ROYAL MACHINE SOLUTIONS INC

HIGH SPEED ENCLOSURE TRANSFER SYSTEM

ABOUT US

Royal Machine Solutions is a full service industrial contractor specializing in custom conveyor manufacturing, millwrighting, machining, and steel fabrication.

Our conveyor knowledge stems from years of experience working in the field servicing conveyors in a variety of industries. During our work we would see many low durability conveyors and common mechanical flaws. This inspired us to produce our own conveyor systems to bring the industry to a higher standard. Now we produce top quality conveyors that provide our customers with more uptime and reduce their maintenance costs.

With proper investment in people and machinery, we were able to bring the entire manufacturing process in house. This allowed us to take conveyor systems from concept development to installation and reduce turnaround time. We can design conveyors to your custom specifications, produce all frames and parts in our shop, install the conveyors at your location, and commission your line to ensure everything is working optimally. Royal Machine Solutions can solve your material handling issues!

ROYAL MACHINE — SOLUTIONS INC

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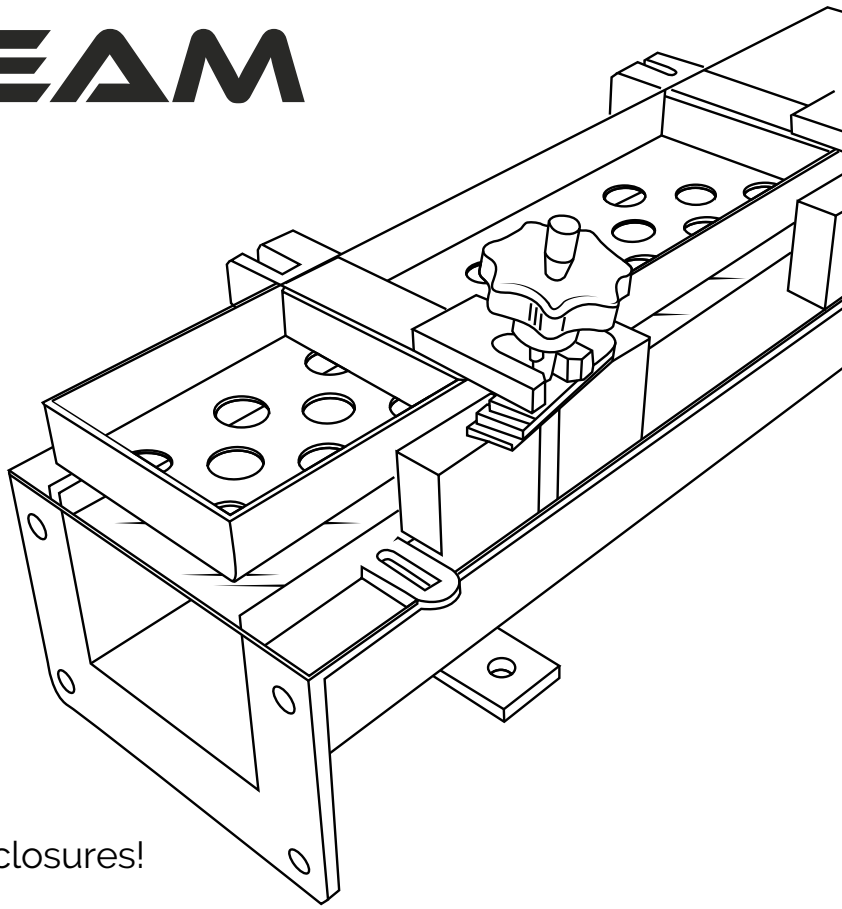
PNEUSTREAM

Pneumatic Air Conveyor



- **Reliable**
- **Clean**
- **Simple**

Moves products
over **500 ft** per minute!

Great for conveying light caps, lids, and enclosures!

Conveyors that run like the wind!

PneuStream conveyors move products at high speeds along a cushion of air. Flow is generated from a pressurized chamber below a louvered bed over which the products glide. A single blower on a drive section can provide the pressure necessary to feed five additional slave sections. The PneuStream design is modular, allowing you to seamlessly bolt sections and accessories together. All conveyors have adjustable lids on hinges, giving operators access to products anywhere in the system. The low coefficient of friction eliminates product jams. This system is a high speed, low friction, low maintenance way of moving material from one location in your facility to another.

