



Vertical Logistics Systems

Vertical Space Efficiency

TTF Marketing Holdings Sdn. Bhd.

AGV小车自动运货
状态:提升

AGV小车自动运货
状态:暂存

AGV小车自动运货
状态:暂存

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ABOUT US

Shanghai Ailift Automation System Co., Ltd., abbreviated as Ailift, was established in 2015. We have been deeply specializing in the vertical conveying system niche, aiming to become a leader in the field of vertical logistics automation. As a professional manufacturer, we focus on warehouse logistics and industrial automation scenarios, providing a solid foundation for the sustainable development of enterprises. Driven by technological innovation, we continuously promote intelligent upgrades within the industry.

Ailift always adheres to a "customer-centric" philosophy, upholds the principles of "integrity and reliability, responsibility and accountability," maintains a spirit of "pioneering and innovation," and is committed to excellence. We focus on providing users with efficient, customized cargo conveying solutions and "Vertical Conveying+" system integration services.

OUR ADVANTAGES

Expert Team

Our core team possesses 20+ years of industry experience and international background, combining strategic foresight with a global perspective, providing solid guarantees for enterprise development.

High-Quality Products

We strive for excellence, refining stable, safe, and efficient products. Our products feature high positioning accuracy, compatibility with multi-scenario and diverse product conveying, offering users custom-designed vertical conveying equipment and peripheral support.

Excellent Service

Leveraging outstanding product strength, we have achieved sales of over 5000 units in the last 10 years, serving 500+ global customers, fully earning the recognition of end-users.



OUR SERVICES





PALLET VERTICAL CONVEYING SERIES

Pallet Conveying Systems



System Introduction

Pallet vertical conveyors are core logistics standard equipment designed for high-intensity, high-efficiency vertical transportation of large goods like pallets between high floors. With exceptional stability, outstanding efficiency, and trustworthy quality, they are the ideal choice for optimizing space utilization and achieving automated logistics.



Application Scenarios

Widely used in production, storage, and conveying links across various industries

- Dense Storage Vertical Conveying
- AGV Vertical Conveying
- Outdoor Vertical Conveying
- Connecting Gallery Vertical Conveying
- Pallet Circulating Vertical Conveying
- High-Rise Vertical Conveying
- High-Speed Vertical Conveying
- Manufacturing Plants
- Logistics Distribution Centers
- Low-Temperature Cold Storage, Clean Rooms, Explosion-Proof Environments
- Oversized, Overweight, Irregularly Shaped Goods Conveying
- Airport and Port Cargo Handling

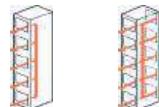


System Advantages

- High conveying capacity, stable operation
- Modular combination, easy installation and maintenance
- A single conveyor can handle multiple pallet sizes
- Capable of conveying various containers (bins, pallets, cages, and various tooling equipment)



- Conveying directions can be freely combined



- Compatibility with forklifts, pallet jacks, and various shuttle cars/AGVs



Standard Pallet Vertical Conveyor Technical Parameters

Max. Equipment Height	100 meters
Max. Load Dimension	3500W×3500L×3000H, 5tons
Min. Load Dimension	150W×150L×150H /5KG
Lifting Speed	10-150 m/min
Horizontal Speed	10-24m/min
Casing Material	Steel plate, acrylic, mesh panel, etc.
Drive Method	Chain, synchronous belt, or wire rope, etc.
Safety Design	Fall prevention device, broken chain detection, safety interlock, etc.



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Note: Custom design available for special requirements. Please feel free to contact us.

Equipment Parameters **SURVEY**

| Equipment Parameter Questionnaire — Reciprocating Vertical Conveyor

Provide the information below to discuss solutions and pricing.

Load Shape: Wooden Pallet Plastic Pallet Other (Please specify in detail)

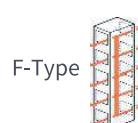
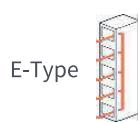
Load Dimensions and Weight: Max W× L× H KG

Min W× L× H KG

Pallet Dimensions and Weight W× L× H KG

Usage Time: Hrs/Day Days/Month Months/Year

Conveying Direction: E-Type [Number] Inlets/Outlets F-Type [Number] Inlets/Outlets



Building Height: Floor level [From Floor] to floor level [To Floor] mm

Floor level [From Floor] to floor level [To Floor] mm

Floor level [From Floor] to floor level [To Floor] mm

Top floor level to ceiling mm

Power Supply: Power Supply at the Installation Site AC220V AC380V Other (Please specify)

Casing: Steel Plate None Mesh Panel Other (Please specify)

Color: Please specify (Provide color code or sample)

Installation Location: Indoor Outdoor Temperature Other (Please specify)

Installation Environment: Temperature Humidity Other (Please specify)

Fire Shutter: Yes No *Fire shutters and fire-rated shafts require construction work by the customer.

