



JOHNSON
AIR-ROTATION® SYSTEMS

CUSTOM-MADE IN THE USA
SINCE 1921.

APPLICATIONS



- Manufacturing and Industrial Facilities
- Warehouses, Distribution Centers & Retail Wholesale Clubs
- Product Sensitive Storage
- Hospital & University Equipment Rooms
- Plastic Injection Molding Facilities
- Pharmaceutical Storage
- Exhibition Centers
- Aircraft Hangars
- Sports Complexes, Athletic Facilities & Gymnasiums

JOHNSON AIR-ROTATION SYSTEMS GENERAL SPECIFICATIONS

ARU Capacities

- 150,000 square feet conditioned with a single unit
- Up to 6,250 MBH per heating unit
- Up to 450 tons per cooling unit (cooling and humidity control)
- Up to 170,000 CFM per unit

ARU Cooling Sources

- DX
- Chilled Water/Glycol
- Evaporative Cooling
- Ammonia

ARU Heating Sources

- Natural Gas
- Propane
- #2 Oil or Dual Fuel
- Steam
- Hot Water
- Electric Coil

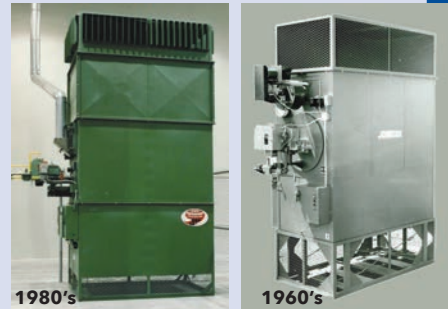
OUR SERVICES INCLUDE:

- Jobsite Evaluation & Building Analysis
- Heating & Cooling Load Calculations
- Energy Analysis & Cost Comparison
- Unique Design Guidance & Engineering Support
- Specification & Schedule Development Assistance
- Equipment Start-Up & End-User Training



A HISTORY OF INNOVATION AND QUALITY

Founded in 1921, Johnson Air-Rotation® Systems set the bar by creating a new technology now known in the industry as Air-Rotation. Don't be fooled by imitators. Over the decades, we've continued to innovate and refine the concept to create the most effective method to heat, cool, filter and/or ventilate large, open buildings. Johnson Air-Rotation Systems have been proudly made in the USA since our beginning and continue to be to this day. As the only UL® approved Air-Rotation/air-turnover system in the industry, we take pride in our custom manufactured product and you will too.



Built to Last

Johnson Air-Rotation Systems are built with the highest quality materials. We don't cut corners in our production method or in the components we use to build our systems. Our attention to detail and stringent testing process ensures our customers receive the highest quality product possible. You can purchase a Johnson Air-Rotation System with confidence knowing there are thousands of satisfied customers worldwide.

What's the Secret?

Johnson Air-Rotation Systems continually circulate large volumes of air at low velocities with a minimum temperature rise, resulting in the most energy efficient HVAC systems on the market, period. From 10,000 square feet to over 1 million square feet, the Air-Rotation concept works and we have satisfied customers worldwide using less electricity and gas to prove it!

One Size Doesn't Fit All...

Don't be sold on "off the shelf" units. Hot and cold spots, operating costs, air stratification and a short product life are just a few of the problems you may encounter. Johnson Air-Rotation has an in-house engineering team that evaluates and custom designs each system specifically for your facility to ensure the most energy efficient system possible. In addition to our proprietary fan design, which uses the lowest horsepowers in the industry, Johnson Air-Rotation Systems can mix outside air with conditioned air. This combination provides utility savings that will often result in a return on investment in as little as three years.

Visit us online at:
JohnsonAirRotation.com



THE MOST ENERGY EFFICIENT WAY TO CONDITION AND MOVE LARGE VOLUMES OF AIR, PERIOD.

Why Choose Johnson Air-Rotation Systems?

Uniform heating and cooling results in temperature deviation from floor to ceiling that vary less than 1-2 degrees for every 10 feet of building height. Johnson Air-Rotation eliminates stratification of the air.

Optional features include - fresh air induction and economizer cycle for free cooling, humidification, oil mist removal, custom filtration and UV lights.

Heat and Cool or just Ventilate with one system! Up to 450 tons of cooling, 6,250 MBH heating and 170,000 CFM heating per system.

Turning vanes and directional louvers control distribution of conditioned air.

High quality 3-4 mils dry paint coating.

Stainless steel triple slope drain pan prevents stagnant water build-up during cooling season.

Spray foam insulation under drain pan prevents condensation sweating.

