



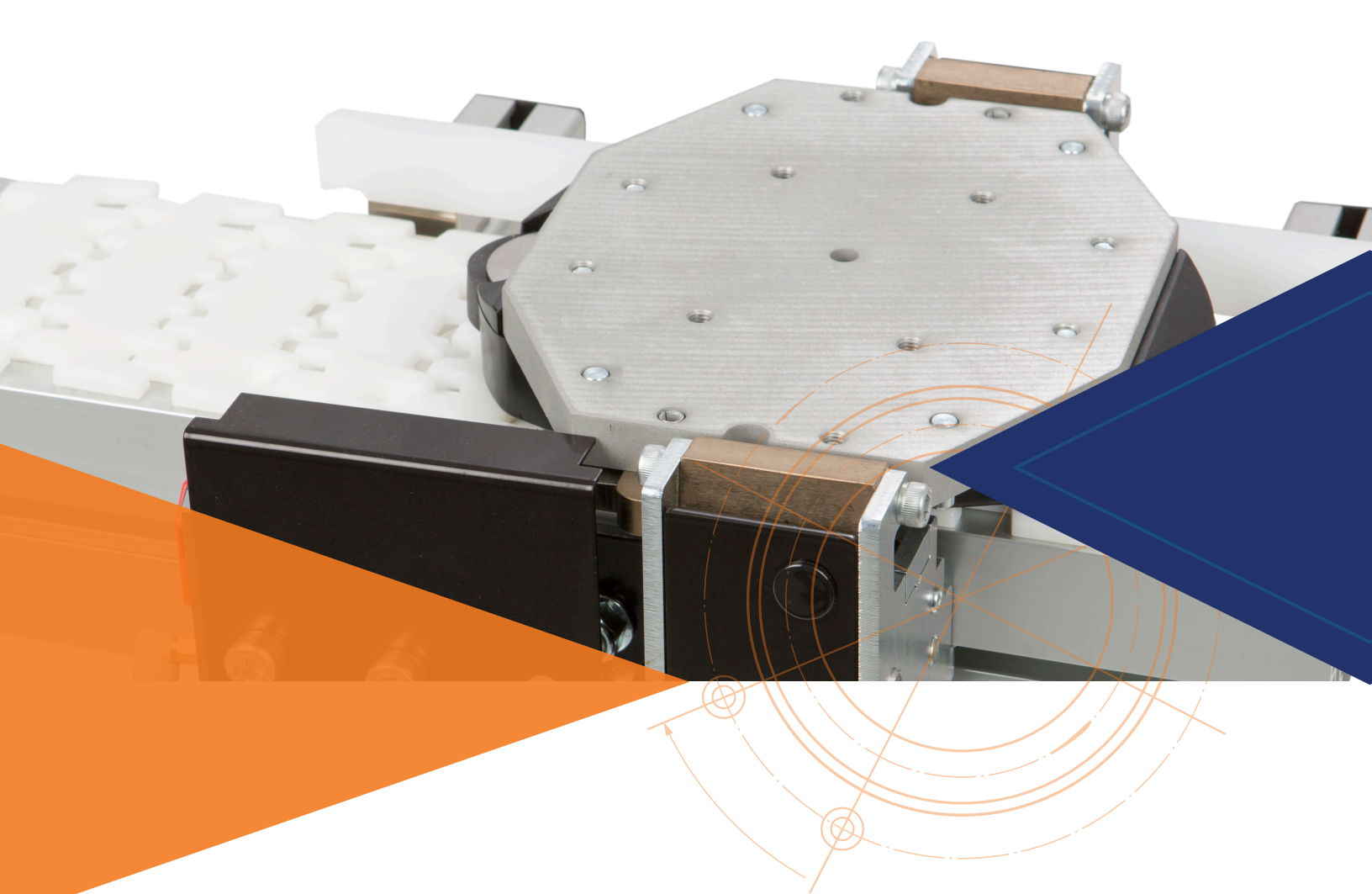
DORNER[®]



PRECISE, EFFICIENT AUTOMATION

WHICH PALLET SYSTEM CONVEYOR IS
BEST FOR MY OPERATION?