- Moves products rapidly and with minimal effort
- No belts, bearings, chains, sprockets, etc. resulting in less maintenance
- Low friction technology limits the risk of product damage
- FDA approved surfaces for food and pharmaceutical applications

FDA APPROVED MATERIALS

Customize Your Conveyor:

- Optional full stainless steel construction
- Single lane and/or multi lane
- Boosters allow increased speed

Options:

- Adjustable height
- Rotating
- Flipping

Conveyor

Standard length of 48"

Accumulator

Standard deck size of 55" & 43"

Pneumatic Conveyor - Straight Drive Section - 4 inch

Part Number: CVY-10500

Description

This straight conveyor uses air pressure to move small, lightweight products at high speeds, typically on level surfaces. It is capable of moving products up to 500 feet per minute. Each fan has louvers to adjust air flow in the desired section.

	Standard
Track Length	48"
Module Width	4"
Module Thickness	1/4"- 1 1/4"

Motor	Voltage	Slaves Per Drive
1-2 hp	600v	5 Slaves

Bolt on Accessories	PN #	Page #
Pneumatic Conveyor Straight Drive	CVY-10500	2
Pneumatic Conveyor Straight Slave	CVY-10501	3
Pneumatic Corner Section - 90˚/45˚	CVY-10502	4
Pneumatic Accumulator Table	CVY-10503	5

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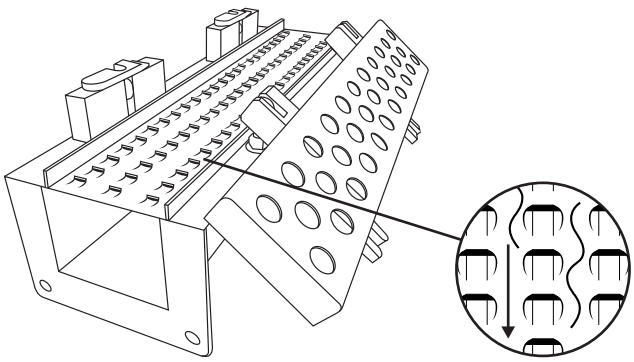
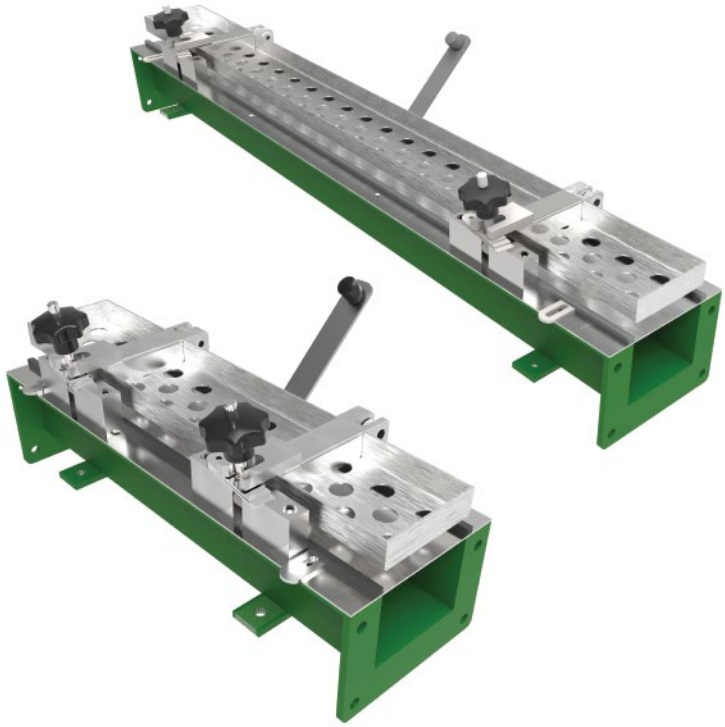
Pneumatic Conveyor - Straight Slave Section - 4 inch

Part Number: CVY-10501

Description

This is a bolt on addition to a straight drive section. Slave driven sections maximize a blower's capability by drawing air power from a drive section, minimizing the total amount of blowers needed. This efficiency means slave sections result in cost savings.





	Standard
Track Length	48"
Product Width	4"
Product Thickness	1/4"- 1 1/4"

Bolt on Accessories	PN #	Page #
Pneumatic Conveyor Straight Drive	CVY-10500	2
Pneumatic Conveyor Straight Slave	CVY-10501	3
Pneumatic Corner Section - 90˚/45˚	CVY-10502	4
Pneumatic Accumulator Table	CVY-10503	5

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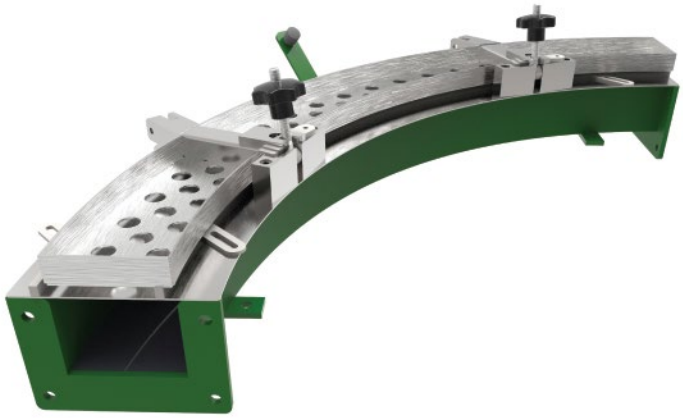
Pneumatic Conveyor - Corner Section - 90˚/45˚

Part Number: CVY-10502

Description

This conveyor section changes the transport direction of materials as they move around a curve. They are transferred single file through the production area without jamming. This addition bolts on to a drive or slave unit.



