

# Latest & Greatest Automated Solutions at Promat

Presented by:

Ed Romaine, SI Systems

Bill Leber, Swisslog



# PROMAT®

2015

McCormick Place South | Chicago

March 23-26, 2015

[promatshow.com](http://promatshow.com)

Sponsored by:

**Automation  
Alliance**

powered by



[www.ProMatShow.com](http://www.ProMatShow.com)

© 2015 MHI®

Copyright claimed for audiovisual works and  
sound recordings of seminar sessions. All rights reserved.

**FIND WHAT'S  
NEXT.**



**PROMAT** 2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  **MHI**

# **AUTOMATED GUIDED VEHICLES (AGVS)**

## Automated Guided Vehicles (AGVs)

- Increases Productivity
- Reduces Labor Costs
- Reduces Product Damage
- User-friendly vehicle and host software.
  - Operates like a webpage
  - Allows users with minimal training ease of use





## Automated Guided Vehicles (AGVs)

Product Category	Receiving	Replenishment	Shipping	Assembly
AGVs	Yes	Yes	Yes	Yes

- Standard loads under 5,500 lbs.
- Custom AGVs up to 60 tons
- AGVs normally handle one or more standard pallets
- Custom AGVs up to 30' long
- Typical maximum AGV speed is 1.6 meters/second
- AGVs up to 35 feet

**FIND WHAT'S  
NEXT.**



**PROMAT** 2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

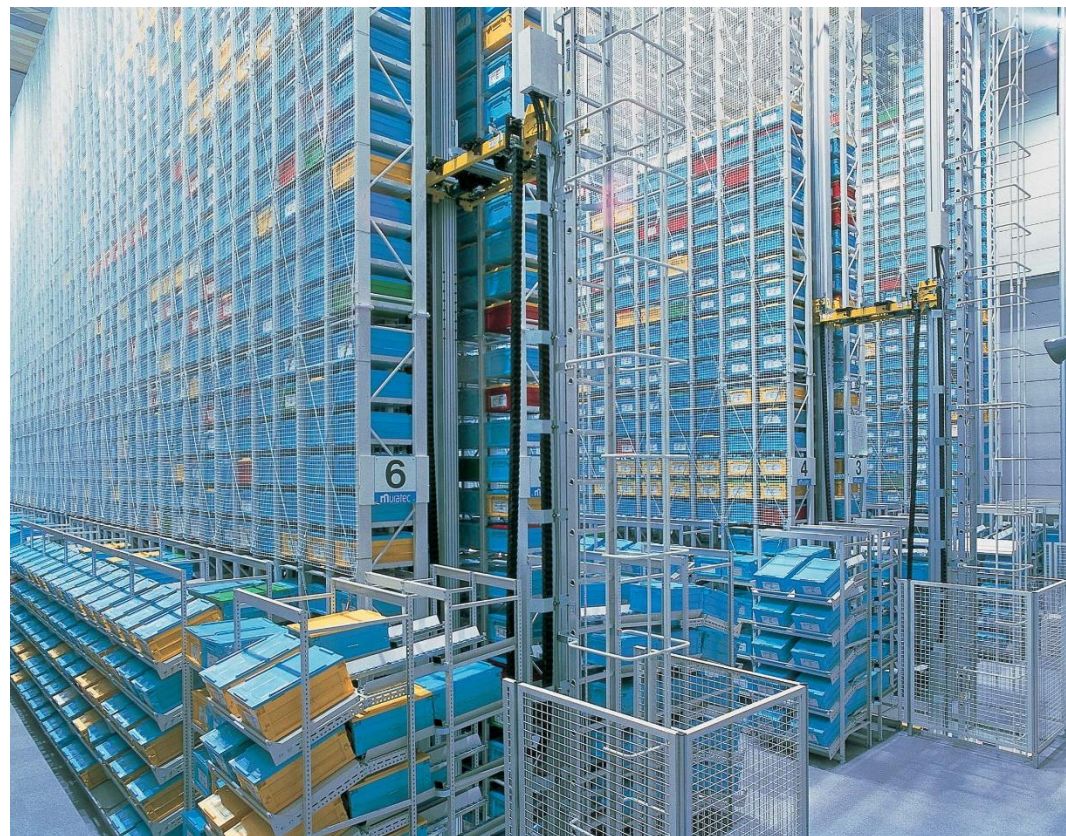
powered by  MHI

# **AUTOMATED STORAGE & RETRIEVAL SYSTEMS (ASRS)**



## Automated Storage & Retrieval Systems (ASRS)

- Free rack location and double-deep storage achieves excellent storage efficiency and residual case handling
- Can be equipped with multiple load handling devices
- Higher throughput than existing single-deep micro-load AS/RS





## Automated Storage & Retrieval Systems (ASRS)

Product Category	Picking	Packing	Shipping	Assembly
ASRS	Yes	No	No	No

- Maximum load capacities up to 300kg
- Flexible handling up to 4 cases
- Multiple-handling of 1-4 units and double deep storage.





