

## DATASHEET - Ecobot 1



### DIMENSIONS and WEIGHT

#### Vehicle size

L = 1.400 mm

W = 662 mm

H = 730 mm

#### Equipment

UR e-series

Techman TM-series

Position from vehicle  
center

x = 0 mm

y = 570 mm

#### Vehicle weight w/o batteries

350 kg

OPPENT S.P.A.

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## PAYLOAD and REQUIREMENTS

Nominal payload 100% deliveries	300 kg
Maximum payload 30% deliveries	360 kg
Payload max size	L = 400 mm
	W = 400 mm
	H = 400 mm
Center of gravity footprint	L = 810 mm
	W = 433 mm
Center of gravity height	H = 970 mm

## PERFORMANCE

Kinematics and Drive	Double trike, omnidirectional
Speed	0,1 m/s min
	1,0 m/s max
X, Y accuracy	+/- 10 mm
$\theta$ accuracy	+/- 1°
Localization rate	5 Hz
Minimum bending radius	0 m; the vehicle turns on its vertical axis
Slope	3% (1,7°)
Slope min bending radius	15 m
Step	±5 mm
Gap	15 mm
Motor wheel power	2x300 W
Braking torque	2x4 Nm

## MATERIALS

Wheels coating	Polyurethane grip + Vulkollan®
Chassis material	AISI 304
Shell material	Painted Steel

## BATTERY

Battery	LiFePO4 24V 120 Ah
Depth of discharge	70%
Autonomy	8 h
Recharging time	3 h
Battery weight	38 kg
Battery cycle life	2.000 cycles

## COMMUNICATION

Communication	WI-FI - WLAN 802.11a/b/g/n - 2,4/5 GHz
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## SAFETY

Safety devices	Nr. 2 Sick S300 laser scanners Sensitive board (front/rear) N.2 E-stop buttons Safety control central unit Sick Flexi
Performance Level	c
Safety field shape	360°

## NAVIGATION

Navigation	Odometric closed loop via laser scanner (natural navigation)
Mapping	Auto acquisition by Mobile Robot

## ENVIRONMENT

Temperature	from +5 to 35 °C
Working relative humidity	from 30% to 80% (absence of condensation)
IP degree	13

## REGULATIONS

Regulations	<ul style="list-style-type: none"><li>• 2006/42/EC Machinery Directive</li></ul>
	<ul style="list-style-type: none"><li>• 2014/35/EU Low Voltage Directive</li></ul>
	<ul style="list-style-type: none"><li>• 2014/30/EU Electromagnetic Compatibility Directive</li></ul>
	<ul style="list-style-type: none"><li>• ISO 3691-4: 2020 Safety of driverless industrial trucks</li></ul>