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FULL SPECTRUM LOGISTICS AUTOMATION

Efficient / Safe / Flexible

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VisionNav Robotics

VisionNav Robotics

A LEADING GLOBAL SUPPLIER OF AUTONOMOUS INDUSTRIAL VEHICLES AND LOGISTICS AUTOMATION SOLUTIONS

VisionNav® Robotics is a global leader in autonomous industrial vehicles (AMRs/AGVs) and logistics automation solutions. Utilizing deep learning, environment perception, and servo control technologies, VisionNav has developed nine product series to address full-stack material handling scenarios. With over 750 projects deployed across more than 30 countries, VisionNav is trusted by numerous Fortune 500 companies in industries such as automotive, food and beverage, chemical, pharmaceutical, and 3PL, enhancing operational safety, efficiency, and future readiness.

MISSION

To meet the challenges of labor shortages and improve the working practices of more than 20 million workers around the world with advanced autonomous vehicles that accomplish repetitive, high-risk, and high-intensity work.

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.

COMPREHENSIVE APPLICATION
ACROSS ALL MATERIAL HANDLING SCENARIOS

Flexible logistics automation solution covering the full range of intralogistics scenarios, managing diverse goods in manufacturing and logistics industries.

Ground-Ground Transportation

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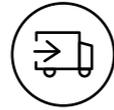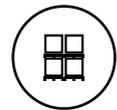
Trailer loading and unloading

Accurately matches various types of trucks, enabling a highly automated, closed-loop logistics process.

High Bay Racking

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

Stacking

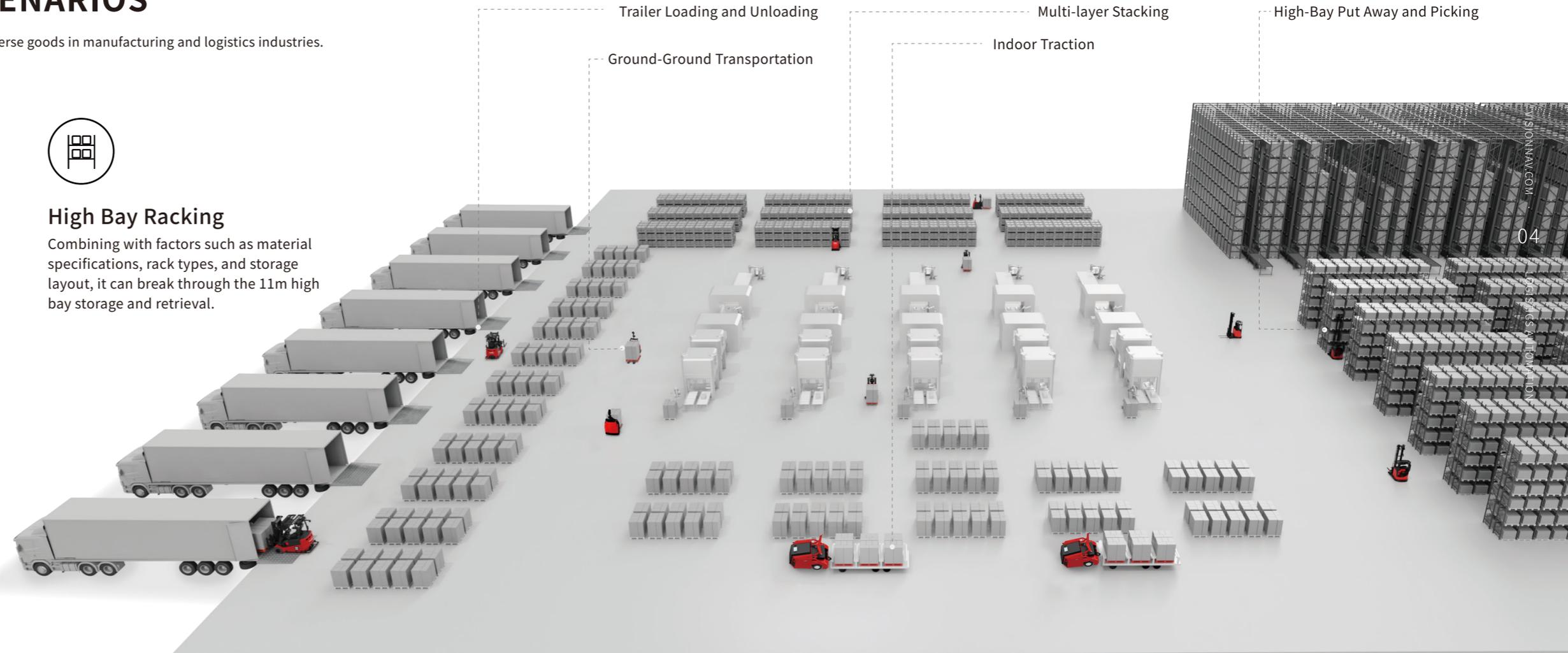Integrates "vision + 3D laser" positioning and perception technologies to enable precise stacking of goods in over six layers.

Indoor Traction

Integrates high-precision navigation, positioning, and perception technology to adapt flexibly to complex indoor environments.

Trailer Loading and Unloading

Ground-Ground Transportation

Multi-layer Stacking

Indoor Traction

High-Bay Put Away and Picking

04

SERVICES NETWORK

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

Europe

Asia

Rotterdam

North America

Detroit

Atlanta

Seoul Tokyo

Shenzhen
Hong Kong, China

Middle East

South Asia

Singapore

South-East Asia

Training & Certification

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

24 / 7 Help Desk

- Email: Service@int.visionnav.com
- Phone: +1-888-666-6190
- Teams: VisionNav Robotics Helpdesk

South America

Maintenance

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

Global Spare Parts Center

- Spare parts center: global multi-point coverage, 100% long-term stock
- Wearable and critical parts: recommended for purchase by users

Oceania

● Branch Company   ● Service Partner /Service Station   ● Spare Parts Center

SOLUTION ARCHITECTURE

CLIENT'S SYSTEM

Supper management System-WMS/MES/ERP

Elevator Conveyor Autodoor

HTTP/HTTPs as standard and Others

Modbus TCP as standard and Others

VN SYSTEM

RCS (Robot Control System)

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

Bright Eye System

WIP(Working in progress) monitoring
Inventory Kit

Wifi

HARDWARE

Autonomous Vehicles

SCENARIOS

Trailor Loading & Unloading

Cages Stacking

Traction

High-bay Racking

Ground Transportation

APPLICATIONS

VisionNav Robotics is trusted by leading companies across various industries for its operational efficiency, accuracy, adaptability to diverse scenarios, and safety. VisionNav products are widely utilized in sectors such as Automotive, FMCG, pharmaceuticals,3PL, and more.

