

DORNER[®]

2200 SERIES IDEA GUIDE

*Turning Conveyors
into Solutions*



DORNER® 2200 SERIES CONVEYORS

The 2200 Series conveyor is the most versatile conveyor in the world. Used today in over 1000 industries in a 1000 different ways. We hope this “Idea Guide” will help inspire you to use the 2200 series conveyor to solve a material handling need in your plant.

All of these concepts have been engineered and built by Dorner Mfg. Corp.

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DORNER®

Providing the Solution, Supporting the Customer

The 2200 Series Conveyors are engineered to virtually eliminate maintenance. The patented designs eliminate tracking adjustments and the fully enclosed bearings are designed for long life.



The 2200 Series Conveyors come in 3 models:
Flat Belt End Drive
Flat Belt Center Drive
Cleated Belt End Drive

Standard 2200 Series conveyors ship in only 4 days.



**V-Guided Belt
Tracking**



**Optional Nose Bar
Transfer**



**Rack & Pinion Belt
Tensioning**

2200 SERIES CONVEYORS

End Drive

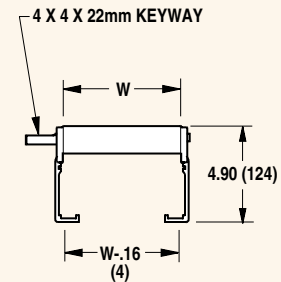
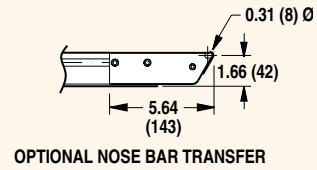
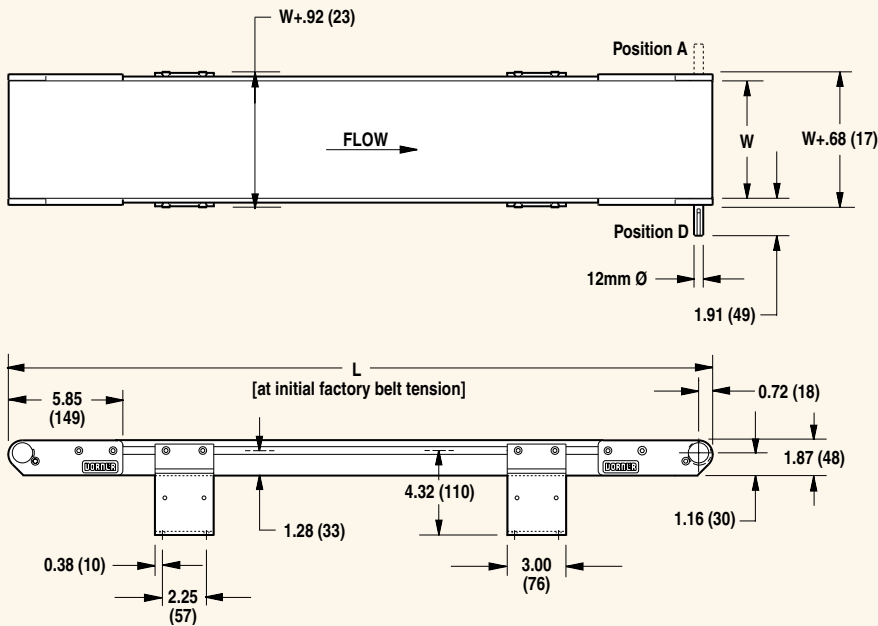


Specifications

- ▶ Aluminum frame with single T-slot
- ▶ Belt widths: 1.75" - 24" (44 - 610 mm)
- ▶ Lengths: 18" - 18' (457 - 5486 mm) in .12" (3) increments
- ▶ Pulley diameter: 1.25" (32 mm)
- ▶ Load: 80 lbs (36 kg) maximum

Features & Benefits:

- ▶ 5 minute belt change
- ▶ Quick rack and pinion belt tensioning
- ▶ Optional V-guided belts - no tracking adjustments
- ▶ Belt tension indicator for preventative maintenance
- ▶ No painted surfaces
- ▶ T-slot for easy accessory mounting
- ▶ Durable knurled stainless steel drive pulley



Change Belts in Less than 5 Minutes!