Timing Belt/Dual Strand,
Flexible Chain, or Edge Roller



What is a Pallet System Conveyor?

When accurate positioning and precision conveyance are key to your operation, a Pallet System Conveyor will meet your needs.

Pallet system conveyors are ideal for many automation-focused applications that require exact movements and positioning of parts, as they can be setup or programmed to start and stop at specific intervals to sync up with robotic interaction or other processes. The use of pallets on a precision conveyor allows for a high degree of accuracy and repeatability in both placement on the conveyor system, and position when interfacing with a robot or operator.

Pallet system conveyors typically come on different platforms to convey the pallet: a dual belt configuration powered by a common drive, a flexible plastic chain belt design, or a roller edge conveyor. The right type of pallet system will depend on the needs of the application and product.

Which of these pallet system conveyor lines is best suited for you?

This e-book explores timing belt, flexible chain, and edge roller pallet system conveyors in depth, discusses their practical applications and highlights features so you can make an informed decision.

Timing Belt/Dual Strand Pallet Systems

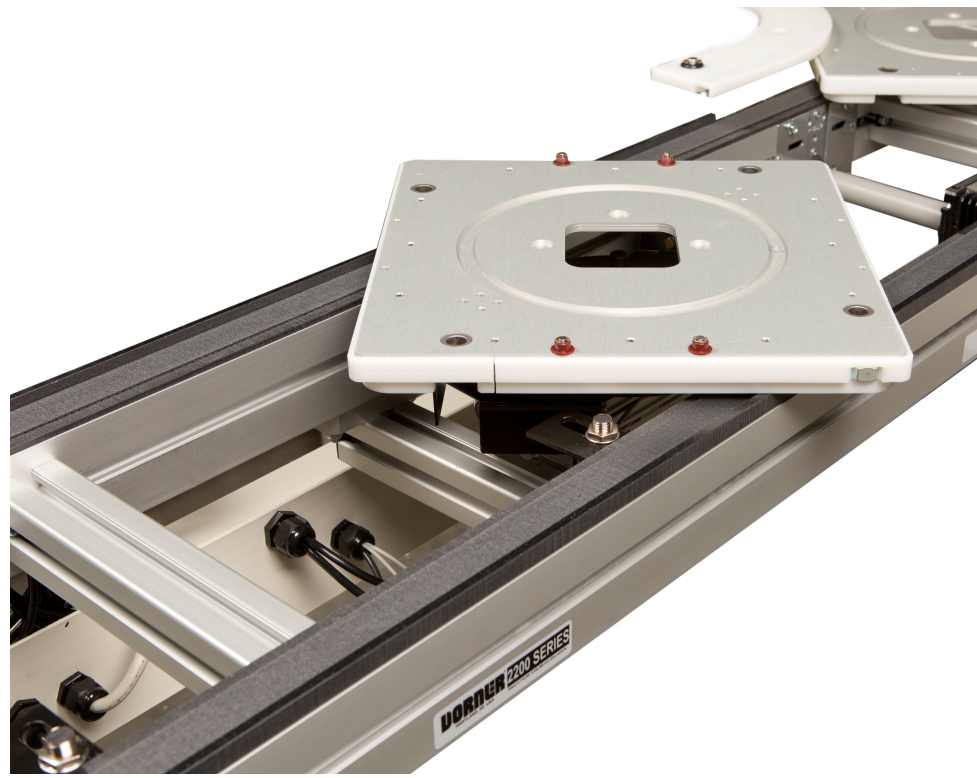
Many packaging, industrial automation, product assembly, and manufacturing applications require product to be in an exact spot on the conveyor at a precise time. The right choice here is precision timing belt conveyors.

A timing belt pallet system is designed with dual belt conveyors with a common drive module. Pallets are typically available in square or rectangular sizes, and utilize pin tracking for a cost-effective and accurate method of conveying pallets through turns.

Powering the conveyor to deliver accurate alignment of time and distance are servo motors that provide indexing repeatability of $\pm .040''$, all at a rate of 100 indexes per minute. This level of precision is critical, especially for robotic applications.

