

Material Handling Robots

- Tug and Tow Robots
- AMR

### MV 500 / 1000 Flat head



MV 500 / 1000 with conveyer





**TUG 2000** 

**TUG 1000** 

# Material Handling Robots / AMR / Tug & Tow Robots

Designed for intensive material handling / movement operations

Robust and built for 2 / 3 shift operations with best in class battery backup

Easy to operate, maintain and manage fleet of robots

Now in four payload capacities (Tug Robots / AMR)

- 250 Kgs
- 500 Kgs
- 1000 Kgs
- 2000 Kgs



Ideal for



### Intelligent

### With Peppermint Fleet Manager

First ever Dynamic load and instruction interface to manage a large fleet of robots for multiple pickup / drop locations

Robots can be programmed to change behaviour based on job flow and speed of operations



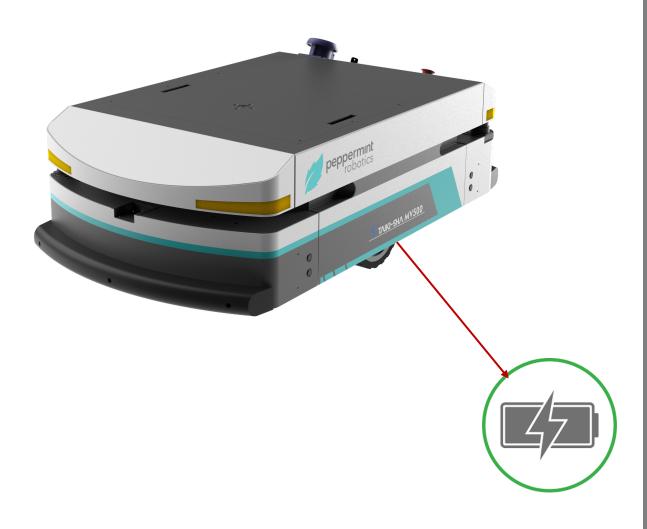
Intelligent navigation ensures safe and stable operations

Peppermint Path Planner Software (V2.0) enables planning team to define time + battery consumption in each region, thereby maximising productivity







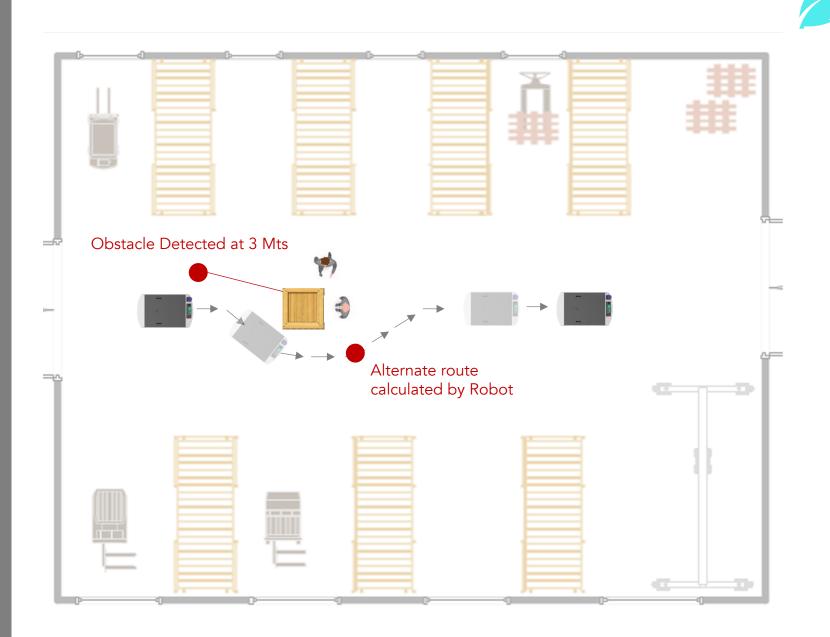


# Best in Class Battery Backup

- Upto 8 Hours of battery backup with Peppermint Optional Large Battery
- Seamless charging via Automotive grade DC Charging
- Smart BMS keeps battery health and life in check for upto 1500 cycles

