



Stopick AS/RS

Automated Storage & Retrieval System

This is the most modern unit load, storage and retrieval system, combining advantages of several systems. It is simple, efficient, modular and easily expandable system. It not only utilises full height, but also uses the depth to any extent.





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The concept

The total system consists of SRM (Storage Retrieval Machine) wherein the load carrier mounted on the mast and guided by rails moves in horizontal and vertical plain between the aisle of two storage racks.

The operator window is provided at the front end of the aisle. The system is provided with a powerful PLC. The light weight and sturdy construction does not impose any limitation on the height and depth of the storage and the speed of the load carrier can be selected depending on the requirement.

Simultaneous movement of the load carrier in vertical and horizontal plane ensures high speed retrieval. This completely customised system ensures complete automation, high density storage, quick retrieval and safety.

Due to several such advantages, AS/RS are popular in developed countries and gaining acceptance over other systems even in India.

Where to use ?

Being highly customised, they can be practically used in any and every stores. However, typical applications are in warehouses, finished goods and raw material stores in a large manufacturing unit such as pharmaceutical, automobile, engineering, heavy electricals etc.

Benefits

Cost-effective system

Single retrieving mechanism for a large storage area saves on the cost of the system.

Integral storage

Single, integral storage area due to optimal utilisation of height and depth ensures high density storage and allows easier control.

Floor space saving

Complete height utilisation, very narrow aisle for column movement ensure considerable floor space saving.

Fast retrieval

High speed and simultaneous movement in both the plains ensure fast retrieval of material.

High safety of stored material

Completely enclosed system with locking of operating window.

Easily expandable

Modular system allows easy expansion of racks and main carriage being the same, the additional cost is comparatively lesser.