Manufacturing

Food & Beverage
FMCG
Electrical products
Automotive
Chemical
Packaging
Pharmaceutical
Metal products
Machinery
Apparel & Shoes
Textile Products
Furniture and Related
Construction

Logistics

3PL
Wholesale & Retail

08

SOFTWARE: FLEET MANAGEMENT SYSTEM

Fleet Management System is a visualized intelligent scheduling platform designed to manage communication and tasks for up to 150 AGVs/AMRs. It enables multi-vehicle scheduling, path planning, collision avoidance, task management, and data analysis in large-scale operations. Utilizing cloud-based scheduling, the system ensures efficient, flexible, and stable performance. Integrated with MES/WMS/ERP systems via VDA 5050 protocol and coordinated with advanced positioning modules, it provides customers with a comprehensive and collaborative solution for industrial vehicle management.
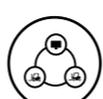
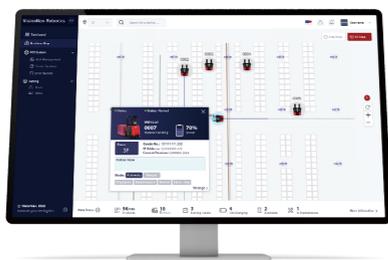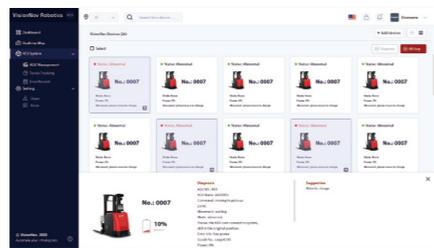| Multiple Devices Polling | Docking with manage-ment systems (WMS/WCS/MES) | Schedule robots and tasks | Quick view of devices status | VDA 5050 protocol |

Real-Time Map   Task Management   Dash Board
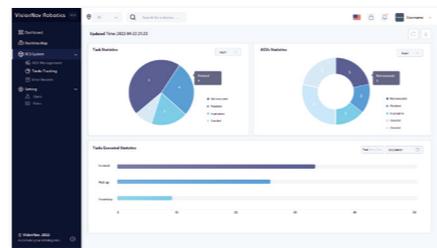
HARDWARE: AUTONOMOUS INDUSTRIAL VEHICLES

BRAKE
SLOWDOWN
SAFE

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   (ANSI) B56.5 ISO3691-4
· 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 VEHICLES SCENARIOS COVERAGE
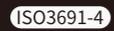
Product series ANSI B56.5 ISO3691-4		ST series	SL series	P series	E series	R series	Q series	K series	KQ series
Product Type		PALLET JACK	PALLET JACK	COUNTERBALANCE STACKER	COUNTERBALANCE TRUCK	REACH TRUCK	TUGGER	PLATFORM AMR	TOWING AMR
Carrier Type	GMA stringer pallet	✓	✓	✓	✓	✓			
	CHEP pallet	✓		✓	✓	✓			
	PECO pallet	✓		✓	✓	✓			
	Stillage Cage/Multi-Layer Rack	✓	✓	✓	✓	✓		✓	
	Rolling Carts						✓		✓
	None-carrier Materials			✓	✓				
Recommend Scenarios	Ground-Ground Transportation	✓	✓	✓	✓	✓		✓	
	Production Line Transfer	✓	✓	✓	✓	✓			
	Goods Stacking			✓	✓				
	High-bay Racking		✓			✓			
	Trailer loading and unloading	✓							
	Indoor Traction						✓		✓

VNSL14(VL)-07 SLIM PALLET JACK AGV/AMR

With the 3D local-SLAM positioning and perception modules on slim-shaped pallet stackers, the implementation period is shortened, and reliability is improved. The vehicle features customizable forks and supporting legs tailored to various scenarios, providing exceptional flexibility and adaptability.
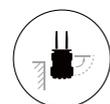
ⓘ *Notice:* Specifications are provided for reference only and may change as part of continuous product improvement.
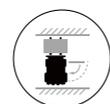
3000lb
Rated Load Capacity

Up to 118in
Fork Lifting Height

47in
Min. Turning Radius

87in
Min. Stacking Aisle Width

Product Views

VNSL14(VL)-07 Fundamental Technical Parameters

Body Weight	2200 lb (1000kg)	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	3000 lb (1400kg)	Battery Type	Lithium iron phosphate battery（LiFePO$_4$）
Vehicle Dimensions	65x40x85in (1650x1000x2150 mm)	Voltage/Capacity	24V/180Ah
Fork Dimensions	45.3x7.1x2.5in (1150x180x60mm)	Charging Mode	Manual/ Automatic Charging
Optional Fork Lengths	49.2x53.x57.1in (1250/1350/1450mm)	Min. Stacking Aisle Width	87in (2200mm)
Fork Lifting Height	Up to 118in (3000mm)	Min. Turning Aisle Width	71in (1800mm)
Width Across Forks	22.1 / 26.8in (560/680mm)	Ambient Temperature	-5℃ ~ 40℃
Width Inside Straddle	7.9 / 12.6in (200/320mm)	Ambient Humidity	20% ~ 95%
Positioning Method	3D SLAM-based	Ground Flatness	±0.20in/㎡ (±5mm/㎡)
Perception Method	3D Scanning-based	Max. Climbing Ability (Loaded/Empty)	5%, 5% (3°, 3°)
Localization Precision	±0.39in/±0.5° (±10mm/±0.5°)	Max. Gap Width	1.18in (30mm)
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)	Max. Obstacle Height	0.39in (10mm)
Load Center Distance	24in (600mm)	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	47in (1173mm)	Rear Safety Protection	Laser Scanner Protection + Non-Contact Sensor
Detecting height of the safety laser	3.9in (100mm)	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	2.24mph，2.91mph (1.0m/s, 1.3m/s)	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Loaded/Empty)	0.67mph，0.67mph (0.3m/s, 0.3m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Backward Turning Speed (Loaded/Empty)	0.67mph，0.67mph (0.3m/s, 0.3m/s)		
Lifting Up Speed (Loaded/Empty)	0.26mph，0.39mph (115mm/s, 175mm/s)		
Lifting Down Speed (Loaded/Empty)	0.36mph，0.28mph (160mm/s，125mm/s)		

