

CASE STUDY MANUFACTURING



JOHNSON
AIR-ROTATION® HVAC SYSTEMS

CUSTOMER SAVES \$3.5 MILLION WITH JOHNSON AIR-ROTATION® HVAC SYSTEM

APPLICATION:..... A Major Aircraft Manufacturer
LOCATION:..... Amarillo, Texas
BUILDING SQUARE FOOTAGE:..... 250,000
SYSTEM STYLE & QUANTITY:..... 6 Outdoor Heating & Cooling Johnson Air-Rotation Systems, for redundancy purposes required by client
SAVINGS:..... \$3.5 million in savings as a result of less utility connections, removal of duct work and installed costs.



DESIGN

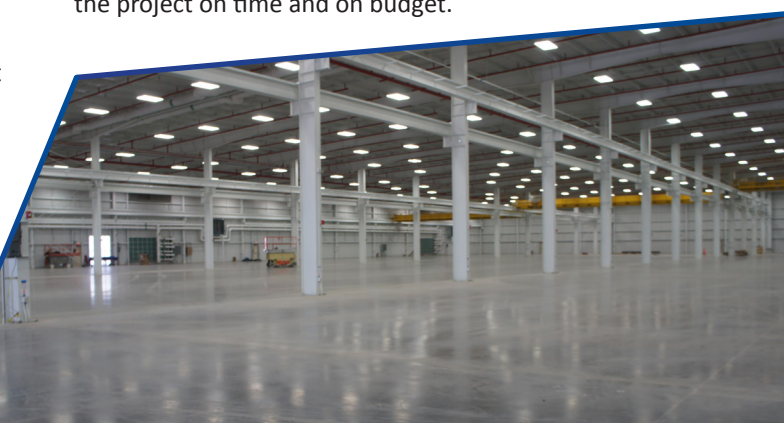
- The aircraft manufacturing company constructed a new facility that required 1,200 tons of cooling.
- A cooling system was designed by a mechanical contractor to meet the quota with 42 rooftop units.
- The buildings current construction could not handle this design and required additional reinforcements or re-building to support rooftop units.

SOLUTION

- Johnson's engineering team eliminated the need for new construction by designing 6 outdoor-placed Johnson Air-Rotation HVAC Systems that were seamlessly incorporated into the current building structure.
- The Johnson Air-Rotation HVAC System reduced the cost of the project due to less equipment, building penetrations, utility connections, duct work and, labor hours.
- With the saved money the customer was able to upgrade to a chilled water system versus the DX system they believed they would have to use with the rooftop units.

RESULTS

- The mechanical contractor was extremely happy with how easy the Johnson Air-Rotation HVAC Systems were to assemble.
- The mechanical contractor said the 1st Johnson Air-Rotation system took 3.5 hours to install and connect to the building, by the time they installed the 6th Johnson Air-Rotation System they had it down to 1 hour.
- The customer was pleased the Johnson Air-Rotation Systems paint color was matched exactly to the overall building color, blending into the space perfectly.
- The customer saved on numerous installation costs associated with rooftop units, allowing them to install a chilled water system and resulting in no additional building work needed during construction as well as savings on utility connections, keeping the project on time and on budget.



JOHNSON
AIR-ROTATION® HVAC SYSTEMS

(800) 325-1303
11880 Dorsett Road,
St. Louis, MO 63043
JohnsonAirRotation.com

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DESIGN SPECIFICATIONS

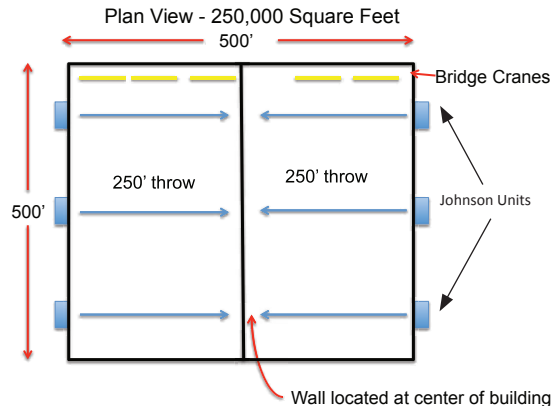
ORIGINAL DESIGN

- 1200 Tons Cooling
- 42 Rooftop Units
- 42 Roof Penetrations
- 42 Electrical Utility Connections
- 42 Gas Utility Connections
- 42 Condensate Drains

