



AS/RS

Automated Storage & Retrieval System

Modern Storage Solution

The new technology in storage solution that will make dramatic improvement to your conventional storage system and inventory control system.



Introduction

What is AS/RS...?

AS/RS @ TTF

Automated Storage & Retrieval System

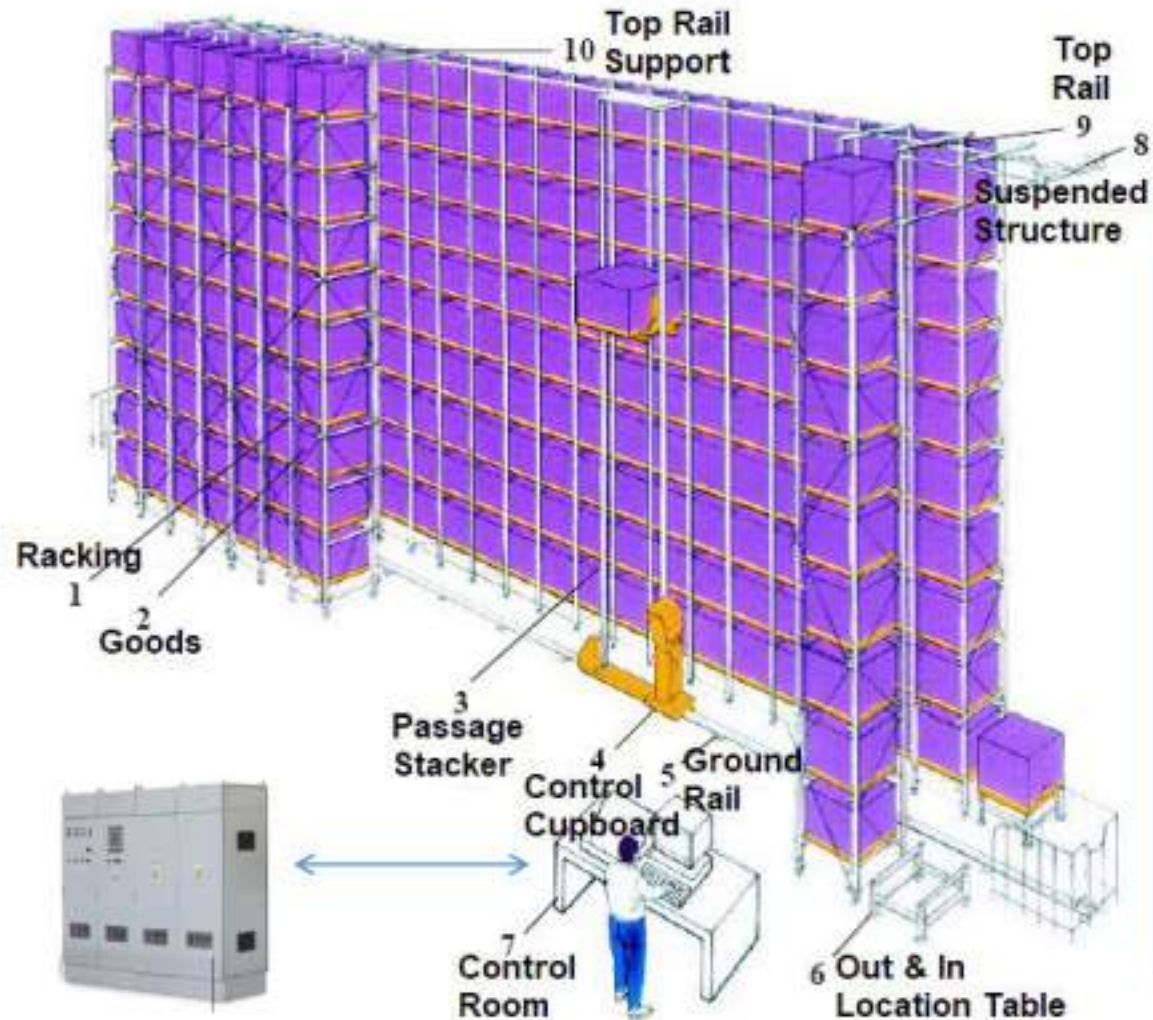
The AS/RS System consists of assembly racking and welding racking.

Complemented by passage stackers, conveyor system and computer control system, it guarantees the fullest space utilization, handling mechanization and storage management modernization.



ASRS CONCEPT STRUCTURE

AS/RS



Beams / Bracket type racking with high steel quality for whole assembly structure.



Steel pallet to load goods with strong loading capacity and better rigidity.



Main components of racking being manufactured in high precision production.



Installation done by certified engineers and technician at site.

CUSTOM DESIGN SYSTEM

AS/RS



Planning Stage

Custom design for warehouse layout and spacing optimization blueprint by site visits and technical discussions.



