

Ensuring Healthy Environments with **XNRGY**

XNRGY.COM



A modern office interior with large windows and contemporary furniture. The room features a light green floor, white walls, and large windows that offer a view of greenery outside. In the foreground, there are several grey, modern-style chairs with silver bases arranged around a small round white table. In the background, more chairs and a desk are visible near the windows.

XNRGY's core team has over 200 years of HVAC experience collectively. The combined value of the systems engineered and designed under **XNRGY** leadership surpasses \$1B US.

This gives **XNRGY** the ability to offer the smoothest and most efficient solutions possible as per the required specifications.

Focused on Solutions

Protecting the health and well-being of patients, staff, and visitors is paramount in healthcare facilities. XNRGY Climate Systems understands this critical need and provides customizable air handling solutions designed to deliver optimal air quality, temperature control, and energy efficiency in any healthcare setting.

This brochure explores our comprehensive range of air-handling units:

- **Packaged and Custom Systems**

Deliver precise temperature and humidity control for sensitive areas like operating rooms, labs, and isolation wards.

- **Rooftop Units**

Offer a compact, pre-engineered solution for general patient care areas and administrative spaces.

- **Modular Air Handling Units**

Provide ultimate flexibility for large-scale hospitals or complex renovations.

- **Parts and Services**

Ensure consistent peak performance with genuine parts and expert service support.



Why Choose XNRGY Climate Systems?

We at **XNRGY** consider ourselves a “**Premium-Green**” brand.
What is a **Premium-Green** brand you might ask?

Well, we believe it’s a brand that focuses on creating and selling products and **services that are environmentally friendly, conserve our natural resources, and are sustainable**. Brands like ours are committed to **reducing their environmental impact** and helping their customers do the same.

Premium-Green brands like **XNRGY** focus on the following to optimize their products for lower energy consumption and highest efficiency:

Supply Chain Sustainability

XNRGY is committed to sourcing sustainable materials for use in our products, utilizing recycled and renewable materials whenever possible. We utilize **environmentally and socially sustainable practices** at every stage to protect the people and environments that could be affected across the whole chain.

As an organization, we uphold environmental and social standards for our operation and the operations of our suppliers. This helps to reduce the environmental impact of our products and conserve our natural resources.

Manufacturing Products in an Environmentally Friendly Way

XNRGY manufactures our products in an environmentally friendly way. This means using **renewable energy sources, reducing waste, and minimizing pollution**.

Designing Energy-Efficient Products

XNRGY designs our products to be as **energy efficient** as possible. This means sourcing and testing energy-efficient components and designing the product in a way that **maximizes energy recovery and minimizes energy waste**.



As an organization, we uphold environmental and social standards for our operation and the operations of our suppliers. This helps to reduce the environmental impact of our products and conserve our natural resources.

Advanced Technology

Our units leverage energy-efficient components and Intelligent control systems, reducing operating costs and environmental impact.

Industry Expertise

Our team possesses extensive healthcare HVAC experience, ensuring optimal system design and installation.

Unwavering Reliability

We build durable, high-performing systems that deliver consistent comfort and safety.

Dedication to Service

We offer comprehensive service plans and readily available parts to keep your system running smoothly.

Customization

We create tailor-made solutions that meet your unique facility requirements and airflow needs.



2 Convenient
Locations
Canada & United States



Uncompromising Indoor Air Quality

XNRGY filters capture ultrafine particles, improving air quality and reducing exposure to pollutants. Studies show **removal rates of 98.4 to 99.94%**.

Improve Air Quality - They capture ultrafine particles (0.3 microns), exceeding traditional filters, leading to cleaner air and reduced exposure to allergens, dust, smoke, and viruses (removal rates between 98.4% and 99.94%).

Better Energy Efficiency - Reduced pressure drop improves airflow, easing the strain on HVAC systems. Studies have shown energy consumption reductions up to 60%.

Extend Filter Life - Lasting 24-30 months compared to **MERV 14 filters'** lifespan of less than 12 months, **XNRGY** filters minimize maintenance costs.

