



ORION RACK
HOLD YOUR WAREHOUSE



GUANGDONG ORION INTELLIGENT EQUIPMENT LIMITED

广东奇力智能设备有限公司



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广东奇力智能设备有限公司

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ORION

QUALITY CREATES VALUE



仓储货架

Storage Racking System

Web: <https://www.orionrack.com>

中国·广东



Website



WhatsApp



Sales Wechat

企业简介 ORION >>>

ENTERPRISE BRIEF INTRODUCTION

Founded in 2003, GUANGDONG ORION INTELLIGENT EQUIPMENT LIMITED is a leading global manufacturer and solution provider of warehouse storage racks and intelligent storage systems. Integrating R&D, design, intelligent manufacturing, sales and service, we are committed to providing reliable support for global customers to improve their warehousing and logistics efficiency, backed by large-scale production bases, advanced manufacturing processes and rigorous quality management systems.



Professional R&D & Customized Solutions



Our R&D and technical support team, led by 100+ senior engineers, focuses on warehousing technology innovation and iteration. We offer a full range of warehouse racks and equipment, as well as tailored scenario solutions to help customers achieve organized storage, maximized space utilization and streamlined operations.

55,000 m²	100,000 tons	20 +	4 sets
Factory area	Annual productivity	Rolling production lines	Fully automatic powder coating lines

Globally Proven & Trustworthy



Our successful projects are widely recognized across the globe. We have delivered thousands of warehousing projects to enterprises worldwide, accumulating extensive experience in cross-border cooperation and services. As a partner with strong production capacity and reliable services, we are committed to creating measurable, sustainable long-term operational value for customers.



广东奇力智能设备有限公司

创立于2003年。二十余载，我们以“守正创新”为根基，以“笃行致远”为步伐，已成为全球仓储货架与智能设备系统领域集研发、设计、智造、销售与全球服务于一体的系统方案提供商。凭借扎实的智造实力与融入血脉的中国智慧，我们为全球仓储物流的效率跃升提供系统化支撑。

我们深信“器以载道，物尽其用”。

公司以人才为引擎、以技术为羽翼，汇聚100余位高级工程师，组成专业研发与售后团队，持续推动仓储技术迭代与突破。已成功开发移动式货架、穿梭式货架、阁楼货架、模具架、工具车、工作台等全系列产品，并支持深度场景定制，助力客户实现存储有序化、空间最大化、运营精益化。

实力，源于规模与专注。

我们在55,000m²现代化生产基地中，布局20+轧制生产线与4套全自动粉末喷涂线，具备年产10万吨的稳定供应能力。从原材料严选到成品出厂，全程实施严苛品控，确保每一套设备都承载着“中国质量”的坚定承诺。

信任，来自全球信赖项目的持续验证。

我们已成功为全球大中型企业交付数千个仓储项目，积累了丰富的跨国服务经验。作为业界产能领先、服务稳健的合作伙伴，我们始终以为客户创造可持续的运营价值为根本使命。

未来，奇力将持续聚焦智能仓储与物流自动化，加大研发与智造投入。秉持“创新、品质、服务”的核心理念，我们矢志成为全球仓储领域最值得信赖的合作伙伴，以智能系统推动行业进化——承载中国智造，服务世界仓储。

INNOVATION, QUALITY, SERVICE

创新、品质、服务

我们的团队 OUR TEAM >>>

• With excellent technology and a serious attitude in every project , we provide high-quality products and the best service to all of our customers. What we pursue is not only honor, but also customer recognition.

• 我们以过硬的技术，认真的态度抓好每一项工程项目，为我们的新老客户提供优质的产品和服务！我们追求的不仅仅是荣誉，更是客户的认可。



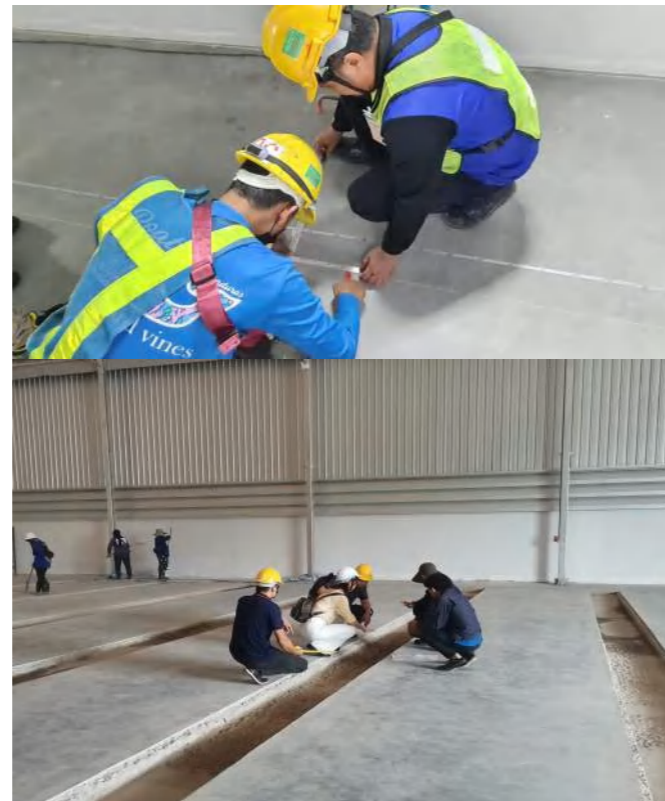
Product Symposium
产品研讨会



Symposium
研讨会



Professional loading container team
专业装柜团队



Installation site survey
安装现场勘测

PRODUCTION EQUIPMENT 生产设备

- 20+Years Industry Experience, Professional Manufacturer.
- 20+年行业经验，专业生产厂家。



Raw material zone
原料间



Automatic cold roll forming line
全自动冷轧成型线



Bending machine
折弯机



Welding
焊接



Pickling treatment
酸洗



Painting line
喷涂线

ORION RACK

Excellence in Infrastructure, Enabling Global Logistics.

以卓越架构，支撑全球物流。



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AUTOMATED WAREHOUSE AS/RS SYSTEM

◎自动化立体仓库AS/RS系统

• We adopt the equipment such as lane stackers, inbound & outbound conveyors, equipped with advanced automated hardware and software systems to automatically realize the continuous transmission of goods, data storage management and inbound & outbound management.

• It helps improve warehouse automation and management levels, and enhances overall logistics efficiency.

• 采用巷道堆垛机，出入库输送机等设备，应用先进的自动化系统硬件设备及软件产品，自动实现货物连续输送，数据的存储管理和出入库管理。具备提高仓储自动化水平及管理水平，提高物流效率等优点。



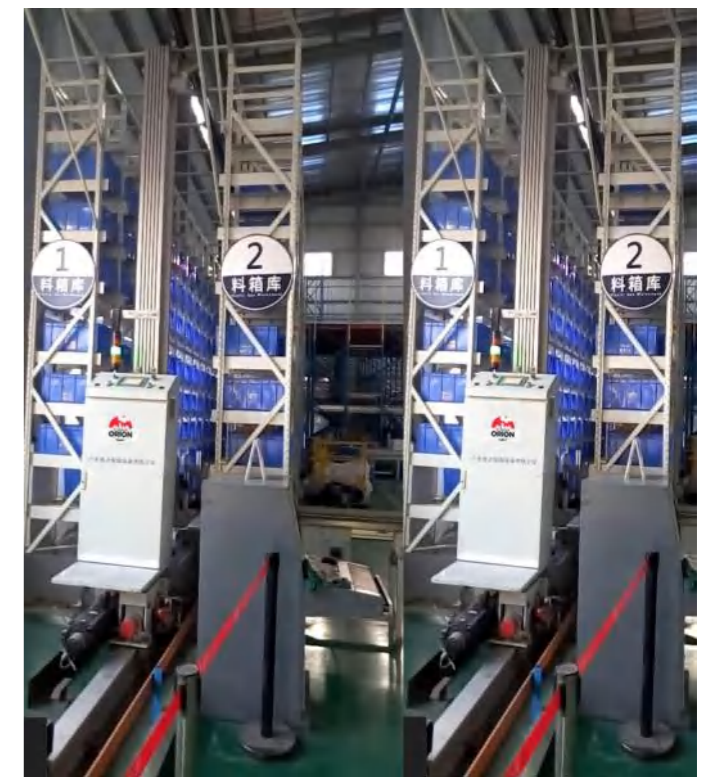
Automation warehouse AS/RS system
自动化立体仓库AS/RS系统



Automation warehouse AS/RS system
自动化立体仓库AS/RS系统



Heavy-duty stacker
重载堆垛机



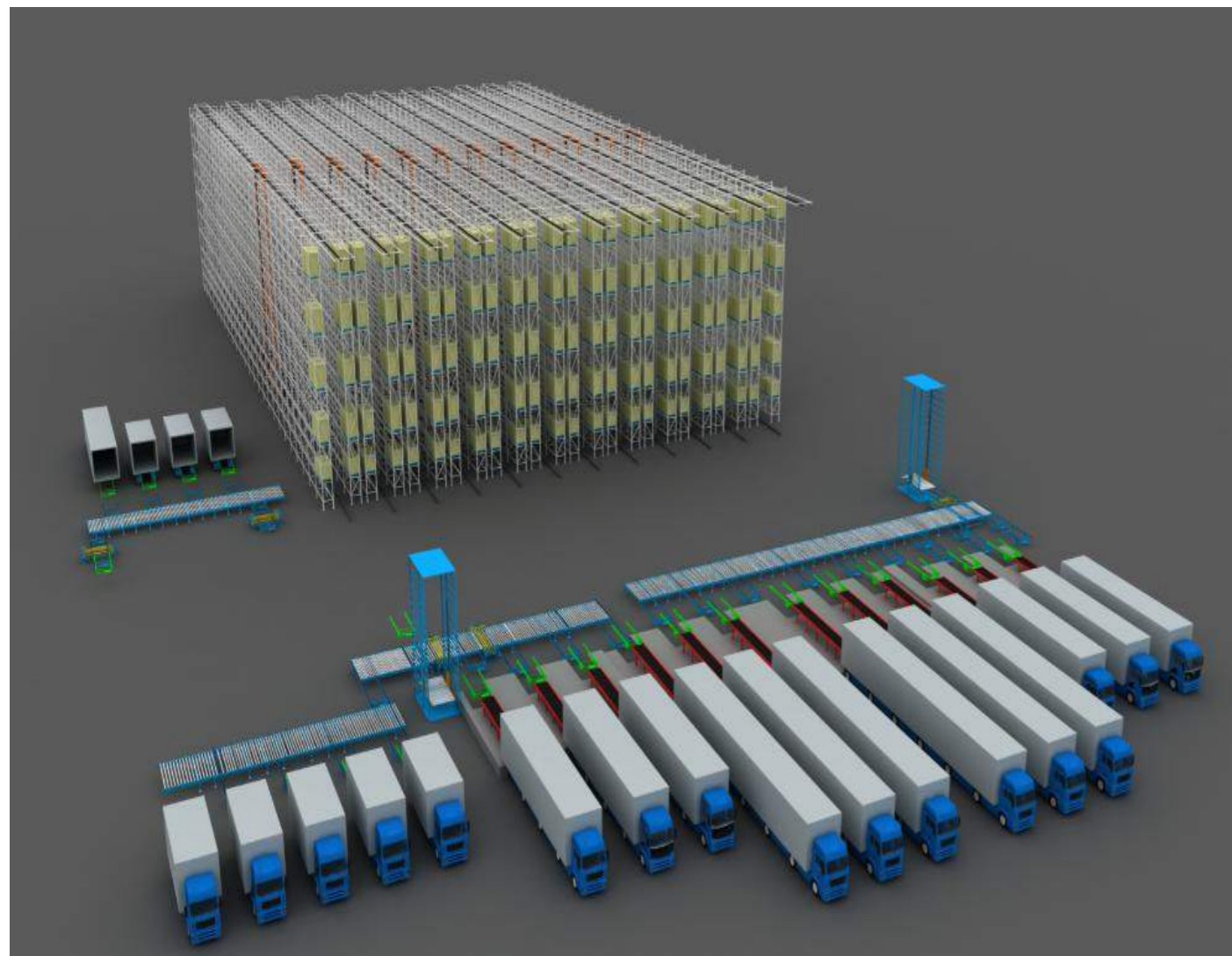
Light-duty High-speed
Aluminum Alloy Stackers
轻型高速铝合金堆垛机

AUTOMATED WAREHOUSE AS/RS SYSTEM

◎ 自动化立体仓库AS/RS系统

- The automated warehouse AS/RS system is widely used in almost all industries.
- The main industries of application are machinery, metallurgy, chemical, aerospace, electronics, pharmaceuticals, publishing, food processing, tobacco, printing, distribution centers, airports, ports, etc.