## Obstacle Avoidance

- 4 Intelligent Sensors to detect obstacles
- 4 Support Sensors for additional safety
- Robot thinks of optimum alternate route
- Robot adopts an alternate route
- Detects obstacle at 3-5 mts
- Needs less than 2 Mts clearance for avoidance





### Multi Modes



Autonomous Operations
 (Without need for Wifi / Internet)



 Remote Controlled Mode with Peppermint Controller / App



 Manual Operations – via control buttons on the robot

## Easy Touch screen interface+ Cloud Connected Dashboard

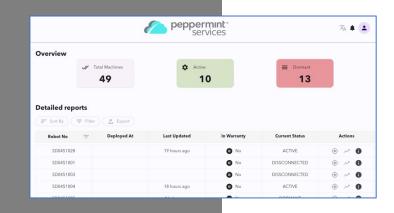
#### Touch Screen

- Select Zone / Pickup or Drop Locations
- Customize Speed and Conveyer Settings
- Diagnostics and Maintenance Data

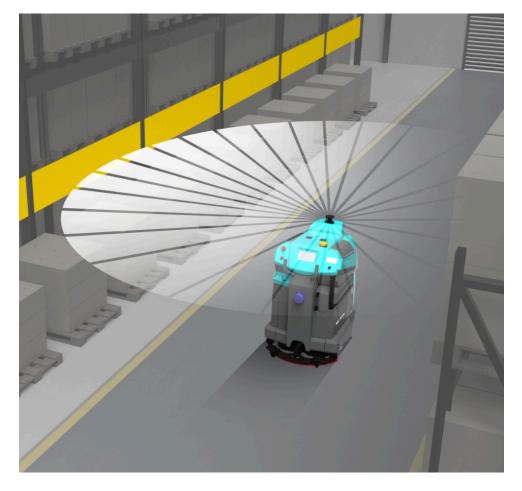


- Cloud connected Robot Management Portal
- Check real-time coverage and heath of your robot
- Manage multiple robots with a click on your laptop
- 100% Visibility of all your operations















# Best in Class Safety Features with Customisation

Long range 2D & 3D Lidars

Depth Sensors with > 200° coverage (Can detect in the dark as well)

Automotive grade Ultrasonic Sensors – for Glass and sudden obstacle detection

Li-Ion Batteries for performance through large temperature range

> Emergency Stop Button

Beacon & Buzzer (For Visual and Audio Alerts)

Customizable Detection Range

Intelligent Static & Dynamic sensing



### Sustainable & Accountable Operations





Round the clock service & maintenance support





Best in Class Battery backup of upto 8 hours



Saving > 50% of Electricity



Certification For Robot Operators



Upskilling Housekeeping Staff to Robot Operators





# Peppermint Robots are designed to be easy to Operate, Maintain & Repair

#### Modular Platform

~90%
Shared
Components

>40%

Reduction in Assembly & Service TAT

Best in Class

Cost of Ownership

### Efficient Design

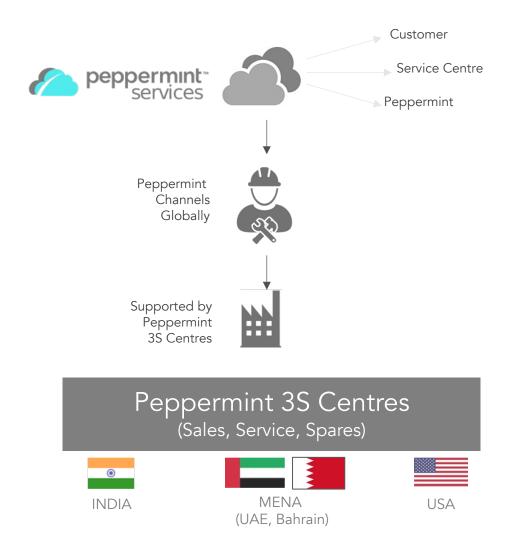


4 Patents

Provisional Approvals received

2 Patents

In Process





### Happy Customers Across the world



















PHARMA













ACG CAPSULES











AVIATION









A Qualcomm & SINE IIT Bombay supported

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