

DATASHEET - Ecart 9



DIMENSIONS and WEIGHT

Vehicle size	L = 1.630 mm	
	W = 600 mm	
	H = 340 mm	
Equipment	Lift platform	
	Plane size	L = 1.020 mm
		W = 510 mm
	Stroke	100 mm
Vehicle weight w/o batteries	380 kg	

PAYLOAD and REQUIREMENTS

Nominal payload 100% deliveries	500 kg
Maximum payload 30% deliveries	700 kg
Payload max size	L = 1.350 mm
	W = 1.000 mm
	H = 1.500 mm
Center of gravity footprint	L = 800 mm
	W = 440 mm
Center of gravity height	H = 900 mm
Min load frame clearance	W = 900 mm
	H = 415 mm

PERFORMANCE

Kinematics and Drive	Diamond, fully bi-directional
Speed	0,1 m/s min
	1,2 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	9% (5,2°)
Slope min bending radius	15 m
Step	±5 mm
Gap	15 mm
Motor wheel power	4x600 W Brushless

Braking torque	4x5 Nm
Motor wheel size	Ø 160x60mm
Caster wheel size	Ø 125x40mm Twin

MATERIALS

Wheels coating	Polyurethane
Chassis material	AISI 304
Shell material	Painted Steel

BATTERY

Battery	LiFePO4 24V 100 Ah
Depth of discharge	70%
Autonomy	6 h
Recharging time	2 h
Battery weight	28 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 (PLd) Sensitive board (front/rear) N.2 E-stop buttons Safety control central unit Sick Flexi (PLe)
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Performance Level	c
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Safety field shape	Boxes 360° Trolleys 180°+180° Front/Rear
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NAVIGATION

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

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