WIJAY维杰®

Material Automation Expert



Automated Guided Vehicle

AGV SERIES

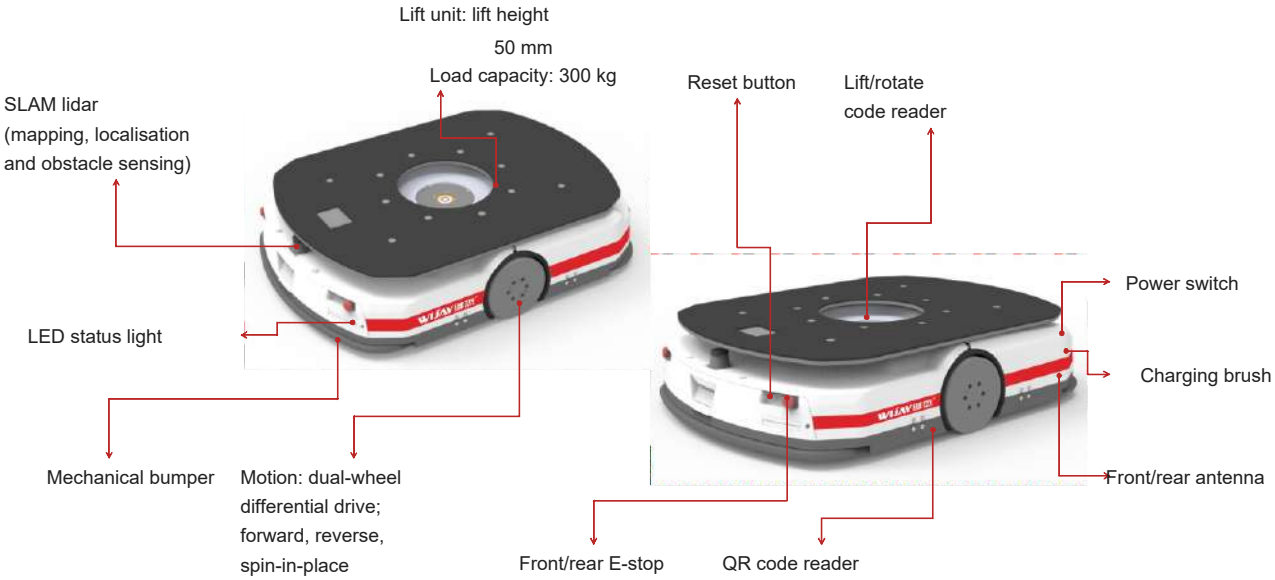
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Low-Profile Carrier AGV

Product Overview

The low-profile robot chassis is a scalable mobile robot platform. With 3D vision and laser SLAM navigation it drives around obstacles automatically, with no floor markers required. Rollers, racks, inspection cameras and other top modules can be fitted, and the platform is open for secondary development. Typical applications are industrial plants, warehouse logistics and smart manufacturing.



Applications

1. Warehouse Transport

2. Production Line

3. Data Check





Functional Features

Navigation: autonomous driving, compatible with SLAM, reflector and QR code navigation.

Motion control: dual-wheel differential drive; autonomous obstacle avoidance, line following and hybrid modes.

Autonomous charging: self-charging at the dock, no operator involved.

Safety: 3D vision, lidar, ultrasonic, photoelectric and mechanical protection.

Connectivity: external Wi-Fi, 4G and 5G modules.

Motion capability: forward, reverse, turning, lifting, transporting and rotating.

