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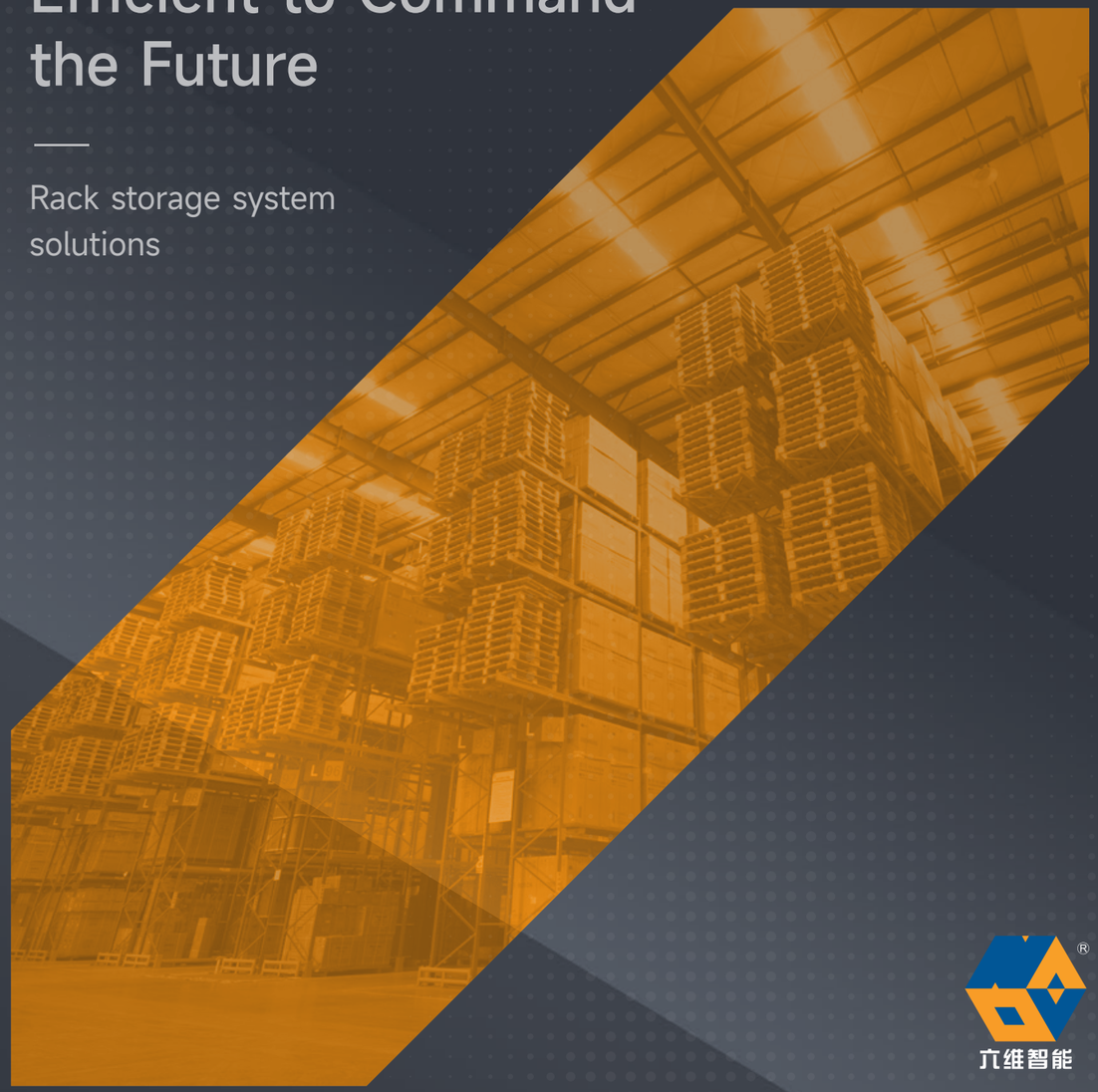
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NOVA
INTELLIGENT

Intelligent and Efficient to Command the Future

Rack storage system solutions



亢维智能®

Intelligent and efficient to command the future

Integrated intelligent warehousing and logistics total solution integrator





1997 NOVA was established

2001 Nanjing rack manufacturing base was completed and put into production, export to overseas

2003 Rack sales volume ranks top 3 domestically, and has passed ISO9001 quality system certification

2007 Became the main rack supplier of Amazon China

2010 Entering the e-commerce industry, serving leading enterprises, such as JD, Suning, Vipshop, etc.

2011 Participated in the drafting of a number of National & Industrial standards related to racks

2013 Undertook JD"Asia NO.1" multi-tier rack project

2017 Became the sole Chinese rack supplier for Amazon in North America area

2019 Set up Heibei subsidiary and Hengshui production base was put into operation

2021 Nanjing new factory was relocated and upgraded, leading the future with a new attitude

Jiangsu NOVA Intelligent Logistics Equipment Co., Ltd. (referred to as "NOVA Intelligent") was founded in 1997. It has two manufacturing bases in Nanjing, Jiangsu and Hengshui, Hebei, which covering an area of nearly 150,000 square meters. It has passed ISO9001 quality management system, ISO14001 Environmental management system, ISO10012 measurement management system and CE certification, with dozens of CNC machining centers and automated production lines, forming a strong high-precision rack manufacturing capacity.