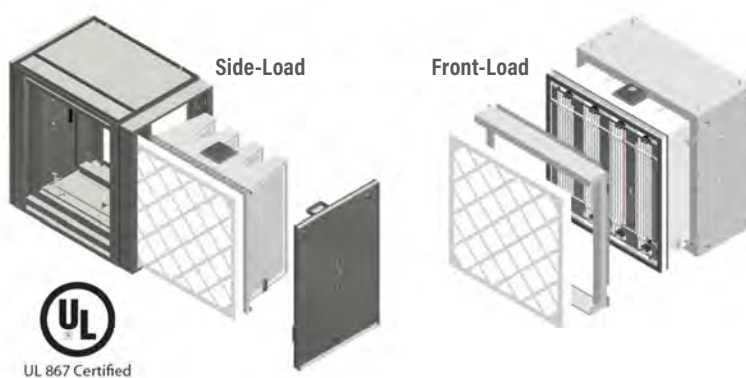
Green Building compliance - By promoting energy savings and improved air quality, **XNRGY** filters aid buildings in meeting green building standards.



Multi-Layer Filtration

Our systems employ a combination of advanced technologies to remove contaminants and ensure exceptional air quality:

- **HEPA Filtration**
Captures **99.97% of particles** down to 0.3 microns, essential for critical care areas.
- **Ultraviolet (UV) Germicidal Irradiation**
Inactivates airborne bacteria and viruses, providing an extra layer of protection.
- **Bi-Polar Ionization**
Neutralizes airborne particles and reduces odors
- **Specialty Coatings**
Inhibit the growth of mold and mildew on internal surfaces.
- **Gas-phase Filtration**
Removes harmful chemicals and volatile organic compounds (VOCs).
- **Needle-Point Ionization**
Creates positively and negatively charged ions that attract and capture airborne particles





Multi-layer filtration

creates a cleaner and healthier environment within medical facilities, promoting better patient outcomes and staff well-being.



300+
Industry Professionals

Desinfective Filtration System (DFS)

DFS Technology utilizes an advanced electronic air filtration process to significantly improve air quality within healthcare facilities. This translates to a healthier environment for patients, staff, and visitors, potentially leading to improved patient outcomes and reduced healthcare costs.

Key Benefits of DFS in Healthcare

- **Enhanced Pathogen Control**

DFS effectively captures airborne particles, including bacteria and viruses, similar to those associated with COVID-19. This can help reduce the risk of Hospital-Acquired Infections (HAIs).

- **Superior Air Filtration**

Unlike traditional filters that struggle with very small particles, DFS utilizes electrostatic charge to attract and trap even microscopic allergens, dust, and other contaminants.

- **Improved Patient Comfort and Recovery**

Cleaner air contributes to a more comfortable environment, potentially promoting faster healing and a more positive patient experience.

- **Extended HVAC System Life**

By capturing dust and contaminants before they reach the HVAC system, DFS helps reduce equipment wear and tear, potentially extending its lifespan.

- **Reduced Operational Costs**

DFS minimizes dust buildup within the HVAC system, potentially lowering maintenance needs and associated costs.

Limitations to Consider

- Maintenance Needs:** While some DFS filters offer extended lifespans, they still require periodic cleaning and maintenance to ensure optimal performance.
- Initial Cost:** DFS filters may have a higher upfront cost compared to traditional filters. However, the potential benefits in terms of improved air quality, energy savings, and reduced healthcare costs can outweigh the initial investment over time.

