



INTELLIGENT LOGISTICS OVERALL SOLUTION
WE HAVE BEEN DELIVERING VALUE

• 智能物流整體解決方案, 我們一直在傳遞價值 •
減人減地減成本, 增產增效增利潤



廣東順力智能物流裝備股份有限公司
Guangdong Sunli Intelligent Logistics Equipment Co.,Ltd.

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GUANGDONG

Sunli

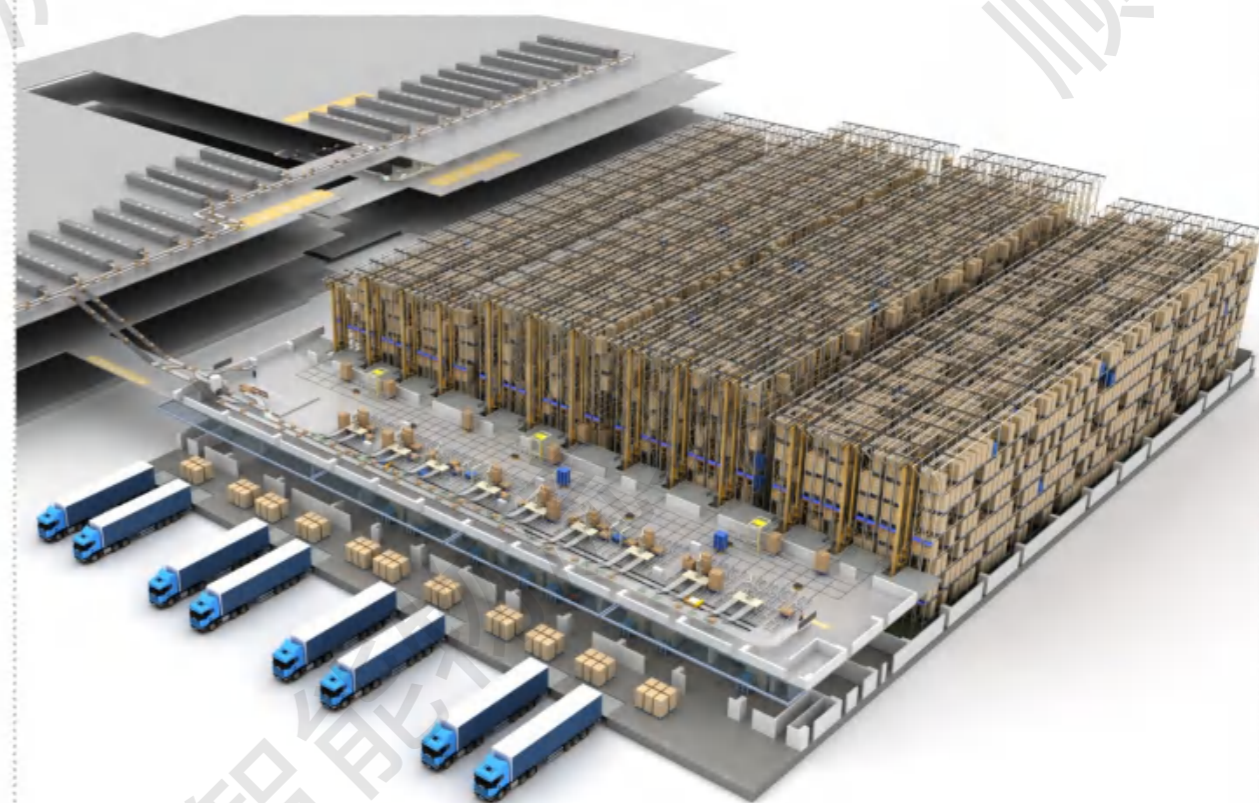
廣東順力智能物流裝備股份有限公司

Intelligent Logistics

Equipment CO.,LTD

智能物流系統集成商及制造商

INTELLIGENT LOGISTICS SYSTEM INTEGRATOR AND MANUFACTURER



為企業降本增效, 綠色發展
讓天下沒有難做的物流

FOR ENTERPRISES TO REDUCE COST AND INCREASE EFFICIENCY, GREEN DEVELOPMENT,
LET THE WORLD HAVE NO DIFFICULTY TO DO LOGISTICS

CORPORATE PROFILE

企業簡介

廣東順力智能物流裝備股份有限公司成立於2005年，實繳註冊資本5116萬，總部位於東莞，現有工業設計、研發、行銷、生產製造等七大中心，設立深圳、福建、蘇州分公司和多個辦事處，是國內知名“智能物流系統集成商&製造商”。

致力於提供“物流系統諮詢&規劃、配送中心設計&集成、物流系統維護&保養、自動化倉儲系統設計、物流資訊系統設計、自動化裝備設計&製造&交付、供應鏈管理&配套服務”七大核心業務。自主研發“自動化立體庫（堆垛機/RGV/穿梭車/提升機/輸送線等）、四向穿梭車、移動機器人（AGV）、倉儲貨架、智能物流管理系統（WMS/WCS/MES/DPS/AGV管理系統）”五大系列產品。已服務“新能源、冷鏈、醫藥、糧油、3C製造、建材家居、電商”等眾多行業。

配置多領域高級技能人才和研發團隊，建立廣東省智慧物流裝備系統集成工程技術研究中心、東莞市市級工業設計中心、GD/TC4東莞智能標準化實驗室基地、5G+智慧物流聯合實驗室。主導或參與4項國家標準、3項行業標準、4項團體標準制定工作；獲得自主研發專利等超118項。

已通過ISO9001、ISO14001、ISO45001、兩化融合管理體系、知識產權管理體系等資質認證。擁有近20年自動化立體庫等物流倉儲的設計、生產、安裝經驗，擁有智能化物流裝備產品線，有能力製造高精度物流倉儲設備。

獲評“國家專精特新‘小巨人’企業、國家高新技術企業、中國物流裝備產業優秀品牌、廣東省知識產權示範企業、廣東省創新型中小企業、廣東省高成長中小企業、廣東省守合同重信用企業、第十二批後備上市企業”等殊榮。



Guangdong Sunli Intelligent Logistics Equipment Co., LTD. founded in 2005, with registered in the capital of 51.16 million yuan, headquartered in Dongguan, has seven main centers that include industrial design, research and development, marketing, production and manufacturing centers, and has set up branches in Shenzhen, Fujian, Suzhou and more offices. It is a well-known "intelligent logistics system integrator & manufacturer" in China.

Committed to providing seven core businesses: "logistics system consulting&planning, distribution center design&integration, logistics system maintenance&maintenance, automated warehouse system design, logistics information system design, automated equipment design&manufacturing&delivery, supply chain management & supporting services.".Independent research and development of five series of products: "AS/RS (stacker/RGV/shuttle car/elevator /conveyor line, etc.), four-way shuttle car, AGV, storage rack, and intelligent logistics management system (WMS/WCS/MES/DPS/AGV management system)".It has served many industries such as "new energy, cold chain, medicine, grain and oil, 3C manufacturing, building materials and home furnishing, e-commerce".

With more than 300 senior skilled talents and service teams in various fields, Guangdong Intelligent Logistics Equipment System Integration Engineering and Technology Research Center, Dongguan Municipal Industrial Design Center, GD/TC4 Dongguan Intelligent Standardization Laboratory Base, and 5G+ Intelligent Logistics Joint Laboratory have been established. Lead or participate in the formulation of 4 national standards, 3 industrial standards and 4 group standards customized work; More than 118 independent R&D patents have been obtained.

We have passed ISO9001, ISO14001, ISO45001, two integration management system, intellectual property management system and other qualification certifications. We have nearly 20 years of experience in the design, production and installation of automated three-dimensional warehouse and other logistics and warehousing. With intelligent logistics equipment product line, has the ability to manufacture high-precision logistics warehousing equipment.

It has been awarded the honors of "National 'Specialized, Special and New' Small Giant Enterprise, National high-tech Enterprise, Excellent brand of China Logistics Equipment Industry, Intellectual Property Demonstration Enterprise of Guangdong Province, Innovative enterprises of Guangdong Province, high-growth enterprises of Guangdong Province, contract-abiding and creditworthy Enterprises of Guangdong Province, the 12th batch of backup listed Enterprises" and so on.

【企業文化】

Company Culture

使命：為企業降本增效、綠色發展，讓天下沒有難做的物流

Mission: for enterprises to reduce cost and increase efficiency, green development, let the world have no difficulty to do logistics

價值觀：貨真架實，厚德載物

Values: Real racking with social commitment.

願景：社會價值、客戶價值、員工價值與企業價值共同成長

Vision: Social value, customer value, employee value and enterprise value grow together

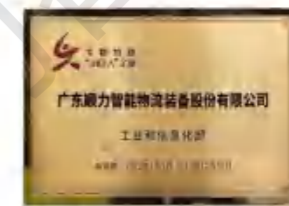
Enterprise honor 企業榮譽



廣東省名牌產品



廣東省守合同重信用企業



第二批國家專精特新“小巨人”企業



國家高新技術企業



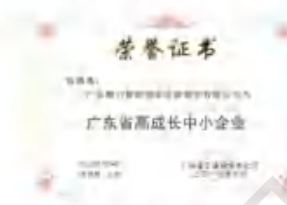
倍增計畫試點企業



知識產權示範企業

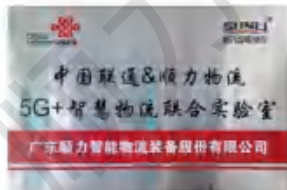
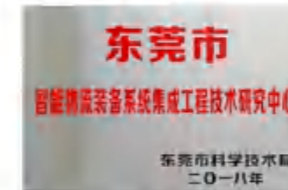
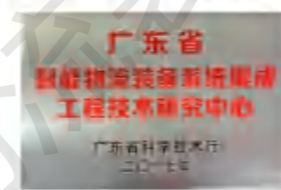


質量品牌培育企業



廣東省高成長中小企業

R&D laboratory 研發實驗室



Qualification certification 資質認證



ISO9001品質管理體系證書



ISO14001環境管理體系證書



ISO45001職業健康安全管理体系證書



兩化融合管理體系評定證書



歐盟CE認證



知識產權管理認證證書(英文)

Patent Technology & Software Works 專利技術&軟件著作



- 已獲授權專利/著作權118項（截至2022年）
（發明專利28項、實用新型專利60項、外觀專利9項；軟體著作21項）
- 申請或審核中專利/著作權 120+項

Corporate office space 企業辦公場所



順力研發大樓

工業設計&研發中心門頭

職能管理中心

生產製造中心



東莞圖書館高埗分館服務站



工業設計&研發中心大堂照



工業設計&研發中心廊道



專利牆



黨建文化室



會客廳



健身室



培訓室

R&D laboratory 研發&實驗室



自動化輸送線測試



無人叉車AGV測試



高集成電櫃調試



AGV系列裝配



穿梭車測試



順力智能立體倉庫(自用)



線邊作業分揀測試



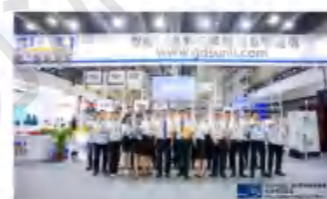
四向穿梭車整體測試



緩存料箱機器人測試

Team Culture 團隊文化風采

致力於成為一家對員工有溫暖，對夥伴有擔當，對客戶有價值，對行業、社會有貢獻的優秀企業！



行業展會



總結會議



合唱《順力夢》



主題活動



佳節福利



節日福利



團建活動



團建活動



專題培訓



趣味實操

釋放工程師紅利
高效益快樂交付

Let engineers to create more dividende
High efficiency and happy delivery

100+
交付行業/Trade

1000+
交付企業/Enterprise

SUNLI's five core intelligent logistics equipment&systems

順力五大智能物流裝備&系統

(1)AS/RS自動化立體庫 Automatic Storage / Retrieval System
 拆碼盤機、堆垛機、RGV、穿梭車、提升機、輸送線等
 pallet stacking and distributing machine, stacker, RGV, shuttle, elevator, conveyor line, etc



(2)四向穿梭車 Four-way shuttle
 四向穿梭車 (含冷庫版) , 提升機、輸送線、視覺識別裝備、貨架
 Four-way shuttle (Include Cold storage version) , elevator line, conveyor, Visual recognition equipment, etc, Rack



(3)AGV移載機器人 AGV Transfer robot
 鐳射導航叉車AGV、單向潛伏式AGV、雙向潛伏式AGV、牽引式AGV、背負滾筒式AGV、雙向背負式AGV、緩存料箱AGV、二維碼AGV等
 Laser navigation forklift AGV, unidirectional latent AGV, bi-directional latent AGV, single-way tugger type AGV, roller platform type AGV, two-way platform type AGV, cache bin AGV, QR code AGV, etc



(4)倉儲貨架 Storage shelves
 穿梭式貨架、閣樓式貨架、橫樑式貨架、駛入式貨架、雙重深儲式貨架、懸臂式貨架、重力自滑式貨架、中型層板式貨架、窄巷道貨架、壓入式貨架等
 Radio shuttle rack, mezzanine rack, pallet rack, drive-in rack, double-deep pallet rack, cantilever rack, gravity self-slide rack, medium duty rack, narrow aisle rack, push back rack, etc



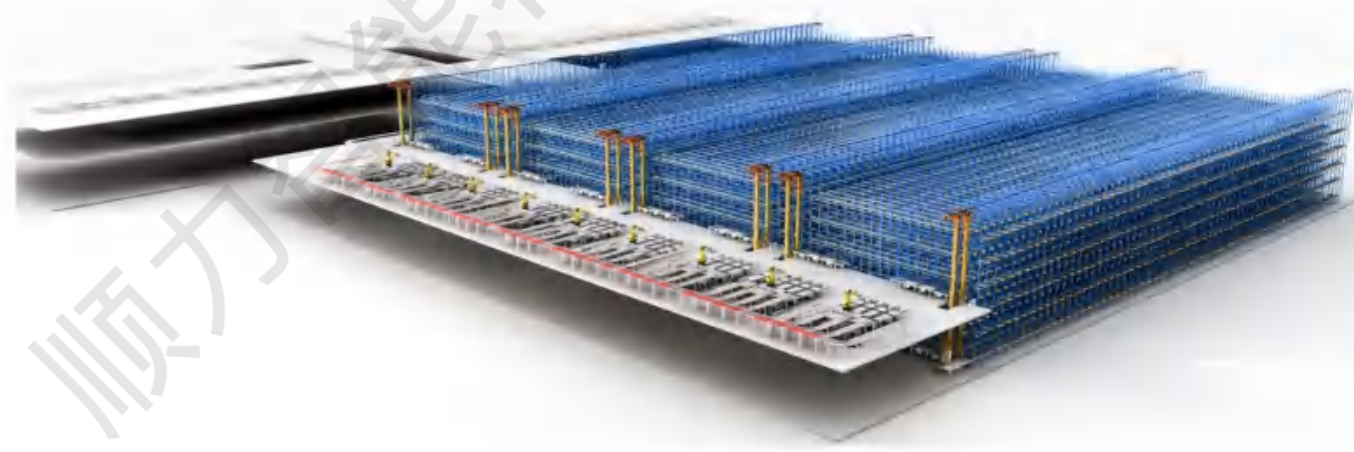
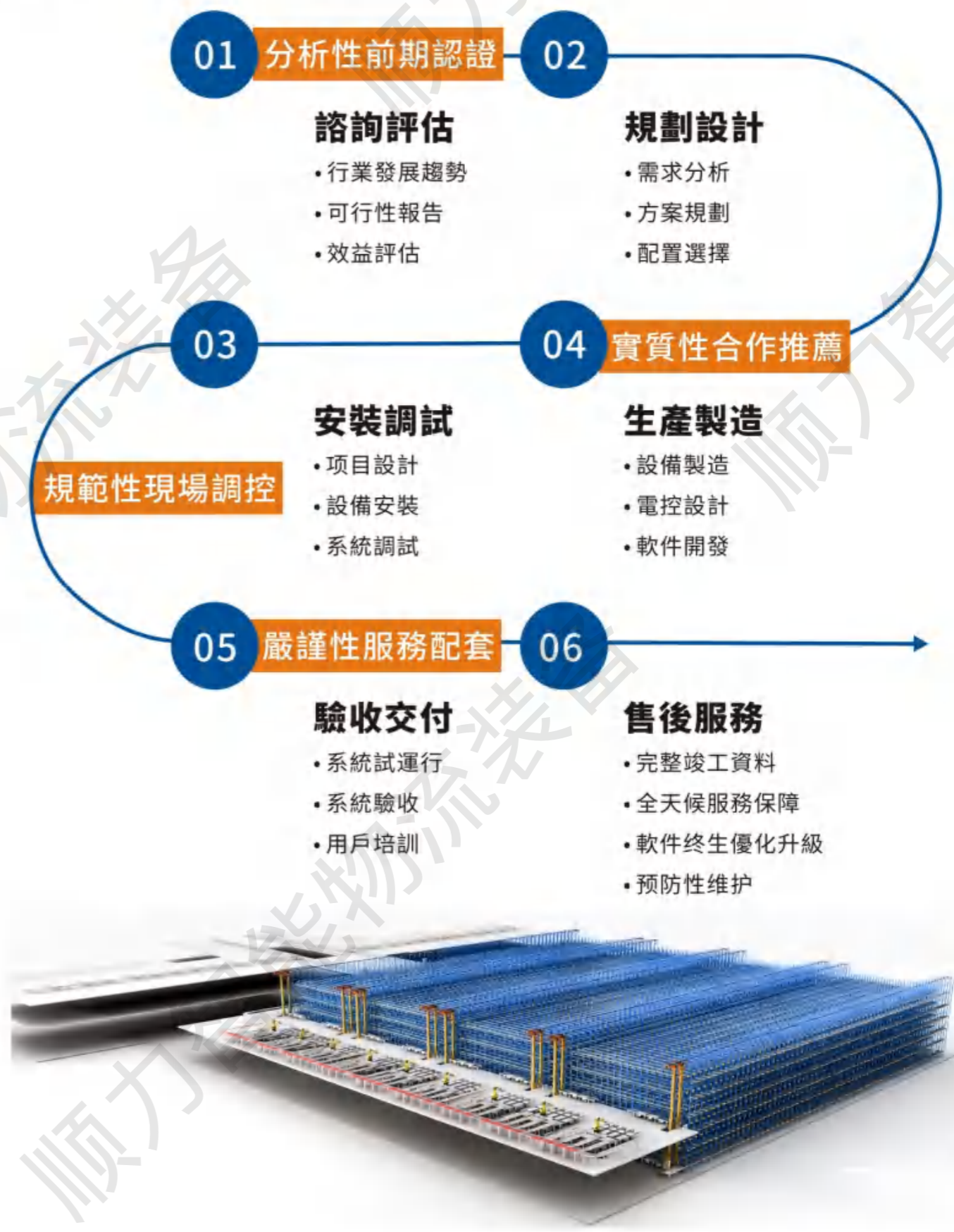
(5)智能物流管理系統 Intelligent logistics management system

- 倉儲管理系統WMS
Warehouse Management System WMS
- 倉庫控制系統WCS
Warehouse Control System WCS
- 手持終端系統RF
Handheld Terminal System RF
- AGV綜合管理系統
AGV Integrated Management System
- TMS運輸任務管理系統
TMS Transportation Task Management System
- IMS Map Edit綜合管理系統
IMS Map Edit Integrated Management System
- 順力貨架結構有限元分析軟體SSS2020
Sunli Intelligent Storage Shelf Structure Analysis Software SSStructure
- 制造執行系統MES
Manufacturing Execution System
- 電子標籤揀選系統DPS
Digital Pick System DPS
- AGV智能管理系統
AGV Intelligent Management System
- 車載控制軟體VCS
Vehicle Control Software VCS
- 車載終端倉儲管理軟體VTS
Vehicle Terminal Storage Management Software VTS
- 四向穿梭車RCS機器人控制系統
RCS robot control system of four-way shuttle vehicle
- 環形機器人AI調度系統
AI scheduling system of ring robot



SUNLI's overall solution for the whole process and life cycle

全過程全生命週期整體解決方案



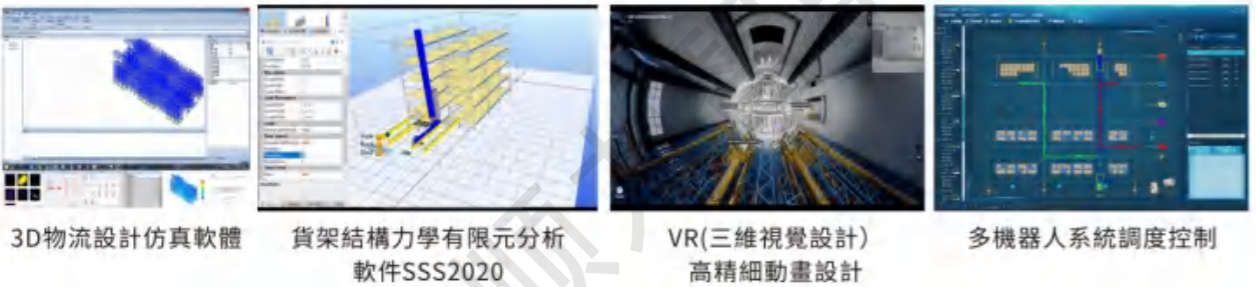
Industrial design&R&D capability

工業設計&研發能力

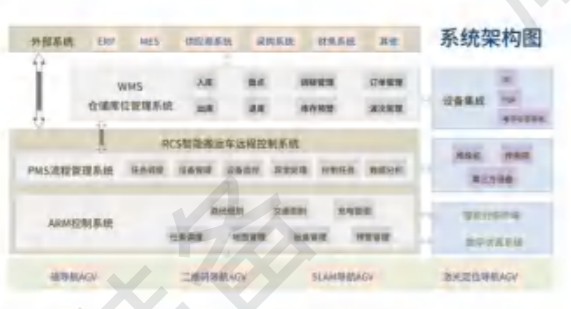
详情请咨询 400-090-1058 或访问顺力网站 www.gdsunli.com

順力智能核心競爭力 Sunli Intelligence core competitiveness

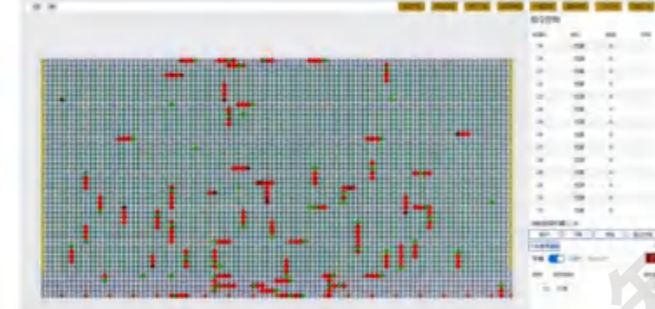
- 物流仿真、力學分析核心能力**
 - ① 自主智慧物流規劃設計與仿真軟體
 - ② 自主貨架力學有限元分析軟體
- 軟件演算法核心能力**
 - ① 自主雲部署倉儲管理與設備控制系統
 - ② 自主多機器人調度控制系統
 - ③ 自主RF手持終端管理系統
- 硬件設計、製造核心能力**
 - ① 自主設計、製造高精密立體貨架
 - ② 自主設計、製造移動機器人本體
 - ③ 自主設計、製造輸送、揀選、移載設備



3D物流設計仿真軟體 貨架結構力學有限元分析軟體SSS2020 VR(三維視覺設計)高精細動畫設計 多機器人系統調度控制



系統架構圖



RCS調度系統測試



機器人AI調度演算法



RCS調度系統測試

core business 核心業務

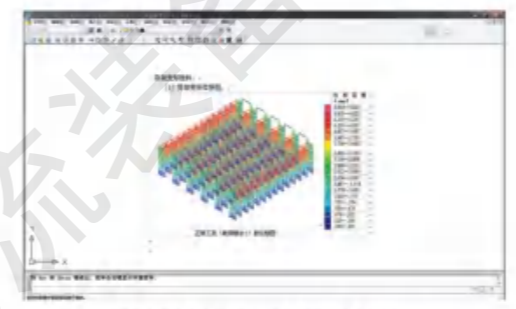
| | |
|-----------------|--|
| 物流系統諮詢&規劃 | Logistics system consulting&planning |
| 自動化倉儲系統設計 | Design of automatic storage system |
| 物流資訊系統設計 | Design of logistics information system |
| 物流配送中心系統設計&集成 | Design and integration of logistics distribution center system |
| 自動化物流裝備設計/製造/交付 | Automatic logistics equipment design/manufacturing/delivery |
| 物流系統維護&保養 | Logistics system maintenance |
| 供應鏈管理&配套服務 | Supply chain management&supporting services |



