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Please note that due to product upgrades, the specifications and parameters may be changed without prior notice. VisionNav assumes no responsibility for any resulting consequences from the changes. Please contact the sales team for the latest information.

INTRALOGISTICS AUTOMATION

Efficient / Safe / Flexible

VisionNav Robotics

VisionNav Robotics

The leading global supplier of autonomous forklifts and intralogistics automation solutions.

VisionNav Robotics is a leading global supplier of autonomous forklifts and intralogistics automation solutions. VisionNav autonomous forklifts utilize AI & machine learning, environment perception and servo control technologies to deliver reliable performances without human interference. VisionNav AGVs work on hundreds of facilities across the world, providing over 11m pallet storages, narrow-aisle operations, automated truck loadings, multi-layer cage stackings and other fully autonomous actions. Dozens of Fortune 500 companies in automotive, food, petrochemical, e-commerce, 3rd-party logistics, pharmaceutical, and other key industries use VisionNav robots to make their operations safer, efficient, and future-proof.

Advantages

Excellent Logistics Robot Performance
Stable, flexible, safe and efficient.

Business-Driven Solution

Seamlessly embedded in customer business processes.

Cutting-edge Technology

Adopting the leading-edge technology to deal with critical challenges.

Stable Supply Chain and Professional Services
Stable supply chain, professional team, fast work order response and 100% turn-key delivery.

Mission

We strive to be the leadingprovider of innovative and personalized solutions that continuously optimize the supply chain.

Full range scenarios application of intralogistics

Flexible logistics automation solution covering all range of intralogistics scenarios, dealing with various goods in factories and warehousing industries.

Ground-Ground Transportation

Adapted to standard carriers, non-standard carriers and non-carriers for automated material transfer.

Truck Loading and Unloading

Accurately match different types of trucks, and realize a highly automated closed-loop of the whole process of intralogistics.

High Bay Putaway and Retrival

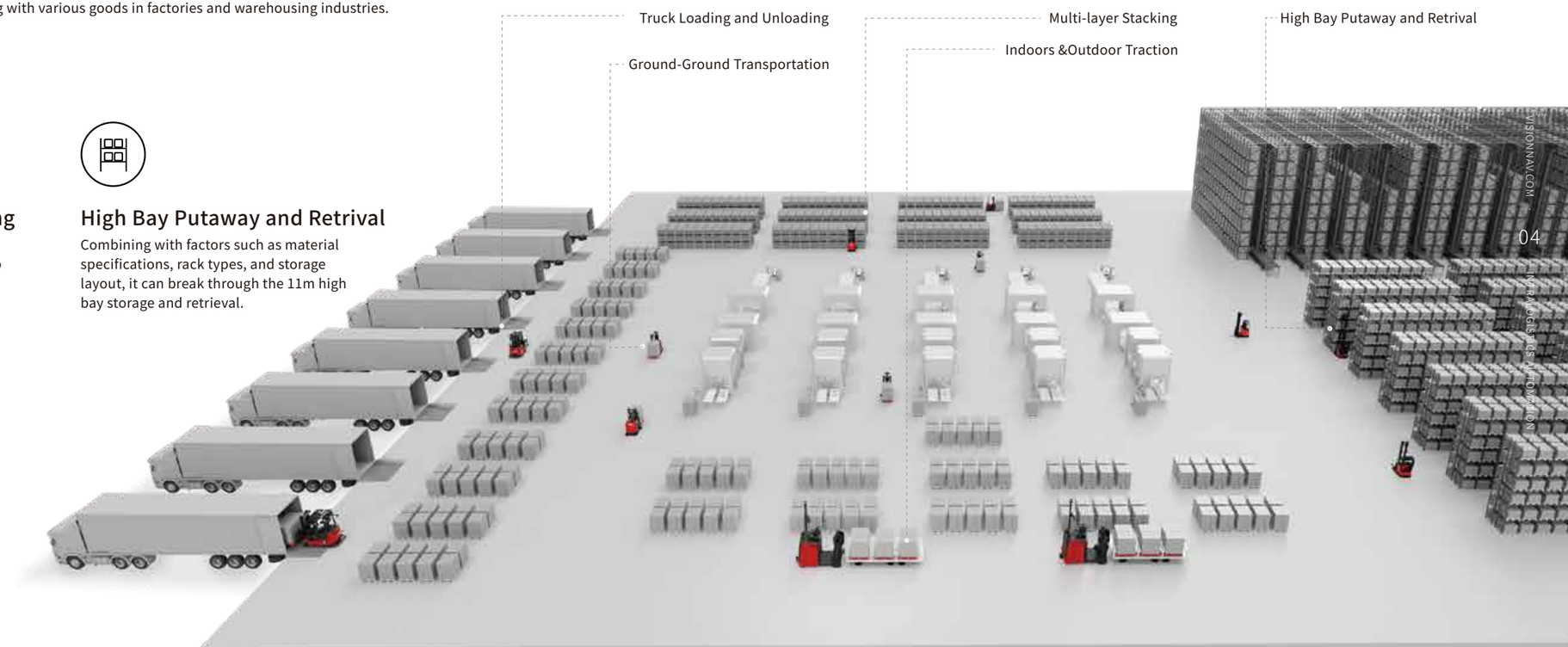
Combining with factors such as material specifications, rack types, and storage layout, it can break through the 11m high bay storage and retrieval.

