



DIVIDE & CONQUER

A Guide to Sortation Systems

An automated conveyor that diverts items to the correct spot could be the tool your warehouse needs for efficient, cost-effective materials handling.

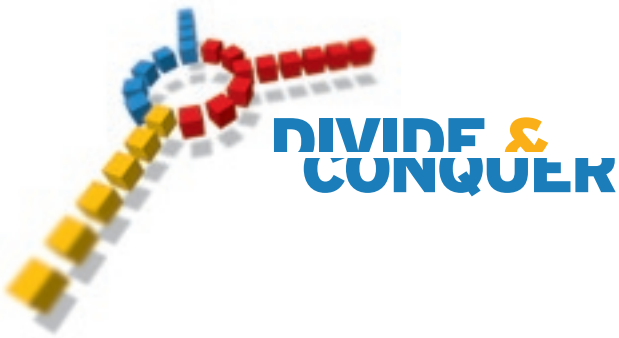
by Catherine Harden

PICTURE YOURSELF SURROUNDED BY TOWERING RACKS laden with row after row of shipping cartons, stacks of parcels, and totes filled with individual products. Each piece has a specific destination inside your warehouse. You've got to get this unruly assortment of items straightened out so you can build orders, process returns, and pack shipments for transit. But how?

One answer is by processing the items with an automated sortation system. Once programmed, the system carries items and separates them according to their ultimate destinations. Mechanisms such as pop-up wheels, tilting trays, and sliding plates called "shoes" divert parcels and products from the main conveyor to the appropriate belt, bin, or workstation. Many systems are infinitely configurable, with up to 95 paths to route items to the appropriate end point, and several offer bar-code scanners along the way to automate product tracking – a necessity with high-speed systems that can sort in excess of 225 items per minute.

The benefits of implementing a sortation system are easy enough to gather. Compared to manual sorting processes, automated systems reduce labor costs and errors, increase shipping rates, and save order assembly time.

On the following pages, you'll see a variety of sortation systems on offer from some of the industry's leading materials handling companies.



Automotion Conveyors & Sortation Solutions

708-229-3700 automotionconveyors.com

Trap Arm Sorter

Sorting up to 20 cartons per minute, this diverter is suited for shipping and/or receiving operations with a medium rate requirement.

FEATURES: Conveyor handles up to 100 pounds of product per foot. Available in four widths. Sorts cartons weighing up to 75 pounds.

Beumer

732-560-8222 beumer.com

Tilt Tray Sorter

Available in three sizes, the Tilt Tray Sorter is suitable for handling small parcels, packages, fragile and sensitive products, as well as heavy freight goods, boxes, and bags.

FEATURES: Designed with sideways tilting mechanism that drops slightly on pivot to create a less jarring product transfer. Offers Double Density tray option to increase system capacity.

Blue Arc Engineering

317-467-BLUE bluearceng.com

High Speed Vertical Conveyor Switch

Typically used in the food and beverage industry for vertically diverting and merging case flows to automated palletizers, the vertical switch allows inbound product to be sorted between two outbound conveyors.

FEATURES: Accommodates inbound case flows up to 180 feet per minute. Requires no compressed air or hydraulics. Product travels up to 36 inches vertically in less than one second.

Carter Control Systems

301-698-9660 cartercontrols.com

High-Speed Tray Sorter (HSTS)

The HSTS can process items weighing up to 70 pounds at a rate of 230 feet per minute, with a total of 95



Beumer Tilt Tray Sorter

possible runout lanes. A powered split-belt sortation-conveyor with pop-up bi-directional diverters transports product to runout lanes or a recirculation system.

FEATURES: Equipped with mini-cameras to scan bar codes from an item's rear, front, or top. Available in single-sided or double-sided configurations.

Cornerstone Automation Systems, Inc.

800-401-0304 cornerstoneautosys.com

SortMaster 150

Capable of sorting at rates up to 180 items per minute, the SortMaster 150 handles products weighing up to 10 pounds, such as CDs, DVDs, small

parcels, jewelry, and cold seal items.

FEATURES: Modular design permits configuration in a number of variations. Requires no compressed air.

Daifuku

801-359-9900 daifukuamerica.com

Jet Surfing Shoe Sorter

Suitable for channeling and sorting medium-size items, totes, and cartons, the Jet Surfing Shoe Sorter can process up to 225 pieces per minute. Bi-directional shoes allow items to be offloaded to both sides of the sorter.