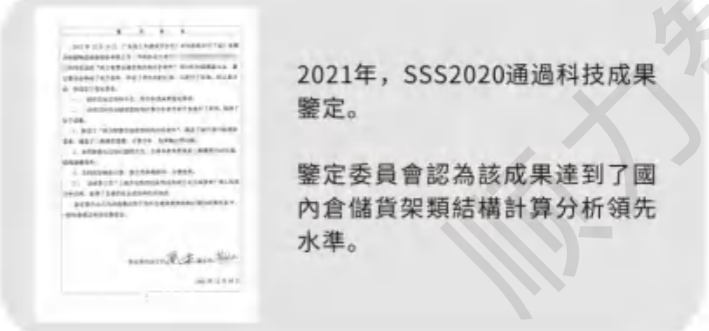
《結構力學》教材主編 何春保教授與順力智能深度推進結構力學合作



順力智能刊登的專刊文章



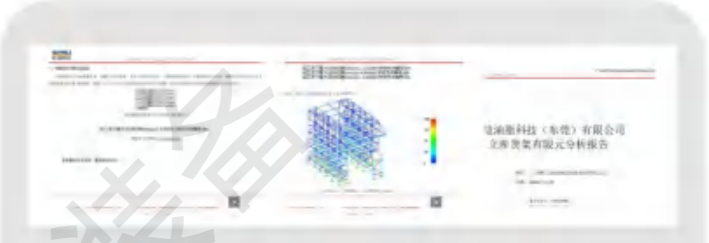
SSS2020有限元分析軟體 (操作界面之一)



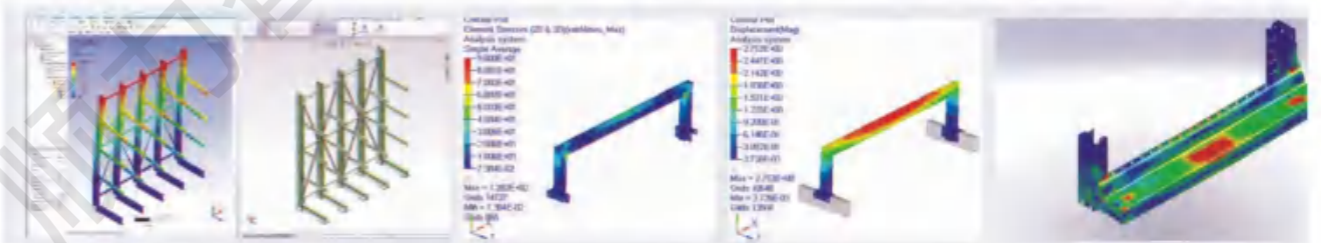
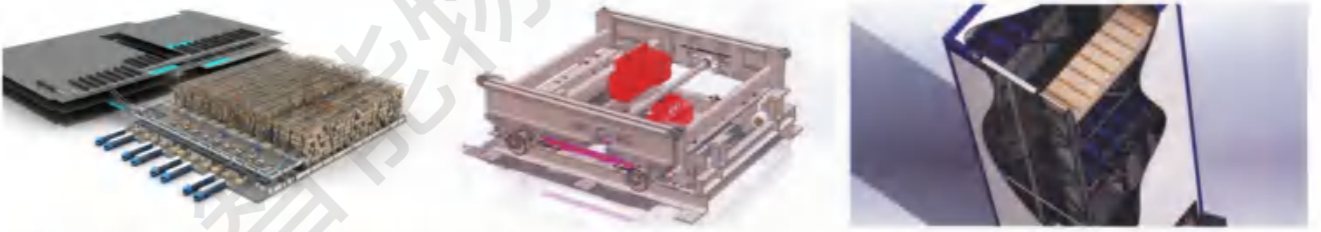
2021年，SSS2020通過科技成果鑒定。
鑒定委員會認為該成果達到了國內倉儲貨架類結構計算分析領先水準。



《科技查新、軟件測試報告、件著作權》



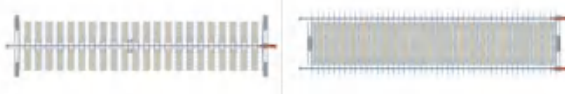
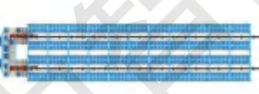


順力《貨架結構力學有限元分析報告》



AUTOMATED STORAGE LIBRARY SOLUTION

自动化存储库解决方案

| | 单伸位货架解决方案 Single-depth racking solutions | | | 双伸位货架解决方案 Double depth racking solutions | | 多伸位货架解决方案 Multi-depth racking solutions | | 高性能堆垛机解决方案 High-performance stacker solution | |
|--|--|--|--|---|--|---|---|---|--|
| 示意图 Schematic diagram |  | | |  | |  | |  | |
| | 单伸位货架+直轨堆垛机解决方案 Rack with single depth+ straight track stacker solution | 单伸位货架+转弯堆垛机解决方案 Single thrust racking + turning Stacker Solution | 单伸位货架+岔轨堆垛机解决方案 Single thrust racking + fork rail Stacker Solution | 双伸位货架+直轨堆垛机解决方案 Rack with double depth+ straight track stacker solution | 双伸位货架+转弯堆垛机解决方案 Double thrust racking + turning Stacker Solution | 双伸位货架+岔轨堆垛机解决方案 Double thrust racking + fork stacker rail solutions | 穿梭式货架+直轨堆垛机解决方案 Shuttle Rack + straight track Stacker Solution | 重力式货架+直轨堆垛机解决方案 Gravity racking + straight track Stacker Solution | 轻型货架+高性能堆垛机解决方案 Duly Light racking + high-performance Stacker solutions |
| 产品周转性 Product revolving | 很好 Well | 好 Good | 一般 General | 一般 General | 一般 General | 差 poor | 差 (先进先出或先进后出) Poor (first in first out or last-out) | 差 (先进先出) Poor (FIFO) | 很好 Well |
| 产品分揆性 Products sorting | 很好 Well | 很好 Well | 很好 Well | 一般 General | 一般 General | 一般 General | 差 poor | 差 poor | 很好 Well |
| 产品重量适应性 Weight adaptability | 100% | 100% | 100% | 100% | 100% | 100% | 一般建议单元重量<1500kg General recommendations unit weight < 1500kg | 一般建议单元重量<1500kg General recommendations unit weight < 1500kg | 一般建议单元重量<200kg General recommendations unit weight < 200kg |
| 厂房面积利用率 Plant area utilization | 50% | 37% | 40%- 45% | 55% | 50% | 55% | 60% | 60-70% | 50- 60% |
| 所应用设备 The application equipment | 堆垛机 Stacker | 堆垛机 Stacker | 堆垛机、岔轨机构 Stackers, fork rail agency | 堆垛机 Stacker | 堆垛机 Stacker | 堆垛机、岔轨机构 Stackers, fork rail agency | 堆垛机、穿梭板 Stacker, shuttle plate | 堆垛机、重力自滑滚筒线 Stacker, gravity from sliding drum line | 堆垛机 Stacker |
| 系统存取效率 System access efficiency | 快 Fast | 一般 General | 慢 Slow | 快 Fast | 慢 Slow | 较慢 Slower | 很慢 Very slow | 很慢 Very slow | 很快 Quickly |
| 设备运行精度 Equipment running accuracy | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±5mm General ± 5mm | 一般±1mm General ± 1mm |
| 设备运动特性 Equipment movement characteristic | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ | $V_{max}=200n/min, A_{max}=0.5m/s^2$ |
| 噪音控制 Noise Control | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般84dB-70dB General 84dB-70dB | 一般<60dB General <60dB |
| 设备投入和存储量产出比 Equipment investment and storage input-output ratio | 投入较高, 存储量一般 Investment is higher, the amount of storage in general | 投入高, 存储量一般 High input, storage general | 投入低, 存储量一般 Investment is low, the amount of storage in general | 投入一般, 存储量高 Investment in general, high storage capacity | 投入低, 存储量高 Low investment, high storage capacity | 投入低, 存储量高 Low investment, high storage capacity | 投入一般, 存储量较高 Investment in general, the higher the amount of storage | 投入低, 存储量较高 Low investment, high storage capacity | 投入较高, 存储量一般 Investment is higher, the amount of storage in general |
| 系统适用特点 System applicable Features | 小批量、多品种、存储时间短、作业频次较高 Small volume, variety, storage time is short, high frequency operation | 小批量、多品种、作业频次高 Small-volume, multi-species, high frequency operation | 小批量、多品种、作业频次低 Small-volume, multi-species, high frequency operation | 大批量、品种较少、作业频次低 High-volume, less variety, high frequency operation | 大批量、品种较少、作业频次低 High-volume, less variety, low frequency operation | 大批量、品种较少、作业频次较低 High-volume, less variety, lower frequency operation | 大批量、少品种或单一品种、作业频次很低 High-volume, less variety or a single species, the job is very low frequency | 大批量、少品种或单一品种、作业频次很低 High-volume, less variety or a single species, the job is very low frequency | 小批量、多品种、箱式轻型货物、作业频次高 Less volume, variety, box-type light goods, high frequency operation |
| 适用行业 For industry | 所有行业 All Industries | 所有行业 All Industries | 应用较少 Less applicable | 几乎所有 Almost all | 几乎所有 Almost all | 几乎所有 Almost all | 陶瓷、冷链、石化、加工制造、包装 Ceramics, cold chain, petrochemical, manufacturing, packaging | 陶瓷、冷链、石化、加工制造、包装 Ceramics, cold chain, petrochemical, manufacturing, packaging | 电子电路、医药、食品 Electronics, medicine, food |

INTELLIGENT LOGISTICS SOLUTIONS

智能物流解决方案

采用堆垛机、RGV、提升机、穿梭车等自动化单机设备，配合各类转运输送线，通过先进的自动化控制理念和全球一流的工控设备和驱动设备，实现货物自动高效的运输、存储，并配以完善的管理软件，实现大数据下全面、简捷的管理。

Using Stacker, RGV, elevator, shuttle and other stand-alone automated equipment, with all kinds of transport conveyor, through advanced automatic control concepts and the world's leading industrial equipment and drive equipment to achieve automatic and efficient cargo transport, storage, and with perfect management software, large comprehensive data, simple management.

托盤庫 Pallet storage





INTELLIGENT LOGISTICS DISTRIBUTION CENTER SOLUTION

智能物流配送中心解决方案

采用受计算机控制的各类物料运输设备，按照工序要求将制定的物料及数量精确运送至指定工位。

Using all types of material handling equipment controlled by the computer, according to the process requirement, accurately delivery the related material and quantity to the designated station.

通过自动化物料搬运解决方案 您可以：

- 实现物料搬运的无人化作业，减少人工成本；
 - 实现物料管理流程的信息化，降低管理难度，提升生产效率；
 - 保障物料高效、准确地运送，杜绝差错；
 - 7×24不间断工作。
- Through automated material handling solutions, you can:
- Unmanned material handling operations, reduce labor costs ;
 - Realization of material management information processes,
 - reduce management difficulties, improve production efficiency ;
 - Safeguard material efficiently and accurately transport, eliminate errors ;
 - 7 × 24 uninterrupted work.



顺力智能物流具有业内最完备的自动化物料搬运设备产品线，且与国内一流的自动化分拣厂商等结成战略合作伙伴，能够根据客户业务的不同特点提供针对性的解决方案：

- 无论何种物料及何种生产环境，顺力智能物流均能提供恰当方案；
- 结合有轨、无轨及变轨等技术，工序能够实时调整，实现生产的柔性化；
- 设备速度快，可靠性好，定位精准度高；
- 可与ERP系统实现实时数据交换并与生产系统协同合作。

Sunli intelligent logistics industry with the most complete auto mated material handling equipment product line, and with the domestic first-class automated sorting and other manufacturers formed a strategic partnership to provide specific solutions according to the characteristics of the customer's business field :

- Regardless of what kind of materials and production environment, Sunli intelligent logistics can provide appropriate solutions ;
- Combined with rail, trolley and orbit technology, processes can be adjusted in real time to achieve flexible production ;
- Device speed, good reliability, high positioning accuracy ;
- Can achieve real-time data exchange with the ERP system and work with the production system.



INTELLIGENT LOGISTICS EQUIPMENT



智能物流設備

智能物流設備是指在智能倉儲過程中，能夠獨立使用的主要單機設備，如：堆垛機、RGV、AGV、穿梭車和提升機等，它們能在指定的工作區域，實時採集當前狀況，經過邏輯處理智能做出最科學的處理方式，完成搬運和倉儲任務。

Intelligent logistics equipment means in the process of intelligent storage, the main stand-alone device can be used independently, such as: stacker, RGV, AGV, shuttle and elevators, etc., they can work in the designated area, real-time acquisition of the current situation, after logic processing intelligence to make the most scientific approach, to complete the task of handling and storage.

智能物流設備優勢：

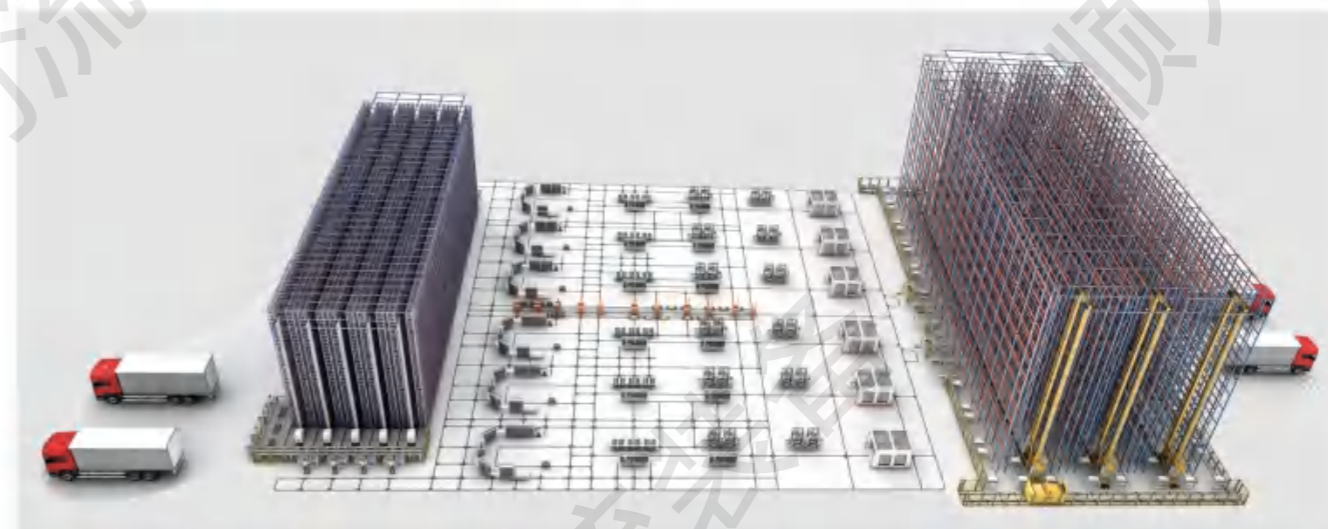
- 提高空間利用率；
- 可形成先進的物流系統，提高企業現代化的生產管理水平；
- 加快貨物的存取節奏，減輕勞動強度，提高生產效率；
- 減少庫存資金積壓。

Intelligent logistics equipment advantages:

- Improve space utilization ;
- Advanced logistics system can be formed, and improving the level of modernization of production management ;
- Speed up access to the rhythm of goods, reduce labor intensity and improve production efficiency production line ;
- Reduce inventory backlog of funds.



AS/RS自动化立体仓库
智能物流装备

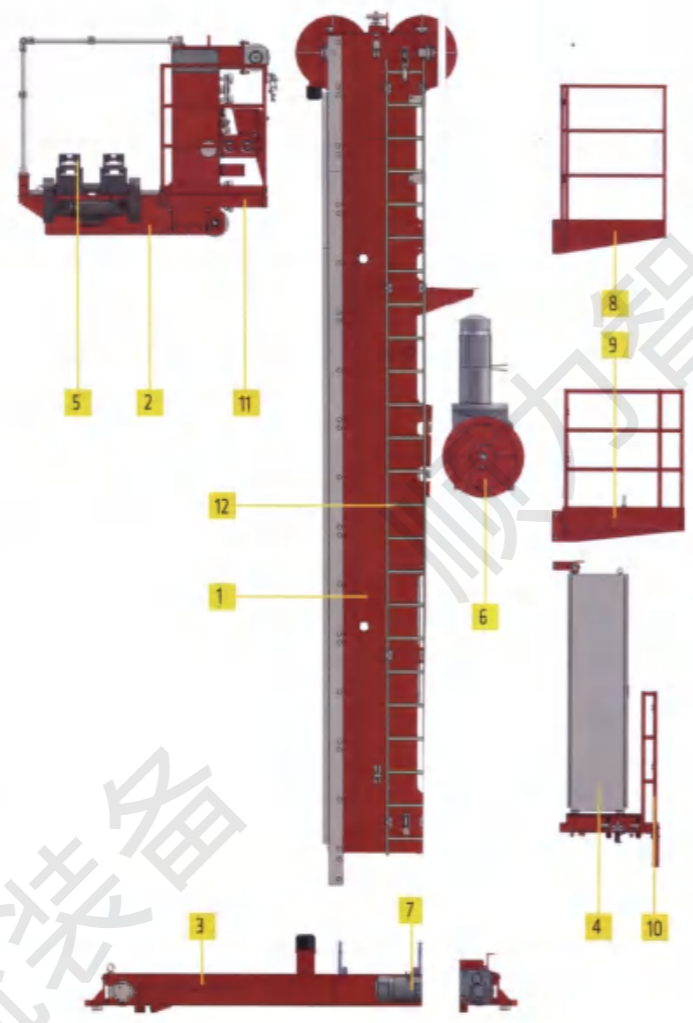
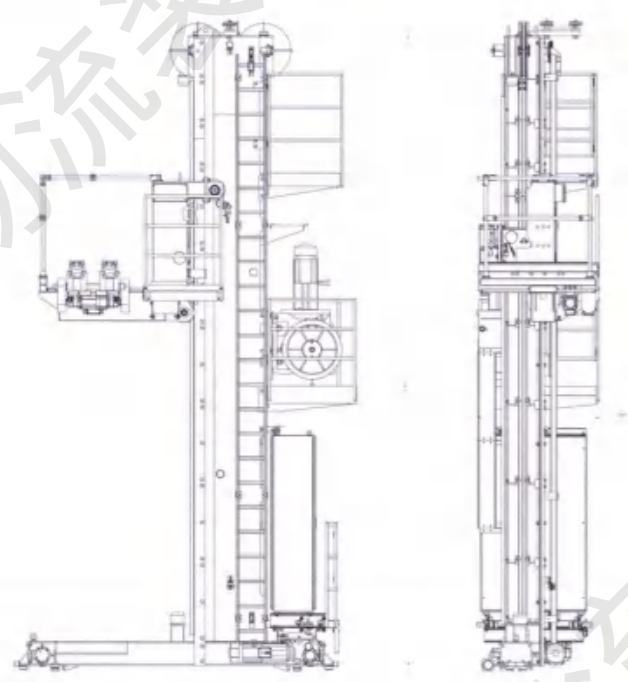


STACKER STRUCTURAL

堆垛機結構

堆垛機是整個自動化立體倉庫的核心設備，通過手動操作、半自動操作或全自動操作實現把貨物從一處運到另一處。

Stacker is the core of the entire automated warehouse equipment, manually operated, semi-automatic or fully automatic operation
Operation achieve the transport of goods from one place to another..



- 1、金屬結構 Metal structures
堆垛機的機架主要是由立柱、上橫梁、下橫梁組成
Rack stacker mainly by the column, top beam and bottom beam
- 2、水平行走機構 Horizontal travel machine
- 3、起升機構 Hoisting mechanism
- 4、載貨臺 Cargo units
- 5、貨叉伸縮機構 Telescopic forks agency
- 6、安全保護裝置 Safety devices
各機構終端限位保護 Terminal limit protection agencies
貨叉伸縮、水平行走、起升三機構運行互鎖
Telescopic fork, horizontal travel and lifting, can be interlocked.
入庫時貨物虛實檢測
When inbound shipments to detect the actual situation
Cargo in, there is pufile detection
貨物超限檢測 Cargo overweight detection
急停按鈕 Emergency stop button
鋼絲繩、鬆繩和過載保護
Rope, Matsunawa and overload protection
堆垛機裝有音響報警裝置，在運行機構啓動前，先發出音響信號
Stacker equipped with an audible alarm
it gives sound before machine run.
- 7、電氣設備 Electrical Equipment
主要包括電力拖動、控制、檢測和安全保護
Including electric drive, control, monitoring and safety protection

| | | |
|----|--------|---------------------------|
| 1 | 機體 | Column |
| 2 | 載貨臺 | Lifting Cradle |
| 3 | 行走檢測裝置 | Walking detection device |
| 4 | 控制櫃 | Control cabinet |
| 5 | 伸縮貨叉 | Telescopic forks |
| 6 | 升降電機 | Lifting motor |
| 7 | 水平運行電機 | Horizontal travel machine |
| 8 | 維修平臺 | Maintenance Platform |
| 9 | 升降電機平臺 | Lifting motor platform |
| 10 | 控制櫃平臺 | Control platform |
| 11 | 提升檢測裝置 | Lifting monitor |
| 12 | 維修爬梯 | Maintenance ladder |



MULTI-LAYER SHUTTLE

多層穿梭車

穿梭車由行走系統、叉取系統、控制系統、供電系統等部分組成，在巷道水平運動，實現同層貨物的進出庫操作。通過穿梭車換層提升機實現穿梭車在同一巷道不同層之前切換。

多層穿梭車是一款交流流均可驅動的穿梭車，在貨架軌道上運行，實現料箱貨物出入庫。利用自身的夾抱式貨叉將料箱取出，放到指定的出口位置，同時可以將入口位置的料箱存入指定的貨位內。

其速度高，取貨速度快，通過增加穿梭車數量，可實現較高的貨物出入庫流量。總之，整機外形美觀質量輕，使用功率低，運行靈活可靠噪音低，具有節能低噪之優點。

The shuttle car is composed of walking system, forklift system, control system, power supply system and other parts.

It moves horizontally in the roadway and realizes the entry and exit operations of goods on the same floor. Through the shuttle car layer change hoist, the shuttle car can be switched between different floors of the same roadway.

The multi-layer shuttle car is a shuttle car that can be driven by both AC and DC. It runs on the shelf track to realize the loading and unloading of box goods.