Multi-layer Stacking

Integrating the "vision + 3D laser" navigation and perception technology to achieve accurate stacking of more than six layers of goods.

Indoors &Outdoor Traction

Integrating high-precision navigation, positioning and environmental perception technology to flexibly respond to complex outdoor environments.



Services Network

Sales, Operations, and Services in 30+ Countries and Regions.

24 / 7 Help Desk

- Service@int.visionnav.com
- VisionNav Service Teams Account:
- VisionNav Robotics Helpdesk

Maintenance

- Replacing Spare Parts Service
- Service Packages: Maintenance Package
- System Technical Support And Upgrade

Training & Certification

- Training service for product use
- Certification of vehicle operator training

Spare Parts Center

- 100% Preparation
- Long lead time parts stored

Solution Architecture

Wi-Fi

UPPER SYSTEM

System- MES/WMS

WEB API Restful Protocol

SOFTWARE

RCS
(Robot Control System)

Docking with:
Automated Equipment
Elevator, Automatic Door
Roller Conveyor, Button/ Tablet

Bright Eye System

WIP(Wait in Process) monitoring
Inventory Kit

HARDWARE

Autonomous
Industrial Vehicles

SCENARIOS

Applications

VisionNav Robotics has been highly recognized by customers in terms of operation efficiency, accuracy, scene adaptability, safety. In addition, our products have been widely used in 1. FMCG, Home appliance, Pharmaceutica, Automotive, e-commerce logistics, third-party logistics and other fields.

Manufacturing

FMCG
Home appliance
Pharmaceutica
Automotive
Other

Logistics industry

Third-Party Logistics
E-commerce Logistics

Software: RCS 2.0

Robot Control System is a visualized intelligent scheduling system for up to 150 AGVs communication and task management. The system can realize multi-AGV scheduling, path planning, collisions avoidance, task management and data analysis in large-scale vehicle scheduling scenarios. By Scheduling from the cloud, the system functions effectively, flexibly and stably. Docking with MES/WMS/ERP system and coordinated with vision navigation modules, the system can provide customers a more integrated and cooperative solution of industrial vehicle.

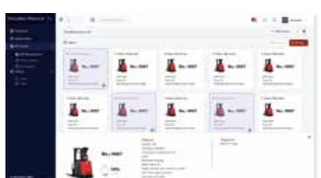
Multiple Devices Polling

Docking with management systems (WMS/WCS/MES)

Schedule robots and tasks

Quick view of devices status

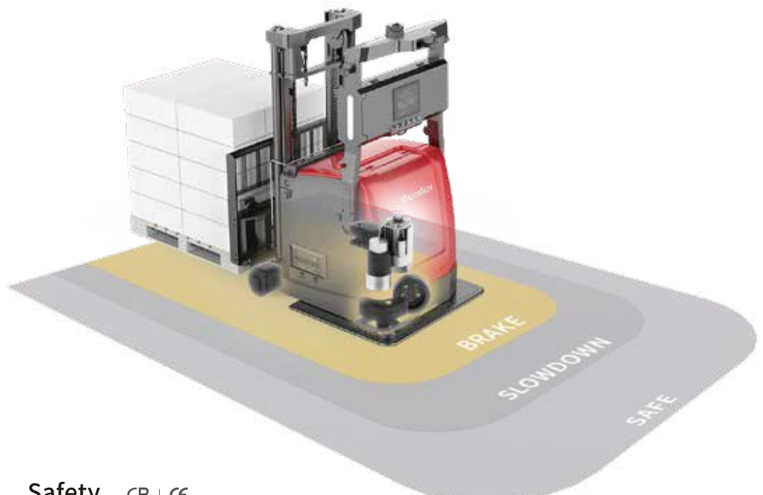
Real-Time Map



Task Management

Dash Board

Hardware: Autonomous Industrial Vehicles



Positioning Module

- High flexibility: Real-time map generation
- High accuracy: up to ±10mm indoors
- High scene adaptability (indoor & outdoor)

Perception Module

- 3D accurate detection of 6 degrees of freedom position and angle of the target goods with accuracy up to ±10mm, ±0.5°

Safety

- Strictly complied with international safety design standards, utlise dual-system control and 5 level safety protection with real-time risk warning.

