

Disney Store

HVAC, Happily Ever After

Case Study



Summary

The Disney Store in Times Square, New York, presented unique climate control challenges, with extreme seasonal temperatures impacting both customer experience and operational efficiency. Nomad Group was brought in to overhaul the store's HVAC system, reducing overall energy usage whilst providing year-round comfort for visitors. Opened in 2010 as the largest Disney Store in North America, the 20,000-square-foot, two-level layout had to be carefully planned. The store featured many features that had to be worked around, an enchanting, castle-like archway and interactive displays. The store's atmosphere was carefully preserved while advanced climate control solutions were seamlessly integrated, in order to keep the Disney magic.

Challenge

Located in the heart of Times Square, the Disney Store experienced drastic seasonal temperature fluctuations that impacted both customers and staff. The existing HVAC system struggled to maintain consistent temperatures, leading to Extreme Weather Challenges due to inefficient air cooling during hot summers causing comfort Issues. The lack of temperature regulation disrupted operations and hindered the customer experience. The Times Square store is a flagship store, the effect the temperature was having on both employees and customers was resulting in loss of revenue and potential. The HVAC system needed to be upgraded as well as integrating further sensors and control capabilities. This upgrade aimed to provide a stable, comfortable environment year-round, aligning with the store's magical atmosphere and ensuring a positive experience for all visitors. The solution required a customized approach that addressed the specific challenges of the location and the unique requirements of the Disney brand, while also prioritizing energy efficiency and long-term sustainability.

Objectives

To address these challenges, the project needed to achieve the following objectives:

- Upgrade HVAC System: Ensure consistent climate control year-round, maintaining temperatures between 20°C (winter) and 26°C (summer).
- Implement User-Friendly Controls: Install an intuitive control system that allows store managers to monitor and adjust settings efficiently.

Enhance Energy Efficiency: Improve operational performance while reducing energy consumption and emissions.

Key Features



Real-time monitoring allows for immediate responses to HVAC issues.



Web-based interface offers flexibility and remote management of the HVAC system.



Automated alerts enable quick intervention, preventing problems from escalating.



Historical data tracking provides insights for optimizing settings and maintenance.



Integration with JENEsys controls ensures accurate data collection and precise system control.

Solution

Nomad Group upgraded the Disney Store's HVAC system with advanced control technology, enhancing efficiency while preserving the store's magical shopping experience.

Key Features:

- Custom HVAC Design: Optimized temperature control to counter stack effect issues.
- Reflow Integration: Web-based interface with JENEsys controls for real-time monitoring, automated alerts, and historical data tracking.
- Advanced Control Technology: Touch panels on both floors for intuitive system management.
- Energy Optimization: Improved airflow reduced strain on heating and cooling components while ensuring consistent comfort.

Results:

- Enhanced Customer Experience: Stable indoor climate year-round, seamlessly integrated into the store's aesthetic.
- Operational Efficiency: Store managers gained real-time alerts, easy system access, and proactive maintenance tools.
- Tangible Benefits: Reliable temperature control, no unexpected closures, lower energy consumption, and a scalable system adaptable to other Disney Store locations.

Reflow's web-based interface was the backbone of this HVAC upgrade, providing:

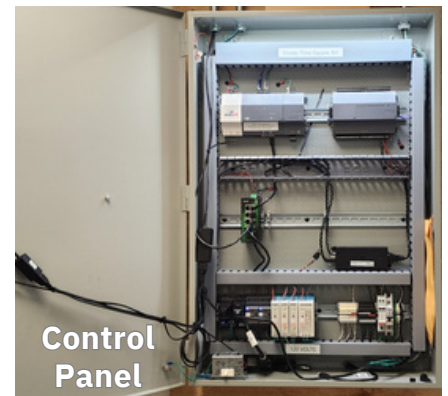
- Real-time monitoring
- Automated alerts
- Historical data tracking.

Store managers could visualize system performance, resolve issues proactively, and optimize settings based on usage trends. Integrated with JENEsys controls, it ensured easy software-to-hardware communication. Remote data accessibility allowed the maintenance team keep the building comfortable, perfect for an immersive shopping environment.



Conclusion

Nomad Group's innovative HVAC upgrade transformed the Disney Store's climate control capabilities, enhancing customer comfort and operational efficiency while delivering long-term energy savings. By integrating advanced control technology, the project set a new standard for seamless and sustainable HVAC solutions in high-traffic retail environments.



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