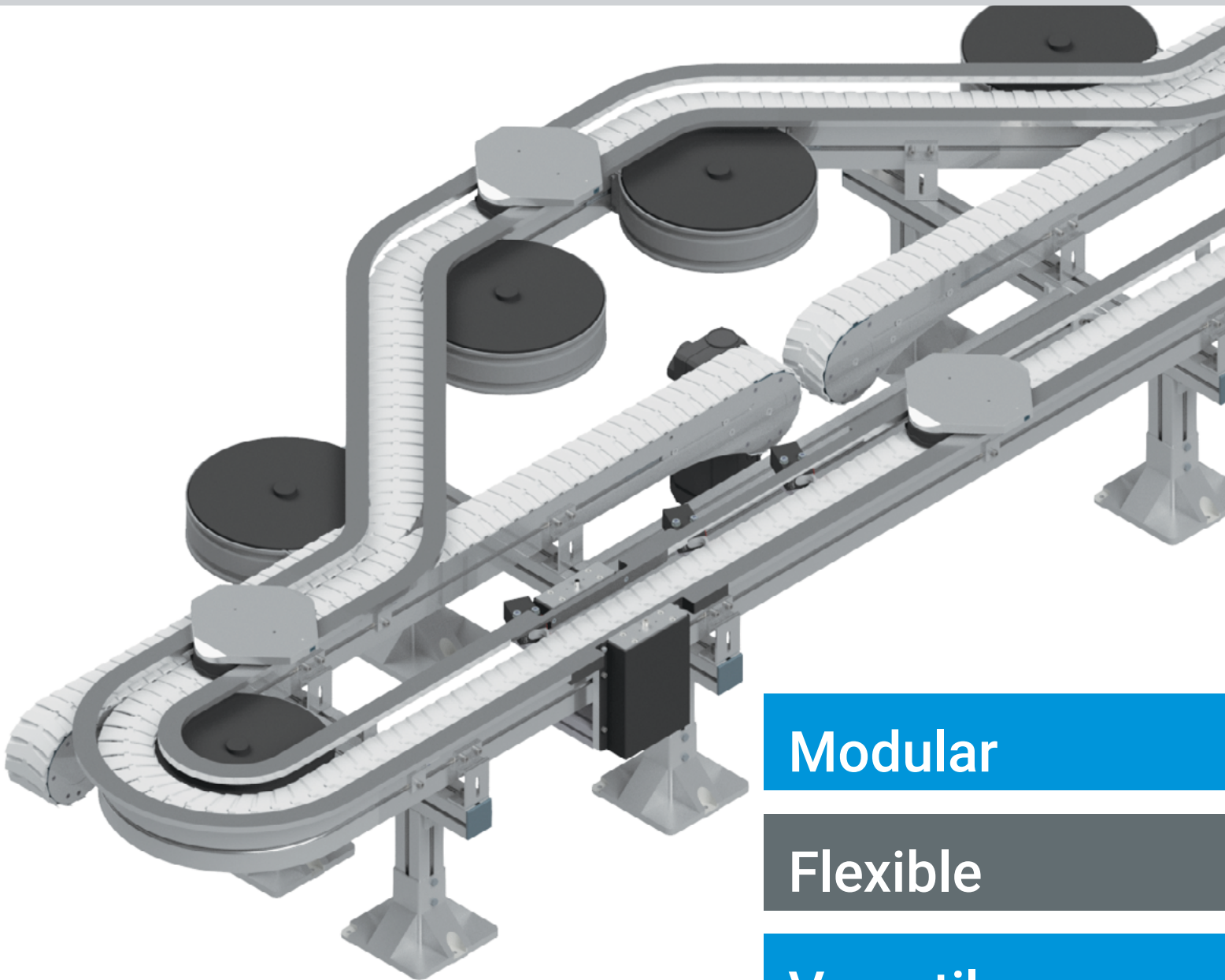


AP10 Flexible Chain Pallet-Handling Conveyors



Modular

Flexible

Versatile



Introduction to mk

mk North America, Inc. is a member of the mk Technology Group and a leading worldwide manufacturer of aluminum conveyors, pallet-handling systems, stainless steel conveyors, and extruded aluminum framing.

