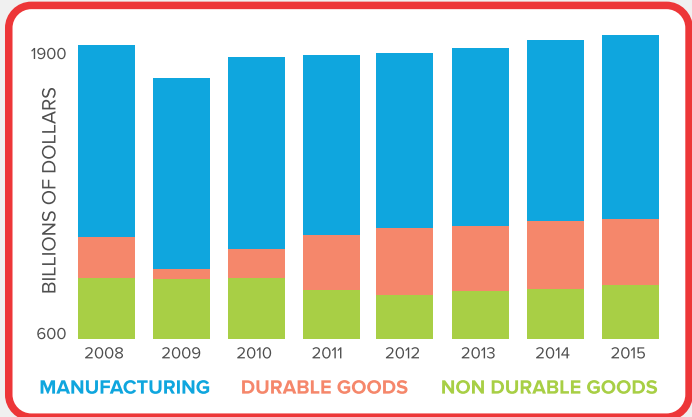


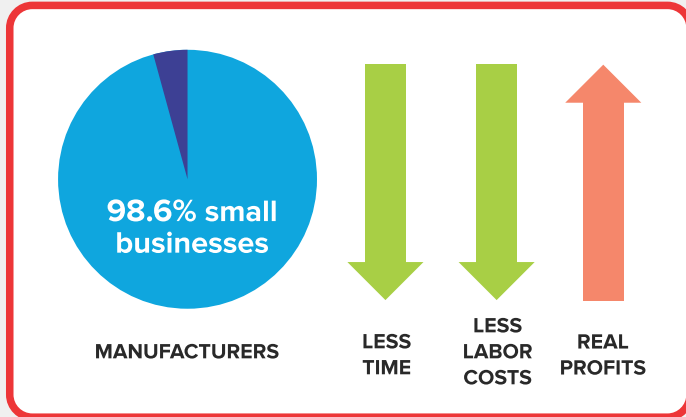
# OPTIMIZING YOUR MANUFACTURING

## ASSEMBLY OPERATION UTILIZING PALLET-HANDLING CONVEYOR SYSTEMS

REAL VALUE ADDED BY INDUSTRY = FACTORY AUTOMATION IS THE KEY



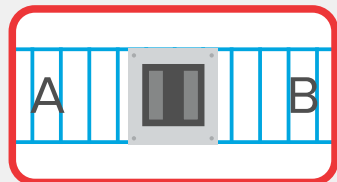
Manufacturing companies contributed \$2.17 trillion to the U.S. economy according to the most recent annual data. source: www.bea.gov



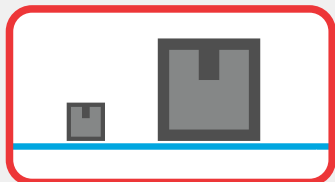
Pallet conveyor systems continue to be a crucial component for virtually every manufacturer seeking to improve profits. source: www.nam.org/Newsroom/Top-20-Facts-About-Manufacturing/

## WHAT ARE THE CHARACTERISTICS OF PALLET CONVEYORS?

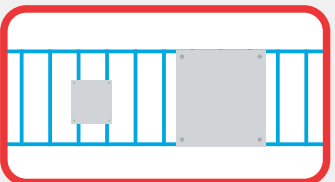
### ADAPTABLE



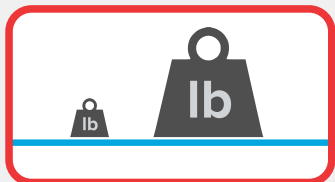
Transfers materials and work in process from one point to other.



Items transported can be small and delicate, or heavy and bulky.

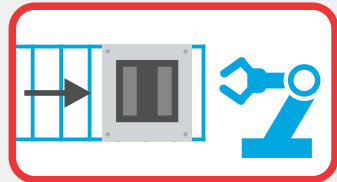


Pallets range from around 10 x 10 inches to 48 x 48 inches.

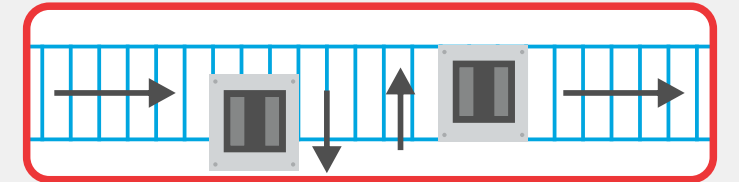


Carry loads of less than a pound, up to several hundred per pallet.

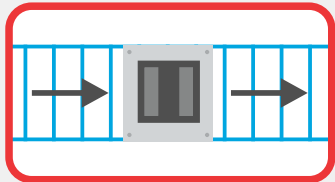
### VARIOUS PROCESSES CAN BE PERFORMED



Pallet carries parts to be assembled to an operator or robot.