Ideal for These Industries

- Automotive
- Electronics
- Medical
- Life Science Products
- Health & Beauty Products
- Appliance Products



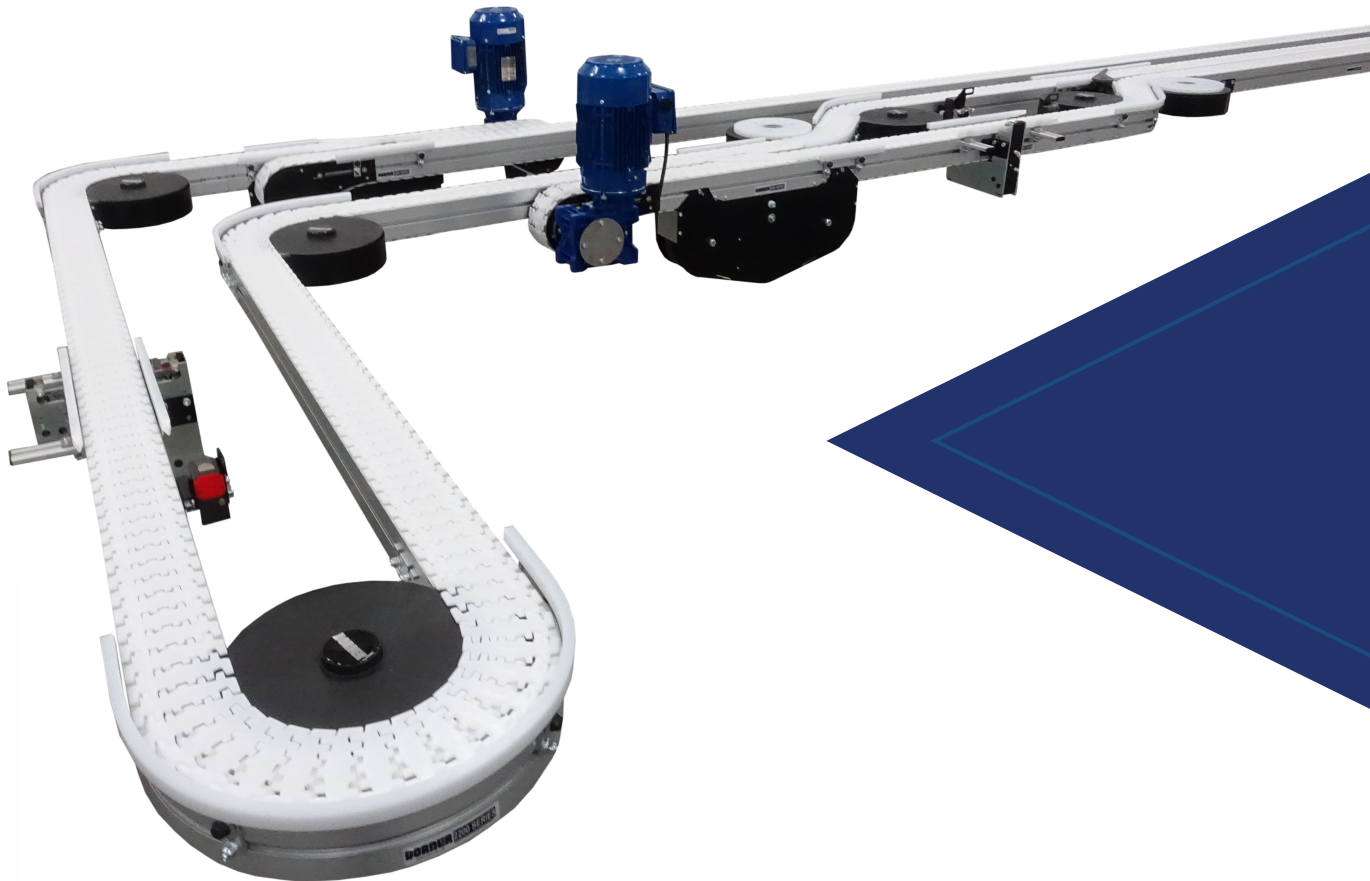
Flexible Chain Pallet System

Some application designs require product to be moved in and around equipment and machinery. To accommodate this need, conveyors need to be flexible and make tight turns – which is ideal for flexible chain conveyors.

