

DATASHEET - ONE Alfa



DIMENSIONS and WEIGHT

Vehicle size
L = 3.460 mm
W = 660 mm
H = 1.050 mm

Equipment
Customized bucket mechanism

Nr of independent movements 2

Nr of independent actuators 4 + 4

Vehicle weight w/o batteries
1.230 kg

PAYLOAD and REQUIREMENTS

| | |
|------------------------------------|-----------------|
| Nominal payload 100% deliveries | 100 kg |
| Maximum payload 30% deliveries | 150 kg |
| Payload max size | Lmax = 2.400 mm |
| | Ø min = 100 mm |
| | Ø max = 440 mm |
| Center of gravity footprint | L = 2.280 mm |
| | W = 380 mm |
| Center of gravity height | H = 500 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 | 10 mm |
| Motor wheel power | 2x700 W |
| Braking torque | 2x8 Nm |

MATERIALS

| | |
|------------------|-------------------|
| Wheels coating | Polyurethane grip |
| Chassis material | AISI 304 |
| Shell material | Painted Steel |

BATTERY

| | |
|--------------------|---------------------|
| Battery | PureLead 24V 240 Ah |
| Depth of discharge | 40% |
| Autonomy | 10 h |
| Recharging time | 8 h |
| Battery weight | 172 kg |
| Battery cycle life | 1.200 cycles |

COMMUNICATION

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

SAFETY

| | |
|--------------------|--|
| Safety devices | Nr. 2 Sick S300 laser scanners Sensitive board (front/rear) N.3 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">• 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 |