As a powerful brand and high-tech enterprise in the domestic rack field, NOVA Intelligent always insists on continuous innovation, and is determined to take reasonable warehouse planning and design as the cornerstone, cooperate with high-quality racks, high-precision installation and perfect services, so as to help customers to maximize value of limited warehouse space quickly and steadily.

Since its establishment, the company has undertaken hundreds of intelligent warehousing and logistics system projects and tens of thousands of rack system projects, which spread across all walks of life and at home and abroad, and have won unanimous praise from customers. Typical customers include Amazon, SIEMENS, SEW, FedEx, Toyota, Jd, Vipshop, Suning, Shein, Cainiao, Midea, Yili, Uni-President, Xinhua, PetroChina, Sinopec, CRRC, etc.





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Longspan Rack

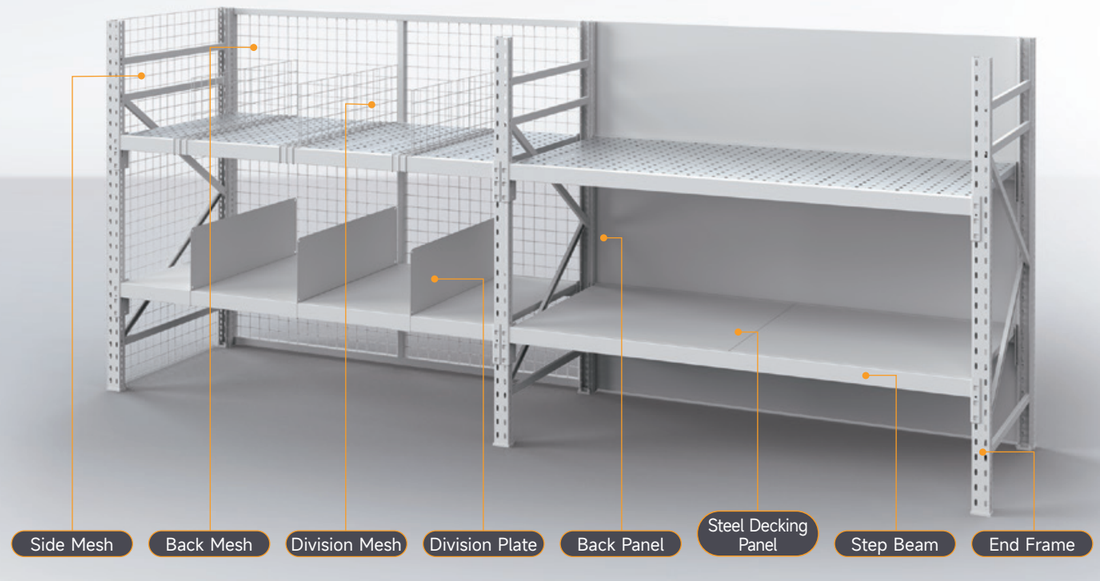
Longspan rack is an ideal solution when you need to store small items with different varieties. It is mainly composed of end frames, beams and shelves. It adopts an assembled structure, and the layer spacing can be adjusted freely. Shelf per layer can be steel decking or plywood, and the specifications and sizes can be customized according to needs.

- Manual access
- Flexible expansion
- Easy to install
- Low investment cost



Table Size

Width(mm)	1500/1800/2000/2400
Depth(mm)	400-1200
Height(mm)	2000-5000
Layer capacity(kg)	200-1000
Upright spec.(mm)	60×50×1.5，Pitch=50