* 1.Performance Specifications: Specifications are based on the model equipped with a 63 in (1600 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.
2.Fork Accessories: Customizable fork length, fork width, and supporting legs width.
3.Optional Accessories: Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNST20(VL)-66 PLUS SLIM PALLET JACK AGV/AMR

Designed for efficient truck loading, unloading, and fast handling, this forklift is equipped with 3D local-SLAM positioning and perception modules on slim-shaped pallet jack, which shortens the implementation period and enhances reliability. The vehicle also features customizable forks and supporting legs, tailored to various scenarios, offering exceptional flexibility and adaptability.

ⓘ *Notice: Specifications are provided for reference only and may change as part of continuous product improvement.*
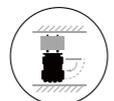
4410lb
Rated Load Capacity

64x31.5x78in
Vehicle Dimensions

56in
Min. Turning Radius

89in
Min. Stacking Aisle Width

Product Views

VNST20(VL)-66 Fundamental Technical Parameters

Body Weight	1278lb (580kg)	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	4410lb (2000kg)	Battery Type	Lithium iron phosphate battery（LiFePO₄）
Vehicle Dimensions	64x31.5x78in (1620x800x1930mm)	Voltage/Capacity	48V/105Ah
Fork Dimensions	45.3x6.9x2.2in (1150x175x55mm)	Charging Mode	Manual/ Automatic Charging
Optional Fork Lengths	34/37/41/49/53/57/61in (850/950/1050/1250/1350/1450/1550mm)	Min. Stacking Aisle Width	89in (2250mm)
Fork Lifting Height	4.5in (115mm)	Min. Turning Aisle Width	75in (1900mm)
Width Across Forks	26.7in (680mm)	Ambient Temperature	-5℃ ~ 40℃
Width Inside Straddle	13in (330mm)	Ambient Humidity	20% ~ 95%
Positioning Method	3D SLAM-based	Ground Flatness	±0.20in/㎡ (±5mm/㎡)
Perception Method	3D LIDAR-based	Max. Climbing Ability (Loaded/Empty)	5%, 5% (3°, 3°)
Localization Precision	±0.31in/±1° (±8mm/±1°)	Max. Gap Width	1.18in (30mm)
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)	Max. Obstacle Height	0.39in (10mm)
Load Center Distance	23.6in (600mm)	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	56in (1430mm)	Rear Safety Protection	Laser Scanner Protection + Non-Contact Sensor
Detecting height of the safety laser	3.5in (82mm)	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	3.13mph，4.03mph (1.4m/s, 1.8m/s)	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Loaded/Empty)	0.67mph，0.67mph (0.3m/s, 0.3m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Backward Turning Speed (Loaded/Empty)	0.67mph，0.67mph (0.3m/s, 0.3m/s)		
Lifting Up Time (Loaded/Empty)	3.2s, 1.8s		
Lifting Down Time (Loaded/Empty)	1.9s，2.7s		

· 1.Performance Specifications: Specifications are based on the model with a 1219x1016mm load, and across forks on width.
2.Fork Accessories: Customizable fork length, fork width.
3.Optional Accessories: UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.

VNP15(VL)-66 COUNTERBALANCE STACKER AGV/AMR

Designed for modern logistics operations, the VNP15 combines advanced 3D SLAM navigation with intelligent perception to enable fast deployment and stable autonomous performance. Comprehensive 360° safety protection and configurable forks and clamps allow it to handle diverse material-handling tasks with exceptional flexibility, reliability, and efficiency.
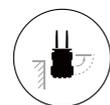
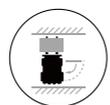ⓘ *Notice: Specifications are provided for reference only and may change as part of continuous product improvement.*

3300lb
Rated Load Capacity

Up to 177in
Fork Lifting Height

86.6in (Min. Turning Radius)
Min. Turning Radius

130in
Min. Stacking Aisle Width

Product Views

VNP15(VL)-66 Fundamental Technical Parameters

Body Weight	6600lb (3000kg)	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	3300lb (1500kg)	Battery Type	Lithium Iron Phosphate Battery（LiFePO$_4$）
Vehicle Dimensions	106x40x80in (2700x1020x2040mm)	Voltage/Capacity	48V200Ah
Fork Dimensions	46.9x3.9x1.6in (1190x100x40mm)	Charging Mode	Manual/ Automatic Charging
Optional Fork Lengths	35/41/52.8/58.7/64.6/70.5in (890/1040/1340/1490/1640/1790mm)	Min. Stacking Aisle Width	130in (3300mm)
Fork Lifting Height	Up to 177in (4500mm)	Min. Turning Aisle Width	87in (2200mm)
Width Across Forks	22.1 in/26.8in (560/680mm)	Ambient Temperature	-5℃ ~ 40℃
Width Inside Straddle	13.2 in/17.9in (336/456mm)	Ambient Humidity	20% ~ 95%
Positioning Method	3D SLAM-based	Ground Flatness	±0.20in/㎡ (±5mm/㎡)
Perception Method	3D Scanning-based	Max. Climbing Ability (Loaded/Empty)	5%, 5% (3°, 3°)
Localization Precision	±0.39in/±0.5° (±10mm/±0.5°)	Max. Gap Width	1.18in (30mm)
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)	Max. Obstacle Height	0.39in (10mm)
Load Center Distance	20in (500mm)	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	86.6in (2200mm)	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	5.7in (145mm)	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	4.70 mph, 5.60 mph (2.1m/s, 2.5m/s)	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Backward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Lifting Up Speed (Loaded/Empty)	0.31mph，0.47mph (140mm/s, 200mm/s)		
Lifting Down Speed (Loaded/Empty)	0.67mph，0.56mph (300mm/s, 250mm/s)		