- 自动化立体库应用广泛，几乎遍布所有行业。
- 应用的行业主要有：机械，冶金，化工，航空航天，电子，医药，图书，食品加工，烟草，印刷，配送中心，机场，港口等。



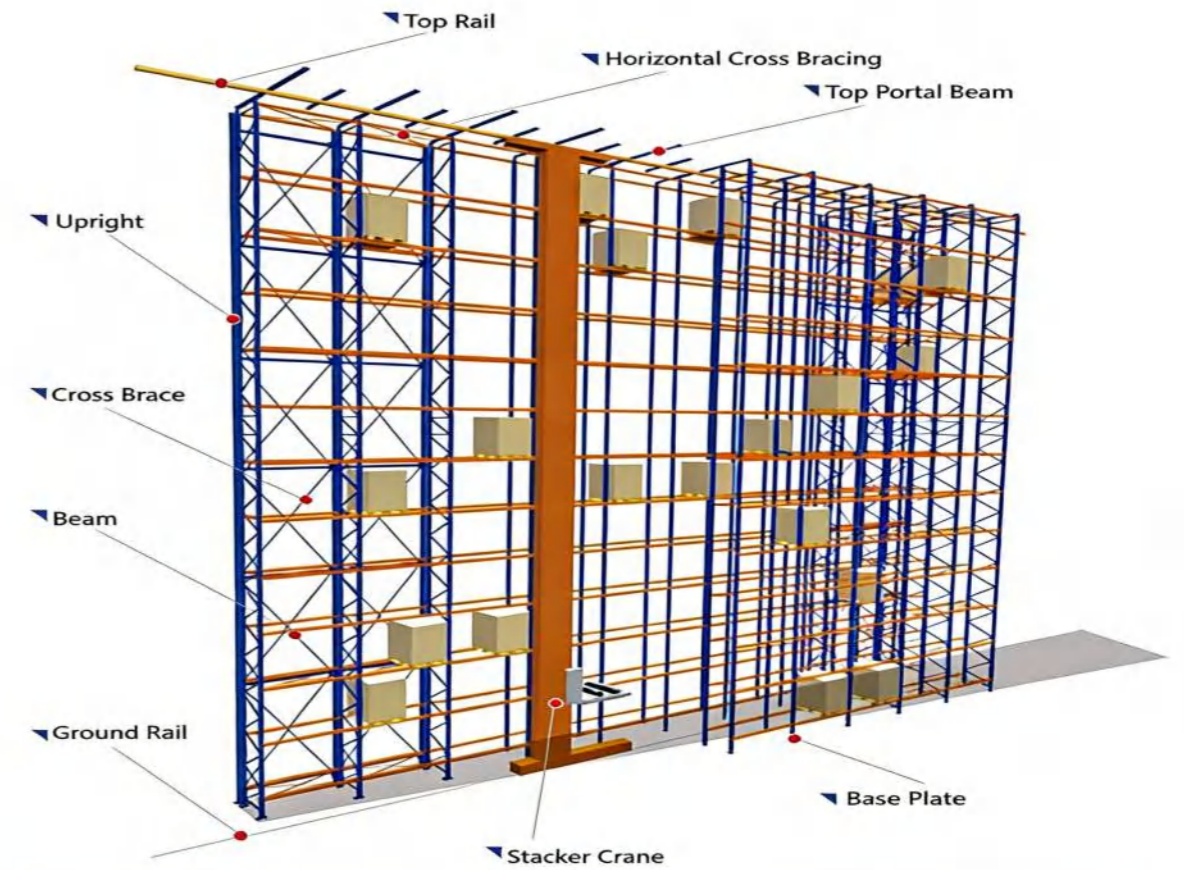
Automation warehouse AS/RS system
自动化立体仓库AS/RS系统



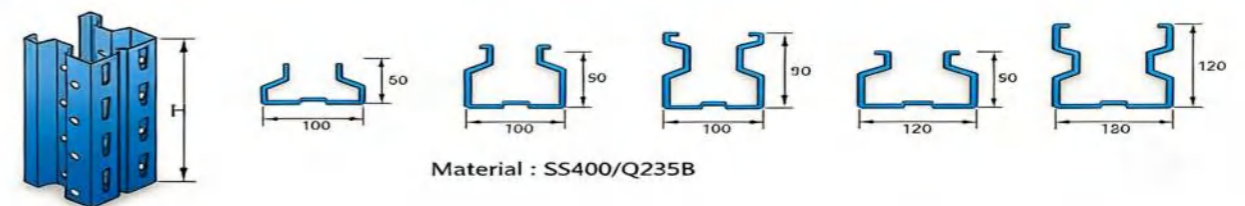
Management Information System
管理信息系统



AGV
AGV 小车



Upright



AS/RS High Rise Racking for Warehouse Automation
高层货架系统

AUTONOMOUS CASE-HANDLING MOBILE ROBOTS (ACRs)

◎ 箱式仓储机器人

- This series features advanced (ASRS) that streamline inventory management and order fulfillment processes, adapt to evolving operational needs, and drive business growth.
- With a modular architecture, this goods-to-person robotic system enables efficient, high-throughput automated storage, retrieval and conveyance of packaged and unpackaged goods.
- Compatible with a wide range of goods including turnover boxes, bins, pallets and bulk materials, the solution is flexible and scalable.
- The modular design allows system reconfiguration, expansion and relocation, providing reliable support for enterprises' long-term development.
- It supports optional unit configurations on the base model, delivering customized solutions with low cost and low complexity.

- 该系列为先进自动化仓储及检索系统（ASRS），可简化库存管理与订单履约流程，适配运营需求变化、助力业务增长。
- 采用模块化架构，属于货到人机器人系统，可高效、高吞吐地自动存储、检索并输送带包装及无包装货物。
- 适配周转箱、料箱、托盘、散料等多种货品，解决方案灵活可扩展。
- 模块化设计支持系统重构、扩容与迁移，为企业长期发展提供可靠保障。
- 可在基础机型上按需选配单元，以低成本、低复杂度实现定制化方案。



Multi-Tier Case Handling Robot

Intelligent case picking, storage, retrieval & simultaneous multi-case transport.

- Pick-up height: 0.4–5.2 m
- Case capacity: 8+1 units
- Single-trip load capacity: 300 kg
- Fully charged battery life: ≥ 6.5 hours

多层料箱机器人

可实现料箱智能拣选、存取，多料箱同时搬运

- 取货高度：0.4-5.2m
- 承载货箱：8+1个
- 单趟载重：300KG
- 满充续航：≥6.5h

Telescopic Lifting Case Robot

Designed for warehouses with a 10-meter ceiling height, greatly improving vertical space utilization in storage.

- Pick-up height: 0.35–10 m
- Case capacity: 8+1 units
- Fully charged battery life: ≥6 hours

伸缩升降料箱机器人

为 10 米层高仓库设计，大幅提升仓储的垂直空间利用率。

- 取货高度：0.35-10m
- 承载货箱：8+1个
- 满充续航：≥6h



Lifting Robot

Suitable for transporting materials of various specifications and forms.

- Number of basket layers: 5 layers
- Lifting stroke: 0.33–3.6 m
- Fully charged battery life: ≥6.5 hours

托举式机器人

适用于多规格多形态的物料搬运

- 背篓层数：5层
- 举升行程：0.33-3.6m
- 满充续航：≥6.5h

AUTONOMOUS CASE-HANDLING MOBILE ROBOTS (ACRs)

◎ 箱式仓储机器人

Advantages

- High-Density Storage.
- Vertical storage height up to 12 meters (over 39 feet).
- Capable of batch picking 9 bins per operation, greatly improving order fulfillment efficiency.
- Accelerates inbound and outbound workflow processes.
- Supports picking for both bins and cartons.
- Order picking accuracy of over 99%.
- Reduces labor costs.
- Enables seamless integration with other technologies and existing WMS/WES systems.
- Automatic charging, supporting 24/7 uninterrupted operation.

核心竞争优势

- 高密度存储。
- 垂直存储高度可达 12 米。
- 单次作业可批量拣选 9 个料箱，大幅提升订单履约效率。
- 加速入库与出库作业流程。
- 支持料箱与纸箱拣选。
- 订单拣选准确率 99% 以上。
- 降低人工成本。
- 可与其他技术及现有 WMS/WES 系统无缝集成。
- 自动充电，支持 24 小时不间断作业。



ACRs project
ACRs案例



ACRs project
ACRs案例



ACRs project
ACRs案例



ACRs project
ACRs案例



ACRs project
ACRs案例

PICK CLIMB

◎ 闪攀系统

- The Climb robot is mainly designed for piece-picking scenarios. It can move horizontally and climb vertically, efficiently transporting cartons from the storage area to workstations, and features autonomous navigation, active obstacle avoidance and automatic charging.

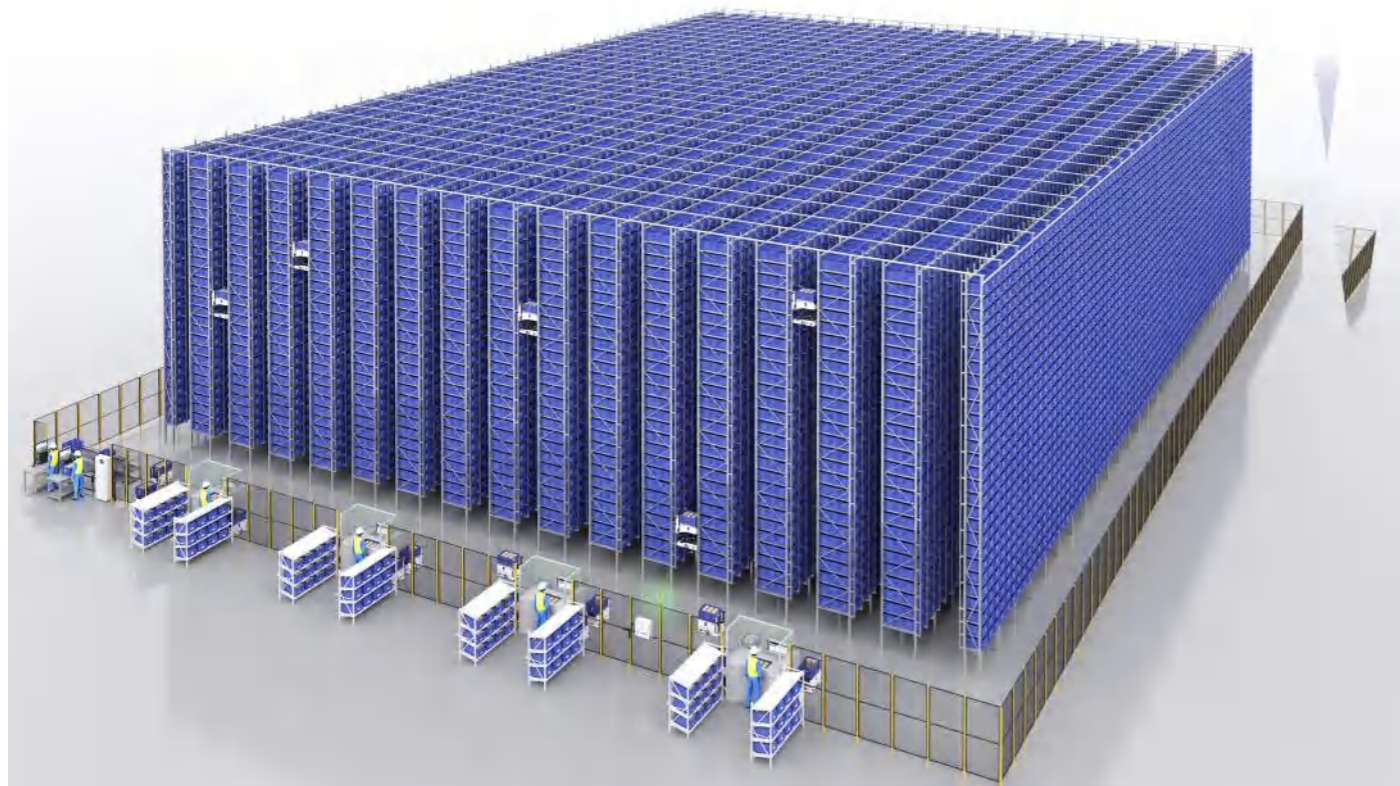
- The Pick Climb System operates via a three-in-one design: high-speed ground traversal + single-rail climbing + intelligent case picking & placing.