Other Notes: (Please specify) _____

Dense Storage Vertical Conveying



Product Introduction

Dense storage vertical conveying equipment is suitable for vertical handling scenarios in dense storage warehouses. The high-precision leveling design of the vertical conveyor meets the layer-changing requirements of shuttle cars, mother-daughter carts, and 4-directional vehicles, ensuring maximum utilization of storage space.

Dense Storage Vertical Conveying Technical Parameters

Max. Load Dimensions	W2900*L2900*H2400(mm)
Load Capacity	2000kg
Speed	90m/min
Conveying Surface Height	500mm
Body Material	Carbon Steel
Drive Method	Chains, steel wire ropes, and gear racks.



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AGV Vertical Conveying



Product Introduction

Suitable for AGV docking scenarios. AGVs can interface with conveyors at the entrance/exit of the vertical conveyor for loading/unloading, or can directly drive into the car of the vertical conveyor for layer changing. Patent technology ensures high-precision leveling of the car, making the AGV drive-in/drive-out process smooth and reliable.

Standard Operating Procedure:

- An operator scans the shipping document barcode using a handheld or fixed PDA and uploads the data to the upstream system. The upstream system automatically generates an order and forwards it to the Warehouse Control System (WCS).
- The WCS dispatches an AGV to the temporary storage area to pick up the goods and transport them to the waiting zone at the entrance/exit of the vertical conveyor.
- After the WCS confirms the vertical conveyor is available for inbound operation, it commands the AGV to enter the system's entrance and deposit the load.
- Once the load is successfully placed, the AGV retreats to a safe area. The WCS then sends a "Load Ready" command to the vertical conveyor, simultaneously creating a cross-floor task and instructing it to transport the load to the destination floor.
- The conveyor mechanism moves the load into the car of the vertical conveyor, which then initiates ascent or descent.
- Upon arrival at the destination floor, the safety door opens. The conveyor operates to transfer the load to the system's exit point.
- The WCS, upon detecting the goods' arrival, dispatches an AGV to the exit to retrieve the load.
- Once the AGV has picked up the load, exited the vertical conveyor system, and reached the designated safe area, the WCS instructs the vertical conveyor to release the current task and proceed to the next one in the queue.
- The AGV transports the goods to their final designated location.



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Outdoor Vertical Conveying



Product Introduction

For special scenarios encountered in projects, we have developed cleanroom environment vertical conveying systems, cold storage vertical conveying systems, outdoor vertical conveying systems, explosion-proof vertical conveying systems, etc.

Depending on the specific working conditions and client requirements, weatherproof enclosures for outdoor applications are typically available in forms such as color steel plates or tempered glass.

The design process, based on thorough site surveys, fully considers factors including building settlement, earthquakes, typhoons, waterproofing, ventilation, and temperature to ensure a safe and reliable solution.