Motivation Module

- Adaptive control: high precision, variable load Partial autonomous planning to enhance vehicle flexibility Ultimate space utilization.

Autonomous Industrial Vehicles in different scenarios

Product series	CE	ST series	P series	SL series	R series	E series	Q series
Product type		PALLET STACKER	COUNTERBALANCE STACKER	PALLET STACKER	REACH TRUCK	COUNTERBALANCE TRUCK	TOW TRACTOR
Carrier Type	Nine Block Pallet	•	•	•	•	•	
	3 Base Pallet	•	•	•	•	•	
	Perimeter Base Pallet	•	•		•	•	
	Stillage Cage/Multi-Layer Rack	•	•	•	•	•	
	Trailers						•
	None-carrier Materials		•			•	
Recommend Scenarios	Ground-Ground Transportation	•	•	•	•	•	
	Production Line Transfer	•	•	•	•	•	
	Goods Stacking		•			•	
	Put-Away and Picking	•	•	•	•	•	
	Truck Loading & Unloading					•	
	Indoor Traction						•

VNSL14(VL)-07 SLIM PALLET STACKER AGV

By using 3D SLAM navigation and 3D Laser perception module on narrow body pallet stacker AGV,the project implementation period is shortened and the AGV has high reliability; The AGV has narrow body design with customizable forks and supporting legs based on different scenarios,which provides great flexibility, and strong adaptability.

1400kg
Rated Load Capacity

1600mm
Fork Lifting Height

1173mm
Min. Turning Radius

2200mm
Min. Stacking Aisle Width

Product pictures

VNSL14(VL)-07 Fundamental Technical Parameters

Body Weight	1000kg	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	1400kg	Battery Type	Lithium iron phosphate ($LiFePO_4$)
Vehicle Dimensions	1642x994x2150mm	Voltage/Capacity	24V/180Ah
Fork Dimensions	1150x180x60mm	Charging Mode	Manual/ Automatic Charging
Optional Fork Dimensions Series	1250/1350/1450mm	Min. Stacking Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Width)	2200mm
Fork Lifting Height	1600mm	Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Width)	1800mm
Fork Outer Width	560/680mm	Working Temperature	-5°C ~ 40°C
Fork Inner Width	200/320mm	Working Humidity	20% ~ 95%
Positioning Method	3D SLAM	Ground Flatness	±5mm/㎡
Perception Method	3D Laser scanner	Max. Climbing Ability (Full-Load/Empty-load)	5%, 5% (3°, 3°)
Locating Precision	±10mm/±0.5°	Max. Groove Width	30mm
Goods Pick-up Self-adaptability	±100mm/±10°	Max. Step Height	10mm
Load Center Distance	600mm	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	1173mm	Rear Safety Protection	Laser Scanner Protection + Non-Contact Sensor
Detecting height of the safety laser	100mm	Top Safety Protection	Photoelectric Sensor + Ultrasound Scanner
Straight Forward Speed (Full-Load/Empty-Load)	1.0m/s , 1.3m/s	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s		
Lifting Up Speed (Full-Load/Empty-Load)	115mm/s , 175mm/s		
Lifting Down Speed (Full-Load/Empty-Load)	160mm/s , 125mm/s		

- Customizable fork length, fork outer width, and supporting legs outer width; With duplex mast option, the lifting height can reach 1600mm, 2500mm, and 3000mm (body weight varies slightly with different mast selections); Other available options: 5G communication, battery heating, loads over height detection, UWB safety system, barcode scanner, dash camera, RFID reader, etc.
All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.
Due to products upgrade, the specifications and parameters may be changed without notice. Please consult the sales for details.

VNST20(VL)-66 SLIM PALLET JACK AGV

By using 3D SLAM navigation +3D laser adaptive sensing, the project import is fast and the cross fetch repeat precision is high. The vehicle weight is light, can support cross-floor work; The length and width of the fork can be customized according to the scene, making the vehicle more flexible and adaptable.

