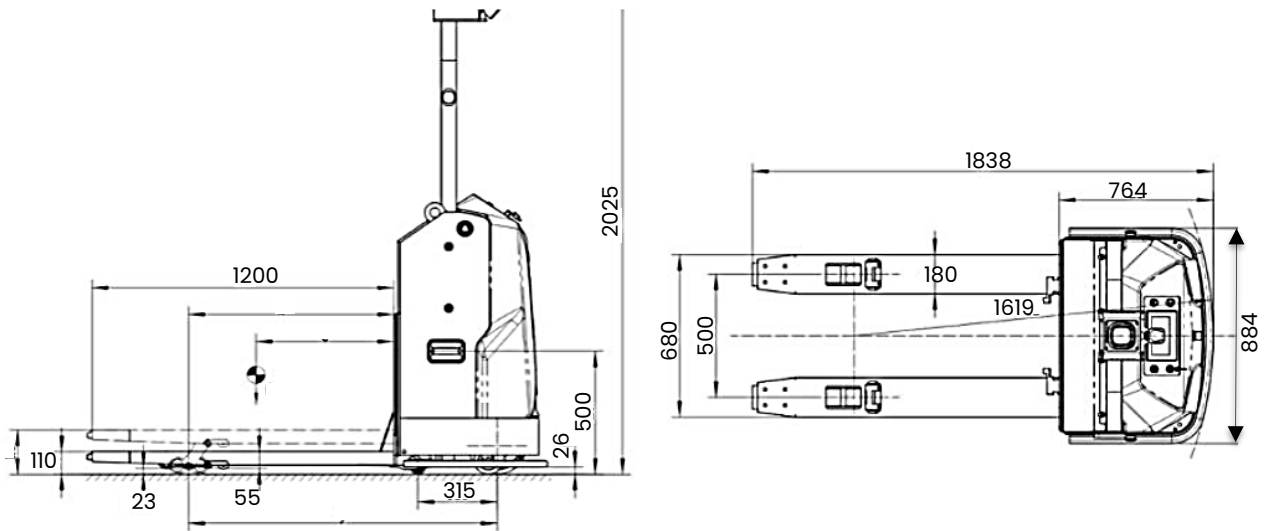


# **Autonomous Forklift-R2000F-LCB**

**LiDAR SLAM Navigation+2000KG Payload**



## Dimension



## Specification

Overall height	h1	2025 mm
Lifting height	h3	180 mm
Fork face ground clearance (with lowest fork)	h5	110 mm
The height of the charging brush plate above the ground	h6	500 mm
Overall length	L1	1838 mm
Vehicle length (without forks)	L2	764 mm
Overall width	b1	884 mm
Fork size (length/width/height)	l/e/s	1200/180/55 mm
Width of fork (outside)	b5	680 mm
Wheelbase, drive side	b10	445 mm
Wheelbase, load side	b11	500 mm
Minimum ground clearance	m1	26 mm
Minimum turning radius (with highest forks)	Wa	1619 mm
Minimum right angle stacking channel width (with highest forks)	Ast	2163+200 mm
Right angle stacking channel width, pallet 1000×1200 (1200 placed along the fork, with highest forks)	Ast	2253+200 mm

<b>Specification</b>	
<b>Basic parameters</b>	
Name	Autonomous Forklift-R2000F-LCB
Navigation mode	LiDAR SLAM
Drive mode	Steering Wheel Drive
Forklift dimensions (L x W x H)	1838 x 884 x 2025 mm
Weight (with batteries)	500 Kg (±10 Kg)
Maximum payload	2000 kg
Chassis ground clearance	26 mm
Standard lifting height	180 mm
Fork dimensions (L x W)	1200 x 180 mm
Pallet type	Tote dolly / shelf
Network	Ethernet / Wi-Fi 802.11 a/b/g/n/ac
Ambient temperature and humidity range	TEMP: 0°C to 50°C / RH: 10%to90%, no compression, no condensation
IP rating [1]	IP20
<b>Performance Parameters</b>	
Possibility (slope/step/gap) [2]	<5 % / 10 mm/ 30 mm
Navigation position accuracy [3]	±10 mm
Navigation angle accuracy [3]	±1°
Operation speed (Adjustable)	≤1.5 m/s
<b>Battery Parameters</b>	
Battery specifications	DC24V / 210Ah (Lithium iron phosphate)
Comprehensive battery life	8 hr.
Charging time (10% to 80%)	≤2 hr.
Charging mode	Manual/Automatic charging
Battery cycle times	1500 cycles, capacity≥80%
<b>Function configurations</b>	
Lidar number	3(SICK Nanoscan3) + 1(SICKTIM781)
Basic functions [4]	✓
Wi-Fi roaming	✓
3D obstacle avoidance	Optional
Pallet recognition	Optional
HMI display	✓
<b>Safety configurations</b>	
Braking distance (1 m/s / 1.5 m/s)	≤30cm / ≤50cm
360° laser protection	✓
Bumper strip	✓
Fork height protection	✓

[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.