Computer<br>with Intel i7-6700TE Quad Core,<br>16BG RAM, nVidia GTX-1050   |
| Jarety interface                       | 2 safety-rated GPIO,<br>1 interface fault line  | Communication                   | 802.11 a/b/g/n/ac/ax, 2.4 Ghz & 5 Ghz<br>2x Long-range Omnidirectional Antennae                      |
| ACCESSORIES (Sold Separately)          |   | ENVIRONMENTAL                   |  |
| Load-Handling                          | 1500 kg (3300 lbs) Hydraulic Lift<br>1500 kg (3300 lbs) In-line Conveyor<br>1900 kg (4190 lbs) Load plate                                       | IP Classification               | IP20   |
|  |   | Temperature                     | 0 to 40°C  |
| Charging                               | Autonomous Supercharger (98 A)<br>Manual Trickle Charger (25 A)   | 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**