Pallet may be freed from the conveyor when it reaches the operator or robot, then returned once assembly is complete.



Pallet can be lifted, rotated and positioned while still on the conveyor.

### PALLET CONVEYORS CAN...

**MOVE**

Pallet conveyors allow for materials to be moved and stored effortlessly. This streamlines and standardizes material handling.

**OPTIMIZE**

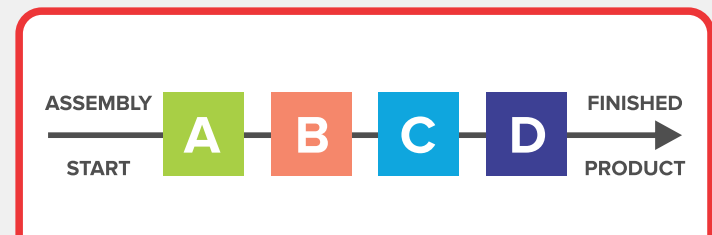
Eliminate operations that require labor but do not add value. For example rotate its pallet to a desired orientation.

**ADAPT**

Modular approach helps manufacturers adapt to changing demands and production requirements.

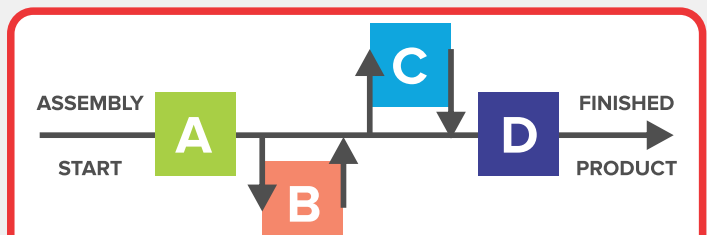
## TYPES OF PALLET CONVEYOR SYSTEMS

### SYNCHRONOUS



All processes happen in time with each other. All pallets move in the same direction at the same time.

### NON-SYNCHRONOUS



All processes can be independent of each other. All pallets can be removed and reintroduced to the line as needed.

## ADVANTAGES OF MODULAR PALLET CONVEYORS

**PHASED-IN IMPLEMENTATION**

Allows the production line to grow as work-cells and individual tasks are joined together.

**INTEGRATION OF PROCESSES AND TESTING**

Diversity of product steps and changing technology, requires flexibility in the conveyor system.

**FLEXIBILITY BASED ON PRODUCT DEMAND**

Line speed and product flow can be altered based on product demand and automation controls.

**RESPONDING TO PRODUCTION INSPECTION**

Rejected parts can be moved to a reject line while approved products continue the normal flow.

**REUSE AND RECONFIGURE MODULES**

Conveyors can be lengthened or shortened, and modules can be added or removed.

**IMPROVED ERGONOMICS**

Pallet conveyors are quiet, modules for positioning and rotating reduces worker repetitive work fatigue.

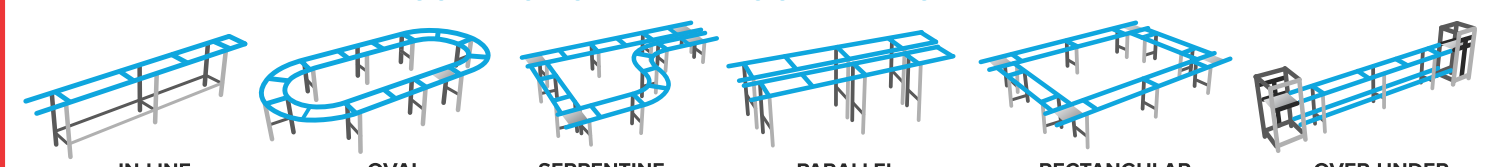
**AUTOMATION CONTROLS**

Pallets can be outfitted with read-write devices, that communicate with the control panel.

**REDUCED WORK-IN-PROCESS**

Pallet conveyors, continuously move product down the line from workstation to workstation.

### CONTROL OVER THE FOOTPRINT OF THE LINE



The modular design of pallet conveyors provides for a variety of different configurations that maximize your floor space, allowing the same system to run multiple products with little change-over.