2000kg
Rated Load Capacity

115mm
Fork Lifting Height

1431mm
Min. Turning Radius

2150mm
Min. Stacking Aisle Width

Product pictures

VNST20(VL)-66 Fundamental Technical Parameters

Body Weight	500kg	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	2000kg	Battery Type	Lithium iron phosphate ($LiFePO_4$)
Vehicle Dimensions	1620x800x1830mm	Voltage/Capacity	48V/40Ah
Fork Dimensions	1150x175x55mm	Charging Mode	Manual/ Automatic Charging
Optional Fork Dimensions Series	850/950/1050/1250/1350/1450/1550mm	Min. Stacking Aisle Width (Pallet Size L*W:1200*800mm, Across Forks On Width)	2150mm
Fork Lifting Height	115mm	Min. Turning Aisle Width (Pallet Size L*W:1200*800mm, Across Forks On Width)	1900mm
Fork Outer Width	560mm	Working Temperature	-5°C ~ 40°C
Fork Inner Width	210mm	Working Humidity	20% ~ 95%
Positioning Method	3D SLAM	Ground Flatness	±5mm/㎡
Perception Method	3D Laser scanner	Max. Climbing Ability (Full-Load/Empty-load)	5%, 5% (3°, 3°)
Locating Precision	±8mm/±1°	Max. Groove Width	30mm
Goods Pick-up Self-adaptability	±100mm/±10°	Max. Step Height	10mm
Load Center Distance	600mm	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	1431mm	Rear Safety Protection	Laser Scanner Protection + Non-Contact Sensor
Detecting height of the safety laser	110mm	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Full-Load/Empty-Load)	1.4m/s , 1.8m/s	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s		
Lifting Up Time (Full-Load/Empty-Load)	3.2s , 1.8s		
Lifting Down Time (Full-Load/Empty-Load)	1.9s , 2.7s		

- Optional fork length, fork outside width;Optional 5G communication, battery heating, code scanning gun, traffic recorder, RFID card reader, etc.
All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.
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VNP15(VL)-07 COUNTERBALANCE STACKER AGV

Taking advantages of 3D SLAM navigation and 3D laser perception module, the project implementation period is shortened and the AGV has high reliability; The AGV has 360-degree safety protection with customizable forks and other tools based on different scenarios, which provides high level safety, great flexibility, and strong adaptability.

1500kg
Rated Load Capacity

3000mm
Fork Lifting Height

1490mm
Min. Turning Radius

3150mm
Min. Stacking Aisle Width

Product pictures

VNP15(VL)-07 Fundamental Technical Parameters

Body Weight	2900kg	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	1500kg	Battery Type	Lithium iron phosphate ($LiFePO_4$)
Vehicle Dimensions	2543x1344x2085mm	Voltage/Capacity	24V/270Ah
Fork Dimensions	1040x100x40mm	Charging Mode	Manual/ Automatic Charging
Optional Fork Dimensions Series	890/1190/1340/1490/1640/1790mm	Min. Stacking Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Length)	3150mm
Fork Lifting Height	3000mm	Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Length)	2152mm
Fork Outer Width	560/680mm	Working Temperature	-5℃ ~ 40℃
Fork Inner Width	336/456mm	Working Humidity	20% ~ 95%
Positioning Method	3D SLAM	Ground Flatness	±5mm/㎡
Perception Method	3D Laser scanner	Max. Climbing Ability (Full-Load/Empty-load)	5%, 5% (3°, 3°)
Locating Precision	±10mm/±0.5°	Max. Groove Width	30mm
Goods Pick-up Self-adaptability	±100mm/±10°	Max. Step Height	10mm
Load Center Distance	500mm	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	1490mm	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	110mm	Top Safety Protection	Photoelectric Sensor + Ultrasound Scanner
Straight Forward Speed (Full-Load/Empty-Load)	1.3m/s , 1.5m/s	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Full-Load/Empty-Load)	0.6m/s , 0.6m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Lifting Up Speed (Full-Load/Empty-Load)	100mm/s , 150mm/s		
Lifting Down Speed (Full-Load/Empty-Load)	180mm/s, 100mm/s		

- Customizable fork length, fork outer width, and supporting legs outer width; With duplex mast option, the lifting height can reach 3500mm, 4000mm, and 4500mm. With triplex mast option, the lifting height can reach 4500mm (body weight varies slightly with different mast selections); Available fork type options: Side shifter and adjustable forks; Other available options: 5G communication, battery heating, battery trolley for battery swap, loads over height detection, UWB safety system, barcode scanner, dash camera, RFID reader, etc. Maximum load capacity varies with lifting height, please refer to load capacity curve.
All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.
Due to products upgrade, the specifications and parameters may be changed without notice. Please consult the sales for details.

