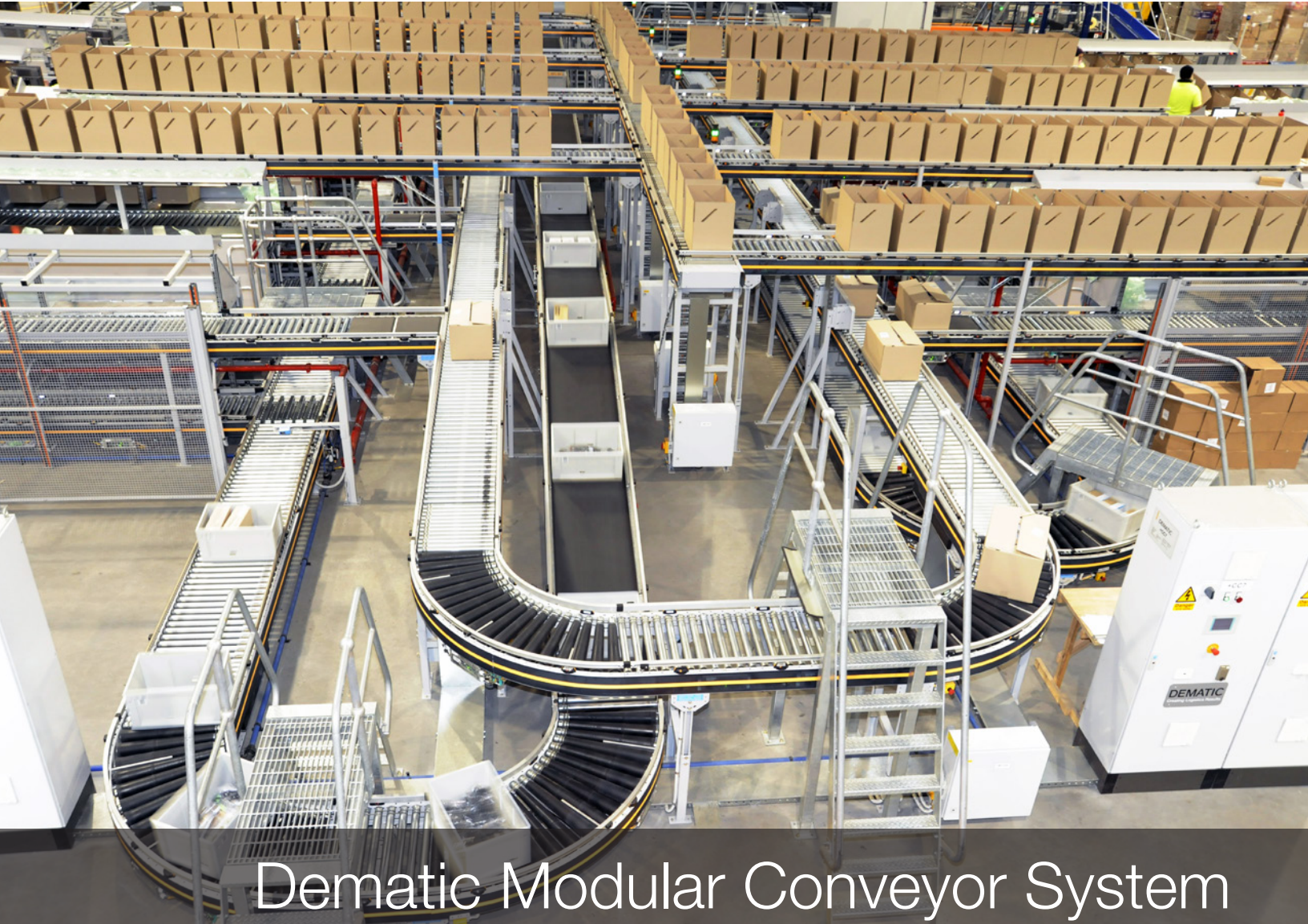


We Optimize Your Supply Chain

DEMATIC



# Dematic Modular Conveyor System

**FLEXIBILITY, ADAPTABILITY, SCALABILITY**





**Scalable  
Architecture**

**Configurable  
Modules**

**Efficient  
Performance**

DEMATIC MCS UTILIZES A UNIVERSAL SIDE FRAME FOR ALL MODULES. THIS DESIGN FEATURE ALLOWS FOR EASIER RE-CONFIGURATION AS YOUR OPERATION CHANGES



# Increase Operational Flexibility

## CREATE A LAYOUT WITH MORE OPTIONS

### MORE PERFORMANCE

Dematic Modular Conveyor System (Dematic MCS) is a totally integrated package conveyor technology. Whether handling cases, totes, trays, poly bags, or parcel envelopes, Dematic MCS transports them efficiently and effectively.

