

# Innovative AMR Technologies for Your Business Needs

Technical Specification

## EAE15

Pay Load

**1500KG**

Lifting Height

**4500MM**

Length/Width/Height

**2578/1040/2100MM**



### Counterbalance Forklift

The AE15 AMR robot integrates 2D/3D SLAM navigation, laser odometry, and perception technologies to deliver robust scene adaptability for automotive rack disassembly/stacking, dense storage, dock operations, shelf docking, and robotic arm collaboration, with support for customized solutions. Through advanced manufacturing processes that ensure vehicle consistency, the AE15 achieves  $\pm 5$  mm positioning accuracy (compatible with reflector- and column-based navigation). Multiple algorithms enable automatic recognition, pickup/placement, and disassembly/stacking of pallets, spools, and racks. For safety, the robot is equipped with 360° planar obstacle stopping, forward 3D obstacle avoidance, rear-bottom obstacle detection, low-height and overhead obstacle identification, as well as load presence, spatial, height, and deviation detection. Additional safety features include fork tip collision detection, emergency stop buttons, anti-collision bumpers, and compliance with UL certification standards.

# AITEN

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## Motion performance

The forward-moving mast design significantly reduces operational space requirements, enabling smooth navigation in narrow aisles and high-density storage environments. It supports attachments such as fork side-shifting, fork opening/closing, and fork tilting, as well as customizable tools like clamp arms and rotating forks. These capabilities address specialized requirements in automotive manufacturing, cold chain logistics, and electronics production, delivering millimeter-level precision, agile motion control, and mission-critical reliability across diverse operational scenarios.

## Endurance

Supports both manual and automatic charging with a LiFePO<sub>4</sub> (lithium iron phosphate) battery, offering high safety and over 2,000 charge-discharge cycles. Equipped with a 24V 210Ah battery, it provides 6–8 hours of runtime under rated conditions and supports fast charging with a charging time of less than 2 hours.

## Human-Machine Interaction

Equipped with a human-machine interface (HMI) display for real-time monitoring of system status and operational parameters.

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## Technical Data

|          |   |   |     |       |                        |
|----------|---|---|-----|-------|------------------------|
| Features | 1 | Product Model   |     |       | EAE15                  |
|          | 2 | Drive Type  |     |       | Electric               |
|          | 3 | Operation Mode  |     |       | Laser Guidance         |
|          | 4 | Pay Load  | Q   | kg    | 1500                   |
|          | 5 | Load Center   | C   | mm    | 600                    |
|          | 6 | Front Overhang  | X   | mm    | 167                    |
|          | 7 | Wheelbase   | Y   | mm    | 1100                   |
| Wheels   | 1 | Tire  |     |       | Polyurethane Wheels    |
|          | 2 | Drive Wheel Size  |     | mm    | 254x100                |
|          | 3 | Load-bearing Wheel Size                                 |     | mm    | 210x85                 |
|          | 5 | Number of Wheels (Driving Side/Load-bearing Side)       |     |       | 1x-1/2                 |
|          | 6 | Track (Driving Side)                                    | b10 | mm    | /                      |
|          | 7 | Track (Load-bearing Side)                               | b11 | mm    | 841                    |
| Other    | 1 | Curb Weight   |     | kg    | 2865±50                |
|          | 2 | Axle Load (Driving Side/Load-bearing Side) - Full Load  |     | kg    | 544/3821               |
|          | 3 | Axle Load (Driving Side/Load-bearing Side) - Empty Load |     | kg    | 1589/1276              |
|          | 4 | Vehicle Noise Level                                     |     | dB(A) | <70                    |
|          | 5 | Battery Weight  |     | kg    | 79                     |
|          | 6 | Battery Voltage/Capacity                                |     | V/ah  | 24/301 Lithium Battery |

## AI Recognition

AI-powered perception enables high-precision, adaptive detection of pallets, racks, and cages across multiple specifications, colors, and angles, ensuring stable pickup, placement, and stacking operations.

## Communication

Supports dual-band high-power Wi-Fi 6 (802.11ax) for doubled signal coverage, with optional expansion to industrial-grade Ethernet. Compatible with 802.11b/g/n/ac/ax Wi-Fi protocols.

## Quality Assurance

Each AMR undergoes rigorous testing (e.g., load testing, durability testing) and full-process inspection before delivery, ensuring compliance with 48-hour fault-free operation standards.

|             |    |  |       |      |                       |
|-------------|----|--|-------|------|-----------------------|
| Dimensions  | 1  | Total Height(Forks Lowered)              | H1    | mm   | 2100                  |
|             | 2  | Lifting Height                           | H3    | mm   | 4500                  |
|             | 3  | Fork Ground Clearance (Highest Position) | H2    | mm   | 5423                  |
|             | 4  | Fork Ground Clearance (Lowest Position)  | H5    | mm   | 40                    |
|             | 5  | Total Length                             | L1    | mm   | 2578                  |
|             | 6  | Total Width (with Bumper)                | b1    | mm   | 1040                  |
|             | 7  | Vehicle Body Width                       | b2    | mm   | 950                   |
|             | 8  | Fork dimensions                          | s/e/l | mm   | 110/40/1150           |
|             | 9  | Fork Outer Width                         | b3    | mm   | 400-680               |
|             | 10 | Min Ground Clearance                     | m     | mm   | 50                    |
|             | 11 | Right-angle Stacking Aisle Width         | Ast   | mm   | 3029                  |
|             | 12 | Turning Radius                           | Wa    | mm   | 1296                  |
| Performance | 1  | Travel Speed (loaded/unloaded)           |       | m/s  | 1.5/2                 |
|             | 2  | Lifting Speed (loaded/unloaded)          |       | mm/s | 90/120                |
|             | 3  | Lowering Speed (loaded/unloaded)         |       | mm/s | 100/90                |
|             | 4  | Maximum Gradeability (loaded/unloaded)   |       | %    | 45/78                 |
|             | 5  | Brake Type                               |       |      | Electromagnetic Brake |
|             | 6  | Drive Motor Power                        |       | kw   | AC 2.5                |
|             | 7  | Lifting Motor Power                      |       | kw   | DC 3.0                |



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