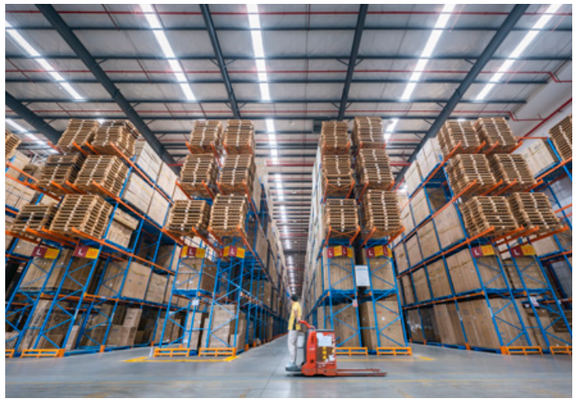
Selective Pallet Rack

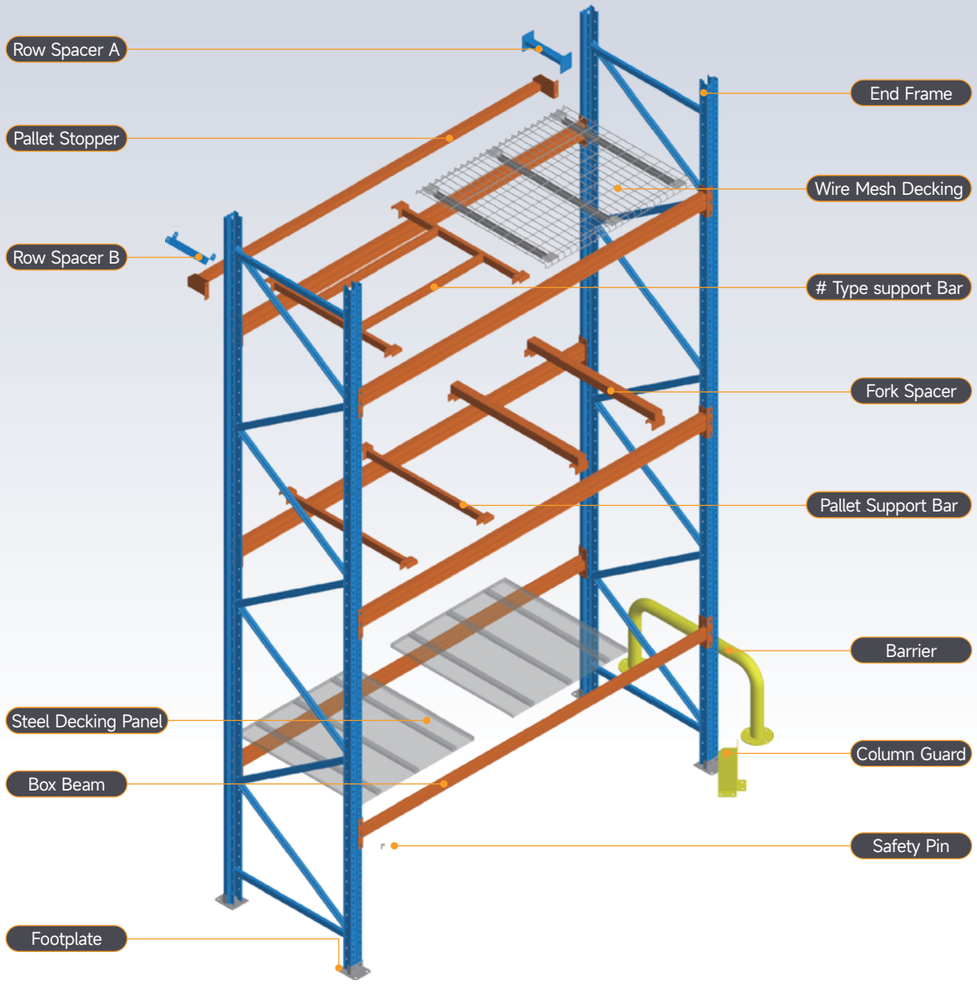
Selective Pallet Rack is the most widely used racking system. It is stored in the form of pallets, which can make full use of space and expand flexibly. The layer can be adjusted freely to ensure optimal utilization of warehouse space, and double-deep storage can also be achieved. It is suitable not only for multi-variety and small-batch goods, but also for small-variety and large-volume goods.

- Can store various types of goods, the most widely used
- Forklift operation, flexible inbound & outbound,easy access
- Easy disassembly & assembly, good durability
- Low investement cost

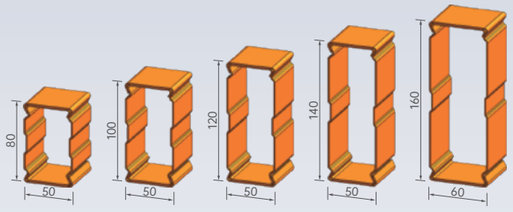




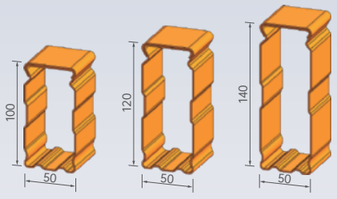




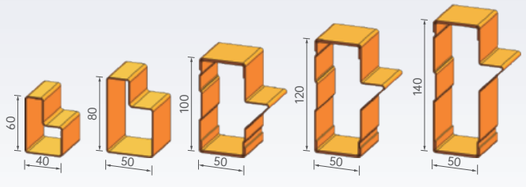
Standard Box Beam Sections.



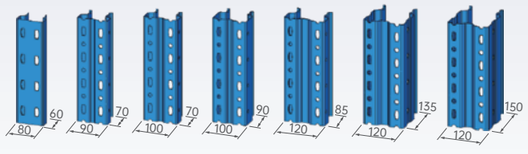
Standard One-Beam Sections.



Standard Step Beam Sections.



Standard Upright Sections.

