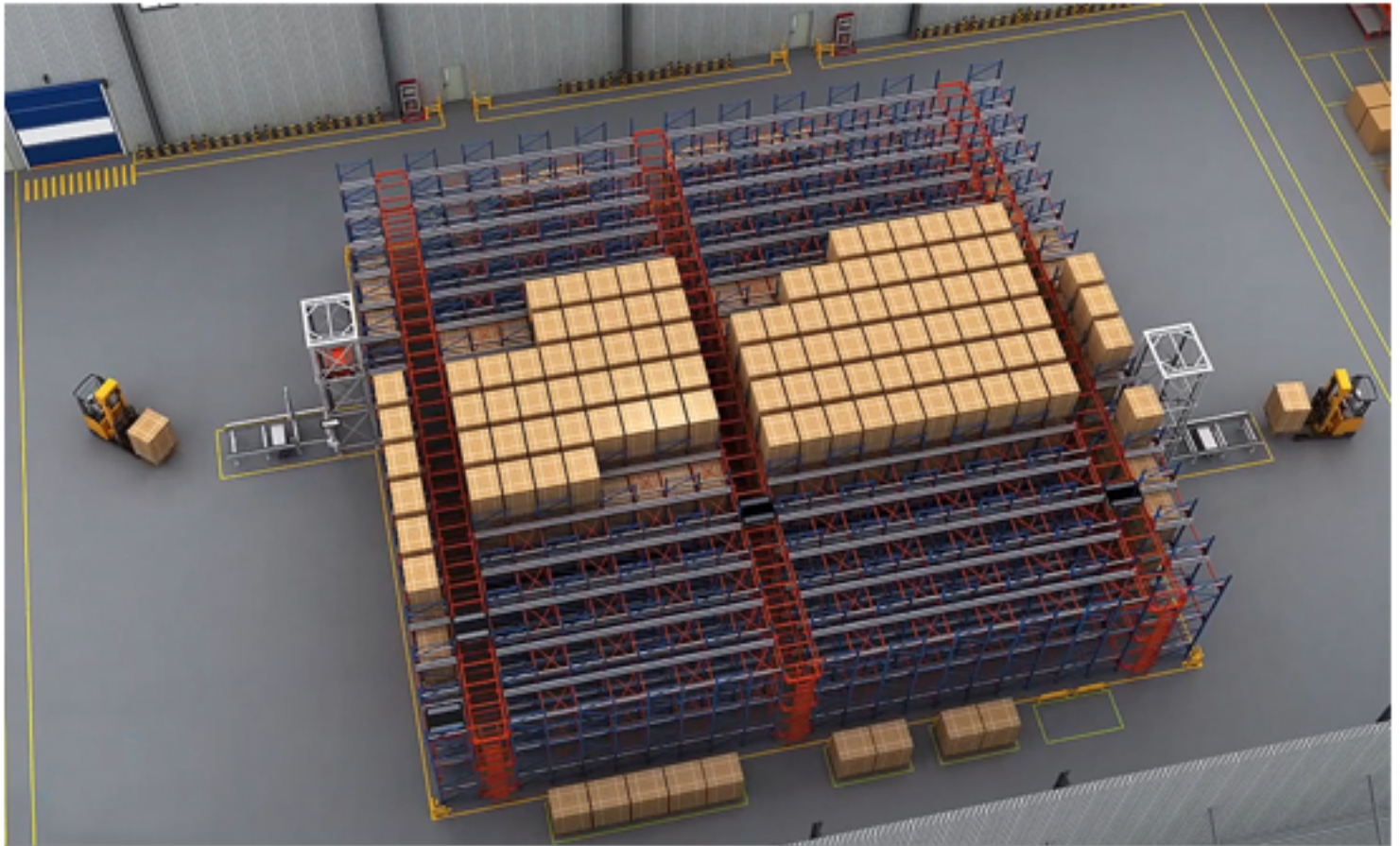




FOUR-WAY SHUTTLE AUTOMATIC STORAGE SOLUTION

— Technology | Quality | Service —

Four-Way Shuttle

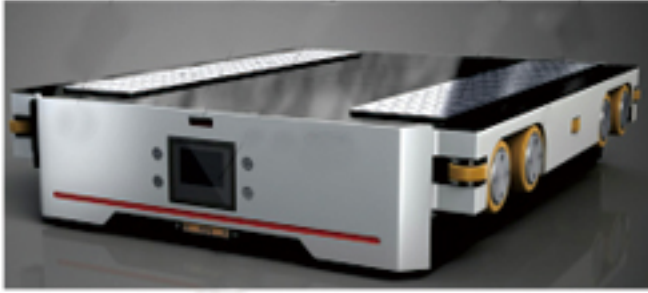


The four-way automatic storage system mainly consists of racks, shuttles, lifters, conveyors, WMS and WCS. It is an upgraded system to shuttle stacker system and shuttle carrier system. The system is controlled by computer, and the shuttles run in four directions to take the pallets to position. The lifters carry pallets and shuttles to each different levels. And finally connects to conveyors on ground to complete input and output process.