	Standard
Standard Radius	24"
Product Width	4"
Product Thickness	1/4"- 1 1/4"

Bolt on Accessories	PN #	Page #
Pneumatic Conveyor Straight Drive	CVY-10500	2
Pneumatic Conveyor Straight Slave	CVY-10501	3
Pneumatic Corner Section - 90˚/45˚	CVY-10502	4
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Pneumatic Accumulator Table

Part Number: CVY-10503

Description

This table allows products to accumulate while transferring from a multi-lane conveyor to a single lane conveyor. They are an effective method for keeping production moving since they reduce product jams. The table has adjustable slide gates to control airflow and speed as required. These are also helpful when sensors are integrated into the system to power machines on and off, depending on whether or not the conveyors are full.

	Standard
Overall Dimension	55"- 66"
Product Width	1"- 8"
Product Thickness	1/4"- 1 1/4"
Height	Built to suit

Motor	Amp	Voltage	Slaves Per Drive
3 hp	3 amp	600v Standard	Standalone

Bolt on Accessories	PN #	Page #
Pneumatic Conveyor Straight Drive	CVY-10500	2
Pneumatic Conveyor Straight Slave	CVY-10501	3
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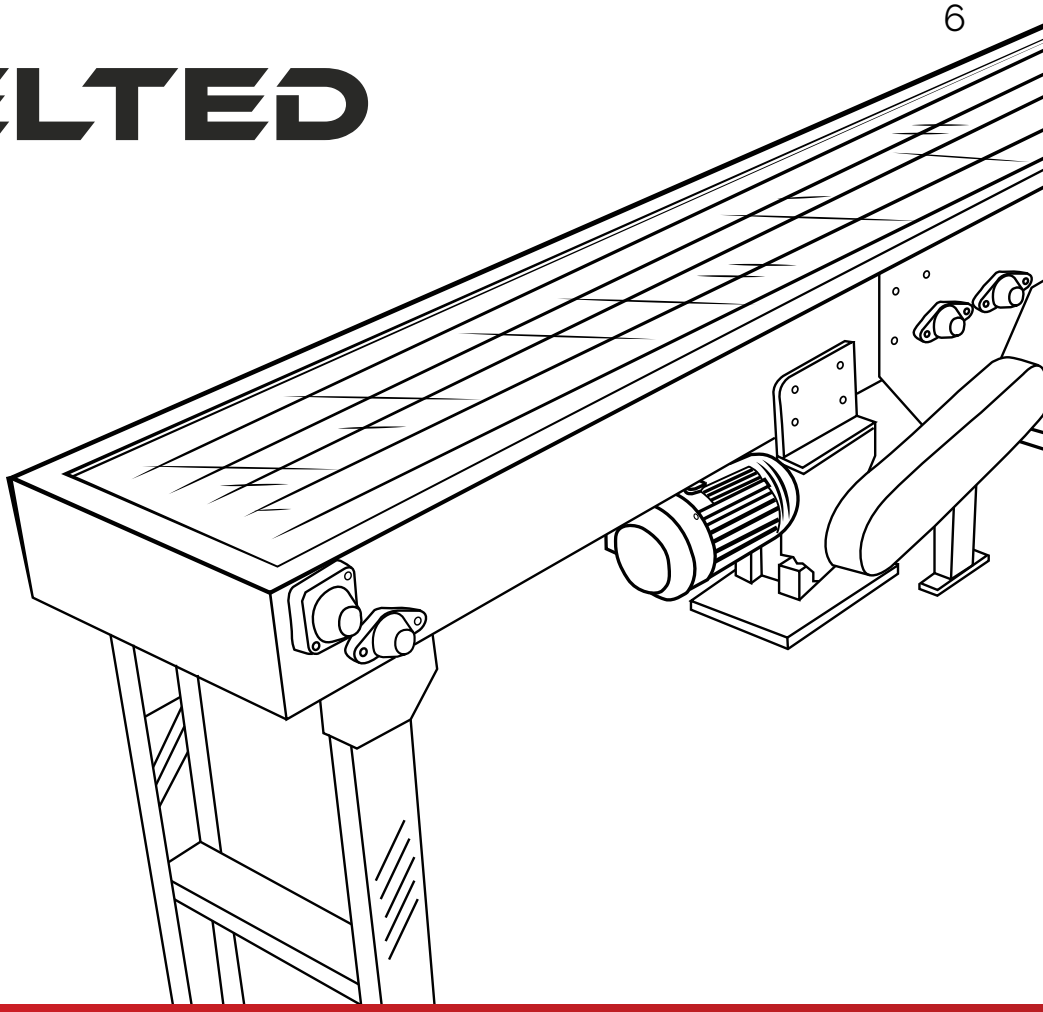
RMSBELTED

