

SLS500

Shuttle Robot System For
Buffering And Sorting

System Introduction



CONVEYOR LOGISTICS

HWArobotics PTE. LTD. (hereinafter referred to as "HWArobotics") has developed the SLS500 shuttle robot AS/RS (hereinafter referred to as "SLS500") to meet the diverse requirements in hybrid storage, picking, buffering, sorting, and other operations involving totes and cartons of various sizes and specifications. This advanced system enables rapid automatic replenishment, high-density buffering, efficient sorting, and precise picking, specifically tailored to meet the circulation characteristics of Type A goods. The SLS500 is suited for large-scale automated picking and cross-docking of Type A goods.



System Composition



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**Buffering and sequencing
of shipping to aisle**

**Reduces the workload of
shipping and handling**



- Flow racks, also referred to as gravity roller type racks, have a sloped design that allows for direct connection to rails, cross beams, and middle bracing beams using flow strips made of aluminum alloy or metal plate. The gradient of installation for the flow strips is determined by the size, weight, and depth of the goods containers (turnover boxes, parts boxes, or cartons). In cases where the paths are excessively long, separators are used for partition to mitigate.



- In the SLS500, the goods storage container uses its own weight to store goods into one end of the aisle and retrieve goods from another. This enables efficient replenishment and batch retrieval of goods. The entire process, starting from goods information reading to the transportation of goods by the shuttle to the classified drop sites, is seamlessly managed by management software and deployment software.
- Meanwhile, the flow racks within the SLS500 are integrated with an electronic label picking system. Controlled by computer and software, and aided by sound-light alarms as auxiliary tools, the flow racks effectively guide pickers to accurately and rapidly pick or dispatch goods.
- The multi-level racks in this storage and retrieval system offer several advantages. They have a compact layout, a sturdy structure, and are easy to install and scale. The racks can be quickly and flexibly deployed, expanded, or adjusted based on the customer's on-site requirements. This capability significantly reduces the customer's investment costs.



Advantages And Features

SLS500 Advantages

High storage density

Effective hybrid storage location design with dense storage spaces

Saving energy and protecting environment

Utilize energy-efficient parts and drive solutions

Broad storage unit size compatibility

Length & Width: 200-600mm (7.8-23.4in)

High storage and retrieval efficiency

Suitable for short-term storage and picking of a large quantity of goods

Multiple flow channels with large and deep locations

Effectively buffering a large quantity of goods during the peak and off-peak of replenishment lanes

First-in-first-out, automatic quick replenishment

SLS500 Features

Highly flexible
Open and compatible
Standardized and universal system
Maximized storage space



Openness and compatibility principle
Standardization and universalization principle
Principle of maximizing storage size in limited space



This product meets and has successfully obtained the CE standard certification.



The multi-level shuttle system is equipped with intelligent deployment and control capabilities.