Device Features

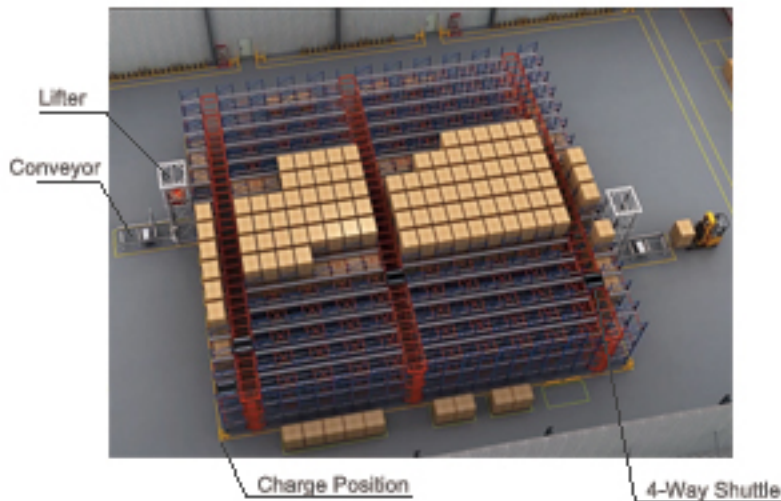
This 4-way shuttle system obtains flexible in storage and efficiency. The pallet in the lane can be divided as needed. Efficiency changes as per numbers of devices, and also as per system schedule planning. It facilitates different customers with various storage needs. Compared with other automatic storage system, this solution has got the advantages in safety, general investment, storage capacity. It is specially suitable for industries of food, cold chain, pharmaceutical, chemical etc.

结构介绍 Structures



As the core equipment of automatic shuttle storage system, the 4-way shuttle consists of mechanical structure, electricals, power system, driving system, lifting system, and sensors, etc. It has two sets of driving and lifting system. Driving system supports it running in four directions, and lifting system is for pallets and changing working lanes.

四向车业务 4-Way Shuttle Process



- 1 Receive
- 2 Palletize
- 3 Input
- 4 Output
- 5 Transfer
- 6 Inventory
- 7 Charge
- 8 Switch

TWO OPERATION MODE

FILO

Only operate at one side of racking system.

FIFO

Pallets in and out chronologically at opposite side.

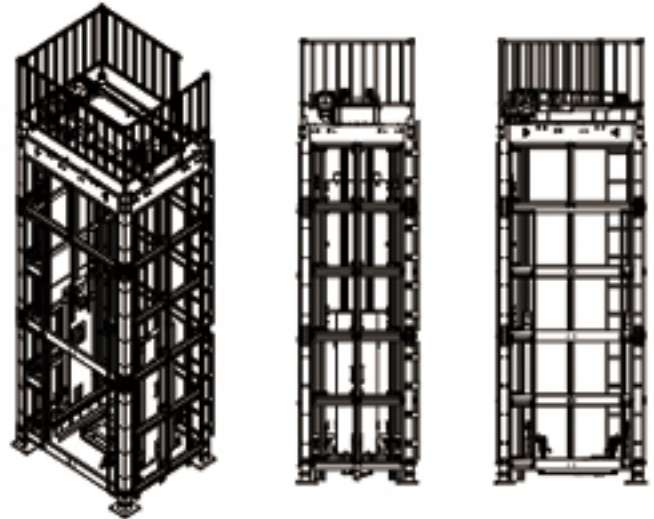
Four-Way Shuttle Technical Parameters

Item		Basic Parameters	Notes
Model No.		TDR-ZHC-1210-1.5T	
Pallet		Width 1200mm, Depth 1000mm	
Max Load		Max 1500kg	
1st Travel	Speed	Empty 2.0m/s, Full load 1.0m/2	For main aisles
	Driving	Brushless servo system	
2nd Travel	Speed	Empty 1.0m/s, Full load 0.8m/2	For storage aisles
	Driving	Brushless servo system	
2nd Lift	Height	35mm	For Pallets
	Motor	Brushless motor 48V DC 500W	
2nd Lift	Height	35mm	For changing aisles
	Motor	Imported Brushless motor 48V DC 800W	
Main Aisle Addressing		Barcode	Germany P+F/LUEZE
Storage Lane Addressing	Travel - Photoelectric + Encoder		Germany P+F/LUEZE
	Pallet - Laser + Photoelectric		Germany P+F/LUEZE
	Lift - Proximity Switch		Germany P+F/LUEZE
Remote		Frequency 433MHZ, Distance 100m	
Power Supply		Lithium Battery	
Battery		48V, 40AH, Working Duration \geq 8h charging time 3h and repeated 1000 times.	
Control System		WCS or Remote	
Operating Noise		\leq 60db	
Painting		Outer Frame (Black). Lifting, Battery, tank and control cabinet (Light Grey)	
Ambient Temperature		0 °C ~ 50 °C	
		5% ~ 95% (No condensation)	

Custom Built Lifting System

Lifter Features

- Transport both pallets and shuttles
- High load capacity but small settlement
- Save space at top and bottom
- Fast working speed up to 60m/min



TOCO System Integration

- One of brand integrator in the industry.
- Independent developed products with core technology
- Innovation on schedule system WCS of shuttles
- The lifter is tailor made to suit the shuttle system
- Standard 4-way shuttle system has been established to build automatic compact storage system for customers.