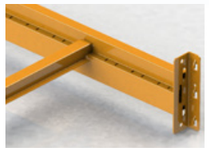




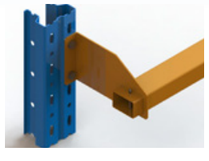
The connection between Beam & Upright



Support Bar A



Support Bar B



Pallet Stopper



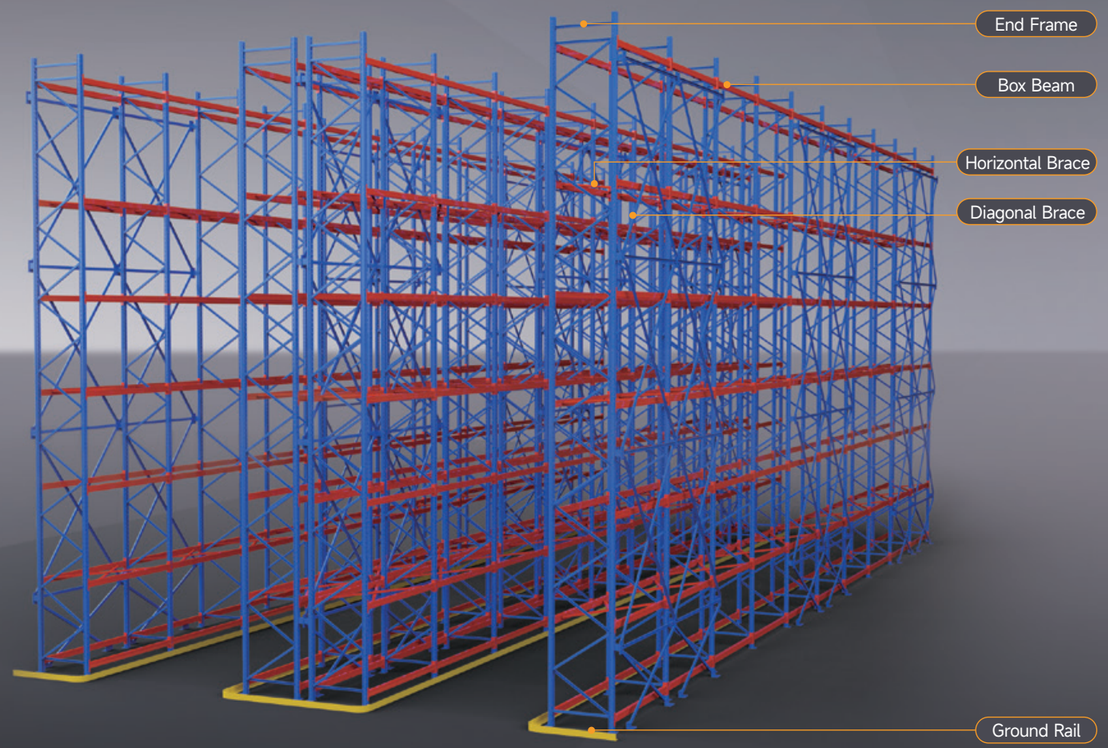
Upright Joint

Very Narrow Aisle Rack (VNA)

VNA Rack is suitable for storing large quantities of goods. Compared with conventional pallet racks, VNA has a very narrow aisle width, normally 1.65-1.95m, which can increase the storage capacity in the same space. The rack height can reach up to max.18m, ensuring higher space utilization. In terms of operation, VNA rack must be operated with 3-way stacking forklift.

- High Storage Density
- The Rack height up to max.18m
- Safe & Reliable Access



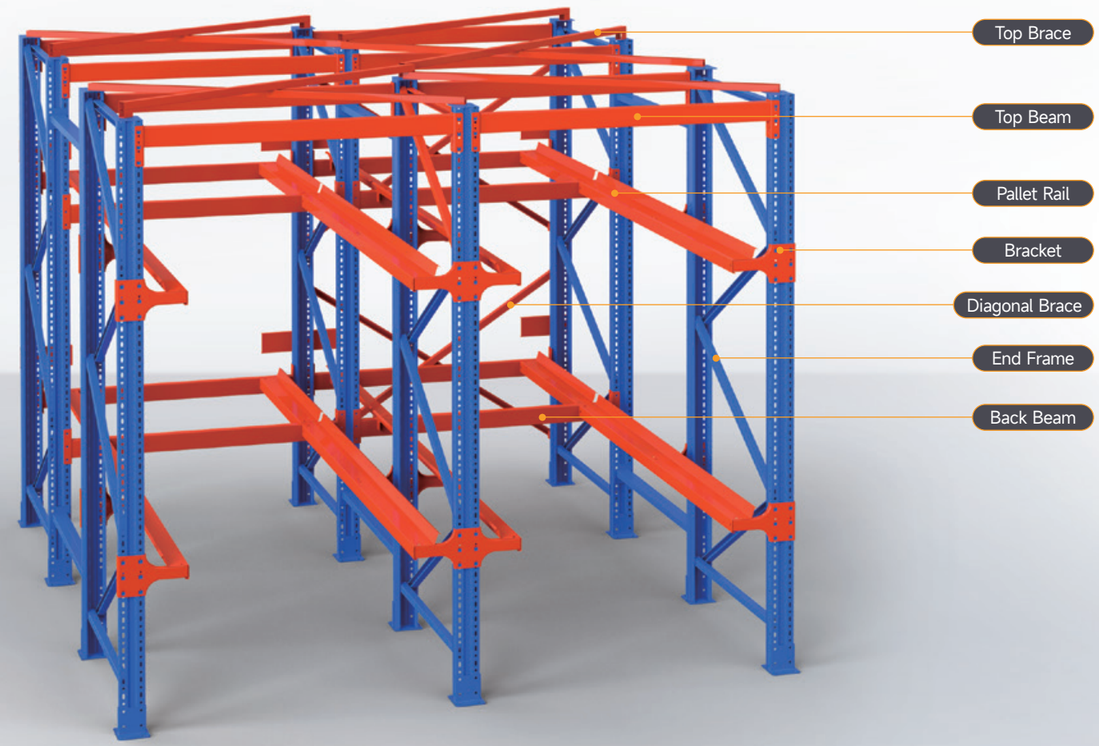


Drive in Rack

Drive in Rack is composed of end frame,brackets,top beam,horizontal brace,etc. It's an ideal choice for storing goods at single-variety and large-volume. It's an integral rack that is not divided into aisles, which adopts pallets access model with various types of forklift and pallets. Forklift can drive-through aisles to load/unload pallets. The storage density of drive in rack is high and the space utilization rate can reach about 80%. Compared with selective racks, the space utilization rate is more than 30%. The drive in rack is often used in cold storage,food,tobacco and other warehouses with higher storage space costs.