VNP20(VL)-07 COUNTERBALANCE STACKER AGV

Taking advantages of 3D SLAM navigation and 3D laser perception module, the project implementation period is shortened and the AGV has high reliability; The AGV has 360-degree safety protection with customizable forks and other tools based on different scenarios, which provides high level safety, great flexibility, and strong adaptability.

1900kg
Rated Load Capacity

3000mm
Fork Lifting Height

1900mm
Min. Turning Radius

3650mm
Min. Stacking Aisle Width

Product pictures

VNP20(VL)-07 Fundamental Technical Parameters

Body Weight	3300kg	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	1900kg	Battery Type	Lithium iron phosphate ($LiFePO_4$)
Vehicle Dimensions	3051x1344x2085mm	Voltage/Capacity	24V/270Ah
Fork Dimensions	1040x100x40mm	Charging Mode	Manual/ Automatic Charging
Optional Fork Dimensions Series	890/1190/1340/1490/1640/1790mm	Min. Stacking Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks Length)	3650mm
Fork Lifting Height	3000mm	Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks Length)	2400mm
Fork Outer Width	560/680mm	Working Temperature	-5°C ~ 40°C
Fork Inner Width	336/456mm	Working Humidity	20% ~ 95%
Positioning Method	3D SLAM	Ground Flatness	±5mm/㎡
Perception Method	3D Laser scanner	Max. Climbing Ability (Full-Load/Empty-load)	5%, 5% (3°, 3°)
Locating Precision	±10mm/±0.5°	Max. Groove Width	30mm
Goods Pick-up Self-adaptability	±100mm/±10°	Max. Step Height	10mm
Load Center Distance	500mm	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	1900mm	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	110mm	Top Safety Protection	Photoelectric Sensor + Ultrasound Scanner
Straight Forward Speed (Full-Load/Empty-Load)	1.3m/s, 1.5m/s	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Full-Load/Empty-Load)	0.6m/s , 0.6m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Lifting Up Speed (Full-Load/Empty-Load)	80mm/s , 150mm/s		
Lifting Down Speed (Full-Load/Empty-Load)	250mm/s , 100mm/s		

- Customizable fork length, fork outer width, and supporting legs outer width; With duplex mast option, the lifting height can reach 3500mm, 4000mm, and 4500mm. With triplex mast option, the lifting height can reach 4500mm (body weight varies slightly with different mast selections); Available fork type options: Side shifter and adjustable forks; Other available options: 5G communication, battery heating, battery trolley for battery swap, loads over height detection, UWB safety system, barcode scanner, dash camera, RFID reader, etc. Maximum load capacity varies with lifting height, please refer to load capacity curve.

All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.

Due to products upgrade, the specifications and parameters may be changed without notice. Please consult the sales for details.

VNP30(VL)-07 COUNTERBALANCE STACKER AGV

Taking advantages of 3D SLAM navigation and 3D laser perception module, the project implementation period is shortened and the AGV has high reliability; The AGV has 360-degree safety protection with customizable forks and other tools based on different scenarios, which provides high level safety, great flexibility, and strong adaptability.

3000kg
Rated Load Capacity

3000mm
Fork Lifting Height

2020mm
Min. Turning Radius

3850mm
Min. Stacking Aisle Width

Product pictures

VNP30(VL)-07 Fundamental Technical Parameters

Body Weight	4800kg	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	3000kg	Battery Type	Lithium iron phosphate ($LiFePO_4$)
Vehicle Dimensions	3250x1420x2170mm	Voltage/Capacity	48V/400Ah
Fork Dimensions	1010x125x45mm	Charging Mode	Manual/ Automatic Charging
Optional Fork Dimensions Series	860/1160/1310/1460/1610mm	Min. Stacking Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks Length)	3850mm
Fork Lifting Height	3000mm	Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks Length)	2585mm
Fork Outer Width	560/680mm	Working Temperature	-5°C ~ 40°C
Fork Inner Width	286/406mm	Working Humidity	20% ~ 95%
Positioning Method	3D SLAM	Ground Flatness	±5mm/㎡
Perception Method	3D Laser scanner	Max. Climbing Ability (Full-Load/Empty-load)	5%, 5% (3°, 3°)
Locating Precision	±10mm/±0.5°	Max. Groove Width	30mm
Goods Pick-up Self-adaptability	±100mm/±10°	Max. Step Height	10mm
Load Center Distance	500mm	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	2020mm	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	145mm	Top Safety Protection	Photoelectric Sensor + Ultrasound Scanner
Straight Forward Speed (Full-Load/Empty-Load)	1.3m/s, 1.5m/s	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.6m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s		
Lifting Up Speed (Full-Load/Empty-Load)	200mm/s , 320mm/s		
Lifting Down Speed (Full-Load/Empty-Load)	340mm/s , 290mm/s		