Loosen fasteners and collapse tail section.



Remove old belt and replace.



Adjust tension on new belt, tighten fasteners and go!

Center Drive

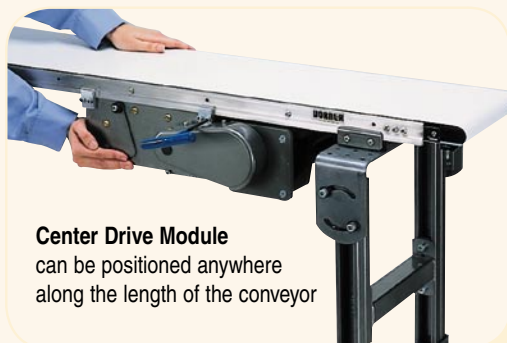
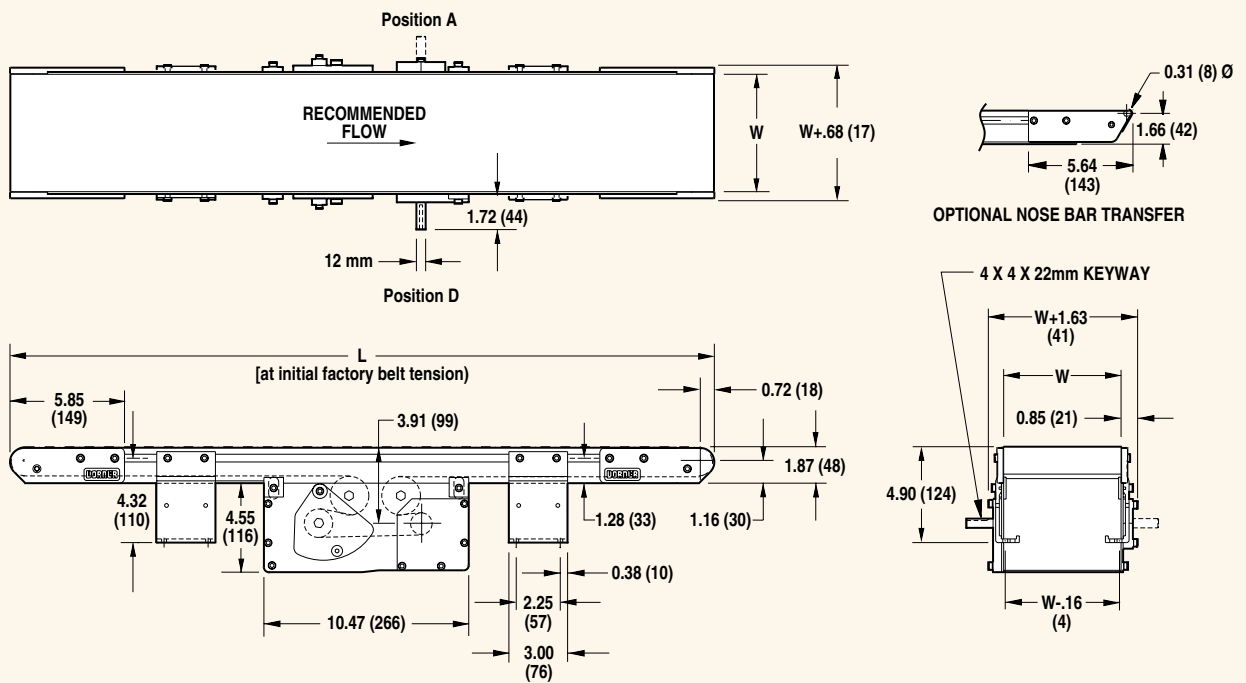