FINAL DESIGN

- 6 Johnson Air Rotation Units
- Air Cooled Chilled Water Plant (Owner Preferred)
- Only 6 Utilities Connections
- Eliminated All Duct Work
- Saved on Installation Costs and Kept Overall Project on Track

JOHNSON AIR-ROTATION HVAC SYSTEM PLAN

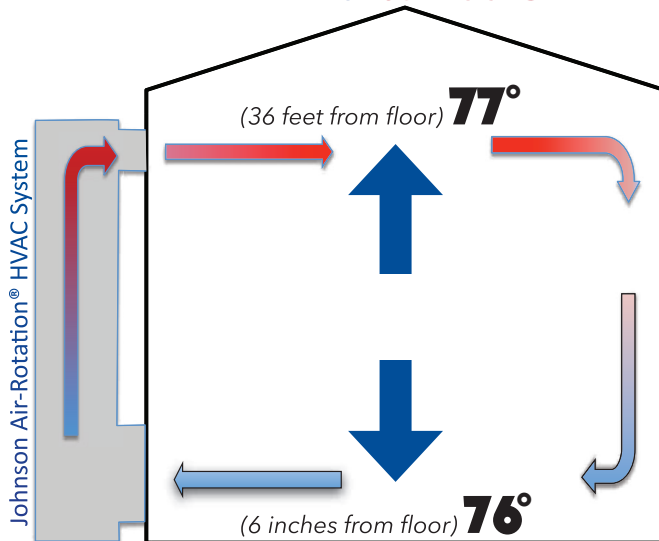


The Johnson Air Rotation System featured six outside Air Rotation systems along two sides of the building. Each system is able to throw air to the center wall at two hundred fifty feet to control air temperature and rotate the air to maintain conditioned air throughout the facility.

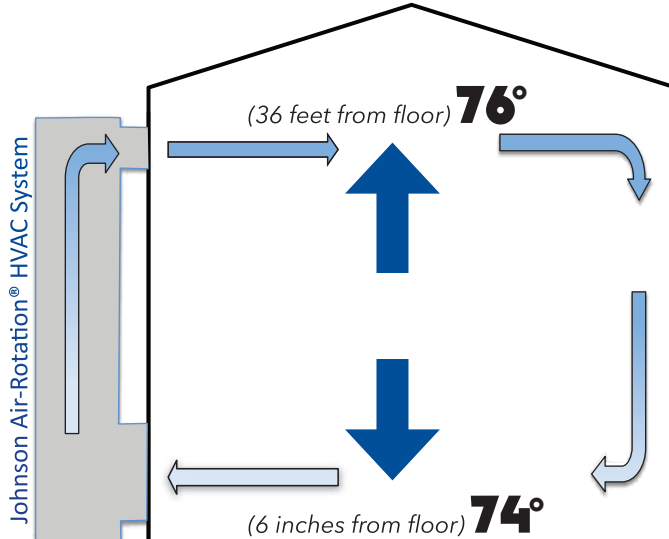
AIR-ROTATION HVAC SYSTEM KEEPS TEMPERATURE CONSISTENT

When measured with a digital thermometer there was ONLY a 2 degree difference between 6 inches from the floor and 36 feet from the floor.

HEATING: 38°F OUTSIDE



COOLING: 82°F OUTSIDE



Named one of the Fastest Growing Companies by Inc. Magazine



Johnson Air-Rotation® HVAC Systems are Manufactured in the USA



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