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Is "Poor Man's Sortation" System a Smart Answer for Smaller Distribution Centers?

Approach Relies on More Manual Effort, Says Holste, but Can Provide Good Payback Now and Set Table for Enhancements Later

SCDigest Editorial Staff

Automatic, high speed sortation systems are one of the most common approaches to automating distribution centers, especially those with heavy case pick volumes.

But for many companies, the cost of this level of automation can exceed either the capital they have to spend, or would not lead to a good ROI, as volumes aren't enough to justify full automation.

"You need at least 10,000 cases per shift to consider a fully automated sortation system," says SCDigest Materials Handling Editor **Cliff Holste**.

Those systems typically involve some level of "pick to belt" case pick operations and mechanized "split case picking" as appropriate. Picked cartons move via conveyor to any one of various types of high speed sorters, which divert the cartons down lanes for shipping based on customer order and/or carrier.

Options for Smaller Operations

"Smaller operations, however, should not abandon the possibility of reducing labor costs by adding mechanization," Holste says. He believes that "a scaled down, but still effective use of automation can serve many of these companies very well," an approach he has seen work first hand at several companies over his career.

The approach uses a manual sorting system utilizing a simple re-circulating conveyor loop connected via conveyors to picking areas (as on the next page).

In this approach, order pickers use batch picking techniques, which are at the heart of the labor savings delivered by traditional sortation systems. As a wave or batch of orders is released to the floor, picks per location are consolidated, meaning a picker visits that location just once, and picks cartons across orders for that wave.

Holste says the annual labor saved from reducing the headcount equivalent by 4 to 6 full-time employees will go a long way to providing a 30-36 month payback.

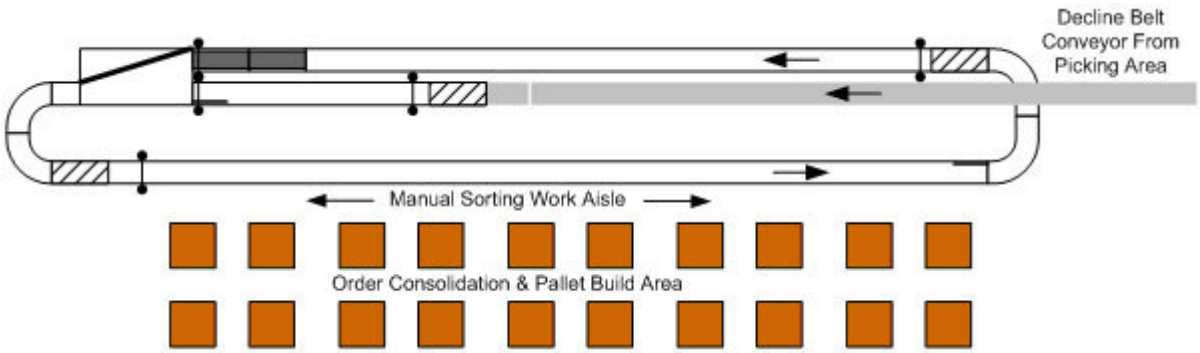
As the cartons are picked, they are placed on a conveyor for delivery to the sortation loop. As a result, this approach can significantly reduce travel time, always the largest element of picking costs, in full-case picking operations

The picked cartons are conveyed to the sorting area. There, however, the company doesn't deploy a traditional (and expensive) high-speed automated sorter. Instead, a simple circulating conveyor loop is used. A team of workers (number depending on case volume) remove cases from the conveyor loop and place them on the appropriate pallet as indicated on the customer ID label, applied in picking.

Holste says this kind of system can be implemented for as little as $250,000 - $350,000, a level a much greater number of distribution operations can afford.

Is "Poor Man's Sortation" System a Smart Answer for Smaller Distribution Centers? (Con't)

Low Cost Sortation System Concept



Holste says the annual labor saved from reducing the headcount equivalent by 4 to 6 full-time employees will go a long way to providing a 30-36 month payback. He adds that the built-in additional shipping capacity will allow for volume growth without an incremental labor increase.

If done right, the approach can also be leveraged to add more automation, such as an automated sorter later.

Why don't more companies use this approach? It's one that's simply not well understood, Holste says, and is not pushed by most consultants and hardware providers, who generally favor larger projects.