Conveyors

- Durable
- Efficient
- Simple



Moves products
over **500 ft** per minute!

The classic conveyor belt!

Simple in design and construction, belted conveyors carry products along a belted surface using the power of pulleys. Plastic, rubber, and metal belting surfaces can be used depending on industry standards and individual product need. Easy to install and reliable as a system, they are excellent for assembly and packing lines. They include straight and curved sections, as well as product reorganization modules that can flip, separate, and raise. They complement integrated systems and install quickly, adding fluidity to any material handling process.

- Versatile options to suit any industry
- Various belt types to accommodate your application
- Modular sections to suit your space and conveyance needs

FDA APPROVED MATERIALS

Customize Your Conveyor:

- Optional full stainless steel construction
- Single lane and/or multi lane
- Optional magnetization vacuum or blowers

Options:

- Adjustable height
- Rotating
- Flipping

Conveyor

Standard designs

Accumulator

Custom sizes to fit any layout

Belted Conveyor - Straight Section

Part Number: CVY-10001

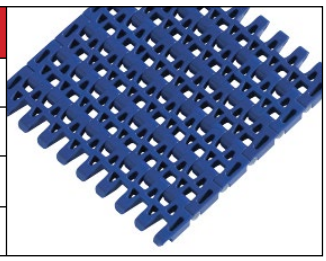
Description

This is a center drive conveyor able to drive in both directions. It's great for multi-lane conveyance of products. The modular belting eliminates the issues with tracking. It has replaceable UHMW guides and a drip tray under all oil filled gearboxes.

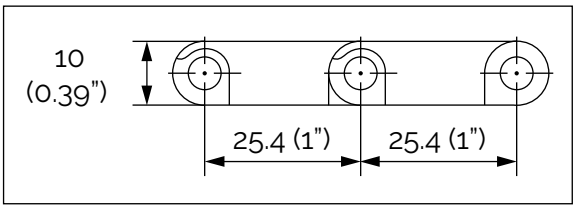
	Standard
Standard Belt Widths	6" / 8" / 10" / 12" / 14" / 16" / 18" / 22" (more sizes available)
Standard Belt Thickness	0.3906"

Motor	Voltage
1 hp	600V

Belt - HabasitLINK® series M2533
Food approved materials available
Open hinge
"Open window" sprockets
Excellent for cooling and draining



HabasitLINK® series M2533



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Radius Modular Conveyor - Corner Section - 90˚/45˚

Part Number: CVY-10002

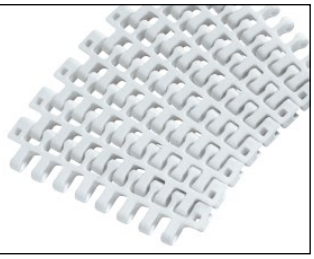
Description

Radius conveyors allow for smooth transitions when moving units around corners, an area where product jams commonly take place. They are designed to keep products moving in line with the direction of the conveyor, ensuring products are easily transitioned into the next stage.

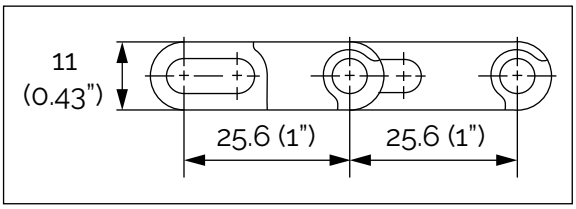
	Standard
Belt Length	Custom per order
Belt Width	8" / 10" / 12" / 14" / 16" (sizes up to 47")
Belt Thickness	0.430"

Motor	Voltage
1 hp	600V

Belt - HabasitLINK® series M2540
Food approved materials available
Excellent for cooling and draining
Easy to clean
Accessories available



HabasitLINK® series M2540



Magnetic/Vacuum Belt Conveyor

Part Number: CVY-10003

Description

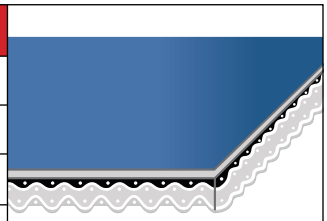
Using either internal magnets or a vacuum, this belt conveyor pulls small products from conveyors running under it in order to inspect their opposite side with a camera. It is able to transfer products 500 feet per minute and replaces the need for a flipper chute.