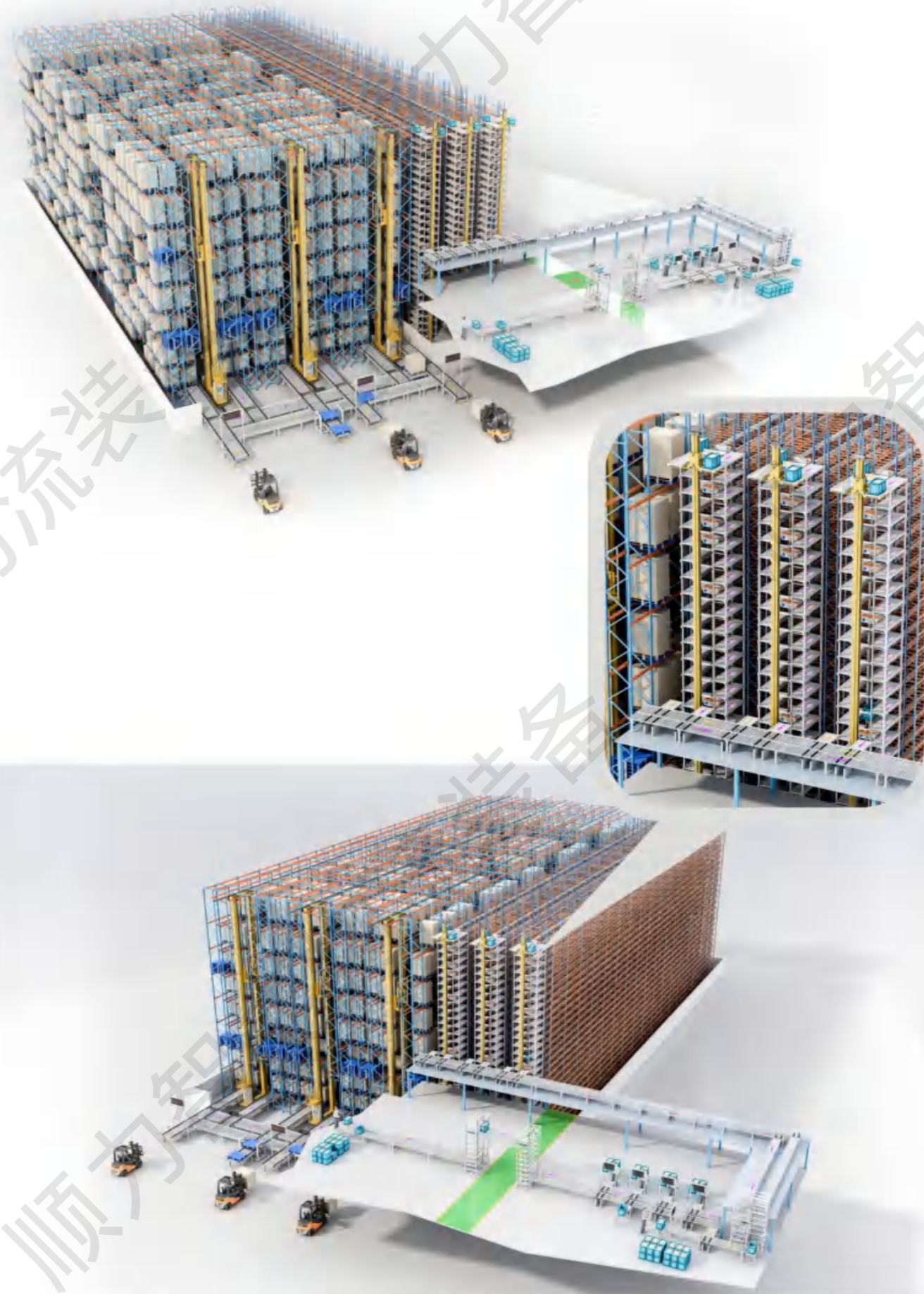
Take out the material box with its own clamping fork, put it into the designated exit position, and at the same time, the material box at the entrance position can be stored in the designated cargo position.

The speed is high and the picking speed is fast. By increasing the number of shuttles, a higher flow of goods in and out of the warehouse can be achieved. In short, the machine is beautiful in appearance and light in quality, low in power, flexible and reliable in operation, low in noise, and has the advantages of energy saving and low noise.



穿梭車技術參數

| 項目名稱 | 技術參數 | |
|-------------|-----------------|-----------|
| 型式 | 雙深/單深 | |
| 額定載質量 (kg) | 50 | |
| 水平行走 | 行走驅動方式 | 伺服驅動 |
| | 制動方式 | 電磁剎車制動 |
| | 定位 (X向) 精度 (mm) | ≤ ± 3mm |
| | 滿載最大速度 | 200m/min |
| 貨叉 | 空載最大速度 | 240m/min |
| | 定位方式 | 絕對值編碼器+光電 |
| | 滿載速度 | 0-30m/min |
| | 滿載加速度 | 1m/s |
| 貨叉力矩限制保護功能 | 有 | |
| 通訊方式 | 無線通訊 | |
| 控制方式 | 西門子PLC控制 | |
| 操作方式 | 半自動/自動 | |
| 機載人機界面 | 觸摸屏 | |
| 供電方式 | 滑觸線 | |
| 電源規格 | 48V | |
| 單機噪聲 (高速滿載) | ≤ 65dB | |
| 主機顏色 | 順力標準色 (可定制) | |



TWO-WAY SHUTTLE CAR

兩向穿梭車



兩向穿梭車常規版

兩向穿梭車特點:

1. 工作效率高，大大減少工作時間。
2. 穩定性好，減少貨架碰撞。
3. 高密度存儲，倉庫利用率比車道堆棧倉庫高30%。
4. 靈活的操作方式。
5. 入庫和出庫可採用先進先出、先進後出的方式。

Two-way shuttle features:

1. High work efficiency, greatly reducing working hours.
2. Good stability, reducing shelf collisions.
3. High density storage, with a warehouse utilization rate 30% higher than that of driveway stacked warehouses.
4. Flexible operation mode.
5. Warehousing and warehouse-out can adopt the methods of first in, first out, and first in, second out.

| 序号 | 规格指标 | 参数 |
|----|----------------|--------------------------|
| 1 | 穿梭车外形标准尺寸 (mm) | 长×宽×高 1120×960×170 (可定制) |
| 2 | 载荷 | 标准版≤800Kg (可定制) |
| 3 | 空载速度 | 0-60m/min |
| 4 | 满载速度 (m/min) | 30-35m/min |
| 5 | 升降高度 | ≤45mm |
| 6 | 作业时长 | 6-8h |
| 7 | 行走电机功率 | 750W |
| 8 | 举升电机功率 | 750W |
| 9 | 电池电压 | 锂电池 48V |
| 10 | 电池容量 | 50Ah |
| 11 | 电池续航能力 | 满载 4-6h |
| 12 | 常温下充电时间 | 2h |
| 13 | 正常使用电池寿命 | 满充满放 2000 次 |
| 14 | 品牌 | SunLi |
| 15 | 显示屏 | 液晶 |
| 16 | 电源 | 锂电池 |
| 17 | 工作电压 | 5V |
| 18 | 待机功能 | 48 小时以上 |
| 19 | 电池 | 持续作业 24 小时以上 |
| 20 | 控制方式 | 手动、单机半自动、系统自动控制 |
| 21 | 功能 | 单次存货、单次取货、连续存货、连续取货、盘点等 |

兩向穿梭車是用於託盤自動化貨架密集存儲系統的核心自動化設備，將單元託盤物料按生產流程從進貨端送到出貨端，可與堆垛機及母車配合實現全自動化倉儲作業，與高貨位叉車配合實現半自動化倉儲作業，遙控操作、無需駛入、進出貨效率高。可以實現先進先出(FIFO)和先進後出(FILO)，適用於各種託盤。



兩向穿梭車定制版

Two-way shuttle truck is the core automation equipment used in the tray automated shelf intensive storage system. It transfers unit tray materials from the incoming end to the outgoing end according to the production process. It can cooperate with the stacker and the mother truck to achieve fully automated warehousing operations, and cooperate with a high cargo forklift to achieve semi-automatic warehousing operations. Remote control operation, no need to drive in, and high efficiency in incoming and outgoing goods. Can achieve first in first out (FIFO) and first in last out (FILO), suitable for various pallets.



穿梭車+AGV



穿梭車+叉車



穿梭車+堆棧機



穿梭車作業



穿梭車方案



穿梭車方案

PALLET FOUR-WAY SHUTTLE

托盤四向穿梭車

托盤式四向穿梭車于托盤類貨物搬運的智能設備，既能實現縱向行走也能實現橫向行走，可以到達倉庫任意位置。一臺穿梭車即可完成貨物在貨架內的平面搬運，垂直方向的搬運可以通過提升機換層來實現，系統自動化程度大大提高。

作為托盤類密集存儲解決方案的最新一代的智能搬運設備，相比于傳統的穿梭車/堆垛機、穿梭車/母車搬運系統，具有更高的靈活性、更高的空間利用率。

The intelligent equipment for pallet type four-way shuttle car for handling pallet goods can realize both vertical and horizontal walking, and can reach any position of the warehouse. A shuttle car can complete the plane transportation of goods in the shelf. The vertical transportation can be realized by the elevator changing layers, and the degree of system automation is greatly improved. As the latest generation of intelligent handling equipment for pallet-type dense storage solutions, compared with traditional shuttle/stacker, shuttle/mother handling systems, it has higher flexibility and higher space utilization.

穿梭車技術參數

| 項目名稱 | 技術參數 | |
|-------------|-----------------|---------|
| 額定載質量 (kg) | 1500 (可定制) | |
| 水平行走 | 行走驅動方式 | 伺服驅動 |
| | 制動方式 | 電磁剎車制動 |
| | 定位 (X向) 精度 (mm) | ≤ ± 3mm |
| | 滿載最大速度 | 35m/min |
| 貨叉 | 空載最大速度 | 70m/min |
| | 驅動方式 | 電機+連杆機構 |
| | 定位方式 | 編碼器+光電 |
| 頂升時間 | 4s | |
| 通訊方式 | 無線通訊 | |
| 控制方式 | 西門子PLC控制 | |
| 操作方式 | 半自動/自動 | |
| 機載人機界面 | 觸摸屏 | |
| 供電方式 | 電池供電 | |
| 電源規格 | 48V | |
| 單機噪聲 (高速滿載) | ≤ 65dB | |
| 主機顏色 | 順力標準色 (可定制) | |



应用场景

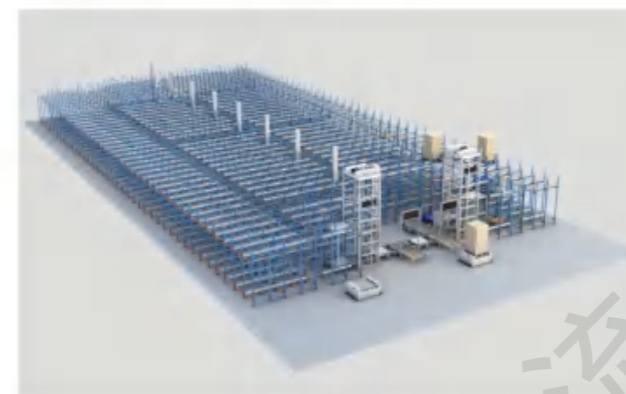


① 單機應用演示

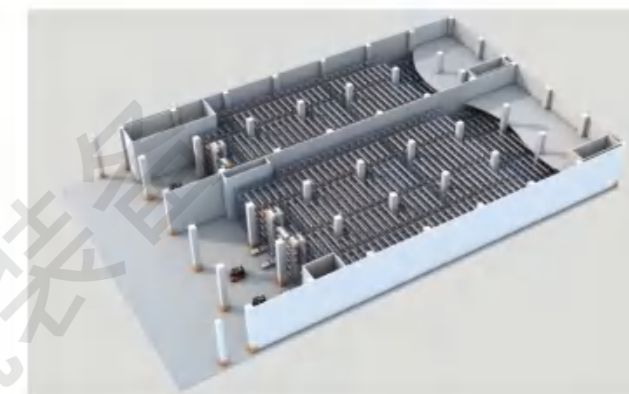


② 四向穿货架

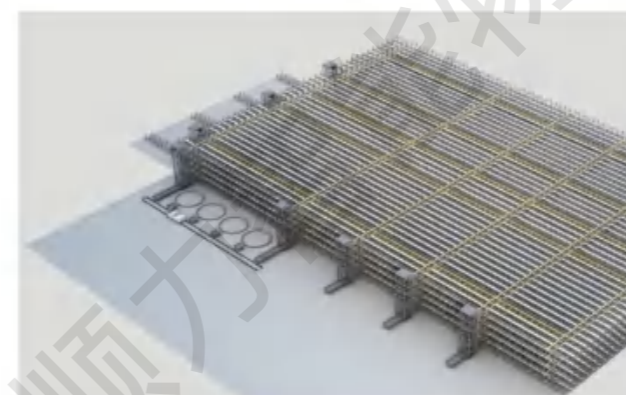
创新适用场景



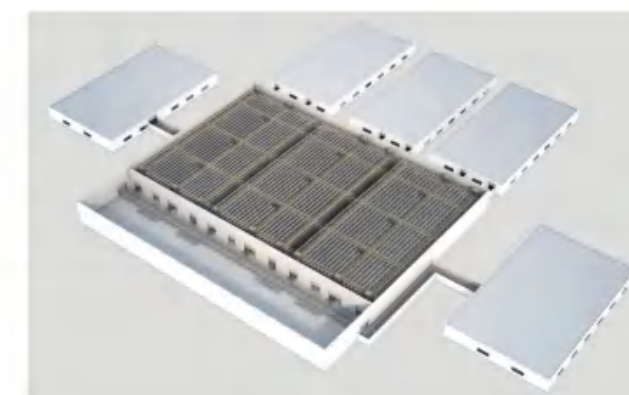
① 高密度存储仓库



② 不规则仓库



③ 出入库缓存



④ 跨建筑物流打通

HOIST (VERTICAL TRANSPORTATION EQUIPMENT)

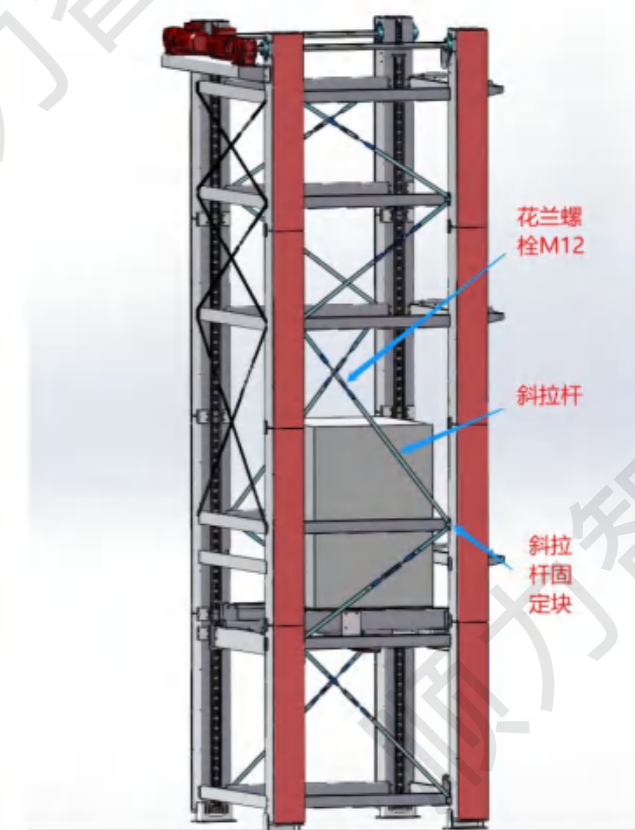
提升機 (垂直輸送設備)

提升機：通過與安裝於提升機出入口的線體配合運行以及豎直方向運行來實現貨物在高度方面的搬運，多用於貨物的穿層使用。按結構可以分為往復提升機和連續提升機。

It lifts cargo on vertical path with inlet and outlet access as well as profile detector. There are reciprocating and continuous style hoist.



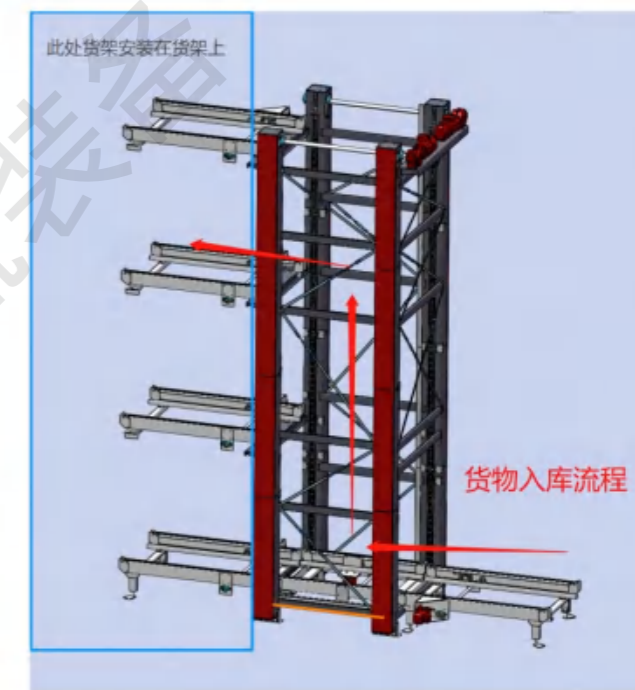
提升機概覽



提升機結構示意圖



提升機+AGV 換層示意圖



提升機+貨物 入庫示意圖

CORPORATE PROFILE

智能周邊設備

指在一定的時間和空間里，由所需輸送的物料和包括有關的設備、輸送工具、倉儲設備、人員以及通信聯繫等要素構成的具有特定功能的有機整體。

It is referred to conveyor system, material handling storage system, personnel as well as communication methods.



巷道堆垛機立體庫



軌道RGV輸送線



頂升裝置



拆碼盤機



料箱式自動化立庫



滾筒輸送線



風淋除塵室



鏈條輸送線

LIGHT TRANSMISSION SORTING EQUIPMENT SYSTEMS

轻型输送分拣装备系统

输送分拣装备系统是將隨機的、不同類別、不同去向的物品，按其要求進行分類（按產品類別或產品目的地不同分類）的一種物料搬運系統

Conveyor&sorting system is the material handling System,it can sort all types of cargoes by category and direction during continuous conveying.



PALLET CONVEYOR SYSTEM

重型托盤輸送系統

托盤輸送系統主要包括滾筒機、鏈式機、移載機、旋轉臺等。分為托盤輸送機和托盤升降機。

Pallet conveyor system includes pallet roller,chain machine, transfer machine,rotating machine other facilities. Composed of conveyor machine and lifting system.



LASER NAVIGATION FORKLIFT AGV (carry type)

激光导航叉车AGV (搬运型)

产品概述：

激光导航式AGV（搬运型），定位精确，行驶路径多变，能适应复杂的行驶环境。该类型叉车AGV适用于栈板类货物搬运，大大地提升了无人搬运的工作效率。可广泛应用于汽车、电子、家电、新能源、仓储、医药、电力、烟草等各种复杂需物流搬运的行业中。

Product Overview:

Laser Navigation Forklift AGV (carry type), accurate positioning, variable driving path, be able to adapt to complex driving environment. This type of AGV is suitable for pallet cargo handling, which greatly improve the efficiency of unmanned handling. It can be widely used in automobile, electronics, household appliances, new energy, storage, medicine, electric power, tobacco and other complex industries requiring logistics and transportation.

参数及规格 Parameters and Specifications

| 产品名称 Product Name | 激光导航叉车AGV (搬运型) Laser Navigation Forklift AGV | 产品尺寸 Product Dimensions | L2200mm*W800mm*H2200mm(可定制) (Customizable) |
|--------------------------------|--|-----------------------------|---|
| AGV型号 AGV Model | SL-AGV-1000BY-01 | 转弯半径 Turning Circle | ≥1500mm |
| 导航类型 Navigation Type | 激光导航 Laser Navigation | 导航精度 Navigation Accuracy | ±10mm |
| 行走方向 Walking Direction | 前进/后退/转弯 Forward/Back/Turn | 停止精度 Stop Accuracy | ±10mm |
| 网络方式 Network Way | WiFi网络 WiFi Network | 爬坡能力 Grade Ability | ≤5° |
| 驱动方式 Drive Mode | 舵轮控制 Steering Wheel Control | 工作方式 Operating Mode | 24小时作业 24-hour operation |
| 驱动电源 Drive Power | DC24V | 充电方式 Charging Mode | 手动充电/自动充电 Manual Charging/Automatic Charging |
| 额定负载 Rated Load | 1000KG (可定制) 1000KG (Customizable) | 蓄电池 Battery | 铅酸电池/锂电池 Lead-acid Batteries/Lithium Batteries |
| 运载类型 Carrier Type | 托盘搬运 Pallet Handling | 报警方式 Alarm Method | 语音提醒+星光报警 Voice Alert +Starlight Alarm |
| 最小通道宽度 Minimum Aisle Width | ≥2500mm | 设计寿命 Design Life | ≥10年 ≥10 years |
| 行走速度 Running Speed | 直线前进0-72m/min;直线后退0-36m/min;转弯0-18m/min Straight forward 0-72m/min; Straight back 0-36m/min; Turning 0-18m/min. | | |
| 安全感应范围 Safe Induction Range | ≤3m可调。紧急制动距离小于20mm ≤3m is adjustable, the emergency braking distance is less than 20mm. | | |
| 安全防护 Security | 前方障碍物检测传感器+机械防撞机构双重防护 Double protection of obstacle detection sensor and mechanical anti-collision mechanism. | | |

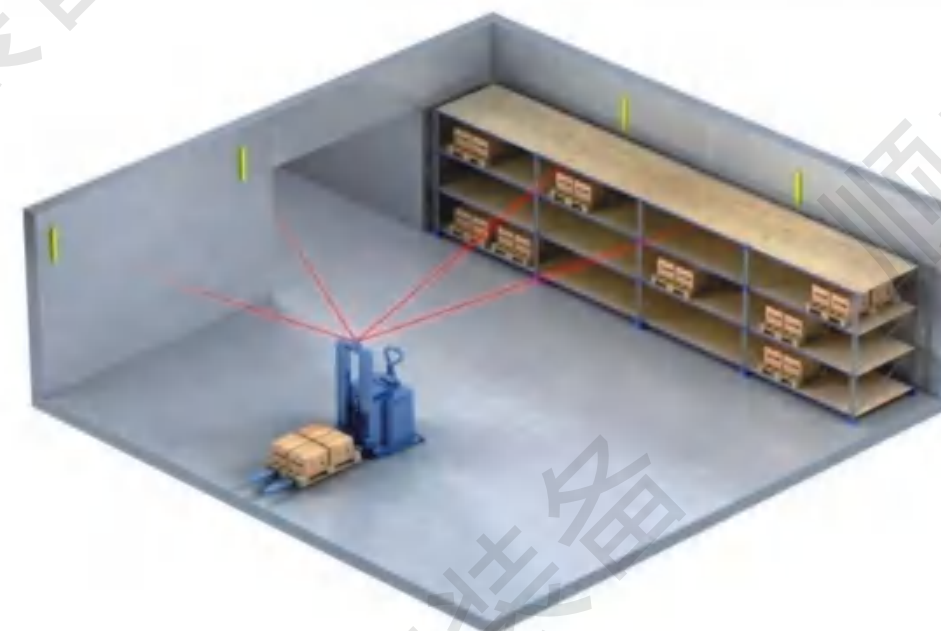


激光导引AGV工作原理简介：

Laser Navigation Forklift AGV Working Principle:

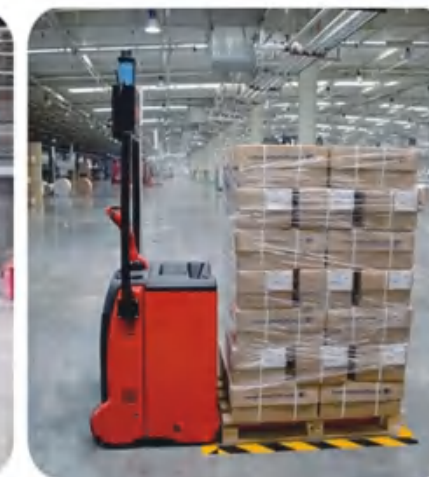
激光测量系统，能够在激光束的帮助下在一个平面内扫描周围轮廓，在一个二维极坐标下测量周围环境。当一束测量光束照射到物体，它的位置会以距离、方向和角度来确定，用从光发出到经反光板反射到激光传感器的传播时间可以计算出物体的距离。

The laser measuring system with the help of laser beam, can scan the surrounding contour of a plane and measure the surrounding environment in a two-dimensional polar coordinate. When a beam of measuring light strikes an object, the position is determined by distance, direction and angle, and the distance can be calculated by calculating the time of propagation from the light emitted to the laser sensor reflected through the reflector.