FILTRATION EFFICIENCY / PARTICLE SIZE

	MERV 11-13	MERV 14 - 15	MERV 16	HEPS Filter	DFS Technology
EFFICIENCY	20 - 50 %	50 - 85 %	95 %	99.97 - 99.9999%	99.99%
PARTICLE SIZE	0.3 - 1.0 microns	0.3 - 1.0 microns	0.3 - 1.0 microns	0.3 microns	0.007 microns
AIR PRESSURE REQUIREMENT					
CAPTURES	Lead Dust Vehicle Emissions	Lead Dust Vehicle Emissions Smoke Exhalation Droplets	Lead Dust Vehicle Emissions Smoke	Lead Dust Vehicle Emissions Smoke Exhalation Droplets Bacteria Viruses	Lead Dust Vehicle Emissions Smoke Exhalation Droplets Bacteria Viruses

Sustainable Efficiency by Design

Vertically Integrated Manufacturing

We manufacture key components like coils, fans, fan motors, backdraft dampers, and sound attenuation dampers in-house, ensuring superior quality, performance, and reduced environmental impact.

Superior Motor Efficiency

XNRGY selected motors can exceed IE4-IE5 efficiency levels across most operating points. This translates to significant energy cost savings and reduced carbon footprint for businesses.

No-thru Metal Cabinet Construction

Eliminates leakage points, regardless of the required CFM, maximizing efficiency and minimizing energy consumption.

Heat Recovery Options

Our units offer various heat recovery strategies to capture waste heat and reuse it for preheating or other applications:

- **Heat Pipe Coils**
Transfer heat efficiently between air streams.
- **Plate Heat Exchangers**
Offer compact and high-efficiency heat transfer.
- **Heat Recovery Wheels (Passive/Active)**
Recover both sensible and latent heat, providing the highest level of energy savings.
- **Run-around heat recovery systems**
Useful when exhaust and supply air streams can't be directly mixed, or when there's a need to prevent contamination between the two airflows.



Aircore EC Motor

When compared to conventional motors, this motor is 10-65% more efficient, 50% smaller and lighter, and uses 66% less copper. The motor's modular design allows for housing, rotors and stators to be reused multiple times to serve future generations.

Green Building Compliance

LEED and WELL Certification

Our air handling units can help your healthcare facility achieve LEED and WELL certification by reducing energy consumption, improving indoor air quality, and promoting occupant well-being.

Best ESG Scores

Our commitment to sustainability and energy efficiency helps our clients achieve the best ESG scores, demonstrating their commitment to environmental and social responsibility.

A large industrial dehumidifier unit, likely for hospital use. It features multiple metal coils and a walkway with a diamond plate floor. The unit is made of stainless steel and has a walkway with a diamond plate floor. The background shows a clean, industrial environment with a walkway and a large metal coil.

In hospitals, **dehumidifiers fight germs and allergens** (mold, asthma triggers) by controlling moisture. This keeps patients comfy, protects equipment, and creates a cool, dry environment for surgeons - all crucial for better healthcare.

Improved Patient **Comfort & Health**

Dehumidification plays a critical role in achieving **better HVAC** for health-care facilities by controlling moisture levels in the air. **Here's how:**

Reduced Risk of Mold and Fungal Growth

Dehumidification controls moisture, preventing the growth of mold and fungus which can trigger allergies and respiratory problems.

Infection Control

Dehumidification helps maintain a comfortable temperature range, promoting patient wellbeing and aiding recovery.

Improved Temperature

Dehumidification can help control the spread of viruses and bacteria by creating an environment less favorable for their survival.

Improved Hygiene

Dehumidification helps maintain drier surfaces, facilitating effective cleaning and hygiene practices.



Rigorous Testing for Peak Performance

Comprehensive Testing

Each unit undergoes rigorous testing to ensure compliance with industry standards and optimal performance:

Leakage Test

Ensures airtight construction and minimizes energy waste.

Deflection Test

Evaluates structural integrity under load.

Vibration Test

Ensures proper balance and smooth operation.