- Compact Storage for optimal use of space
- Low investment cost
- Suitable for seasonal inventory



Multi-tier Rack

Multi-tier rack is recommended when to store a large number of small parts but existing storage space is insufficient. The multi-tier rack is composed of columns, beams, decking panels, floor beams, floor panels, handrails, stairs, etc. It is to build an intermediate attic on the existing workplace or racks to increase storage space, and can be flexibly designed as two floors, three floors. The goods are usually sent to the second and third floors by forklifts, lifts or elevators, and then transported to designated locations by trolleys or hydraulic pallet trucks. Layered shelves can be individually configured according to the industry, site conditions and job requirements. Using this racking solution can make full use of the height of the warehouse without increasing the floor space, and employees can also store and pick on multiple floors at the same time to improve the transfer capacity.



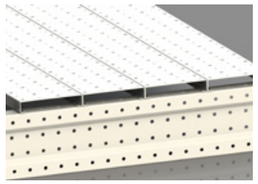
- Efficient use of high-level space
- Flexible layout according to needs
- Hierarchical structure facilitates parallel picking
- Assembled structure for easy installation and migration



The components



Option 1 to show the connection between steel floor & floor beam



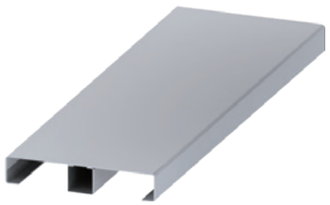
Option 2 to show the connection between steel floor & floor beam



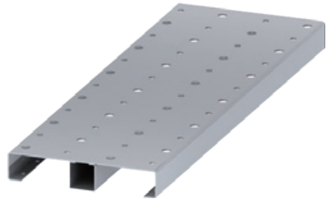
The connection among floor beams



The connection among H-steel



Solid steel floor



Perforated steel floor

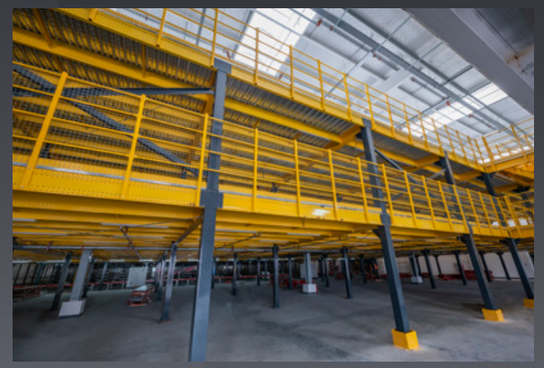


Wedge-shaped reinforced floor



Steel Platform

Steel Platform adopts a fully assembled light steel structure. According to the site conditions and needs, it's flexibly designed to be 2 or more floors based on the steel structure design code, to make full use of warehouse space.



- Low cost, fast installation
- Making full use of space height
- Flexible layout according to needs
- Assembled structure for easy installation and migration



Gravity Rack

Gravity rack is composed of end frames,beams,rollers,guide plates,buffer devices,etc. and is suitable to store pallets. The rack channel has a certain slope, and the palletized goods are delivered to loading side by forklift, then slide to unloading side at the gravity purpose. It is suitable for the FIFO (First in, first out) goods storage at large quantities but few varieties, and rack depth and number of layers are customized.



