

CASE STUDY REPORT

CHALLENGE

- The existing space was heated for freeze protection but was not controlled for summertime cooling or humidity control.
- Carters wanted this space cooled and dehumidified for employee comfort and product stability and quality. A ducted system was not desirable as an extensive conveyor system was to be added in addition to heavy racking.
- Even temperature and humidity control from floor to ceiling was important due to racking and mezzanines as well as maximizing operational efficiency.

SOLUTION

- Six (6) air turnover units were installed along the perimeter of the building.
- Two (2) 300-ton air cooled York chillers with a packaged pump skid manufactured by **Canariis Corporation** were installed in the back of the facility.

STRUCTURAL INFORMATION

Tilt-Up Construction
500,000 sq. ft
42 ft Avg. Ceiling Height

ENGINEERING INFORMATION

Air Flow: 348,000 CFM
Cooling: 600 Tons
Heating: Existing Unit Heaters
Throw: 250 ft



*Figure 1: IFA-600-C Air Turnover Unit
100 Tons/ 58,000 cfm*

PRODUCT

Applied Air - Air Turnover System

- (6) IFA-600-C (Cooling Only)

INDUSTRY

Infant Clothes: Packing & Distribution

FACTORY REP

Lincoln Associates

APPLICATION

Cooling & Humidity Control

END USER

Carters Distribution Center
Stockbridge, GA



*Figure 2: One of Two York 300 Ton
Air Cooled Chillers*

NOTES OF INTEREST

- Carters DC recognized a \$500,000 capital costs savings using air turnover over conventional packaged roof top systems.
 - Savings were due to:
 - Elimination of duct work
 - Elimination of structural engineering & analysis
 - Elimination of structural roof reinforcement
 - Reduction in electrical scope
- DDC control allowed for remote monitoring, trending and control of the system.
- Chilled water provided more diversity than packaged DX systems, thereby lowering overall operating costs.
- No roof penetrations were required, providing less potential for leaks and longer roof life.
- The ATO's were mounted indoors, extending the potential service life to 30 years or more.

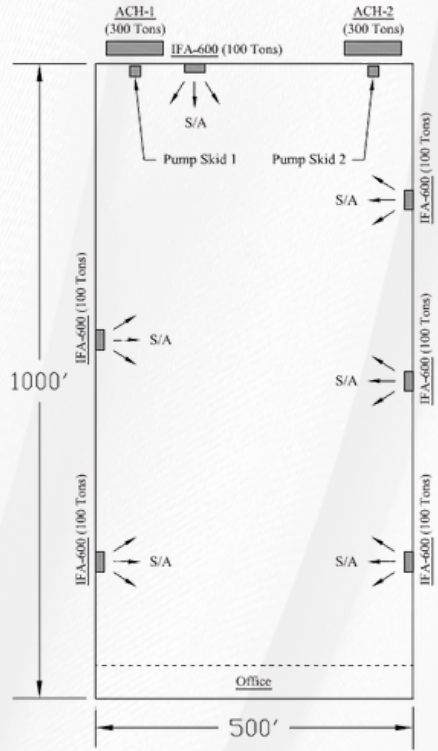


Figure 3: IF-A-600-C Air Turnover Unit
100 Tons/58,000 cfm

Applied Air Systems has manufactured quality industrial heating and cooling equipment since 1975.
www.appliedair.com

Lincoln Associates has represented Applied Air Systems since 1976. With Application Engineers on staff, Lincoln Associates is able to assist customers in the selection and application of Applied Air equipment.

For more information, call 770.425.1500 or visit www.lincolnassoc.com.