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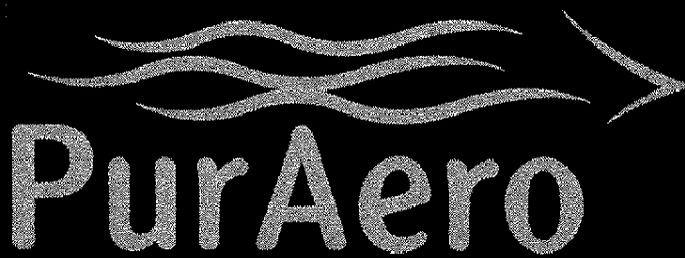


# Indoor Air Quality A Problem?

Try a  
FRESH  
solution  
from

**ARCO**

## INDOOR AIR MANAGEMENT SOLUTIONS



# PurAero

## IMPROVE INDOOR AIR QUALITY AND REDUCE ENERGY COSTS WITH AIR DUCT SEALING

You may not realize it, but your energy dollars may be literally "seeping through the cracks" of your facility. Cracks and holes in air ducts can cause a typical heating and cooling system to lose 15% to 40% of its capacity. Further indicators that a problem exists include abnormally high energy consumption and uneven room temperatures. Fortunately, a new technique - air duct sealing - is the solution to your problem and it can put an end to major energy waste while improving indoor air quality (IAQ) at your facility.

Air duct sealing will stop dirt, dust, pollen, allergens, humidity, odors and other contaminants from entering the ductwork and being distributed into your furnace or air handler and ultimately throughout your facility. By eliminating these pollutants, you'll create a healthier work environment for your employees that may result in a drop in absenteeism. Equally as important, you're likely to see a drop in energy costs.

### How it works

Duct sealing internally seals air leaks in heating and cooling ducts. Adhesive particles are blown into the duct system, where they attach themselves to the edges of leak sites such as perforations, seams and gaps in ductwork, as well as at duct joints, connections, elbows, fittings and register boots - sealing them completely. Duct sealing can eliminate up to 90% of ductwork leakage resulting in improved air quality, equalized room temperatures and reduced energy costs.

### AIR DUCT SEALING BENEFITS:

- Reduces energy costs by up to 30%
- Improves indoor air quality
- Provides consistent temperatures
- Improves heating and cooling efficiencies

Still not convinced? Here are some facts from the Environmental Protection Agency:

- Indoor air is found to be up to 40 times more polluted than outdoor air
- Most people spend 80-90% of their time indoors
- 50% of all illness is caused or aggravated by polluted indoor air
- The average person breathes 500 cubic feet of air daily
- There are up to 30 million dust and pollutant particles in one cubic foot of air

Improve the comfort, safety, and indoor air quality at your facility while reducing your energy costs. Call Nicor today about a duct sealing solution that's right for you.

### Consulting Service

Nicor's PurAero Indoor Air Management Solutions are designed to address any concerns you have regarding indoor air quality. Our specialists can provide customized consulting services for air remediation needs in commercial or industrial environments. For more information, call Nicor at 630-388-2596 or visit our website at [www.nicorgas.com/puraero](http://www.nicorgas.com/puraero).

# Indoor Air Quality

## INDOOR AIR MANAGEMENT SOLUTIONS



# PurAero

**PROBLEM:**

- High Moisture and Humidity Levels

**SOLUTION:**

- Desiccant Dehumidification System

## CONTROL MOISTURE AND HUMIDITY WHILE LOWERING ENERGY COSTS WITH DESICCANT DEHUMIDIFICATION

Controlling moisture and humidity levels is a battle for many facilities that are noticeably damp due to poor indoor air quality (IAQ). Often, the facility is a breeding ground for the growth of mold, mildew, pathogens and bacteria that can make employees ill. Facilities experiencing extremely poor IAQ are known as being "sick" or having Sick Building Syndrome (SBS). Other facilities have problems with condensation, resulting in damaged equipment and corrosion of metal infrastructures.

Fortunately, there is a solution. Facility managers across the country have seen first hand the difference a desiccant dehumidification system can have on indoor air quality while realizing a reduction in energy and operating costs.

A desiccant dehumidification system can be the most effective space-conditioning solution for many businesses. Hospitals, schools, hotels, motels, office buildings and retail establishments, supermarkets, ice skating rinks, refrigerated warehouses, industrial and technical facilities – regardless of size – can benefit from a desiccant system. By simply removing moisture from the air, facilities can save on energy and operating costs, as well as provide a better indoor air quality environment for their employees. While a desiccant system should be considered for any facility experiencing indoor air quality problems, it should be a fixed solution for any facility where the required dew point is below 45-50°F for manufacturing or storage of products. And, since employee costs are often higher than maintenance and operation costs, improving the work environment is a sound investment.