Technical Specifications

Parameter	AGV-WJ-1500	AGV-WJ-1000	AGV-WJ-600
	BASIC DATA		
Overall dimensions (L×W×H)	1150 × 820 × 260 mm	1150 × 820 × 260 mm	950 × 650 × 250 mm
Turning diameter	1201 mm	1201 mm	965 mm
Service weight	180 kg	180 kg	130 kg
	PERFORMANCE		
Rated travel speed (laden / unladen)	1.5 / 1.8 m/s	1.5 / 1.8 m/s	1.5 / 1.8 m/s
Acceleration (laden / unladen)	0.3 / 0.6 m/s²	0.3 / 0.6 m/s²	0.3 / 0.6 m/s²
Rotation speed (laden / unladen)	70 / 200 °/s	70 / 200 °/s	70 / 200 °/s
Rated payload	1500 kg	1000 kg	600 kg
Drive	Dual-wheel differential	Dual-wheel differential	Dual-wheel differential
HMI	Touchscreen	Touchscreen	Touchscreen
Chassis suspension	Two-stage floating	Two-stage floating	Two-stage floating
Gradeability	≤ 5% / 2.8°	≤ 5% / 2.8°	≤ 5% / 2.8°
Step crossing	≤ 5 mm	≤ 5 mm	≤ 5 mm
Gap crossing	≤ 30 mm	≤ 30 mm	≤ 30 mm
	NAVIGATION & POSITIONING		
Navigation	Laser SLAM or QR code	Laser SLAM or QR code	Laser SLAM or QR code
Stop position accuracy	± 10 mm	± 10 mm	± 10 mm
Stop angle accuracy	± 1°	± 1°	± 1°
	BATTERY		
Capacity / rated voltage	45 Ah / 48 V	40 Ah / 48 V	24 Ah / 48 V
Charge-discharge cycles	1500 (full cycles)	1500 (full cycles)	1500 (full cycles)
Runtime, rated duty	8 h	8 h	8 h
Charging time, fully discharged	≈ 1.5 h	≈ 1.5 h	≈ 1.5 h
Battery chemistry	LiFePO	LiFePO	LiFePO
	SAFETY		
Emergency stop buttons	2 (front / rear)	2 (front / rear)	2 (front / rear)
Contact protection	Piezo bumper switch	Piezo bumper switch	Piezo bumper switch
Audible / visual alarm	Standard	Standard	Standard
Front laser obstacle detection	1 / 213 mm	1 / 213 mm	1 / 213 mm
3D vision obstacle avoidance	Optional	Optional	Optional

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Pallet Truck AGV

Double-faced pallet handling

Product Overview

This series uses a wide-leg design with an auxiliary lift mechanism, so heavy double-faced pallets can be moved and stacked efficiently while the vehicle stays compact and manoeuvrable. It suits logistics warehouses, manufacturing plants and high-density storage.



Applications

1. Warehouse
Transport

2. Production
Line

3. Cold Chain
Clean

4. Supermarket
Sorting





Functional Features

Parameter	Specification
GENERAL	
Model	WIJAY-15ED
Power source	Electric
Drive mode	AGV automatic / manual remote
Rated capacity (Q)	1500 kg
Load centre (c)	600 mm
Navigation	3D SLAM, natural environment
Connectivity	Wireless / 5G / 4G
Positioning accuracy	± 10 mm
SAFETY FUNCTIONS	
Pallet detection (fork tip)	Optional
Vision anti-collision (front)	Standard
Laser anti-collision (front)	Standard
Mechanical bumper (front)	Standard
Photoelectric anti-collision (fork tip)	Standard
Apron bumper (fork tip)	Standard
Emergency stop	Standard
Tri-colour beacon	Standard
Audible alarm	Standard
MOTOR	
Drive motor	1.25 kW
Lift motor	2.2 kW
Battery	24 V / 105 Ah
Battery weight	52 kg

Parameter	Specification
DIMENSIONS	
Wheels	Polyurethane
Service weight (incl. battery)	520 kg
Fork lift height (h)	180 mm
Fork height, lowered (h)	92 mm
Overall length (l)	1832 mm
Body height (h)	2035 mm
Body width (b)	873 mm
Fork dimensions (s/e/l)	70 / 160 / 1200 mm
Fork spread (b)	660 mm
Ground clearance (m)	30 mm
Min. right-angle stack aisle, Ast	2150 mm
Aisle width, 1200 × 1200 pallet, Wa	2400 mm
PERFORMANCE	
Travel speed, laden / unladen	5 / 5 km/h
Lift speed, laden / unladen	30 / 35 mm/s
Lowering speed, laden / unladen	42 / 30 mm/s
Gradeability, laden / unladen	3 / 5 % (1.5° / 2.5°)
Service brake	Electromagnetic

