

## ML2 Mini Load AV with Natural Features Navigation

## **EXECUTIVE SUMMARY**

The ML2 mini load AV is designed as a flexible platform with a variety of material handling appliance options available to engage loads in multiple ways.

With a robust controls architecture, lithium-ion battery, automatic charging and full fleet software connectivity & monitoring systems, the ML2 allows for maximized uptime and functionality.

The ML2 is highly maneuverable with its small size and zero turn radius (ZTR) capabilities, allowing you to optimize your processes and navigate tight spaces.



## **OVERVIEW**

- Payload capacity up to 200kg (440 lbs)
- Maximum travel speed up to 1.8m/s (4.0 mph)
- Bi-directional travel with Category 3 safety
- Independent drive suspension with zero turn radius
- DC brushless motors/differential steer package
- Natural feature navigation via LiDAR
- Selection of appliances for various payload deck configurations



## ML2 Mini Load AV Specifications



| General Data                            |              |           | ML2   |
|---|--------------|-----------|---|
| Payload Capacity                        |              | kg (lbs)  | 200 (440)   |
| Speed                                   | Maximum      | m/s (mph) | 1.8 (4.0) forward and reverse                               |
|   | Minimum      | m/s (mph) | 0.1 (0.2)   |
| Battery and Charging information        |              |           | 63amp hr Lithium-ion  |
|   |              |           | Standard automatic battery charging contacts                |
|   |              |           | Automatic power off   |
| Guidance Method                         |              |           | Natural feature via 2D LiDAR                                |
| Travel Instruction Method               |              |           | Feature map with virtual path planning & devices            |
| Drive Type                              |              |           | Independent drive system                                    |
| Steering                                |              |           | True ZTR with differential traction wheels                  |
| Braking Method                          |              |           | Electromagnetic   |
| Appliances                              |              |           | Engineered to order standard and custom solutions           |
| Safety                                  |              |           | Category 3 safety   |
|   |              |           | Status light – multiple colors to indicate AV state         |
|   |              |           | Front and rear panel e-stop                                 |
|   |              |           | Circuit protection main drive motors, appliance, drive-lift |
| Dimensions (without appliances) mm (in) |              |           | Length - 1028.6 (40.5)                                      |
|   |              | mm (in)   | Width - 605.3 (23.8)  |
|   |              |           | Height – 274 (10.8)   |
| Weight (without appliances) kg (lbs)    |              | kg (lbs)  | 153.3 (338)   |
| Floor<br>Conditions                     | Step (ridge) | mm (in)   | 5 (0.2) or less   |
|   | Gap (crack)  | mm (in)   | 20 (0.9) or less  |
|   | Waviness     | mm (in)   | 10 (0.4) or less over the length of the AGV                 |
| Working<br>Environment                  | Temperature  | C° (F)    | 0 - 40 (32 - 104)   |
|   | Humidity     | %         | 35 – 85 RH (no condensation)                                |
|   | Outdoor Use  |           | Prohibited  |
| Optional Accessories                    |              |           | Auxiliary connector for remote I/O                          |