- This compact robot enables ultra-narrow aisle layouts. Thanks to its agile mobility, no additional transverse passages are required, allowing for ultra-space-efficient rack arrangements and maximum utilization of existing floor space. The system optimizes both horizontal and vertical space utilization simultaneously.

- 闪攀机器人主要针对拆零拣选的场景，可水平移动与垂直爬升，高效完成货箱从库区到工作站的搬运，具备自主导航、主动避障、自动充电功能。

- 通过“地面高速穿梭 + 单侧导轨攀爬 + 智能取放料箱”三合一方式运行。

- 小巧的机器人支持超窄巷道设计，其灵活的运动能力无需预留横向通道，实现极致省空间的货架布局，最大化利用现有场地。系统同时优化水平与垂直空间利用率。



Pick Climb system
闪攀系统



Advantages:

- **Higher Storage Density:** 30,000+ storage locations in 1000m², with a maximum operating height of 12m.
- **High Speed & Efficiency:** Maximum travel speed of 4 m/s, order fulfillment within 2 minutes, delivering a 34% efficiency improvement over traditional ASRS.
- **High Throughput:** Up to 4,000 case turnovers/hour in 1000m² storage area.
- **Low Maintenance & High Reliability:** Dual climbing arms with single-side rail design halve connection points, enabling simple installation and significantly reduced operation and maintenance costs.
- **Strong Adaptability:** Suitable for old warehouse renovation & new warehouse upgrade.

特征:

- 优化存储密度：1000m²可实现30000+储位，最高作业高度达12米。
- 高速高效：运行速度最高 4m/s，2分钟内订单送达，效率较传统 ASRS 提升34%。
- 高吞吐量：1000m²的存储面积每小时最高周转4000箱次。
- 低维护高可靠：双攀爬臂单侧导轨设计，连接点减半，安装简便，运维成本大幅降低。
- 高适应性：适配现有仓库智能化改造与新建仓储效能升级。



RADIO SHUTTLE RACK

◎ 穿梭式货架

- The Radio shuttle rack consists of three parts: racks, shuttle carts, and forklifts.
- It is a high-density pallet storage system that relies on shuttle carts running along rack rails.
- Radio shuttle racks are suitable for goods with high volume and low SKU, such as food, chemicals, tobacco and products from other industries with large batch sizes and relatively limited product varieties.
- Compared with drive-in racks, radio shuttle racks eliminate the need for forklifts to enter the racks to access goods, which greatly improves efficiency. They can be designed with greater depth and denser storage, significantly saving space and labor costs.

- 穿梭式货架系统由货架、穿梭车、叉车三部分构成。
- 它是依靠穿梭车在货架轨道中自行堆码的高密度托盘存储系统。
- 穿梭式货架适用于多量少样的货品，如食品、化工、烟草等单品种批量大，品类相对单一的行业。
- 跟驶入式货架相比，穿梭式货架存取无需叉车驶入，效率极大提高，并可设计进深更大，存储更密集，极大节省空间及人力成本。



Radio shuttle rack project
穿梭式货架案例



Radio shuttle rack project
穿梭式货架案例



- 1. 轨道 Rail
- 2. 横档 Crossbeam
- 3. 轨道支撑板 Rail support plate
- 4. 货架立柱 Upright Post
- 5. 可调底脚 Adjustable footing
- 6. 叉车挡板 Forklift baffle
- S1. 轨道内宽 Inner width of rails
- S2. 轨道外宽 Outer width of rails
- S3. 立柱内宽 Inner width of upright posts
- S4. 轨道高度 Height of rail

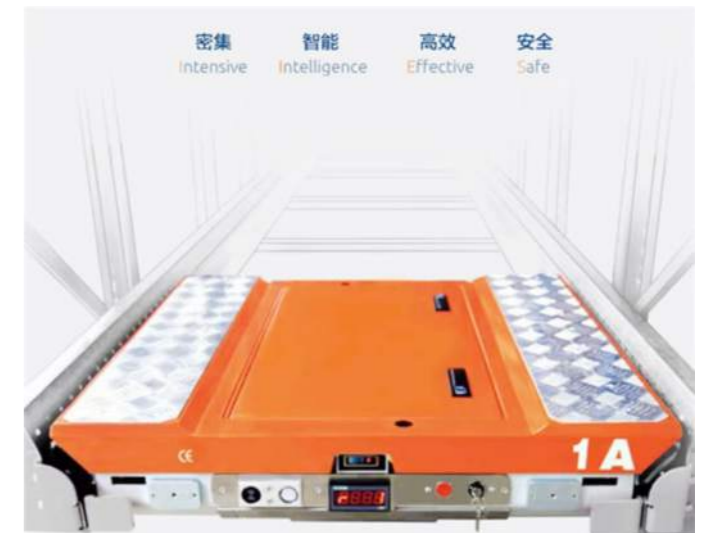
Radio shuttle rack structure details
穿梭式货架结构

Two-way Shuttle

- Moves only back and forth within a single aisle.
- Requires external auxiliary equipment for layer changing or aisle changing.
- Ideal for single-category, high-volume bulk storage.

两向穿梭车

- 仅可沿巷道前后单向移动
- 需依赖外部辅助设备完成换层/换巷道
- 适用单品类、大批量货物存储



Shuttle
穿梭车

Four-way Shuttle

- Enables longitudinal and transverse travel in all directions.
- Can complete cross-layer operations when equipped with a hoist.
- Suitable for multi-category goods and high-frequency storage & retrieval operations.

四向穿梭车

- 可实现横向 + 纵向双向行走
- 配合提升机即可完成跨层作业
- 适用多品类货物、高频次存取作业

SELECTIVE PALLET RACK

◎ 横梁式货架

- As the simplest and most effective versatile storage racking system, it stores pallets of goods on racks with the use of forklifts.
- It enables flexible and efficient storage and retrieval operations, offers high selectivity, supports FIFO (First-In-First-Out) inventory management, ensures a high inventory turnover rate, and has a load capacity of up to 5 tons per layer.
- Rack specifications can be customized to suit different warehouse layouts and cargo types.
- Featuring a simple structure, easy assembly, high versatility and low cost, it is the most widely used storage system in warehouses.

- 最简单有效的多元化仓储货架, 将货物放置在托盘上, 配合叉车使用存储。
- 存取操作灵活快捷, 选择性强, 可实现先进先出, 周转率较高, 承重可达5T/层。
- 货架规格可以按照不同的空间与货物量身定制。
- 因其结构简单、装配方便、通用性强、实施成本低等优点, 成为仓库中最常用的仓储系统。

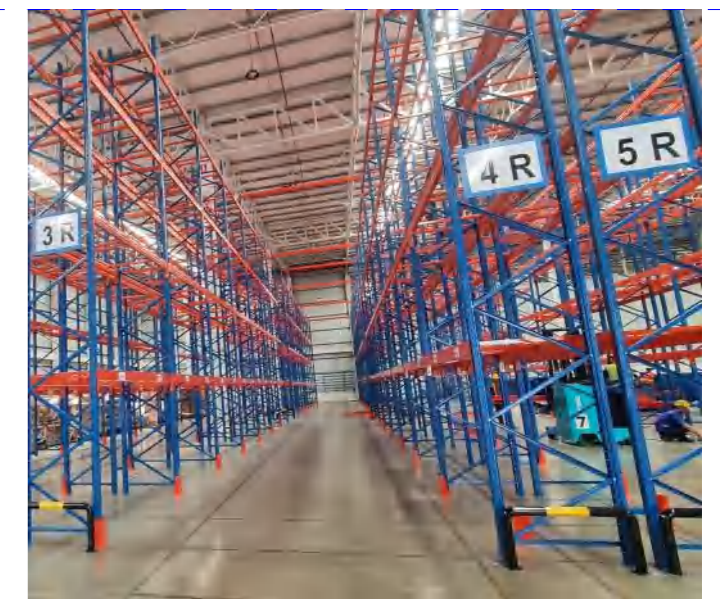


Structural features:

- Full modular structure for easy and quick assembly and flexible application.
- The upright posts are designed with adjustable hole spacing of 50mm/75mm, allowing flexible adjustment of layer spacing according to cargo height.

结构特点:

- 全组合式结构, 拆装简便快捷, 应用灵活。
- 立柱设计有50mm/75mm 可调孔距, 可根据货物高低灵活调节层间距。



SELECTIVE PALLET RACK

◎ 横梁式货架

Design rack's factor:

- Weight of goods (including pallets or containers);
 - Dimensions of pallets and goods (W*D*H);
 - Fork entry direction of pallets;
 - Dimensions of the storage area (Length, Width, Height) or the CAD drawing of the warehouse building;
- Number of beam layers per rack;
- Load capacity per layer of the rack.

货架设计要素:

- 货物的重量 (包括托盘或料箱);
- 托盘及货物的尺寸 (宽*深*高);
- 托盘的进叉方向;
- 存储区域 (包括长, 宽, 高) 或是您的仓库CAD建筑图纸;
- 每个货架要多少层横梁;
- 货架的每层承重是多少。



Upright post 立柱



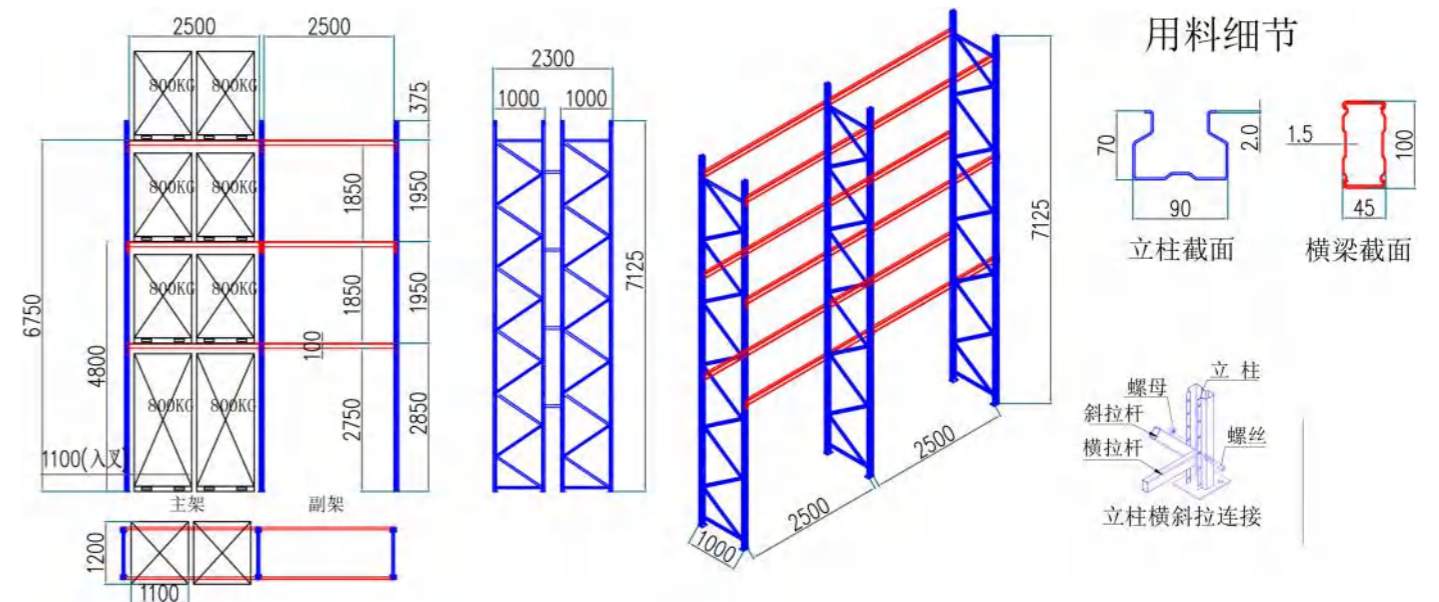
Box beam 横梁



Post protector 护脚



Anti-collision fence 防撞栏



MEDIUM-DUTY & HEAVY-DUTY RACK

◎ 中型和重型货架

• The rack features an all-combination structure, detachable and adjustable, easy to disassemble and install, with an attractive appearance and stable, durable performance. Specifications can be customized according to customers' actual needs.

- Each layer can bear a load of 300kgs to 5000kgs.
- The medium duty rack is suitable for manual access to lighter and scattered goods.
- The heavy duty rack is suitable for storing some heavy goods with pallets.
- Each post is equipped with adjustable holes at intervals of 50mm/75mm, allowing for flexible adjustment of the layer spacing according to the height of the goods.
- There are three main types of decking: steel decking, plywood decking & wire mesh decking.