应用场景

Applications Scenarios



LASER NAVIGATION FORKLIFT AGV (Lifting type)

激光导航叉车AGV (举升型)

产品概述:

激光导航式AGV(举升型),定位精确,行驶路径多变,能适应复杂的行驶环境,该类型叉车AGV适用于货物搬运和高库位的出入库工作,大大地提升了无人搬运的工作效率。可广泛应用于汽车、电子、家电、新能源、仓储、医药、电力、烟草等各种复杂需物流搬运的行业中。

Product Overview:

Laser Navigation Forklift AGV (Lifting type), accurate positioning, variable driving path, is able to adapt to complex driving environment. The AGV of this type is suitable for cargo handling and high warehouse entry and exit, which greatly improves the working efficiency of unmanned transportation. It can be widely used in automobile, electronics, household appliances, new energy, storage, medicine, electric power, tobacco and other complex industries requiring logistics and transportation.



参数及规格 Parameters and Specifications

| 产品名称 Product Name | 激光导航叉车AGV(举升型) Laser Navigation Forklift AGV | 产品尺寸 Product Dimensions | L1950mm*W796mm*H2200mm(可定制) (Customizable) |
|--------------------------------|--|-----------------------------|---|
| AGV型号 AGV Model | SL-AGV-1500DD-01 | 转弯半径 Turning Circle | ≥1500mm |
| 导航类型 Navigation Type | 激光导航 Laser Navigation | 导航精度 Navigation Accuracy | ±10mm |
| 行走方向 Walking Direction | 前进/后退/转弯 Forward/Back/Turn | 停止精度 Stop Accuracy | ±10mm |
| 网络方式 Network Way | WiFi网络 WiFi Network | 爬坡能力 Grade Ability | ≤5° |
| 驱动方式 Drive Mode | 舵轮控制 Steering Wheel Control | 工作方式 Operating Mode | 24小时作业 24-hour operation |
| 驱动电源 Drive Power | DC24V | 充电方式 Charging Mode | 手动充电/自动充电 Manual Charging/Automatic Charging |
| 额定负载 Rated Load | 1500KG(可定制) 1500KG (Customizable) | 蓄电池 Battery | 铅酸电池/锂电池 Lead-acid Batteries/Lithium Batteries |
| 运载类型 Carrier Type | 托盘搬运和举升堆高 Pallet Handling and Lifting Stacking | 报警方式 Alarm Method | 语音提醒+星光报警 Voice Alert+Starlight Alarm |
| 最小通道宽度 Minimum Aisle Width | ≥2500mm | 设计寿命 Design Life | ≥10年 ≥10 years |
| 行走速度 Running Speed | 直线前进0-72m/min;直线后退0-36m/min;转弯0-18m/min Straight forward 0-72m/min; Straight back 0-36m/min; Turning 0-18m/min. | | |
| 安全感应范围 Safe Induction Range | ≤3m可调,紧急制动距离小于20mm ≤3m is adjustable, the emergency braking distance is less than 20mm. | | |
| 安全防护 Security | 前方障碍物检测传感器+机械防撞机构双重防护 Double protection of obstacle detection sensor and mechanical anti-collision mechanism. | | |

激光导航AGV配置简介: Laser Navigation Forklift AGV Configuration Introduction



应用场景

Applications Scenarios



UNIDIRECTIONAL LATENT AGV

单向潜伏式AGV



产品概述：

单向潜伏式AGV可潜伏到台车底部，利用自身的牵引机构实现料车的自动挂接与脱挂。该车型结构紧凑，行走灵活，广泛应用于汽车、家电、电器、电子等行业。

Product Overview:

Unidirectional Latent AGV can lurk to the bottom of the trolley, using its own traction mechanism to achieve automatic hook-up and hook-off the wagon. The AGV of this type has compact structure, flexible walking, widely used in automobile, household appliances, electrical appliances, electronics and other industries.

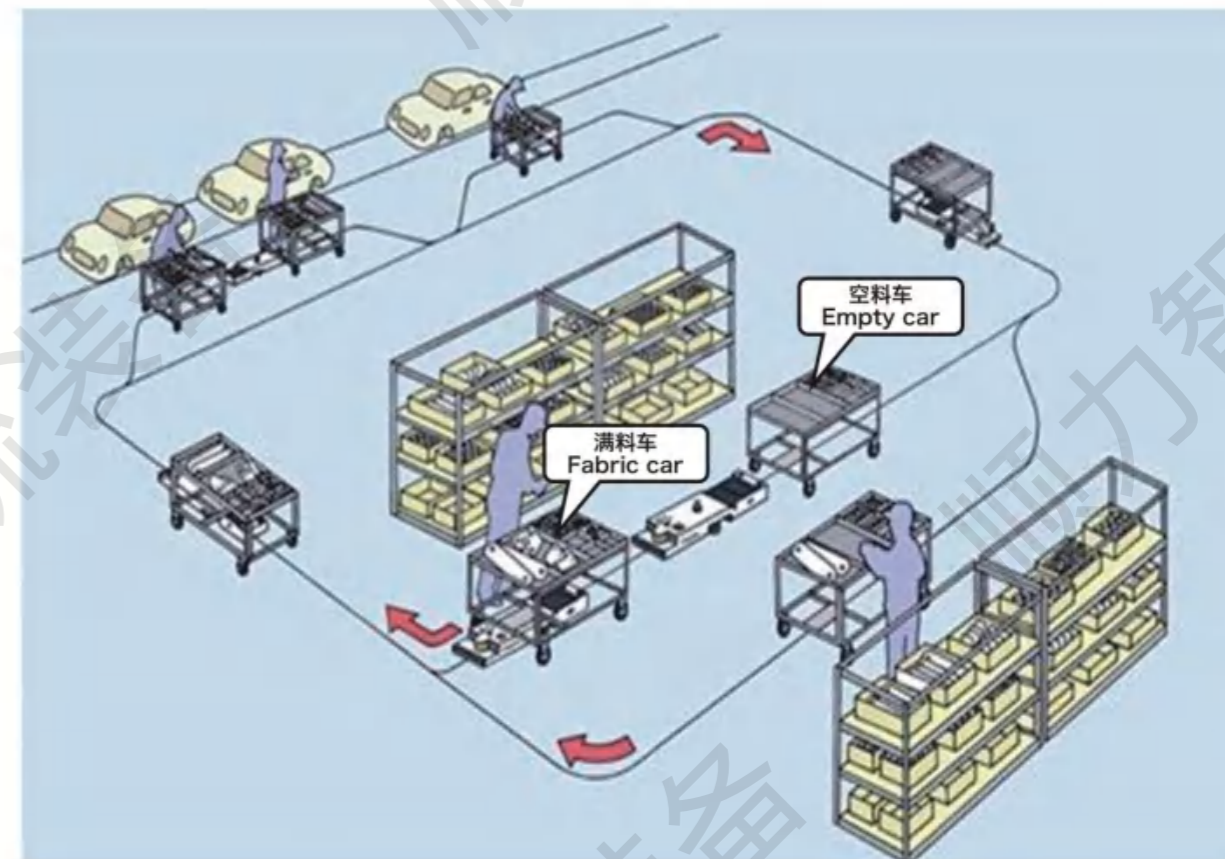


参数及规格 Parameters and Specifications

| 产品名称 Product Name | 单向潜伏式AGV Unidirectional Latent AGV | 产品尺寸 Product Dimensions | L1400mm*W420mm*H290mm |
|--------------------------------|--|-----------------------------|---|
| AGV型号 AGV Model | SL-AGV-1400DX-01 | 转弯半径 Turning Circle | ≥700mm |
| 导航类型 Navigation Type | 磁条导引 Magnetic Stripe Guidance | 导航精度 Navigation Accuracy | ±10mm |
| 行走方向 Walking Direction | 前进/转弯 Forward/Turn | 停止精度 Stop Accuracy | ±10mm |
| 网络方式 Network Way | WiFi网络 WiFi Network | 爬坡能力 Grade Ability | ≤2° |
| 驱动方式 Drive Mode | 差速控制 Differential Control | 工作方式 Operating Mode | 24小时作业 24-hour operation |
| 驱动电源 Drive Power | DC24V | 充电方式 Charging Mode | 手动充电/自动充电 Manual Charging/Automatic Charging |
| 额定负载 Rated Load | 500KG/800KG | 蓄电池 Battery | 铅酸电池/锂电池 Lead-acid Batteries/Lithium Batteries |
| 运载类型 Carrier Type | 潜伏式 Latent Type | 报警方式 Alarm Method | 语音提醒+星光报警 Voice Alert+Starlight Alarm |
| 设计寿命 Design Life | ≥10年 ≥10 years | | |
| 行走速度 Running Speed | 直线满载行走0-35m/min; 直线空载行走0-45m/min; 转弯0-15m/min Move Straight with full-load 0-35m/min; Move Straight with no-load 0-45m/min; Turning 0-15m/min | | |
| 安全感应范围 Safe Induction Range | ≤3m可调。紧急制动距离小于20mm ≤3m is adjustable, the emergency braking distance is less than 20mm. | | |
| 安全防护 Security | 前方障碍物检测传感器+机械防撞机构双重防护 Double protection of obstacle detection sensor and mechanical anti-collision mechanism. | | |

单向潜伏式AGV作业方式:

Unidirectional Latent AGV Operation Mode:



应用场景

Applications Scenarios



BI-DIRECTIONAL LATENT AGV

双向潜伏式AGV



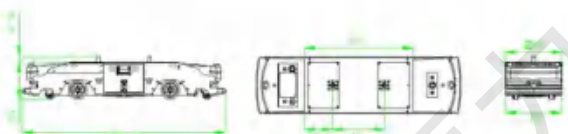
产品概述:

双向潜伏式AGV可潜伏到台车底部,利用自身的牵引机构实现料车的自动挂接与脱挂。该车型结构紧凑,行走灵活,广泛应用于汽车、家电、电器、电子等行业。

Product Overview:

Bi-Directional Latent AGV can lurk to the bottom of the trolley, using its own traction mechanism to achieve automatic hook-up and hook-off the wagon. The AGV of this type has compact structure, flexible walking, widely used in automobile, household appliances, electrical appliances, electronics and other industries.

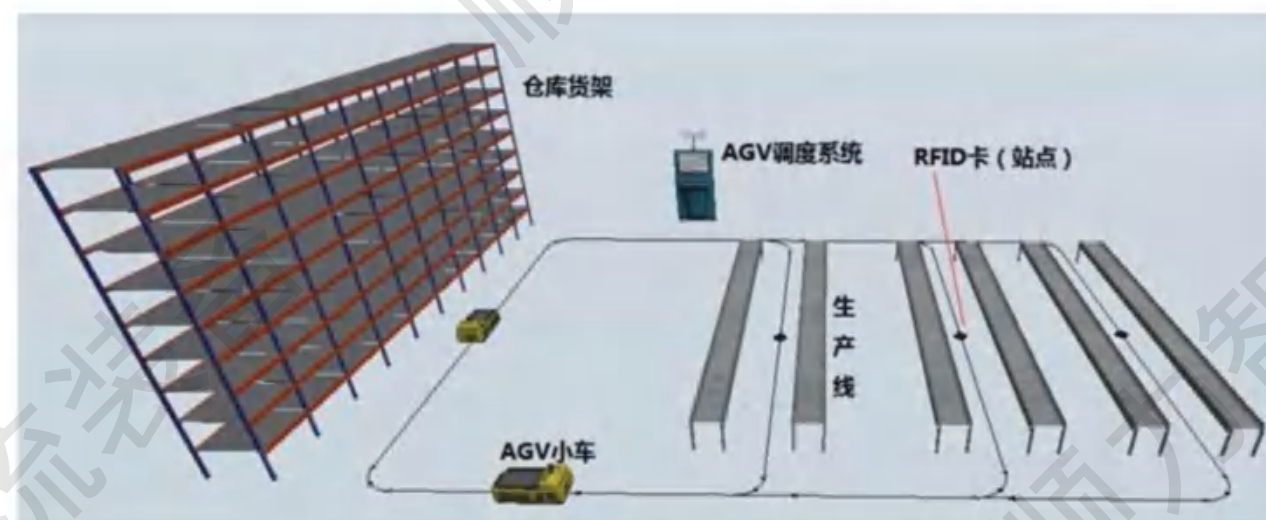
参数及规格 Parameters and Specifications



| 产品名称 Product Name | 双向潜伏式AGV Bi-Directional Latent AGV | 产品尺寸 Product Dimensions | L1600mm*W450mm*H295mm |
|--------------------------------|---|-----------------------------|---|
| AGV型号 AGV Model | SL-AGV-1600SX-02 | 转弯半径 Turning Circle | ≥800mm |
| 导航类型 Navigation Type | 磁条导引 Magnetic Stripe Guidance | 导航精度 Navigation Accuracy | ±10mm |
| 行走方向 Walking Direction | 前进/后退/转弯 (位置制为原地旋转和侧向移动) Forward/Back/Turn (positioning for in-situ rotation and lateral movement) | 停止精度 Stop Accuracy | ±10mm |
| 网络方式 Network Way | WiFi网络/射频网络 WiFi Network/RF Network | 爬坡能力 Grade Ability | ≤2° |
| 驱动方式 Drive Mode | 差速控制 Differential Control | 工作方式 Operating Mode | 24小时作业 24-hour operation |
| 驱动电源 Drive Power | DC24V | 充电方式 Charging Mode | 手动充电/自动充电 Manual Charging/Automatic Charging |
| 额定负载 Rated Load | 500KG/800KG | 蓄电池 Battery | 铅酸电池/锂电池 Lead-acid Batteries/Lithium Batteries |
| 运载类型 Carrier Type | 潜伏式 Latent Type | 报警方式 Alarm Method | 语音提醒+星光报警 Voice Alert+Starlight Alarm |
| 设计寿命 Design Life | ≥10年 ≥10 years | | |
| 行走速度 Running Speed | 直线满载行走0-25m/min;直线空载行走0-35m/min;转弯0-15m/min Move Straight with full-load 0-25m/min; Move Straight with no-load 0-35m/min; Turning 0-15m/min. | | |
| 安全感应范围 Safe Induction Range | ≤3m可调,紧急制动距离小于20mm ≤3m is adjustable, the emergency braking distance is less than 20mm. | | |
| 安全防护 Security | 前方障碍物检测传感器+机械防撞机构双重防护 Double protection of obstacle detection sensor and mechanical anti-collision mechanism. | | |

双向潜伏式AGV作业方式:

Bi-Directional Latent AGV Operation Mode:



作业方式基本与单向潜伏相同,区别在于双向(或单向)行走,不用设置环形路线,适用于狭小的空间。The operation mode is basically the same as Unidirectional Latent AGV. The difference lies in unidirectional (or bi-directional) walking, which is suitable for small space without setting circular route.

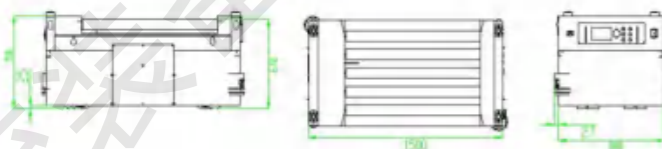
应用场景

Applications Scenarios



ROLLER PLATFORM TYPE AGV

背负滚筒式AGV



产品概述:

背负滚筒式AGV可在狭小的空间内运行,可实现左右横移,360旋转等功能,其大大节省了现场运行空间。可精确地与线边设备自动对接,实现自动上下料,达到无人操作的高度自动化,广泛应用于汽车、家电、电子等行业。

Product Overview:

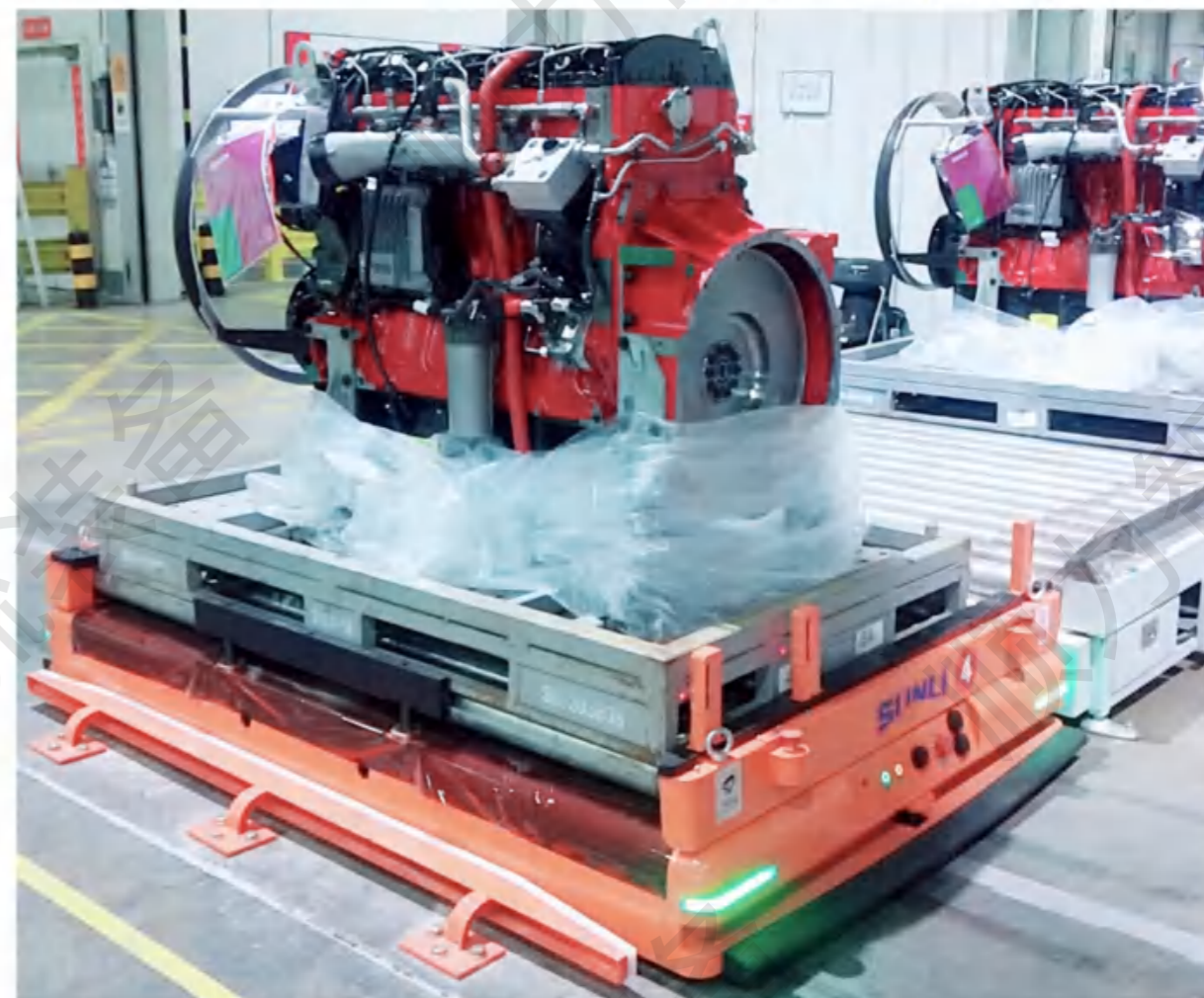
Roller Platform Type AGV, which can realize functions such as horizontal movement from left to right, 360 rotation, etc., can be operated in a narrow space and greatly saves the field operation space. It can automatically dock with the line edge equipment accurately, realize automatic feeding and unloading, achieve high automation of unmanned operation. It is widely used in automobile, household appliances, electronics and other industries.

应用场景

Applications Scenarios



背负滚筒式AGV作业方式 Roller Platform Type AGV Operation Mode



参数及规格

Parameters and Specifications

| 产品名称 Product Name | 背负滚筒式AGV Roller Platform Type AGV | 产品尺寸 Product Dimensions | L1500mm*W800mm*H700mm |
|--------------------------------|---|---|---|
| AGV型号 AGV Model | SL-AGV-1500GT-01 | 转弯半径 Turning Circle | ≥800mm |
| 导航类型 Navigation Type | 磁条引导 Magnetic Stripe Guidance | 导航精度 Navigation Accuracy | ±10mm |
| 行走方向 Walking Direction | 前进/后退/转弯/原地旋转/横移 Forward/Backward/Turn/Spin in Place/Move Sideways | 停止精度 Stop Accuracy | ±10mm |
| 网络方式 Network Way | WiFi网络/射频网络 WiFi Network/RF Network | 爬坡能力 Grade Ability | ≤2° |
| 驱动方式 Drive Mode | 差速控制 Differential Control | 工作方式 Operating Mode | 24小时作业 24-hour operation |
| 驱动电源 Drive Power | DC24V | 充电方式 Charging Mode | 手动充电/自动充电 Manual Charging/Automatic Charging |
| 额定负载 Rated Load | 1000KG (可定制) (Customizable) | 蓄电池 Battery | 铅酸电池/锂电池 Lead-acid Batteries/Lithium Batteries |
| 运载类型 Carrier Type | 滚筒式 Roller Type | 报警方式 Alarm Method | 语音提醒+星光报警 Voice Alert+Starlight Alarm |
| 设计寿命 Design Life | ≥10年 ≥10 years | | |
| 行走速度 Running Speed | | 直线满载行走0-35m/min; 直线空载行走0-45m/min; 转弯0-15m/min Move Straight with full-load 0-35m/min; Move Straight with no-load 0-45m/min; Turning 0-15m/min. | |
| 安全感应范围 Safe Induction Range | | ≤3m可调, 紧急制动距离小于20mm ≤3m is adjustable, the emergency braking distance is less than 20mm. | |
| 安全防护 Security | | 前方障碍物检测传感器+机械防撞机构双重防护 Double protection of obstacle detection sensor and mechanical anti-collision mechanism. | |

TWO-WAY PLATFORM TYPE AGV

双向背负式AGV

产品概述:

双向背负式AGV,可背负至少100KG货物,可前进、后退、转弯、分支,旋转等行驶功能。AGV钣金车身采用喷塑处理工艺,外观美观,表面坚固,耐腐蚀。AGV侧面为四根国标4040铝型材,可非常方便使用相关配件进行扩展。此款AGV可沿设定的路线自动行走,路线可由用户直接进行编程设定,可实现柔性化生产需求,最大化提高企业效率。

Product Overview:

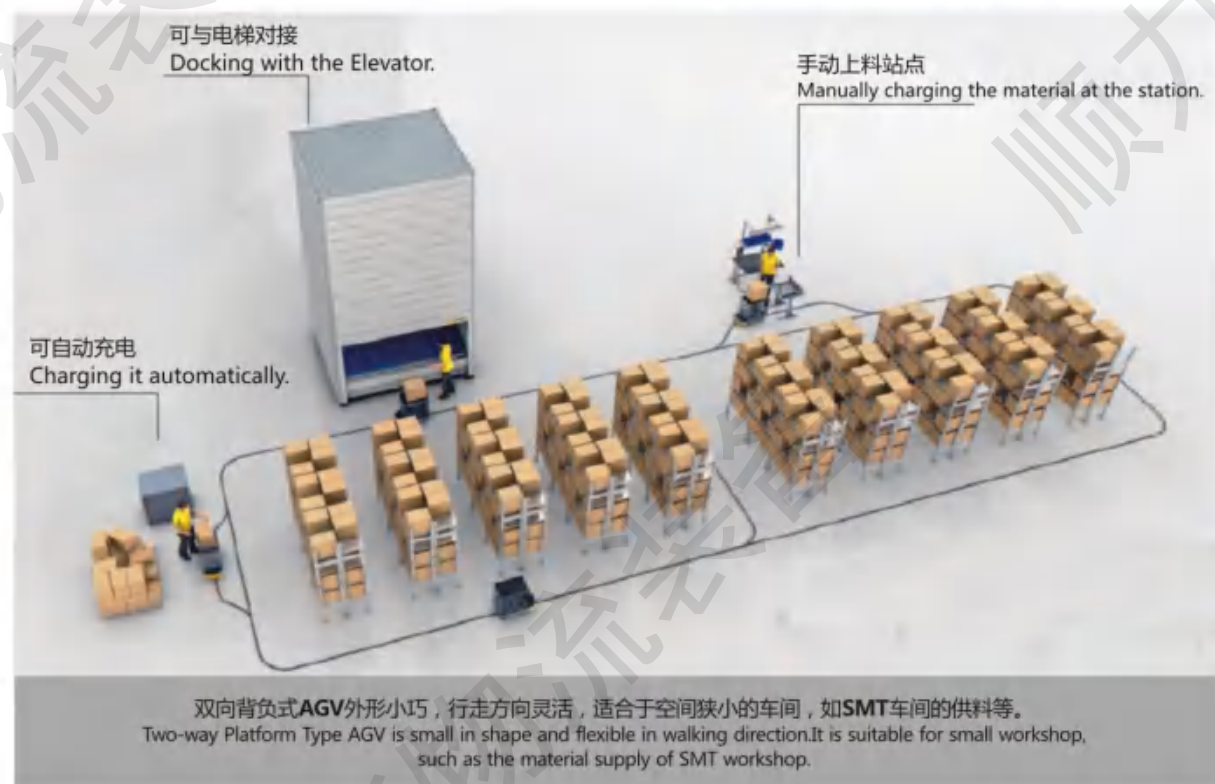
Two-way Platform Type AGV,which can carry at least 100KG of goods,has move forward,backward,tum,branch,rotate and other driving functions.