	Standard	Option 2
Belt Width	4"	custom width

- Optional encoder on a drive shaft.
- Mounts seamlessly with a Pressco camera.

Motor	Voltage
1 hp	600V

Light Conveyor Belts - HNB-5E 14
Abrasion & cut resistant
Anti-Static
Dimensionally stable
Superior cleanability



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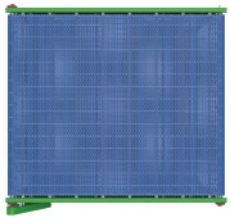
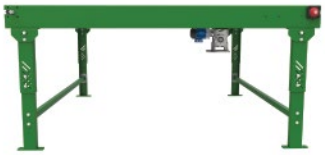
Belted Conveyor - Wide

Part Number: CVY-10004

Description

The modular belt conveyor is ideal for slower applications where accumulation is required. This unit is a singular direction modular belt and is excellent for applications where a lower friction belt style is an advantage.

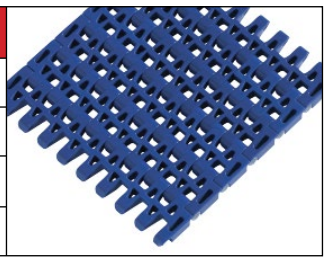




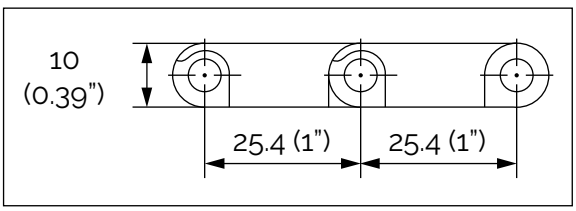
	Standard
Pulley Diameter	4"
Belt Width	6" / 8" / 10" / 12" / 14" / 16" / 18" / 22" (more sizes available)
Belt Thickness	.3937"

Motor	Voltage	Belt Pitch	Belting
1 hp	600	1"	HabasitLink M2533

Belt - HabasitLINK® series M2533
Food approved materials available
Open hinge
"Open window" sprockets
Excellent for cooling and draining



HabasitLINK® series M2533



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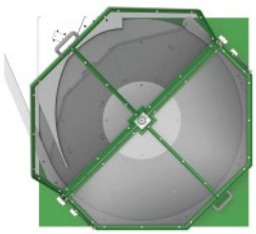
Mechanical Turn Table

Part Number: CVY-10005

Description

Turn tables allow products to accumulate while transferring them from a multi-lane conveyor to a single-lane conveyor. This unit can manage products moving at 1000 units per minute. The use of a mechanical table eliminates jams usually caused by using tapered guides on standard conveyors.



	Standard
Disk Diameter	55" / 44"
Product Thickness	1/4 - 1 1/4"
RPM	120 RPM

Motor	Voltage
1 hp	600V

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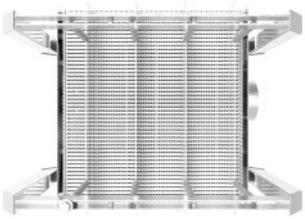
Nose Bar Conveyor

Part Number: CVY-10006

Description

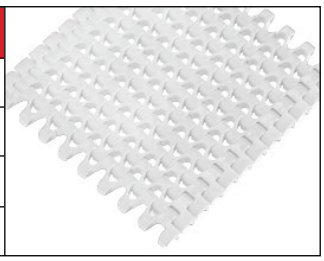
A nose bar conveyor reduces the gap between conveyors and allows small parts to transfer with more stability. It is able to tightly connect conveyors from different heights and transfer products at slower speeds. A modular belt elminates issues with tracking.



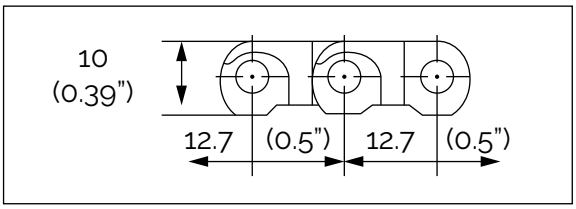
	Standard
Nose Bar Diameter	3/4"
Material	Stainless Steel Construction
Cleaning	Washdown proof

Motor	Voltage
1/3	600V

Belt - HabasitLINK® series M1233
Food approved materials available
Open hinge
"Open window" sprockets
Superior cleanability



HabasitLINK® series M1233



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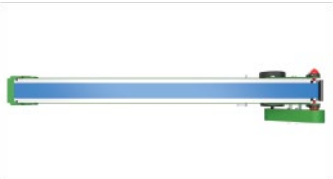
4" Flat Belt Conveyor

Part Number: CVY-10007

Description

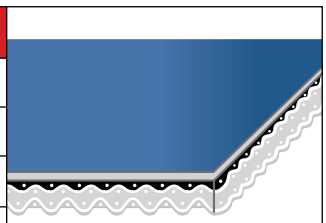
With this high friction style flat belt conveyor, products can transfer at up to 500 ft/minute while still maintaining grip. Internal magnets allow products to increase speed quickly to maximum potential. Its small diameter pulleys are great for reducing transfer plate sizes. Custom covers and guides available.



