

Transform your storage operations with intelligent automation.

Contact our solutions team today for a customized assessment of how our full-service AS/RS solutions can optimize your warehouse, reduce costs, and accelerate your order fulfillment.

Let's engineer efficiency together.



Suzhou

Add. No. 2, Shuangma Street,
Suzhou Industrial Park,
Suzhou, CHINA

Poc. Manager Li
Tel. 13962115383
Email. andy_li@szkeming.com.cn

Beijing

Add. Room 721, Zone 1, 7th Floor,
No. 160, North Fourth Ring Road West,
Haidian District, Beijing, CHINA

Poc. Manager Sun
Tel. 19951273187
Email. sulan.sun@szkeming.com.cn

Chongqing

Add. Room 201-4, 2nd Floor, No. 2 Yunbai Road,
Cuiyun Sub-district, Liangjiang New Area,
Chongqing City, CHINA

Poc. Manager Li
Tel. 18862309186
Email. jiaming.li@szkeming.com.cn

Shenzhen

Poc. Manager Qiao

Tel. 18914068298
Email. qiaozongzhi@szkmzn.cn

Malaysia

Add. Kuala Lumpur, Malaysia

Poc. Manager Li
Tel. +60138620188
Email. jiaming.li@szkeming.com.cn

Keming Intelligent Technology (Suzhou) Co., LTD
Customer Service Email: jiaming.li@szkeming.com.cn



www.szkmzn.com

AS & RS 

Automated Storage & Retrieval Systems

Total AS/RS Solutions Provider

Automated Storage & Retrieval Systems(AS&RS): Your Full-Service Provider

Automated Storage & Retrieval Systems represent the pinnacle of modern logistics and warehousing technology. As a full-service provider, we deliver comprehensive solutions that transform how businesses store, manage, and retrieve inventory.

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About Keming

Keming Intelligent Technology (Suzhou) Co., Ltd. is a wholly-owned subsidiary of Suzhou Keming Technology Co., Ltd. Founded in 2007, Keming specializes as a comprehensive enterprise focused on enhancing business efficiency. The company obtained ISO 9001 quality management system certification in 2014. In recent years, it has applied for over 10 invention patents, obtained more than 30 utility model patents, and registered 5 software copyrights.



Vertical Lift Module (External Output)



Vertical Lift Module



Vertical Lift Module
Selective(Single-item In/Out)



Vertical Lift Module - Material Box

Why

Choose Us As Your Full-Service Provider?

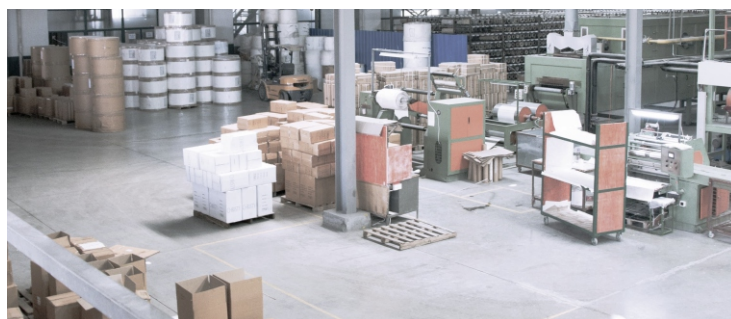
Flexible, Efficient, And Cost-Effective

KM Series Vertical Lift Container System delivers top-tier high-tech warehousing and material handling — saving time, space, and costs while enabling smoother, more efficient workflows.



Space-Saving / Height Utilization

Maximize vertical space utilization to achieve the greatest storage capacity within the smallest footprint, effectively reducing costs and enabling more economical use of storage areas.



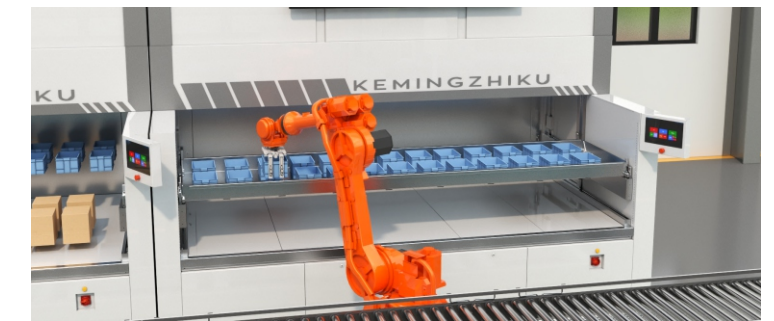
Ergonomic & Safe

Ergonomic design minimizes physical strain on workers. Unlike in conventional warehouses, operators no longer need to walk long distances, climb shelves, or use ladders and pulleys—effectively reducing operational hazards.