* 1.Performance Specifications: Specifications are based on the model equipped with a 118-inch (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.
2.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
3.Optional Accessories: Battery Trolley, Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNP20(VL)-66 COUNTERBALANCE STACKER AGV/AMR

Leveraging 3D SLAM navigation and a 3D laser perception module, the implementation period is shortened, and the vehicle achieves high reliability. It offers 360-degree safety protection and can be equipped with customizable forks and other tools tailored to different scenarios, ensuring a high level of safety, exceptional flexibility, and strong adaptability.
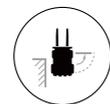
ⓘ *Notice:* Specifications are provided for reference only and may change as part of continuous product improvement.
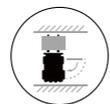
4400lb
Rated Load Capacity

Up to 177in
Fork Lifting Height

56in
Min. Turning Radius

142in
Min. Stacking Aisle Width

Product Views

VNP20(VL)-66 Fundamental Technical Parameters

Body Weight	7000lb (3200kg)	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	4400lb (2000kg)	Battery Type	Lithium iron phosphate battery（LiFePO₄）
Vehicle Dimensions	118x40x82in (3010x1020x2087mm)	Voltage/Capacity	48V200Ah
Fork Dimensions	46.9x3.9x1.6in (1190x100x40mm)	Charging Mode	Manual/ Automatic Charging
Optional Fork Lengths	35/41/53/59/65/70in (890/1040/1340/1490/1640/1790mm)	Min. Stacking Aisle Width	142in (3600mm)
Fork Lifting Height	Up to 177in (4500mm)	Min. Turning Aisle Width	95in (2400mm)
Width Across Forks	22.1 in/26.8in (560/680mm)	Ambient Temperature	-5℃ ~ 40℃
Width Inside Straddle	13.2 in/17.9in (336/456mm)	Ambient Humidity	20% ~ 95%
Positioning Method	3D SLAM-based	Ground Flatness	±0.20in/m² (±5mm/m²)
Perception Method	3D Scanning-based	Max. Climbing Ability (Loaded/Empty)	5%, 5% (3°, 3°)
Localization Precision	±0.39in/±0.5° (±10mm/±0.5°)	Max. Gap Width	1.18in (30mm)
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)	Max. Obstacle Height	0.20in (5mm)
Load Center Distance	20in (500mm)	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	56in (1424mm)	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	4.3in (110mm)	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	4.70 mph, 5.60 mph (2.1m/s, 2.5m/s)	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Backward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Lifting Up Speed (Loaded/Empty)	0.31mph，0.47mph (140mm/s, 200mm/s)		
Lifting Down Speed (Loaded/Empty)	0.67mph，0.56mph (300mm/s, 250mm/s)		

1.Performance Specifications: Specifications are based on the model equipped with a 118-inch (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.
2.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
3.Optional Accessories: Battery Trolley, Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNP30(VL)-66 COUNTERBALANCE STACKER AGV/AMR

Leveraging 3D SLAM navigation and a 3D laser perception module, the implementation period is shortened, and the vehicle achieves high reliability. It offers 360-degree safety protection and can be equipped with customizable forks and other tools tailored to different scenarios, ensuring a high level of safety, exceptional flexibility, and strong adaptability.

ⓘ **Notice:** *Specifications are provided for reference only and may change as part of continuous product improvement.*
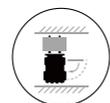
6600lb
Rated Load Capacity

Up to 118in
Fork Lifting Height

75in
Min. Turning Radius

148in
Min. Stacking Aisle Width

Product Views

VNP30(VL)-66 Fundamental Technical Parameters

Body Weight	11400lb (5200kg)	Type of Operation	Automatic / Manual Handheld
Rated Load Capacity	6600lb (3000kg)	Battery Type	Lithium iron phosphate battery（LiFePO₄）
Vehicle Dimensions	130x48.3x82.6in (3300x1220x2100mm)	Voltage/Capacity	48V/400Ah
Fork Dimensions	46.8x5x1.6in (1190x125x45mm)	Charging Mode	Auto/Manual
Optional Fork Lengths	35/40.9/52.7/58.6/64.5/70.4in (890/1040/1340/1490/1640/1790mm)	Min. Stacking Aisle Width	148in (3750mm)
Fork Lifting Height	Up to 118in (3000mm)	Min. Turning Aisle Width	96in (2450mm)
Width Across Forks	22.1 in/26.8in (560/680mm)	Ambient Temperature	-5℃ ~ 40℃
Width Inside Straddle	11.3/16in (336/456mm)	Ambient Humidity	20% ~ 90%
Positioning Method	3D SLAM-based	Ground Flatness	±0.20in/㎡（±5mm/㎡）
Perception Method	3D LIDAR-based	Max. Climbing Ability (Loaded/Empty)	5%, 5% (3°, 3°)
Localization Precision	0.39in/±0.5° (±10mm/±0.5°)	Max. Gap Width	1.18in (30mm)
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)	Max. Obstacle Height	0.39in (10mm)
Load Center Distance	20in (500mm)	Front Safety Protection	3D Lidar+2D Laser Scanner+ Anti-Collision Bumper
Min. Turning Radius	75in (1910mm)	Rear Safety Protection	3D Lidar+2D Laser Scanner+ Contact Sensor
Detecting height of the safety laser	5.7in (145mm)	Top Safety Protection	3D Lidar
Straight Forward Speed (Loaded/Empty)	4.47mph，4.47mph (2.0m/s, 2.0m/s)	Side Safety Protection	3D Lidar+2D Laser Scanner+ Anti-Collision Bumper
Straight Backward Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Backward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)		
Lifting Up Speed (Loaded/Empty)	0.63mph，0.78mph (280mm/s, 350mm/s)		
Lifting Down Speed (Loaded/Empty)	0.78mph，0.67mph (350mm/s, 300mm/s)		