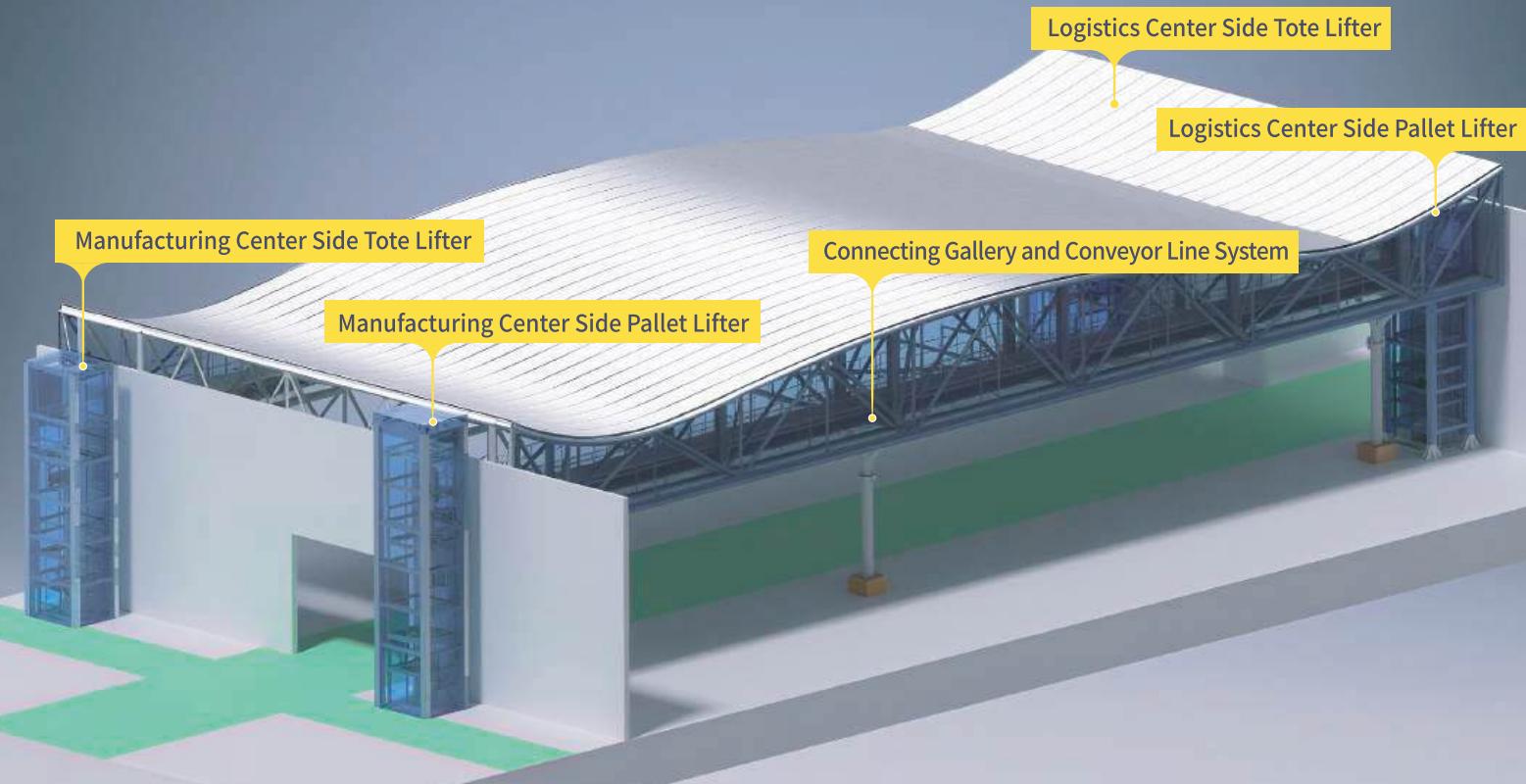
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Connecting Gallery Vertical Conveying System



Product Introduction

The Connecting Gallery Vertical Conveying System is an intelligent logistics solution integrating lifting, conveying, control, and safety protection. It is particularly suitable for automated material transfer scenarios across campuses with high frequency and multiple varieties. It offers excellent industrial applicability and future upgrade potential in terms of efficiency, safety, flexibility, and scalability.

This application scenario often adopts combination modes such as "Lift + Horizontal Conveyor," "Lift + RGV," or "Lift + AGV." These systems can be configured as left-right loops or vertical loops.

They offer stable and reliable performance, achieving high transport efficiency while significantly minimizing civil engineering requirements and reducing construction costs.



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Pallet Circulating Vertical Conveyor



Product Introduction

Pallet vertical conveyors are core logistics standard equipment designed for high-intensity, high-efficiency vertical transportation of large goods like pallets between high floors. With exceptional stability, outstanding efficiency, and trustworthy quality, they are the ideal choice for optimizing space utilization and achieving automated logistics.

This model features a conveyor + circulating pallet design, offering the following key advantages:

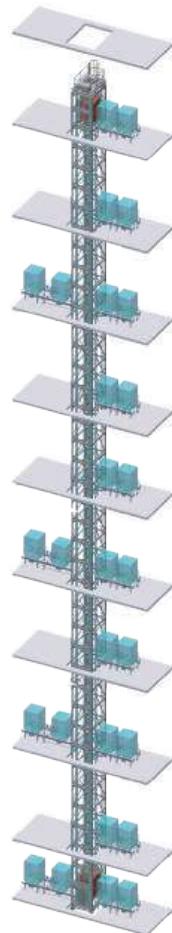
- **High Compatibility:** Capable of handling various load types, such as pallets, cage carts, AGVs, and all kinds of tooling racks.
- **Simplified Installation:** Equipped with a floor-level interface lift, eliminating the need for excavation or pits.
- **Enhanced Efficiency:** Its double-deck design transports loaded pallets on the upper level and empty pallets on the lower level, significantly improving throughput.



