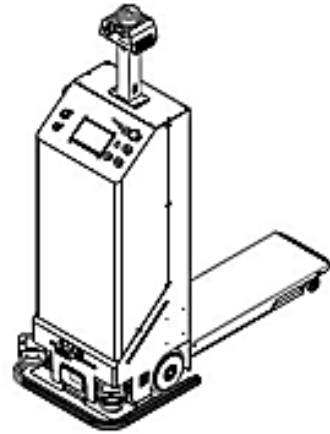
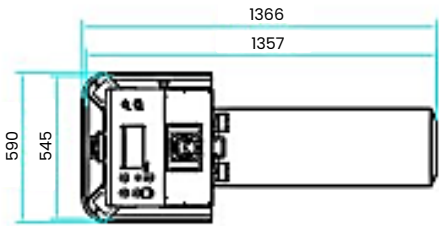
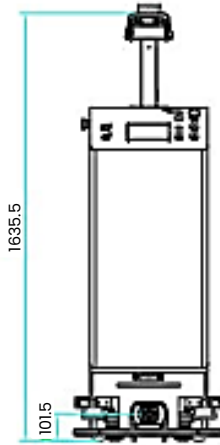
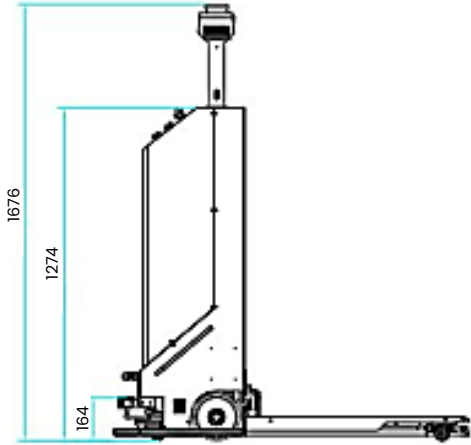


Autonomous Forklift R300F-L

LiDAR SLAM Navigation + 300KG Payload



Dimension



Specification	
Basic parameters	
Name	Autonomous Forklift R300F-L
Drive mode	Steering Wheel Drive
Dimension (L x W x H) (with bumper strip)	1366 x 590 x 1676 mm
Weight (with batteries)	210 Kg (±10 kg)
Maximum payload	300 Kg
Chassis ground clearance	25 mm
Standard lifting height	70±5 ~ 90±5 mm
Fork dimensions (L x W)	800 x 300 mm / Customized
Pallet type	Tote dolly / shelf
Network	Ethernet / Wi-Fi 802.11 a/b/g/n/ac
Ambient temperature and humidity range	Temperature: 0~50°C / Humidity: 10~90%, no compression, no condensation
IP rating [1]	IP20
Performance Parameters	
Possibility (slope/step/gap) [2]	<3% / 2 mm / 5 mm
Navigation position accuracy [3]	±10 mm
Navigation angle accuracy [3]	±1°
Operation speed (Adjustable)	≤1.4 m/s
Battery Parameters	
Battery capacity	48V/40Ah Lithium iron phosphate
Comprehensive battery life	8 hr.
Comprehensive battery life	≤1.5 hr.
Charging mode	Manual/Automatic
Cycle times	1500 cycles, capacity > 80%
Safety Parameters	
LiDAR SLAM number	3(SICK Nanoscan3) + 1(SICKTIM781)
Emergency stop button	✓
Sound and light indicator	✓
Braking distance: 1 m/s / 1.5 m/s	≤30 / ≤50cm
360° laser protection	✓
Bumper strip	✓
Fork height protection	✓
Functions Parameters	
Basic function [4]	✓
Wi-Fi Roaming	✓
3D obstacle avoidance	Optional
Pallet recognition	Optional
HMI display	✓

[1] Designed for indoor transport, not recommended for outdoor environments.

[2] Road surface is smooth, clean and without significant undulations. $\text{Slope} 5\% = \arctan(0.05) \approx 2.8^\circ$. The robot may not stop or turn at ramps, steps, or gaps, but may only pass quickly perpendicular to them.

[3] Navigation accuracy usually refers to the repeated accuracy of the robot navigation to the target site. When the environment scanned by the robot LiDAR is relatively stable (change rate <30%), the repeated accuracy of the robot navigation from the fixed direction to the target site can reach the expected value. When the robot runs along the virtual path, it will try to fit the path, but it does not guarantee repeatability. That is, the robot can guarantee the accuracy of the point, without guaranteeing the accuracy of the navigation path. The minimum site spacing supported by the robot is 1cm.

[4] The basic functions include map editing, model editing, positioning and navigation, basic motion model (differential), API interface, etc.