



# AFORMIC

## FL2

### AUTONOMOUS OMNIDIRECTIONAL PALLET JACK ROBOT

FL 2 is an autonomous pallet jack robot with omni-directional drive, designed for efficient transport of loads up to 1500 kg. Its robust construction ensures high maneuverability, operational reliability, and safety, making it a suitable solution for modern intralogistics environments.

#### HIGH PAYLOAD CAPACITY

Capable of transporting loads up to 1500 kg, the FL2 is engineered for demanding industrial applications. Its durable construction ensures consistent performance under full load, offering a reliable and versatile solution across a wide range of intralogistics environments.



#### OPTIMAL MANEUVERABILITY IN WAREHOUSE AND FACTORY SETTING

#### OMNIDIRECTIONAL DRIVE SYSTEM

The FL2 is equipped with an omnidirectional drive system, enabling smooth movement in all directions—including lateral and diagonal. This high level of maneuverability allows the robot to operate efficiently in confined spaces and execute precise movements, making it well-suited for complex warehouse and factory layouts.

#### ADVANCED SLAM NAVIGATION

Equipped with SLAM technology, the FL2 enables real-time mapping and accurate localization. This supports efficient route planning, dynamic obstacle avoidance, and adaptability to changing environments, ensuring reliable operation in dynamic and complex intralogistics settings.

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## ADVANCED SAFETY SYSTEM

FL2 is equipped with a comprehensive safety package, including two SICK micro, two nano safety scanners, two emergency stop buttons, 360° laser coverage, and a blue spot warning light. Its onboard IMU module ensures stability and precise motion control even in complex environments, making it safe for operation alongside people and machinery.

### GENERAL SPECIFICATIONS

- Payload capacity: 1500 kg
- Dimensions (L x W x H): 1959 x 1098 x 1415 [mm]
- Lifting height: 38 mm
- Weight: 595 kg
- Maximum speed: 1.5 m/s
- Drive type: omnidirectional (multi-directional drive)
- Drive power: 2 x 1.2 kW

### POWER SYSTEM

- Battery type: Lithium-ion (Li-ion)
- Battery capacity: 120 Ah
- Battery voltage: 48 V

### TERRAIN CAPABILITIES

- Maximum longitudinal inclination: 1.0°
- Maximum lateral inclination: 5.0°
- Positioning accuracy (+/-): 1.0 cm

### SAFETY FEATURES

- Laser scanner field of view: 360°
- Safety scanners:
  - Sick Micro Scanners: 2 units
  - Sick Nano Scanners: 2 units
- Emergency push buttons: 2 units
- Blue spot lamp: 1 unit
- IMU module: 1 unit

### NAVIGATION SYSTEMS

- SLAM Technology: yes
- Odometry: yes
- IMU (Inertial Measurement Unit): yes

### ENVIRONMENTAL CONDITIONS

- Operating temperature: 15°C – 40°C
- Relative humidity: >70%

## DIMENSIONS [MM]