* 1.Performance Specifications: Specifications are based on the model equipped with a 118-inch (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.
2.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
3.Optional Accessories: Battery Trolley, Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNR SERIES REACH TRUCK AGV/AMR

The combination of the Vision-based positioning module and 3D laser perception module enhances accuracy across various aspects, including vehicle positioning, goods picking, and put-away. The VNR series features 360-degree laser safety protection along with mechanical safeguards, making it ideal for high-bay racking.
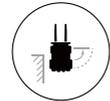
ⓘ *Notice: Specifications are provided for reference only and may change as part of continuous product improvement.*
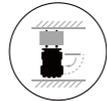
4400lb
Rated Load Capacity

Up to 450in
Fork Lifting Height

67in
Min. Turning Radius

128in
Min. Stacking Aisle Width

Product Views

VNR Series Fundamental Technical Parameters

Model	VNR14(VL)-01	VNR16(VL)-01	VNR20(VL)-01	Model	VNR14(VL)-01	VNR16(VL)-01	VNR20(VL)-01
Body Weight	6900lb (3140kg)	7000lb (3190kg)	7600lb (3460kg)	Side Shift Range	±3.15in (±80mm)		
Rated Load Capacity	3100lb (1400kg)	3500lb (1600kg)	4400lb (2000kg)	Type of Operation	Automatic / Manual Seated		
Reach Retracts Dimensions	104x65x98in (2650x1640x2480mm)	104x64x98in (2650x1640x2480mm)	105x64x135in (2670x1640x3430mm)	Battery Type	Lithium iron phosphate battery（LiFePO$_4$）		
Reach Extends Dimensions	121x65x98in (3080x1640x2480mm)	125x65x98in (3185x1640x2480mm)	130x64x135in (3295x1635x3430mm)	Voltage/Capacity	48V/400Ah		
Fork Dimensions	41x4x1.8in (1115x100x45mm)			Charging Mode	Manual/ Automatic Charging		
Optional Fork Lengths	50/54/58/62in (1260/1360/1460/1560 mm)			Supporting Legs Height	13.4in (310mm)		373mm (373mm)
Fork Lifting Height	Up to 335in (8500mm)	Up to 450in (11400mm)		Min. Stacking Aisle Width (Reach Retracts)	128in (3250mm)		130in (3300mm)
Width Across Forks	28in (710mm)			Min. Stacking Aisle Width (Reach Extends)	145in (3700mm)	150in (3800mm)	153.5in (3900mm)
Width Inside Straddle	19in (486mm)			Min. Turning Aisle Width	99in (2500mm)		102.4in (2600mm)
Mast Forward Distance	16.7in (424mm)	21in (534mm)	24.5in (623mm)	Ambient Temperature	-5°C ~ 40°C		
Positioning Method	3D SLAM-based			Ambient Humidity	20% ~ 95%		
Perception Method	3D Scanning-based			Ground Flatness	±0.12in/m² (±3mm/m²)		
Localization Precision	±0.39in/±0.5° (±10mm/±0.5°)			Max. Climbing Ability (Loaded/Empty)	10%，10% (6°，6°)		
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)			Max. Gap Width	1.18in (30mm)		
Min. Turning Radius	67in (1695mm)	70.9in (1800mm)	75.4in (1915mm)	Max. Obstacle Height	0.39in (10mm)		
Load Center Distance	24in (600mm)			Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Straight Forward Speed (Loaded/Empty)	4.47mph，4.47mph (2.0m/s, 2.0m/s)			Rear Safety Protection	Laser Scanner Protection + Contact Sensor		
Straight Backward Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)			Top Safety Protection	3D Laser Scanner Protection		
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)			Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Backward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)			Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm		
Lifting Up Speed (Loaded/Empty)	0.89mph，1.48mph (400mm/s, 660mm/s)		0.72mph，1.14mph (320mm/s, 510mm/s)				
Lifting Down Speed (Loaded/Empty)	1.23mph，1.01mph (550mm/s, 450mm/s)		1.23mph，0.89mph (550mm/s, 400mm/s)				

· 1.Performance Specifications: Specifications are based on the model equipped with a 225 in (5755 mm) triple telescopic mast, a 1219x1016mm load size, and with across forks on width.
2.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNE20(VL)-07 COUNTERBALANCE TRUCK AGV/AMR

The Counterbalanced Forklift AGV/AMR, featuring 3D SLAM navigation and 3D laser adaptive sensing, ensures rapid project deployment and high forking repeatability. The vehicle is capable of driving at higher speeds and handling steeper routes. With customizable clamps, fork length, outer width, and outriggers, it offers exceptional flexibility and adaptability to various scenarios, particularly in semi-outdoor operations.
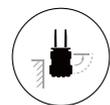
ⓘ **Notice:** *Specifications are provided for reference only and may change as part of continuous product improvement.*
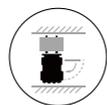
4400lb
Rated Load Capacity