• 中型和重型货架为全组合式结构，可拆可调，拆装简便快捷，外形美观，稳固耐用，规格尺寸可按照客户实际需求定制。

- 每层承重 300kg-5000kg。
- 中型货架：适用于人工存取较轻的零散货物。
- 重型货架：适用于托盘存放的一些重型货物。
- 立柱各设有50mm/75mm可调孔距，可根据货物高度灵活调节层距。
- 层板主要有三种：钢层板、木夹板、网层板。



Structure details of racks
货架细节图



Structure details of racks
货架细节图



Medium-duty rack with divider
货架带分隔板



Rack with wire mesh decking
货架铺网层板



Rack with plywood
货架铺木板



Rack with steel decking
货架铺钢层板

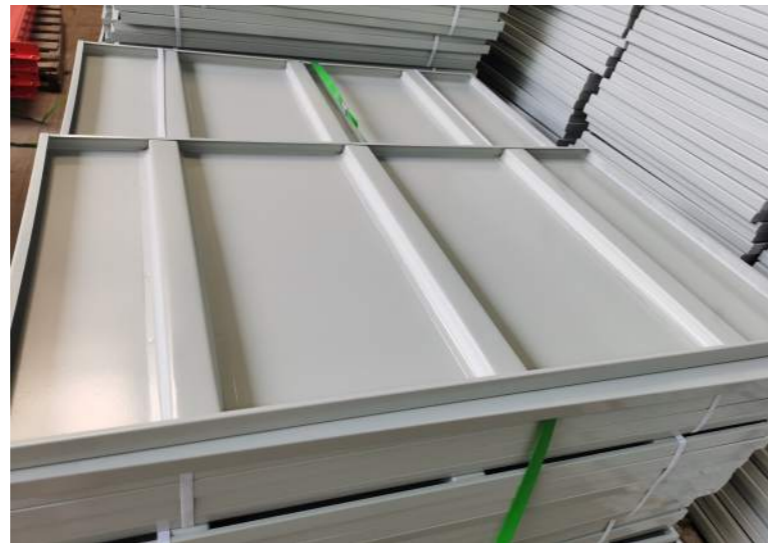
LIGHT-DUTY RACK

◎ 轻型货架

- Adopting an upright frame and beam hanging structure, it is easy to disassemble and assemble, with each layer adjustable longitudinally every 50mm.
- The light-duty rack has a relatively low load capacity, capable of supporting 100 to 500kgs.
- There are three main types of decking: steel decking, plywood decking & wire mesh decking.
- It is suitable for manual storage of small goods.
- 采用立柱片与横梁挂接结构，拆装方便，层板每50mm可调。
- 轻型货架载重量较轻，可承载100-500公斤。
- 层板可选用钢层板，木层板（夹板，中纤板，实木板）及网层板等。
- 适用于人工存取小件货物。



Upright frame 立柱片

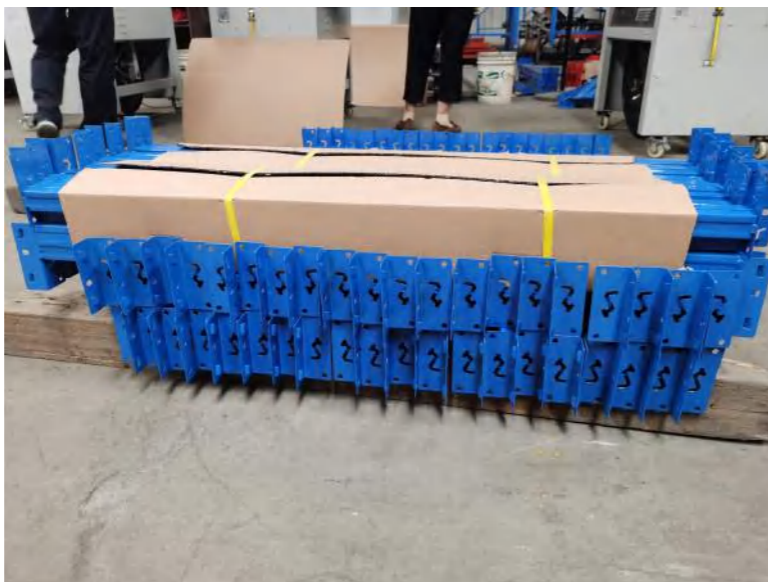


Steel decking 钢层板



EXTRA STRONG 80MM UPRIGHTS
COMPARED TO 50MM SUPPLIED BY
MOST OTHER SUPPLIERS

Upright post 立柱



Box Beam 横梁



Light-duty rack
轻型货架



Light-duty rack
轻型货架



Light-duty rack
轻型货架



Box beam connect with upright post
横梁与立柱连接



Light-duty rack project
轻型货架案例



Light-duty rack project
轻型货架案例



Light-duty rack project
轻型货架案例



Light-duty rack project
轻型货架案例

MULTI-TIRE RACK (MEZZANINE RACK)

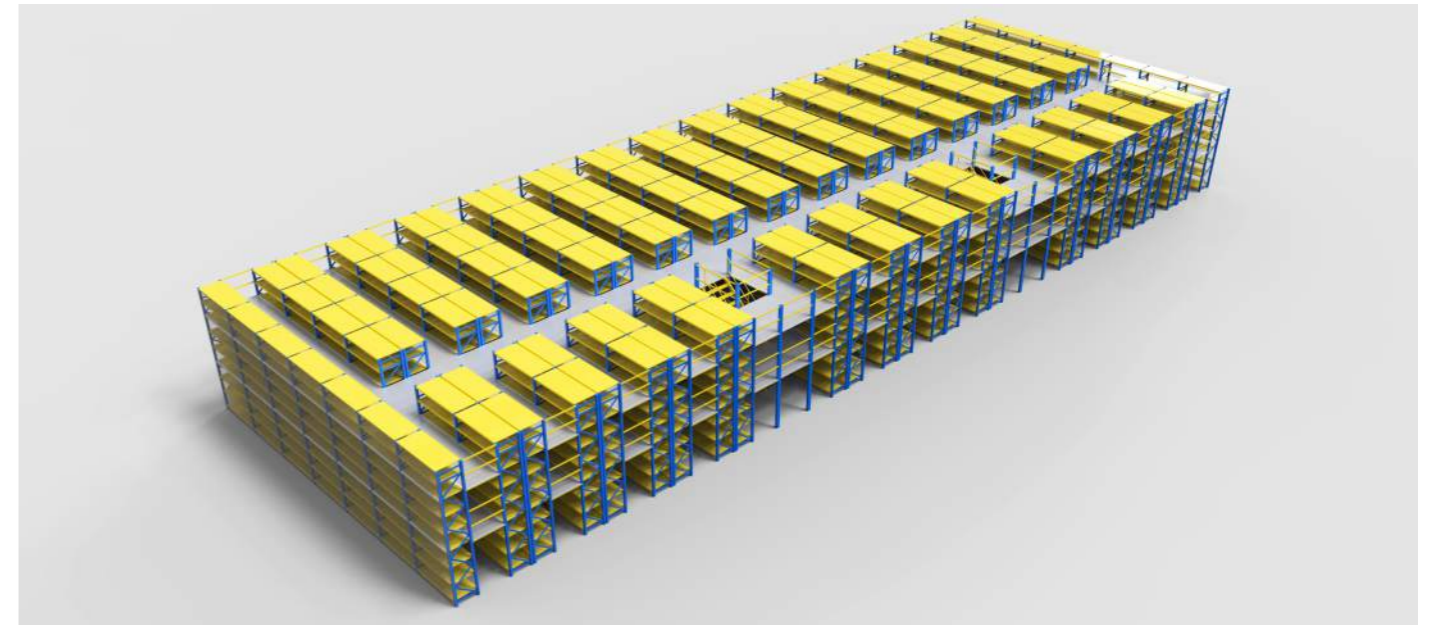
◎ 阁楼式货架

- It usually uses medium-duty racks or heavy-duty pallet racks as the main structure.
- It features a fully modular structure, easy and quick to assemble and flexible in application.
- It can work with forklifts or hydraulic lifting platforms for cargo loading and unloading.
- Multi-tier mezzanine rack is the simplest and most efficient way to save storage space.
- It is suitable for storing light, small and medium-sized goods, as well as multi-variety goods handled manually.

- 通常使用中型层板式货架或重型横梁式货架作为主体结构。
- 全组合式结构，组装方便快捷，应用灵活。
- 可配合叉车或液压升降平台进行货物上下作业。
- 多层阁楼式货架是节省存储空间最简单高效的方式。
- 宜存取轻型及中小件货物，适于多品种、人工存取的货物。



3D View of Mezzanine rack
阁楼式货架3D模型



Mezzanine rack with steel grating
阁楼式货架铺钢格板



Mezzanine rack basic structure
阁楼式货架基本结构



Mezzanine rack project
阁楼式货架案例



Case of match staircase
配楼梯案例

STEEL PLATFORM (MEZZANINE FLOOR)

◎ 钢平台

- It can make dual use of floor space, improve space utilization and reduce operating costs.
- According to the warehouse space, the platform span can be designed :3000-6000mm.
- The maximum load capacity can reach 1500kgs/m².
- The four sides of floor are equipped with the handrails, along with stairs for easy movement and a lifting platform for loading and unloading goods.
- The platform panel can be used plywood, steel gusset plate or steel grating.
- With an aesthetic appearance, stable structure and detachable design.

- 双倍利用地面空间，提高空间利用率，降低运营成本。
- 可根据仓库空间设计平台跨度:3000-6000mm。
- 最大承重可达1500kgs/m²。
- 楼面四周配防护栏，并配置方便上下走动的楼梯及上下货的升降平台。
- 平台面板可选用木夹板，钢扣板或钢格板。
- 整体美观，结构稳固，可拆卸。



3D View of Mezzanine floor
钢平台3D模型



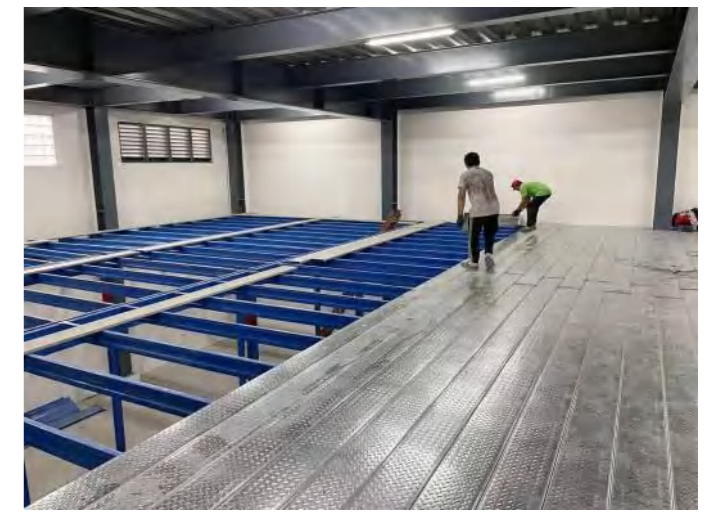
Mezzanine floor project
钢平台案例



Mezzanine floor project
钢平台案例



Mezzanine floor with steel gusset plate
钢平台铺钢扣板



Mezzanine floor with steel gusset plate
钢平台铺钢扣板

MOBILE RACK

◎ 移动货架

• Derived from pallet racks, the mobile rack consists of two rows of racks mounted back to back on a mobile base, arranged in multiple groups. Each base is equipped with rollers and a motor; by pressing the control button, the racks move along the tracks laid on the ground, allowing forklifts to enter the aisle for goods access.

• The shelf system is equipped with multiple infrared sensors. If personnel or a forklift enters the aisle while the racks are moving, the racks will stop automatically to ensure the safety of personnel and goods.

• It only requires one working aisle, featuring high space utilization, safety and reliability, and easy movement.

• It is suitable for warehouses with a wide variety of goods but low access frequency.

