

Overview

Industry:
Pharmaceuticals

Focus:
Reduced Cooling Loads
Front End Engineering
Detailed Design

Dehumidification Upgrade

Pharmaceutical process and storage rooms

The project objective was to reduce summertime humidity levels in the existing production and storage areas from 60% RH to 25% +3% / -5% RH. The areas included pharmaceutical process rooms and storage rooms.

An evaluation of the existing facility was made and a Front End Engineering Report provided that included recommendations to upgrade the system. Two alternatives were analyzed: centralized and semi-centralized installations. Pros and cons as well as budgetary estimates for each system were provided.

The centralized system was recommended, combining the installation of packaged dehumidifiers to process conditioned air at a known condition and an after-cooler system.

The combination of this equipment, as well as individual exhaust variable-speed fans in specific and designated areas, gave a reliable method of achieving desired conditions within the given time limits.

A two-speed humidistat-controlled exhaust fan was installed to maintain or alter the specified room condition. All air supplied either directly to process areas or into transfer corridors would be maintained at the desired conditions of the process rooms. Any air infiltration therefore would be drawn at the desired rate of humidity.

In selecting the centralized system, the client was able to reduce the re-circulating AHU cooling loads because unnecessary warm air would not be added to the system.

JNE provided civil, mechanical and electrical engineering design services to execute the recommendations.

Project Size: 5,700 sq. ft.