	Standard
Pulley Diameter	2"
Surface Speed	600 ft/min
Cleaning	Epoxy coated non-washdown proof / optional stainless construction

Motor	Voltage
1 hp	600V

Light Conveyor Belts - HNB-5E14
Abrasion & cut resistant
Anti-Static
Dimensionally stable
Superior cleanability



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Chain Driven Live Roller Conveyor

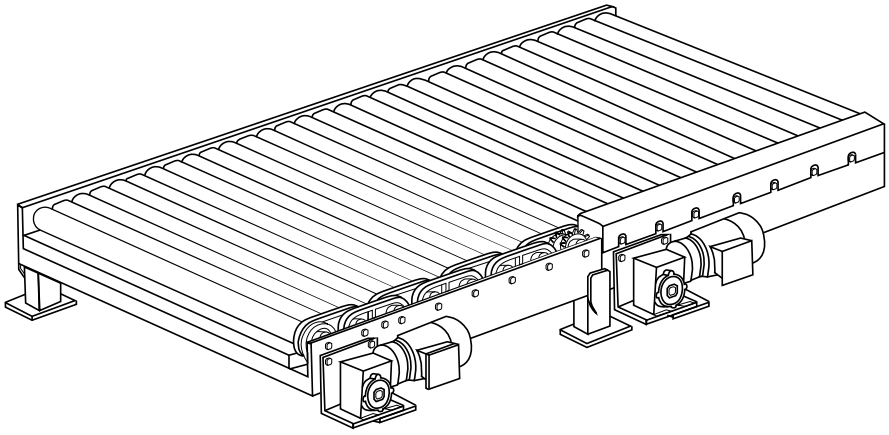
Part Number: CVY-10008

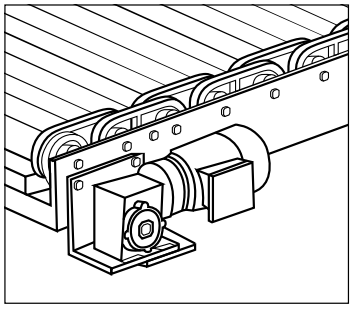
Description

These conveyors are great for moving pallets. With multiple drive units, they allow for accumulation of skids. Optional lifting racks integrated into them allow for skids to be lifted up and product to be pulled off.

Built to your needs

These conveyors are customizable based off product weight, speed, and pallet dimensions. Internally or externally mounted gear boxes based off of customer preference.





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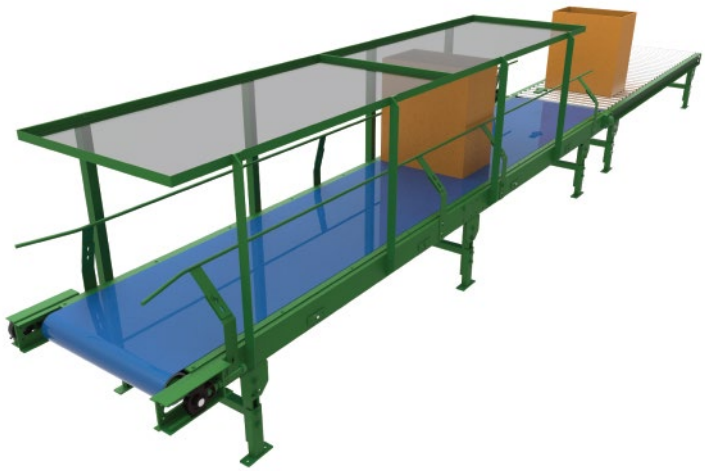
Standard Light Duty Conveyor

Part Number: CVY-10009

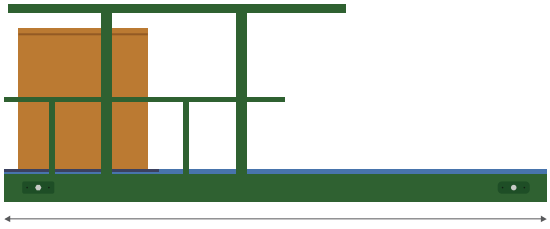
Description

An automated light duty conveyor such as this can be used during a boxing process. It can be integrated with counters to confirm that the correct quantities are present before moving the boxes forward. It is usually paired with a gravity roller conveyor to accumulate filled boxes. A Lexan cover prevents contaminants from getting in the open boxes.