## Unit Load ASRS (with in-rack vehicles)

- High Density Storage
  - Stores 3 to 18 pallets deep
  - Eliminates unusable space in your existing building by 40%







## Unit Load ASRS (with in-rack vehicles)

Specifications				
Max Width	Max Depth	Max Height	Weight/Load	Transactions/minute
48"	40"	Variable	16,000 lbs.	Variable

- Handles:
  - Pallets
  - Unique Loads/Items

## Unit Load ASRS (with shuttle forks)

- Aisle Changing Cranes
  - Construction height up to 45 m
  - Payload 8,500 kg"
  - Temperature range - 40 to +60 °C





## Unit Load ASRS (with shuttle forks)

Specifications				
Max Width	Max Depth	Max Height	Weight/Load	Transactions/minute
6 m	3 m	45 m	8,5 t	300 m/min

- Handles:
  - Pallets
  - Unique Loads/Items



# FIND WHAT'S NEXT.



## PROMAT<sup>®</sup> 2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  MHI

# PICKING SYSTEMS

## Portable High Speed A-Frame Order Picking

- 2,000 items per/hour
- Portable and delivered fully constructed
- Up to 16 channels per unit





## Portable High Speed A-Frame Order Picking

Product Category	Picking	Shipping	Kitting
Order Picking	Yes	Yes	Yes

- Works with any conveyor
- Plug and play
- Labor free picking
- Pick to tote, belt or shipping container
- Ideal for 1 or 2 line orders



# FIND WHAT'S NEXT.



## PROMAT

2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  MHI

## Pick Wall

- High accuracy
- High labor productivity
- Portable and scalable





## Pick Wall

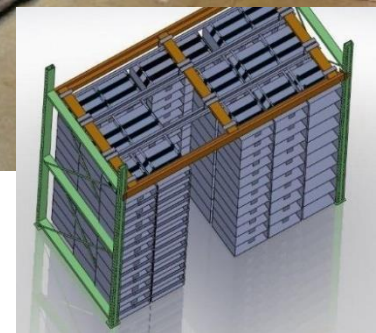
Product Category	Picking	Packing	Shipping	Assembly	Component
Computer Software & Hardware	Yes	Yes	Yes	Yes	Yes

- Order consolidation solution
- Order packing solution
- Mobile configuration



## High Density Storage for Slow-Med Velocity SKUs

- High density, maintenance free, mobile storage solution made from double PVC laminated Industrial Textile
- Non-fraying, fire, mold, & static resistant; safe for all types of storage applications: apparel, cold, electronics, food, high value, small to medium sized parts, etc.
- Operating Temp from -20° <-> +180°







## High Density Storage for Slow-Med Velocity SKUs

Product Category	Picking	Packing	Shipping	Assembly	Component	Other:
High Density Storage	Yes	Yes	Yes	Yes	Yes	Pick Module

- Scalable and customizable storage solution that eliminates wasted space in the storage warehouse and retail back room
- ~240 lbs. per column, 35 lbs. per cell
- Improved storage density from 40-60% & pick efficiency from 30-40%

**FIND WHAT'S  
NEXT.**



**PROMAT** 2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  **MHI**

# PACKAGING EQUIPMENT

## Carton Packaging Equipment

- Eliminates excess void for parcel shipping
- Auto void fill options
- Drop in place integration







## Carton Packaging Equipment

Product Category	Picking	Packing	Shipping	Assembly	Component
Packaging Equipment	No	Yes	Yes	No	No

- Up to 15 cases per minute
- 12" L x 8" W x 2" T – Min Case
- HSC Case Handling

# FIND WHAT'S NEXT.



# PROMAT<sup>®</sup>

2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  MHI

# ROBOTS



## Robotic Carousel ASRS

- Goods-to-Person delivery eliminates labor
- Saves up to 85% of floor space with carousels and robotic interface
- Fast ROI due to cost effectiveness