Specifications

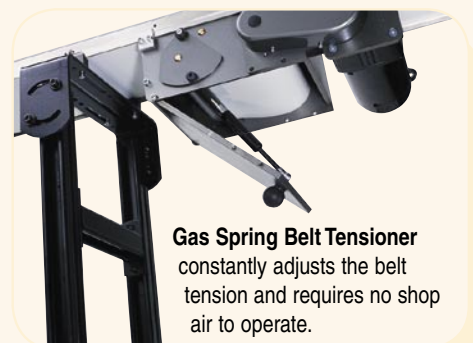
- ▶ Aluminum frame with single T-slot
- ▶ Belt widths: 1.75" - 24" (44 - 610 mm)
- ▶ Lengths: 24" - 24' (610 - 7315 mm) in .12" (3) increments
- ▶ Pulley diameter: 1.25" (32 mm)
- ▶ Load: 120 lbs (54 kg) maximum

Features & Benefits:

- ▶ 5 minute belt change
- ▶ Optional V-guided belts - no tracking adjustments
- ▶ T-slot for easy accessory mounting
- ▶ Durable knurled stainless steel drive pulley
- ▶ Maintenance free gas spring tensioning



Center Drive Module
can be positioned anywhere
along the length of the conveyor



Gas Spring Belt Tensioner
constantly adjusts the belt
tension and requires no shop
air to operate.

2200 SERIES CONVEYORS



Low Profile

2200 Series Conveyors have a space-saving, low profile of 1.87 inches (47 mm).

- Fits into machines to accept or deliver product.
- Allows multiple conveyors to be stacked.

Machine Interfacing

The space-saving design frame height of 1.87" (47mm) along with the option to order any width conveyor allows the 2200 to fit anywhere.

- Fits under the stamping press to remove parts and scrap



Nose Bar Transfers

Nose bar provides the smallest possible belt to belt product transfer. Available on the non-driven end of the conveyor.

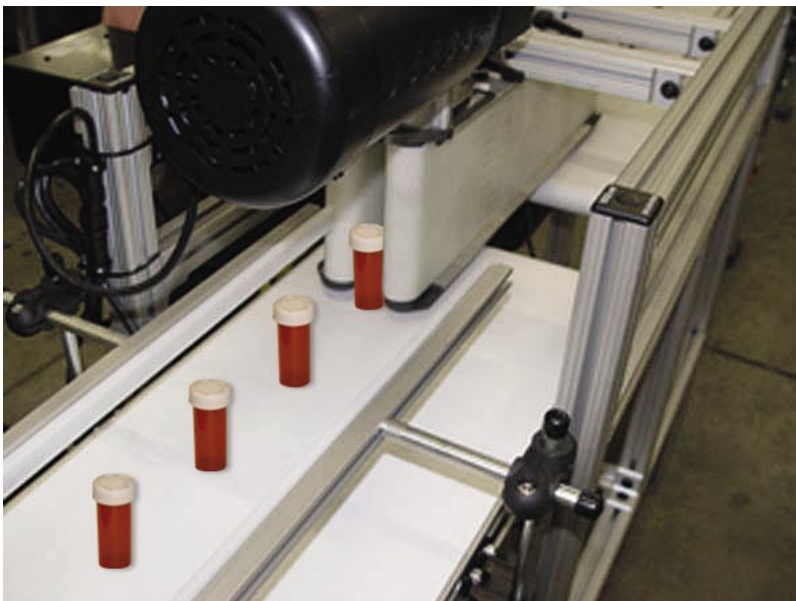
- Eliminates dead plate transfers.
- Simplifies small product transfers.
- Lower cost option.
- 8mm diameter



Small Product Transfers

Transfer small products without dead plates or losing product

- Use two nose bars end to end for very small product



Small Bottle Transfers

Transfer small bottles without tipping

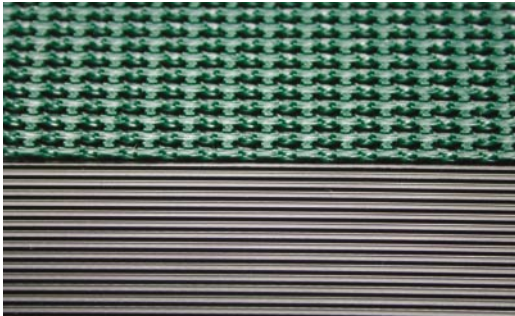
- Use two 2200 on edge to transfer product over conveyor gaps
- V-guiding controls tracking

2200 SERIES CONVEYORS

Special Cleated Conveyors

Cleats are applied to the conveyor belt at any spacing and in a variety of heights and cutouts up to 2.36" (60mm) tall.