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High-Rise Vertical Conveying



Product Introduction

The High-Rise Vertical Conveying System is an integrated logistics solution specifically designed for automated, high-efficiency transportation of materials between different elevations, such as different floors, aerial connecting corridors, and elevated warehouses. It consists of vertical lifts and horizontal conveyors seamlessly connected to form a complete closed-loop system.

High-Rise Vertical Conveying Technical Parameters

Main Structure	Frame-type, Wall-mounted type	 Scan QR code to watch video
Drive Mode	Reducer motor, Traction machine	
Transmission Mode	Steel wire rope, Chain	 Scan QR code to watch video
Load Capacity	≤3tons	
Load Size	Customized according to user's actual dimensions	

High-Speed Vertical Conveyor



Product Introduction

High speed, low noise, and high positioning accuracy. It boasts a simple, stable structure that is easy to maintain. The lightweight, modular design facilitates installation and transportation. Inlet/outlet configurations are freely combinable (E/F/L type), and the motor can be top or bottom mounted for convenient maintenance. Includes multiple safety protection designs. Application Scenarios: Airports, Express Logistics, Factory Automation.

High-Speed Vertical Conveyor Technical Parameters

Lifting Speed	≤360 m/min
Acceleration	7 m/s ²
Load Capacity	35 - 200 kg
Load Dimensions	Customized to user requirements
Noise Level	≤72 dB



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Note: Custom design available for special requirements. Please feel free to contact us.

Custom Designed
Conveying Equipment
**Pallet Horizontal
Conveying**



Product Introduction

The most common application scenario for vertical conveyors. The combination of a vertical conveyor and inbound/outbound connecting conveyors achieves "horizontal + vertical" transportation of pallets. Common loading methods include: pallet jacks, forklifts, automated lines, etc.

Pallet Chain Conveyor Technical Parameters	
Load Capacity	2000kg
Speed	12-24m/min
Conveying Surface Height	400mm
Body Material	Carbon Steel
Drive Method	Chain