A popular choice for packaging lines within industrial, medical, life sciences and consumer product industries, flexible chain conveyors operate well in an environment that has tight spaces or elevation changes.

Ideal Applications

- Manual and Automated Assembly
- Inspection
- Automotive
- Electronics





Edge Roller Pallet Systems

With belted conveyors, typically the force of moving a product across the bed plate produces significant tension and friction on the belt. This high level of friction causes dusting and debris, which can lead to major issues for higher level cleanroom type applications such as medical device manufacturing, medical product assembly, life science applications, pharmaceutical product manufacturing, electronics assembly, and more.

With a roller style conveyor, the force to move the product has almost no friction, and the slip roller technology reduces the force by almost 75%.

An edge roller pallet and tray handling conveyor provides efficient, non-contact zoning for light, medium, and heavy load assembly automation applications. They feature a clean, open roller design and meet cleanroom requirements.

Ideal for These Industries

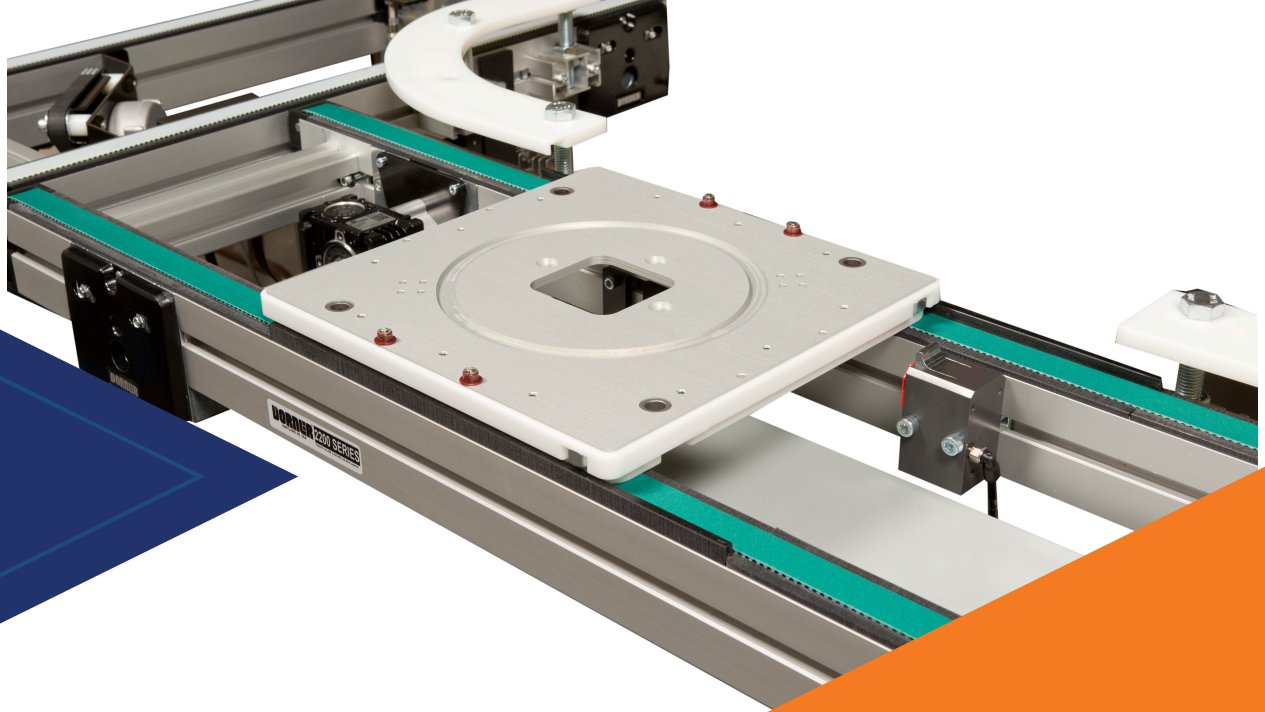
- Medical
- Electronics
- Consumer Goods
- Life Science Products
- Automotive
- Appliance Products
- Packaging
- Cleanroom Manufacturing



TAKING A CLOSER LOOK

Which Dorner product fits my application?