MCS offers a complete range of modules to create a highly efficient material flow configuration. MCS is often integrated with other devices such as scanners, sorters, label print and apply devices, case sealers, in-line weigh scales, palletizers, and robotics.

### A COMPLETE FAMILY OF MODULES

Dematic MCS uses a universal, metric side frame for all modules. This design allows for easier reconfiguration as your operation changes. Dematic MCS is made up of over 40 standard conveyor models for configuring the most optimized conveyor network for your application.

Dematic MCS is designed for a wide variety of functions, including transportation, accumulation, gapping, and sorting (right angle transfers and steerable wheel diverters). The conveyor is available in several standard widths and configurations — horizontal, inclining, and declining sections with straight, curved, or angled junctions (wedges).

### MORE DRIVE OPTIONS

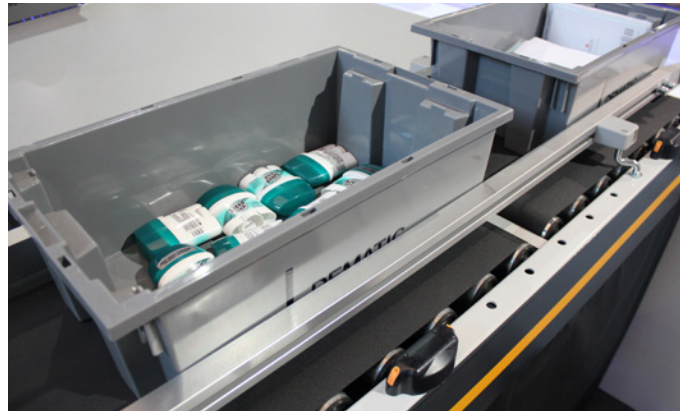
Dematic MCS is configured using AC drive motors, DC low voltage motor driven rollers, or a combination of both, providing the best option for your conveyor system layout.

For example, with long runs of conveyor, it is most cost effective to use one AC motor instead of multiple motor driven rollers. Or, a right angle transfer module can be inserted into a single length of AC driven accumulation conveyor by “snubbing down” the narrow Kevlar® drive belt, omitting the need for an AC drive motor on either side of the transfer.

### QUIET ROLLERS & BELTED SECTIONS

Dematic MCS is available with quiet rollers and belted conveying surfaces. Rollers feature double spring action, plastic coated axles, and precision sealed-for-life bearings.

High strength, one piece vulcanized belting is used in zone segments to allow precise carton control or for applications that accommodate light weight or poly bagged items. The segmented belt conveyor, driven by motor driven rollers, features automatic tracking and tensioning.



Motorized roller conveyor



Integration with scanners



Cover on side channel protects electronic sensor

### ELECTRONIC SENSING

Dematic MCS uses electronic sensing devices for load detection. Zone boundaries are determined with electronic sensors and reflectors. A standardized set of parts make up the assembly: sensor, reflector, protective housing, cabling and mounting components. The sensor and reflector housings offer multiple mounting angles.

# Modular By:

## ARCHITECTURE, FUNCTION, COMPONENT

### MODULAR ARCHITECTURE

We designed Dematic MCS from the ground up to increase operational flexibility. As business changes, users can make changes to their conveyor system and not have to start over with an all new conveyor network. To accommodate change, MCS conveyor uses a universal side channel as the backbone for all the conveyor models. Therefore, MCS gives you the ability to “drop-in” new conveyor modules, re-configure the modules, or add new modules. Also, the global metric design of MCS uses common components throughout, which simplifies maintenance support and reduces your spare parts inventory.

Standard control modules, connected using CAN Bus, are utilized to operate the conveyor network. Motor driven rollers operate using standard motor controllers; parameters such as conveyor speed, accumulation mode, and sleep mode are adjustable. These parameters and others can be adjusted using local or central controls.