This kind of AGV sheet metal body adopts spray-plastic treatment technology, has beautiful appearance,solid surface,corrosion resistance.The side of AGV is four national standard 4040 aluminum profiles,which can be easily extended with relevant accessories.Two-way Platform Type AGV can automatically walk along the set route,which can be programmed directly by users,which can realize flexible production requirements and maximize enterprise efficiency.



双向背负式AGV作业方式

Two-way Platform Type AGV Operation Mode



应用场景

Applications Scenarios



参数及规格

Parameters and Specifications

| 产品名称 Product Name | 双向背负式AGV Two-way Platform Type AGV | 产品尺寸 Product Dimensions | L700mm*W500mm*H300mm |
|--------------------------------|--|-----------------------------|---|
| AGV型号 AGV Model | SL-AGV-700BF-01 | 转弯半径 Turning Circle | ≥500mm |
| 导航类型 Navigation Type | 磁条导引 Magnetic Stripe Guidance | 导航精度 Navigation Accuracy | ±10mm |
| 行走方向 Walking Direction | 前进/后退/转弯/原地旋转/横移 Forward/Backward/Turn/Spin in Place/Move Sideways | 停止精度 Stop Accuracy | ±10mm |
| 网络方式 Network Way | WiFi网络 WiFi Network | 爬坡能力 Grade Ability | ≤2° |
| 驱动方式 Drive Mode | 差速控制 Differential Control | 工作方式 Operating Mode | 24小时作业 24-hour operation |
| 驱动电源 Drive Power | DC24V | 充电方式 Charging Mode | 手动充电/自动充电 Manual Charging/Automatic Charging |
| 额定负载 Rated Load | 1000KG (可定制) (Customizable) | 蓄电池 Battery | 铅酸电池/锂电池 Lead-acid Batteries/Lithium Batteries |
| 运载类型 Carrier Type | 背负式 Platform Type | 报警方式 Alarm Method | 语音提醒+星光报警 Voice Alert+Starlight Alarm |
| 设计寿命 Design Life | ≥10年 ≥10 years | 自身重量 Sheer Weight | 50KG |
| 行走速度 Running Speed | 6m/min-42m/min | | |
| 安全感应范围 Safe Induction Range | ≤3m可调, 紧急制动距离小于20mm ≤3m is adjustable, the emergency braking distance is less than 20mm. | | |
| 安全防护 Security | 前方障碍物检测传感器+机械防撞机构双重防护 Double protection of obstacle detection sensor and mechanical anti-collision mechanism. | | |

CACHE BIN AGV

緩存料箱AGV

45



兼容料箱紙箱作業

Compatible material box carton operation

可同時取放紙箱和料箱，無需二維碼識別，提升業務場景適應能力，降低料箱投入成本。

The carton and the material box can be picked and placed at the same time without the need for QR code identification, which improves the adaptability of business scenarios and reduces the cost of material box input.

兼容整箱取放和拆零揀選

Compatible with FCL picking and unpacking and picking

支持整箱揀選，或拆零揀選。支持直接對接輸送線

Support FCL sorting, or split-zero sorting. Support direct docking conveyor line

3D攝像頭視覺識別取貨

3D camera visual recognition pickup

視覺識別取貨，無需二維碼定位。採用歐洲進口3D攝像頭，ARM含GPU處理器；

Visually identify pickup, no need for QR code positioning. Using European imported 3D camera, ARM With GPU processor;

多尺寸紙箱

Multi-size carton

視未來可兼多尺寸紙箱，目前已在迭代測試階段。

Depending on the future, multiple carton sizes can be used, and it is currently in the iterative testing stage.

| | |
|-------------------------------|---|
| 產品型號 Product number | SL42N |
| 機器人高度 Robot height | 4220 mm(可支持定制) 4220 mm (customization can be supported) |
| 機器人速度 Robot speed | Avg.1.5 m/s,max 1.8 m/s |
| 兼容紙箱尺寸 Compatible carton size | 400mm-600mm(L) |
| 紙箱重量 Carton weight | 30kg |
| 存儲能力 Storage capacity | 最多可達 8+1個紙箱 Up to 8+1 cartons |
| 巷道寬度 Roadway width | 1110mm |
| 續航能力 Endurance | 3.5h/0.7 hr充電 3.5h/0.7 hr charge |



QR CODE AGV

二維碼AGV

詳情請諮詢 400-090-1058 或訪問順力網站 www.gdsunli.com

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| 序号 | 规格指标 | 参数 | 参数 |
|----|-------------|------------------|-----------------|
| 1 | 型号 | SL-T10D | SL-T05D |
| 2 | 导引方式 | 二维码导航 | 二维码导航 |
| 3 | 举升高度 | 70mm | 70mm |
| 4 | 外观尺寸(长x宽x高) | 1100mmx916x295mm | 910mmx716x295mm |
| 5 | 载重能力 | 1000kg | 500kg |
| 6 | 控制方式 | 智能运动控制系统 | 智能运动控制系统 |
| 7 | 走行方向 | 前进, 原地旋转 | 前进, 原地旋转 |
| 8 | 通讯功能 | WIFI | WIFI |
| 9 | 驱动方式 | 差速驱动 | 差速驱动 |
| 10 | 走行速度 | 1m/s | 1m/s |
| 11 | 导航精度 | ± 10mm | ± 10mm |
| 12 | 停车精度 | ± 10mm | ± 10mm |
| 13 | 充电方式 | 自动充电 | 自动充电 |
| 14 | 蓄电池 | 锂电池 | 锂电池 |
| 15 | 安全防护 | 激光扫描0-4米 | 激光扫描0-4米 |
| 16 | 报警形式 | 声光报警、即时信息推送 | 声光报警、即时信息推送 |

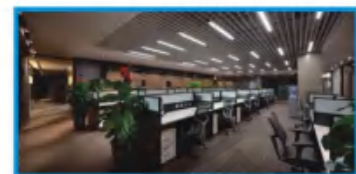
DIGITAL FACTORY

数字化工厂

详情请咨询 400-090-1058 或访问顺力网站 www.gdsunli.com

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LOA办公协同
打通产门间制造信息OA协同

QMS数字化质量检验
打标准工艺约束的检验指标，完成单件产品的数字化检验和质量数据采集

QMS全程质量追溯与分析
打基于产品全生产周期的追溯分析，监控关及时发现缺陷，提高质量



WMS智能物流配送集成
优化及管理由库房到产线及回仓的物料发放，RFID、条码、PPA移动终端

SRM供应商管理
与供应商协同联通工厂与工厂



BI数字化看板与分析
报表、报警、实时看板以及运作看板



APS作业计划导入和排产
将车间级作业计划导入MOM系统，进行任务安排

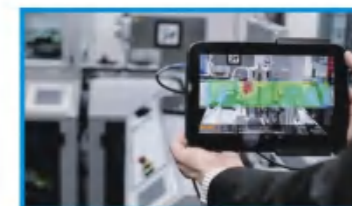


CRM客户关系管理
与消费者协同，联通消费者与生产者

ERP



PLM设计工艺系统集成
产品设计数据和工艺数据自动下发MOM执行系统，虚拟生产系统与MOM整合



SCADA设备状态监控与数据采集
底层工业控制网络实现设备联网和状态监控、数据采集

MES生产过程控制
产制程执行，流程跟踪，数据采集/分析，对生产过程透明化管控

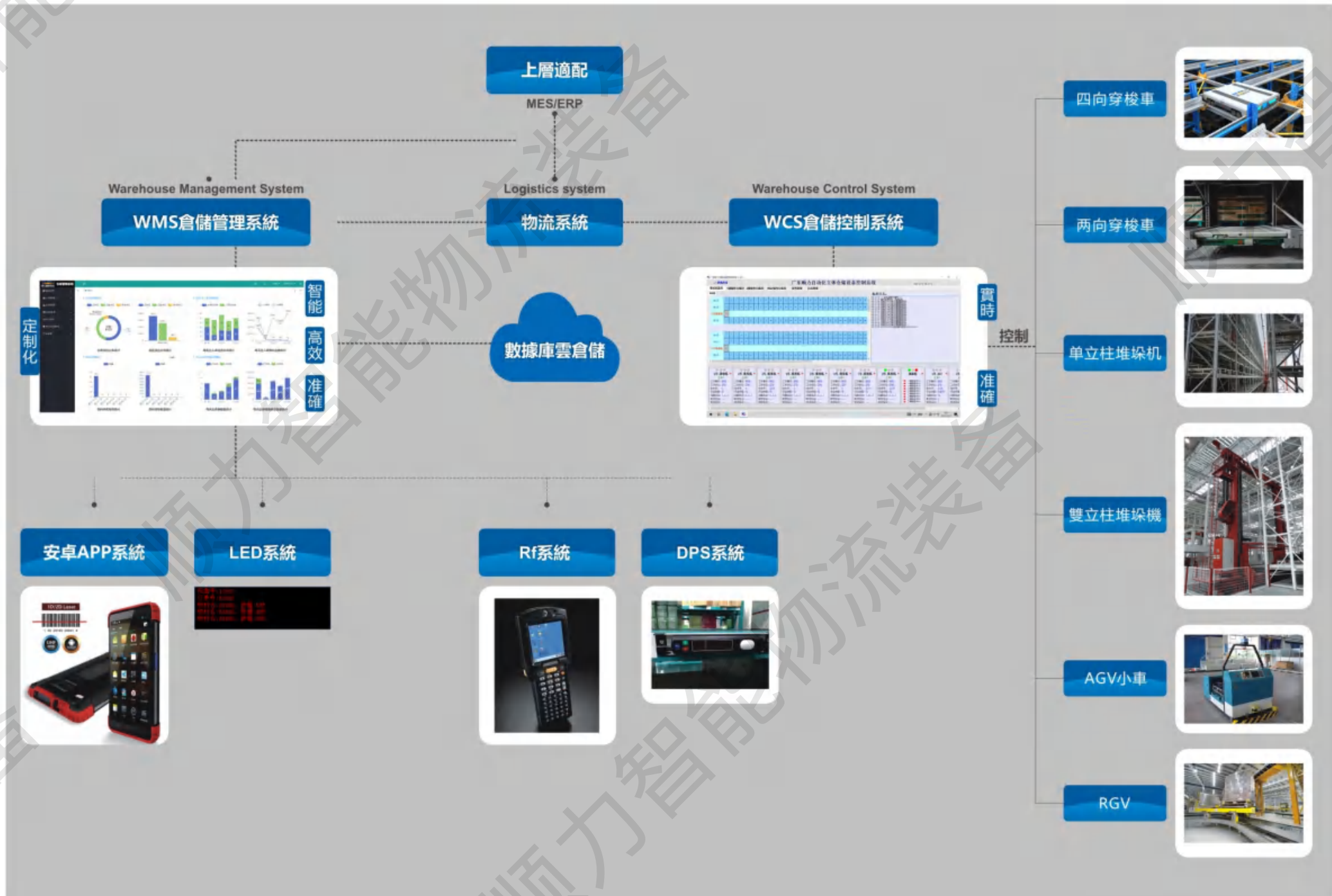


WAREHOUSE MANAGEMENT SYSTEM

倉儲管理系統

順力WMS倉儲管理系統是一款基於電子智能制造管理和倉庫管理資訊化而開發的現代化運營管理系統。是以精益生產（JIT）為理論基礎，通過數據庫技術、條碼技術、API技術（應用程序接口）和相應的通信機制與外部系統的對接集成，能有效地對倉庫流程和空間進行管理，實現批次管理、快速出入庫和動態盤點。并快速幫助企業的倉庫管理人員對庫存物品的入庫、出庫、移動、調撥、盤點、配料等操作進行全面的控制和管理，有效的利用倉庫存儲空間，提高企業倉庫存儲空間的利用率及企業物料管理的質量和效率，提高倉庫存儲管理水平和生產效率，實現物料防錯和追溯管理，降低企業庫存和人力成本，提升企業市場競爭力，以滿足日益變化的供應鏈需求，實現完善的企業倉庫信息管理。

Sunli WMS is based on an intelligent electronic warehouse management and manufacturing management of information technology and the development of Modern Management System. Based on lean production (JIT) as the theoretical basis, through database technology, bar code Docking technology, API technology (Application Programming Interface) and the appropriate communication mechanism with external systems integration, energy Effective warehouse processes and space management, batch management, rapid and dynamic out of storage inventory, and Quick help enterprise warehouse management personnel for inventory items storage, a library, move, transfer, inventory, distribution Materials and other operations to conduct a comprehensive control and management, effective use of warehouse storage space, improve storage warehouse Quality and efficiency of space utilization and corporate materials management, warehouse inventory management and improve production efficiency. Achieve material error prevention and traceability management, reduce inventory and labor costs, enhance the market competitiveness of enterprises, in order to Meet the changing needs of the supply chain, to achieve complete enterprise information management warehouse.



WAREHOUSE

平庫管理系統

平庫管理系統 (WMS) 是通過物料入庫上架、訂單配貨出庫、物料抽檢、盤點管理、系統基礎信息管理等功能綜合運用的管理系統，有效控制并跟蹤倉庫業務的流程和成本管理全過程，實現完善的企業倉儲信息管理。該系統可以獨立執行庫存操作，與其他系統的單據和憑證等結合使用，可提供更為完整全面的企業業務流程和財務管理信息。結合客戶現有製造系統，通過接口與現有製造系統交互，提升整個企業的信息化水平。利用叉車、穿梭車等設備在低成本的环境下達到效率的最大化，節省人力成本。

WMS through the material storage shelves, order picking out library materials sampling, inventory management, basic information management system and other functions integrated use of management system, and with effective control Warehouse processes and cost tracking service management process to achieve complete enterprise storage and information management. That Inventory system can perform operations independently, in combination with other systems of documents and vouchers, can mention For a more complete and comprehensive enterprise business processes and financial management information. Combined with the customer's existing manufacturing systems, Interface with existing manufacturing system interaction to enhance the level of information throughout the enterprise. The use of forklifts, Shuttle vehicles and other equipment to maximize efficiency at a low cost environment, save on labor costs.

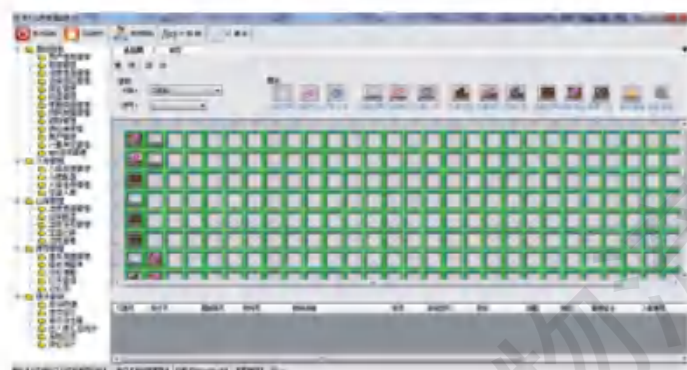


WAREHOUSE CONTROL SYSTEM

倉儲控制系統

WCS是倉儲控制系統(Warehouse Control System)的縮寫。WCS是介於WMS系統和PLC系統之間的一層管理控制系統。一方面，它與WMS系統進行信息交互，接受WMS系統的指令，並將其發送給PLC系統，從而驅動立庫及輸送設備產生相應機械動作。另一方面，它將PLC系統的狀態及數據實時反映在界面上，並提供對PLC系統和輸送線的手動調試接口。

WCS is a warehouse control system (Warehouse Control System). WCS is the system that can connect WMS and PLC. On the one hand, information exchange with WMS from receive instructions WMS system, and send it to PLC systems, The orders will be carried out to operate machine on the other hand, it reflects condition, it connects WMS and PLC controller and updates from PLC, providing aless of manual handling.



AGV CONTROL SYSTEM

AGV控制系统

順力AGV智能管理系统产品概述：

順力AGV智能控制系统，是一个同时对多台AGV进行实时监控、控制和调度的系统。用户可以从系统界面实时了解到每台在线AGV的设备状态、位置、工作情况等，还可以自动或手动呼叫空闲AGV进行任务分配。该系统结合了工业生产物流配送自动化实际现场应用，设计的界面友好美观，开放式菜单管理，更加方便了客户的应用。

Sunli AGV Control System Product Overview:

Sunli AGV Control System is a system which supervise, control and schedule multiple AGVS at the same time. Users can learn the status, location and working status of each online AGV in real time from the system interface, and also can call idle AGV automatically or manually for task assignment. The system combines the practical field application of industrial production and logistics distribution automation, the designed interface is friendly and beautiful, and the open menu management makes the application of customers more convenient.

系统特点：

- ①交通管制功能，在多台AGV运行时可有效避免AGV在交汇或转弯处的“撞车”行为。
- ②实时AGV动态监控，包括AGV的运行状态，位置信息，报警信息，稼动率等
- ③在线远程控制功能，能实时远程控制AGV的各种状态参数。另外，控制系统软件预留了与客户系统进行对接的强大功能。
- ④可与MES\WMS\WCS等系统进行对接，可将AGV所有数据与外部系统进行交互。

System Features:

- The traffic control function can effectively avoid the "collision" behavior of AGV at the junction or turn of AGV when multiple AGCS are running.
- Real-time AGV dynamic monitoring, including AGV operation status, location information, alarm information, utilization rate and so on.
- The on-line remote control function enables real-time remote control of AGV's various state parameters. In addition, the control system software reserves the powerful function of docking with the customer system.
- It can connect with MES/WMS/WCS and other systems, and interact all AGV data with external systems.



4 SUNLI-MapEdit

- MapEdit地图编辑器
- 绘制AGV的行驶路径
- 配置交通管制区域
- 配置AGV的待命点，活动站点等
- 关联活动站点动作码，导航点的一些参数设定和路段的参数设定，以配合交通管制的灵活设置。
- 生成地图文件供AGV和系统管理器使用。
- MapEdit map editor
- Draw the path of AGV
- Allocation of traffic control areas
- Configure AGV standby points, active sites, etc.
- Link the activity site action code, some parameters of the navigation point and the parameter setting of the section to match the flexible setting of traffic control.
- Generate map files for AGV and system manager.



5 SUNLI-VCS

软件概述：Software Overview:

Vehicle Control Software(车辆控制软件)，顾名思义即控制车辆运动的一个软件。

Vehicle Control Software, as the name implies, is a software to control vehicle movement.

主要单元模块：

与MCU单元交互，发送各种运动指令。

与上位机（AGV综合管理系统）交互，接收调度任务和交管信号，并实时上报车辆的各种设备数据信息。

设置车辆的各种参数值，包括各种传感器，驱动单元，控制板，声音控制设备，对MCU,DIU接口的参数等.....

串口通信单元实现与MCU的交互，网口通信单元实现与上位机的接口通信。

Main Unit Modules:

Interact with the MCU unit and send various motion instructions.

Interact with the upper computer(AGV CONTROL SYSTEM),receive scheduling tasks and handover signals,and report various equipment data information of the vehicle in real time.

Set various parameters of the vehicle,including various sensors,driving units,control panel,sound control equipment,parameters of MCU,DIU interface,etc.

The serial communication unit realize the interaction with MCU,and the network communication unit realize the interface communication with the upper computer.



ELECTRONIC TAGS PICKING SYSTEM

電子標籤揀選系統

工作原理

- 品種、庫位指示
- 出庫數量顯示
- 完成信息確認
- 最終幫助揀貨員完成揀貨系統

電子標籤揀貨系統的優勢

與傳統的紙張揀貨單方式相比，電子標籤具有極大的優勢：

1.實現無紙化作業，不需要打印出庫單、分揀單等紙張單據，減少了出庫前單據處理時間，節省紙張。

2.利用電子標籤揀貨，可大大加快揀貨速度。

■ 可以省去庫位尋找和核對的時間

■ 可以省去品種核對的時間

■ 被揀庫位的直觀顯示，可大大減少揀貨員的行走距離

3.利用電子標籤揀貨，可大大提高揀貨的準確率

■ 揀貨員精力主要用于揀貨數量的確認

■ 降低揀貨員思考、判斷的時間。

■ 由於降低了揀貨的勞動強度，使工作不易疲勞，工作人員始終可以保持較高效率。

4.提高揀貨效率，降低揀貨成本

■ 利用電子標籤揀貨系統，對產品、倉庫不熟練的人員也可從事揀貨。降低企業的培訓和管理成本。

■ 通過揀貨效率的提升，使揀貨人員數量下降。

■ 培訓簡單，可以使用兼職人員。

5.增強企業的競爭優勢

■ 利用電子標籤的高效率，使企業可應對以往幾倍的工作量。

■ 縮短交貨時間，使客戶服務反應大大加快，提升企業競爭力。

■ 揀貨準確率的提高，降低因發貨不準確造成的退貨、投訴和財產損失。

■ 適合各種惡劣條件，降低員工的勞動強度。

■ 具備各種輔助功能，協助完成盤點、補貨等工作。



Working principle

- Species, indicating the location
- O/S display
- Complete information confirmation
- Ultimately helping pickers complete picking system

Advantages of electronic tags picking system

Compared with traditional paper pick lists, the electronic tag has a great advantage:

1. To achieve paperless, no printing Delivery.No sorting lists and other paper documents.during order picking

2. To accelerate speed of picking&sorting.Use of electronic tags picking can greatly accelerate the speed.

■ Omitted location to find and check time

■ Variety omitted check time

■ Visual display ,it can greatly reduce the walk distance of the pickers

3. The use of electronic tags picking, can greatly improve the accuracy of the picking

■ Make operator focuson number-picking

■ Reduce judging time.

■ Reduction of labor intensity, the staff keep efficient work condition

4. To improve picking efficiency and reduce the cost of picking The use of electronic tags picking system, product, warehouse unskilled personnel can be engaged

■ Picking. Reducing training and management costs.

■ Picking through improved efficiency, so picking the number of personnel decreased.

■ Training is simple, you can use the part-time staff.

5. enhance competitive advantage

■ Efficient use of electronic tags, so that enterprises can cope with huge workload.

■ Shorten delivery time,in-time customer' s service response and enhance the competitiveness of enterprises.

■ Picking accuracy increases, fewer rejects complaints and loss.

■ For a variety of harsh conditions, reduce labor intensity.