Pallet System Features & Specifications



2200 Precision Move Pallet System

Our 2200 Precision Move Pallet conveyors offer a cost-effective, efficient option for automation applications.

The 2200 Precision Move Pallet Conveyor is designed with dual belt conveyors with a common drive module. Pallets are available in square or rectangular sizes, and utilize pin tracking for a cost-effective and accurate method of conveying pallets through turns.

Features & Specifications

- Dual belt conveyors with common drive module
- 22mm wide, 5mm pitch timing belt conveyor
- Widths: 160, 240, 320, 400, & 480mm
- Lengths: Up to 24' 7" (7,500mm)
- Speeds up to 114ft/min (34m/min)
- Conveyor Load Capacity: 500lbs non-accumulating, 250lbs accumulated
- Pallet Capacity: 30-70lbs
- Pallet size: 160 mm to 480 mm
- Static conductive pallet skirt
- Square and rectangular pallets available

Ideal Applications

- Medium to large sized part movement
- Product routing and control
- Product inspection
- Assembly automation

MADE FOR MAXIMUM EFFICIENCY

2200 Precision Move Pallet System: Innovative, Modular Design

This line of conveyors is designed to be efficient and cost effective, while providing precision and accuracy throughout the manufacturing, assembly, and inspection process. With features that offer easy belt changes, powered turns, and accurate positioning, the 2200 Precision Move Pallet System is a reliable choice for automation applications.

Additional Benefits of Precision Move Pallet Conveyors

Innovative Offering

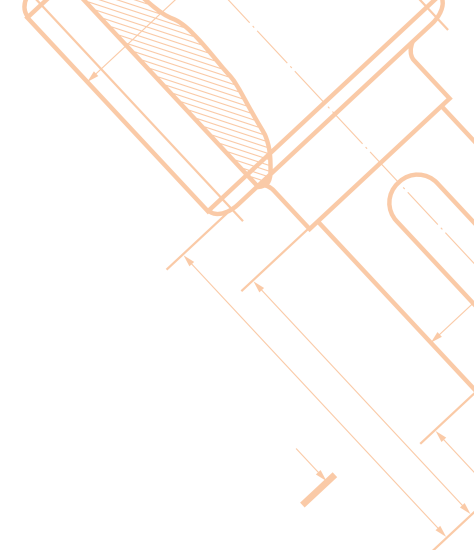
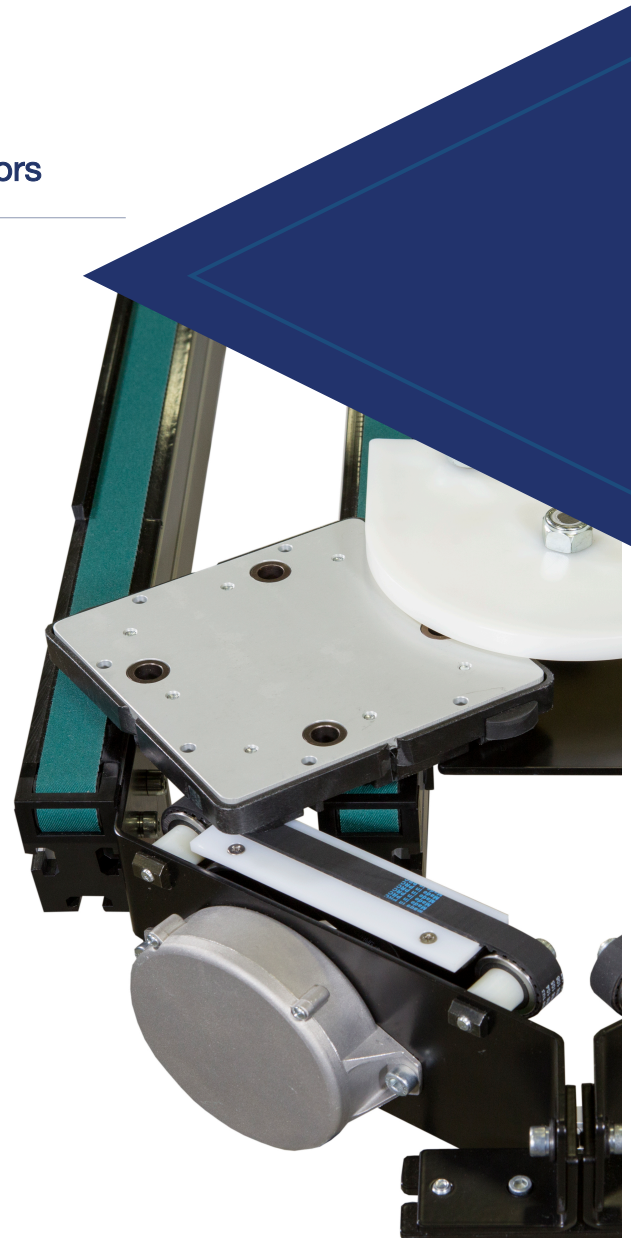
- Timing belt conveyors provide added load capacity in a small platform
- Quick belt change without the need to remove conveyor from system
- Pin Tracking System provide cost effective pallet traffic management