Designing Stage

ASRS components technical selection by engineers in engineering division to meet customer requirements.



Manufacturing Stage

Manufacturing of selected components according to configured mode and design drawings.



Installation Stage

Assemble, install & debug of mechanical structure and electrical control system at customer site.



After Sales Stage

Technical support / services at site and remote online maintenance by professional engineers at your requests.

DESIGN HIGHLIGHTS

AS/RS



- Operation control mode - Computer monitoring & controlling system
- Operator schema - Online auto / Manual / Maintenance mode
- Auto address mode - Laser / Rolling / Barcode addressing
- Communication mode - Infrared / Wireless

RACKING SYSTEM

- Optimized sectional design
- High quality steel material
- Pitch adjustable 75mm upright
- Strengthen by bolts & nuts
- High intensity & good stability
- Exopy powder coated surface

STACKER SYSTEM



STACKER CRANE

- Single / Double mast structure
- Stable & reliable operation
- Vector frequency driver
- Encoder position controlling
- Real time tracing of pallets
- Touch screen easy operation

- Roller conveyor
- Chain conveyor
- Lift & transfer conveyor
- Palletizing conveyor
- Depalletizing conveyor
- AVG lane conveyor
- Shuttler lane conveyor

CONVEYOR SYSTEM





Advantages

How AS/RS will help to improve your business...?

ASRS BENEFIT HIGHLIGHTS

AS/RS

High storage density degree vs space.
Increased variety of goods stored.
Micro warehouse cells stock check.

Maximum store space utilization.
High rise warehouse structure.
Minimum land space utilization.

High automatic operational speed.
Minimum manual stock handling tasks.
Minimum stock damages and losses.

Application for Industry 4.0 implementation.
Interface syncing with mainframe ERP / SAP.
Auto database logs and ISO reporting formats.

Real time inventory management.
Increased inventory stock accuracy.
Increased warehouse overall efficiency.

Short ROI period of approx 2 to 3 years.
High rate of increased operation efficiency.
Skilled workers development via technology.



ASRS INTO THE FUTURE



Management Decision

Low present investment cost.
Support future biz expansion.
Increased company image.



Implementation

Standard installation.
Easy worker training.
Local tech support.



Efficiency

Fast performance.
Min stock losses.
Time factor saving.



Moving Forward

Industry 4.0 concept.
Advanced technology.
Biz competitive edge.



Bring your business to another level of advancement through technology application. High operational efficiency and minimum stock loss are keys to internal profit centre. ASRS can be developed for future business expansion with min space requirement.

PROJECT CASES

3

**Implemented ASRS
warehouses for your
review**

LOGISTIC INDUSTRY

AS/RS



Dalian Alice Supplies Co Ltd
(Asia's Largest AS/RS system)

- Industry - Logistics
- Rack Height - 22.7 Meters
- Total Pallet Position - 50,184 Cells
- Stacker Crane - 14 Sets
- Conveyor System
 - Roller Conveyor - 85 Sets
 - Rotary trolley - 28 Sets
 - Rising & Transferring Device - 20 sets
- Ground work station - 6 Sets
- Drive System - SIEMENS FCS - 1 set
- Computer Monitoring System - 1 set

MECHANICAL INDUSTRY

AS/RS



- Azusa Auto Parts Co Ltd
(Typical Single Warehouse Setup)
- Industry - Mechanical Parts
 - Rack Height - 12.25 Meters
 - Total Pallet Position - 8,280 Cells
 - Stacker Crane - 8 Sets
 - Conveyor System
 - Roller Conveyor - 10 Sets
 - Rotary trolley - 10 Sets
 - Rising & Transferring Device - 4 sets
 - Ground work station - 1 Set
 - Drive System - SIEMENS FCS - 1 set
 - Computer Monitoring System - 1 set

CHEMICAL INDUSTRY

AS/RS



- Zhejiang Jushi Group Co Ltd
(Advanced Single Warehouse Setup)
- Industry - Chemical
 - Rack Height - 22 Meters
 - Total Pallet Position - 18,696 Cells
 - Stacker Crane - 12 Sets
 - Conveyor System
 - Chain Conveyor - 18 sets
 - Roller Conveyor - 25 Sets
 - Shuttle Vehicle - 1 Set
 - Rising & Transferring Device - 12 Sets
 - Reciprocating Lift - 2 Sets
 - Size & Weight Detection - 4 Sets
 - Ground work station - 1 Sets
 - Drive System - SIEMENS FCS - 1 set
 - Computer Monitoring System - 1 set

ASRS - NEXT PROJECT...

AS/RS



Location - Your Factory ... !

We are looking forward to work hand-in-hand to implement this ASRS at your site.

We believe technology innovation inline with Industry 4.0 is the upcoming strategy to enhance your business in near future.

Let's make it happen together ... !