

## OTHER OFF-LINE EQUIPMENT

### Coil Tipplers



- Mechanical or hydraulic
- Coil saddle with urethane or nylon wear pads
- Optional slot for C-hook or coil grab
- Optional conveyors for coil transfer

### Coil Mounters



This free-ranging, custom-engineered coil mounter moves easily throughout a plant. It combines the benefits of fork trucks, upenders and coil cars to maximize productivity. Like rail-mounted cars, these units are designed to handle a wide range of sizes and weights. Available with 12- or 24-volt DC motors, this steerable, walk-along coil mounter handles steel and wire coils as well as rolled products like paper or plastic.

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### Slit Mult Lifter



Specially designed lifter facilitates fast and safe placement of a slit coil onto the mandrel of an un-coiler.

- It automatically adjusts to varying coil diameters.
- The full length handle makes it easier to maneuver the lifter.
- Faster and safer than using a conventional C-hook.

## SLIT COIL PACKAGING



### Is your packaging line choking your slitting line?

Bushman AvonTec designs and manufactures a full range of slit coil packaging systems to work in conjunction with standard and special application slitting lines. These systems are available in economical, manually operated configurations or in sophisticated, automated, PC-controlled high production systems designed to meet virtually any plant layout.

Benefits of Bushman AvonTec coil packaging systems:

- Increase material flow and revenue
- Reduce product damage
- Reduce maintenance costs and downtime
- Reduce labor costs
- Increase profitability

FOR MORE INFORMATION PLEASE CONTACT ARCON MACHINERY AS



### Solving Material Handling Problems

Below-the-Hook • Floor Based • Slit Coil Packaging  
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# SLIT COIL PACKAGING

## COIL CARS

Slit mults may be transferred to the exit turnstile by coil transfer cars, Automatic Guided Vehicles (AGV), or an overhead crane with a C-hook. Photos of several types of coil cars are below.



Slitting line entry end coil car



Slitting line exit end coil car



Propane powered master coil transfer car

## TURNSTILES

Most slit coil packaging lines are located directly after the exit turnstile of the slitting line they service. Coil cars move coils to a turnstile which stores up to four sets of slit coils. Coils can be loaded or removed by a C-hook, coil car or downender.



Four-arm turnstile

## DOWNENDERS

Coil downenders remove the coils from an eye-horizontal to an eye-vertical position for packaging. Most customers use a Pick & Place downender to improve productivity and reduce coil damage.



Pick & place downender

# SYSTEM COMPONENTS

## NON-FERROUS PACKAGING



Non-ferrous coils wrapped in plastic film

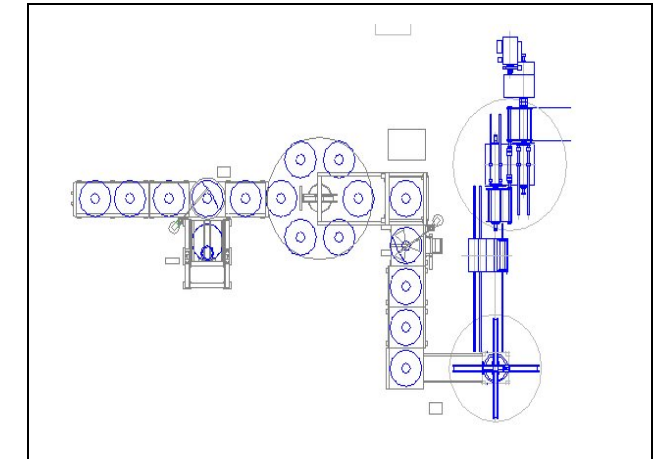
If you need to handle non-ferrous coils or other materials with delicate edges, Bushman~AvonTec can help you.

Non-ferrous packaging utilizes control equipment that is PLC based with automation designed to be user friendly. Complete slit mult tracking systems are available for non-ferrous packaging and include interfaces to the slitter and to shop production/stock control systems.



Non-ferrous coils wrapped in plastic film

## PACKAGING LINE LAYOUT



The layout above is one example of the many packaging lines Bushman AvonTec has designed.

### DO YOU NEED A NEW PACKAGING LINE OR AN UPGRADE TO AN EXISTING LINE?

Almost every packaging line we have built has a different layout to suit process requirements and building designs. Let us help you with the most efficient layout, for example:

- Matching production capacity requirements.
- Most advantageous material flow arrangement for your plant.
- Best operator locations for easy access.

