



AFORMIC

FP22

HEAVY-DUTY UNDERRIDE AMR

ENGINEERED TO HANDLE LOADS
UP TO 4,400 LB

OMNIDIRECTIONAL DRIVE

The FP22 is equipped with an advanced omnidirectional drive system, enabling it to move in any direction — forward, sideways, diagonally — and rotate around its own axis. This high degree of mobility allows the robot to operate smoothly in tight spaces and navigate complex layouts with precision, ensuring seamless integration into space-constrained production areas.

HIGH PAYLOAD CAPACITY

With a maximum payload of 2000 kg (4,400 lb), FP22 is ideal for transporting large, bulky materials and non-standard carriers. Its robust mechanical structure ensures stable and reliable performance even under full load, making it a versatile solution for demanding production environments.



ADVANCED SLAM NAVIGATION

Equipped with SLAM technology, the FP22 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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COMPREHENSIVE SAFETY SYSTEM

FP22 is equipped with a safety package, including four SICK Micro safety scanners, ten emergency stop buttons, 360° laser coverage, and blue spot warning lights.

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: 2000 kg (4,400 lb)
- Dimensions (L x W x H):
4330 x 1630 x 434 mm (170.5 x 64.2 x 17.1 in)
- Lifting height: 40 mm (1.6 in)
- Weight: 2343 kg (5,170 lb)
- Maximum speed: 1.5 m/s (4.9 ft/s)
- Drive type: omnidirectional
- Drive power: 4 x 1 kW

POWER SYSTEM

- Battery type: Lithium-ion (Li-ion)
- Battery capacity: 280 Ah
- Battery voltage: 48 V

TERRAIN CAPABILITIES

- Maximum longitudinal inclination: 3.0°
- Maximum lateral inclination: 5.0°
- Positioning accuracy (+/-): 1.0 cm (0.4 in)

SAFETY FEATURES

- Laser scanner field of view: 360°
- Sick Micro Scanners: 4 units
- Emergency push buttons: 10 units
- Blue spot lamp: 2 units
- Four bumpers, one on each side of the vehicle

NAVIGATION SYSTEMS

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

ENVIRONMENTAL CONDITIONS

- Operating temperature: 15°C – 40°C (59–104 °F)
- Relative humidity: >70%

DIMENSIONS [MM]