- Contains small parts for elevation changes.
- Creates pockets for controlled separation of product.
- Available in urethane belt and plastic chain styles.
- Fixed guides or integral sidewalls are available.



High Friction Belts

Belts with high friction or tacky surfaces are designed to keep products from moving on the belt.

- Holding parts with flat surface on an incline or decline conveyor
- Holding slippery parts in position



Low Friction Belts for Accumulation

These conveyors can be mounted side by side going in opposite directions to provide an accumulation area. Plastic chain or low friction urethane belts can be used.

- Product accumulation to maintain product flow to the next process
- No product marking or damage

Electrically Conductive Belts

Moving conveyor belts can create static electricity. Removing static electricity is important for manufacturing and assembly of all electrical components and equipment. The electrically conductive belt allows the static charge to dissipate through the belt and conveyor frame.

- Protect product from electrical damage
- Safe environment
- Protect equipment and machinery



Color Contrasting Belts

An alternative to the backlit conveyor is a color contrasting belt

- Enhanced contrast with product
- Easier product recognition



2200 SERIES CONVEYORS

Magnetic Conveyors

Magnetic conveyors are created by placing permanent ceramic magnets in the bed of a standard conveyor.

- Holds ferrous parts fast to the belt.
- Ideal for elevation changes or part holding.
- Can be used in upside down applications.
- Strength and size of magnetic field is designed per application.



Vacuum Conveyors

Vacuum conveyors are made by perforating the belt and drawing air through grooves in the bed of a standard conveyor.

- Holds flat parts of any material fast to the belt.
Must be able to create a seal between part and belt surface.
- Ideal for elevation changes or part holding.
- Can be used in upside down applications.
- Vacuum area required is designed per application.
- A variety of vacuum sources can be used.

Backlit Conveyors

A light fixture is installed inside the conveyor frame and emits light through a translucent belt highlighting the product details.

- Provides enhanced contrast between product and conveyor belt for visual inspection and vision system interface.
- Parts can be stopped directly over the lit section or continue through uninterrupted.
- Easier to see product details and edges.
- Easier to inspect labels in poor lighting situations



Metal Free Zones

Provides a metal free zone in the conveyor for use with various types of inspection equipment including Metal Detectors, X-rays and Electron Beams.

- Parts can be stopped directly over the metal free zone or continue through uninterrupted.
- Single conveyor can pass directly through inspection equipment
- Continuous conveyor eliminates need to transfer product into and out of inspection equipment.



Dual Belt with Bedplate Cut Away

Opening in bedplate allows access to product for various operations.

- Scanning parts.
- Marking products.
- Assembly processes.

Frame Cut Away

Cut away section allows the tail of the infeed conveyor to insert part way into the frame of the main conveyor.

- 90° transfer of small parts.
- Tighter interface with other equipment.



Fixed Angle Conveyor

A 2200 conveyor can be modified to have a fixed angle in the frame creating an incline or decline section of conveyor.

- Incline or decline and horizontal sections



2200 SERIES CONVEYORS

Multiple Belt Conveyors

Two or more individual belts can be mounted onto a single conveyor frame.

- Creates single lanes for handling parts.
- Parts can traverse each belt to create part access from below.



Recirculating Conveyors

Two conveyor belts can be mounted side by side going opposite directions.

- Inspection area to return defective product to the originating process
- To change product flow direction after an assembly operation
- Increased line time for product curing or drying



Common Driven Conveyors

Two or more conveyors can be driven from a single gearmotor using a common drive shaft or coupled shafts.

- Saves money on maintenance by using fewer drives
- Creates single lanes for handling parts.
- Conveyors can be of different widths and lengths.
- Wide parts can be carried by each conveyor to create parts access from below.



Product Access

Transversing two conveyors with a central gap provides easy access to the product for necessary operations.

- Apply or read labels from bottom
- Access for assembly operations
- Hold wide products on the edges



Tall Product Guiding

- Prevent tall products from tipping.
- Guiding with Teflon Coating to reduce drag and prevent marking of product.