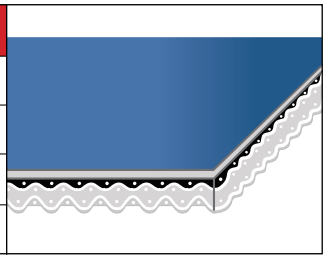
Sized to fit

These conveyors are fully customizable. Belt widths range from 6 inches to 36 inches. Height and length are made to order.



Motor	Voltage
1 hp	600V

Light Conveyor Belts - HNB-5E
Abrasion & cut resistant
Anti-Static
Oil resistant
Flame resistant



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Incline Conveyor

Part Numbers: CVY-10010 / CVY-10011

Description

Easily move products from one elevation to another. This positive drive belt has extruded teeth that help drive the belt with a sprocket. These belts require little to no pretensioning. Optional cleats and side walls are available depending on the geometry needed to move the product.

Motor	Voltage
1 hp	600V

DualDrive™ | Volta Belting
Smooth and textured belt surfaces
No fraying, delamination, or detaching of flights
No fragmenting or chipping, compared with modular belts
Easily and effectively cleaned

Incline Trough Conveyor

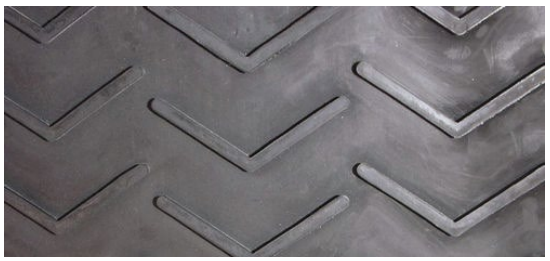
Part Number: CVY-10012

Description

Ideal for use where loose products are being moved. Troughing idlers are used to prevent materials from spilling out of the sides of the belt. Optional cleats on the belt prevent product from rolling down the incline.

Motor	Voltage
1 hp	600V

BTO Item - Class 1 Belting
220/2 Duraline
RMA2 Multi V Incline Heavy Duty Conveyor Belt



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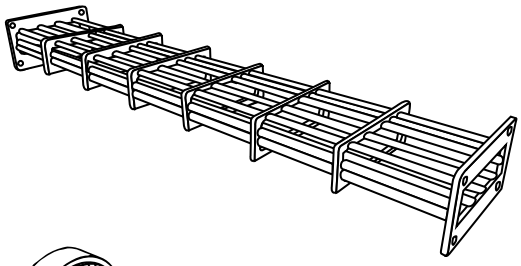
Conveyor Accessories:

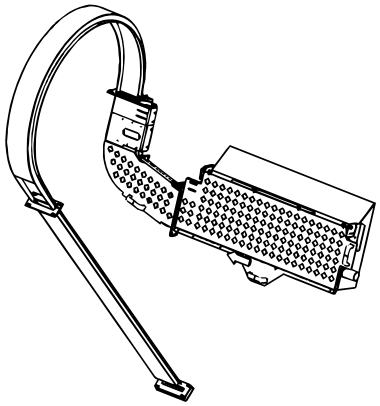
These are custom built for machine layouts and application of products.

Wire Chutes

Custom Order Parts

1.





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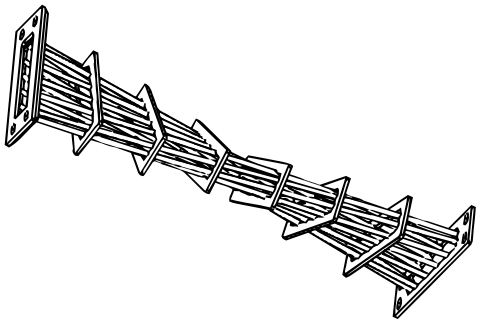

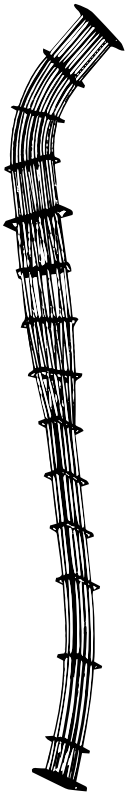

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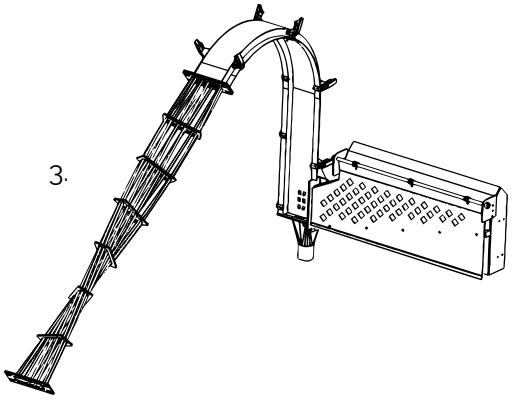


Organize Your Products

1. A wire chute is used to organize products for imaging or transitioning products to another machine for further processing.

