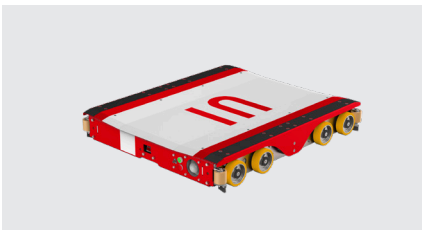
SWISSLOG

PowerStore

Flexible & sustainable – optimal utilization of pallet storage space



Efficient Pallet Storage

PowerStore is a shuttle storage and retrieval system designed for deep lane storage of palletized loads. PowerStore is tailored to provide an attractive return on investment for companies with small, medium and large storage needs. This fully automated system is very adaptable in size and shape and can therefore be implemented using existing space to maximize density and efficiency in your current warehouse.

The simultaneous use of automated storage and retrieval devices, along with independent lifts means that PowerStore has the ability to make your warehouse the world's most efficient with the highest density and throughput in the industry. In addition, PowerStore can perform in various temperature zones including deep freeze environments.

PowerStore can be configured either with ProMove conveyor systems or with a monorail system, depending on the requested throughput.

Benefits

High Performance
Throughput of up to 200 pallets per cell per hour where high performance and density is combined.

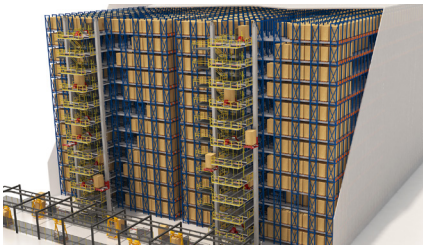
Flexibility
PowerStore can be implemented into buildings of any shape and size. The modular technology allows for easy addition of extra modules. It is also suitable for most pallet types and applications.

High Availability
Reduced error rate thanks to smart positioning system, unique design of rack interfaces and deflection of pallets.

Projects implemented with PowerStore:
Virtro Group, BevChain, Stemilt Growers, Pepsi, Trinchero Family Estates

Provides better use of available space than any other automated pallet storage system

Components – vertical conveyor and transfer conveyor



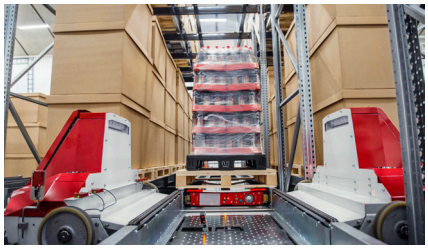
Vertical Conveyor

The single mast design accommodates fast and effective pallet movements between levels. The lift motor and the most critical components are located on floor level for easy maintenance. Therefore, the design incorporates the ability to remove or replace these critical parts within one hour if required.

Transfer Station

The Transfer Station is available with chains, or beams/rail platform and separates the vertical conveyor from the aisle carrier.

Components – aislecarrier & rowcarrier



Together, the AisleCarrier and RowCarrier pair deliver and retrieves pallet loads from the rack.

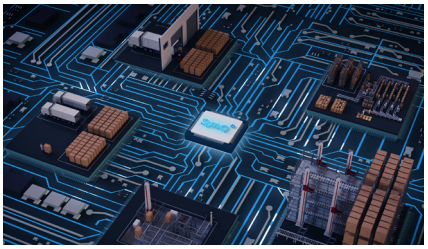
AisleCarrier

The AisleCarrier transports the RowCarrier, with or without a load unit on it, between the Vertical Conveyor and the designated row. The AisleCarrier knows its position along the aisle rail through a laser positioning system.

RowCarrier

The RowCarrier retrieves from and delivers to the Transfer Station at the Vertical Conveyor. The RowCarrier regards its position on the AisleCarrier as its “home” position. The RowCarrier utilizes a precision laser for positioning and wireless Ethernet/IP for communication with AisleCarrier. The RowCarrier is designed to handle various pallet types and load requirements.

Components – software & controls



Warehouse Management System

PowerStore comes with a standard software application developed by Swisslog. Efficient storage and retrieval strategies trigger transport tasks for all movement of goods at the optimum time. In addition, the software application offers several features including user management, pallet location management, and interfaces to integrate PowerStore with complementary subsystems, such as pallet conveyors. Visualization and statistics functions complete the application. The system can also optionally be delivered with a standard interface to any WMS.

Control

PowerStore‘s movements are controlled by CraneBox software. CraneBox ensures that transport tasks are executed properly and monitors processes to guarantee optimized interaction between subsystems.

Facts

Load weight per transport unit	up to 1,500 kg in standard application
Transport units	CHEP, EURO, Blockpalette, Stringer, AS
AisleCarrier vehicle speed	up to 5.0 m/s
RowCarrier vehicle speed	up to 3.0 m/s
Vertical Conveyor	up to 2.0 m/s
Throughput	up to 200 pallets per hour per cell
Temperature range	Ambient version from 0 to 45 °C (32 °F to 113 °F) Cold storage version from -30 to 0 °C (-22 °F to 32 °F)

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