Unsurpassed variety, maximum flexibility and easy integration are reasons mk has become the supplier of choice for machine builders, system integrators and manufacturing companies around the globe.

Since 1988 mk North America has been providing diverse industrial know-how, superb quality, constant innovation and application engineering excellence. mk North America offers you the perfect solution for any application.

better products. better solutions.

At mk North America we believe in offering not only better products, but also better solutions. We offer the most extensive product line in the industry; featuring more than 30 different types of conveyors. This allows us to partner with you to provide just the right solution for your needs.

Our broad offering and years of experience in material handling allows us to provide the best equipment for your individual needs. Our innovative conveying, both standard and custom, has proven itself in the automotive, manufacturing, machine builder, electronics, consumer goods, and printing industries, to name a few.

When ordering our conveyors you will experience firsthand the benefits of our innovative designs, competitive pricing and exceptional customer service.

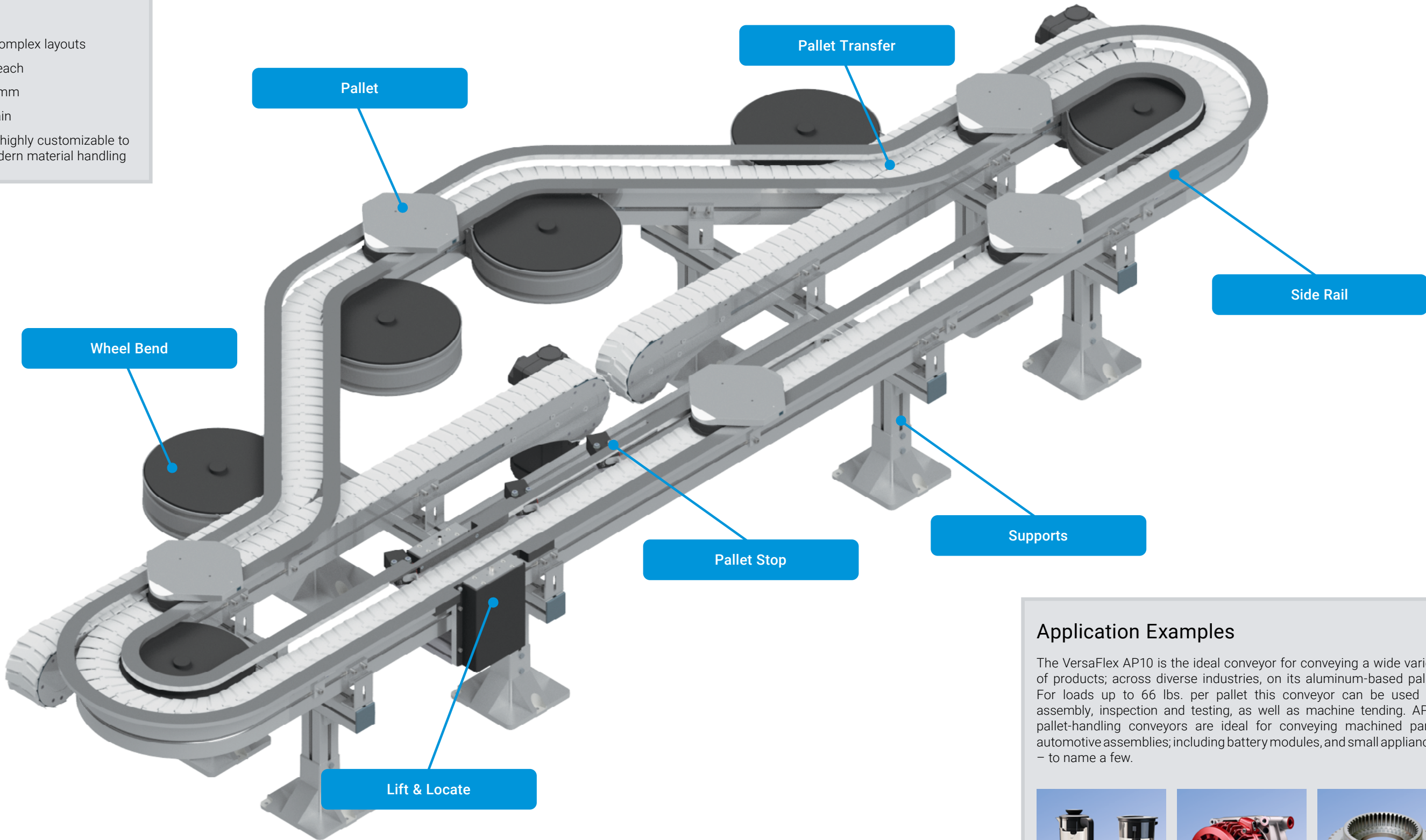
At mk we are dedicated to providing you better products and better solutions.