Pallet Chain Conveyor



Product Introduction

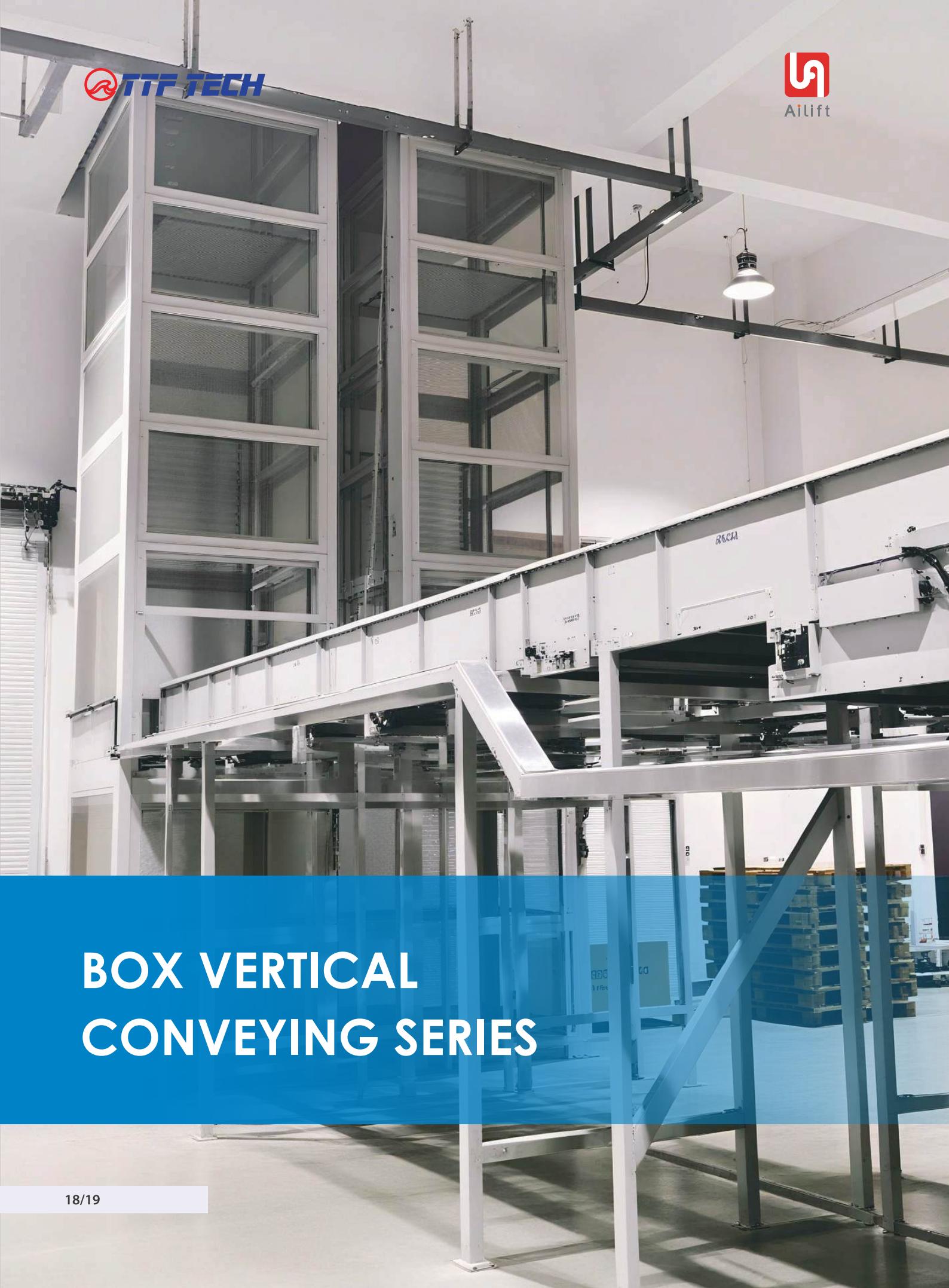
The most common application scenario for vertical conveyors. The combination of a vertical conveyor and inbound/outbound connecting conveyors achieves "horizontal + vertical" transportation of pallets. Common loading methods include: pallet jacks, forklifts, automated lines, etc.

Pallet Roller Conveyor Technical Parameters	
Load Capacity	2000kg
Speed	12-24m/min
Conveying Surface Height	400mm
Body Material	Carbon Steel
Drive Method	Roller



Pallet Roller Conveyor

Note: Custom design available for special requirements. Please feel free to contact us.



BOX VERTICAL CONVEYING SERIES

Box vertical conveying Series



Product Introduction

Box vertical conveying systems combine the smooth continuity of escalators with the efficient handling advantages of conveyor systems, creating highly efficient and compact three-dimensional logistics conveying systems for clients. They enable high-speed, stable conveying, sorting, and merging of various specification totes/boxes, and are key equipment for achieving efficient space utilization and automated logistics processes.



Application Scenarios

- Modern Manufacturing
- E-commerce Sorting Centers
- Airport Baggage Handling
- Food & Beverage
- Pharmaceutical & Chemical



System Advantages

- High Handling Capacity
- High Efficiency
- Strong Versatility
- Flexible Layout



Key Highlights

Maximize vertical space utilization, breaking through the limitations of planar storage.
Achieve continuous closed-loop conveying of tote/box materials, enhancing logistics efficiency.
Deep integration with WMS/MES systems, supporting unmanned warehouse collaboration.
Designed with high load capacity and high availability, ensuring long-term stable operation.

Standard Tote/Box Vertical Conveyor Technical Parameters

Max. Equipment Height	100 m
Max. Load	1520Wx2000Lx1000H/200KG
Min. Load	150Wx150Lx150H/5KG
Lifting Speed	360m/min
Horizontal Speed	10-60m/min
Enclosure Material	Steel plate, acrylic, mesh panel, etc.
Drive Method	Timing belt or steel wire rope, etc.
Safety Design	Fall prevention device, broken chain detection, safety interlock, etc.

Note: Custom design available for special requirements. Please feel free to contact us.



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Light-Duty Continuous Vertical Conveyor Z-Type



Product Introduction

The Z-Type vertical conveying system uses a continuous layout, designed for light-duty materials, enabling efficient and energy-saving flow across floors. Its advantages include small space occupation, flexible conveying paths, and seamless integration with automation systems, significantly improving vertical logistics efficiency and space utilization.