**How it works**

Desiccants are materials that attract and hold moisture. A desiccant dehumidification system removes moisture from the air before it is conditioned. This greatly improves the quality of the indoor air and enables separate control of temperature and humidity within a facility. Desiccant dehumidification systems can raise

the coil temperature of existing cooling systems, which significantly enables the facility to make more effective use of its energy dollars.

Desiccant systems are reliable and easy to operate. There are no compressors to break down and no belts or fuses that ever need replacing. In addition to the ease of operation and cost savings, desiccant systems guarantee a better work environment. Drier air enhances comfort and productivity. Mold and mildew is eliminated and a healthier environment is achieved since desiccants reduce airborne bacteria and fungus by up to 94 percent. And, safety is certainly improved with reduced condensation and icing on floors. The results of installing a desiccant system in your facility can be dramatic.

**Benefits**

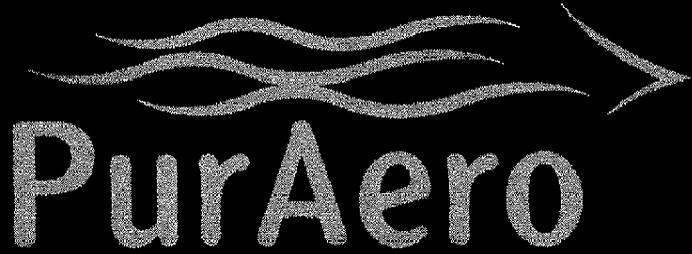
- Decreased energy costs while controlling moisture and preventing the growth of mold, mildew, pathogens and bacteria
- Independent control of temperature and humidity
- Improved product quality and quality control
- Elimination of fog, ice build-up, wet coils and condensation
- Lower peak demand due to reduced electric cooling load
- Improved comfort for employees
- Improved employee health, safety and productivity

**Consulting Service**

Desiccant Dehumidification systems are a simple, efficient, low cost, reliable means of controlling humidity at the levels you specify. Nicor's PurAero Indoor Air Management Solutions are designed to address any concerns you have regarding indoor air quality. Our indoor air quality specialists can provide customized consulting services for air remediation needs in commercial or industrial environments. For more information, call Nicor at 630-388-2596 or visit our website at [www.nicorgas.com/puraero](http://www.nicorgas.com/puraero).



## INDOOR AIR MANAGEMENT SOLUTIONS



PurAero

**PROBLEM:**

- Drafty and Uncomfortable Environment
- Poor Indoor Air Quality (IAQ)

**SOLUTION:**

- Make-Up Air System

## CONTROL AIR FLOW AND IMPROVE AIR QUALITY WITH MAKE-UP AIR

Tired of drafty areas at your facility? Experiencing frequent equipment malfunctions or breakdowns? Employees complaining of foul odors or experiencing unusual fits of coughing or frequent illness? If so, your facility could be experiencing difficulties due to uncontrolled air flow and poor indoor air quality (IAQ) associated with make-up air problems.

Uncontrolled air flow and a lack of adequate air ("air starvation") wreak havoc on facilities — sometimes for far too long — since inadequate make-up air problems are often difficult to recognize. Facilities with make-up air problems experience symptoms such as inefficient heating, cold spots, foul odors, lost productivity, poor equipment performance, high employee absenteeism and a drafty and uncomfortable environment.

The solution to these problems is a properly designed and installed make-up air system that will control the air flow throughout your facility. A properly designed and installed make-up air system will improve indoor air quality while reducing gas consumption by as much as one-third.

**How it works**

Commercial and industrial buildings typically exhaust large quantities of air. The exhausted air is often replaced by unwanted air sucked in around doors, windows, or even through cracks which results in a drafty and uncomfortable facility. The "new" air that is replaced then needs to be heated in the winter when it is brought in — increasing your energy costs.

A make-up air unit will more effectively control and heat air flowing into the facility and will eliminate problems associated with "air starvation" while also reducing overall operating costs.

**Typical Causes of Make-Up Air Problems**

- Original use of building has changed
- New tenant in existing building
- New process loads installed
- New exhaust fans and hoods
- Building additions

**Benefits of Make-Up Air Systems**

- Reduced operating costs/fuel savings
- Improved indoor air quality
- Improved occupant comfort
- Increased productivity
- Reduced operator and maintenance costs
- Higher quality products
- Increased process efficiency

**Consulting Service**

Make-up air systems that are properly engineered and installed will more efficiently and reliably control air flow and improve indoor air quality. Nicor's PurAero Indoor Air Management Solutions are designed to address any concerns you have regarding indoor air quality. Our IAQ specialists can provide customized consulting services for air remediation needs in commercial or industrial environments. For more information, call Nicor at 630-388-2596 or visit our website at [www.nicorgas.com/puraero](http://www.nicorgas.com/puraero).

Indoor Air Quality