- Customizable fork length, fork outer width, and supporting legs outer width; With duplex mast option, the lifting height can reach 3500mm, 4000mm, and 4500mm. With triplex mast option, the lifting height can reach 4500mm (body weight varies slightly with different mast selections); Available fork type options: Side shifter and adjustable forks; Other available options: 5G communication, battery heating, battery trolley for battery swap, loads over height detection, UWB safety system, barcode scanner, dash camera, RFID reader, etc. Maximum load capacity varies with lifting height, please refer to load capacity curve.

All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.

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VNR SERIES REACH TRUCK AGV

The combination of navigation module (Vision-based or 3D SLAM) and 3D Laser perception module provides higher accuracy on different perspectives such as vehicle positioning, goods loading , goods unloading, and etc. The VNR series has 360-degree laser safety protection with mechanical protection. In addition, it is suitable for selective pallet rack, drive-in rack, and other high position storage scenarios.

2000kg
Max. Rated Load Capacity

7255mm
Max. Fork Lifting Height

1695mm
Min. Turning Radius

3250mm
Min. Stacking Aisle Width

Product pictures

VNR Series Fundamental Technical Parameters

Model	VNR14(VL)-01	VNR16(VL)-01	VNR20(VL)-01
Body Weight	3140kg	3190kg	3460kg
Rated Load Capacity	1400kg	1600kg	2000kg
Reach Retracts Dimensions	2651x1635x2476mm	2651x1635x2476mm	2672x1635x3430mm
Reach Extends Dimensions	3075x1635x2476mm	3185x1635x2476mm	3295x1635x3430mm
Fork Dimensions	1115x100x45mm		
Optional Fork Dimensions	1265/1365/1465/1565mm		
Fork Lifting Height	5755mm		7255mm
Fork Outer Width	710mm		
Fork Inner Width	486mm		
Mast Forward Distance	424mm	534mm	623mm
Positioning Method	Vision-based Navigation		
Perception Method	3D Laser scanner		
Goods Pick-up Self-adaptability	±100mm/±10°		
Locating Precision	±10mm/±0.5°		
Min. Turning Radius	1695mm	1800mm	1915mm
Load Center Distance	600mm		
Straight Forward Speed (Full-Load/Empty-Load)	2.0m/s, 2.0m/s		
Straight Backward Speed (Full-Load/Empty-Load)	0.6m/s, 0.6m/s		
Forward Turning Speed (Full-Load/Empty-Load)	0.3m/s, 0.6m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s, 0.6m/s		
Lifting Up Speed (Full-Load/Empty-Load)	400mm/s, 660mm/s		320mm/s, 510mm/s
Lifting Down Speed (Full-Load/Empty-Load)	550mm/s, 450mm/s		550mm/s, 400mm/s

Model	VNR14(VL)-01	VNR16(VL)-01	VNR20(VL)-01
Side Shift Range	±80mm		
Type of Operation	Automatic / Manual Seated		
Battery Type	Lithium iron phosphate ($LiFePO_4$)		
Voltage/Capacity	48V/400Ah		
Charging Mode	Manual/ Automatic Charging		
Supporting Legs Height	310mm		373mm
Min. Stacking Aisle Width (Reach Retracts)	3250mm		3300mm
Min. Stacking Aisle Width (Reach Extends)	3700mm	3800mm	3900mm
Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Width)	2500mm		2600mm
Working Temperature	-5°C ~ 40°C		
Working Humidity	20% ~ 95%		
Ground Flatness	±3mm/㎡		
Max. Climbing Ability (Full-Load/Empty-load)	10%, 10% (6°, 6°)		
Max. Groove Width	30mm		
Max. Step Height	10mm		
Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Rear Safety Protection	Laser Scanner Protection + Contact Sensor		
Top Safety Protection	Photoelectric Sensor + Ultrasound Scanner		
Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm		

- Side shifter is standard configuration; Customizable 3D SLAM navigation; come with triplex mast option with lifting height 5755mm, 7255mm, 8555mm , 9455mm(weight of car body varies with the selection of masts with different lifting heights); other available options: 5G communication, battery heating, battery trolleyfor battery swap, loads over-height detection, UWB safety system, barcode scanner,dash camera and RFID reader, and etc.