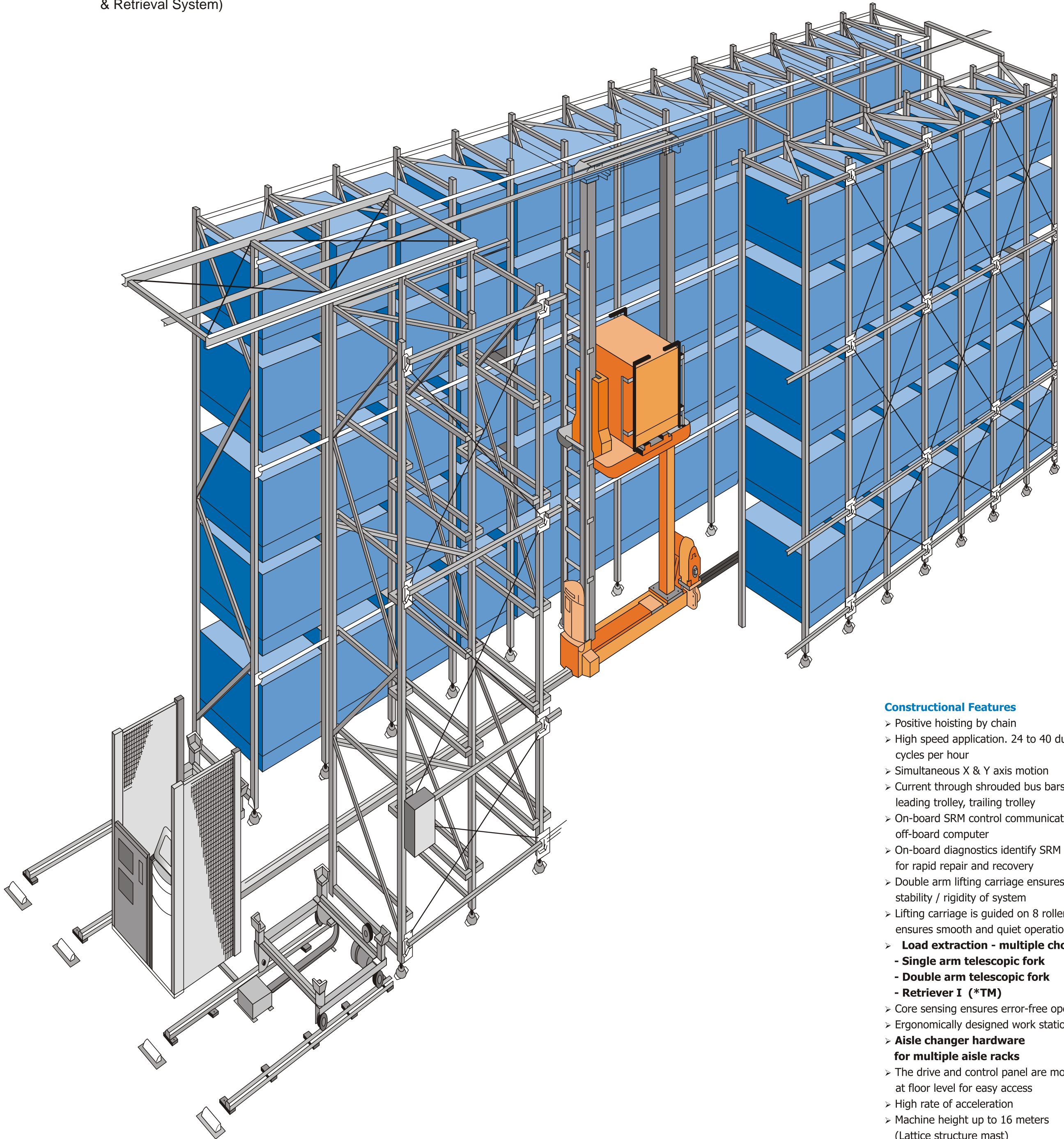
One man operation

One person can operate the system very easily since storage and retrieval is completely automated.



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Constructional Features

- Positive hoisting by chain
- High speed application. 24 to 40 dual cycles per hour
- Simultaneous X & Y axis motion
- Current through shrouded bus bars / leading trolley, trailing trolley
- On-board SRM control communicates with off-board computer
- On-board diagnostics identify SRM faults for rapid repair and recovery
- Double arm lifting carriage ensures stability / rigidity of system
- Lifting carriage is guided on 8 rollers, ensures smooth and quiet operation
- **Load extraction - multiple choices e.g.**
 - Single arm telescopic fork
 - Double arm telescopic fork
 - Retriever I (*TM)
- Core sensing ensures error-free operation
- Ergonomically designed work station
- **Aisle changer hardware for multiple aisle racks**
 - The drive and control panel are mounted at floor level for easy access
 - High rate of acceleration
 - Machine height up to 16 meters (Lattice structure mast)
 - Hoisting and long travel are achieved through AC variable frequency drive, ensures precision and smooth operation
 - Quadruple chain hoisting ensures complete safety
 - Linear guide ways for extractor **Retriever I**
 - Optical load centering device on board
 - Rack supported structures ensure lower building cost
 - Optional man on-board available
 - Can be easily interfaced with a PC or central computer system

Safety features

- Full safety protocols through on-board sensors as per FEM 9.754
- Racking structure, stringent design, standard as per 9.831 requirement SRM as per FEM 9.311

Wide ranging applications

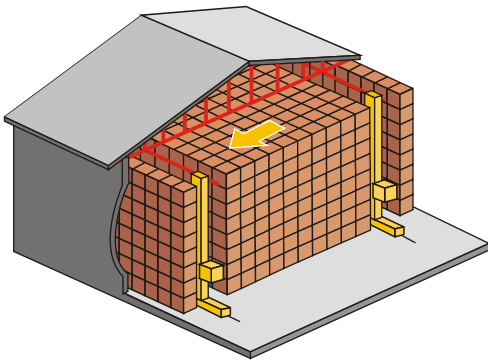
This system is highly versatile and the application areas are countless. It can be practically used for storing every type of material right from small electronic parts, hardware, small tools to refrigerators, drums in chemical / process industries and even storing & retrieving passenger cars in parking lots.



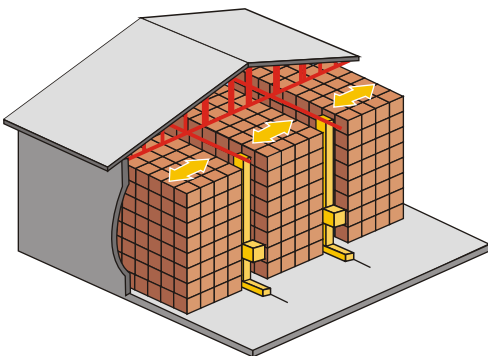


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Deep lane with Flow Rack



Deep lane with Shuttle Car