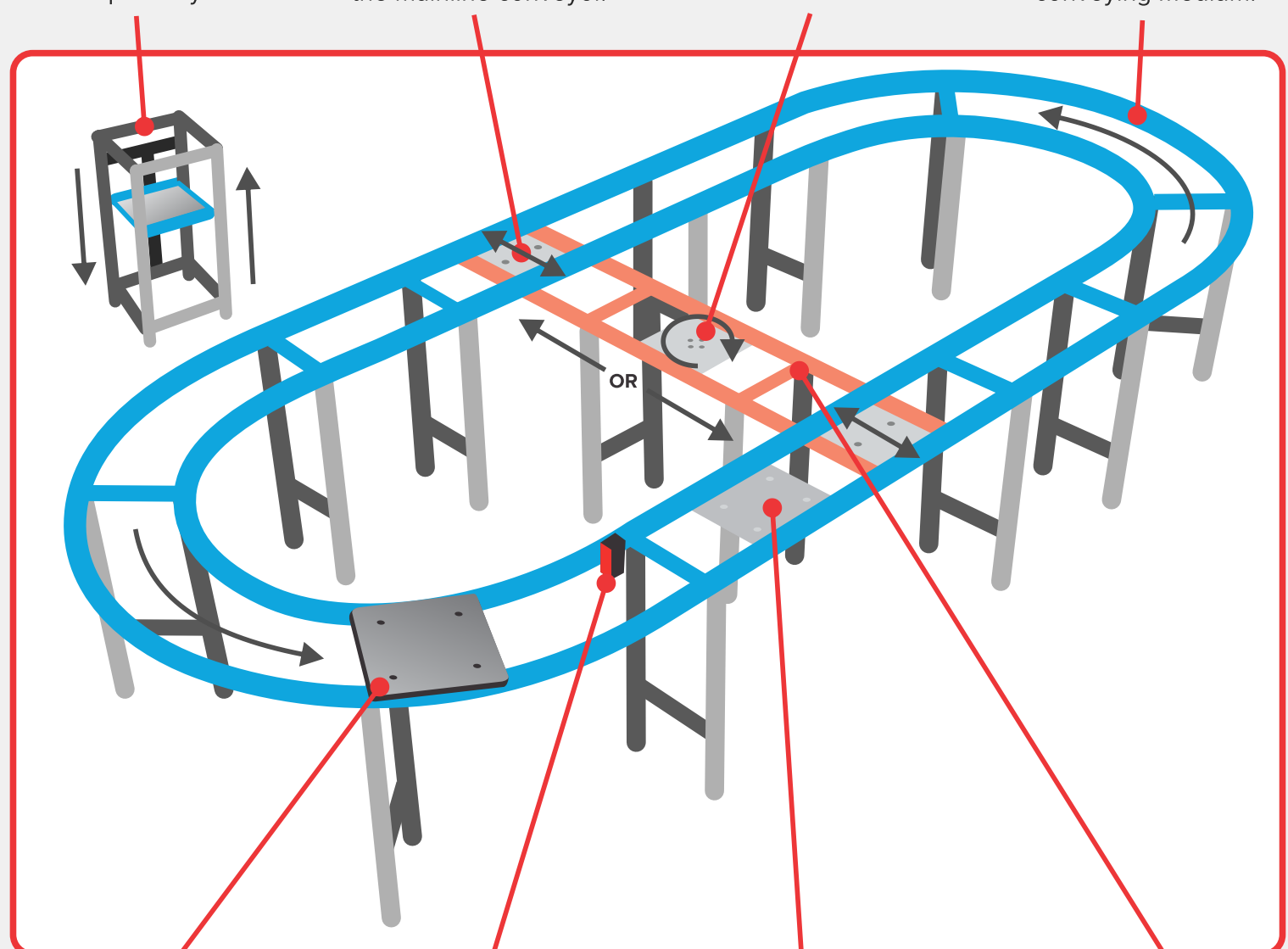
## PALLET CONVEYOR MODULES

**VERTICAL TRANSFER UNITS (VTUs)** move pallets between various mainline elevations in Over and Under pallet systems.

**LIFT AND TRANSFER** move pallets between adjacent lines at a right angle. Is positioned between the strands of the mainline conveyor.

**LIFT AND ROTATE** devices lift the pallet off the mainline, traverse or spur conveyor and rotates it either 90° or 180° and lowers it back.

**MAINLINE CONVEYORS** are typically dual strand. Featuring accumulating roller chain or timing belts as the conveying medium.



**PALLETS** an essential component in pallet handling systems. They come in a variety of different sizes, styles and materials.

**PALLET STOPS** are used to stop pallets at or before a particular location or assembly station.

**POSITIONING UNITS** accurately and precisely locate the pallet, lift it off to maintain location, while the conveyor continues to run.

**TRAVERSE OR SPUR CONVEYORS** move pallets short distances, between mainline runs and Spur in and out the mainline.

## WHY CHOOSE VersaMove Pallet-Handling Systems?



The VersaMove workpiece pallet conveyor system allows for cutting-edge productivity and efficiency, while still providing the flexibility needed for a broad array of industries and operations. Available in three sizes, it can be expanded or reconfigured to meet company's needs. mk North America designs and engineers the VersaMove pallet-handling conveyor systems. We fully assemble all modules, build and test each system prior to shipping. We work with experienced systems integrators.



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