• 移动货架由托盘式货架衍生而来，两排货架背靠背安装在移动底座上，呈多组排列。每个底座配有滚轮和驱动电机，按下控制按钮，货架即可沿地面铺设的轨道移动，叉车便可进入通道进行货物存取。

• 该货架系统配备多个红外感应装置，货架移动过程中若有人员或叉车进入通道，货架会自动停止，保障人员与货物安全。

• 仅需设置一条通道，空间利用率极高，安全可靠，移动方便。

• 适用于货品品类较多，但存取频率较低的仓库。



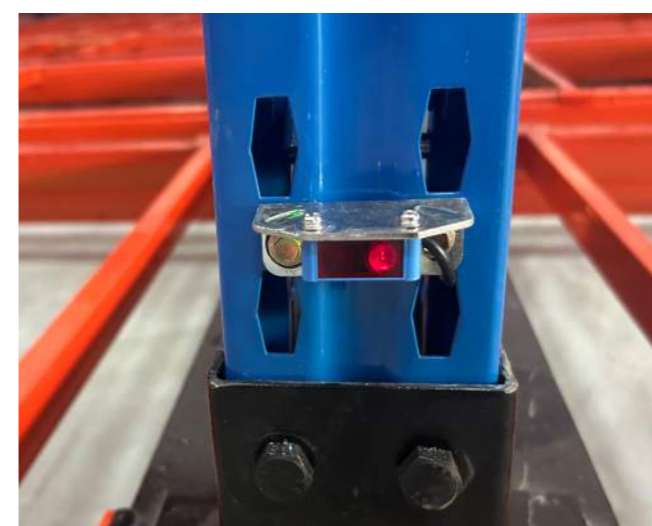
Mobile rack project
移动货架案例



Operation switch
运行开关



Anti-collision rubber
防撞胶



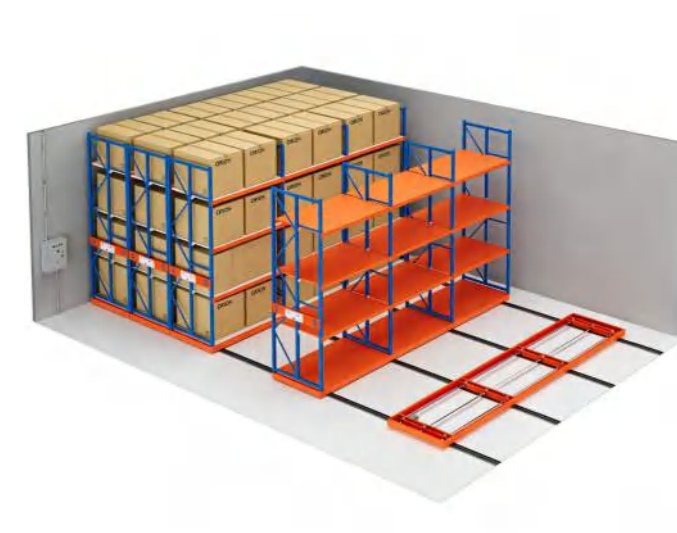
Infrared sensor
红外感应传感器



Position limit switch
行程开关



Mobile rack project
移动货架案例



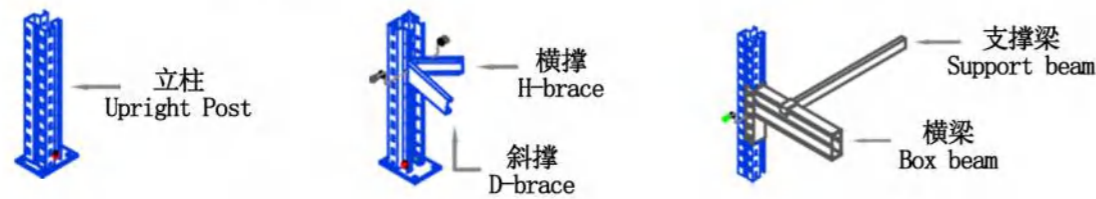
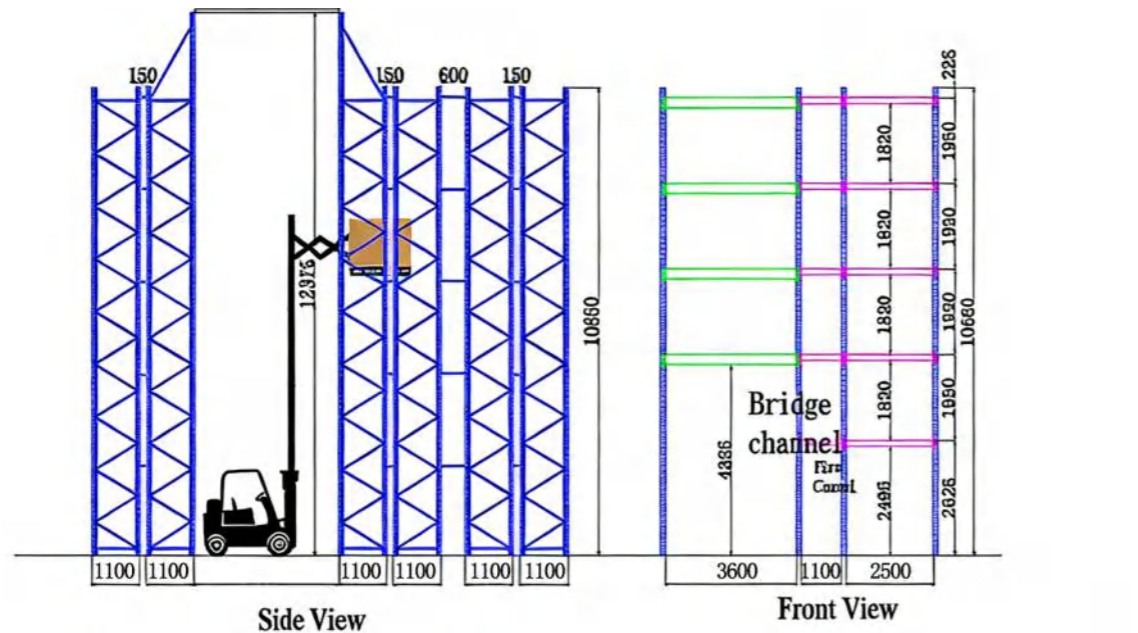
Mobile rack 3D view
移动货架3D效果图

DOUBLE-DEEP PALLET RACK

◎ 双深度货架

- The double-deep pallet rack is a derivative type of the pallet rack, with goods placed in two rows along the depth of the rack.
- Compared with standard pallet racks, it increases storage capacity by reducing the number of aisles.
- It requires the use of a forklift with telescopic arms to access the goods.
- It is suitable for efficient storage of identical goods or goods with a low turnover rate.

- 双深度货架是横梁式货架的衍生类型，货物沿货架深度方向双排摆放。
- 与标准货架相比，它通过减少通道数量来提高存储容量。
- 需使用带有伸缩叉臂的叉车存取货物。
- 适合高效存储相同或周转率较低的货物。



Design Details:

1. Heavy duty double deep pallet racking (adjustable 75mm longitudinally)
2. Size 1: L2500*D1100*H12375/10650*5 layers box beam;
- Size 2: L3600*D1100*10650*5 layers box beam;
- Size 3: L1100*D1100*10650*5 layers box beam;
3. Load Capacity: 1000Kgs/pallet.

Double-deep pallet rack drawing
双深度货架设计图



Double-deep rack project
双深度货架案例



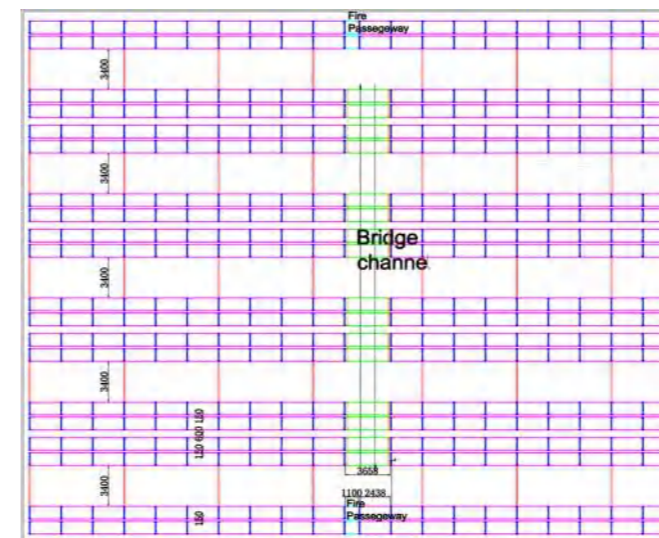
Double-deep rack project
双深度货架案例



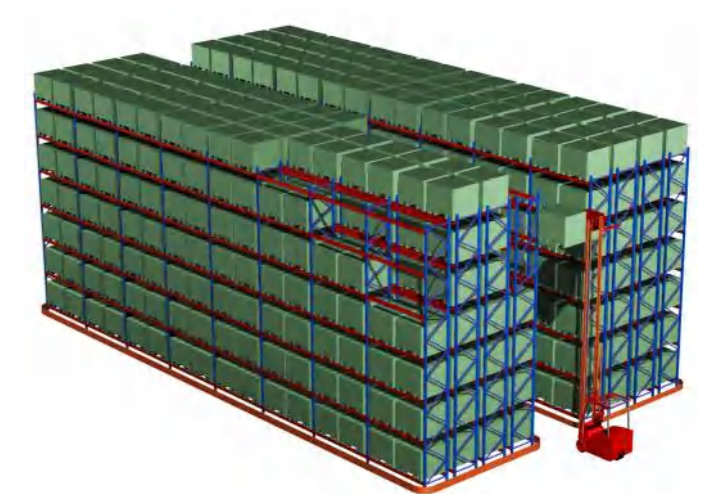
Double-deep rack project
双深度货架案例



Scissor-type forklift
剪刀式叉车



Double-deep rack drawing
双深度货架设计图



Double-deep rack 3D view
双深度货架3D效果图

VERY NARROW-AISLE RACK

◎ 窄巷式货架

- Its key feature is its relatively narrow aisle width, usually ranging from 1600mm to 2000mm.
- Its maximum height can reach 14 meters, allowing full use of warehouse space for high-density storage.
- It offers 100% accessibility for all stored materials.
- It is suitable for warehouses with frequent goods entry and exit and high picking requirements for the goods.
- Very narrow-aisle racks must be used with three-way forklifts for storage operations.

- 核心特点是通道宽度较窄，通常在1600mm-2000mm之间。
- 最高可达14米，能充分利用仓库空间，实现高密度存储。
- 对所有存储的物料都具备100%的可选性。
- 适合于货物进出频繁且对货物有较高拣选要求的仓库。
- 窄巷式货架必须配备三向叉车进行存储作业。