Reduces Labor Costs

It automatically delivers required materials to the access point at high speed and stops at an ergonomically optimal height. This "goods-to-person" design significantly reduces access time.



Optimal Material Management

The management software can operate independently to manage inventory, or seamlessly integrate with customers' existing data processing systems, ensuring real-time and accurate synchronization of inventory information.



Vertical Lift Module

External Output

Modular Design

The modular structural design allows for easy adjustment of the equipment height, enabling rapid delivery and deployment.

Dynamic Storage Location Allocation Technology

Dynamically measures pallet height during the storing process, enabling real-time compression for optimal storage density.

Access Port with Automatic Door

Enhances safety for both operators and stored goods while reducing noise emissions. The sealed space provides better protection for the cargo.

Pallets Meeting Various Load Capacity Requirements

A single unit can store pallets with different load capacities, reducing procurement costs and ensuring flexible, continuous operation.

Weight Management

Utilizes current-based weighing methods or load cells to monitor the weight of pallets and the shuttle, preventing overload of individual pallets or the entire system.

Chain Drive System

Enables high load capacity, anti-deflection design, stable and efficient access operations and extended service life.

Ergonomic Picking Port Design

Each picking port provides space for handling two pallets simultaneously. Operators benefit from ample standing space and can work closer to the equipment, aligning with ergonomic principles.



Technical Parameters

Equipment Dimensions	Width	1320 to 4570mm
	Depth	1990/2475/3095/3855/4290 (mm)
	◆ Height	2100 to 32000mm
Pallet	◆ Width	850 to 4100mm
	◇ Depth	450/643/850/1105/1250 (mm)
	Height	50/70/100/120/133 (mm)
	◇ Pallet Load Capacity	100/250/500/750/1000kg
	Grid Spacing of Storage Bins	25mm
Minimum Increment Of Equipment Height		200mm
Picking Window		1~5 (Multi-Floor, Multi-Window Configuration)
Performance Data	Vertical speed	0.65-1m/s (Unloaded) 0.5-0.8m/s (Fully Loaded)
	Traverse Speed	0.3m/s
	Overall Equipment Load	Maximum 80 Ton

- ◆ For parameters marked with this symbol, please enter a specific number.
- ◇ For parameters marked with this symbol, please select a specific specification.

Options

- ☒ Laser Guidance
- ☒ Mobile / Flip Screen
- ☒ ESD Protection (Electrostatic Discharge Protection)
- ☒ Weighing Function
- ☒ Dual / Multiple Retrieval
- ☒ Barcode Scanner
- ☒ User Management
- ☒ Cantilever Crane
- ☒ Customized Trays for Pallet Storage
- ☒ Card Reader
- ☒ Additional Access Windows
- ☒ API Data Interface
- ☒ LED Position Indicators