Customizable

- Can be modified with a variety of modules and accessories
- Aluminum extruded frame with universal T-slots
- Modular design mean this conveyor can be customized to meet a wide range of specifications

Modules & Accessories

- Lift & Locate
- Lift & Rotate
- Lift & Transfer
- 90 Degree Corner
- 90 Degree Corner & Merge



FlexMove Pallet System

Save space and improve efficiency in assembly and testing applications.

Features & Specifications

The FlexMove Pallet System is perfect for product routing and control throughout the production process. All components and pallets are sold as kits to allow for increased flexibility and customization and your business needs change.

Pallet Specs:

- 105 mm (4 in) Conveyor
- 190 mm (7.5 in) wide
- 100, 150, and 200 mm (4, 6, and 7.9 in) lengths
- Max product load = 9 kg (20 lbs)
- Aluminum base plate [13 mm (1/2 in thick)]
- (2) Hardened steel location blocks
- Pin Tracking System
 - Pins guide pallet along conveyor
 - Pins provide accuracy at stop location
- Pallets can be purchased as completed assemblies or as kits allowing end user to fabricate their own top plate
- Bumper material available to reduce noise and vibration in accumulated pallets

Modules & Accessories

Merge & Diverts

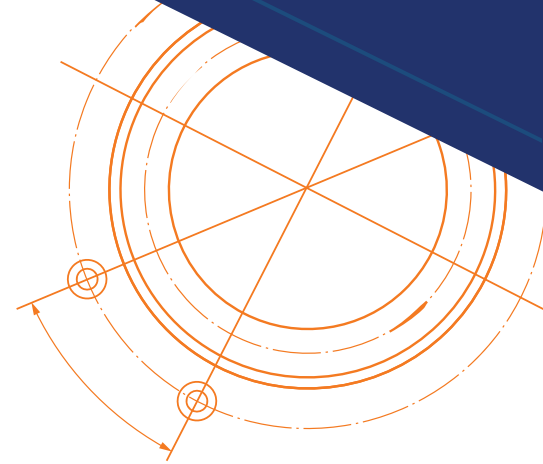
- Multiple Kit Styles: merge, divert, and merge & divert
- Multiple configurations: 45, 90, and parallel
- Requires pallet or puck stops and guiding for product traffic control
- Pneumatic diverter arm only contact pallet base puck
- Adjustable diverter positioning and height

Lift & Locate Station

- ± 0.1 mm (0.004 in) accuracy
- 91 kg (200lbs) holding force
- Includes 1 pallet stop (cushioned or non-cushioned) and sensor mounts
- Optional sensor and pneumatic valves

Pallet Stops

- Pneumatic stops available in cushioned and non-cushioned
- Capable of back to back pacing
- Up to 45kg (100lbs) total per pallet stop at 30 mpm (100 fpm)
- Higher load options available



MADE FOR MAXIMUM FLEXIBILITY

Our highly advanced FlexMove Pallet Systems are flexible chain conveyors with pallets for product routing and control. All components and pallets for the FlexMove system are sold as kits to allow for easy design changes and flexibility for end-users. Additionally, the use of the flexible chain conveyor allows easy curves and elevation changes in the line, so product can be routed around machinery or walkways, saving on valuable floor space.