All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.

Due to products upgrade, the specifications and parameters may be changed without notice. Please consult the sales for details.

VNE20(VL)-07 COUNTERBALANCE TRUCK AGV

Counterbalanced forklit AGV is based on 3D SLAM navigation+3D laser adaptive sensing, which can make the project import fast and the forking repeatability high;The vehicle is capabale to drive faster and overcome steeper routes.; Narrow body design, supporting fork length, outer width and outrigger customization according to the scene, with great flexibility and stronger adaptability.

2000kg
Rated Load Capacity

3000mm
Fork Lifting Height

1835mm
Min. Turning Radius

3560mm
Min. Stacking Aisle Width

Standard multiple attachments

Product pictures

VNE20(VL)-07 Fundamental Technical Parameters

Body Weight	3350kg	Type of Operation	Automatic / Manual Seated
Rated Load Capacity	2000kg	Battery Type	Lithium iron phosphate ($LiFePO_4$)
Vehicle Dimensions	3222x1250x2035mm	Voltage/Capacity	48V/400Ah
Fork Dimensions	1040x100x40mm	Charging Mode	Manual/ Automatic Charging
Optional Fork Dimensions Series	890/1190/1340/1490/1640/1790mm	Min. Stacking Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Length)	3560mm
Fork Lifting Height	3000mm	Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Length)	2435mm
Fork Outer Width	450/1000mm	Working Temperature	-5°C ~ 40°C
Fork Inner Width	225/775mm	Working Humidity	20% ~ 95%
Positioning Method	3D SLAM	Ground Flatness	±5mm/㎡
Perception Method	3D Laser scanner	Max. Climbing Ability (Full-Load/Empty-load)	13%, 15% (7°, 8.5°)
Locating Precision	±10mm/±0.5°	Max. Groove Width	50mm
Goods Pick-up Self-adaptability	±100mm/±10°	Max. Step Height	30mm
Load Center Distance	500mm	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	1835mm	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	145mm	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Full-Load/Empty-Load)	2.7m/s , 2.7m/s	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-Load)	1.0m/s , 1.0m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s , 0.3m/s		
Lifting Up Speed (Full-Load/Empty-Load)	260mm/s , 340mm/s		
Lifting Down Speed (Full-Load/Empty-Load)	300mm/s , 300mm/s		

- Side shifter is standard configuration; Customizable fork length, fork outer width, and supporting legs outer width; come with duplex mast option, the lifting height can reach3000mm, 3500mm, 4000mm, and 4500mm. With triplex mast option, the lifting height can reach 4500mm (body weight varies slightly with different mast selections); Available fork type options: Side shifter and adjustable forks; Other available options: 5G communication, battery heating, battery trolley for battery swap, loads over-height detection, LWB safety system, barcode scanner, dash camera, RFID reader, etc.
All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.
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VNE SERIES COUNTERBALANCE TRUCK AGV

Counterbalanced forklit AGV is based on 3D SLAM navigation+3D laser adaptive sensing, which can make the project import fast and the forking repeatability high;The vehicle is capabale to drive faster and overcome steeper routes.; Narrow body design, supporting fork length, outer width and outrigger customization according to the scene, with great flexibility and stronger adaptability.

