

# ML2 Mini Load AV with Natural Features Navigation

*Bastian Solutions ML2 Mini Load AV combines functionality and safety into one compact, highly maneuverable vehicle*

## 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.

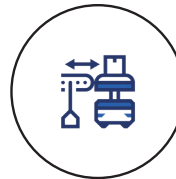
The ML2 is highly maneuverable with its small size and zero turn radius (ZTR) capabilities, allowing you to optimize your processes and navigate tight spaces.



## PRODUCT 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

## FEATURES



Assembly Line Conveyance



Accommodates Various Appliances



Order Container Transport



Enables 24/7 Automated Operations





# TECHNICAL DATA 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 & CHARGING INFORMATION			63 amp/hour Lithium-ion
			Standard Automatic battery charging contacts
			Automatic power off
GUIDANCE METHOD			Natural features 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 DEVICES	Optical Sensor		CAT 3 safety system
	Status Light		Color to indicate AV state
	E-Stop		Front and rear panel e-stop
	Circuit Protection		Main drive motors, appliance, drive-lift
DIMENSIONS (WITHOUT APPLIANCES)	Overall Length	mm (in.)	1028.6 (40.5)
	Overall Width	mm (in.)	605.3 (23.8)
	Overall Height	mm (in.)	274 (10.8)
WEIGHT (WITHOUT APPLIANCES)		kg (lbs)	153.3 (338)
FLOOR 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 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