

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
Vehicle weight w/o batteries	350 kg

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
θ 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	LeadGel 24V 280 Ah	PureLead 24V 240 Ah
Depth of discharge	70%	30%	40%
Autonomy	8 h	8 h	10 h
Recharging time	3 h	12 h	8 h
Battery weight	38 kg	170 kg	172 kg
Battery cycle life	2.000 cycles	500 cycles	1.200 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

- 2006/42/EC Machinery Directive
- 2014/35/EU Low Voltage Directive
- 2014/30/EU Electromagnetic Compatibility Directive
- ISO 3691-4: 2020 Safety of driverless industrial trucks