CB-Z Vertical Conveyor Technical Parameters

Max. Load Dimensions	W1200*L1200*H1000 (mm)
Load Capacity	100kg
Speed	36 m/min
Max. Lift Height	20m
Body Material	Carbon Steel
Drive Method	Chain



Light-Duty Continuous Vertical Conveyor C-Type



Product Introduction

The Light-Duty Continuous Vertical Conveyor C-Type system is designed for small and medium-sized items. It adopts a compact continuous vertical layout to achieve efficient and flexible conveying across floors. Its advantages include extremely small space occupation, smooth and low-noise operation, and seamless integration with production lines and sorting equipment, significantly enhancing the level of vertical logistics automation and space utilization.

CB-C Vertical Conveyor Technical Parameters

Max. Load Dimensions	W1200*L1200*H1000 (mm)
Load Capacity	100kg
Speed	30 m/min
Max. Lift Height	20m
Body Material	Carbon Steel
Drive Method	Chain



Note: Custom design available for special requirements. Please feel free to contact us.

Heavy-Duty Continuous Vertical Conveyor



Product Introduction

The Heavy-Duty Continuous Vertical Conveyor is designed for cross-floor transportation of large-tonnage materials. It offers significant advantages such as high load capacity, high efficiency, high reliability, and space savings. It can seamlessly integrate with automation systems, completely replacing traditional freight elevators.

Heavy-Duty Continuous Vertical Conveyor Technical Parameters

Max. Load Dimensions	W1520*L1500*H1000 (mm)
Load Weight	≤200kg
Max. Speed	20m/min
Max. Lift Height	20m
Machine Frame	Carbon Steel
Drive Method	Chain



Rubber Chain Continuous Vertical Conveyor



Product Introduction

The Rubber Chain Continuous Vertical Conveyor uses rubber chains as driving components, offering advantages such as quiet, low-noise operation; wear-resistant, easy-to-maintain chain links; no need for lubrication, pollution-free; reasonable structure, high conveying capacity; and long service life. It is widely used in logistics automation systems in airports, new retail, pharmaceuticals, tobacco, and other industries.

Rubber Chain Continuous Vertical Conveyor Technical Parameters

Max. Load Dimensions	W1200*L1200*H1000 (mm)
Load Weight	≤50kg
Max. Speed	40m/min
Max. Lift Height	20m
Machine Frame	Carbon Steel / Aluminum Profile
Drive Method	Rubber Chain

Note: Custom design available for special requirements. Please feel free to contact us.

