

DATASHEET - Eroller 4



DIMENSIONS and WEIGHT

Vehicle size	L = 2680 mm
	W = 1930 mm
	H = 1235 mm

Equipment	Rollers	
	Roller plane size	L = 2.500 mm
		W = 1.700 mm
H1 = 1.200 mm		
	Rollers	48xØ60 mm - 4x35W - i 1:30

Vehicle weight w/o batteries	600 kg
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PAYLOAD and REQUIREMENTS

Nominal payload 100% deliveries	1.000 kg
Maximum payload 30% deliveries	1.500 kg
Payload max size	L = 2.000 mm
	W = 1.500 mm
	H = 1.200 mm
Center of gravity footprint	L = 1.360 mm
	W = 1.950 mm
Center of gravity height	H = 850 mm

PERFORMANCE

Kinematics and Drive	Double trike, omnidirectional
Speed	0,1 m/s min
	1,4 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	10 mm
Motor wheel power	2x700 W
Braking torque	2x8 Nm

MATERIALS

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

BATTERY

Battery	LiNMC 24V 370 Ah
Depth of discharge	70%
Autonomy	12 h
Recharging time	3 h
Battery weight	104 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 microScan3 laser scanners (PLd)
- Sensitive board (front/rear)
- N. 5 E-stop buttons
- Safety control central unit Sick Flexi (PLe)

Performance Level	c
Safety field shape	360°
Detect bridge obstacle	Nr. 2 Intel RealSense D435 (front/rear)

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