Service Life of Main Components

No.	Component	Specification	Unit	Qty	Replacement interval (years)
1	Battery	LiFePO	pc	1	3 (duty dependent)
2	Travel motor	—	set	1	8
3	Steering motor	—	set	1	8
4	Lift motor	—	set	1	8
5	Core controller	Wijay ECS800	pc	1	8
6	Oil-free bearing	SF-1F182012	set	1	10
7	Load wheel axle	Custom	set	1	10
8	Load wheel bushing	Custom	set	1	10
9	Deep-groove ball bearing	6304	set	1	10
10	Lift contactor	SU80B-5447P	set	1	6

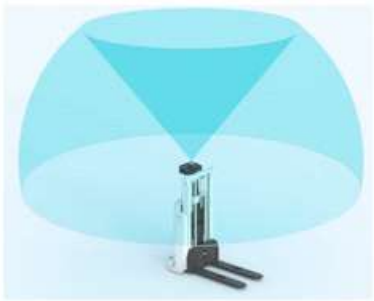
Key Advantages

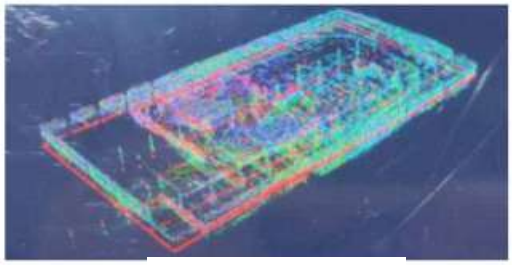
Both four-way entry (block) pallets and three-runner (stringer) pallets can be handled by the same vehicle, so no changeover is needed. The result is high flexibility, stable load handling, narrow-aisle capability and low total cost. A standard pallet jack, by contrast, cannot pick a block pallet — a counterbalance or reach truck would be required, which costs more, takes more floor space and needs AGV aisles of 3400–3800 mm.

Navigation uses 3D SLAM in the natural environment, with millimetre-level positioning and stable indoor/outdoor operation. Maps of up to 800,000 m² can be built, and obstacles are avoided within 0.5 s.



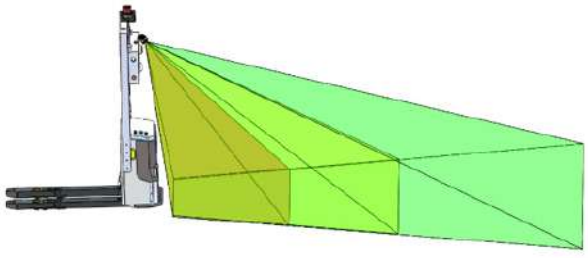
Mid-360



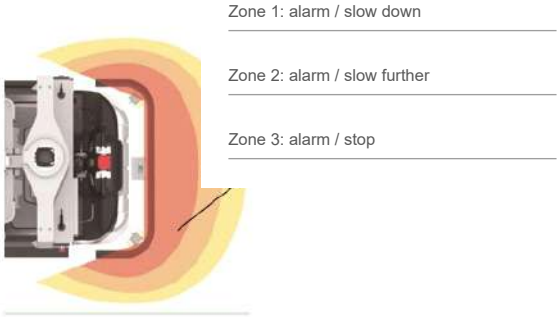


3D site simulation

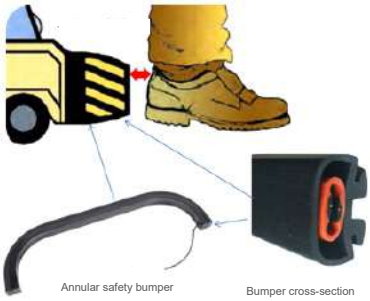
Safety package: vision anti-collision, laser anti-collision, mechanical bumpers, photoelectric anti-collision, apron bumpers and emergency stop buttons.



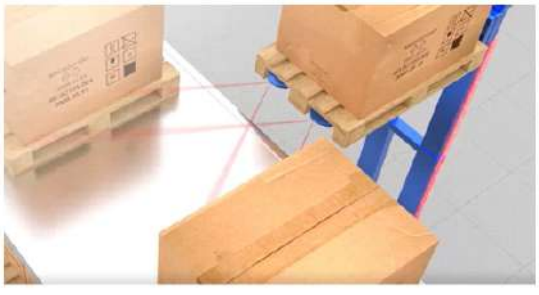
3D vision coverage zone



Laser anti-collision



Vision anti-collision: AGV stops on contact



Photoelectric anti-collision



Emergency stop

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Handling Forklift

Pallet truck AGV



Product Overview

A handling forklift, also known as a pallet truck, is an industrial vehicle built for horizontal material flow. Its job is to move goods over short distances inside warehouses, workshops and similar facilities.