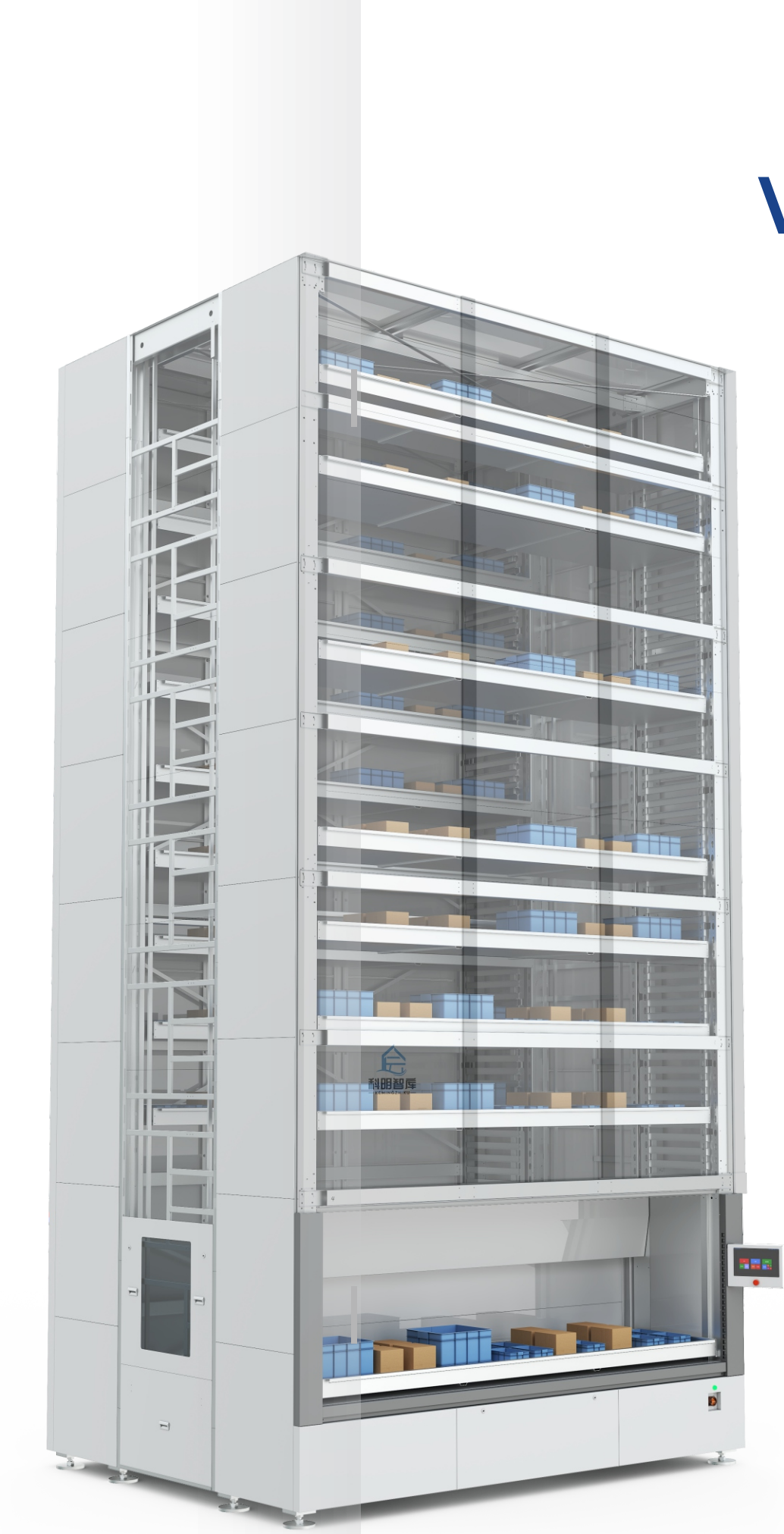
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Ergonomic Picking Port Design

Each picking port provides space for handling two pallets simultaneously. Operators benefit from ample standing space and can work closer to the equipment, aligning with ergonomic principles.

Vertical Lift Module

Selective (Single-item In/Out)

Modular Design

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Vision Recognition + 3-Axis Picking Mechanism

Through vision recognition and a 3-axis picking mechanism, precise management of single-item inbound and outbound operations can be achieved. This solution is suitable for managing high-value, small-volume items.



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	Overall Equipment Load	Maximum 80 Ton

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Options

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Vertical Lift Module

Bin-type, each bin independent in/out

Extreme Space Utilization

Utilizes vertical dense storage, saving 50%-80% floor space compared to traditional racking—exemplifying "using height for space."

High-Efficiency & Accurate Access

The fixed "single input/output" workstation enables "goods-to-person" operations, eliminating travel and search time, drastically boosting picking speed and accuracy.

Seamless Integration & Process Automation

Interfaces automatically with AGVs or conveyors, transforming from an isolated unit into a key node in fully automated logistics, enabling unmanned operation from storage to dispatch.

Intelligent Information Hub

Deeply integrated with WMS/WCS, it not only manages its own inventory but also coordinates AGVs and triggers upstream/downstream processes, enabling dynamic location allocation, FIFO control, and real-time inventory visibility.

Ergonomic & Safety Excellence

The fixed access port ensures operator safety and comfort, while the fully enclosed system secures materials, reducing damage and loss.

High Flexibility & Scalability

Features modular design, allowing customization and expansion in bin specifications, load capacity (supporting over 50kg/bin), system height, and capacity to adapt to business growth.



Technical Parameters

Equipment Dimensions	Width	2470 to 6000mm
	Depth	2470 to 4570mm
	Height	2100 to 16000mm
Material Bins	Material Bins for Standard Micro Load Systems	
	Material Bin Specifications	640mm*440mm Customization Available
	Load Capacity per Bin	50KG
Minimum Increment Of Equipment Height		200mm
Performance Data	Vertical speed	0.65-1m/s (Unloaded) 0.5-0.8m/s (Fully Loaded)
	Traverse Speed	0.3m/s
	Overall Equipment Load	Maximum 100 Ton

Options

- ☒ Laser Guidance
- ☒ Mobile / Flip Screen
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- ☒ Weighing Function
- ☒ Dual / Multiple Retrieval
- ☒ Barcode Scanner
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Software System

API Server

Handles warehouse business logic, such as order consolidation/splitting, inventory allocation strategies (FIFO, by batch, etc.). It also exchanges data with external systems (e.g., ERP, MES, WMS) — receiving orders, synchronizing inventory, and returning execution results.