The mk Advantage

- ✓ Robust construction and high quality components decrease downtime and increase productivity
- ✓ Modular design reduces engineering costs and lead-times
- ✓ Technical application assistance
- ✓ Competitive pricing
- ✓ Innovative designs
- ✓ Custom solutions

AP10 Benefits

- ✓ Economical solution for complex layouts
- ✓ Pallet loads up to 66 lbs. each
- ✓ Repeat accuracy of ± 0.1 mm
- ✓ Features a finger safe chain
- ✓ Modern, expandable, and highly customizable to meet the demands of modern material handling

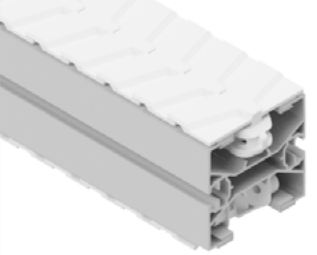





Application Examples

The VersaFlex AP10 is the ideal conveyor for conveying a wide variety of products; across diverse industries, on its aluminum-based pallet. For loads up to 66 lbs. per pallet this conveyor can be used for assembly, inspection and testing, as well as machine tending. AP10 pallet-handling conveyors are ideal for conveying machined parts, automotive assemblies; including battery modules, and small appliances – to name a few.



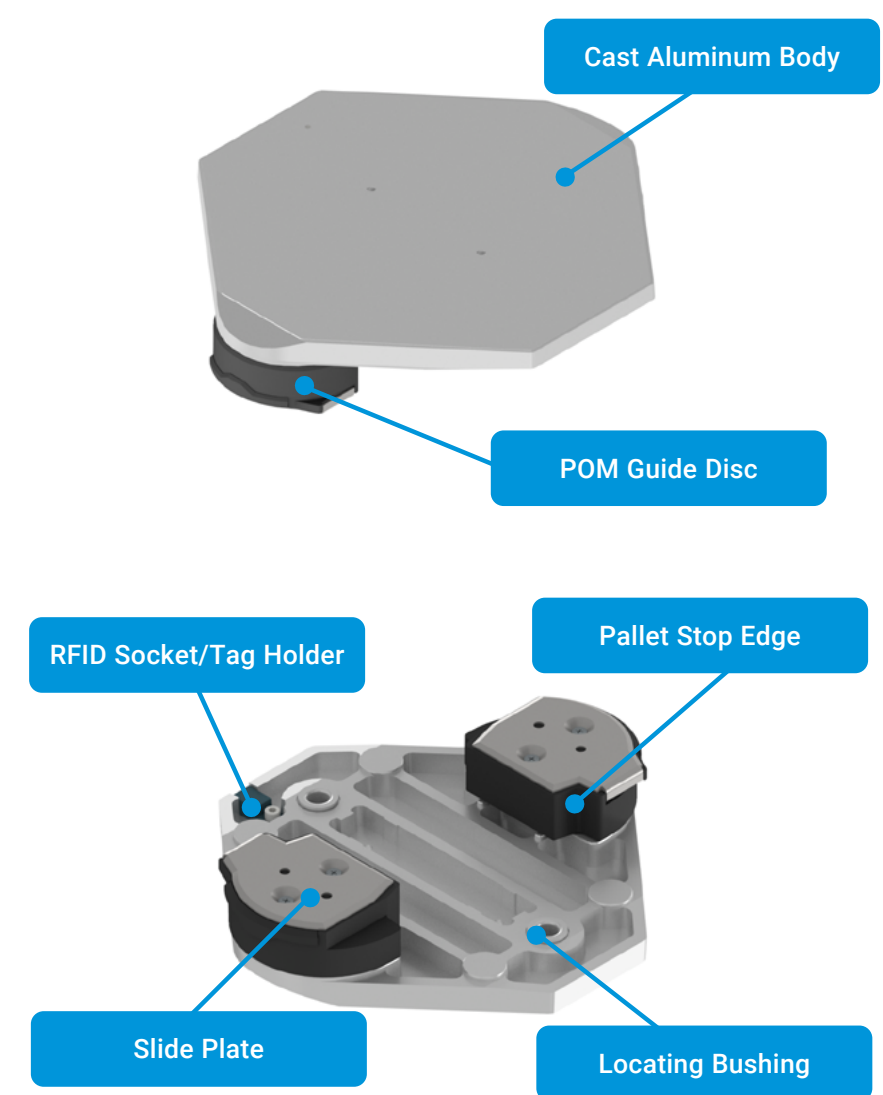
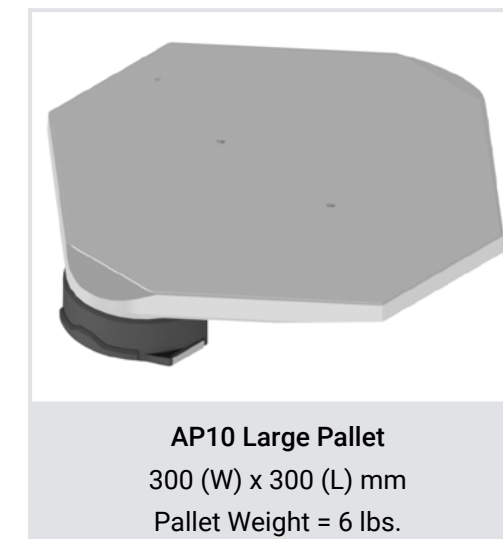
versaflex AP10 Pallet-Handling Systems

	Features	Technical Data
VersaFlex AP10 Flat Top Chain Conveyor		
	<ul style="list-style-type: none"> ▪ Straight running, curves and inclines ▪ Frame height is 95 mm including chain ▪ 105 mm frame width with 102 mm chain width ▪ POM flat top, finger safe, chain ▪ Double deep t-slots on each side of the frame 	<ul style="list-style-type: none"> ▪ Length: up to 30,000 mm ▪ Loads: up to 66 lbs./pallet* ▪ Speeds: up to 90 fpm