Custom construction and quality components = Longer product life (30+ years!).

Ground level controls and filter replacement for easy maintenance.

Optional VFD's on supply fans increases energy efficiency.

Hinged access doors.



Indoor/Outdoor mounted systems that customize to your needs. We don't modify your needs to fit the product.

- The ONLY UL® listed Air-Rotation®/air-turnover system on the market, ASHRAE 90.1 compliant 130 point quality control checklist and testing before shipment ensures you receive the best Johnson Air-Rotation System possible.
- Factory built custom heat exchangers provide industry leading product life.
- Custom engineering and manufacturing means we can build a system as tall as your facility needs (our current record is 100 feet tall).
- A single unit will condition 150,000 square feet!
- Proprietary air foil axial fans reduce motor horsepower by 50-60% and reduce sound levels to 63-72 DBA.
- In-house controls commissioning means your system arrives on-site ready to go!
- Factory designed and installed piping saves \$ on installation costs.
- Our systems are extremely quiet in your facility.

Johnson Air-Rotation Systems Vs. Rooftop Units Compare installation and system savings for yourself!

Faster Installation Install in a matter of hours, not days or weeks because of the simple set-up process!

No Additional Rooftop Support Our systems do not need additional roof support required with conventional rooftop units.

No Ductwork Johnson Air-Rotation Systems DO NOT require ductwork.

Fewer Utility Hook-ups Because one Johnson Air-Rotation System replaces multiple rooftop units, less utility hook-ups are needed, thus saving you time and money.

Lower Utility Costs Johnson Air-Rotation Systems use less utilities than rooftop units.

Ground Level Servicing Customers save money on repairs because ground level servicing means no need to climb on the roof and tackle potential weather elements such as snow, wind and rain, thus ensuring proper routine maintenance is followed.

Lower Horsepower Johnson Air-Rotation Systems require lower horsepower than conventional rooftop units to heat and/or cool, thus saving you utility costs.

Lower Installation Costs Save substantially on electrical installation costs that are associated with higher horsepower rooftop units.

No Rooftop Penetrations Multiple rooftop penetrations are not required with our systems unlike rooftop units, meaning you don't have to worry about leaking roofs or potential damage to your products and equipment.

Return on Investment Johnson Air-Rotation Systems pay for themselves in a matter of years as a result of the utility savings vs. conventional rooftop units.

Portability A significant number of our customers, especially tenants who are leasing a building on a short-term basis, prefer Johnson Air-Rotation Systems because of their portability. Other types of air conditioning systems are practically impossible to move to another location.

Longer Product Life Higher quality construction and components results in a product lifespan of 30+ years versus 10-15 for rooftop units.



CASE STUDY

DISTRIBUTION COMPANY HEATS **TWICE THE SPACE** WHILE CUTTING ORIGINAL FUEL COSTS



Customer: Distribution Company Specializing in Grocery Products

Location:Wisconsin

Building Square Feet:130,000

Building Cubic Feet:2,921,600

Dock Doors:13

Problem - Company growth resulted in the need for nearly doubling the facility to approximately 245,000 square feet with an average ceiling height of 32 feet. The existing 130,000 square foot facility was heated with gas unit heaters.

Johnson Air-Rotation® Solution - Johnson worked with the distribution company and a local engineering firm to have the old gas unit heaters removed and replaced with three Johnson Air-Rotation Systems to heat the newly-expanded 245,000 square foot space.

Results - The Wisconsin Public Service Gas Company provided a fuel usage analysis, which calculates gas use for the year prior to the addition of the Air-Rotation Systems and for the year after. To make before and after comparisons accurate, all figures have been adjusted for degree-days to reflect the difference in the daily temperatures between the winters before and after adding Johnson Air-Rotation Systems.

Total Therms Used:

| | |
|------------------------------|---------|
| Before @ 130,000 sq. ft..... | 131,277 |
| After @ 245,000 sq. ft..... | 84,054 |
| Change | -36% |

BTU's per Cubic Ft. per Degree-Day:

| | |
|--------------|------|
| Before | 56 |
| After..... | 17 |
| Change | -70% |

The distribution company nearly doubled the building size while cutting fuel costs by over 30%! Johnson Air-Rotation Systems are heating nearly twice the space with less gas than the distribution company used before the addition. With a conservative cost per therm of \$1.06, this equals more than \$50,000 in savings in one heating season alone! This savings results in a return on investment in as little as 2-3 years.



Named one of America's Fastest-Growing
Private Companies by Inc. Magazine



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Johnson Air-Rotation® Systems are
Manufactured in the USA