Warehouse Management System (WMS)

The "brain" and "administrator" of the warehouse, managing storage locations, batches, SKUs, inventory quantities, statuses (e.g., intact, defective, frozen, etc.). It plans and directs all manual operational workflows within the warehouse, such as picking, putaway, replenishment, counting, transfer, checking, packing, and more.

Warehouse Control System (WCS)

The "commander" and "nerve center" of automated equipment, it directly connects to and controls automated devices. It receives equipment task instructions (e.g., "move from point A to point B") issued by the WMS and decomposes them into command sequences executable by the equipment.

Product Functional Architecture



Integration With Other Equipment

Conveyor

The Warehouse Control System (WCS) governs the start-stop operations, speed regulation, and diverter switching of conveyor lines. This integration is typically achieved via Programmable Logic Controllers (PLCs), where the WCS issues high-level commands to the PLC, which subsequently drives the physical actuators and control mechanisms.

Robot

The Warehouse Control System (WCS) orchestrates robotic manipulators to execute tasks such as grasping, placing, and sorting. The WCS dispatches parameters including target object coordinates and placement positions, and can integrate with vision recognition systems (cameras) for positioning verification.

AGV

The Warehouse Control System (WCS) dispatches Automated Guided Vehicles (AGVs) to execute point-to-point material transfers. In "Goods-to-Person" picking operations, the WCS receives picking tasks from the Warehouse Management System (WMS) and coordinates AGVs to transport corresponding mobile racks to designated manual picking stations.

Jib Crane

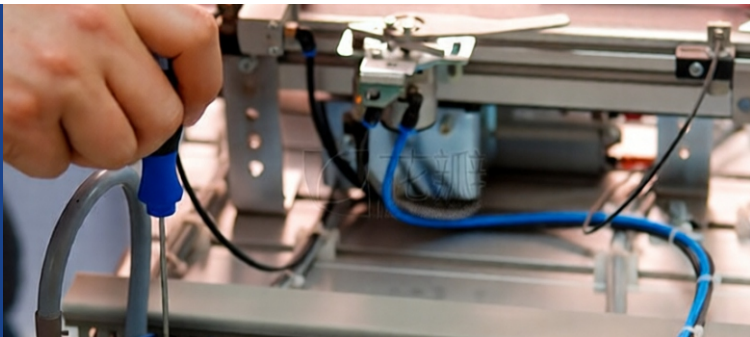
Operators manually control the jib crane to perform grasping, moving, and placing operations. In heavy-duty warehousing or manufacturing workshops, this assists personnel in handling large workpieces, molds, or heavy material transfers.



Application Overview

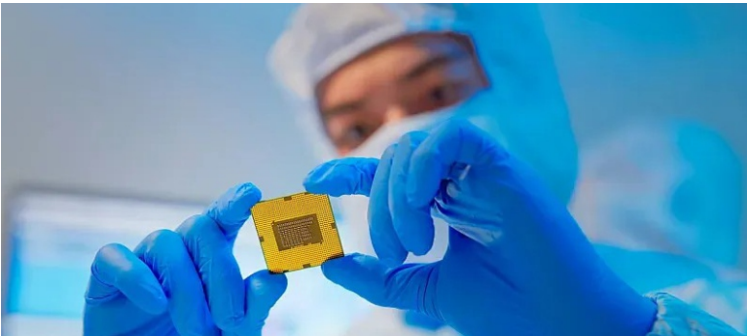
Electronics

High-density storage saves costly cleanroom space; ensures precise traceability and error-proofing; enables automatic feeding through production line integration.



Semiconductor

Offers cleanroom-compatible solutions; enforces strict batch isolation and end-to-end traceability; enhances the storage security of wafer cassettes.



Metalworking Industry

Heavy-duty automated access ensures safety and efficiency; integrates tool management systems for automated scheduling and lifespan monitoring.



Pharmaceutical Industry

Guarantees complete process accuracy; systems enforce first-expiry-first-out (FEFO) rules; integrates with cold chain environments to maintain temperature control continuity.



Automobile / Machinery / Aviation

Vertical lift modules are widely used across industries. In automotive manufacturing, they ensure precise storage and delivery of high-value tools and sensors for efficient production. The machinery sector utilizes them to manage diverse tools and parts, enabling quick access and inventory control. In aviation, they provide secure, traceable storage for sensitive components in controlled environments.