

Benchmark Briefing

# Secure and Clean ESD Component Storage







# Upgrading to stay ahead

As one of the largest electronics manufacturing services (EMS) providers in the world, GPV helps industrial companies optimize their value chains and improve their competitiveness through increased productivity, product reliability and decreased total cost of ownership.

Their facility in Västerås, Sweden, with over 320 employees and continuously growing, is no stranger to automation as it has been using automated storage and retrieval systems (ASRS) for over 30 years. To save additional space, improve stock accuracy and safely store customer-owned material, they have chosen to progressively replace their old Vertical Carousel Modules (VCM) with new Vertical Lift Modules (VLM) and the latest software. Fourteen Kardex Shuttle 500s now store components and trays as well as screws, nuts and bolts that are needed to assemble finished products.

## Case at a glance

### Site

GPV Group (previously Enics until the merger with GPV in 2022), Västerås, Sweden

### Application

Storage of components for the electronics manufacturing industry

### Equipment

Fourteen Vertical Lift Module Kardex Shuttle 500s with ESD-protected VLM Boxes, Kardex Power Pick System inventory management software and Kardex Color Pick System. Additional accessories: Display LED-Navigator and LED laser pointer for maximum picking accuracy



**Increased**  
storage capacity



**Improved**  
stock accuracy



**Safe storage**  
of valuable items





# Solution upgrade

The VLMs installed at GPV offer optimal use of space. With shelves adjusting to the height of the products, the new machines can store more items on roughly the same floor space as the old VCMs.

VLM Boxes, the modular bin system specifically designed for the Kardex Shuttle, increase the storage capacity by 20–25% and keep items tidy and organised in a fixed place. GPV opted for the ESD-protected VLM Boxes, specially manufactured with electrostatic protective properties – an essential for the electronics industry. As an additional accessory, LED laser pointers are installed to indicate precisely where the correct item is located to further facilitate the picking and putting process.

Finally, the Kardex Color Pick System, combined with the ASRS, provides an intelligent picking and replenishment process, allowing for a more efficient use of the resources.

# Main challenges

With aging VCMs, GPV needed to modernize their warehouse and gradually replace their machines. While optimizing space in the production area and improving stock accuracy were the main goals, GPV also required a solution that could guarantee safe storage of customer-owned Last Time Buy (LTB) material by locking access to specific items with login. Providing ESD protection for storing sensitive electronic components was also essential.

With the Swiss factory relocating to Västerås, Sweden, it was necessary to create room for an additional 1,000 products on top of the roughly 30,000 articles already stored.



14 Vertical Lift Module Kardex Shuttles  
 2 × W: 4,380 mm, D: 2,972 mm, H: 6,250 mm  
 5 × W: 3,980 mm, D: 2,921 mm, H: 5,250 mm  
 7 × W: 3,980 mm, D: 2,972 mm, H: 6,250 mm



Kardex Color Pick System



Kardex VLM Boxes with ESD protection



Display LED-Navigator and LED laser pointer

# How it all works

**Dealing with a large number of small parts, GPV relies on clean and secure storage of all the components and fasteners that are needed to assemble finished products. Combining their ASRS with Kardex Power Pick System items are kept safe and accounted for.**

The Kardex Shuttles operate on the 'goods-to-person' principle, delivering a tray with the needed inventory directly to the operator. A Display LED-Navigator indicates exactly how many items to pick, and a LED laserpointer further helps to show the operator where the items are located. Once the items are picked, the operator confirms, the tray returns to storage, and the next one can be presented.