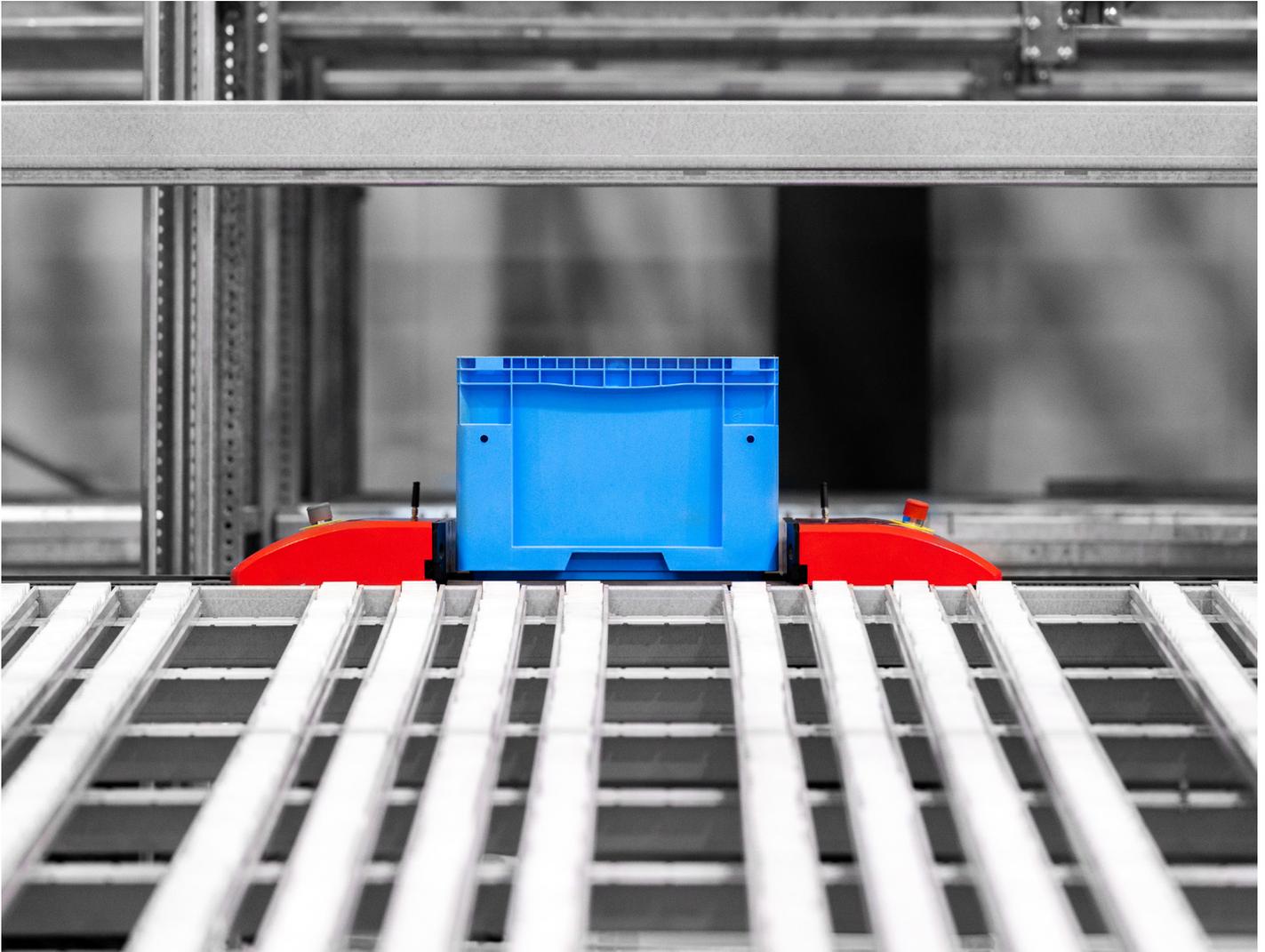


The shuttles are designed to work continuously for 24 hours without any downtime.



The inbound access conveyor can identify the unit size.





Item	Parameter
Rated Unit Load	3-20kg (6.6-44lb)
Single Aisle Single Inbound Efficiency	≥540boxes/hour
Goods Size (L*W*H)	L: 220~600 mm (7.8-23.4in) W: 200~400 mm (7.8-15.6in) H: 150~500mm (5.85-19.5in)
MTTR (Mean Time To Repair)	<15mins



Application Scenario

The SLS500 with a broad industry fit, can be applied in numerous industries, such as e-commerce, media tobacco, pharmaceutical, electric power, electronics, etc.



E-commerce



Media



Tobacco



Pharmaceutical



Electric Power



Electronics

Case Study

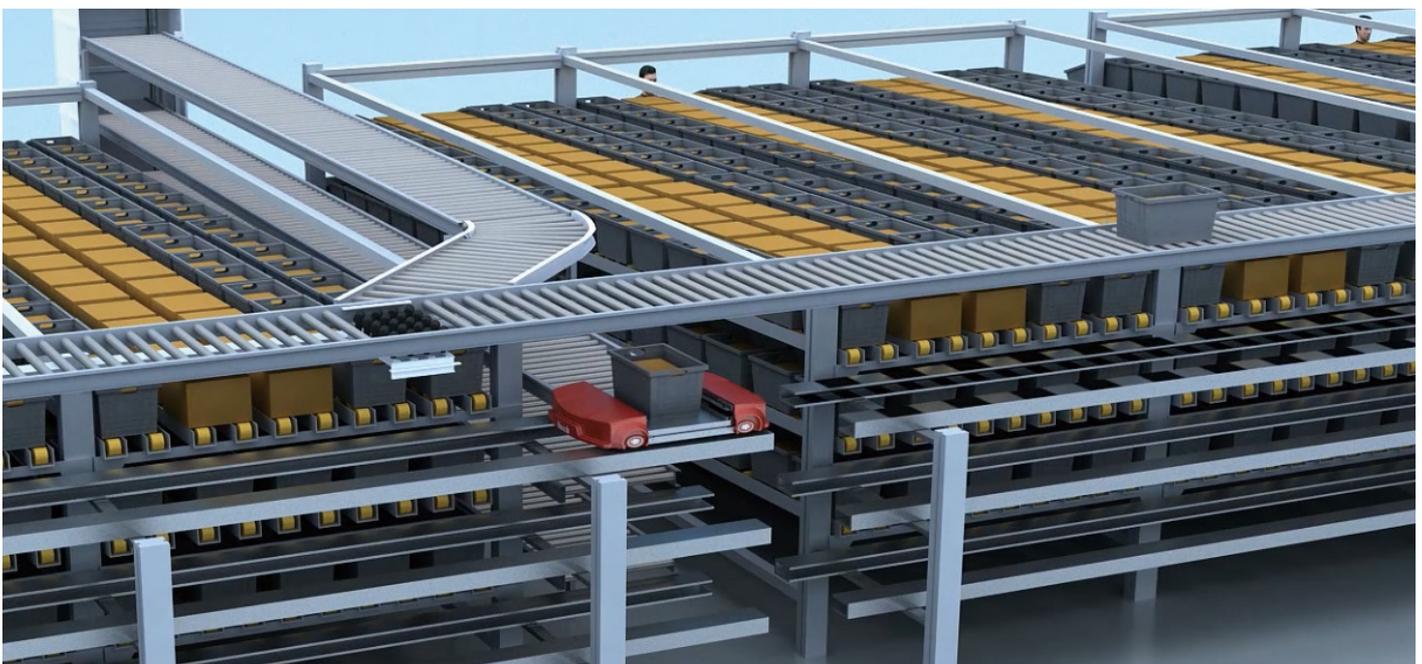
A well-known large-scale pharmaceutical intelligent warehouse project

Project Features

- The logistics center covers an area of 16,722m² (179,929 ft², and the building area is about 51,000m² (548,760 ft²)
- The total point of sale for delivery is about 4000 stores, and the daily distribution number is 1,340 stores
- Automatic replenishment of the buffering and sorting system by shuttles

Core Configuration

- 5 aisles of flow racks, each aisle has 3 levels, which can provide up to 1575 totes/hour
- A total of 6,885 cargo units, 405 aisles; At the same time, supporting 174 pallet buffering storage units
- Total storage capacity is more than 10,000 totes. Daily outbound capacity is more than 22,000 totes.



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