90° Transfer of Products

Standard product turning kits allows product to move smoothly through a 90° turn.

- No Surface Marring
- Minimizes friction

Lane Guiding

Multiple product lanes can be created across the width of the belt.

- Accumulate large quantity of product
- Divert product across lanes
- Merge multiple lanes to a single lane
- Support unstable product

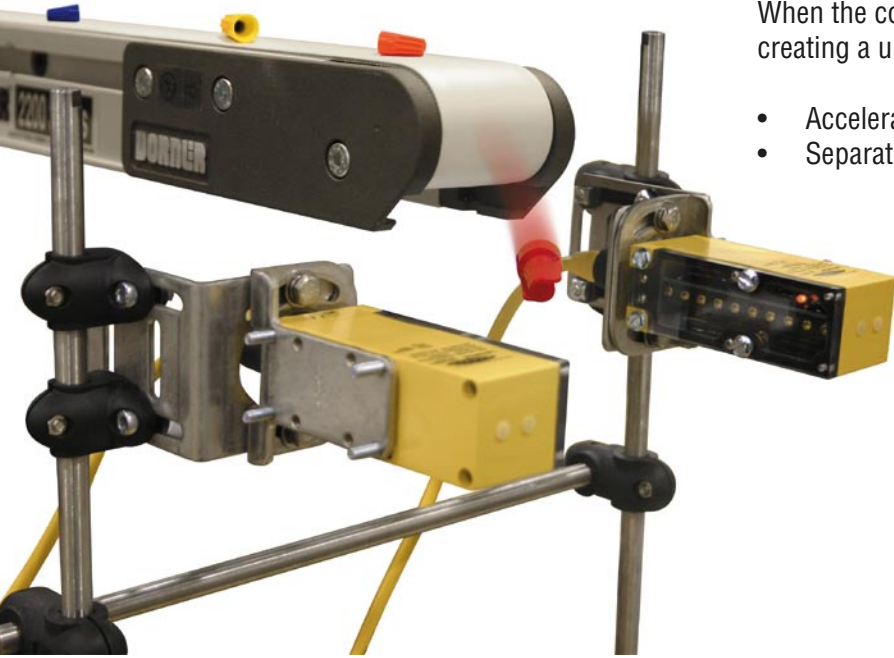


2200 SERIES CONVEYORS

Counting Products / Batching Products

In-line counter can be mounted between two conveyors. When the count is achieved, the second conveyor accelerates creating a uniform batch of product.

- Accelerate counting of products
- Separate equal batches of product for packaging or filling.



Indexing

Product spacing and flow can be maintained for a packaging machine or easier visual inspection.

- Even spacing of product.
- Assembly operations.
- Inspection of product sides.



Servo Drives

Servo drives can be mounted to the conveyor using standard or modified hardware.

- Accurately stops the conveyor to provide precise part location.
- Provides controlled acceleration and deceleration.
- Great for very accurate assembly operations.



Shaft Encoders

Encoders can be mounted to the drive shaft of the conveyor.

- Senses shaft rotation or counts pulley revolutions.
- Can sense excessive drag on the conveyor belt.
- Counts revolutions for accurate control of the belt in feeding or indexing applications.

Controls

Integrated frame T-slot allows for easy mounting of various controls.

- Start / Stop kits
- Emergency Stop kits
- Photo Eye kits
- Jog kits

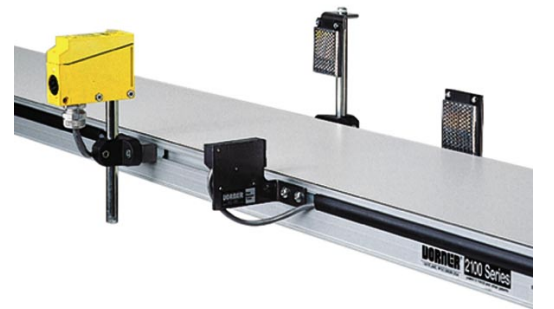


Photo Eye

Photo eyes can be used to stop product when the light beam is broken.

