Multiway Robotics



R14/R16/R20







Introduction

The R-series forward-moving unmanned forklift is suitable for automatic intermediate transfer and handling of goods between different positions for various types of entering fork-type carriers. It supports a maximum load of 2500kg and a lifting height of up to 9500mm. It can meet the requirements of high stacking operations, with advantages such as fast operation speed, good climbing ability, and strong compatibility with carriers. It is widely used in scenarios such as line integration, goods stacking, shelf access, and automatic loading and unloading.

Features



Environment Adaptive

With laser navigation and positioning, there's no need to renovate the on-site environment.



Non-stop pallet position detection

Visual perception non-stop pallet pose identification can realize fast and accurate pick-and-place of goods.



Highly Intelligent

A whole range of functions such as mapping, path planning, auto-charging, and intelligent operations for various scenarios.



Intelligent Safety

Comprehensive fault self-detection 360° obstacle avoidance and sound & light warning.

Scenarios



Cold Storage Applications

Breaking through the -25°C automation handling requirements, adapting to high and low-temperature switching operations, the series of cold storage vehicle models comprehensively meet various logistics scenarios, including stacking of goods in cold storage and high-level access.



Automatic (un)loading

Compatible multiple models (wing gate, tail gate). Compatible with multiple sizes of cargo (automatic allocation).



Cage Stacking

The motion trajectory is dynamically constructed to achieve accurate stacking of up to 6 layers of material cages. It is also equipped with safety technology detection to ensure operating safety.



High-level Access

The maximum lifting height can reach 10m, enabling quick identification and correction of positional deviations, precise identification of cargo conditions, and avoiding hazards in high-level shelf operations.

R Series Reach Truck

Specifications

| | Model | R14 | R16 | R20 | | | | |
|---|---|---|-------------------|---------|--|--|--|--|
| Basic Parameter Movement Specifications | Navigation | Laser/ Sky Navigation/ Mixed Navigation | | | | | | |
| | Communication | Wi-Fi/ 5G/ Optical Communication | | | | | | |
| | Driving Features | Forward, Reverse, and Turn | | | | | | |
| | Control Mode | Auto/Manual | | | | | | |
| | Rated Load (Q) | 1400 kg | 1600 kg | 2000 kg | | | | |
| | Load Center (C) | 600mm | | | | | | |
| | Weight (Including battery) | 3010~3 | 3375~3650 kg | | | | | |
| | Turning Radius (Wa) | 1705 mm | 1710mm | 1940 mm | | | | |
| Basic Parameter Movement Specifications Battery Specifications | Aisle Width | 3200 | 3250 mm | | | | | |
| | Maximum Lifting Height | 9000mm | 9500 | 9500 mm | | | | |
| | Dimensions (L×W×H) | 2550x1455x (2 | 2600x1550x4930 mm | | | | | |
| | Fork Dimensions (lxexs) | 1150x10 | 1150x100x45 mm | | | | | |
| | Fork Rack Width (b2) | 790 | 830 mm | | | | | |
| | Fork Spread Outer (b3) | 296~690 mm | 710 mm | | | | | |
| | Minimum Height of Fork From the Ground (h6) | 50±5 mm | 55±5 mm | | | | | |
| Basic Parameter Movement Specifications Battery Specifications | Positioning precision (Center of bearing wheel) | | ±20 mm | | | | | |
| | Obstacle Clearing Capability | ≤10 mm | | | | | | |
| | Cross-Groove Capability | | ≤30 mm | | | | | |
| Basic Parameter A Parameter A M Devement Specifications C Battery F Specifications E | Max Driving Speed (No Load/Full Load) | 1.5m/s / 2m/s | | | | | | |
| | Battery Voltage/Capacity (V/Ah) | 48V/450AH | | | | | | |
| Battery Specifications | Run time | 8~10h | | | | | | |
| | Battery Life | Complete charge-discharge 2500 times ≥70% | | | | | | |

Note: In the real-time update of product parameters, the above parameters are for reference only and shall prevail.





| Triplex Mast | | | | | | | | | | | | | | | |
|--|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| R14HD -6355 to 8555mm; R16HD -6355 to 11455mm:R20-4355 to 11455mm; R20N-4355mm to 9455mm | | | | | | | | | | | | | | | |
| Lift | h₃ | 4355 | 4655 | 5155 | 5755 | 6355 | 6655 | 6955 | 7255 | 7555 | 7955 | 8255 | 8555 | 8955 | 9155 |
| Free Lift | h ₂ | 1261 | 1627 | 1627 | 2061 | 2081 | 2081 | 2581 | 2581 | 2581 | 2581 | 2581 | 3081 | 3081 | 3081 |
| Height of mast;lowerd | hı | 2110 | 2476 | 2476 | 2910 | 2930 | 2930 | 3430 | 3430 | 3430 | 3430 | 3430 | 3930 | 3930 | 3930 |
| height of mast; extended | h4 | 5095 | 5395 | 5895 | 6495 | 7139 | 7439 | 7739 | 8039 | 8339 | 8739 | 9039 | 9339 | 9739 | 9939 |
| | | | | | | | | | | | | | | | |

| R14HD -6355 to 8555mm; R16HD -6355 to 11455mm:R20-4355 to 11455mm; R20N-4355mm to 9455mm | | | | | | | | | | |
|--|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lift | h₃ | 9455 | 9655 | 9955 | 10155 | 10455 | 10655 | 10955 | 11155 | 11455 |
| Free Lift | h2 | 3081 | 3081 | 3581 | 3581 | 3581 | 3581 | 4081 | 4081 | 4081 |
| Height of mast; lowerd | hı | 3930 | 3930 | 4430 | 4430 | 4430 | 4430 | 4930 | 4930 | 4930 |
| height of mast; extended | h₄ | 10239 | 10439 | 10739 | 10939 | 11239 | 11439 | 11739 | 11939 | 12239 |

Load Curve





| Aisle Width | | | | | | | | | | |
|-----------------------|---------|------|------|------|--|--|--|--|--|--|
| Model | | R14 | R16 | R20 | | | | | | |
| 1000 | | 3050 | 3050 | 3100 | | | | | | |
| 1000 ↑ x1200mm Pallet | AST(mm) | 3200 | 3200 | 3250 | | | | | | |
| 1200 ↑ x1200mm Pallet | | 3250 | 3250 | 3300 | | | | | | |

Comprehensive safety protection:

Acoustic+physical, 360° protection



Point Cloud Obstacle Avoidance:

The forward simulation algorithm can measure the distance to obstacles, autonomously adjust the moving speed, ensure the vehicle accelerates and decelerates smoothly without sudden changes in speed.



Contact Us

Offices:

USA · Atlanta | Japan · Tokyo | Korea · Seoul Germany · North Rhine-Westphalia China · Shenzhen

Official website: www.mw-r.com

Email: sales@mw-robot.com

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