

 Robotnik

  
**RB-2 BASE**

RB-2 Base is suitable for industrial applications in logistics and construction. Robustness, high payload and enclosure class are its main advantages.

## Product

RB-2 BASE is a compact mobile robot with high payload capacity for high performance industrial applications in logistics and construction. In logistics, RB-2 BASE is used for indoor transport of payload or trolleys up to 200 Kg. In construction, the robot has applications to carry high payload devices inside buildings being able to pass through narrow corridors and having IP65 enclosure class.

The platform uses a differential kinematic configuration with omni-wheel castors that distributes the payload in the corners, providing the maximal stability in the minimal footprint. The robot mounts 2 1000W servomotors that provide it with a linear speed up to 1.7 m/s. It mounts 2 laser range finders for localization, navigation and safety as also RGBD devices for the detection of obstacles out of the range finder plane.

The advanced kinematic configuration (9 axes, 2 active) enables passing over small obstacles and ditches even in maximal payload conditions. The traction can be adjusted as a function of the payload and through shock-absorbers, reaching different slopes, with a maximal slope of 20%.

The robot includes an optional self-recharging base station. The base is modular and can supply and interface additional application related hardware (internal connectivity: USB, RS232, GPIO and RJ45, external connectivity: USB, RJ45, power supplies 5, 12 VDC and battery). For unattended logistic applications the robot can mount an optional lifting unit.

The control architecture is open-source and modular, based on ROS ([www.ros.org](http://www.ros.org)). ROS framework defines a well organized robot software architecture and includes hundreds of user contributed packages and sets of packages called stacks, that implement functionalities as localization and mapping, planning, manipulation, perception, etc. This characteristic simplifies the software development cycle and allows easy integration and reutilization of software components whether they are device drivers or state of the art algorithms in vision, SLAM, point cloud processing, grasping, planning, swarming, etc.

## Applications

- Logistics, warehouses and other intra-logistics applications
- Robotics for Construction
- Applications in harsh environments

## Advantages

- Robust and compact high-payload platform
- Enclosure class
- Wide range of tutorials and examples in ROS software
- Competitive price

## Optional components

- Docking station
- Lifting unit
- Digital&Analog I/O module
- Magnetic guide sensors

## Technical specifications

### Mechanical

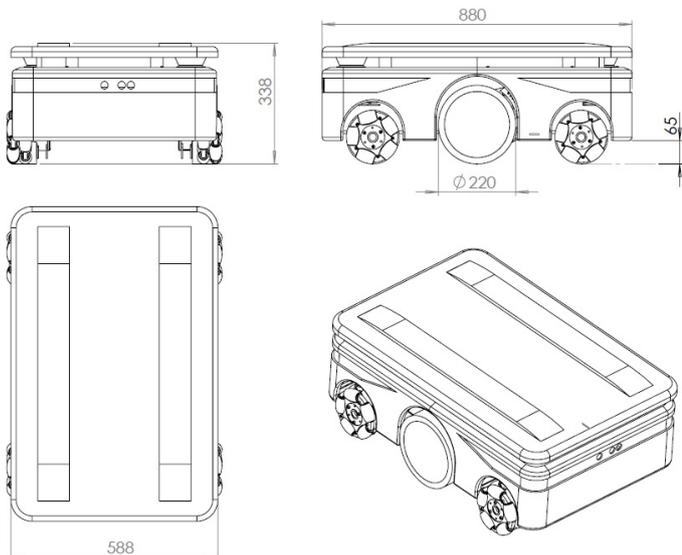
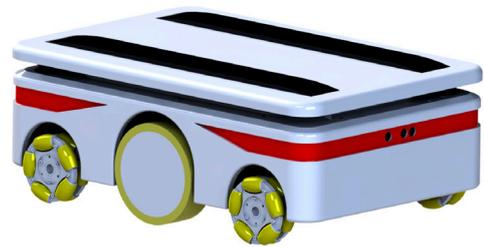
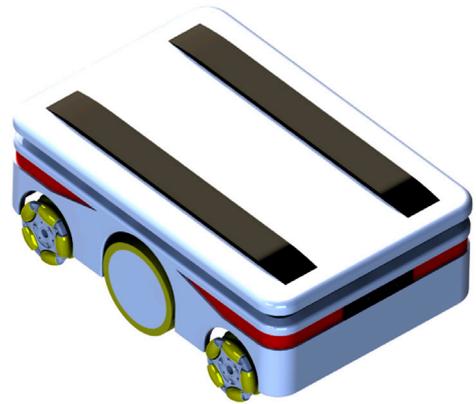
Dimensions	736 x 535 x 355 mm
Weight	95 Kg
Payload	200 Kg
Speed	1.7 m/s
Enclosure class	IP6510 h.
Autonomy	10h / 20h
Batteries	15Ah@48V (30Ah@48V optional)
Traction motors	2 x 1000W
Temperature range	0° a 45°
Lifting unit range (opt.)	50 mm

### PC

Processor	4th generation Intel i7
RAM	8 Gb
Hard Drive	120 Gb

### Control

Controller	Open architecture ROS Embedded PC with Linux (Intel BayTrail J1900 or similar)
Communication Connectivity	WiFi 802.11n/Radio/Cable Ethernet/USB External ports



ROS.org

C/ Ciudad de Barcelona, 3-A, 46988  
P.I Fuente del Jarro, Paterna, Valencia (Spain)  
Phone. +34 96 147 54 00

[www.robotnik.eu](http://www.robotnik.eu)