BR Reciprocating Vertical Conveyor



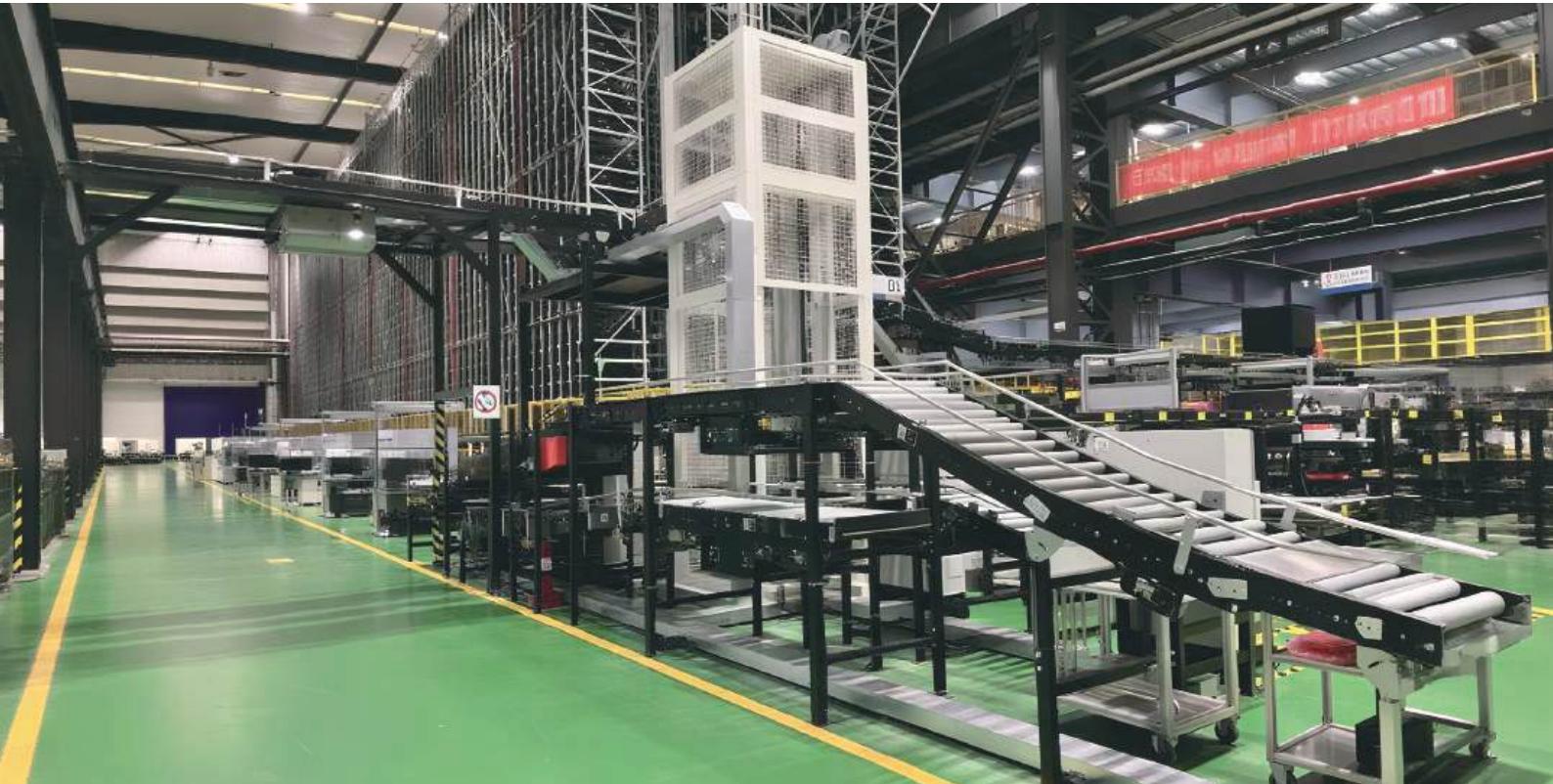
Product Introduction

The BR Reciprocating Vertical Conveyor uses chain drive and frequency conversion control to achieve efficient vertical lifting of goods, saving space and operating smoothly. It is suitable for various production lines and warehousing logistics scenarios.

BR Reciprocating Vertical Conveyor Technical Parameters

Max. Load Dimensions	W800*L800*H800 (mm)
Load Capacity	100kg
Speed	75m/min
Max. Lift Height	25m
Machine Body Material	Carbon Steel
Drive Method	Chain, Timing Belt

MR Reciprocating Vertical Conveyor



Product Introduction

The MR Reciprocating Vertical Conveyor uses a vibrating motor drive to achieve efficient vertical conveying of granular, lump, and powdered materials. Its enclosed structure provides dust and contamination protection, with small footprint, low energy consumption, and low operating noise. It is suitable for multiple industries such as mining, chemical, and food.

MR Reciprocating Vertical Conveyor Technical Parameters

Max. Load Dimensions	W1300*L1300*H1000 (mm)
Load Capacity	200kg
Speed	75m/min
Max. Lift Height	25m
Body Material	Carbon Steel
Drive Method	Chain, Timing Belt

Note: Custom design available for special requirements. Please feel free to contact us.

Reciprocating Ultra-High-Speed Tote Vertical Conveyor

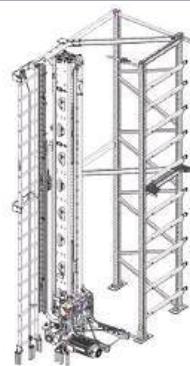


Product Introduction

The Reciprocating Ultra-High-Speed Tote Vertical Conveyor uses an independent lifting mechanism, designed for high-frequency, extremely fast vertical conveying of tote/box materials. Its speed and efficiency far exceed those of traditional lifts, significantly optimizing warehouse logistics tempo.