- Locating product for assembly
- Stopping product for labeling
- Stopping product for inspection

2200 SERIES CONVEYORS

Lift Gates

A standard conveyor can be mounted to a lift gate base creating a conveyor gate that is easily lifted open for walk-thru access.

- Counterweights create easy opening of the gate.
- Interlock switches and a timer allow the conveyor to clear before the gate is opened preserving full product control.
- Product flow can automatically resume after the gate is closed.



Pivot Conveyors

A standard conveyor is mounted to a pivot base to allow the conveyor to swing out of the way and provide walk-thru access.

- Interlock switches and a timer allow the conveyor to clear before the gate is opened.
- Product flow can automatically resume after the conveyor is returned to the in-line position.



Moving Guide

V-Guide enables vertical orientation of 2200 while both belts run in unison moving the product.

- Supports tall and/or unstable product.
- Could use a cleated belt for added product support.



Product Rotation

Rotate product while moving down the production line to allow for consistent heat-shrinking of label on cap.

- Rotate bottles
- Gently control product location on the belt

2200 SERIES CONVEYORS

Moving Heavy Product

The 2200 load capacity can be increased by adding a 3200 center drive module to the standard 2200 frame.

- Increase 2200 load capacity from 80 lbs to 300 lbs (36-135 Kg)
- Provides heavy load capacity in a low-profile package.



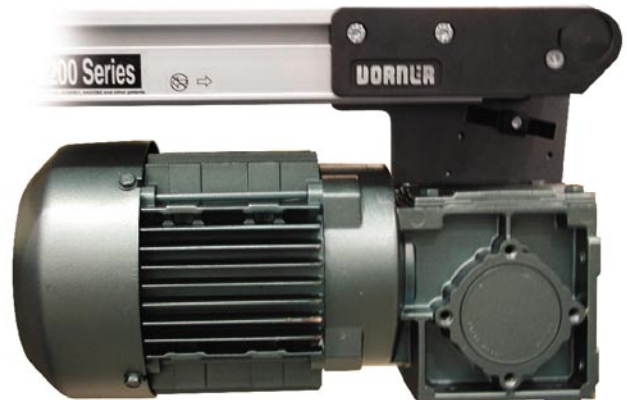
Flush Motor Mounting Packages

Lowers motor and gear box below the top of the belt.

- Products wider than the conveyor frame can be moved.

Custom Motor Mounting Packages

Mount your standard motors to Dorner 2200 Series conveyors.



Dorner offers the widest range of conveyors available. From metal stamping to automated assembly to food processing to packaging, we have the right conveyor for the job.



2200 Series Low-Profile Belt Conveyors

Aluminum extruded construction

- High performance conveying
- Streamlined machine interface
- Small parts transfers
- Efficient use of space
- Aesthetics
- Low maintenance



MPB Series Modular Plastic Belt Conveyors

Aluminum extruded construction

- Accumulation
- High Temperatures
- Sharp parts
- Low maintenance



3200 Series Heavy Duty Belt Conveyors

Aluminum extruded construction

- High performance conveying
- Main line, long lengths
- Heavy duty applications
- Fast belt speeds
- Aesthetics
- Low maintenance



LPZ Series Angular Belt Conveyors

Aluminum extruded construction

- Inclined and elevating
- High performance conveying
- Main line, long lengths
- Heavy duty applications
- Fast belt speeds
- Low maintenance



6200 Series Low Profile Belt Conveyors

Stainless Steel construction

- Tight space
- Basic conveying needs
- Rugged Environment
- Low maintenance



AquaPruf Family of Sanitary Stainless Steel Conveyors

7200, 7300 & 7400 Series

- Wash-down and sanitary environments
- Clean rooms
- Chemical Resistance
- Low maintenance

DORNER® LITERATURE

Be sure to check out other literature available from Dorner.
You may request additional literature online (www.dorner.com)
or call toll free **1.800.397.8664** (262.367.7600)



For the most current product information,
please visit the Dorner website.

www.dorner.com

While there, be sure to check out our new
Application Database & Conveyor Selector,
the latest web-based tools from Dorner.

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