Additional Benefits of FlexMove Pallet Conveyors

Customizable Solutions

- With our engineered solutions, we can customize the series and models described here to meet your operation's individual needs.

Boost Productivity

- Save space, improve pinch point safety, promote efficiency, and improve your overall productivity.

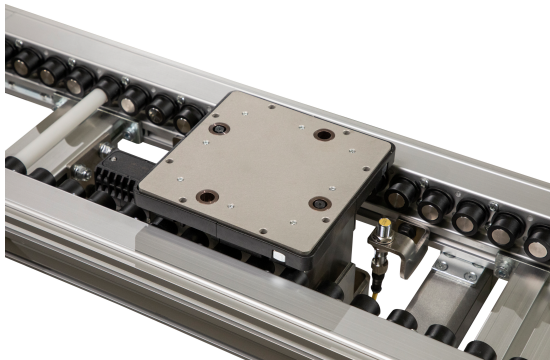


ERT Pallet Systems

ISO Class 4 Cleanroom Certified Conveyors

Each of these series offers multiple models and options to further fit your packaging, handling, and processing needs:

ERT150



Low profile pallet conveyor ideal for small and light load assembly automation.

Specifications

Sizes & Measurements

- 80 mm to 480 mm wide
- Lengths from 128 mm to 2432 mm (in 64 mm increments)
- 24 mm diameter rollers on 32 mm centers

Loads & Speeds

- Load: up to 16kg (35lbs) per pallet or tray
- Speed: up to 37 m/min (121 ft/min)

Pallets

- 160-320 mm pallets
- Proximity sensor pick-up on side and bottom
- Static conductive HPDE skirt

ERT250



Heavy duty pallet system designed for medium to large product assembly.

Specifications

Sizes & Measurements

- 120 mm to 960 mm wide
- 150 mm long tray minimum
- 38 mm diameter rollers on 50 mm centers

Loads & Speeds

- Load: up to 114kg (250lbs) per pallet or tray
- Up to 6.8 kg (15lbs) per roller
- Speed: up to 37 m/min (121 ft/min)

Pallets

- 320-800 mm pallets
- Proximity sensor pick-up on side and bottom
- Static conductive HPDE skirt
- Optional pin tracking ball bearings for corner conveyors

Options & Accessories

- Single Zone Conveyor
- Multiple Zone Conveyor
- Turn & Transfer
- 90 & 180 Degree Corner Conveyors
- Pallet Pusher
- Lift & Transfer
- Lift & Rotate
- Lift & Locate

MADE FOR MAXIMUM UPTIME

The ERT system's open design is non-jamming and that eliminates pinch-points, improving safety for operators and durability for the equipment itself. It also requires significantly less voltage, further improving its efficiency in assembly and cleanroom application.

