



NPE

Four Vertical Lift Modules (VLMs) for managing and protecting electronic components

Managing a wide range of electronic components, reducing operator travel distances and ensuring proper storage conditions for production materials: these were the challenges NPE S.r.l. set out to address by moving beyond traditional shelving and improving internal logistics efficiency. A leading example of Italian manufacturing excellence, NPE is an innovative company founded in 1965 in Longarone (Belluno), in the heart of the Dolomiti Innovation Valley. Specialising in the design and manufacture of printed circuit board assemblies (PCBAs), electronic components and advanced control systems, the company develops technological solutions for a wide range of industrial sectors, from electric mobility to energy management. Before introducing vertical storage automation, NPE managed its electronic components using conventional shelving, with storage locations identified in SAP and materials managed according to FIFO principles. During picking operations, however, operators had to physically move between different storage locations. Luciano Bucciarelli, Supply Chain & Production Director at NPE, explains the solution developed by Ferretto to meet the company's requirements.

CUSTOMER

NPE New Procond Elettronica

WHERE

Longarone (BL), Italy

SOLUTIONS

Vertical lift module Vertimag
Warehouse Management System



Less operator travel and faster picking: 79 trays for organising electronic components

"During picking operations, operators had to move between different storage locations, often covering considerable distances." To improve its warehouse operations, NPE installed four Vertimag® 103 XL automated vertical lift modules (VLMs), featuring a total of 79 trays and providing 345.83 m² of tray storage area within a footprint of just 69.6 m². This configuration consolidates electronic components into a compact storage area, maximising the use of vertical space and delivering materials directly to operators through the goods-to-person principle. One of the key factors behind NPE's decision to choose Ferretto was the innovative Ergo-Tech® ergonomic access opening, which prepares the next tray while the operator is working on the current one, helping reduce waiting times between picking operations. "After evaluating the advantages and disadvantages of different solutions, we chose Ferretto because of its innovative Ergo-Tech® access opening, which prepares the next tray beneath the one currently in use, saving valuable time." Trays divided into individual compartments accommodate different electronic components, while LED indicators identify the correct picking locations, helping operators locate and retrieve materials more efficiently.

Protecting electronic components from dust, electrostatic discharge and unsuitable environmental conditions

Proper storage of electronic components and printed circuit board assemblies requires particular attention to environmental conditions, especially when handling materials sensitive to dust, humidity, temperature fluctuations and electrostatic discharge (ESD). To meet NPE's requirements, three Vertimag® VLMs were dedicated to electronic component storage, while the fourth was equipped with thermal insulation and temperature and humidity control for materials requiring specific storage conditions. The solution also incorporates ESD protection and fire protection systems, while enclosed storage helps limit the exposure of electronic components to dust. All four Vertimag® VLMs are managed through Ferretto Warehouse Management Software (WMS), integrated with SAP, coordinating picking priorities and tray movements. Displays, LED picking indicators, barcode scanners and audible confirmations guide operators through warehouse activities, improving material identification and inventory control. The benefits achieved by NPE extend across its entire internal logistics process, from picking operations to inventory management.



Objectives

- Reduce operator travel distances
- Speed up electronic component picking
- Simplify inventory management
- Protect sensitive electronic materials
- Maintain controlled storage conditions

Solution

- 4 Vertimag® 103 XL automated vertical lift modules
- Ergo-Tech® ergonomic access openings
- Ferretto WMS BASIC integrated with SAP
- Guided picking accessories
- Thermal insulation, ESD protection and fire protection systems

Value added

- 345.83 m² of tray storage area within a 69.6 m² footprint
- Reduced picking times and operator travel distances
- Faster, more accurate inventory operations
- Fewer picking errors
- Improved protection of electronic components
- Operational continuity and technical support

WAREHOUSE IN NUMBERS

Installed solution	4 Vertimag® 103XL300-BIG H4461
Total number of trays	79
Total floor footprint	69.6 m ²
Total tray storage area	345.83 m ²
Usable storage volume	85.5 m ³
Load capacity per tray	300 kg
Maximum complete cycle time	47 seconds