SU Undamped Pallet Stop		
	<ul style="list-style-type: none"> ▪ Typically used for pallet singulation ▪ Undamped pneumatic stop ▪ Single or dual-acting ▪ Maintenance free ▪ High load capacity ▪ High cycle rate 	<ul style="list-style-type: none"> ▪ Total load is dependent on stop version and conveyor speed ▪ Working pressure: treated compressed air, 4 - 8 bar
Lift and Locate		
	<ul style="list-style-type: none"> ▪ Positions and lifts a single pallet, via pneumatic cylinder ▪ Locating pins within Lift and Locate unit engage with bushings on the pallet ▪ Maintenance free operation ▪ Includes lifting cylinders, integrated undamped stop and mounting ▪ Cylinder sensing (optional) 	<ul style="list-style-type: none"> ▪ Repeat accuracy: ± 0.1 mm ▪ Additional Pallet Stops are required, but not included, in order to control pallet flow
Pallet Diverter		
	<ul style="list-style-type: none"> ▪ Designed to divert pallets from one conveyor to another ▪ Includes rotary actuator, one-way control valves, and proximity sensor with sensor bracket ▪ Assembly is mounted and integrated into the conveyor ▪ Maintenance free operation 	<ul style="list-style-type: none"> ▪ Left or Right orientation ▪ Constructed out of phenolic resin for long-life and durability