4000kg
Max. Rated Load Capacity

3000mm
Max. Fork Lifting Height

2240mm
Min. Turning Radius

4200mm
Min. Stacking Aisle Width

Standard multiple attachments

Product pictures

VNE Series Fundamental Technical Parameters

Model	VNE30(VL)-07	VNE35(VL)-07	VNE40(VL)-07
Body Weight	5450kg	5600kg	6200kg
Rated Load Capacity	3000kg	3500kg	4000kg
Vehicle Dimensions	3621x1430x2190mm		
Fork Dimensions	1040x125x45mm	1040x125x50mm	
Optional Fork Dimensions Series	890/1190/1340/1490/1640/1790mm		
Fork Lifting Height	3000mm		
Fork Outer Width	450/1050mm		
Fork Inner Width	175/775mm		
Positioning Method	3D SLAM		
Perception Method	3D Laser scanner		
Goods Pick-up Self-adaptability	±100mm/±10°		
Stacking Accuracy	±15mm/±0.5°		
Load Center Distance	500mm		
Min. Turning Radius	2240mm		
Straight Forward Speed (Full-Load/Empty-Load)	1.9m/s, 2.2m/s		
Straight Backward Speed (Full-Load/Empty-Load)	0.6m/s, 0.6m/s		
Forward Turning Speed (Full-Load/Empty-Load)	1.0m/s, 1.0m/s		
Backward Turning Speed (Full-Load/Empty-Load)	0.3m/s, 0.6m/s		
Lifting Up Speed (Full-Load/Empty-Load)	280mm/s, 350mm/s	260mm/s, 350mm/s	
Lifting Down Speed (Full-Load/Empty-Load)	300mm/s, 300mm/s		

Model	VNE30(VL)-07	VNE35(VL)-07	VNE40(VL)-07
Type of Operation	Automatic / Manual Seated		
Battery Type	Lithium iron phosphate ($LiFePO_4$)		
Voltage/Capacity	83.2V/500Ah		
Charging Mode	Manual/ Automatic Charging		
Min. Stacking Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Length)	4200mm		
Min. Turning Aisle Width (Pallet Size L*W:1200*1000mm, Across Forks On Length)	2620mm		
Working Temperature	-5°C ~ 40°C		
Working Humidity	20% ~ 95%		
Ground Flatness	±10mm/㎡		
Max. Climbing Ability (Full-Load/Empty-load)	13%, 15% (7°, 8.5°)		12%, 15% (6.8°, 8.5°)
Max. Groove Width	50mm		
Max. Step Height	30mm		
Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Rear Safety Protection	Laser Scanner Protection + Contact Sensor		
Top Safety Protection	3D Laser Scanner Protection		
Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm		

- Side shifter is standard configuration; Optional fork length, fork outside width;Optional duplex mast lifting height 3000mm, 3500mm, 4000mm, 4500mm, triplex mast lifting height 4500mm (body weight with the height of the door slightly different); Optional side shifter, pitch fork; Optional 5G communication, battery heating, battery trolley, safety sensor, cargo ultra high detection, UWB warning system, scan gun, traffic recorder, RFID card reader, etc.

All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions.
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VNQ50(VL)-01 AUTONOMOUS TOW TRACTOR

Autonomous tractor is based on 3D SLAM navigation, Its maintenance is convinient.High parking Accuracy with high efficiency.3D laser is capable of detecting high-level obstacles for safer transportation.IPX4 waterproof grade.

5000kg
Rated Load Capacity

1050mm
Wheelbase

1300mm
Min. Turning Radius

3D SLAM
Positioning Method

Product pictures

VNQ50(VL)-01 Fundamental Technical Parameters

Body Weight	1000kg	Voltage/Capacity	24V/270Ah
Rated Load Capacity	5000kg	Charging Mode	Manual/ Automatic Charging
Vehicle Dimensions	1650x860x2000mm	Tyre type	Rubber(outdoor)/Polyurethane (indoor)
Center Height of Traction Pin	290/345/400mm	Min. Turning Aisle Width (Excluding cart)	1700mm
Wheelbase	1050mm	Working Temperature	-5°C ~ 40°C
Sound level at driver's ear	<70dB	Working Humidity	20% ~ 95%
Rated drawbar pull	1000N	Ground Flatness	±5mm/㎡
Drive motor output (60 min.rating)	3kW	Max. Climbing Ability (Full-Load/Empty-load)	5%, 24% (3°, 13°)
Service brake	Electro-magnetic	Max. Groove Width	30mm
Positioning Method	3D SLAM	Max. Step Height	20mm
Cart Type	Quad Steer	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	1300mm	Top Safety Protection	Laser Scanner Protection
Position Accuracy	±50mm/±1°	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Forward Speed (Full-Load/Empty-load)	2.0m/s , 2.0m/s	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Full-Load/Empty-load)	0.3m/s , 0.6m/s	• Customizable UWB ranging alarm system, magnetic markers guidance, hooking and unhooking module, battery heating package, RFID card reader, dashcam, etc. All the above parameters are obtained from the factory testing environment of standard products, and the vehicle parameters and performance of the project may vary according to actual conditions. Due to products upgrade, the specifications and parameters may be changed without notice. Please consult the sales for details.	
Type of Operation	Automatic / Manual Seated		
Battery Type	LFP Battery		