

Solution Guide

Automated Kitting



kardexremstar



Kitting for speed & accuracy

Utilizing an automated kitting system that incorporates an automated storage and retrieval system (ASRS) – such as Vertical Buffer Modules Kardex Miniload-in-a-Box*, Vertical Lift Modules Kardex Shuttle, Vertical Carousel Modules Kardex Megamat or Horizontal Carousel Modules – to store individual parts and completed kits creates a high-density, space-saving kitting operation.

In a broken case order fulfillment environment where SKUs are stored individually, picking speed and accuracy are often the measure of success. While ASRS can speed picking and integrated light directed technology can increase pick accuracy; kitting can improve both metrics even further.

When SKUs are stored together as a kit, based on manufacturing usage or a current retail promotion, they can be easily retrieved as a complete kit – reducing walk and search time for each individual SKU. Automated kitting can support just-in-time manufacturing efforts and speed order picking in a retail distribution environment.

Automated kitting provides



Eliminates operator travel time for increased productivity



Sequences delivery of kits to assembly or packing



Increases pick accuracy to 99.9%

Kit building

Pre-assembling or combining individual SKUs into one ready to use kit prior to storage allows for quick retrieval and saves time in manufacturing and distribution. While kit building and storage keeps operations running at peak efficiency, it is often a costly and space-hogging process. Manual kitting operations using low-density static shelving waste an excessive amount of floor space and require operators to travel among multiple storage aisles seeking specific items or kits.

* formerly Kardex Compact Buffer

Automated kitting

Here is how automated kitting works

- Individual items required for kitting are organized and stored in totes, bins or sub-divided trays and stored in an ASRS. For maximum picking efficiency, the Kardex Power Pick System inventory management software automatically stores SKUs related to the same kit within the same tray or area of the system.
- When it is time to assemble the parts into specific kits, the operator uses the ASRS as an order picking system, batch picking to multiple totes (kits) located on a conveyor or batch station. The Kardex Power Pick System software directs the ASRS to present the tray or carrier of items to the operator.
- Pick-to-light technology mounted at the access point indicates which SKUs to pick and in what quantities. The operator picks the required parts and distributes them among the waiting kits as directed by put lights.
- After the operator assembles the kits from the selected parts, the completed kits can be re-stored in the same storage device using a unique part number or another storage device in a different area of the facility.

Advanced automated kitting

For advanced operations – the kits can be automatically transferred and inducted into a Vertical Buffer Module Kardex Miniload-in-a-Box in a separate zone via conveyor without operator intervention. Upon induction, the Kardex Miniload-in-a-Box automatically scans the tote's license plate number and transports the kit to its unique position in the unit for storage.

When kits are needed, the Kardex Power Pick System software can direct the Kardex Miniload-in-a-Box to automatically deliver stored kits to an attached conveyor to be seamlessly transported to the next destination (assembly line, order consolidation, packing, etc.). The Kardex Miniload-in-a-Box can also sequence delivery of kits, ensuring the right parts are provided at the right time and in the right order.





A usage example

FlightSafety International is the world's leading manufacturer of full flight simulators, visual systems and displays. With more than 40 Learning Centers worldwide, 1,800 instructors, 3,000 courses on 135 aircraft types,

In coordination with a new facility the stockroom implemented four Kardex Shuttles to manage components and kit inventory. The new automated picking and kitting process has reduced stockroom labor requirements by 86%, increased accuracy to 99.9% and reduced floor space by 85%.



[Read more about kitting operations at Flight Safety](#)