2. A curved flipper chute takes the product from the infeed conveyor, flips it upside down and then offloads it onto the outfeed conveyor.

3. This custom air powered velocity chute flips products 180˚ in a helix motion before they are redirected to the next machine. It does this using air power in a similar way to the pneumatic conveyor systems.

ROYAL MACHINE SOLUTIONS INC

Conveyor Accessories:

These are custom built for machine layouts and application of products.

Capture Chute

Part Number: CVY-11000

Description

Metal products have the potential to become damaged when they are being transferred into a packing box at high speeds. This chute slows them down by capturing them off a conveyor and sliding them through a vertical s-curve. This allows them to spread out and fall gently into the packing box. These chutes come with or without side panel access doors. Made out of food safe UHMW.

Air Powered Velocity Chute

Part Number: CVY-11001

Description

These create an air pocket underneath the products and allow gravity to move them. These chutes can be customized with either electrically powered blowers or a pneumatic compressed air booster, eliminating the need for wires and a fan. Compressed air boosters create a high-flow air stream. Flow boosters draw in ambient air, which amplifies compressed air flow by up to 4x, adjustable to your needs. They do not require covers as they function using lower air pressure.

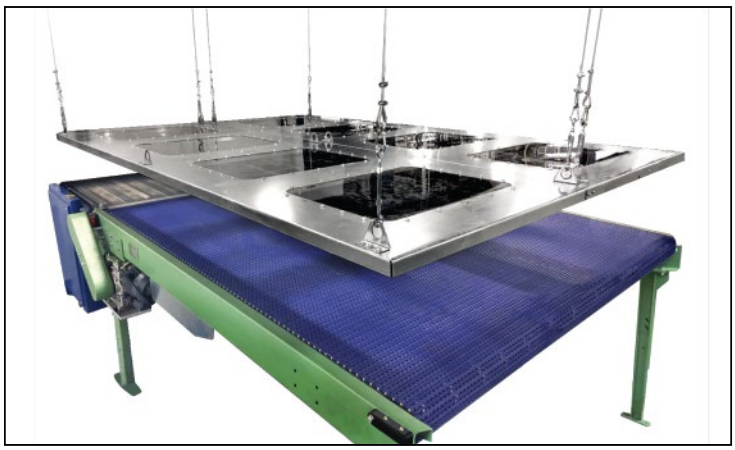
ROYAL MACHINE SOLUTIONS INC

Conveyor Accessories:

These are custom built for machine layouts and application of products.

Dust Covers For Conveyors

Part Number: CVY-11002

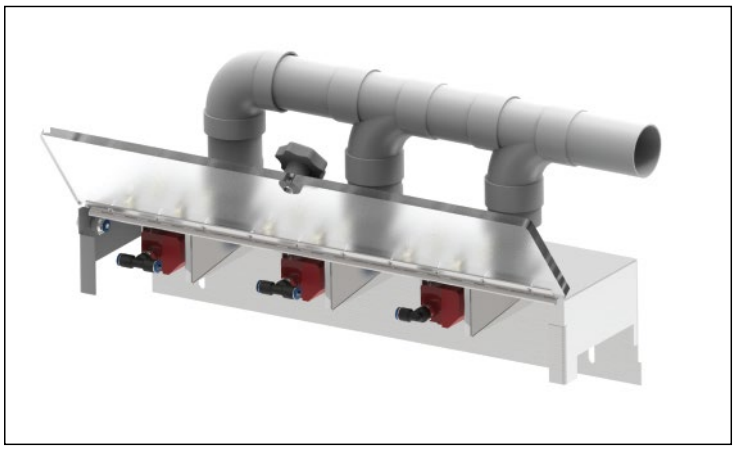


Description

These dust covers keep products covered and safe from dust and other debris while allowing operators to access the belt. They can be suspended from the ceiling as a mounting option.

Suspended Cleaning Head

Part Number: CVY-11003



Description

The suspended cleaning head uses an air knife to shoot a high velocity air jet at products to clean off debris. The disturbed particles are then vacuumed up in the vacuum assemblies.

Pictured here is a 3 stage air knife cleaning mechanism. It eliminates some of the issues with coating hair forming during the metal enclosure process.

ROYAL MACHINE
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