Up to 177in
Fork Lifting Height

73in
Min. Turning Radius

148in
Min. Stacking Aisle Width

Product Views

VNE20(VL)-07 Fundamental Technical Parameters

Body Weight	7400lb (3350kg)	Type of Operation	Automatic / Manual Seated
Rated Load Capacity	4400lb (2000kg)	Battery Type	Lithium iron phosphate battery（LiFePO$_4$）
Vehicle Dimensions	136x50x80in (3460x1250x2040mm)	Voltage/Capacity	48V/400Ah
Fork Dimensions	47x4x1.6in (1190x100x40mm)	Charging Mode	Manual/ Automatic Charging
Optional Fork Lengths	35/41/53/59/65/71in (890/1040/1340/1490/1640/1790mm)	Min. Stacking Aisle Width	148in (3760mm)
Fork Lifting Height	Up to 177in (4500mm)	Min. Turning Aisle Width	98in (2470mm)
Width Across Forks	17.7/39.4in (450/1000mm)	Ambient Temperature	-5℃ ~ 40℃
Width Inside Straddle	9/31in (225/775mm)	Ambient Humidity	20% ~ 95%
Positioning Method	3D SLAM-based	Ground Flatness	±0.39in/㎡ (±5mm/㎡)
Perception Method	3D Scanning-based	Max. Climbing Ability (Loaded/Empty)	13%, 15% (7°, 8.5°)
Localization Precision	±0.39in/±0.5° (±10mm/±0.5°)	Max. Gap Width	1.97in (50mm)
Goods Pick-up Self-adaptability	±3.94in/±10° (±100mm/±10°)	Max. Obstacle Height	1.18in (30mm)
Load Center Distance	20in (500mm)	Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Radius	73in (1835mm)	Rear Safety Protection	Laser Scanner Protection + Contact Sensor
Detecting height of the safety laser	5.7in (145mm)	Top Safety Protection	3D Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	6.04mph，6.04mph (2.7m/s, 2.7m/s)	Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper
Straight Backward Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Forward Turning Speed (Loaded/Empty)	2.24mph，2.24mph (1.0m/s, 1.0m/s)		
Backward Turning Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)		
Lifting Up Speed (Loaded/Empty)	0.58mph，0.76mph (260mm/s, 340mm/s)		
Lifting Down Speed (Loaded/Empty)	0.67mph，0.67mph (300mm/s, 300mm/s)		

· 1.Performance Specifications: Specifications are based on the model equipped with a 118-inch (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.
2.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
3.Optional Accessories: Battery Trolley, Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNE SERIES COUNTERBALANCE TRUCK AGV/AMR

The Counterbalanced Forklift AGV/AMR, featuring 3D SLAM navigation and 3D laser adaptive sensing, ensures rapid project deployment and high forking repeatability. The vehicle is capable of driving at higher speeds and handling steeper routes. With customizable clamps, fork length, outer width, and outriggers, it offers exceptional flexibility and adaptability to various scenarios, particularly in semi-outdoor operations.
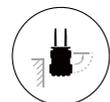
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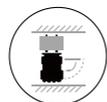
8800lb
Rated Load Capacity

Up to 177in
Fork Lifting Height

89in
Min. Turning Radius

175in
Min. Stacking Aisle Width

Product VIews

VNE Series Fundamental Technical Parameters

Model	VNE30(VL)-07	VNE35(VL)-07	VNE40(VL)-07	Model	VNE30(VL)-07	VNE35(VL)-07	VNE40(VL)-07
Body Weight	12000lb (5450kg)	12400lb (5600kg)	13700lb (6200kg)	Type of Operation	Automatic / Manual Seated		
Rated Load Capacity	6600lb (3000kg)	7700lb (3500kg)	8800lb (4000kg)	Battery Type	Lithium iron phosphate battery（LiFePO$_4$）		
Vehicle Dimensions	149x56x86in (3790x1430x2190mm)			Voltage/Capacity	83.2V/500Ah		
Fork Dimensions	47x4x1.6in (1190x125x45mm)	47x4x2in (1190x125x50mm)	47x5x2in (1190x150x50mm)	Charging Mode	Manual/ Automatic Charging		
Optional Fork Lengths	35/41/53/59/65/71in (890/1040/1340/1490/1640/1790mm)			Min. Stacking Aisle Width	175in (4430mm)		
Fork Lifting Height	Up to 177in (4500mm)			Min. Turning Aisle Width	106in (2690mm)		
Width Across Forks	17.7/41.3in (450/1050mm)			Ambient Temperature	-5℃ ~ 40℃		
Width Inside Straddle	6.89/30.51in (175/775mm)			Ambient Humidity	20% ~ 95%		
Positioning Method	3D SLAM-based			Ground Flatness	±0.39in/㎡（±10mm/㎡）		
Perception Method	3D LIDAR-based			Max. Climbing Ability (Loaded/Empty)	13%, 15% (7°, 8.5°)		12%, 15% (6.8°, 8.5°)
Localization Precision	0.39in/±0.5°（±10mm/±0.5°）			Max. Gap Width	1.97in (50mm)		
Goods Pick-up Self-adaptability	±3.94in/±10°（±100mm/±10°）			Max. Obstacle Height	1.18in (30mm)		
Load Center Distance	20in (500mm)			Front Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Min. Turning Radius	89in (2240mm)			Rear Safety Protection	Laser Scanner Protection + Contact Sensor		
Straight Forward Speed (Loaded/Empty)	4.25mph，4.92mph (1.9m/s, 2.2m/s)			Top Safety Protection	3D Laser Scanner Protection		
Straight Backward Speed (Loaded/Empty)	1.34mph，1.34mph (0.6m/s, 0.6m/s)			Side Safety Protection	Laser Scanner Protection + Anti-Collision Bumper		
Forward Turning Speed (Loaded/Empty)	2.24mph，2.24mph (1.0m/s, 1.0m/s)			Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm		
Backward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)						
Lifting Up Speed (Loaded/Empty)	0.63mph，0.78mph (280mm/s, 350mm/s)	0.58mph，0.78mph (260mm/s, 350mm/s)					
Lifting Down Speed (Loaded/Empty)	0.67mph，0.67mph (300mm/s, 300mm/s)						

1.Performance Specifications: Specifications are based on the model equipped with a 118-inch (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.
2.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
3.Optional Accessories: Battery Trolley,Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity

VNE40-66 COUNTERBALANCE TRUCK AGV/AMR

The Counterbalanced Forklift AGV/AMR, featuring 3D SLAM navigation and 3D laser adaptive sensing, ensures rapid project deployment and high forking repeatability. The vehicle is capable of driving at higher speeds and handling steeper routes. With customizable clamps, fork length, outer width, and outriggers, it offers exceptional flexibility and adaptability to various scenarios, particularly in semi-outdoor operations.
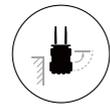
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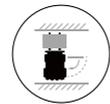
6180lb
Rated Load Capacity