FEATURES: Operates at speeds up to 541 feet per minute. Handles loads up to 110 pounds.



Daifuku Jet Surfing Shoe Sorter

Dematic

877-725-7500

dematic.us

FlexSort SL

A new parallel divert mode minimizes gapping between packages, allowing higher throughput at lower speeds and reducing the tendency of small and square packages to roll during sortation.



Dematic FlexSort SL

FEATURES: Equipped with a Web-enabled controller system featuring real-time tracking, gapping, and sortation control. Reaches throughput capacity of more than 400 cases per minute.

Diamond Phoenix

888-233-6796

diamondphoenix.com

Low-speed Sorter

With sort rates of less than 30 items per minute, low-speed sortation systems are suitable for tote systems and small case distribution operations.

FEATURES: Achieves transfer rates of eight to 20 sorts per minute with right-angle transfer mechanisms, and 15 to 25 sorts per minute with pusher diverters.

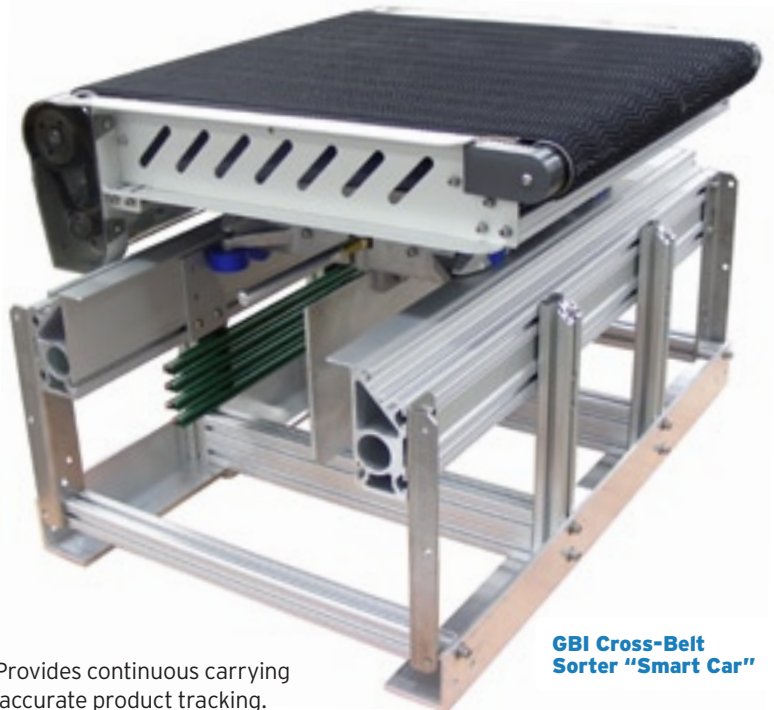
FKI Logistex

877-935-4564

fkilogistex.com

UniSort XV

Powered diverter wheels shift items on the UniSort XV belt-powered pop-up wheel sortation conveyor, which is capable of rates in excess of 130 cartons per minute.



GBI Cross-Belt Sorter "Smart Car"

FEATURES: Provides continuous carrying service for accurate product tracking. Accommodates an unlimited number of diverts.

GBI Data & Sorting Systems

954-596-5000

gbisorters.com

Cross-Belt Sorter

Each of the Cross-Belt Sorter's "Smart Car" units possesses independent controls for functions such as belt acceleration, turn rate, distance, and timing.

FEATURES: Sorts articles of varying weights (up to 100 pounds), shapes, and sizes at rates up to 200 pieces per minute, per station. Provides real-time tracking by time, loader, carrier, bin, and order.

HK Systems

262-860-7000

hksystems.com

Modular Plastic Belt Sorter

Moving items at a rate of up to 300 feet per minute, the modular plastic belt's rollers rotate faster than the forward motion speed of the conveyor, while divert mechanisms drive the product off the mainline onto a takeaway.

FEATURES: Reaches divert rates up to 120 items per minute. Allows for zero spacing between divert lanes. Handles products ranging from envelopes to cases.

Hytrol

870-935-3700

hytrol.com

ViperSort

Capable of handling packages weighing up to 25 pounds and measuring up to 24 inches long, the ViperSort right-angle sortation conveyor sorts up to 120 items per minute.

FEATURES: Available in four widths and with pushers located on both sides with staggered centers.



HK Systems Modular Plastic Belt Sorter