- High storage density
- FIFO
- Safe & Reliable System

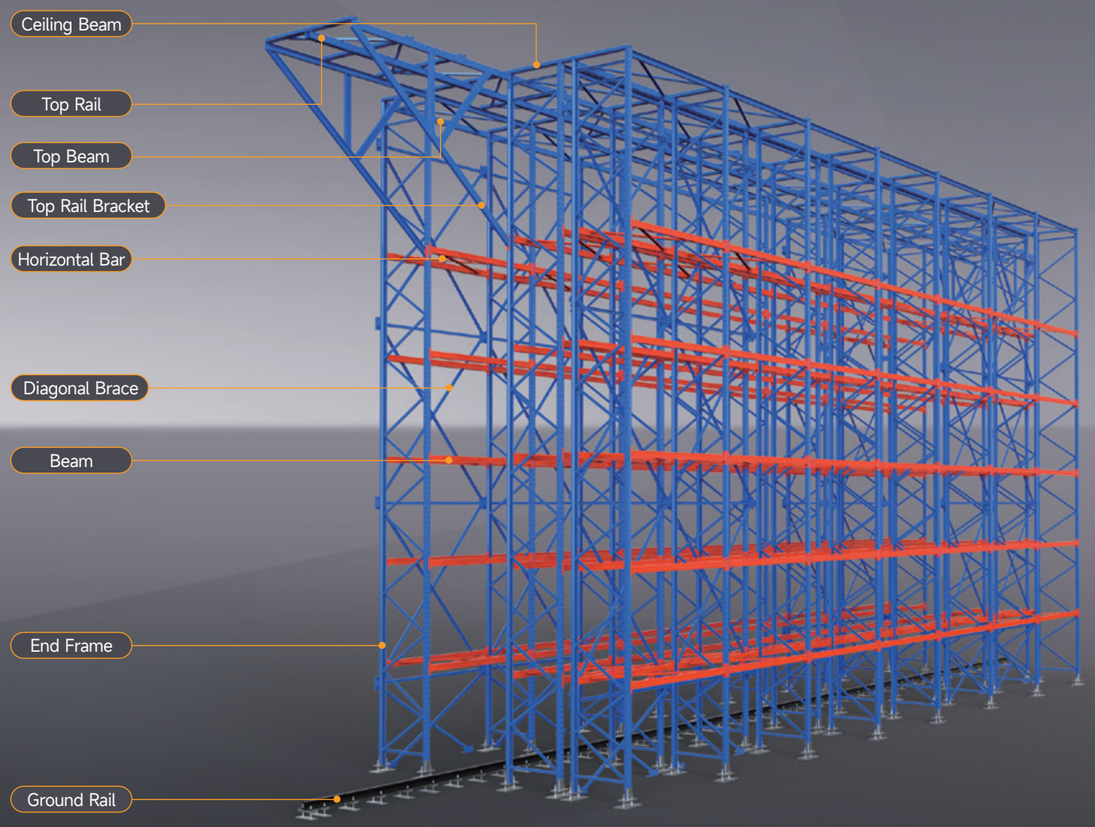


ASRS high-level rack

ASRS high-level rack is the main support structure for the ASRS warehouse system to realize the stereo storage of goods. In order to make the goods move efficiently and accurately, the design and manufacturing accuracy of the rack itself are relatively high.

- The rack height can reach more than 40 meters (jointed)
- Cooperate with automatic access equipment to coordinate dynamic storage
- The space utilization rate is 2-5 times than that of conventional racks
- Save manpower, precise and efficient





Shuttle Rack

The shuttle rack is evolved from the drive-in rack, but the forklift does not need to drive into the rack, the outer pallets are reversed by the forklift, and the internal pallets are accessed by the shuttle car. When in stock, the palletized goods are placed in the fore-end of a certain channel and a certain layer of rails in the rack area by a forklift, and the palletized goods are transported to the channel by a remote control. The palletized goods are then removed by a forklift. The shuttle rack overcomes the shortcomings of the drive-in rack, such as the slow access speed and the poor stability of the rack system. It can efficiently use the warehouse space and reduce the waiting time for operations. It is suitable for the goods storage at large quantities and few varieties, such as food and fast-moving consumer goods, cold chain and other industries.



- Stable structure and high safety factor
- Significantly improve operational efficiency
- High-density storage, high space utilization
- Remote control and automatic refilling

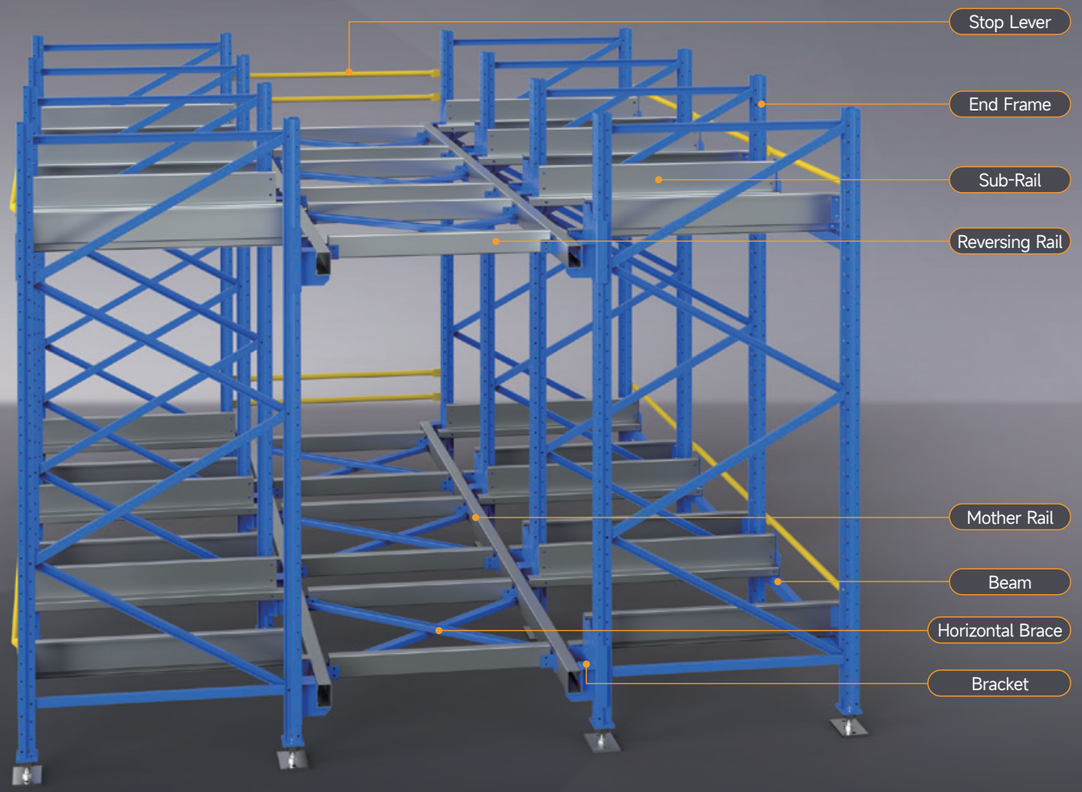


Four-way Shuttle Rack

The four-way shuttle rack is mainly composed of end frames, brackets, support beams, rails, stop levers, tie rods, safety nets, ladders, etc., and is combined with automatic equipment such as four-way shuttles, lifters, and conveyor lines to make a fully automated high-density storage solution. There are rails in both vertical and horizontal directions, which are directly connected to the operation station. There is no secondary handling in and out of the warehouse. It is suitable for palletized cargo storage and is widely used in food, beverage, chemical, third-party logistics and other industries.