Up to 275in
Fork Lifting Height

86.6in
Min. Turning Radius

173.2in
Min. Stacking Aisle Width

Product Views

VNE40(VL)-66 Fundamental Technical Parameters

Model	VNE40(VL)-66 *Version with 7 m lifting height*	Model	VNE40(VL)-66 *Version with 7 m lifting height*
Body Weight	16093 lb (7300kg)	Type of Operation	Auto/Manual(Handheld)
Rated Load Capacity	6180 lb (2800kg)	Battery Type	Lithium iron phosphate battery（LiFePO₄）
Vehicle Dimensions	149*55*85 in (3790*1402*2150mm)	Voltage/Capacity	83.2V/500Ah
Fork Dimensions	47x5.9x2.0 in (1190x150x50mm)	Charging Mode	Manual/ Automatic Charging
Optional Fork Lengths	35/40/53/59/65/70 in (890/1040/1340/1490/1640/1790mm)	Min. Stacking Aisle Width	173.2 in (4400mm)
Fork Lifting Height	Up to 275 in (7000mm)	Min. Turning Aisle Width	110.2 in (2800mm)
Width Across Forks	15.0~40.1 in (380~1020mm)	Ambient Temperature	23°F ~ 104°F (-5℃~40℃)
Width Inside Straddle	2.1~27.3 in (54~694mm)	Ambient Humidity	20% ~ 95%
Positioning Method	3D SLAM-based	Ground Flatness	±0.12 in/sqft (±10mm/m²)
Perception Method	3D LIDAR-based	Max. Climbing Capability (Loaded/Empty)	13%, 15% (7°, 8.5°)
Localization Precision	±0.59 in / ±0.5° (±15mm/±0.5°)	Max. Gap Width	1.97in (50mm)
Goods Pick-up Self-adaptability	±3.94 in / ±10° (±100mm/±10°)	Max. Obstacle Height	1.18in (30mm)
Load Center Distance	20 in (500mm)	Front Safety Protection	3D Lidar+Safety laser Scanner+ Anti-Collision Bumper
Min. Turning Radius	86.6in (2200mm)	Rear Safety Protection	3D Lidar+Safety laser Scanner+ Contact Sensor
Straight Forward Speed (Loaded/Empty)	4.47 mph, 5.59 mph (2.0m/s, 2.5m/s)	Top Safety Protection	3D Laser Scanner Protection
Straight Backward Speed (Loaded/Empty)	2.24 mph, 2.24 mph (1.0m/s, 1.0m/s)	Side Safety Protection	3D Lidar+Safety laser Scanner+ Anti-Collision Bumper
Forward Turning Speed (Loaded/Empty)	2.24 mph, 2.24 mph (1.0m/s, 1.0m/s)	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Backward Turning Speed (Loaded/Empty)	1.34 mph, 1.34 mph (0.6m/s, 0.6m/s)		
Max. Fork Lifting Speed (Loaded/Empty)	0.54 mph, 0.78 mph (240mm/s, 350mm/s)		
Backward Turning Speed (Loaded/Empty)	0.67 mph, 0.67 mph (300mm/s, 300mm/s)		

1.Performance Specifications: Specifications are based on the model equipped with a 118 inch (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on short side 1016mm.
2.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
3.Optional Accessories: Battery Trolley, Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
4.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.

VNQ50(VL)-66 AUTONOMOUS TOW TRACTOR

The Autonomous Tractor, powered by 3D SLAM positioning, offers convenient maintenance and high parking accuracy with exceptional efficiency. Its 3D laser system can detect high-level obstacles, ensuring safer transportation.

ⓘ *Notice: Specifications are provided for reference only and may change as part of continuous product improvement.*

11000lb
Rated Towing Capacity
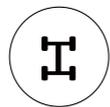
33in
Wheelbase

45in
Min. Turning Radius

3D Slam
Positioning Method

Product Views

VNQ50(VL)-66 Fundamental Technical Parameters

Body Weight	2380lb (1080kg)	Voltage/Capacity	48V200Ah
Rated Towing Capacity	11000lb (5000kg)	Charging Mode	Manual/ Automatic Charging
Vehicle Dimensions	63x36x51in (1560x900x1300mm)	Ambient Temperature	-10℃ ~ 40℃
Tow Pin Height	11.8in (300mm)	Ambient Humidity	20% ~ 95%
Wheelbase	33in (860mm)	Ground Flatness	±0.20in/㎡ (±5mm/㎡)
Tire Type, Front/Rear	SE	Max. Climbing Ability (Loaded/Empty)	3.5%
Braking Method	E-Brake	Max. Gap Width	1.9in (30mm)
Positioning Method	3D SLAM-based	Max. Obstacle Height	0.4in (10mm)
Min. Turning Radius	45in (1150mm)	Front Safety Protection	Laser Scanner Protection
Position Accuracy	±0.39in/±1° (±10mm/±1°)	Rear Safety Protection	Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	4.47mph，4.47mph (2.0m/s,2.0m/s)	Top Safety Protection	Laser Scanner Protection
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)	Side Safety Protection	Laser Scanner Protection
Type of Operation	Automatic / Manual Seated	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Battery Type	Lithium Iron Phosphate（LiFePO₄）		
Service brake	Electro-magnetic		

· Optional Accessories: Battery Trolley, UWB Kit, Dashcam, Automatic unhooking, among others.

VNQ200(VL)-66 AUTONOMOUS TOW TRACTOR

The Autonomous Tractor, powered by 3D SLAM positioning, offers convenient maintenance and high parking accuracy with exceptional efficiency. Its 3D laser system can detect high-level obstacles, ensuring safer transportation.