VNA rack project
窄巷式货架案例



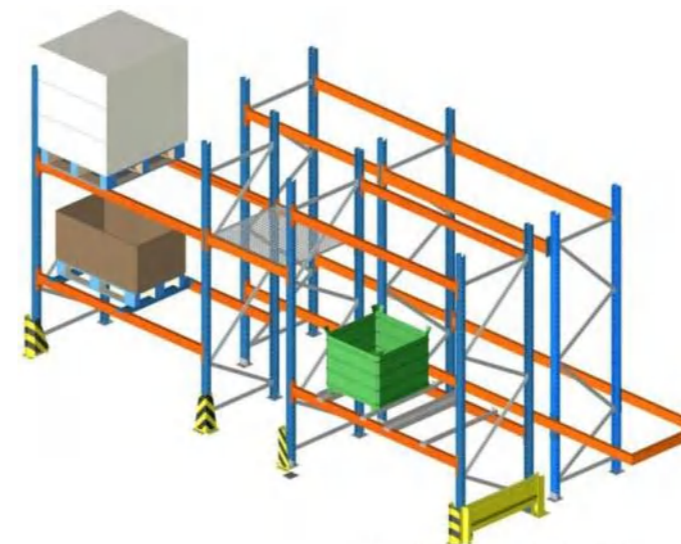
VNA rack project
窄巷式货架案例



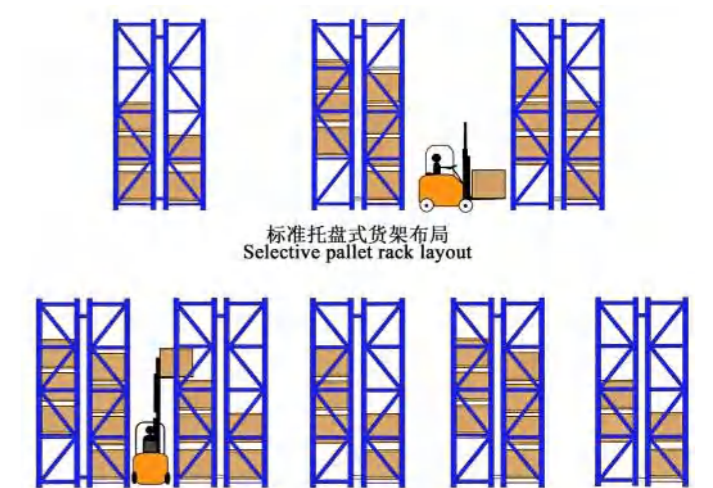
VNA rack project
窄巷式货架案例



VNA rack project
窄巷式货架案例



VNA 3D view
窄巷式货架3D效果图



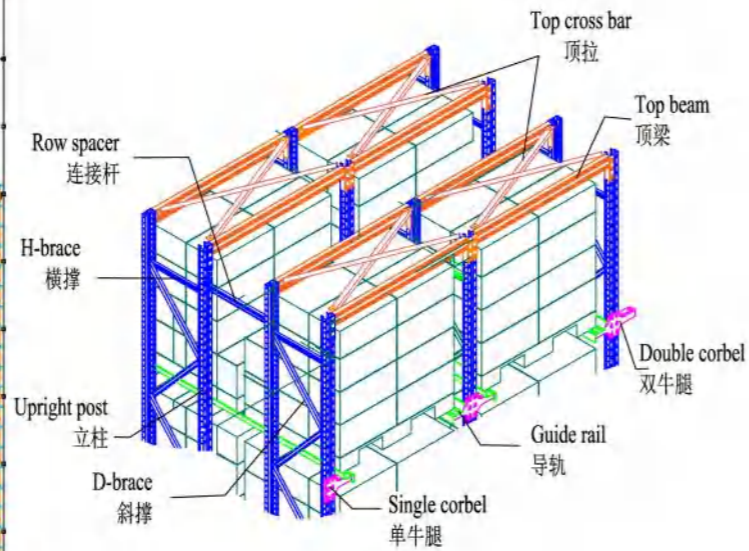
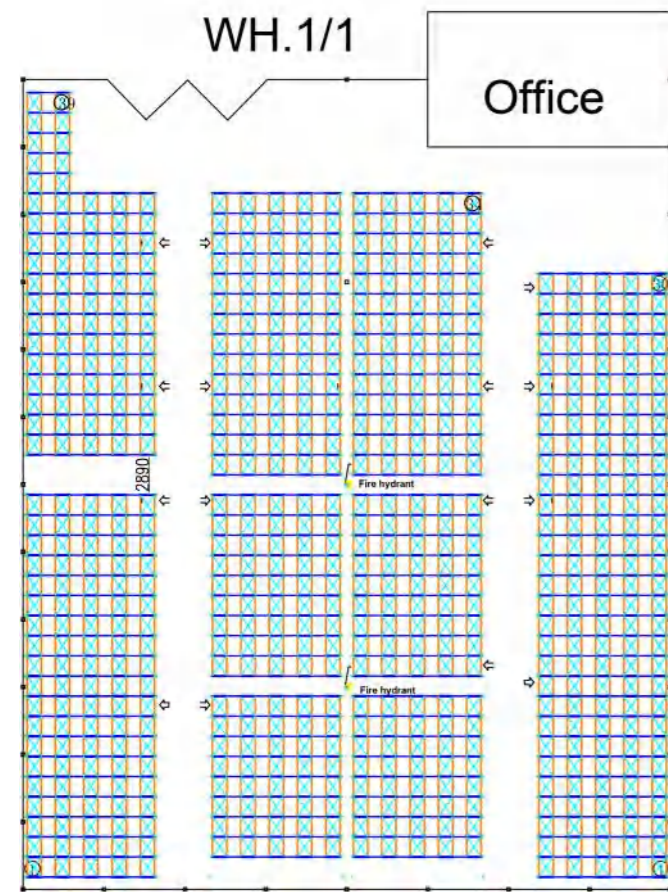
Layout Comparison
布局对比

DRIVE-IN RACK

◎ 驶入式货架

- Forklifts enter the aisle of the rack to store and retrieve goods.
- It is suitable for storing a small variety of products in large quantities of the same type.
- Goods can be stored and retrieved from the same side or stored from one side and retrieved from the other side, realizing both first-in-first-out and first-in-last-out storage methods.
- Compared with selective pallet racks, the warehouse utilization rate can reach about 80%, representing an increase of more than 30% over the original level.

- 叉车进入货架巷道内存取货物。
- 适用于存储品种少，批量大的同类型产品。
- 货物可由同一侧存取，也可一侧存入另一侧取出，实现先进先出及先进后出的存储方式。
- 与托盘货架相比、仓库利用率可达 80% 左右，较原有水平提升 30% 以上。

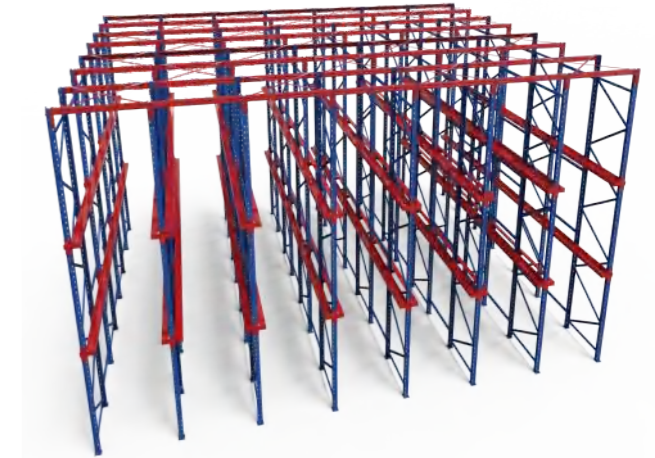


Drive-in rack remarks:
 1. Rack size: L1400 (inner) * D1100/1000 * H9000 * 4 (3+G) layers, 500KG/pallet
 2. Storage capacity: 1200 fork entrance * 1000 pallets 4524 pallets
 3. Color: upright frame, row spacer-blue, guid rail: galvanized, others-orange.

Drive-in rack Layout diagram & structure diagram
 驶入式货架布局图 & 结构图



Drive-in rack project
 驶入式货架案例



Drive-in rack project
 驶入式货架案例



Drive-in rack project
 驶入式货架案例



Drive-in rack project
 驶入式货架案例



Drive-in rack project
 驶入式货架案例



Drive-in rack project
 驶入式货架案例

FLOW THROUGH RACK

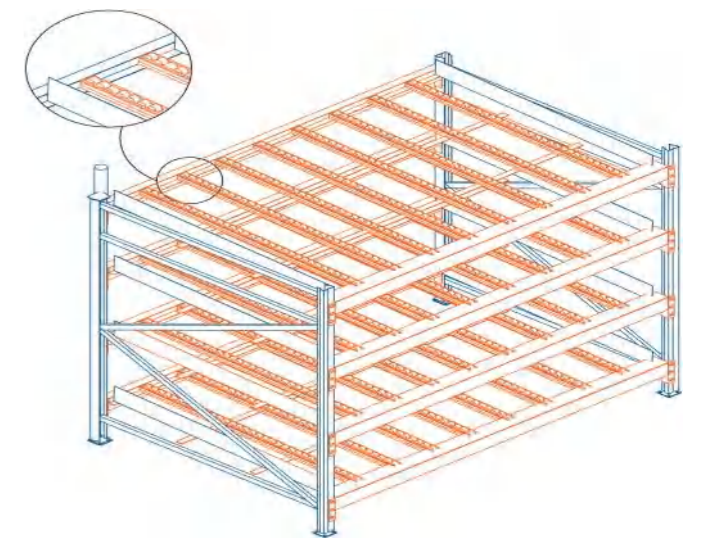
◎ 流利式货架

- The flow-through rack is a combination of an assembled rack and roller-type fluent strips.
- The goods slide down by their own gravity to ensure first-in-first-out (FIFO) storage.
- It is suitable for order-picking and sorting warehouses such as light industry manufacturing facilities, commercial distribution centers, and central pharmacies.
- It features easy access to goods, a space-saving design, and improved operational efficiency.

- 流利式货架采用全组合货架与辊轮式流利条相结合。
- 利用货物自重实现货的先进先出。
- 广泛用于轻工业制造、商业配送中心、中心药房等配货分拣仓库。
- 存取简便、节约空间、提升效率。



Fluent strips
流利条



Flow through rack drawing
流利式货架设计图

PUSH BACK RACK

◎ 后推式货架

- Push-back racks, also called press-in racks, consist of selective pallet racks, tracks, and trolleys.
- The trolleys are nested and run on inclined tracks. Later incoming goods push the earlier goods inward. When picking, the outermost pallet is removed first; once taken away, the inner pallets automatically slide forward by gravity. This achieves first-in, last-out (FILO) storage.
- Compared with drive-in racks and double-depth pallet racks, push-back racks have the advantage of convenient access to goods. The storage depth of this kind of racks is suitable for 2-4 pallets, and the can be up to 5 pallets at maximum.

- 后推式货架也叫压入式货架，由横梁式货架、轨道、台车等组成。
- 台车采用嵌套式布置，在带有一定倾角的轨道上运行；后入库的货物依次将先入库的货物向里推进。取货时先取最外侧托盘，外侧货物取出后，内侧货物会在重力作用下自动滑出，实现先进后出存储。
- 与驶入式货架、双深度横梁式货架相比，后推式货架具有存取货物方便的优势，此种货架存储进深以2-4个托盘为宜，最深可达5个托盘。



Push back rack project
后推式货架案例



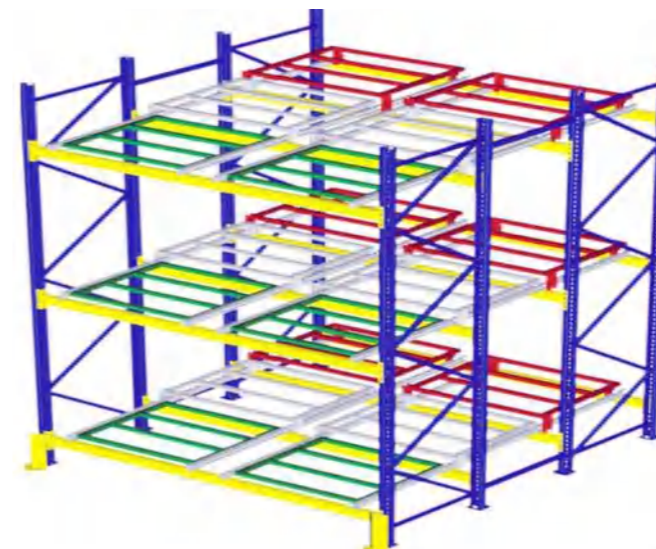
Push back rack project
后推式货架案例



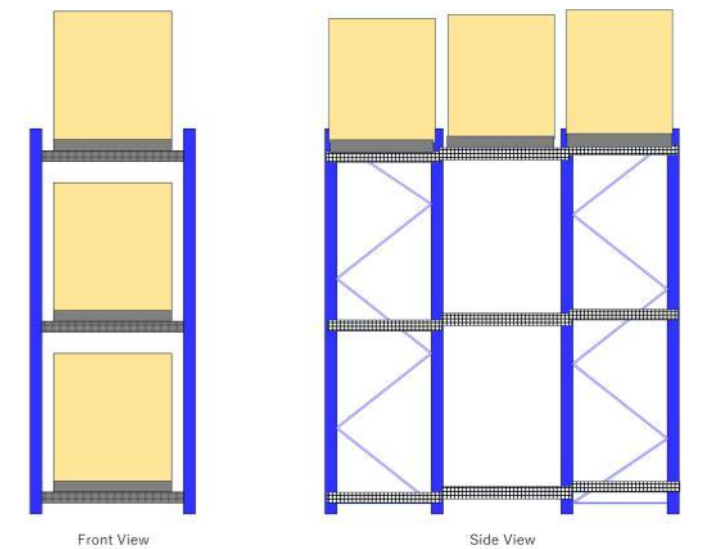
Trolley & tracks
台车 & 轨道



Trolley & tracks
台车 & 轨道



Push back rack design drawing
后推式货架设计图



Push back rack design drawing
后推式货架设计图

GRAVITY RACK

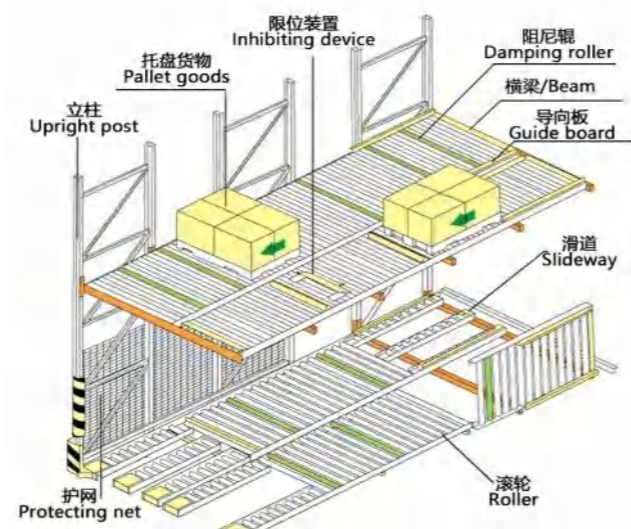
◎重力货架

- The gravity rack is a storage system based on gravity tracks with an inclination angle of 3-5°. Goods move automatically by their own gravity.
- It is suitable for the storage and picking of heavy goods, which are placed on pallets and handled by forklifts.
- It features high space utilization, and is particularly suitable for storing goods with a shelf life that are not suitable for long-term backloging.