## Robotic Carousel ASRS

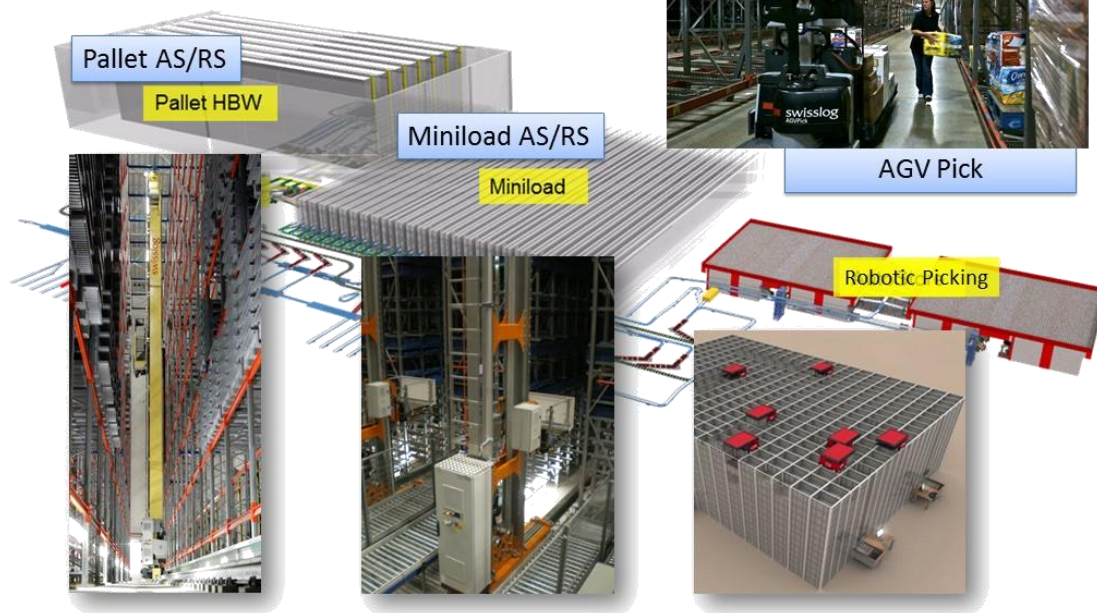
Product Category	Picking	Packing	Shipping	Assembly	Component
ASRS	Yes	Yes	No	Yes	No

- Handles loads up to 36" W x 36" H x 36" D
- Up to 200 lbs.
- Systems up to 1440 transactions/hour



## Robotic Automated Storage & Retrieval System

- Reliability –  
100% redundancy  
any robot to any bin
- Goods-to-person  
picking - accuracy  
and efficiency
- Highest storage  
density possible -  
maximize existing  
infrastructure





## Robotic Automated Storage & Retrieval System

Product Category	Picking	Packing	Shipping	Assembly	Component
Robots	Yes	No	Select One	No	No

- 5000 - 1,000,000 bin storage system
- Footprint of:  
2000 - 400,000 Sq. Ft.

**FIND WHAT'S  
NEXT.**



**PROMAT** 2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  MHI

# SCISSOR LIFTS



## Scissor Lifts

- Customized lifting, tilting, and turning of material, products or personnel
- High performance extends the serviceable life in extreme, high speed, and/or high cycle applications







## Scissor Lifts

- Remote access connectivity.
- Provides remote networked control to access the system in real time from any location.
- The engineers can access the module through the system provider's secured communication network.
- The module facilitates:
  - remote troubleshooting
  - maintenance
  - uploading networked components

**FIND WHAT'S  
NEXT.**



**PROMAT** 2015

McCormick Place South | Chicago  
March 23-26, 2015  
[promatshow.com](http://promatshow.com)

powered by  MHI

# **SORTATION EQUIPMENT**



## Sortation System

- Gently and effectively sorts polybags, bags, padded envelopes, flats, and cases on the same conveyor
- Enables a small footprint with tight divert centerlines
- Sorts bi-directionally





## Sortation System

Product Category	Picking	Packing	Shipping	Assembly
Sortation Equipment	Yes	No	Yes	No

- Up to 200 products/min with 12" product length
- Up to 500 products/min with 4" product length



**FIND WHAT'S  
NEXT.**



**PROMAT** 2015

McCormick Place South | Chicago  
March 23-26, 2015  
promatshow.com

powered by  MHI

## ***For More Information:***

Gary Forger, AS/RS Managing Executive, MHI

Email: [gforger@mhi.org](mailto:gforger@mhi.org)

Website: [www.MHI.org/AS-RS](http://www.MHI.org/AS-RS)