ⓘ **Notice:** *Specifications are provided for reference only and may change as part of continuous product improvement.*

44000lb
Rated Towing Capacity
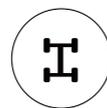
50in
Wheelbase

87in
Min. Turning Radius

3D Slam
Positioning Method

Product Views

VNQ200(VL)-66 Fundamental Technical Parameters

Body Weight	11000lb (5000kg)	Voltage/Capacity	83.2V500Ah
Rated Towing Capacity	44000lb (20000kg)	Charging Mode	Manual/ Automatic Charging
Vehicle Dimensions	86x53x64in (2186x1350x1635mm)	Ambient Temperature	-10°C ~ 40°C
Tow Pin Height	11in (290mm)	Ambient Humidity	20% ~ 95%
Wheelbase	50in (1270mm)	Ground Flatness	±0.20in/m² (±5mm/m²)
Tire Type, Front/Rear	SE	Max. Climbing Ability (Loaded/Empty)	9%(6°), 14%(8°)
Braking Method	E-Brake	Max. Gap Width	1.97in (50mm)
Positioning Method	3D SLAM-based	Max. Obstacle Height	1.18in (30mm)
Min. Turning Radius	87in (2200mm)	Front Safety Protection	Laser Scanner Protection
Position Accuracy	±0.39in/±1° (±10mm/±1°)	Rear Safety Protection	Laser Scanner Protection
Straight Forward Speed (Loaded/Empty)	3.80mph，4.47mph (1.8m/s,2.0m/s)	Top Safety Protection	Laser Scanner Protection
Forward Turning Speed (Loaded/Empty)	0.67mph，1.34mph (0.3m/s, 0.6m/s)	Side Safety Protection	Laser Scanner Protection
Type of Operation	Automatic / Manual Seated	Other Safety Protection	Emergency Stop Button + Acousto-Optic Alarm
Battery Type	Lithium Iron Phosphate（LiFePO₄）		
Service brake	Electro-magnetic		

· Optional Accessories: Battery Trolley, UWB Kit, Dashcam, Automatic unhooking, among others.

VNK15(VL)-19 PLATFROM AMR

The PLATFORM AMR powered by 3D SLAM positioning, offers convenient maintenance and high location accuracy with exceptional efficiency. Its 3D laser system can detect various obstacles, ensuring safer transportation.

ⓘ **Notice:** *Specifications are provided for reference only and may change as part of continuous product improvement.*

3306lb
Rated Load Capacity

47in
Min. Turning Diameter

45x32x10in
Dimensions

3D Slam
Positioning Method

Product Views

VNK15(VL)-19 Fundamental Technical Parameters

Body Weight	507lb (230kg)	Ambient Temperature	32°F~ 104°F (0°C~ 40°C)
Rated Load Capacity	3306lb (1500kg)	Ambient Humidity	20%~90%
Vehicle Dimensions	45x32x10in (1150x820x275mm)	Ground Flatness	0.04in/ft² (3mm/㎡)
Top Module Lift Height	2.36in (60mm)	Max. Climbing Ability	5%
Positioning Method	3D SLAM-based	Max. Gap Width	1.18in (30mm)
Perception Method	3D LIDAR-based	Max. Obstacle Height	0.20in (5mm)
Position Accuracy	±0.39in/±1° (±10mm/±1°)	Laser Scanning Height	7.08in (180mm)
Pick-up Adaptability	±3.90in/±10° (±100mm/±10°)	Forward Safety	Laser Scanner Protection + Anti-Collision Bumper
Min. Turning Diameter	47in (1200mm)	Reverse Safety	Laser Scanner Protection + Anti-Collision Bumper
Battery Type	Lithium Iron Phosphate（LiFePO₄）	Side Safety	Laser Scanner Protection
Battery Voltage/Capacity	48V40Ah	Others	Emergency Stop Button + Acousto-Optic Alarm
Charging Mode	Auto/Manual		
Max Forward Speed (Loaded/Empty)	3.34mph, 4.03mph (1.5m/s, 1.8m/s)		
Max Reverse Speed (Loaded/Empty)	1.34mph, 1.34mph (0.6m/s, 0.6m/s)		

· Customizable the height of the lifting module.

VNKQ20(VL)-18 TUNELING AMR

The Tuneling AMR, powered by 3D SLAM positioning,offers convenient maintenance and high location accuracy with exceptional efficiency. Its 3D laser system can detect various obstacles, ensuring safer transportation.
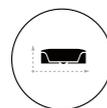
ⓘ *Notice: Specifications are provided for reference only and may change as part of continuous product improvement.*

4409lb
Rated Towing Capacity

39.5 in
Min. Turning Radius

95x20x9in
Dimensions

3D Slam
Positioning Method

Product Views

VNQ20(VL)-18 Fundamental Technical Parameters

Body Weight	882lb (400kg)	Ambient Temperature	23°F~104°F (-5℃~40℃)
Rated Towing Capacity	4409lb (2000kg)	Ambient Humidity	20%~95%
Vehicle Dimensions	95x20x9in (2400x500x230mm)	Ground Flatness	±0.20in/sqf (±5mm/㎡)
Tow Pin Height	1.57in (40mm)	Max. Climbing Ability	0%(0°), 5.2%(3°)
Wheelbase	49.8in (1265mm)	Max. Gap Width	1.18in (30mm)
Drive Direction	Bidirectional Travel	Max. Obstacle Height	0.39in (10mm)
Positioning Method	3D SLAM-based	Forward Safety	Laser Scanner Protection
Min. Turning Radius	39.5inin (1000mm)	Reverse Safety	Laser Scanner Protection
Battery Type	Lithium Iron Phosphate（LiFePO₄)	Top Safety	Laser Scanner Protection
Battery Voltage/Capacity	48V60Ah	Others	Emengency Stop Buttom+ Acousto Optic Alarm
Charging Mode	Auto /Manual		
Max Forward Speed (Loaded/Empty)	3.36mph, 3.8mph (1.5m/s, 1.7m/s)		
Max Reverse Speed (Loaded/Empty)	0.67mph, 1.34mph (0.3m/s, 0.6m/s)		