### MODULAR FUNCTIONALITY

Dematic MCS gives you the ability to change the function of a conveyor module without having to change out entire conveyor sections. For example, a section of roller conveyor can be converted to belt surface conveyor. Transportation conveyor can be changed to accumulation or visa-versa. A right angle transfer can be inserted into a section of accumulation conveyor. These types of modifications can be made without removing and replacing sections of conveyor. Instead, by utilizing many of the existing components and using the same side channel foundation, new system functionality is created faster and at a lower cost.

### MODULAR COMPONENTS

Users can realize the benefits of standardization and common conveyor components. The same rollers, motor driven rollers, segmented belts, side frames, electronic sensors, motor controls, zone control logic assemblies, drive belts, etc. are used throughout all the modules. This standardization creates a smaller inventory of parts to manage and allows greater flexibility when future reconfiguration is required.



#### TOP 10 ATTRIBUTES:

- High speed and throughput
- Conveys more load types
- Excellent carton control
- Universal side frame for all models
- Easy to change functions
- Common parts reduces parts inventory
- AC & DC drive motor options
- Uses fewer AC drives
- Set parameters with modular controls
- Energy efficient, quiet operating





Plastic totes are conveyed and transferred using motor driven rollers

### Low Voltage Motor Driven Rollers

- Brushless, gearless, direct drive motors
- Powerful 24 & 48 volts, DC, variable speed, efficient
- Integrate with AC drives (long runs, inclines)
- Multi-mode: sleep, dynamic, zero pressure
- Quiet operation, electronic sensing
- Monitor motor amp draw and temperature

### CAN Bus Connectivity

- Adjust parameters from central location
- Dynamic carton gapping
- Adjust speed, mode
- Diagnostics
- Flat media cable, DeviceNet tap
- Onboard controls
- Removable HMI interface module



Segmented belt on roller accommodates apparel in poly bag

### Segmented Belt on Rollers

- Accumulate horizontally and on inclines and declines
- Accommodates small light weight items, poly bags
- One piece mechanically-laced belt for faster belt replacement
- Automatic tracking & tensioning belts
- Non contact accumulation on belts
- Minimize jams, side by sides



Embedded Conveyor Controller (ECC) controls the operation of motorized roller conveyor



# Roller Transportation Conveyor

Transportation conveyors maximize material flow by actively controlling spacing and accumulation, and enabling vertical or inclined movement. Dematic designs all power conveyor components, including transportation and accumulation conveyors, directional change equipment, and sortation devices and controls.

## Roller Transportation (Model: 9165)

- AC drive, with narrow belt tape drive media
- Economical where no accumulation is required
- Can be used as transport between divert modules

## Live Roller Curves and Junctions (Model: 9190)

- AC drive, v-belt drive media
- General purpose curve and junction conveyor with high speed capability



Guard rail with optional side cover



## BELT TRANSPORTATION CONVEYOR

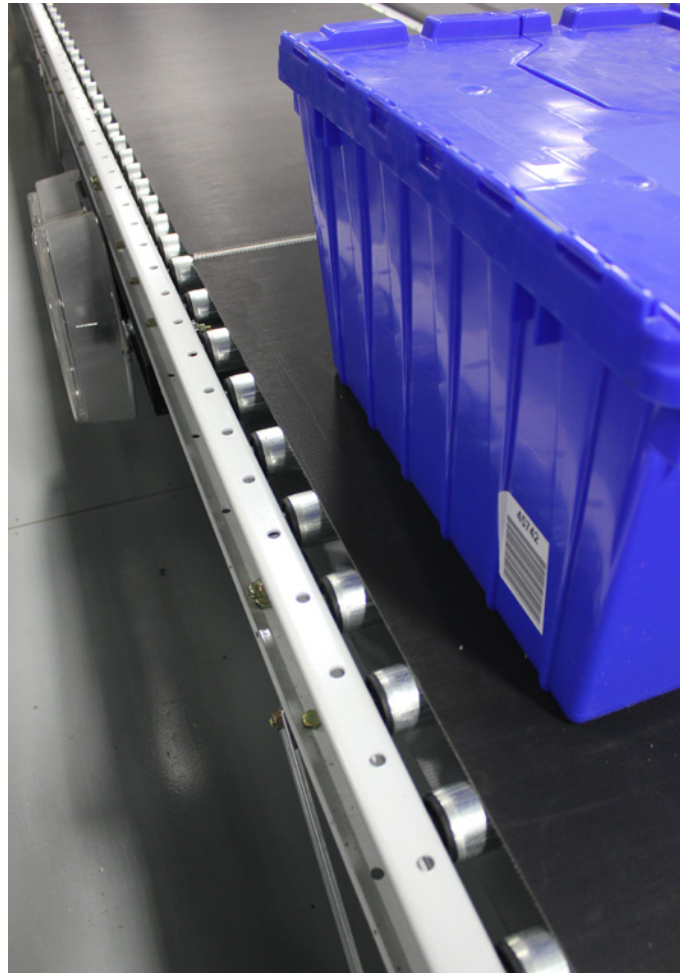
Dematic MCS lets you handle a wide variety of items – from packages, cartons, cases to tote boxes, trays, stuffed envelopes or poly bags. With an all belt surface, you can handle both large and small items simultaneously. Even many irregularly shaped, difficult to convey items can be handled with precision. So you get more throughput, more flexibility and more productivity.