- Compact structure, conducive to increase storage capacity
- Excellent scalability and flexibility
- Flexible layout without space constraints
- Fully automatic access, high rack accuracy



Multishuttle rack

The multishuttle rack is mainly composed of end frames, rails, back beams, bins support, tie rods, safety nets, rail limit devices, reversing platforms, and maintenance platforms. The multi-tier shuttle rack is used in conjunction with multi-shuttle cars. It is specially designed for the automatic storage of cartons, plastic turnover bins and other material bins. It is suitable for goods-to-person picking, and meets the batch storage and caching of diversified materials in enterprises. It is widely used in automobile parts,e-commerce, fast-moving consumer goods, third-party logistics and other industries.



- Achieve goods-to-person picking
- High flow, high turnover
- Excellent scalability and flexibility
- High rack accuracy requirements
- Optimize space and improve space utilization

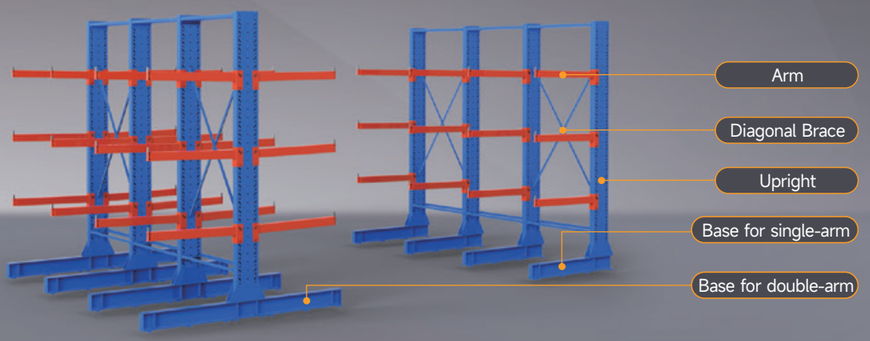


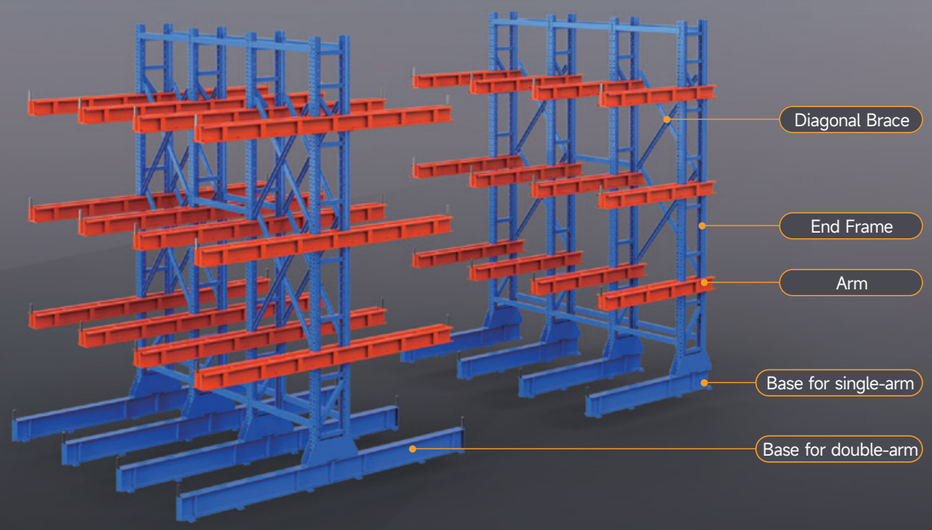
Cantilever Rack

Cantilever rack consists of uprights, arms, vertical tie rods, bases, etc. It is suitable for storing long materials, ring materials, plates, pipes and irregular goods. The number and spacing of cantilevers depend on the weight of the goods. Shelves can also be added between the cantilevers. Compared with ordinary shelf-type shelves, the utilization rate is higher, and it is especially suitable for warehouses with small space and low height.



- Quick and easy access anytime
- Cantilever single-arm / double-arm freely
- Wide field of vision, easy to manage





Flow-through Rack

The flow-through rack is installed with a certain slope between the front and rear beams, forming a plurality of parallel slides. The installation inclination depends on the size of the rack, the weight of the goods and the depth of the flow rail. The distance between the slides is adjustable, adjacent to each other. Separating rods or dividing plates can be set between the slideways to facilitate the guidance of the goods when they slide down. Relying on the weight of the goods to achieve first-in first-out, convenient storage, suitable for short-term storage and picking of box-type goods, especially suitable for process conversion on both sides of the assembly line, picking operations in distribution centers, and warehouses with high shipping frequency.