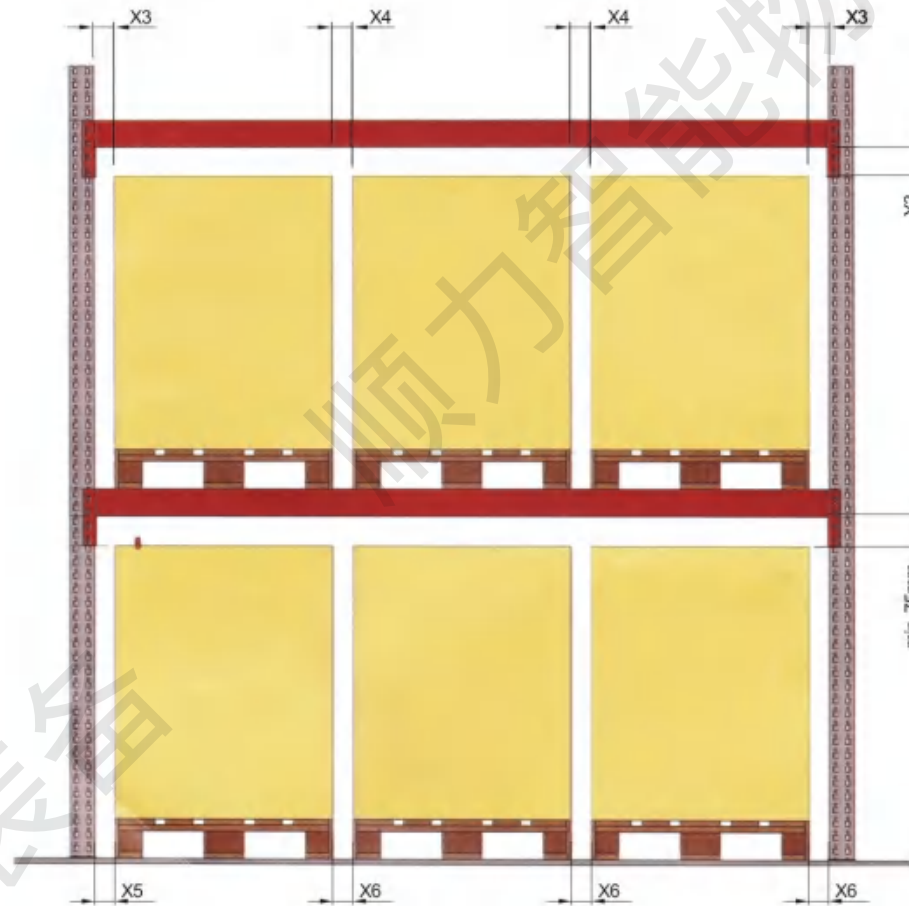
■ With a variety of auxiliary functions to help complete the inventory and replenishment.



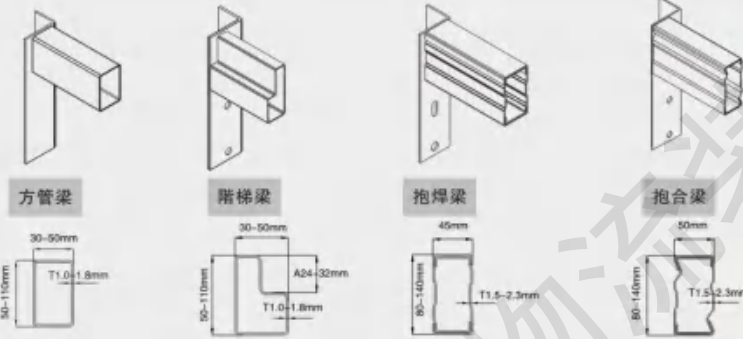
EXPLANATION OF PRINCIPLE

貨架、卡板淨空的原則說明

The principle instructions of clearance of shelf and pallet



| Raf yüksekliği Son travers yüksekliği | Raf Sınıfı 400 x3, x4, x5, x6 Y3 | | Raf Sınıfı 300A x3, x4, x5, x6 Y3 | | Raf Sınıfı 300B x3, x4, x5, x6 Y3 | |
|--|-------------------------------------|-----|--------------------------------------|-----|--------------------------------------|-----|
| 3.000 | 75 | 75 | - | - | - | - |
| 6.000 | 75 | 75 | 75 | 100 | 100 | 100 |
| 9.000 | 75 | 125 | 75 | 120 | 100 | 120 |
| 12.000 | - | - | 75 | 150 | 125 | 150 |



貨架常用顏色

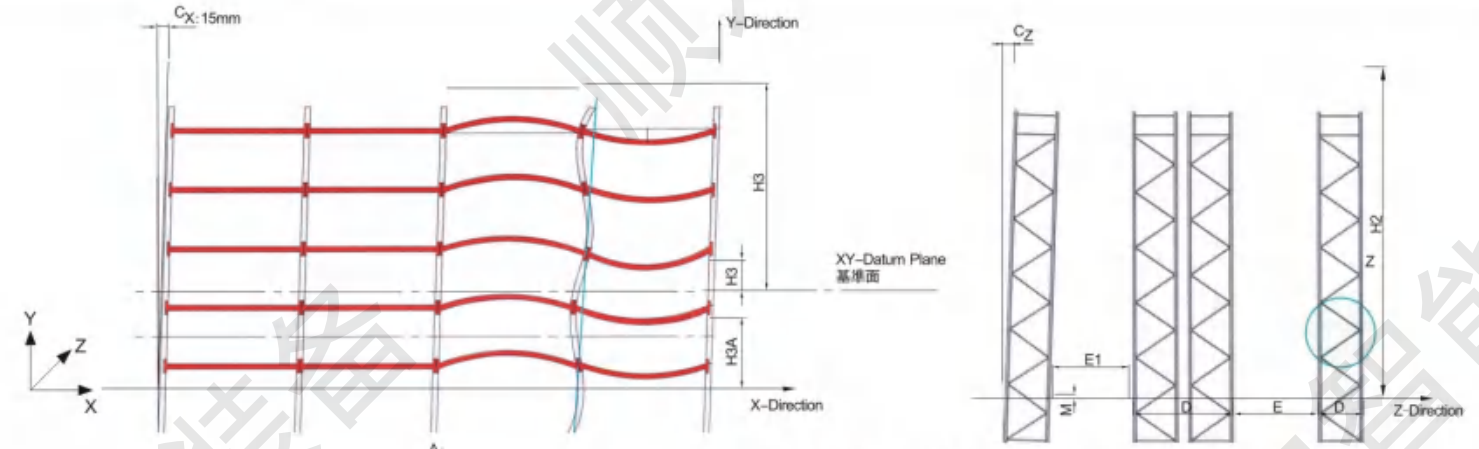
Standard color of racks

| | |
|--|---|
| | 顏色名稱:天藍色 附帶色卡編號:Pa2015 (RAL Color card/PAL 5015) |
| | 顏色名稱:桔紅色 附帶色卡編號:Pa2004 (RAL Color card/PAL 2004) |
| | 顏色名稱:灰白色 附帶色卡編號:Pa1002 (RAL Color card/PAL 1002) |
| | 顏色名稱:橘黃色 附帶色卡編號:Pa1033 (RAL Color card/PAL 1033) |
| | 顏色名稱:藍色 附帶色卡編號:Pa2017 (RAL Color card/PAL 5017) |

可根據客戶提供的色板或色號定做

貨架公差性描述說明

Description of racking tolerance



貨架變形限值 Deformation Limit Value of Racking

貨架構件的變形包括節點位移、橫梁最大位移和懸臂梁最大位移。

貨架各類變形限值按如下表採用

Deformation of racking component include node displacement, maximum displacement of the beam, and maximum displacement of the cantilever beam. The following list of various type of deformation limit value of racking.

| Deformation position 變形位置 | Deformation limit value mm | | |
|---|--|---|--------------------------------------|
| | 自動化立體倉庫貨架 Automatic 3-dimensional warehouse racking | 窄通道托盤貨架 Narrow-aisle pallet racking | 普通托盤貨架 Usual pallet racking |
| 節點最大x向位移 Maximum X to node displacement | 10 | 15 | 15 |
| 節點最大y向位移 Maximum Y to node displacement | 10 | 15 | 15 |
| 節點最大z向位移 Maximum Z to node displacement | 10 | 15 | 15 |
| 橫梁最大z向位移 (撓度) Maximum Z to the beam | 跨度span/300a | 跨度span/200b | 跨度span/300c |
| 懸臂梁最大z向位移 Maximum Z to the cantilever beam | 懸臂梁跨度 Cantilever beam 's span/200 | 懸臂梁跨度 Cantilever beam 's span/150 | 懸臂梁跨度 Cantilever beam 's span/100 |

a.最大不超過10mm maximum more than 10mm
b.最大不超過15mm maximum more than 15mm
c.最大不超過15mm maximum more than 15mm

TOLERANS TOLERANS TANIMI 公差性描述

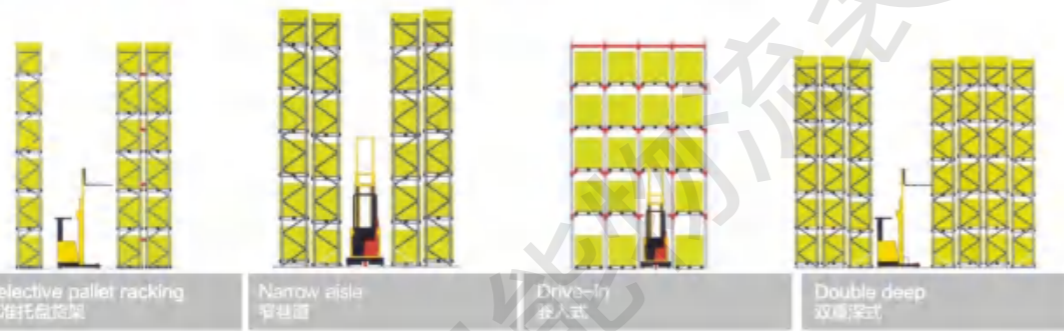
| | Sınıf400 | SINIF300A | |
|--|--|-----------|-------|
| | Under the maximum deformation range of average load and loading role in the beam bending 橫梁在均布載荷下最大允許變形範圍 | L/200 | L/200 |
| | Maximum deformation of a cantilever beam(bending) 懸臂橫梁在均布載荷下可允許最大變形 | L/100 | L/100 |
| | Under the maximum deformation range of average load and loading role in the beam bending 橫梁在均布載荷下最大允許變形範圍 | L/200 | L/200 |
| | Maximum deformation of a cantilever beam(bending) 懸臂橫梁在均布載荷下可允許最大變形 | L/100 | L/100 |

RACKING SELECTION

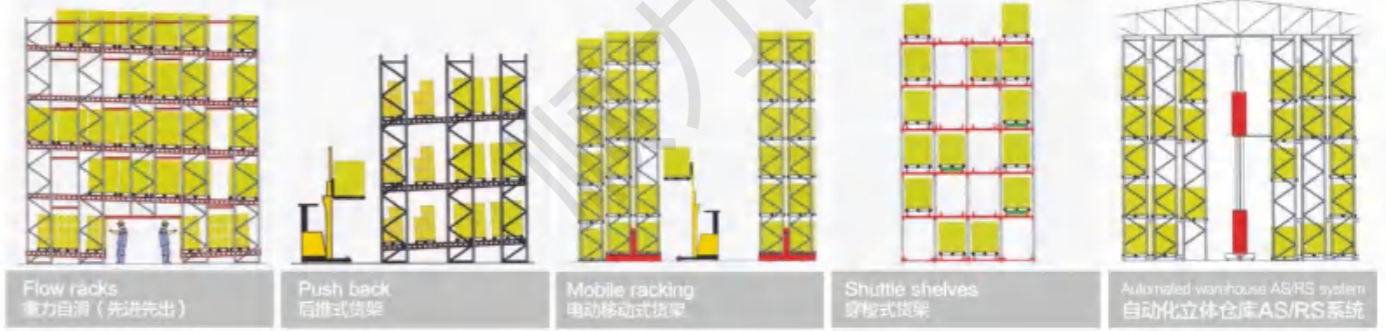
详情请咨询 400-090-1058 或访问顺力网站 www.gdsunli.com

貨架選型

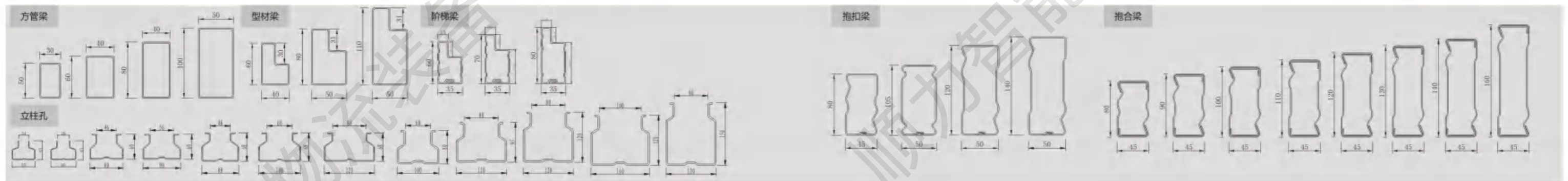
Racking selection



| | Selective pallet racking 标准托盘货架 | Narrow aisle 窄通道 | Drive-in 驶入式 | Double deep 双深深式 |
|--|--|--|---|--|
| Stock rotation 產品周轉 | Good 好 | Good 好 | LIFO 後進先出 | Average 50% accessible 普遍可達到50% |
| Product protection 產品保護 | Good 好 | Good 好 | Good 好 | Good 好 |
| Order picking selectivity, accessibility 訂單分揀選擇性、輔助 | Good, 100% 好, 100% | Good, 100% 好, 100% | Limited 20-30% 有限的20-30% | Average, 50% 普遍的50% |
| Floor area, utilization 容積率、使用 | 34.57% net pallet area 34.57% | 50.37% net pallet area 50.37% | 50.49% net pallet area 50.49% | 51.23% net pallet area 51.23% |
| Maximum height of storage 最大存儲高度 | 11m | 15m | 10m | 10m |
| Machinery equipment 機械設備 | walk behind or ride on stacker counter balance, reach truck 平衡重、前移式、堆垛機叉車 Reach truck offers up to 30% Improved of floor space to height In excess of 11+m high 叉車可伸到超過11米高的且 是30%改良的樓面空間 | specialist vna machine—requires super-flat floor surface 三向堆垛叉車 operates within guide rails, standard or low profile or using a wire induction guidance system which operates to a maximum height of 15m 在導軌內操作、標準或低調或使用 電線感應導航系統對最大高度15m 的操作。 | Counter balance, reach truck 平衡重、前移式叉車 | Counter balance, reach truck 平衡重、前移式叉車 match a special forklift with fork 要配帶有伸縮叉的專用叉車 |
| Picking rate 存取率 | Fast 快 | Fast 快 | Average 勻速 | Average 勻速 |
| Popular industry application 應用的行業 | In virtually every industry 幾乎所有 | Distribution centres 集散中心 | Warehouse with products in few species and large quantity 種類少、量大的產品倉庫 | Cold storage FMCG distribution centers 冷庫、製造和分配中心 |
| Other remarks 備注 | Can be fitted with wide range of partition plate etc. 可配備多種隔板 | Require super flat floor 需要超平地 | Suitable for large quantities Of homogenous product 適用於大批量同類產品 | Need to match beam on the bottom level 底層需配橫梁 |



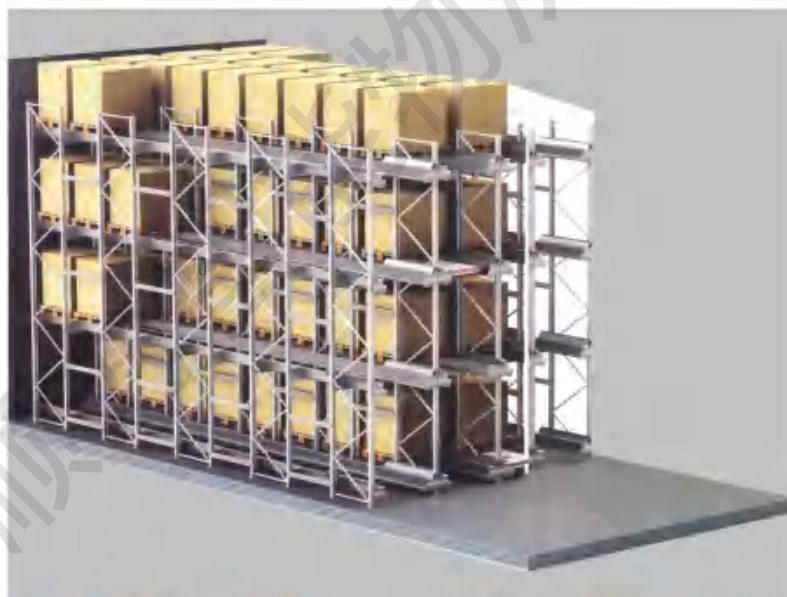
| | Flow racks 重力自滑 (先進先出) | Push back 后推式货架 | Mobile racking 电动移动式货架 | Shuttle shelves 穿梭式货架 | Automated warehouse AS/RS system 自动化立体仓库AS/RS系统 |
|--|--|---|--|--|---|
| Stock rotation 產品周轉 | Excellent using FIFO principle 優良 | First in last out FILO principle 先進後出 | Good 好 | Limited 好 | Good 好 |
| Product protection 產品保護 | Good 好 | Good 好 | Good 好 | Good 好 | Good 好 |
| Order picking selectivity, accessibility 訂單分揀選擇性、輔助 | Good, 100% 好, 100% | Good, 20-30% 好, 20-30% | Limited, 20-30% 有限, 20-30% | Good, 100% 好, 100% | Good, 100% 好, 100% |
| Floor area, utilization 容積率、使用 | 60% net pallet area 60% | 70% net pallet area 70% | | 70% net pallet area 70% | 60%-85% net pallet area 60%-85% |
| Maximum height of storage 最大存儲高度 | 10m | 9m | 10m | 11m | 40m |
| Machinery equipment 機械設備 | Counter balance, reach truck 前移式、平衡重叉車 | Counter balance, reach truck 前移式、平衡重叉車 | Counter balance, reach truck 前移式、平衡重叉車 | Counter balance, reach truck 前移式、平衡重叉車 | Automatic stacker. 自動堆垛機 Automated stacker: turning, double depth, match radio shuttle car for high density project. 自動堆垛機可轉彎, 可做雙重深、 可配穿梭車做高密度方案 |
| Picking rate 存取率 | Fast 快 | Average 均速 | Average 均速 | Average 均速 | High-speed 高速 |
| Popular industry application 應用的行業 | Frigh cost environment, eg, cold stores or where space is at premium 冷庫式高成本額外支付的空間 | Cold storage FMCG distribution centers 冷庫分散中心 | Suitable for large quantities of homogenous products 適合大批量同類產品 | Suitable for large quantities of homogenous products 適合大批量同類產品 | Warehousing for more than 5000 pallet locations 超過5000個卡板位 |
| Other remarks 備注 | The best quality of drum and pallet 滾筒及托盤要質量好, 減速裝置 | Maximum no more than 6 depths 最多不超過6個深 | Require super flat floor 需要超平地 | Require super flat floor 需要超平地 | Land building for needing To as per design 土建需按設計要求施工 |



RADIO SHUTTLE RACKING

 **SUNLISPACE**

穿梭式貨架



穿梭式貨架系統是由穿梭式臺車以及叉車組成的完整的高密度存儲系統，這種高效率的高安全性倉庫空間利用率帶來全新的選擇。

- ◎ 高密度存儲，倉庫利用率高
- ◎ 工作效率高，大大減少作業等待時間
- ◎ 作業方式靈活，貨物的存取方式，也可以先進後出
- ◎ 安全性好，減少貨架碰撞，提高安全生產率

多量少樣：食品、飲品、化工、烟草等單品種批量大，品項相對單一，行業冷庫作業：減少低溫作業時間，提高工作效率
 安全性期限管理：對物品批次有嚴格要求，需要先進先出作業管理的倉庫增加庫容：存儲空間有限，需要最大化利用空間的倉庫。

Radio shuttle Racking system consists of supporting rack, shuttle rait and a Radio shuttle cart(Also Called Pallet Runner or Pallet Mole) Fully programmable deep lane storage and retrieval system for maximum and high-security storage.

- ◎ Goods can be stored in the warehouses with highest density and low cost.
- ◎ better safety and anti-seismic performance, reduce the racking collision and improve the safe production
- ◎ Storage Style: FIFO or FILO, Optional tunnel picking.
- ◎ As each pallet only needs to be positioned at the beginning of the deep lane storage it increases efficiency within operations.

SUNLIMOVER: 用於多伸位托盤存儲的通用式全自動先進模塊化系統。

SUNLIMOVER包括：

- 搬運車，動行於與存儲通道垂直的軌道上的母車，在每個裝載階段，該母車由電源母線供電。
- SUPERCAP，車上的附屬裝置，由母車通過WIFI進行控制，並且用於多種存儲通道中進行托盤的自動取回/存儲操作。

不同的系統配置為托盤提供了必要的起升/降低系統，以便將托盤運至SUNLIMOVER能夠處理的不同通道，並且為單獨作業的SUNLIMOVER搬運推車提供了不同層級的起升/降低系統。對於SUNLIMOVER，也是由我們的WMS軟件進行系統管理。

SUNLIMOVER: for multi-deep storage tray bit general purpose Automatic advanced module System.

SUNLIMOVER include:

- Like carriers, fixed line on the track and the storage channel perpendicular to the parent vehicle, loaded in each
- SUPERCAP, attachment board by the parent vehicle controlled by WIFI. And it is used to store a variety of channels carried the tray automatically retrieve / store operations.

Different system tray configured to provide the necessary lifting / lowering system so that the tray SUNLIMOVER transported to different channels that can be processed, and as a separate job SUNLIMOVER handling carts provide different levels of lifting / lowering system.

For SUNLIMOVER, but also by our WMS software system administration.





SELECTIVE PALLET RACKING

SUNLISPACE

標準式托盤貨架

最簡單有效的多元化倉儲貨架,用于將貨物放置在托盤上配合叉車使用存儲,存取操作靈活快捷,選擇性強,可先進先出,周轉率較高,1T-5T/層,貨架規格可以按照不同的空間、貨物量身定制。

結構特點:

- 1、全組合式結構,拆裝簡便快捷,應用靈活;
- 2、立柱設計有每75mm可調孔距,可根據貨物高低靈活調節層間距。

It's the most effective multiple storage racking, working with fork truck, and store or take goods with pallet, it can be highly selected and "first in first out" with high cycling rate. Load: 1T-5T/layer. The specification for the rack can be customized according to different space and volume of goods.

Structural features:

1. All composite structure, it is easy and fast to dismounting, flexible application.
2. Each upright pitch adjusted by 75mm, the beam distance can be adjustable base on the height of storage item.