### Belt on roller (Model: 9410)

- AC drive
- Horizontal or incline/decline applications

### Belt on slider bed (Model: 9405)

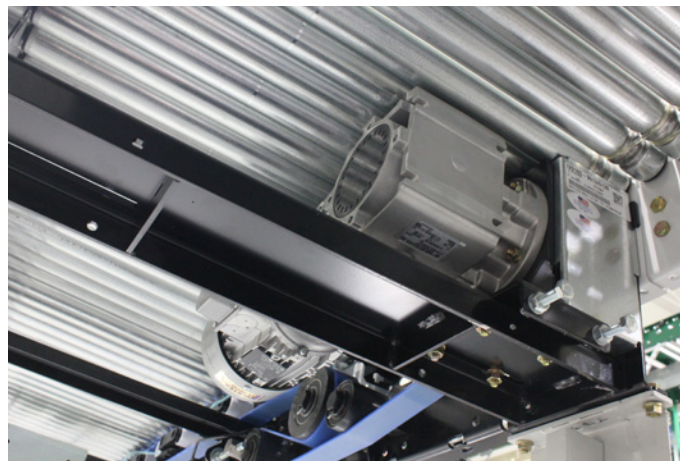
- AC drive
- Horizontal or incline/decline applications
- Case pick applications



Tote on belt transportation conveyor

## SCALABLE DRIVE PLATFORM

- Standard profile, high performance for high-rate applications
- Compact drive with medium performance level optimized for the application
- High efficiency reducer (>95% efficient)
- For roller and belt accumulation and transportation
- Drive configurations: charge end or mid



Low profile drive is designed for compact mounting (underside view)



# Motorized Roller Conveyors

Motorized roller conveyor is designed to transport and accumulate cartons and totes over a wide variety of applications including transfers, curves and inclines. Motorized rollers allow for “on demand” operation, only powering the rollers or zones when cartons are present. This makes operation more efficient and saves energy. It is offered in 24VDC and 48VDC.

## **Straight O-ring Driven Roller (Model: 8100)**

- Motorized roller drive
- Economical vs. 9265 for applications < 60ft (18.29 m)
- One item per zone accumulation improves package control

