Case Study: Jungheinrich Delivers Dual High-Tech Warehouses for Grifols Dublin

Overview
Grifols, a global leader in the production of plasma-derived medicines, operates a flagship logistics centre in Dublin, Ireland-supporting the collection, storage, and distribution of life-saving blood plasma for patients worldwide. To future-proof this facility and meet growing demands, Grifols required a sophisticated, large-scale intralogistics upgrade. They turned to Jungheinrich, a trusted global partner in warehouse automation and cold chain logistics, to deliver a solution that would meet strict pharmaceutical standards, ensure temperature integrity, and maximize operational efficiency.

The result was the delivery of two fully automated, high-tech warehouses: - One dedicated to ultra-low temperature plasma storage at -35C - A second, adjacent ambient warehouse designed for storing dry goods, consumables, and packaging materials

Together, these rack-clad facilities now serve as the logistical backbone of Grifols' Dublin site.

The Challenge
Grifols' Dublin site needed a cutting-edge logistics infrastructure to handle two key types of storage: 1. Frozen Plasma at -35C, which requires strict cold chain maintenance, full traceability, and minimal human contact due to extreme temperatures 2. Ambient Temperature Storage for ancillary materials-also requiring automation, efficient layout, and regulatory compliance

Their goals were clear: - Maximize storage capacity within a limited footprint - Avoid costly building shells by integrating the storage structure with the building envelope - Ensure minimal manual intervention in both temperature zones - Improve energy efficiency and operational safety - Integrate with existing ERP and pharmaceutical quality systems

The Solution: Two High-Tech, Rack-Clad Warehouses
Jungheinrich proposed and delivered a rack-clad warehouse solution-an innovative approach where the storage racking system also serves as the building's load-bearing structure. This allowed Grifols to: - Build higher and store denser - Reduce construction time and cost - Maintain compliance with GDP and GMP regulations

The project consisted of two distinct but integrated high-tech warehouse environments:

1. Ultra-Low Temperature Plasma Warehouse (-35C) - A fully enclosed, automated deep-freeze facility - Equipped with Jungheinrich's cold-resistant stacker cranes, designed for continuous operation in extreme temperatures - Pallet movements fully automated, minimizing human exposure to cold and reducing contamination risk - Integrated airlock systems and insulated doors to preserve

temperature and prevent energy loss - High-bay racking system for maximum vertical storage density

2. Ambient Temperature Warehouse
- Designed for storing packaging, consumables, and dry goods - Features automated stacker cranes and conveyors, improving handling speed and accuracy - Direct integration with the frozen warehouse via airlock-enabled conveyor systems - Full inventory visibility across both zones via the Warehouse Control System (WCS)

Systems Integration and Technology
Jungheinrich's advanced Warehouse Control System (WCS) was integrated directly with Grifols' ERP and pharmaceutical quality systems. This allowed for: - Real-time pallet tracking and inventory control - Full traceability of every unit in line with pharmaceutical regulatory standards - Optimized task allocation and reporting - Temperature and access monitoring for both operational and audit purposes

Client Testimonials
"This solution has completely transformed our Dublin operations," said a Grifols Supply Chain Manager. "The twin warehouse setup-with frozen and ambient zones working in unison-has given us a streamlined, compliant, and future-proof storage system. Jungheinrich's attention to detail, especially in the deep-freeze environment, was outstanding."

A Senior Project Engineer at Grifols added: "The decision to go with a rack-clad structure was game-changing. It maximized our space and minimized construction complexity. Jungheinrich understood the critical nature of plasma storage and built a system that meets the highest standards in pharmaceutical logistics."

Outcomes and Benefits
- 30% more storage capacity achieved using vertical space within the rack-clad design - 90% reduction in manual handling inside the -35C zone - Significant energy savings due to thermal separation and efficient automation - Full traceability and real-time control, supporting audits and compliance - Streamlined material flow between frozen and ambient zones - Reduced construction costs and build time via the rack-clad concept

Conclusion
The partnership between Grifols and Jungheinrich in Dublin showcases how advanced engineering and automation can solve complex pharmaceutical logistics challenges. By delivering two fully automated, rack-clad high-tech warehouses-each tailored to a specific temperature requirement-Jungheinrich has helped Grifols secure its role as a global leader in plasma logistics.

This case stands as a benchmark for cold chain innovation, intelligent warehouse design, and pharmaceutical compliance at scale.