Additional Benefits of ERT Conveyors

Efficiency & Minimal Downtime

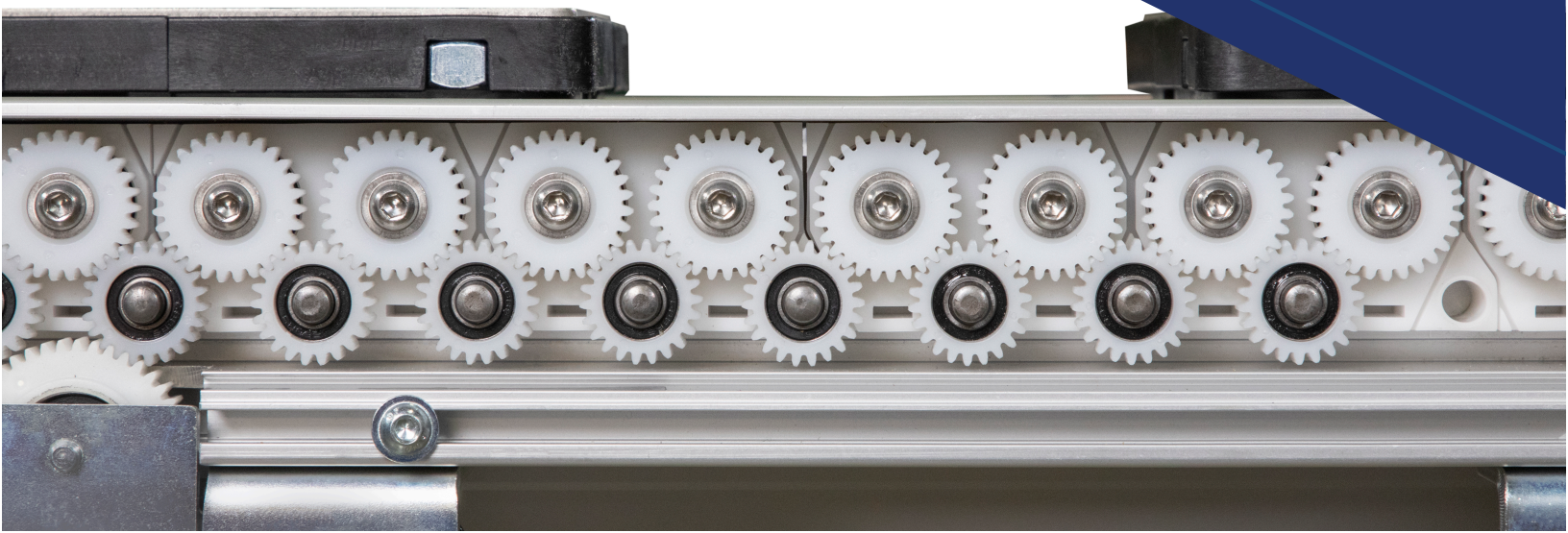
- Non-contact zone control eliminates pallet stops and costly pneumatic valves
- Low back pressure slip rollers can be used for full length with conventional pneumatic pallet stops
- Individual rollers can be replaced without affecting the remaining portion of the conveyor

Durable

- Durable, linear gearbox design provides a robust and flexible method of driven rollers
- No belts, reducing product contact and debris
- 50 watt, 3.5 amp, low voltage brushless DC motors save space and provide improved efficiency

Easily Reconfigurable

- Gears, drive shaft, and gearmotor can be repositioned in the field
- Reversible motors for assembly automation
- Lower gears can be removed and gearmotor added to create new zones
- The drive shaft can be moved to any roller zone and relocated to the lower height for added product clearance



Making Your Decision

Our 2200 Precision Move, FlexMove and ERT Pallet System lines meet the demands of industry standards and fit into your efficient internal workflows. Choosing the right series, the right model, and the right configurations depends heavily on your applications. Here's a quick look on features to help you compare:

	PRECISION MOVE	FlexMove	ERT [®] 150 Edge Roller Technology	ERT [®] 250 Edge Roller Technology
Clean Room			✓	✓
Long Accumulation		✓	✓	✓
Pallet up to 200mm		✓		
Pallet 240-480mm	✓		✓	
Pallet over 480mm				✓
Pallet up to 20lbs		✓		
Pallet up to 30lbs	✓		✓	
Pallet 30-40lbs	✓			
Pallet over 40lbs				✓
Low Voltage Control			✓	✓
Price Sensitivity	✓			
Curved Line Turns		✓		
Elevation Changes		✓		

Know which one is the best fit for your operation?

Contact us to learn more about the pallet system conveyor line that's right for you.

(800) 397-8664 | (262) 367-7600

info@dorner.com

www.dornerconveyors.com

Dorner Difference

Whichever pallet system you choose — 2200 Precision Move, FlexMove, or ERT—you will receive:

- A 10-year warranty
- Quick and easy installation
- Reliable customer service
- Aftermarket support