橫梁式貨架配合叉車作業案例 Case of forklift working for pallet racking

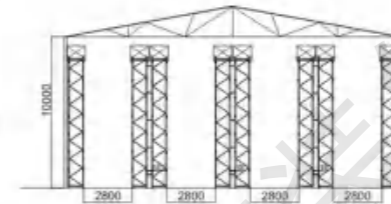
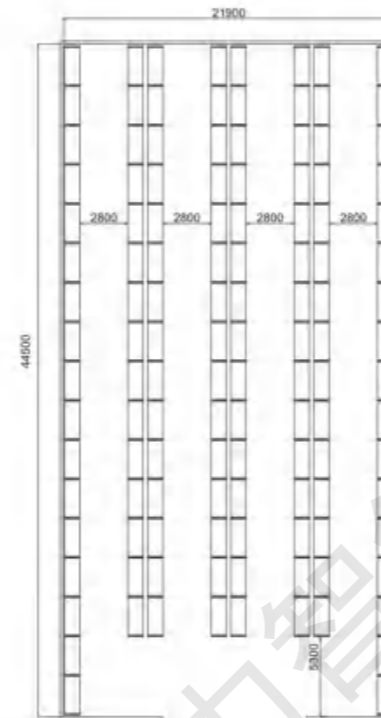
橫梁式貨架案例 Case of pallet racking

橫式通道 Underpass

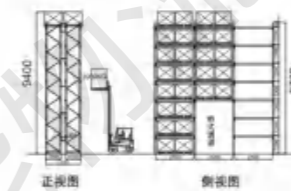
橫梁式貨架通道 Channel of pallet racking

橫梁式貨架配合叉車作業案例 Case of forklift working for pallet racking

橫梁式貨架案例 Case of pallet racking



標準托盤式貨架 正側視圖



正視圖 側視圖

案例Case

如圖案例所示As shown in figure case:
倉庫體積為 Storage's volume: 9745.5m³;
貨架+托盤體積為 Shelf+ pallet's volume: 3368.896m³;
倉庫空間利用率為 Warehouse space utilization rate: 34.57%
配前移式叉車 Match reach forklift truck



橫梁式貨架配合堆高機作業案例 Case of stacking machine working for pallet racking



駛入式貨架 DRIVE-IN RACKING

SUNLISPACE

適用於儲存樣少量多，批量作業且選擇性較小的貨物。貨物採用托盤一個接一個按深度方向，存放在支撐導軌上，增大儲存密度和空間利用率。叉車可直接駛入巷道內存取貨物，極為方便。

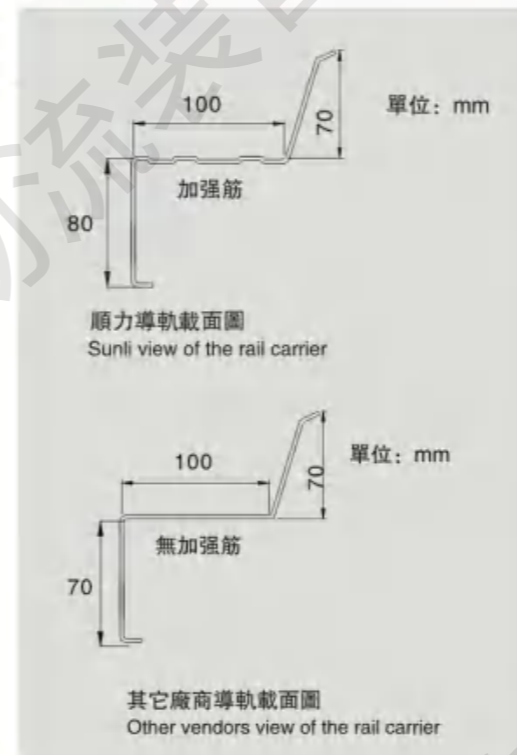
It's suitable for storing large quantity of goods with less types, goods of batched working and small range of selection. The goods are stored on the support guide rail with the pallet one after another in the direction of depth, increasing the storage density and space availability. It's quite convenient for fork truck drives into lane directly to store or take out the goods.



冷彎形導軌 Cold-bending rail



角鋼形導軌 Angle-iron rail

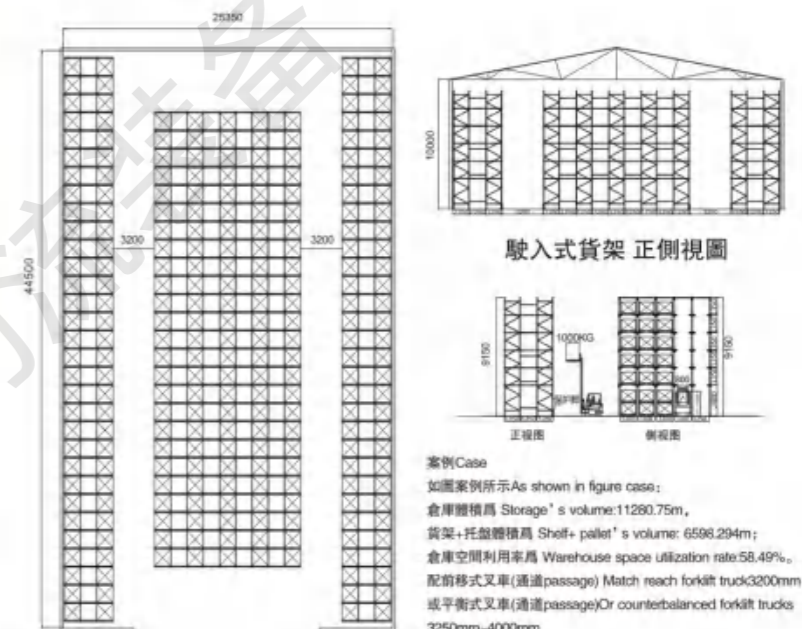


順力導軌對比部分廠家使用大規模加強筋2根，高度可達80mm，用料更大、更美觀，承載力及受力更好。

We will use more 2 pieces of large-scale comparative guide ribs than some manufacturers. Height up to 80mm, material larger, more beautiful, better bearing capacity and force.

Using suggestion for Drive-in racking
Match with double-sided pallet
Pay attention to the forklift size whether working through the depth smoothly or not.
Keep the cargos not over the edge of the pallet.
Reach forklift truck and counterbalanced forklift trucks are acceptable.
Suitable for loading capacity of per pallet is within 2000KG

駛入式貨架使用建議
基於卡板懸空承載貨物考慮，建議使用雙面卡板
注意叉車護頂架是否能順利通過貨架兩牛腿間。
為方便進出貨，卡板上貨物盡量不要超出卡板邊緣。
可採用前移式叉車或者平衡重叉車
適用於每板貨物承重2000KG以內。



案例 Case
如圖案例所示 As shown in figure case:
倉庫體積為 Storage's volume: 11280.75m³;
貨架+托盤體積為 Shelf+ pallet's volume: 6598.294m³;
倉庫空間利用率為 Warehouse space utilization rate: 58.49%.
配前移式叉車(通道 passage) Match reach forklift truck 3200mm
或平衡式叉車(通道 passage) Or counterbalanced forklift trucks
3250mm-4000mm



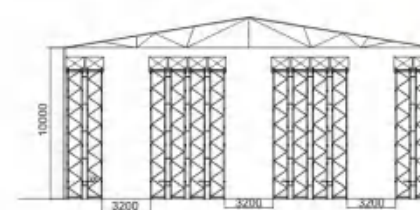
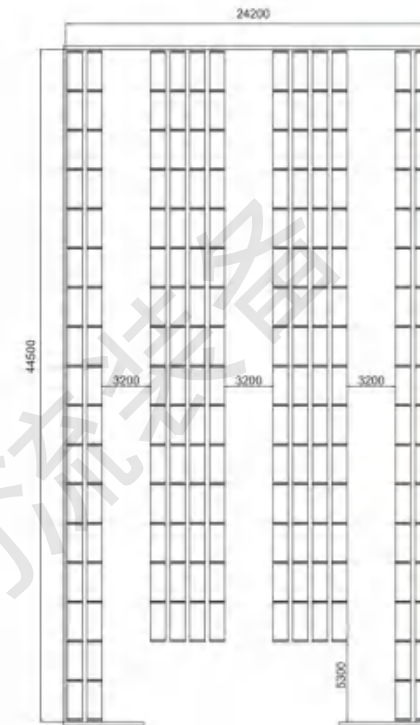
DOUBLE-DEEP STORAGE RACKING

SUNLISPACE

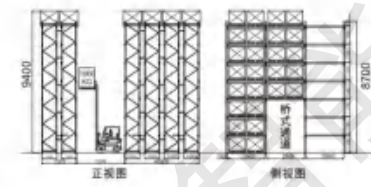
雙重深儲型貨架

必須使用帶伸縮臂的特殊叉車存取貨物，此貨架設計有效的減少了叉車作業通道，進一步增大存儲量。

You must use a special truck with telescopic arm access to goods, this design effectively reduces shelf forklift operating, and increase the storage capacity.



双重深儲式貨架 正側视图



案例Case
如圖案例所示As shown in figure case:
倉庫體積為 Storage's volume:10769m,
貨架+托盤體積為 Shelf+ pallet's volume: 5517.424m;
倉庫空間利用率 Warehouse space utilization rate:51.23%
配前移式叉車Match reach forklift truck

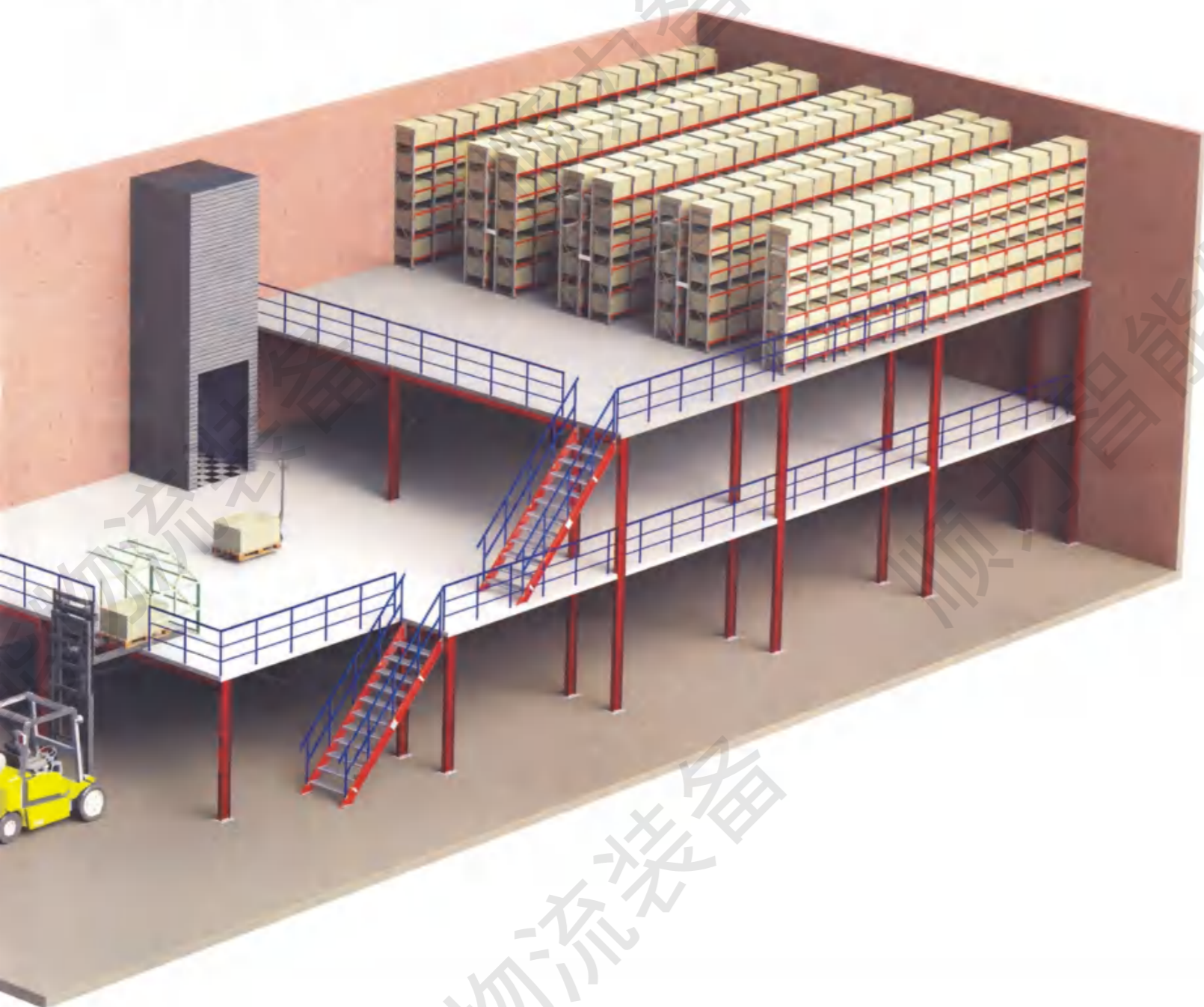


安全標識 Signs containing basic safety rules and recom--mended loading limits should be prominently displayed within the operating area of the racking.

MEZZANINE RACKING SYSTEM

SUNLISPACE

閣樓式貨架



樓面鋪花紋鋼扣板案例 Case of medium duty rack on the ground+platform on the floor.



底層層板式貨架+樓上平臺案例 Case of medium-duty racking on the ground+platform on the floor



二層擱樓式貨架案例 Case of 2 layers mezzanine racking



底層層板式貨架+樓上平臺案例 Case of Heavy-duty racking on the ground+platform on the floor



二層擱樓式貨架案例 Case of 2 layers mezzanine racking



配合升降平臺使用案例 Case of match lifting platform for mezzanine Racking



二層擱樓式貨架案例 Case of 2 layers mezzanine floor



配合樓梯用案例 Case of matching staircase

通常使用中型層板式貨架或重型橫梁式貨架做主體，配合叉車或液壓升降平臺上下樓上貨物。
多層擱樓式貨架簡單高效的利用倉儲空間

Usually use Medium-sized pallet racking or heavy duty racking to do the main part, match with a forklift or hydraulic lifting platform up and down the upstairs goods on. Multi-storey loft-style shelves simple and efficient use of storage space.



SECTIONAL PLATFORM

◎ SUNLISPACE

組合式平臺

雙倍地利用地面空間，提高空間利潤率，降低運營成本。
可根據倉庫空間設計平臺跨度（3000-6000mm），最大承受重量可達到1000KG/m²，通常搭配升降平臺使用上下貨，效率倍增。樓面空曠處配防護欄，並配置方便上下走動的樓梯使用。平臺面板可選用木板，鋼板或鋼扣板。整體美觀、結構穩固安全、并可拆卸。

Doubly make use of ground space. Increase the utilization of the space and reduce the operation cost. According to the warehouse space, we can design the average span (3000-6000). The bearing limit can reach 1000KG/m². The sectional platform can work in high efficiency combined with lift platform. Floor open area match with a fence and walk up and downstairs easily configured to use. Platform panel can be used wood, steel or steel gusset. Overall appearance, structural stability safety and detachable.



組合式平臺案例 Modular platform Case



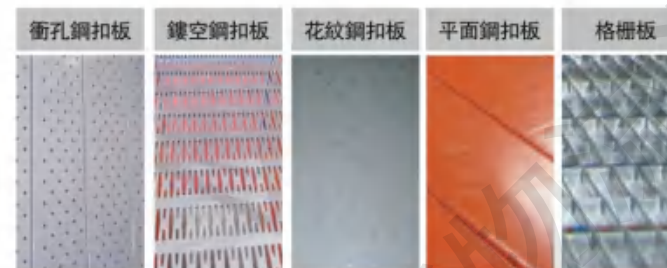
鋼結構大跨度平臺 Steel structure & big span platform



平臺配置方便上下走動的樓梯，美觀穩固耐用
Staircase for platform: nice in appearance, stable and endurable.



平臺案例 Case of platform



幾種不同扣板類型

Different pattern of Floor steel panel



平臺鋪木板案例 Case of platform floor with plywood

MEDIUM-DUTY RACKING

SUNLISPACE

中型層板架

全組合式結構，可拆可調，拆裝簡便快捷，外型美觀，穩固耐用，規格尺寸可按照客戶實際需求訂制。承重量為500KG以內，適用於人工存取較輕的零散件貨物。立柱設有每50mm可調節孔距，可根據貨物高低靈活調節節層間距。主要有鋪設鋼層板和木質層板兩種。

It's dismantlable and adjustable, convenient in assembling, nice in appearance, stable and durable. The specification and size can be customized according to customer's practical requirements and the capacity is within 500KG. Manually operated, it mainly includes steel veneer and wood veneer.



層板中間設分隔板案例
Case of Match with division plate in the panels



貨架鋪木板案例
Case of rack with plywood



貨架設一面背封網和雙側側封網案例
Case of Match with back wire mesh and double sides wire meshes



層板傾斜一定角度案例
Case of Keep a certain in direction of the steel panel



貨架鋪鋼層板案例
Case of rack with steel panel



貨架鋪鋼層板案例
Case of rack with steel panel

BOUTIQUE TUBE FRAME

SUNLISPACE

精益管架

精益管貨架由柔性管和連接件組成，外表面採用熱塑粘貼特殊塑料層，內表面覆防腐層組成而成，可任意組裝，結構靈活多變，廣泛應用於家電、汽車、輕工電子等行業工廠中。

Lean shelf is composed of the flexible tube and the connecting units, with special plastic outer surface of thermoplastic adhesive, and inner surface of erosion resistant coating. Easily assembled and flexible in structure, the lean shelf can be, widely used in home appliances, automobiles, electronics and other light industry factories.



精益管架 Boutique tube frame



案例 Case



配合叉車適用 Matching forklift use



案例 Case

GRAVITY RACKING

SUNLISPACE

流利式貨架

貨架上配流利條，每層前後傾斜3-5°，貨物依靠自身重力向下滑動，保證貨物按照先進先出順序存放，該系統對於管理有保質期的貨物尤其重要，并可縮短挑選時間，提高工作效率與準確性。

Gravity racking match with roller, the inclination is 3-5 degree. Cargo slide down by self weight. Ensure a storage sequence of "First in; first out" for the goods. The system is especially important for management of goods with warranty-period and can reduce the time to select cargo improve work efficiency and precision.



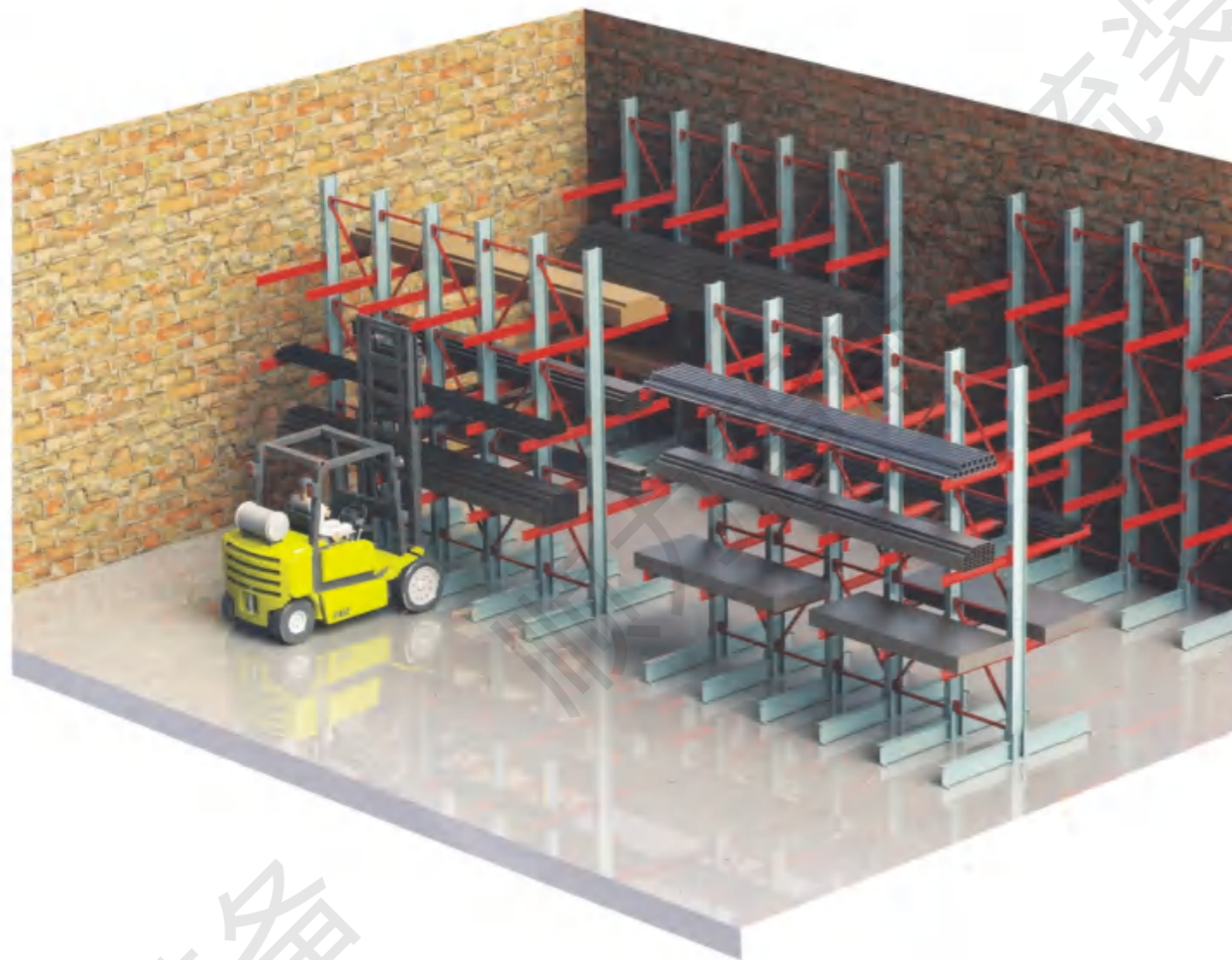
配合閣樓貨架使用案例 Case of mezzanine racking use



流利架細節展示 The detail showing of gravity racking



案例 Case



MOBILE FILING CABINET 移動櫃

◎ SUNLISPACE



雙面懸臂架 Case of double-sides Cantilever racking



雙面懸臂架 Case of double-sides Cantilever racking

CANTILEVER RACKING 懸臂架

◎ SUNLISPACE

适用于存放特别重又特别长的货物。如PVC线管、水管、木条等货物。
It's suitable for storing heavy and long goods such as PVC conduit, water pipe and wood bar, etc.

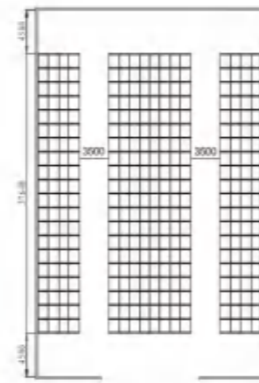
適合少樣多量，低頻率的保管
節省地板面積，使用率達80%以上
保管效率約70%左右
可自由調整存放空間
可直接存取每一項貨品，不受先進先出之限
每座料架皆裝置停止移動系統，確保存取物品時之安全
視覺上美觀的陳列配置
料架可并列集中上鎖，達到防盜保管之效用
每層格板承重100-300kg之內

Suitable for the low frequency storage, economize the area of the floor
The rate of using is above 80%
The efficiency of storage is about 70%
Freely shift the space of store
Directly deposit or take every goods, no limitation
Equipped with the system of the pause of moving, safe to deposit or take goods
Decorated with handsome configuration, it looks very nice
Guard against theft, because it can be center-locked
Every layer board can hold within 100kg-300kg loading for each layer

PUSH BACK RACKING

◎ SUNLISPACE

後推式貨架



%Average locations used 70%
%Immediate accessibility 25%



4 PALLETS HIGH
BUILDING AREA = 1,444 sq.m.



Stock rotation Moderate
% Floor utilisation 65%

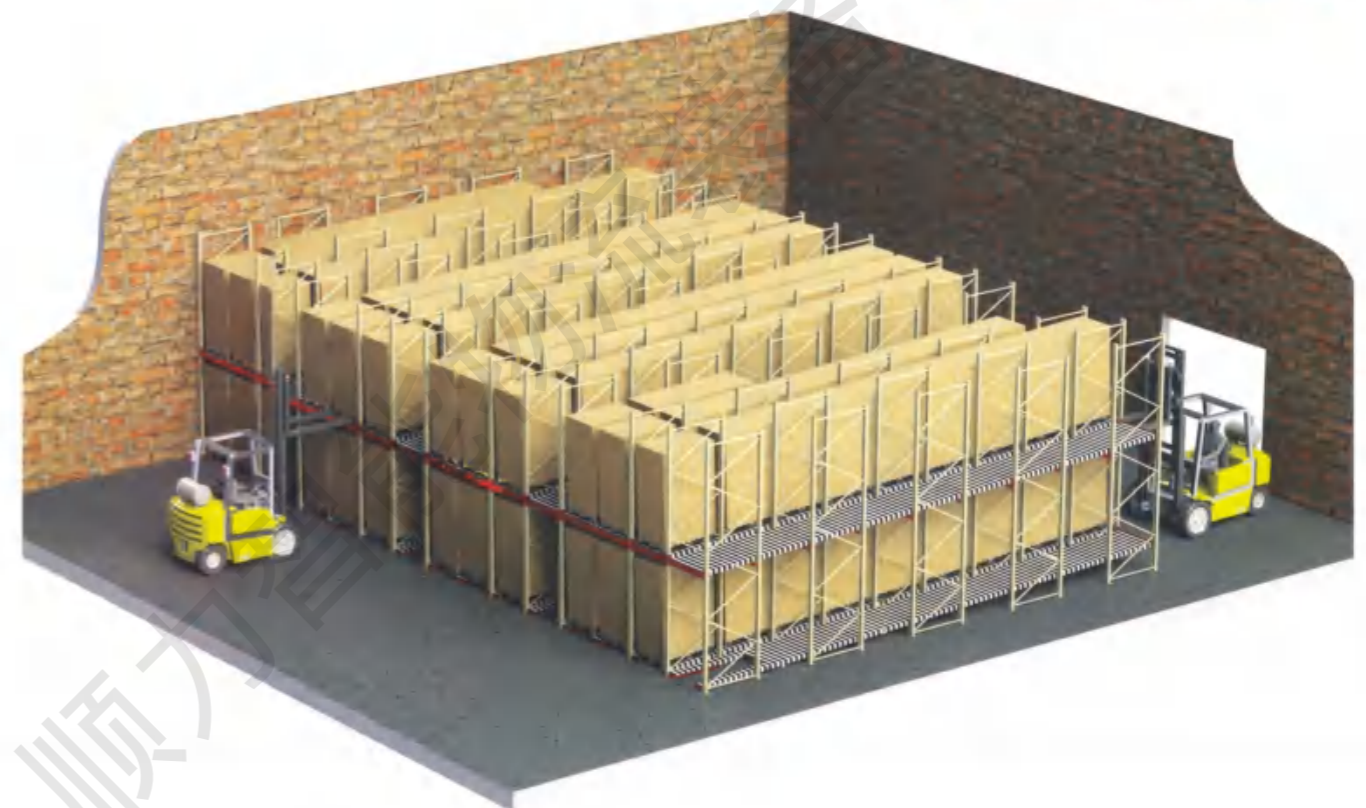
GRAVITY SELF-SLIDE RACKING

◎ SUNLISPACE

重力自滑式貨架

適合先進先出，流量較大的產品。利用滾軸滑動使貨物達到自動存儲流轉，空間利用率達85%。適合冷庫，物流配送中心等大型倉儲管理使用。普通平衡式叉車可操作。

It's suitable for picking system be "first in; first out" with product in large flow rate. The goods are automatically stored and transferred by sliding the roller shaft; and the space availability reaches 85%. It's suitable for the management of bulk storage plants such as freezing plant and logistics center. The common counter balance forklift can operate.