- 该货架是基于重力轨道的存储系统，轨道倾角为 3-5°，货物依靠重力自行移动。
- 适用于重型货物的存储与拣选，采用托盘放货，通过叉车完成存取作业。
- 空间利用率高，尤其适用于储存有质保期、不宜长期积压的货物。



Gravity rack drawing
重力式货架设计图



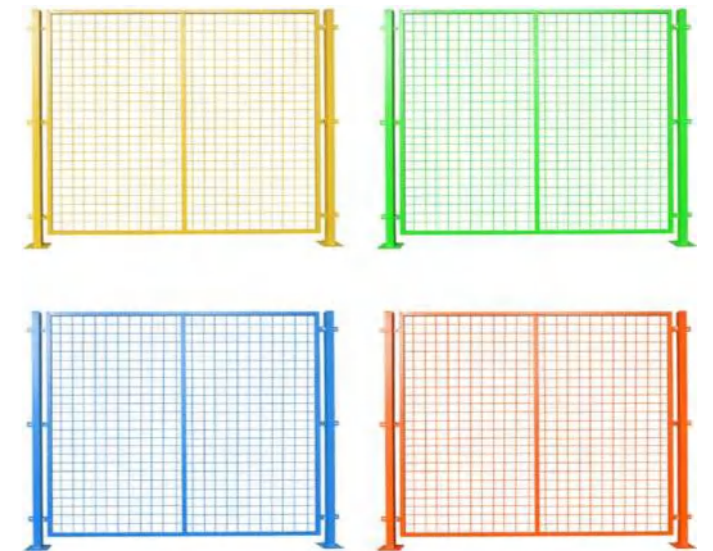
Gravity rack structure drawing
重力式货架结构图

MESH PARTITION WALL

◎网墙隔断

- The mesh partition wall is a multi-functional and cost-effective space partitioning system.
- The columns are firmly fixed to the ground with bolts, ensuring safety and easy assembly and disassembly.
- It can effectively divide space, provide safety protection, and optimize the space layout.
- It is widely used in industries, commerce, public facilities and other places.

- 网墙隔断是一种多功能、经济实用的空间分隔系统。
- 立柱与地面以螺栓连接，安全牢固，拆装简便。
- 可有效划分空间、提供安全防护，同时优化空间布局。
- 广泛适用于工业、商业、公共设施等各类场所。

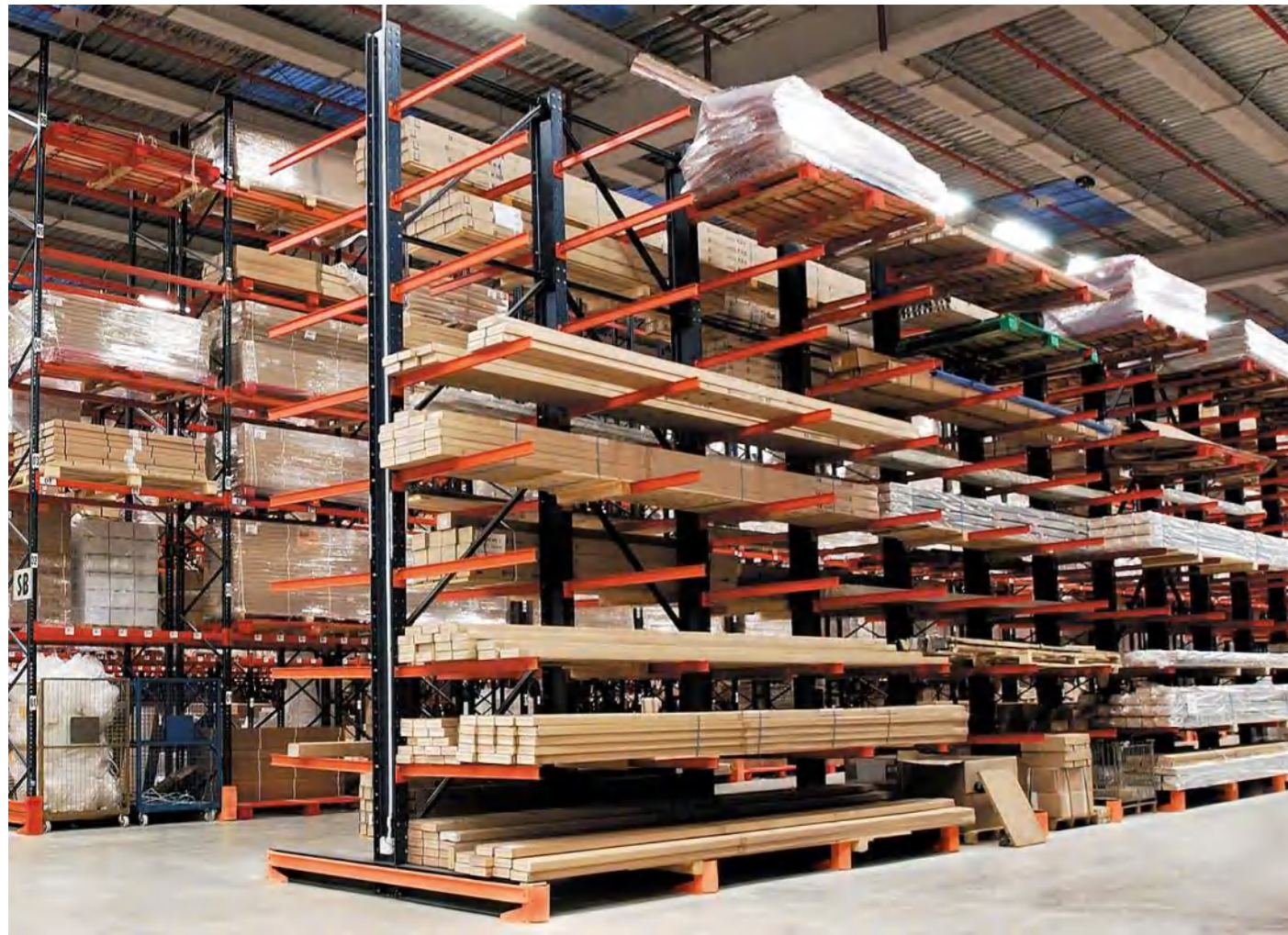


CANTILEVER RACK

◎ 悬臂式货架

- The cantilever rack adopts a combined structure, suitable for storing long materials, ring-shaped materials, plates and pipes.
- It is classified into light-duty, medium-duty and heavy-duty types based on load capacity.
- It is available in single-sided and double-sided versions according to structure.
- It is widely used in machinery manufacturing, building materials supermarkets and other industries.
- It can be combined with steel platforms or mobile racks to form cantilever mezzanines or mobile cantilever racks.

- 悬臂式货架采用组合式结构，适用于长物料、环状物料、板材、管材的存放。
- 根据承载能力可分为轻、中、重型。
- 根据结构可分为单面、双面型。
- 广泛应用于机械制造行业和建材超市等。
- 可与钢平台或移动货架结合组成悬臂式阁楼或移动式悬臂架。



For storing steel tube
存放钢管



For storing wood
存放木材



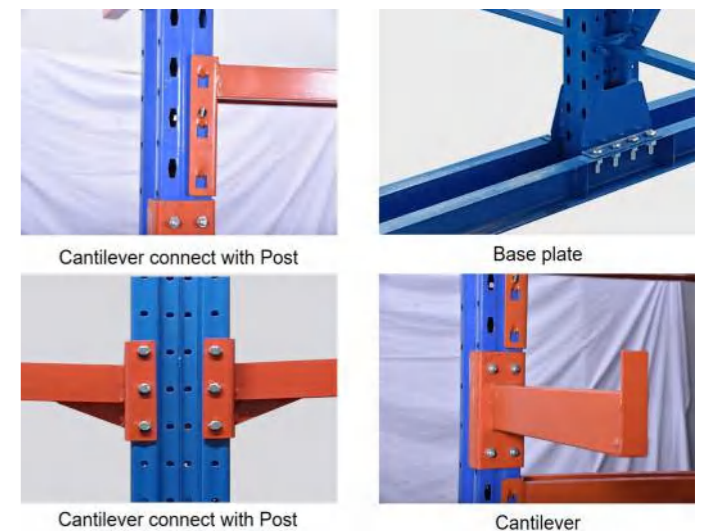
Double-sided cantilever rack
双面悬臂式货架



Double-sided cantilever rack
双面悬臂式货架



Single-side cantilever rack
单面悬臂式货架



Cantilever rack structure diagram
悬臂架结构图

MOLD RACK

◎模具架

- It is mainly used for storing various heavy items such as molds, steel, motors, and engines.
- Space-saving: it covers only 1.8 square meters but can hold dozens of small and medium sized molds for easy management.
- The drawer-type mold rack adopts bearing assembly. Each drawer can be pulled out by 60%–100%. The shelf height can be freely adjusted at 50 mm intervals. The number of drawer layers can be increased or decreased as required, and the racks can be connected infinitely.
- Load-bearing capacity per drawer layer: 200-3000kgs.
- The top is equipped with a left-right movable crane frame and an additional hoist, which can independently lift molds without using large overhead cranes or forklifts, saving time and effort. It is assembled from various components with a simple structure, making it easy to disassemble, transport and install.
- It is equipped with an additional positioning safety device and a safety switch, making mold loading and unloading safer and more reliable.

- 模具架主要用于存放各种模具、钢材、马达、发动机等重型物件。
- 节省场地，占地仅1.8平方米可存放数十套中小型模具，便于管理。
- 抽屉式模具架采用轴承组合，每层抽屉可抽出60%-100%，上下高度可每50mm自由调节，抽屉层数可按需增减，格数无限连接。
- 单层抽屉承重范围:200-3000kgs。
- 顶部配置左右移动天车架附加葫芦，可独立吊模，无需大型行车或叉车，省时省力更加方便；由多种部件组装而成，结构简单，便于拆卸、运输和安装。
- 附加定位保险装置，并带安全开关，上下模具更加安全可靠。



Full-open mold rack
全开式模具架



Full-open mold rack
全开式模具架



Full-open mold rack
全开式模具架



Semi-open mold rack
半开式模具架



Semi-open mold rack
半开式模具架



Upright frame

Drawer



Safety switch

Crane

Mold rack structure diagram
模具架结构图

MOBILE FILE CABINET

◎移动密集柜

• It is suitable for the storage of goods with a small variety but large quantity and low access frequency; it saves floor space, with a space utilization rate of over 80% and a storage efficiency of about 70%.

• The storage space can be adjusted freely; each item can be accessed directly, without being limited by first-in-first-out.

• Each shelf is equipped with a stop movement system to ensure the safety of items when accessing them, and it has a visually beautiful display configuration.

• The cabinets can be locked side by side for anti-theft storage, and the load-bearing capacity of each layer is 100-300kgs.