BASIC SPECIFICATIONS			
Overall dimensions (L×W×H)	1900 × 800 × 2000 mm	Min. turning radius	1627 mm
Service weight, incl. battery	750 kg	Max. gradeability, laden / unladen	5 / 8 %
Load capacity	2000 / 3000 kg	Travel mode	Forward / reverse / turning / spin
Standard lift height	125 mm	Min. aisle width	2900 mm
Fork dimensions (s/e/l), customisable	64 / 170 / 1150 mm	Battery chemistry	LiFePO
Fork spread	540 / 680 mm	Battery capacity	24 V / 202 Ah
Fork height above floor	85 mm	Runtime	6–8 h
Travel speed, adjustable in steps	0–1500 mm/s	Charging time	2 h
Navigation	2D SLAM / 3D SLAM	Laser anti-collision	Standard
Repeatability	± 10 mm	Fork-tip detection (photoelectric / ultrasonic)	Standard
Lift speed, laden / unladen	47 / 65 mm/s	Mechanical bumper	Standard
Lowering speed, laden / unladen	75 / 70 mm/s	E-stop, beacon, load detection	Standard

Functional Features

Flexible and efficient in narrow aisles:
The compact, streamlined body moves easily through narrow passages, raising space utilisation. 24/7 unmanned operation keeps production running without interruption.

Simple operation, one-button start/stop:
The intelligent control system starts or stops a task with a single press. Built-in navigation and route planning complete material moves without complex set-up, so the barrier for operators is low.

Flexible operation with automatic charging:
The AGV returns to the charger on schedule or at low battery, with no operator involved. Intelligent power management keeps round-the-clock operation running.

Applications

1. Warehouse
Transport

2. Production
Line

3. Cold Chain
Clean

4. Supermarket
Sorting





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Stacker Forklift

Rack-access AGV



Product Overview

A stacker forklift is warehouse equipment designed to store and retrieve goods on racks. Its vertical lift capability meets the demands of medium and high bay racking.



BASIC SPECIFICATIONS			
Overall dimensions (L×W×H)	2200 × 800 × 2000 mm	Min. turning radius	1662 mm
Service weight, incl. battery	1450 kg	Max. gradeability, laden / unladen	5 / 8 %
Load capacity	1600 kg (1200 / 1400 / 2000 optional)	Travel mode	Forward / reverse / turning / spin
Standard lift height	2700 mm (2000–5500 optional)	Min. aisle width	3200 mm
Fork dimensions (s/e/l), customisable	60 / 185 / 1150 mm	Battery chemistry	LiFePO
Fork spread	570 / 680 mm	Battery capacity	24 V / 202 Ah
Fork height above floor	90 mm	Runtime	6–8 h
Travel speed, adjustable in steps	0–1500 mm/s	Charging time	2 h
Navigation	2D SLAM / 3D SLAM	Laser anti-collision	Standard
Repeatability	± 10 mm	Fork-tip detection (photoelectric / ultrasonic)	Standard
Lift speed, laden / unladen	108 / 160 mm/s	Mechanical bumper	Standard
Lowering speed, laden / unladen	185 / 155 mm/s	E-stop, beacon, load detection	Standard

Functional Features

Flexible lift height:
Stacking heights of 2–5.5 m make full use of the vertical space and raise storage capacity.

High handling accuracy:
A side shifter and adjustable forks hold fork positioning to ± 10 mm, keeping high-level work stable and safe.

Flexible operation:
Automatic charging on schedule or at low battery keeps the unit working 24/7.

Applications

1. Warehouse
Transport

2. Production
Line

3. Racking
Mobile

4. Cross-floor
Handling









Selected Customers

Wijay has designed and delivered automated handling systems for powder, liquid and paste raw materials at Futong Group, Country Garden Group, China FAW Group and other plastics industry customers, helping them build digital plants to international standards. The work has been recognised by a large number of Fortune 500 companies.







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Material handling automation, engineered and built in China

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