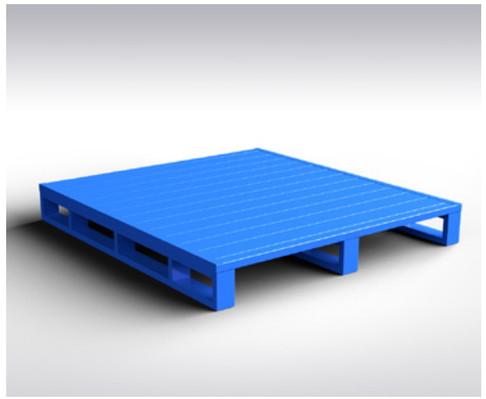
- Cargo safety, not easy to damage
- FIFO
- Manual access, one-time replenishment and multiple picking
- Can be equipped with electronic tags to realize information management



Logistics Equipment

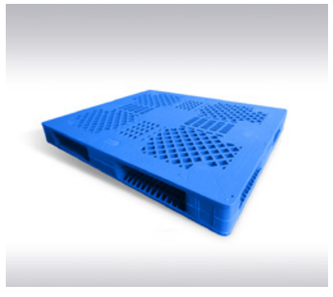
Steel Pallet

The basic structure of the steel pallet is composed of longitudinal beams or pads under single-layer plank, and outriggers,etc. It is mainly divided into two-way fork steel pallets and four-way fork steel pallets in terms of structure. It is mainly used for ground storage, racking storage and cargo intermodal turnover. The pallet's fork height needs to be matched with forklifts, pallet trucks and stacker forks to ease the operation and specific size can be customized.

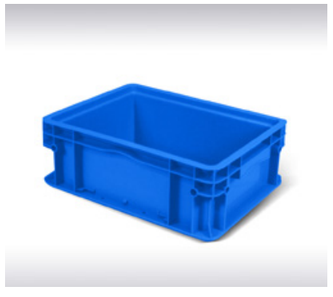


Model	Specs.(mm)			Load Capacity (kg)
	Length	Width	Height	
NSP101	1000	1000	150	500-1500
NSP102	1200	1000	150	500-1500
NSP103	1200	1200	150	500-1500

Plastic Pallet



Plastic turnover bin



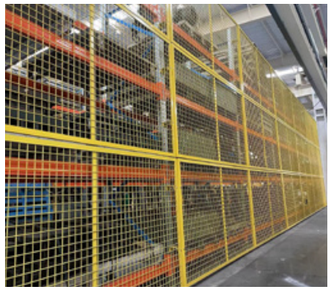
Steel Box Pallet



Steel Mesh Box Pallet



Mesh Fence



Barrier



Combination of software and hardware

the conventional warehouse can also be digitized

On the basis of meeting customer needs and focusing on improving the level of customer information management, NOVA Intelligent has independently developed a conventional warehouse management system. It covers warehousing operations, outbound operations, cargo location management, inventory management, batch management, quality inspection management and other links, effectively controls and tracks the entire process of warehouse operations, and achieves precise control of warehouse goods. The system is based on modular design ideas and adopts standard interfaces, which can connect with third-party system data, comprehensively improve operational efficiency, and help enterprises build the core competitiveness of warehousing and logistics management.

Application Advantages

- Supporting the management of multi-organizaiton,multi-factory,multi-warehouse,multi-location
- Physical and data synchronization, real-time control of inventory, document status, task execution, etc.
- "Data entry" is transformed into "data collection", which reduces the labor intensity and improves labor efficiency
- The full name is digital management, paperless operation

NOVA self-developed WMS system

Basic Management

Receipt	Inventory	Documents Consolidation	Material Information	Wave Strategy
Quality Inspection	Warehouse Transfer	Automatic Distribution	User Information	Loading Strategy
Loading	Replenishment	Unloading Picking	Merchant Information	Unloading Strategy
Return	Transfer	Secondary Picking	Warehouse Information	Storage Partition
Warehouse Return	Stocking	Packing Review	Storage Location Information	Matching Strategy
Cross Docking	Freezing	Loading and Departing	Pallet Information	Early Warning Strategy

Inbound management | In-warehouse management | Outbound management | Basic data | Operation strategy

Senior Management

3D Dynamic View	Electronic Board	Slot View	Video Surveillance
Automation Integration	Custom Report	Three-level Authority	Secondary Development



After-sale Service

NOVA intelligent professional installation and after-sales management team installs and debugs the racking system for you to ensure that the racking system is highly stable, reliable and high-precision, which is convenient for you to use it for a long time without worries.

Warehouse storage racking system needs proper use and reasonable maintenance to ensure safety. NOVA trains customers on how to operate safely and do basic maintenance, not only involving racks but also the correct operation of mechanical handling equipment to access and store goods.

Regular rack safety inspections ensure the safety and practicability of the racking system and prevent problems before they occur. We provide professional rack inspection services, and after-sales engineers come to inspect and evaluate to issue reports to prove whether your racking system meets safety standards.

- Verticality inspection
- Fastener inspection
- Structural inspection
- Safety guard inspection
- Partial deformation inspection

In order to ensure 100% availability of the system, we provide you with sufficient spare parts service and fast after-sales response service to provide you with on-site assistance in the shortest possible time.

- Damaged parts replacement
- verticality adjustment
- guard configuration
- safety sign visualization

NOVA INTELLIGENT

Intelligent and Efficient to Command the Future

Intelligent Logistics Total Solution Integrator