## **Curved O-ring Driven Roller (Model: 8120)**

- Motorized roller drive
- Tapered plastic roller sleeves

## **ODR Skewed (Model: 8130)**

- Motorized roller drive
- Use for compact edge alignment

## **Narrow Belt Driven Roller (Model: 8240)**

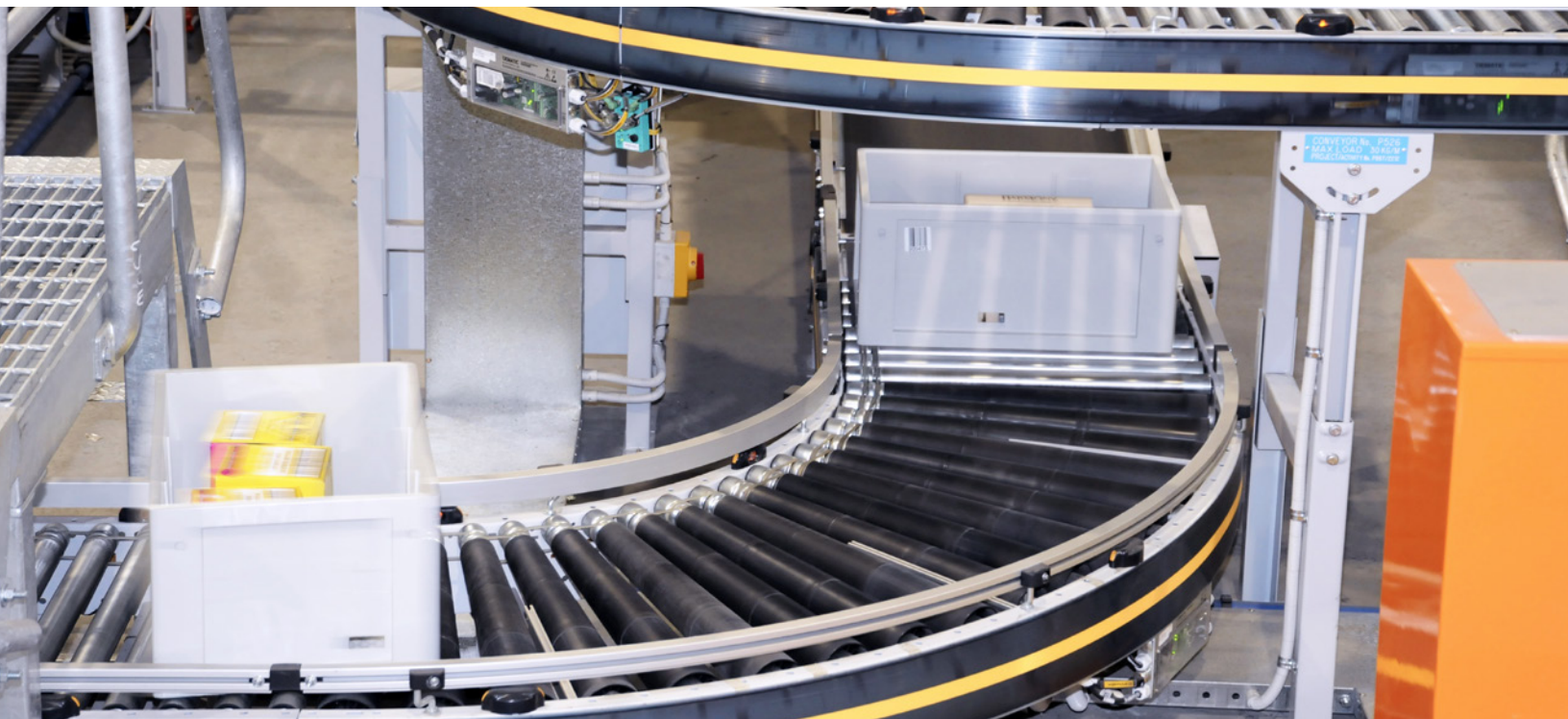
- Motorized roller driven tape drive below roller surface
- 30 degree merge and take-away

## **Straight Segmented Belt on Roller (Model: 8300)**

- Motorized roller drive
- Best package control and conveyable variety

## **Curved Segmented Belt on Roller (Model: 8320)**

- Motorized roller driven tape drive below roller surface
- 30 degree merge and take-away



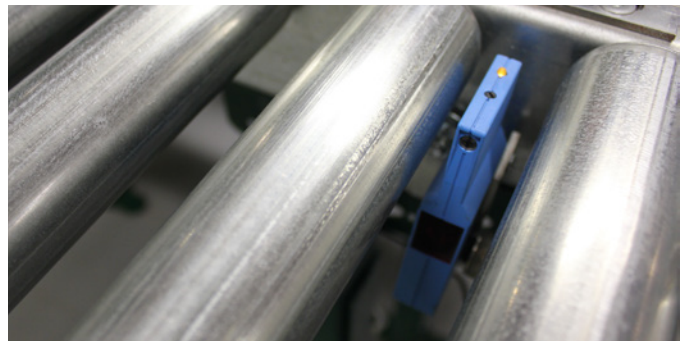
Motorized roller conveyor accommodates plastic totes



# Accumulating Conveyor

Accumulation conveyors are used to temporarily stop, hold, and release material, a common requirement in both manufacturing and warehousing material handling systems. The Dematic accumulation conveyors were the first power conveyors to allow material accumulation along a line without pressure buildup. Dematic has multiple models:

- Contacting accumulation for higher throughput
- Non-contacting accumulation for discrete package control, when fragile contents or controlled delivery to operators or other equipment is needed



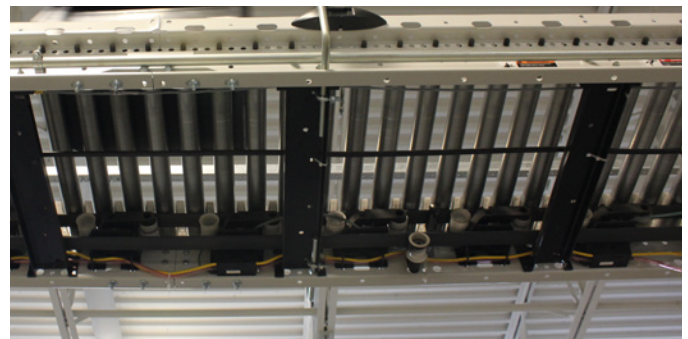
Accumulating with proximity sensor

## Roller Contacting Accumulation (Model: 9265)

- AC drive, with narrow belt drive media
- Electronic sensing options
- Available with Segmented Belts in each zone for improved package control

## Roller Non-Contacting Accumulation (Model: 9365)

- AC drive, with narrow belt drive media
- Each accumulation zone includes positive roller braking
- Can be used in slight accumulating decline applications



Narrow belt driven (under side looking up)



Accumulating conveyor with electronic sensing



# Diverters

## Right Angle Transfer (Model: 2497) and High-Speed Right Angle Transfer (Model: 2498)

- Motorized roller drive for transfer rollers
- Transport rollers can be driven via MDR or associated conveyor drive belt
- Pneumatic lift mechanism
- Available in Standard, and High Performance (small item) versions
- Bi-directional diverting
- Up to 50 items per minute capability



Right angle transfer

## Steerable Wheel Divert (Model: 2465)

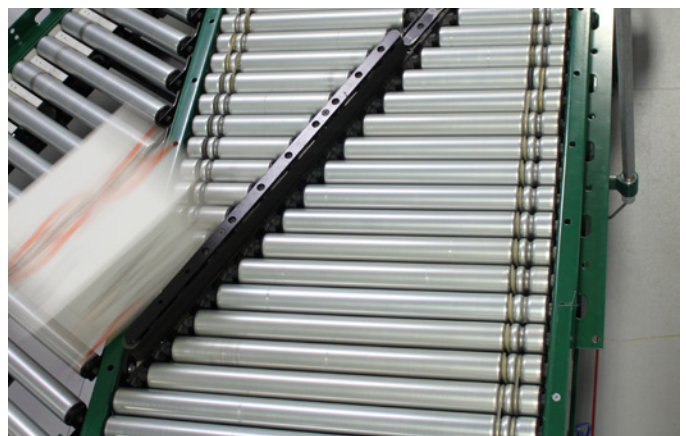
- Motorized roller drive for wheels
- Pneumatic rotary actuator to turn wheels for diverting
- One-sided diverting only at this time
- Up to 80 items per minute capability



Steerable wheel diverter

## Positive Belt Diverter (Model: 2468)

- Pneumatic lift mechanism
- Powered belt faces rise into package flow for diverting
- One or two belts used depending on width of conveyor to reduce minimum gap requirements and maximize rate
- One-sided diverting only
- Up to 65 items per minute capability



Positive belt diverter



# Gapping Devices

## Brake Belt (Model: 2325)

- AC drive
- General purpose belt for controlling flow

## Meter Belt (Model: 2330)

- AC drive
- General purpose belt for controlling and metering package flow

## Segmented Belt on Roller, SBOR (Model: 8300)

- Motorized roller drive
- A two zone unit with a Dual Motor Controller
- Cost effective and simple metering device

## Gapping Units (Models: 2335 & 2350)

- For sorter induction
- Very low maintenance and fast MTTR
- Operates with FlexSort PC controller
- PLC controlled version
- Available with 4, 6, or 8 belts
- Each belt driven by a high efficiency motor and VFD



High rate gapping unit

# Carton Alignment

## Carton Singulators (Model: 9167)

- Aligns “side-by-side” cartons
- Creates proper orientation prior to sorting
- For new or existing systems



The singulator improves downstream merge and sorter performance