(*) The load rating per pallet also includes the weight of the pallet.

Pallets

VersaFlex pallets act as product carriers as they move around the conveyor system. Pallets can be tooled with fixtures to secure products for manual or automated operations. All mk pallets contain a set of precision bushings. These bushings mate with the locating pins in the different modules.

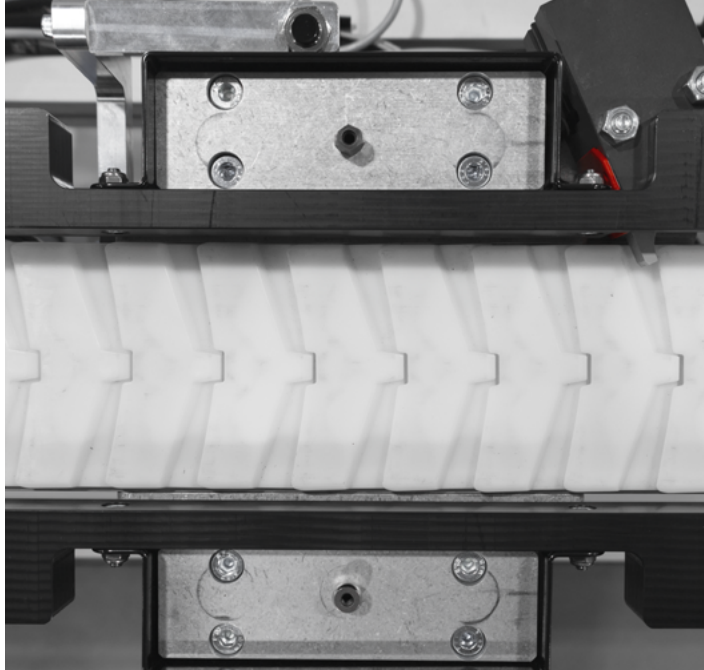


Pallet Details:

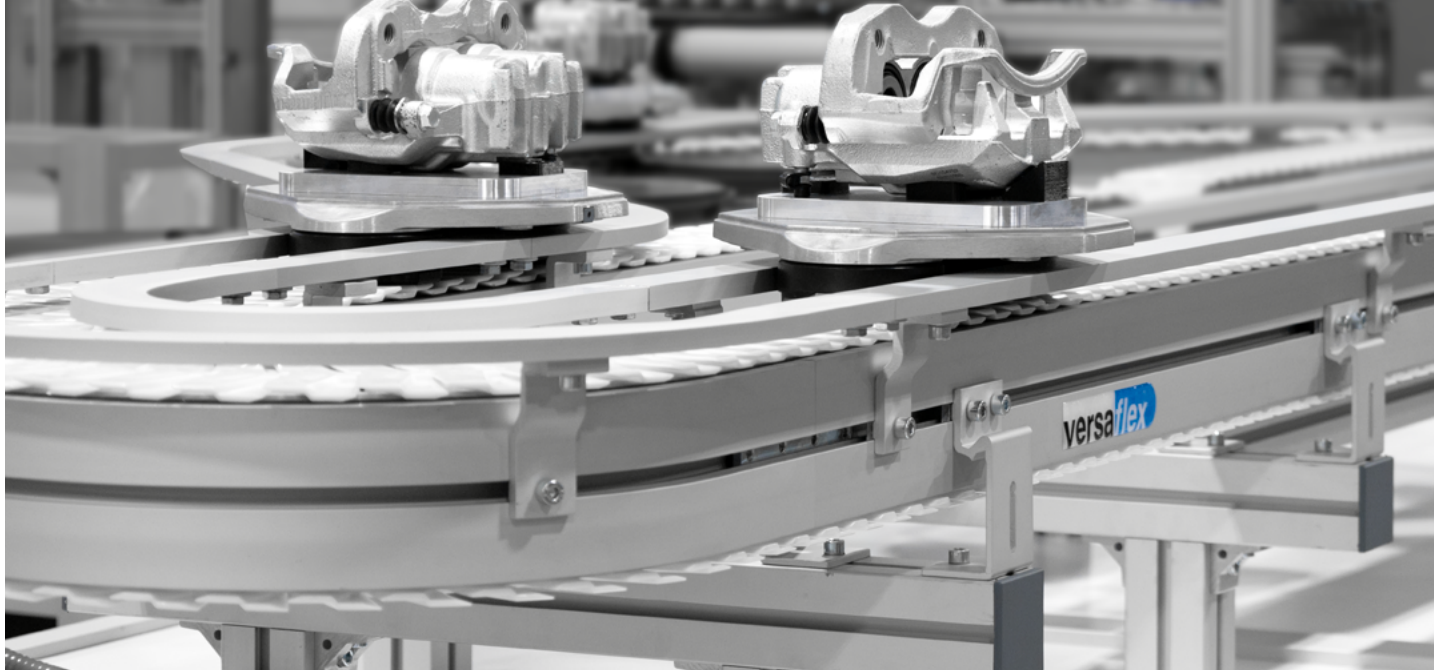
- ✓ Up to 66 lbs. load per pallet*
- ✓ Repeat accuracy up to ± 0.1 mm
- ✓ Includes locating bushings for interfacing with locating pins of Lift and Locate module
- ✓ The guide discs are designed so that they include integrated pallet bumpers
- ✓ Surface plates can be machined to accept fixtures and additional tooling



Lift and Locate Modules require the use of a Pallet Stop within the modules itself, as well as in the position right before the module.



In this image, a top down view of a Lift and Locate Module, one can see the optional pallet sensor at the top center of the image.



Pallets are easily transported around curves; as shown in the example above which includes a 180° curve.



A pallet is entering into the Lift and Locate Module. First the pallet will be stopped using a Pallet Stop positioned within the Lift and Locate Module.

