



Dematic Modular Conveyor System



We **Optimise** your Supply Chain

DEMATIC

About Dematic

Dematic is one of the world's leading suppliers of logistics automation systems and solutions. With a global knowledge network of highly skilled logistics professionals, Dematic provides its customers a unique perspective in world class materials handling solution design.

What this means for you: Even in international projects, you have a single point of contact. Dematic takes responsibility for throughput and system uptime in logistics projects.

FLEXIBLE ADAPTABLE SCALABLE

Increase Operational Flexibility

Create a layout with more options

More Performance

Please reference Dematic specification sheets by model number for technical attributes and capacity ratings. 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, palletisers, and robotics.

A Complete Family of Modules

Dematic MCS uses a universal side frame for all modules. This design feature allows for easier reconfiguration as your operation changes. MCS is made up of over 40 standard conveyor models that allow you to configure the most optimised conveyor network for your application. The conveyor types available to build your system include transportation, accumulation, curves, inclines/declines, right angle transfers, steerable wheel sorters, and sorter induction.

More Drive Options

Dematic MCS is configured using AC drive motors, DC low voltage motor driven rollers, or a combination of both. With this dual offering, the most appropriate drive system can be applied to 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 offered with quiet operating rollers and belted conveying surfaces. Rollers feature double spring action, plastic coated axles, and precision, “sealed for life” bearings. High strength, one piece vulcanised 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.

Electronic Sensing

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



Motorised roller conveyor



Integration with scanners



Housing protects electronic sensor

Modular by Architecture, Function and 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, MCS uses common components throughout, which simplifies maintenance support and reduces your spare parts inventory.

Standard control modules, connected using CAN Bus, are utilised 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 utilising 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 realise the benefits of standardisation 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 standardisation creates a smaller inventory of parts to manage and allows greater flexibility when future reconfiguration is required.

Top 10 attributes:

- Conveys more load types
- Excellent carton control
- Universal side frame for all models
- Easy to re-configure layout
- 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



Embedded Conveyor Controller (ECC) controls the operation of motorised roller conveyordriven rollers



Segmented belt on roller accommodates apparel in poly bag

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 Rollers

- Accommodates small light weight items, poly bags
- One piece vulcanised belts
- Automatic tracking & tensioning belts
- Non contact accumulation on belts
- Minimise jams, side by sides



Roller Transportation Conveyor

Transportation conveyors maximise 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



Clear cover allows fast visual inspection

Technology	Model	Transmission	Config.	Capacity
Roller Conveyor	9190	V-belt	Mid	Med-high
	9165	Narrow belt	Mid & head	Med-high
	9265			
	9365			
Belt Conveyor	9405 9410	Full width belt	Mid & head	Med, high, x-high

Scalable Drive Platform

- Low profile for mid-rate applications
- Standard profile for high-rate applications
- High efficiency reducer (>95% efficient)
- For roller and belt accumulation and transportation
- Drive configurations: mid and head



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



Motorised roller conveyor accommodates plastic totes

Motorised Roller Conveyors

Motorised roller conveyor is designed to transport and accumulate cartons and totes over a wide variety of applications including transfers, curves and inclines. Motorised 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 24 V DC and 48 V DC.

Straight O-ring Driven Roller (Model: 8100)

- Motorised 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)

- Motorised roller drive
- Tapered plastic roller sleeves

ODR Skewed (Model: 8130)

- Motorised roller drive
- Use for compact edge alignment

Narrow Belt Driven Roller (Model: 8240)

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

Straight Segmented Belt on Roller (Model: 8300)

- Motorised roller drive
- Best package control and conveyable variety

Curved Segmented Belt on Roller (Model: 8320)

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



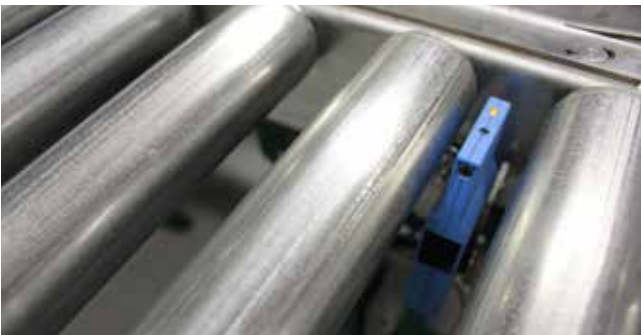
Accumulating conveyor with electronic sensing

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.

Roller Accumulation (Model: 9265)

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



Accumulating with proximity sensor



Narrow belt driven (under side looking up)

Diverters

Right Angle Transfer (Model: 2467)

- Motorised roller drive for transport and transfer rollers
- Powered Tap-Off drive available for transport rollers
- Pneumatic lift mechanism
- Available in Standard, and High Performance (small item) versions
- Bi-directional diverting
- Up to 30 items per minute capability

High Speed Right Angle Transfer (Model: 2466)

- Motorised roller drive for transport and transfer rollers
- Power Tap-Off drive available for transport rollers
- Pneumatic lift mechanism
- Strip belts for transport, and rollers for transfer
- Bi-directional diverting
- Up to 60 items per minute capability



Right angle transfer

Steerable Wheel Divert (Model: 2465)

- Motorised 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 maximise rate
- One-sided diverting only
- Up to 65 items per minute capability



Positive belt diverter



High rate gapping unit

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)

- Motorised 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

Carton Alignment

Carton Singulators (Models: 9167 & 9168)

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



The singulator improves downstream merge and sorter performance

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