MOULD RACKING

◎ SUNLISPACE

模具架

適用於各種模具存放，每個層板都可以單獨抽出約2/3，抽拉順暢，方便吊模。每層高度可自由調節，節約儲存及操作空間。配合導軌上移動的手動葫蘆輕鬆存取，每次承重1000-3000KG。
標準規格：L1000*D600*H2000*4層*4格。

It's suitable for storing different kinds of mould with each veneer separately drawable and height of each layer adjustable, saving storage and operation space. Save and take easily by assisting the movable manual chain hoist on the guide rail. Load for each layer: 1000-3000KG.
Standard specification: H2000*L1000*D600*4 layers *4 cases.



FULL-OPEN MOLD RACKING

◎ SUNLISPACE

全開式模具架

採用雙排立柱結構，抽屜式層板可全部抽出，便于吊模，可設計制造承重3噸以下模具架使用。

The tray is drawable and convenient for hanging the mould. The load bearing for each tray is within 3000kgs.

PARTITIONING

◎ SUNLISPACE

隔斷

Applied to separate different jobs work area, effectively improve the working environment, rational planning and operating the factory space, modular components, folding equipment is simple and flexible in assembling columns can be connected to the ground screw fastening, which is safe to handle.

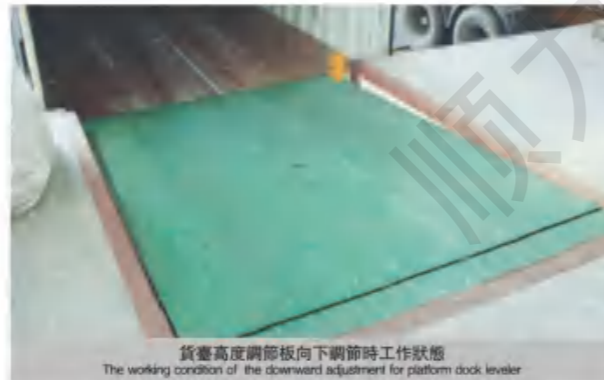
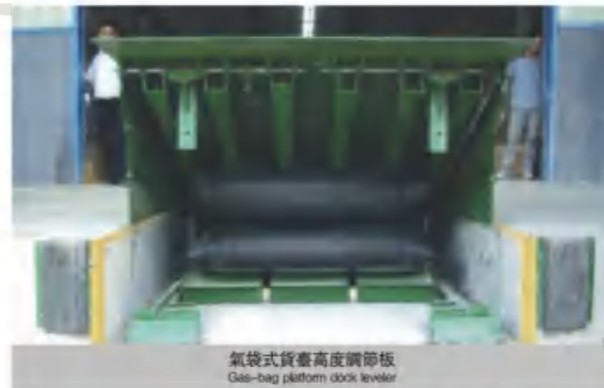
用於分隔不同工作的作業區域，有效改善工作環境，合理規劃工廠及作業空間，模塊化組件，拆裝簡便，靈活性強。立柱可與地面以螺絲緊固連接，確保安全使用。



WAREHOUSING PLATFORM DOCK LEVELER

SUNLISPACE
貨臺高度調節板

- 歐洲原裝進口單元組成，品質優良，性能卓越。
European imported with original packaging modules, good quality and excellent performance.
- 28噸安全支撐腳設計，操作安全性高。
28T safe supporting foot design & high-security operation.
- “耳片式”關節設計，且設計增加了加強地板，使端面焊位面積更大，關節受力度更高。
“Lug-type” joint design, and increase strength floor in design so that larger welding area, higher joint resistance strength.
- 框架式底座設計，使設備整體強度更高，避免設備在長途運輸及吊裝過程中的變形、損壞。
Frame-type base design make entire strength of equipment be higher to avoid equipment's deformation and damage in the long distance transport or installation process.
- 人性化安全支撐杆設計，便于設備維修保養及清掃坑位。
Humanized safe support bar design is easy to equipment's maintenance, serves and clean to pit site.
- 臺面骨架採用特殊“工”字鋼製成受力度更穩固平均，板面抗扭力度更強，承載力更大，堅固耐用。
Meas skeleton adopt special H-steel, more robust force on average, stronger plate area with torsional stiffness, greater loading capacity, sturdy and durable.
- 安全防護板及警示色設計，即便在調節板上升至最高位時，側板也能保證側面安全封閉，可有效避免壓傷腳趾的危險，確保操作人員的安全。
Security baffle & the warning color design, even if dock leveler up to the highest point, side baffle also assure to close safely in the flank in order to avoid the risk of a bruised toe and ensure the safety of the operator.



現代化的廠房倉庫，為了便於裝卸，均設計有高起的卸貨平臺，而一般貨車（如貨櫃、廂式車、平板車等）與貨臺之間總會有間隙，且有高度差，使搬運工具（如叉車等）不能直接進出貨車進行裝卸，嚴重影響工作效率及增加作業危險性。而順力海德倉庫貨臺用高調節板正是針對及克服上述問題而設計製造的，利用此高度調節板，可靈活地將貨臺與貨車有效地連接，使裝卸搬運工具順暢進行裝卸作業，大大提高裝卸率及加強人員和貨品安全，現已被衆多的大、中企業廣泛應用。

Modern factory warehouse are designed with unloading platform for easing of stevedoring, whereas, Between the common truck (such as container, Van, lorry...) and platform have a gap and the different in heights, which makes removal tool (such as forklifts...) can not be launched directly lorry to loading and unloading, thus seriously affecting efficiency and increase the risk of job. But Sunli Hyde warehouse platform use dock leveler. Design & manufacture of dock leveler is aimed at and overcame these problem. Using dock leveler flexibly can connect platform and lorry effectively so that handling tool will be smoother for loading and unloading operation, greatly improving handling rate and enhancing the safety of persons & goods.

So it has been a large number of large, middle enterprise in wide range of applications.



COMMON PLATFORM

SUNLISPACE

多種常見的貨臺形式



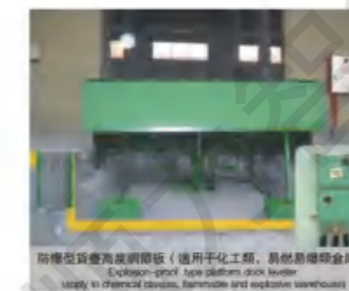
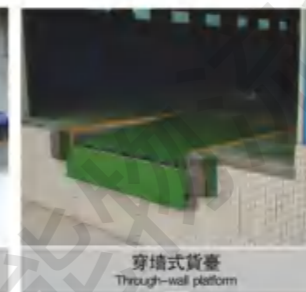
多種型號、供您選擇：

- 規格長度：6英尺（1830mm）、8英尺（2440mm）、10英尺（3050mm）；
- 規格寬度：6英尺（1830mm）、6.5英尺（1980mm）、7英尺（2130mm）；
- 標準承重：10噸、15噸、22噸。
- 長度、寬度和承重可任意組合成型，“8英尺×6英尺10T”為最普通使用之型號；
- 長度為6英尺和8英尺調節板，調節範圍為：+300mm/-300mm；
長度為10英尺調節板，調節範圍為：+450/-300mm；
- 設備驅動電壓：380V&220V/50Hz；
- 設備功率：0.75KW或0.85KW；
- 亦可根據客戶實際使用需求訂做電動機標鋼板；

Various models for your choice;

- Length: 6 inch (1830mm)、8 inch (2440mm)、10 inch (3050mm) ;
Width: 6 inch (1830mm)、6.5 inch (1980mm)、7 inch (2130mm) ;
Standard loading capacity: 10T、15T、22T;
Length Width Loading capacity is selective. Most common specification 8inch*6inch 10T;
The adjusting range for the length is 6 inch and 8 inch of dock leveler is :
+300mm/-300mm;
The adjusting range for the length is 10 inch of dock leveler is : +450/-300mm;
Driving voltage: 380V&220V/50Hz
Power: 0.75KW/0.85KW

It is available to produce dock leveler according to clients' special requirements.



MOBILE RAMP

◎ SUNLISPACE

移動式登車橋



移動式登車橋應用于裝卸站臺或裝卸位置不同固定以及裝卸場地狹小等場合，實現了貨物快速裝卸。通過它使用叉車等搬運車輛直接進入貨車、無需其它動力，能適用于各種裝卸場合；采用支腿支撐和網格狀鋼板結構，有更可靠的安全性能。

Mobile Ramp apply to loading platform or loading location being variable and narrow situation for loading. Therefore, realize speed loading & unloading of cargoes, With the performance of mobile ramp, forklift could drive into the truck without extra efforts, Mobile ramp adopt the landing leg to support and structure of gridding steel plate to enhance the antiskid safety performance,



標準型移動登車橋 Standard type-mobile ramp



定做前端平臺寬加移動登車橋 Widen ramp front side as required. -Mobile Ramp



工作狀態中移動登車橋 Working status-Mobile Ramp



承載測試中移動登車橋 Loading capacity test-mobile ramp

移動登車橋常規型號為：
2000 × 11000mm，行程：450mm，承重：
10噸；亦可根據客戶實際使用需求非標訂做。
(亦可定做電動升降等車橋)


Mobile Ramp Standard Specification: 2000* 11000mm,
Travel: 450mm, loading capacity: 10T. Non-standard
specification is available to produce according to
customer's requirements. (including Electric lifting ramp)

STEEL PALLET




鋼制托盤


| 型號 | 型外尺寸 (mm) | | | 承載 |
|-----------|-----------|-------|---------|-------------|
| | 長度(L) | 寬度(D) | 高度(H) | |
| SL-TP0001 | 800 | 800 | 150-300 | 1000-5000KG |
| SL-TP0002 | 800 | 1000 | 150-300 | 1000-5000KG |
| SL-TP0003 | 800 | 1200 | 150-300 | 1000-5000KG |
| SL-TP0004 | 1000 | 1000 | 150-300 | 1000-5000KG |
| SL-TP0005 | 1000 | 1200 | 150-300 | 1000-5000KG |
| SL-TP0006 | 1100 | 1000 | 150-300 | 1000-5000KG |
| SL-TP0007 | 1100 | 1200 | 150-300 | 1000-5000KG |
| SL-TP0008 | 1200 | 1200 | 150-300 | 1000-5000KG |



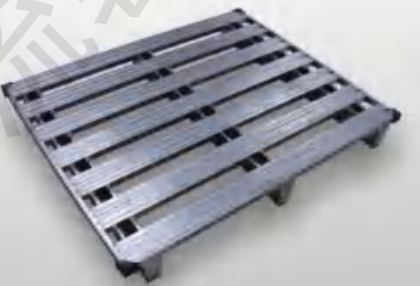
鋼制托盤 SL-TP0002
Steel pallet SL-TP0002



鋼制托盤 SL-TP0001
Steel pallet SL-TP0001



鋼制托盤 SL-TP0007
Steel pallet SL-TP0007



鍍鋅鐵卡板
Galvanizing steel pallet

款式一(含防滑墊)
Type A (with skid-proof sheet)

款式二(不含防滑墊)
Type B (no skid-proof sheet)

產品特性:

- 1、防滑墊採用優質的PE料制成，防撞、防滑、防變形，使卡板更美觀更耐用；
- 2、卡板表面光潔，防水防火，不易生銹；
- 3、鋼托盤的品質，塑料托盤的價格，還比塑料托盤更耐用；
- 4、符合國際出入口免檢條例，根據自身重量計算單價，動載可達1.2T，靜載2.5T；
- 5、採用鍍鋅薄鐵板制作，經專用機械成型和焊接，每個卡板平均重量祇有10公斤；
- 6、平均使用壽命比塑料托盤長一倍，而且還能100%回收，絕不會造成材料浪費；


Product features:

- 1.Superior PE for anti-skid sheet, anticollision, anti-skid, deformation-proof.
- 2.Smooth surface for waterproof, fireproof and low rusting.
- 3.Same price as plastic pallet, but more durable.
- 4.Meeting international export, import standards, Designed load capacity:1.2T for dynamic,2.5T for static.
- 5.100% recyclable, environmental.
- 6.Adopting thin galvanized plate and automatic processing&welding;10kg net weight for each item.

詳情請諮詢 400-090-1058 或訪問順力網站 www.gdsunli.com

PLASTIC PALLET


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網格田字型托盤
Grid "田" font type

常用規格: 1200*1000*150/1000*1000*150/1100*1100*150;
進叉: 四向進叉; 顏色: 默認為藍色; 材質: 高密度聚乙烯;
載重: 靜載:6.0T; 動載: 2.0T; 架載: 1.0T (可內置鋼管);
適用行業: 啤酒行業, 飲料行業, 工業, 商業物流中心;
適用叉車: 手動叉車, 電動叉車, 堆垛車


Regular size: 1200*1000*150/1000*1000*150/1100*1100*150
Entry type: 4-way; **Color:** the default is blue; **Material:** HDPE
Loading capacity: Static loading 6.0T; Dynamic loading 2.0T
Racking loading 1.0T (can be built of steel tube)
Applicable industries: beer industry, beverage industry, industrial, commercial logistics center.
Applicable forklift: manual forklift, electric forklift, stacker.



網格雙面型托盤
Grid double side font type

常用規格: 1200*1000*150/1000*1000*150/1100*1100*150;
進叉: 四向進叉; 顏色: 默認為藍色; 材質: 高密度聚乙烯;
載重: 靜載:6.0T; 動載: 2.0T; 架載: 1.0T (可內置鋼管);
適用行業: 啤酒行業, 飲料行業, 化工, 面粉, 飼料行業, 糧油加工行業,
適用叉車: 電動叉車, 堆垛車


Regular size: 1200*1000*150/1000*1000*150/1100*1100*150
Entry type: 4-way; **Color:** the default is blue; **Material:** HDPE
Loading capacity: Static loading 6.0T; Dynamic loading 2.0T
Racking loading 1.0T (can be built of steel tube)
Applicable industries: beer industry, beverage industry, chemical industry, flour, feed industry, grain and oil processing industry.
Applicable forklift: electric forklift, stacker.



網格九腳型托盤
Grid nine feet type

常用規格: 1200*1000*150/1000*1000*150/1100*1100*150;
進叉: 四向進叉; 顏色: 默認為藍色; 材質: 高密度聚乙烯;
載重: 靜載:2.0T; 動載: 1.0T; 此款卡板不能上貨架
適用情況: 適合工廠的周轉, 物流; 適合各類卡車運輸, 方便叉車、液壓托盤車等搬運工具; 不適合在倉庫堆棧, 不可上貨架, 使用時一定要注意載重要求。
適用叉車: 手動叉車, 電動叉車, 堆垛車


Regular size: 1200*1000*150/1000*1000*150/1100*1100*150
Entry type: 4-way; **Color:** the default is blue; **Material:** HDPE
Loading capacity: Static loading 2.0T; Dynamic loading 1.0T
This plastic pallet can not be on the racking
Applicable industries: Applicable industries: suitable for turnover, the logistics for the factory; suitable for all types of trucks, convenient forklifts, hydraulic pallet trucks and other handling tools; not suitable for stacking in the warehouse, no on the shelf, be sure to pay attention to the loading requirements when using.
Applicable forklift: manual forklift, electric forklift, stacker.



平板川字型托盤
Flat "川" font type

常用規格: 1200*1000*150/1000*1000*150/1100*1100*150;
進叉: 四向進叉; 顏色: 默認為藍色; 材質: 高密度聚乙烯;
載重: 靜載:5.0T; 動載: 1.5T; 架載: 1.0T (可內置鋼管);
適用行業: 食品, 醫藥行業, 糧油加工行業; 自動化立體庫推薦使用
適用叉車: 手動叉車, 電動叉車, 堆垛車


Regular size: 1200*1000*150/1000*1000*150/1100*1100*150
Entry type: 4-way; **Color:** the default is blue; **Material:** HDPE
Loading capacity: Static loading 5.0T; Dynamic loading 1.5T
Racking loading 1.0T (can be built of steel tube)
Applicable industries: food, pharmaceutical industry, grain and oil processing industry, automated three-dimensional database is recommended.
Applicable forklift: manual forklift, electric forklift, stacker.



網格川字型托盤
Grid "川" font type

常用規格: 1200*1000*150/1000*1000*150/1100*1100*150;
進叉: 四向進叉; 顏色: 默認為藍色; 材質: 高密度聚乙烯;
載重: 靜載:5.0T; 動載: 2.0T; 架載: 1.0T (可內置鋼管);
通用行業: 廣泛用于倉庫, 汽車配件, 機械機械, 食品飲料, 電子, 烟草, 醫藥, 化工, 紡織等行業
適用叉車: 手動叉車, 電動叉車, 堆垛車

Regular size: 1200*1000*150/1000*1000*150/1100*1100*150
Entry type: 4-way; **Color:** the default is blue; **Material:** HDPE
Loading capacity: Static loading 5.0T; Dynamic loading 2.0T
Racking loading 1.0T (can be built of steel tube)
Applicable industries: Widely used in warehouse, auto parts, electrical machinery, food and beverage, electronics, tobacco, pharmaceutical, chemical, textile and other industries.
Applicable forklift: manual forklift, electric forklift, stacker.



平板雙面型托盤
Flat double side font type

常用規格: 1200*1000*150/1000*1000*150/1100*1100*150;
進叉: 四向進叉; 顏色: 默認為藍色; 材質: 高密度聚乙烯;
載重: 靜載:5.0T; 動載: 1.5T; 架載: 1.0T;
通用行業: 啤酒行業, 飲料行業;
適用叉車: 電動叉車, 堆垛車

Regular size: 1200*1000*150/1000*1000*150/1100*1100*150
Entry type: 4-way; **Color:** the default is blue; **Material:** HDPE
Loading capacity: Static loading 5.0T; Dynamic loading 1.5T
Racking loading 1.0T (can be built of steel tube)
Applicable industries: beer industry, beverage industry.
Applicable forklift: electric forklift, stacker.

FOLDING STORAGE CAGE

SUNLISPACE

折疊式倉儲籠



折疊式倉儲籠規格明細表 Folding storage cage specifications list

| 編號 | 外型尺寸 (mm) L×W×H 全層高100mm | 容積 (m³) | 承載層數 | 線徑 (mm) | 間隔 (mm) | 承重 (kg) | 備註 |
|-------|-----------------------------|---------|------|---------|---------|---------|----|
| SL-01 | 800X500X540 | 0.16 | 4-5 | 6.0 | 50X50 | 500 | |
| SL-02 | 800X600X640 | 0.22 | 4-5 | 6.0 | 50X100 | 800 | |
| SL-03 | 1000X800X500 | 0.28 | 4-5 | 6.0 | 50X50 | 1000 | |
| SL-04 | 1000X800X840 | 0.52 | 4 | 6.0 | 50X100 | 800 | |
| SL-05 | 1050X1000X890 | 0.76 | 3-4 | 6.4 | 50X100 | 900 | |
| SL-06 | 1200X1000X890 | 0.84 | 3-4 | 6.0 | 50X50 | 1200 | |
| SL-07 | 1300X1250X1200 | 1.60 | 3 | 6.4 | 50X100 | 1500 | |
| SL-08 | 1800X1200X890 | 1.60 | 3 | 6.0 | 50X100 | 2000 | |

倉儲籠 storage cage
 採用先進的金屬絲電焊工藝，超強強度，承重量大。表面經電氣鍍鋅處理。
 易于運輸，輕便可折疊和堆放，正面用兩獨立門栓固定，堆疊時，開取方便。
 說明 Instruction
 1. 可根據客戶的需求設計製造非標準的倉儲籠，保證利用最大化，節省成本
 2. 滿足客戶特定需求，加裝塑料萬通板（防漏，刮傷，碰撞），隔層鋼（上下，左右分層）腳輪、前後牽引、貨架支撐等
 3. 根據客戶使用實際需要，為節省成本，優化設計可選擇線徑鋼距目前製造的最大規格
 Adopt advanced metal wire welding technique, ultra-high strength, ultra-large loading.
 Surface is dealt with electric galvanizing, easy to transport, be handy folded and stacked.
 Using two separated doors to secure in the front. When stacked, easy to open.
 We design and manufacture non-standard cage on the basis of customer's demand to ensure that the max utilization and economical costs.
 According to customers' actual needs, and in order to save costs, optimum design, you can select diameter, steel distance.
 At present the largest manufacturing specification:

WORKING-TABLE CART

SUNLISPACE 工具車

該推車帶2個萬向型腳輪和2個固定型腳輪，其中萬向型腳輪帶剎車。
 The stroller with two universal type casters and two stationary casters, where universal type casters with brakes.



該籠絲網直徑：網目尺寸50*50mm，可折疊式隔面，帶剎車。

OUR CUSTOMERS

我們的客戶

順力智能致力於成為一家崇尚科學，尊重技術，對員工有溫暖，對夥伴有擔當，對客戶有價值，對股東、行業、社會有貢獻的優秀企業。我們將秉承“貨真架實，厚德載物”的價值觀，向客戶提供數位化智能化物流一體化服務，做好智慧物流整體解決方案系統集成商&製造商，為企業降本增效、綠色發展，讓天下沒有難做的物流。

SUNLI Intelligent is committed to becoming an excellent enterprise that advocates science, respects technology, is warm to employees, is responsible for partners, is valuable to customers, and contributes to shareholders, industry and society. We will adhere to the value of "real goods, solid goods, and moral integrity", provide customers with digital and intelligent logistics integration services, and do a good job of intelligent logistics overall solution system integrator&manufacturer. For enterprises to reduce costs, increase efficiency and green development, there is no difficult logistics in the world.



始于2005年
Started in 2005

Intelligent logistics System Integrator&Manufacturer,
We have been delivering value.

智能物流系統集成商&製造商，我們一直在傳遞價值。

◆ 新能源



◆ 物流配送



◆ 汽车制造



◆ 粮油食品



◆ 建材卫浴



◆ 鞋帽服装



◆ 环保化工



◆ 3C电子



◆ 医药



◆ 钢铁



◆ 其他