# SLIT COIL PACKAGING

## AUTOMATIC SPACER PLACERS

A spacer placer automatically places three or four wooden spacer blocks radially on top of a slit coil so that another coil can be placed on top. This allows multiple slit coils to be packaged together on a single pallet without being damaged. Coils can then be easily un-packaged and handled at the final destination.



Automatic spacer placer

## COIL STACKERS

### MANUAL COIL STACKERS

Coil packaging lines with low throughput usually find manual coil stackers to be economical. Free standing jib cranes fitted with a coil ID lifter are frequently used to lift the eye banded coil and place it on a pallet.



Jib crane with coil ID lifter

## AUTOMATIC COIL STACKERS

High throughput packaging lines use automatic stacking and sorting to increase productivity and reduce labor needs. Automatic stacking and sorting can be provided using a sortation table with multiple stacking positions or a shuttle car system.



Travel lift stacker



Vacuum lift



Overhead carriage with VFD

# SYSTEM COMPONENTS

## SORTATION TABLES

Sortation tables allow the operator to process multiple customer orders from one master coil.

Four, six, eight OR 12-position powered sortation tables provide fast and flexible sorting capability. Features include:

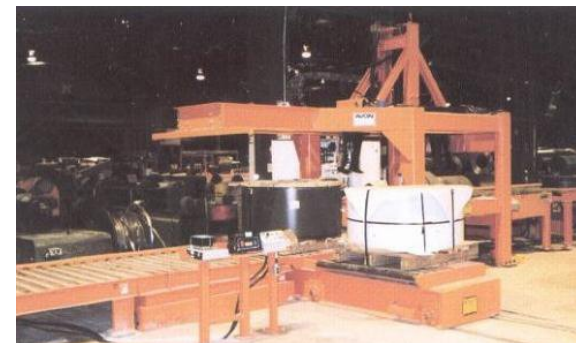
- Smooth hydraulic powered, gear-driven rotation.
- Precision center bearing.
- Auto indexing provided to any position.
- Each position mechanically latched for consistent positioning accuracy.



Eight-position sortation table

Shuttle cars provide an alternative to sortation tables when minimal sorting is required. Shuttle cars may be equipped with either:

- Variable frequency electrical motor drives for smooth, accurate position indexing
- Automatic indexing



Shuttle car

## SKIDDED COIL STACK PACKAGING

The usual stack packaging process involves:

- Weighing the skidded stack.
- Securing the coil stack to the skid with either:
  - Steel or plastic strapping.
  - Stretch film wrapping and roping.
- Visual checking of shipping package and application of shipping labels.
- A stretch film wrap and top sheet application is often used to seal the secured coil stack.



A weigh scale typically produces a “ticket” that is attached to the skid of coils. This “ticket” includes information such as weight, customer name, barcode, etc.

## SLIT COIL PACKAGING

### PAPER & PLASTIC FILM WRAPPING & ROPING

Exit storage conveyors can include plastic film wrapping equipment. Some customers incorporate a wrapper with roping to secure the slit mults to the skid to avoid the need to use steel strapping.

- stretch wrappers are available from several manufacturers such as Signode, Wulftec, etc.
- For use with Bushman AvonTec rotary table.
- No need to band coil to skid. This depends on the type of transport that is used, truck or rail.
- Improved coil protection.



### SKIDDED COIL STACK HANDLING



Eye-to-sky handling

Slit mults may be removed from the storage conveyor with:

- Fork lift truck off of the end storage conveyor.
- Crane and motorized telescoping pallet lifter off of the storage conveyor.



Coil tipping to eye-horizontal

Sometimes, after the coils are packaged in the eye-vertical position, they must be tipped up into the eye-horizontal position for shipping to the customer. Typically wide coils, greater than 15 inches, are shipped this way. An in-line upender will tip the coil stack through 90° to eye-horizontal position for removal by a C-hook or pole truck.

## SYSTEM COMPONENTS

### DOWNENDERS (Cont.)

Fixed position downenders are better suited to heavy gauge coils. A pusher arm on the turnstile slides the coil on to the downender arm.



Fixed position downender

### CONVEYORS

Conveyors move the product to each stage of the packaging process. Space and price considerations frequently dictate the quantity of conveyors selected. More conveyors provide extra storage to free up the turnstile area as soon as possible without waiting for all the mults in a batch to be eye banded.



Auto indexing conveyor



Direction change conveyor

### EYE BANDING TABLES

Eye banding tables incorporate steel or plastic strapping systems with or without seals. Manual, semi-automatic and fully automatic options are available. Spin roll or iron cross style tables are available.



Manual steel strapping



Semi-automatic steel strapping



Automatic plastic strapping