

Rexam • Berlin Plant

Building Automation & Controls Replacement • Equipment & Process Optimization

The Complete Package: Controls Replacement and Equipment / Process Optimization With No Down Time.

Located in Berlin, Ohio, Rexam Plastics manufactures state-of-the-art prescription packaging and a full line of vials and custom imprinted closures for pharmacists and retail customers.

Challenge

Rexam Plastics had a dated Building Automation and Controls System (BAS) controlling their cooling tower and chilled water along with the environment and humidity controls inside their plant. The obsolete controls system led to issues with regulating the humidity in the plant and the temperature controls for their machines and process equipment. If the humidity in the facility was too high, it affected the quality of the products. If the temperature of the water and oil to the machines was not quite right, the machines could not perform the way they should. Something needed to be done to better optimize the building controls inside the plant.

Solution

Gardiner conducted a complete controls replacement of Rexam's current BAS with a Tracer system. This replacement included adding an SC front end and integrating the plant's existing 5 dehumidification chillers, 14 air handling units, 5 process chillers and cooling towers so the equipment could communicate back to the BAS. This change helped with controlling the humidification process. Next, they integrated the BAS to control the water pressure and temperature of the chilled water loops from the process chillers to the blow and injection mold machines. Then, the cooling tower was added to the controls system to control the temperature of the water used to cool the oil in the plant's process machines. Variable frequency drives (VFDs) were added to control the speed of the tower fans. Finally the water being cooled by the chillers was converted over to the cooling tower. Doing this allowed Rexam to utilize the outside air to cool the water on a cooler day. This "free cooling" option minimizes the load on the chiller and cools without having to run the compressor, saving energy.



Rexam • Berlin, OH

The plastic packaging facility is 265,000 square feet. The plant was constructed in multiple phases. The ground breaking started in 1968 and the last major addition occurred in 1988.

Project Overview

- Controls Replacement & Integration to Equipment
- Trane Tracer Summit SE Building Automation System
- VFDs installed on Air Handling Units, Pump Skids, Chilled Water Loops & Cooling Towers
- Cooling Tower Fans
- Water Pressure and Temperature Monitoring

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Results

The completion of these projects has enabled Rexam to better gauge their energy usage because they have better control of their equipment and processes. The new building automation and controls system allows them to hold tighter tolerances on their machines. Annually, they have saved 2,230,852 kwh and have experienced an energy savings of \$295,384.

“We have a great working relationship with Gardiner. Their team is very professional, knowledgeable, technically savvy and dedicated when it comes to our projects. They really know what they are talking about.”

Maintenance Manager



Annual Energy Savings

- \$295,384 Annual Energy Savings
- 2,230,852 kwh/ year
- 1673 tons- Annual CO² Emissions Reductions

GARDINER

For more information on Gardiner Solutions, visit
www.WHGardiner.com or contact us at 440.248.3400