Reciprocating Ultra-High-Speed Tote Vertical Conveyor Technical Parameters

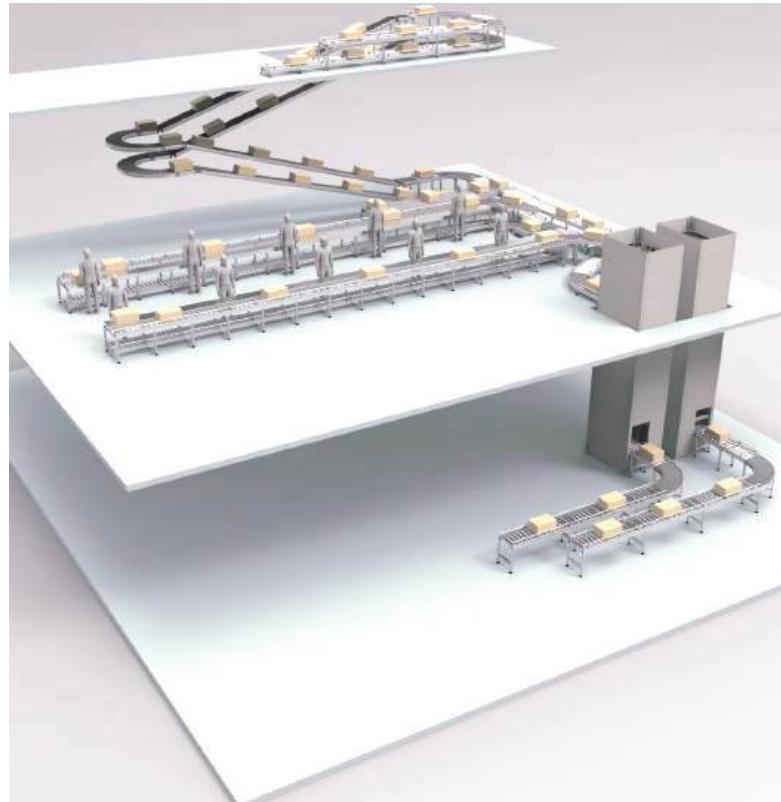
Max. Load Dimensions	W1000*L2000*H1000 (mm)
Load Capacity	150kg
Speed	6m/s
Acceleration	7m/s ²
Max. Lift Height	30m
Body Material	Carbon Steel / Aluminum Profile
Drive Method	Synchronous Belt



Multi-Shuttle Vertical Conveyor



Box Horizontal Conveyor



Product Introduction

The Box-type Conveyor is specifically designed for the continuous vertical conveyance of boxed materials, offering advantages such as high space utilization, stable operation, strong automation connectivity, and high reliability.

Box-type Horizontal Conveyor Technical Parameters

Load Capacity	60kg
Speed	60m/min
Load Type	Plastic totes, cartons, etc.
Drive Method	Motor, Motorized roller
Body Material	Carbon steel
Transmission Method	Poly-V belt, O-belt, Chain



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Equipment Parameters **SURVEY**

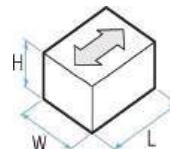
| Equipment Parameter Questionnaire — Continuous Vertical Conveyor

Provide the information below to discuss solutions and pricing.

Load Shape: Carton Plastic Tote Other (Please specify)

Load Dimensions and Weight: Max W× L× H KG

Min W× L× H KG



Required Maximum Conveying Capacity: Pcs (Boxes) / Hour

Usage Time: Hrs/Day Days/Month Months/Year

Conveying Direction: Z-Type (Inlet/Outlet opposite sides) C-Type (Inlet/Outlet same side)

Usage Pattern: Up/Down Conveying Up only Down only

Building Height: Floor level at lower I/O conveyor to floor level at upper I/O conveyor mm

Floor level at upper I/O conveyor to ceiling mm

Conveying Height: Upper I/O: Floor level to conveying surface height mm

Lower I/O: Floor level to conveying surface height mm

Power Supply: Power Supply at the Installation Site AC220V AC380V Other (Please specify)

Casing: Steel Plate Acrylic Plate Mesh Panel Other (Please specify)

Color: Please specify (Provide color code or sample)

Installation Location: Indoor Outdoor Temperature Other (Please specify)

Installation Environment: Temperature Humidity Other (Please specify)

Fire Shutter: Yes No *Fire shutters and fire-rated shafts require construction work by the customer.

Other Notes: (Please specify)

Industry Application Cases

CASE COLLECTION



Apparel Industry



Outdoor Furniture Industry



Home Appliance Industry



Cold Storage Industry



3C Industry



Home Appliance Industry



Electro-Mechanical Industry



Power Equipment Industry



Retail Industry



Stationery Industry



3C Industry



Pharmaceutical Industry



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