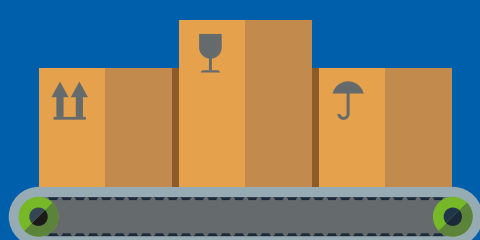


Positioning Your Order Picking Team

# For Success



Automated goods-to-person storage and retrieval systems deliver ergonomic benefits that yield higher productivity, better accuracy and reduced operational costs.

## Common Ergonomic Injuries and their costs

Non-fatal workplace injuries cost U.S. businesses nearly

# \$62 billion

yearly according to the 2016 Liberty Mutual Workplace Safety Index

### 3 Leading Causes of Injuries



**\$19.2B**  
Overexertion injuries



**\$15.5B**  
Falls



**\$5.3B**  
Struck by object or equipment

## How much could an Ergonomic Injury cost?

The average cost of a back-injury-related workers comp claim can be:

**\$40,000** to **\$80,000** per employee.



Employers also experience significant indirect costs associated with a worker injured on the job — from **2 to 20 times** higher than direct costs.



## An Ergonomic Solution: Automated Storage Systems



### Vertical Carousels

Comprised of a series of shelves which rotate around a track to deliver stored items safely and quickly to an ergonomically positioned work counter.



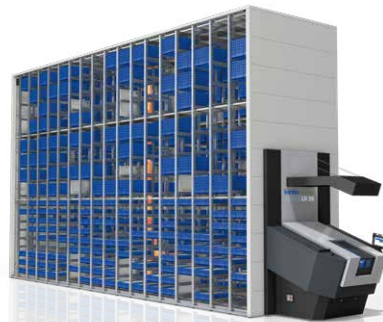
### Vertical Lift Modules (VLMs)

An automatic inserter / extractor device operates between two columns of shelving automatically retrieving and delivering trays with stored goods when required by an operator.



### Horizontal Carousels

Bins mounted on an oval track rotate horizontally to deliver storage locations to an operator.



### Vertical Buffer Modules (VBMs)

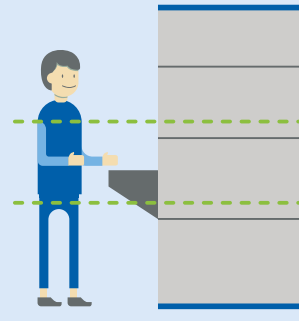
A discrete handling, tote/bin based system, consisting of enclosed dense shelving with a movable mast in the center that stores and retrieves totes delivering them to a picking station or via automatic conveyor.

## The Ergonomic Impact of AS/RS



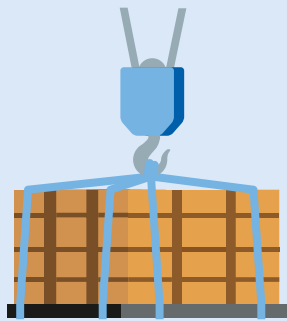
### Minimize Fatigue, Improve Accuracy

With automation, a warehouse can boost picking rates by 600% due to drastically reducing walk and search time and improve picking accuracy due to reduced operator fatigue.



### Go for the Gold (en Zone)

Every item stored is delivered to the operator at the optimal ergonomic work height, called the "Golden Zone" or waist-high reducing the risk of injury due to reaching, bending and stooping.



### Need a Lift? Add a Hoist

For heavy loads, a VLM can be equipped with an integrated overhead crane and electric hoist for ergonomic handling assistance reducing the risk of injury due to heavy lifting.



### Other Benefits

Positioning operators at an ergonomic workstation, these systems significantly reduce absenteeism, insurance premiums and worker's compensation claims.