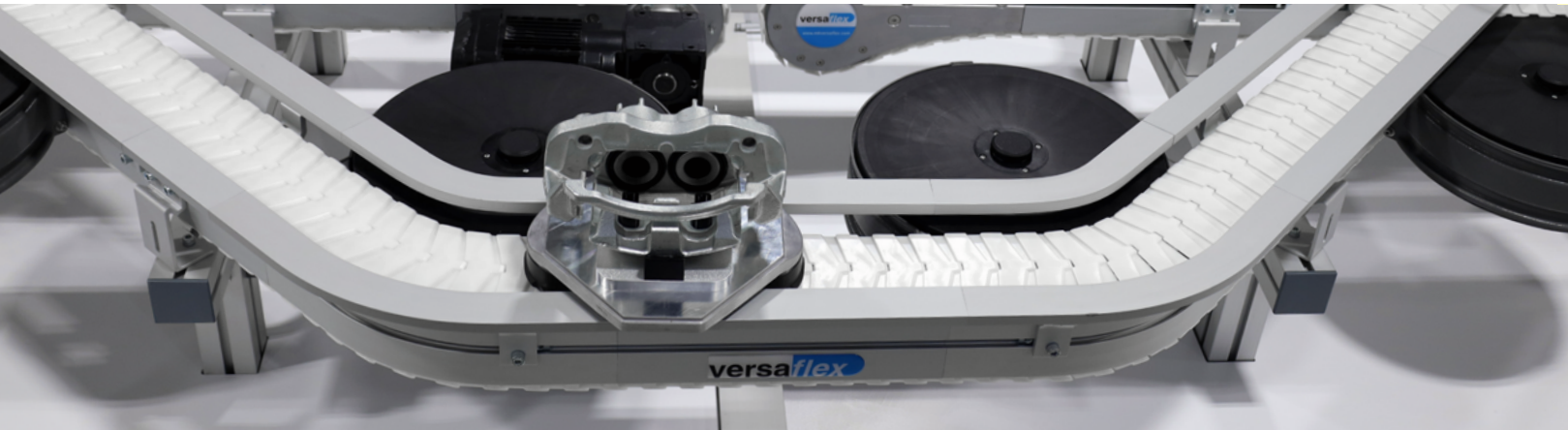


A close-up view of a Pallet Stop.



A close up view of a pallet stopped via a Pallet Stop.

The mk North America Difference



Support

At mk North America we believe in supporting our customers from the initial inquiry through the delivery of their system and beyond. We have a dedicated sales and engineering staff to manage your project. All orders include detailed 3D and 2D models for your review and approval. mk assembles and tests all material-handling systems prior to shipping. mk also offers FAT, start up and installation assistance and as well as all replacement and spare parts.

Customizations

mk North America believes in offering not only a better product, but also a better solution. We understand how the performance of your production line affects your business. Regardless of what makes your material handling application unique – temperature, environmental concerns, handling requirements, or space constraints – mk can provide a custom solution that meets your needs and keeps your business moving.

Advantages

- ✓ **Easy installation:** All mk products are assembled and tested prior to shipping
- ✓ **Easy integration:** All mk products work together and are fully compatible
- ✓ **Design without compromise:** mk offers more products and flexibility than anyone else
- ✓ **Cost-effective:** Save time and money by using standard mk products to build custom solutions
- ✓ **High quality components:** Reduce operating expenses and increase productivity
- ✓ **Experience:** Providing customers with functional and cost-effective solutions since 1988
- ✓ **Engineering support:** Full technical and design assistance before, during and after the sale

Our Other Products

Conveyor Systems & Linear Motion

With over 20 different conveying systems, mk offers a product variety which is unsurpassed in the marketplace. Our broad offering, and more than 30 years of experience in material handling, leads to robust solutions that feature long life and reliable operation while maintaining all the advantages of modular design and expandability.

Our innovative conveying solutions, both standard and custom, have proven themselves in automotive, manufacturing, machine builder & integrators, metal working, packaging, pharmaceutical and printing industries.



VersaMove Pallet-Handling Conveyor Systems



mk North America manufactures pallet conveyors over three different platforms. This allows for the pallet-handling system to be tailored to meet your specific needs. mk believes in offering not only a better product, but also a better solution. VersaMove pallet-handling conveyors are pre-engineered and modular. The system can be easily expanded or reconfigured as your manufacturing needs change. Our workpiece pallet conveyors can be used in a variety of layouts, or combined for even greater flexibility in planning production processes. www.mkversamove.com



Extruded Aluminum Framing

mk Aluminum Framing Systems feature over 200 different profile shapes and more than 2,700 connectors and system components, all engineered for a precise fit and maximum rigidity. Forget the hassles and inflexibility of steel – the welding, grinding, painting and waiting. mk offers you fast assembly, easy reconfiguration and unlimited flexibility.

With mk Aluminum Framing you can build just about anything you can imagine. Whether it be machine bases, safety enclosures, perimeter guards, tool racks, robot stands, carts, workstations, display units or something else, with mk's aluminum framing the possibilities are nearly limitless.



**Find your local mk representative at
www.mknorthamerica.com/sales-and-support**

**View all of our products and request a quote at
www.mknorthamerica.com**

www.mkversaflex.com



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