

Shamrock Distribution Centre

1,200,000 Square Foot Mega Project

Case Study



Summary

At 1.2 million square feet, Shamrock Foods' new distribution center in Denver is a massive logistical hub requiring highly precise temperature regulation to protect perishable goods and maintain operational efficiency. Nomad was brought in to design and deliver a fully integrated HVAC solution that would meet the strict demands of cold storage and industrial scale. From custom-designed hardware to user-friendly software, Nomad's system ensures accurate control, real-time visibility, and energy-efficient performance across this expansive facility.

Challenge

The size and function of the distribution center posed a number of significant challenges that demanded a bespoke and highly reliable HVAC approach:

- Extreme Temperature Demands
- Maintaining consistent conditions in coolers and freezers—despite external weather fluctuations—was critical for food safety and regulatory compliance.
- Large-Scale Infrastructure
- Spanning over a million square feet, the facility required a powerful yet efficient HVAC network to maintain airflow, climate consistency, and control across all zones.
- Simplified Control
- With so many active areas—from receiving and shipping docks to storage and pump zones—management needed a centralized system to easily monitor and adjust HVAC performance.

Objectives

To meet Shamrock's operational and logistical needs, Nomad focused on the following key goals:

- Precise Temperature Control
- Design systems capable of maintaining strict temperature standards in all climate-sensitive zones.
- Energy Efficiency
- Optimize energy use across all systems to reduce operational costs and environmental impact.
- Centralized, Intuitive Control
- Equip the facility with real-time data, alerts, and touch-screen controls for seamless operation and proactive maintenance.

Key Features



Nomad managed the entire installation, ensuring functionality and long-term maintainability.



Touch panels in key areas for quick adjustments without technical expertise.



A centralized platform with real-time monitoring, alarms, and performance data for fast, informed decisions.



Tailored systems optimized airflow and temperature control across key zones, including coolers and docks.



Designed with future expansion in mind, the system can easily adapt to changing needs or additional facilities.

Solution

Nomad successfully completed a major project to optimize the HVAC and refrigeration systems at Shamrock Foods' 1.2 million square foot distribution center in Denver. The project aimed to ensure precise temperature control across critical areas, such as coolers, freezers, and shipping/receiving docks, while improving operational efficiency and energy savings.

Nomad engineered a custom HVAC design tailored to meet the specific needs of each zone, ensuring optimized airflow and temperature consistency. A centralized software platform was integrated, enabling real-time monitoring, alarm triggers, and system performance data, which empowered Shamrock's team to make informed decisions and respond quickly to any issues. User-friendly touch panels were installed throughout the facility, allowing operators to manage settings without technical expertise.

The project also included the installation of a Jace controller, a touch panel, and the integration of the Emerson E2 Refrigeration System, configured to efficiently manage and monitor refrigeration. Two days of on-site commissioning were carried out to ensure all systems were fully operational. Coordination with the general contractor was essential for tasks like mounting and powering the control box and running Ethernet cables between key components.

Shamrock Foods was provided with remote access capabilities, allowing ongoing system monitoring from any location. Nomad also trained the refrigeration installer to ensure they could support the system after installation, and comprehensive system documentation was provided for future maintenance.

As a result, Shamrock now enjoys optimized temperature control, improved energy efficiency, and enhanced system monitoring. The solution is scalable, with the flexibility to expand as the facility grows.

Conclusion

Nomad's HVAC solution at Shamrock's Denver distribution center proves that scale doesn't have to come at the cost of precision. With intelligent control, advanced monitoring, and a custom-engineered design, Nomad helped create a climate-controlled powerhouse built to perform—and built to last.



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