



Absorbent Material Manufacturer Plant Ventilation

QUICK FACTS

Project Name:	Plant Addition
Location:	Hazleton, PA
Project Type:	Ventilation for a large absorbent material manufacture
Building Description:	New construction
Size:	165,000 square foot, 95-foot ceiling height
Building Controls and Automation System Integrator:	AbsolutAire, Inc. Kalamazoo, Michigan

PROJECT

A large absorbent material manufacturer underwent an addition of 165,000 square feet, with higher ceilings than their existing facility which demanded special ventilation that was required to deliver a positively pressurized space for their manufacturing process.

The positive pressurization was essential to keep effluents and contaminants out of the facility as the absorbent material being manufactured was of medical grade and necessitated that those specific requirements, guidelines, and compliance be met.

GOALS

The Project goals were to maintain proper ventilation, space pressurization and a comfortable temperature for the manufacturing environment while automatically compensating for the cycling of multiple exhaust fans and the opening/closing of overhead doors. In addition, a goal was to have enough ventilation to accommodate this, while having enough reserve for equipment maintenance downtime.

SOLUTION

As the selected solutions provider for the project, AbsolutAire deployed a Lynxspring, Niagara JENEsys Edge 514 controller with an accompanying TSD-10 Touchscreen.



MECHANICAL & CONTROL REQUIREMENTS

AbsolutAire's solution included ventilation equipment that consisted of four (4) 100,000 CFM, variable volume, direct fired industrial grade heating and ventilation units. In addition, the calculated air volume required to ventilate and pressurize the space was determined to be approximately 265,000 CFM of air flow. As a total of 400,000 CFM was available, this allowed for three units to operate at less than full capacity with one unit on standby.

OUTCOMES

By capitalizing on the use of the Niagara Framework® embedded within the JENEsys Edge 514, AbsolutAire was able to accurately measure space pressure and control the three operating make-up air units by balancing the fans, which allowed for equalized workload and even heating, while allowing web browser monitoring and control from various locations at any time.

The modulating, direct fired burners provide only the necessary heat for the space and the variable volume fans provide only the required ventilation. As a result, the equipment now operates more efficiently, resulting in savings in gas and electricity costs.

The JENEsys Edge 514 controller provided a balanced workload when the units were operating. It also allowed for automatic on/off cycling of the units on a schedule to equalize equipment usage. Notifications for hours of operation are calculated to give the operators advance notice of upcoming maintenance. Gas and electricity usage are calculated for energy analysis.

ABOUT ABSOLUTAIRE



Founded in 1992, AbsolutAire and its Pure and Simple Solutions provide outstanding value in meeting market needs for direct fired and indirect fired space heating, make-up air, air turnover, and ventilation equipment. Their products serve a wide variety of building types and applications. These include restaurants, commercial paint facilities, large manufacturing facilities, warehouses and distribution facilities and waste water and sewage treatment facilities. Their intuitive and flexible designs can be tailored to fit most every need.

<https://www.absolutaire.com/>

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ABOUT LYNXSPRING



Founded in 2002, and embracing open software and hardware platforms, Lynxspring develops, manufactures, distributes, and supports edge-to-enterprise solutions and IP technology that creates smarter buildings, smarter equipment, and smarter solutions.

The Lynxspring technologies, products and services provide connectivity, control, integration, interoperability, data access, aggregation and visualization enabling users to achieve operational and business outcomes.

The versatility, functionality, and broad scope of the company's product portfolio, combined with its extensive domain knowledge of the built environment, make it a powerful and economical solution for system integrators, building owners and operators, consultants, and equipment manufacturers. Lynxspring solutions are deployed in millions of square feet of commercial and government facilities in the United States and internationally.

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