

ZIKO ROBOTICS



R-bot + H-bot Dense Storage System

Leader of Pallet-to-Person Robotics

R-bot+H-bot dense storage system is suitable for the whole pallet in/out or a small amount of picking in/out scenarios. Compared with stacker cranes AS/RS, the storage density and comprehensive efficiency are greatly improved, with the advantages of high efficiency, high density, high flexibility, quick delivery and so on, which is the best choice for the customers in pursuit of the maximum storage density and improvement of the space utilization rate.



R-bot
Four-Way Pallet Shuttle

+



H-bot
High-Speed Elevator

+



PTP
Smart Warehouse Software

+



Pallet racks

R-bot Four-Way Pallet Shuttle

The R-bot Four-Way Shuttle is a smart storage robot that is independently developed by Zikoo and designed for dense storage systems of pallets. It boasts four-way flexible driving, smart autonomous handling, multi-shuttle collaborative operation, and other benefits. It is flexibly adaptable to dense storage scenarios for pallets in various industries.



| | | Standard Model R1500N | Cold Chain Model R1500C | New Energy Model R1500E |
|------------------------------|------------------|--------------------------------|--------------------------------|--------------------------------|
| Weight | Kg | 320 | 360 | 350 |
| Rated load | Kg | 1000 | 1500 | 1500 |
| Navigation | - | RFID + photoelectric sensor | RFID + photoelectric sensor | RFID + photoelectric sensor |
| Positioning accuracy | mm | ±2 | ±2 | ±2 |
| Applicable temperature | °C | -10~45 | -25~0 | -5~45 |
| Type of batteries | - | Lithium-iron phosphate battery | Lithium-iron phosphate battery | Lithium-iron phosphate battery |
| Battery capacity | Ah | 46 | 38 | 48 |
| Duration time at full charge | h | 8~10 | 6~8 | 8~10 |
| Fully charging time | h | 1.5 | 2.5 | 2.5 |
| Body dimensions | mm | L1000*W972*H125 | L1192*W972*H125 | L1192*W972*H125 |
| Applicable pallet sizes | mm | 1100~1600*800~1200 | 1200~1600*1000~1200 | 1200~1600*1000~1200 |
| Maximum speed | m/s | 2 | 2 | 2 |
| Acceleration | m/s ² | 2 | 2 | 2 |
| Reversing time | s | 2.5 | 2.5 | 3.5 |
| Lifting time | s | 2.5 | 2.5 | 3.5 |

The Advantages of R-bot+H-bot dense storage system

R-bot dense storage system, using R-bot four-way shuttle and H-bot high-speed elevator horizontal and vertical combination of operations, combined with PTP smart warehousing software, to achieve the maximum degree of dense storage, space utilization rate is very high. The system is not restricted by fixed routes and can reach any position in the space. It can also flexibly increase or decrease the number of four-way shuttles according to the business requirements, and can be flexibly matched with conveyor lines and AMR to complete the rapid in and out of the warehouse.



High Efficiency

Comprehensive efficiency increase of 2-3 times compared to traditional warehouses, and 15%-20% compared to ordinary automated three-dimensional warehouses (stacker cranes AS/RS)



High Density

The storage density is 4-6 times higher than in traditional warehouses and 30-100% higher than in ordinary automated three-dimensional warehouses (stacker cranes AS/RS)



High Flexibility

Suitable for new or renovated warehousing scenes, suitable for multiple pillars, cross-floor, irregular warehouse types, according to the business needs of the change in the number of flexible increase or decrease in the number of equipment



Quick Delivery

Reduction of delivery times by more than 40% in comparison to ordinary automated three-dimensional warehouses (stacker cranes AS/RS), resulting in high quality deliveries



Scenarios

≤30m

N.H. of warehouse

Lesser

No. of SKUs

High

Storage Density

High

In/Out Storage Efficiency

Average

Picking efficiency

Industries



Food



Manufacture



Cold Chain



Energy



3PL



Building Materials



Chemical



Household



4350 m²
Area



9760
Storage position

x4

Storage capacity

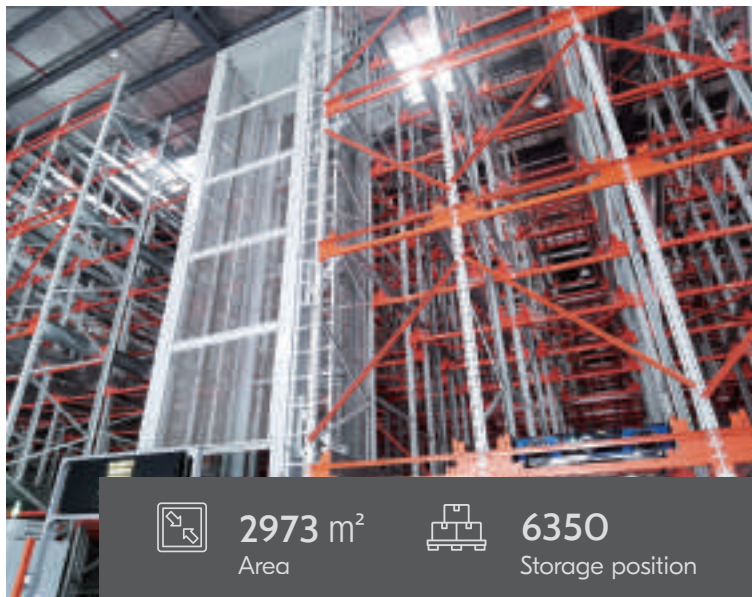
180 pallets/hour

Storage efficiency

Food Industry A dairy 3D warehouse

Intelligent Solutions

- 15 four-way shuttles, 5 high-speed elevators, 1 set of IWMS, IWCS, RMS system, customized automatic palletizing system, forklift scheduling system, and a set of flat warehouse management system
- Realize 15 shuttles with the same level of multi-shuttle scheduling; the system can be divided into warehouse area control, unified allocation; through the setting of the expiration date ban, expiration date warning, to realize the effective management of food expiration date, the goods of the whole process of information can be traced.



2973 m²
Area



6350
Storage position

70%

Storage capacity

24h

Uninterrupted operation

Manufacturing industry A component 3D warehouse

Intelligent Solutions

- 7 four-way shuttles, 6 elevators, 1 set of IWMS, IWCS, RMS software system.
- Equipped with two kinds of pallet size to realize the management of various kinds of materials.
- Build air corridor, realize interconnection between warehouse and workshop, and create intelligent integrated production line.
- Multi-equipment linked scheduling, efficient in and out of the warehouse, efficiency up to 123 pallets/hour.

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