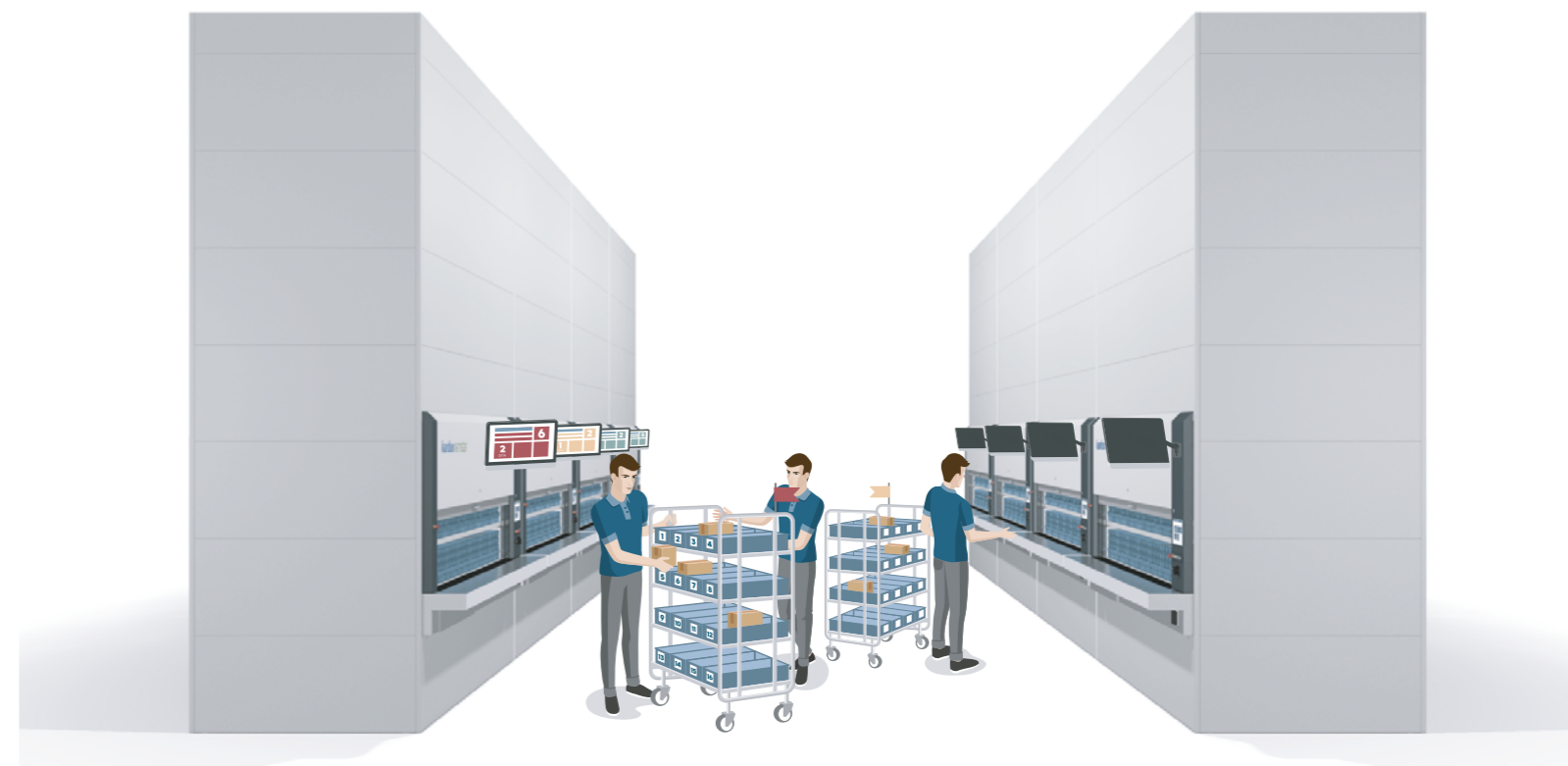
For customer-owned Last Time Buy (LTB) the articles are kept on specific trays, which particular operators can only access upon login to guarantee highly secure storage.

«We see a big advantage with the Kardex Color Pick System. It's both easy to use and allows us to work more efficiently. Today, three operators can pick and put away articles simultaneously instead of one operator at a time.»

**Johan Åkertlund**, Facility and Process Engineer, GPV Group A/S – Västerås.

## Smarter picking with the Kardex Color Pick System

Based on a pick-to-light technology, the Kardex Color Pick System allows multiple operators to pick articles or manage replenishment simultaneously by following assigned colors that guide them from machine to machine. The solution provides increased efficiency and higher precision in the picking process. It also requires minimal training, meaning it is effortless for new employees or extra resources to get started – they just need to follow the screens' colors and instructions.







# A global picture – zooming in on Finland

As a global company, Kardex installs automated solutions for international customers worldwide. GPV is an excellent example of this, as Kardex has implemented ASRS for them on several sites, including Finland.

GPV's factory in Lohja, Finland, launched a pilot project to evaluate the use of automation in their warehouse which eventually led to the gradual investment in 13 Vertical Lift Modules between 2017 and 2021.

The machines now ensure an effective First In First Out (FIFO) strategy and 100% component traceability. As a result of more compact storage, they have saved more than 800 m<sup>2</sup> floor space, reduced walking time and increased picking speed by 50-70%, depending on the process.