• 适合少样多量，低存取频率的货品保管；节省占地面积，空间使用率高达80%；存储效率约70%。

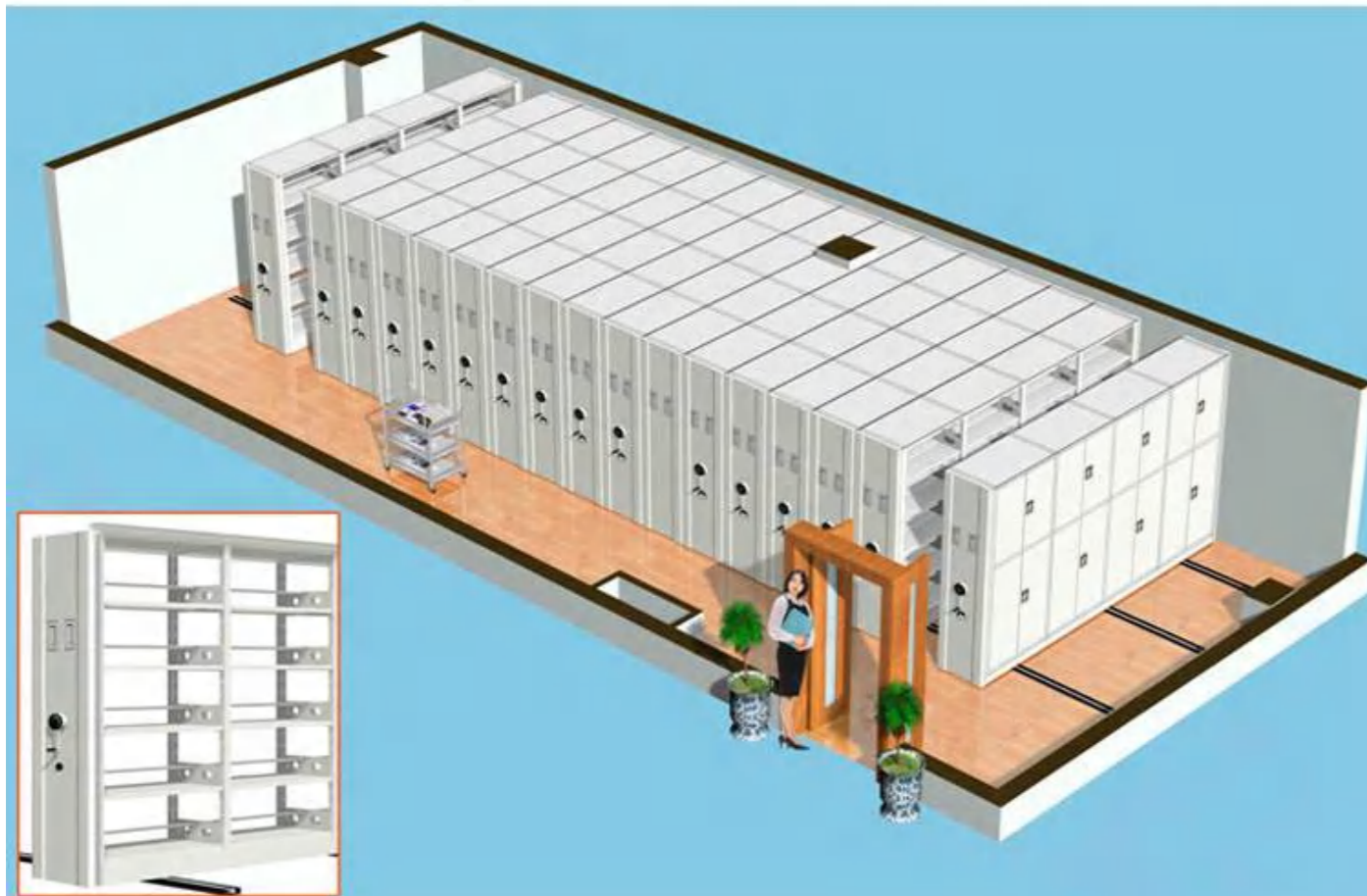
• 可自由调整存放空间；可直接存取每一项货品，不受先进先出之限。

• 每座料架皆装置停止移动系统，确保物品存取安全；外观陈列美观大方。

• 料架可并列集中上锁，实现防盗存储；每层格板承重100-300kgs。

3D场景图

Exclusive custom
专属定制



Hand-operated mobile file cabinet
手摇移动密集柜



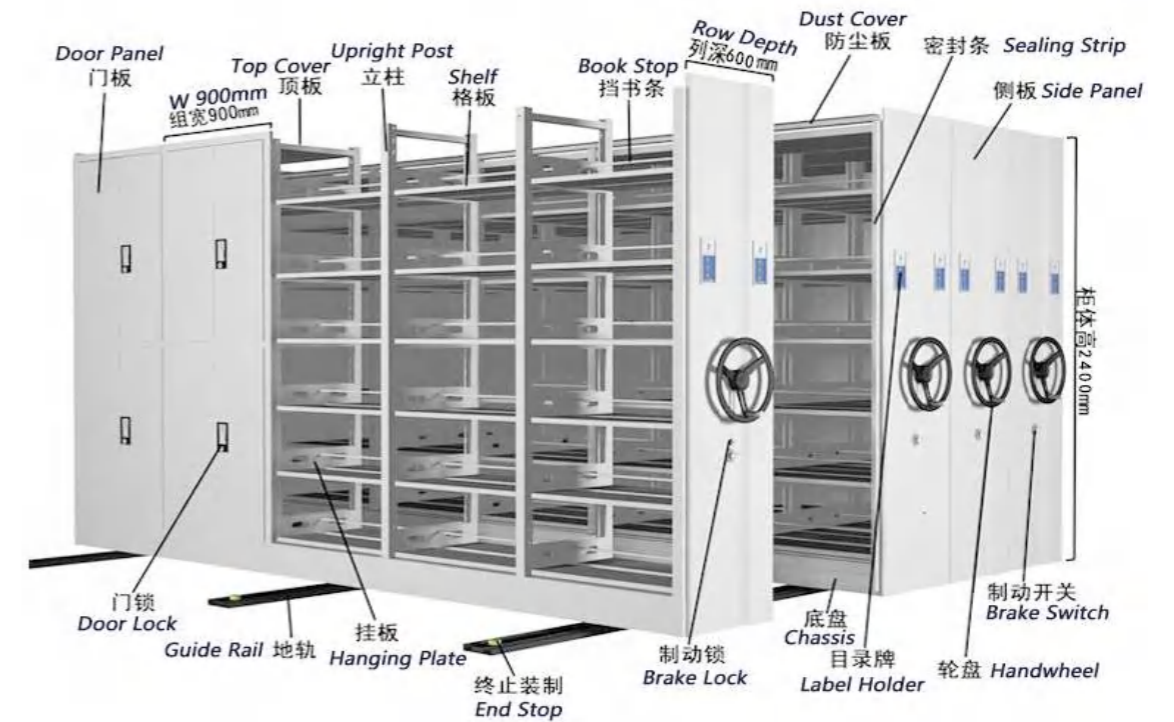
Hand-operated mobile file cabinet
手摇移动密集柜



Intelligent mobile file cabinet
智能移动密集柜



Intelligent mobile file cabinet
智能移动密集柜



Mobile file cabinet structure diagram
移动密集柜结构图

PLATFORM DOCK LEVELER

◎ 货台高度调节板

- The dock leveler flexibly and effectively connects the platform with the truck, ensuring smooth operation of loading and unloading equipment.
- It greatly improves handling efficiency while enhancing the safety of personnel and goods, and has been widely adopted by numerous large and medium-sized enterprises.
- 利用此高度调节板,可灵活衔接货台与货车,使装卸搬运设备顺利开展装卸作业。
- 大幅提升装卸效率,同时强化人员与货品安全防护,现已被众多大中型企业广泛应用。



MOBILE BOARDING BRIDGE

◎ 移动登高桥

- It is suitable for various scenarios such as loading & unloading platforms, sites with unfixed loading & unloading points, and narrow working areas.
- It allows forklifts and other handling vehicles to drive directly into trucks for operation without additional power, enabling efficient cargo loading and unloading.
- It adopts a supporting leg structure integrated with perforated steel plate design for more reliable safety.
- 移动式登车桥适用于装卸站台或装卸位置不固定、装卸场地狭小等各类场合。
- 借助该设备,叉车等搬运车辆可直接驶入货车内作业,无需额外动力,实现货物的快速装卸。
- 设备采用支腿支撑搭配网纹钢板结构的设计,具备更可靠的安全性能。



SUPERMARKET SHELF

◎超市货架

超市货架常规尺寸
Standard Supermarket Shelf Size (mm)

Type 类型	Length 长	Width 宽	Height 高	Color 颜色	Load capacity/layer 承重/每层
Single-sided 单面	700	450	1200	Semi gloss white / Gray/black 半光白色/灰色/ 黑色	35~120kgs
Double-sided 双面		850	1500		
Single-sided 单面	900	450	1800		
Double-sided 双面		850	2000		
Single-sided 单面	1200	450	2200		
Double-sided 双面		850			



BOOK SHELF

◎ 书架



Shelf connected with Post



Steel Shelf



Book Trolley
图书运输车



Post



Shelf connected with Post



OUR CUSTOMERS

◎ 合作客户



HITACHI



Minebea



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CATERPILLAR



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TOYO DENKI



AirAsia



FOXCONN
富士康科技集团



Shibaura Machine



FLEXTRONICS



CASIO



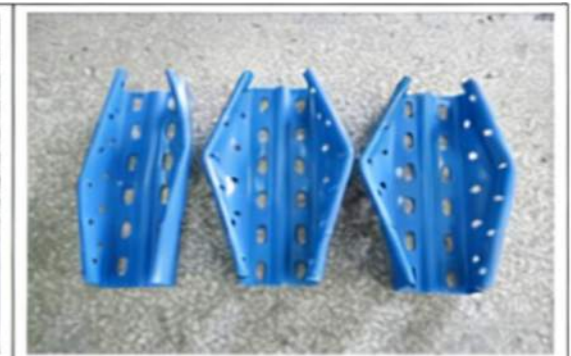
蒙牛

RACK TEST

◎ 货架测试



Before Stub column compression test



After Stub column compression test

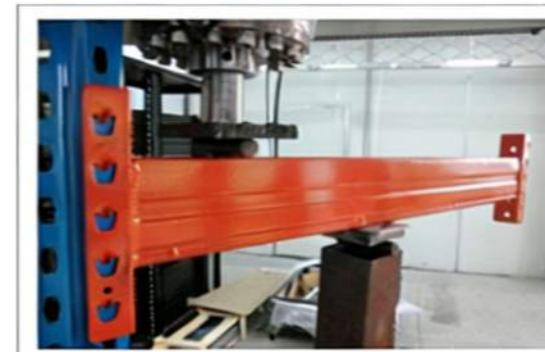


Before Compression test on uprights



After Compression test on uprights

*****To be continued*****



Before Shear test on beam end connectors and connector locks



After Shear test on beam end connectors and connector locks



Before Bending tests on upright sections



After Compression tests on uprights

*****End of report*****



Certificate No.
10.16.1035

Date of Issue
09/01/2023

Valid From
09/01/2023

The Certificate is valid until
08/01/2028

CERTIFICATE OF CONFORMITY

FULLNESS EXAMINATION OF TECHNICAL FILE

Applicant (Name & Address)	ORION (Guangzhou) Intelligent Equipment Co., Ltd No. 3 East Shengli Road, Pingzhou Industrial Park, Guicheng, Nanhai District, Foshan City, Guangdong Province, China
Manufacturer (Name & Address)	Same as applicant
Test Report No.	LTR22032804503
Product Description	Warehouse Storage Racking System
Model(s)	LSS200620/4-3, LSS200620/4-5, LSS180624/5-5, LSS250940/3-10, LSS271260/4-20, SPR251045/3-10, SPR271130/2-20, SPR270960/3-30, SPR281090/5-30, SPR3010120/7-15, DPR159260/3-17, DPR1463110/6-12, DPR154290/5-10, DPR144272/4-15, DPR1473590/5-8 (See Annex for details)
Applicable Standard(s)	EN 15512:2020

This is to attest that, upon the relevant request of the above-mentioned applicant, EUROCERT S.A. as Third-Party Authority, has received, archived and proceed to the examination of the Technical Construction File of the above-mentioned product.

Note:

- All modifications to the Technical File should be first submitted to the Third-Party Inspection Authority to ensure further validity of this attestation.
- This certificate is valid only for the product and configuration described and in conjunction with the technical data detailed above.



Check the validity of the Certificate by scanning the QR code at right.
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ANNEX TO

CERTIFICATE NO.: 10.16.1035

Technical Characteristics of Model

No.	Model	Size(mm)	Number of layers	Load capacity
Long Span Shelving/Racking (with solid steel decks)				
1	LSS200620/4-3	W2000*D600*H2000	4	300kg/layer
2	LSS200620/4-5	W2000*D600*H2000	4	500kg/layer
3	LSS180624/5-5	W1800*D600*H2400	5	500kg/layer
4	LSS250940/3-10	W2500*D900*H4000	3	1000kg/layer
5	LSS271260/4-20	W2700*D1200*H6000	4	2000kg/layer
Heavy Duty Selective Pallet Racking				
6	SPR251045/3-10	W2500*D1000*H4500	3	1000kg/layer
7	SPR271130/2-20	W2700*D1100*H3000	2	2000kg/layer
8	SPR270960/3-30	W2700*D900*H6000	3	3000kg/layer
9	SPR281090/5-30	W2800*D1000*H9000	5	3000kg/layer
10	SPR3010120/7-15	W3000*D1000*H12000	7	1500kg/layer
Heavy Duty Drive-in Pallet Racking System				
11	DPR159260/3-17	W1500xD(1150x8)×H6000	3	1700kg/pallet
12	DPR1463110/6-12	W1400xD(1050x6)×H11000	6	1200kg/pallet
13	DPR154290/5-10	W1500xD(1050x4)×H9000	5	1000kg/pallet
14	DPR144272/4-15	W1400xD(1050x4)×H7200	4	1500kg/pallet
15	DPR1473590/5-8	W1400xD(1050x7)×H9000	4	800kg/pallet



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