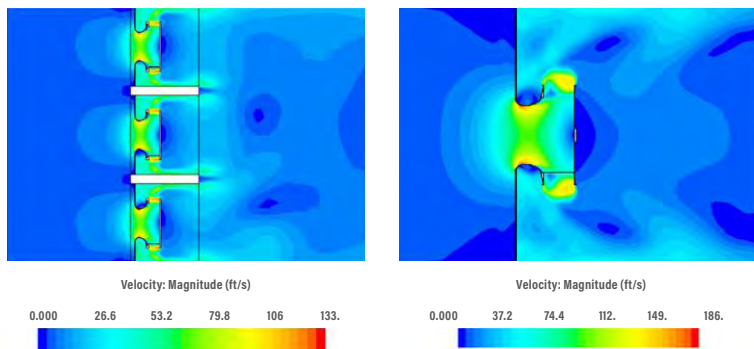
Acoustical Test

Measures noise levels for a quiet operating environment.

Airflow Test

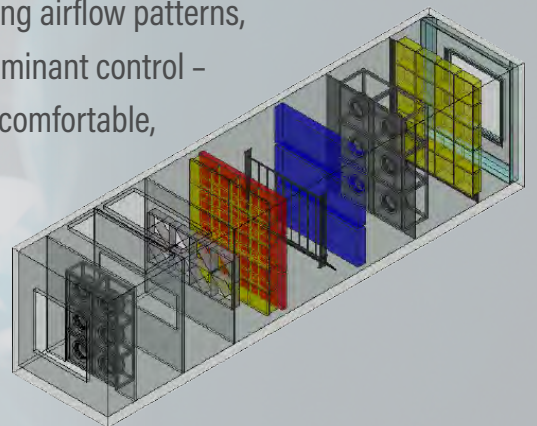
Verifies precise airflow delivery according to design specifications

Side View : Multi-Fan vs Single Fan

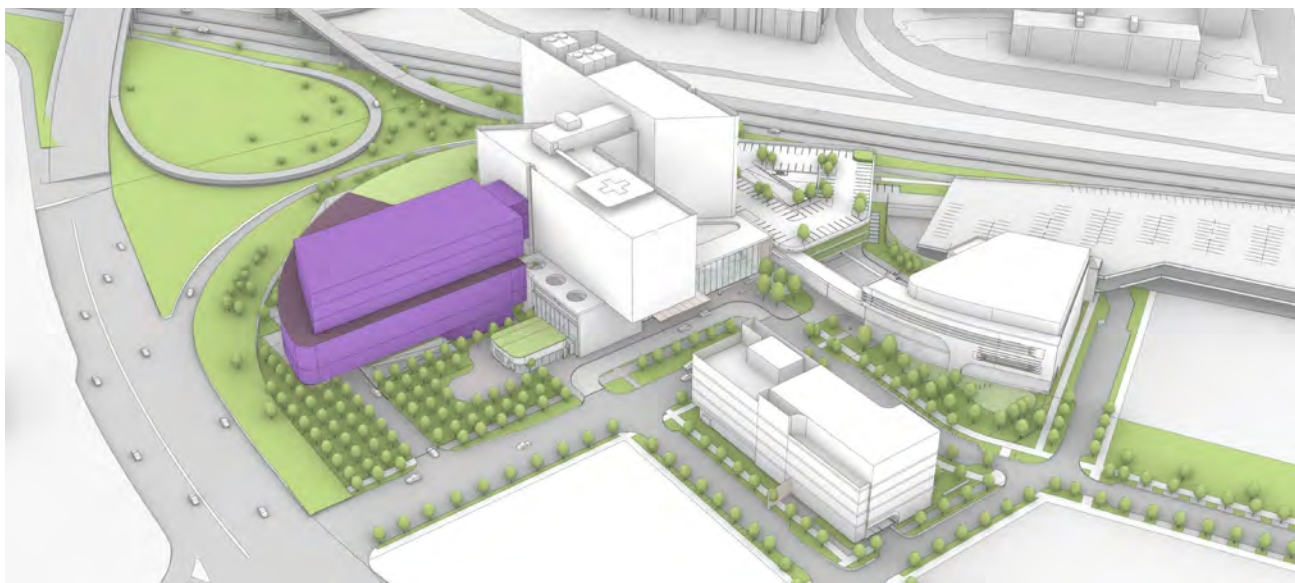




CFD modeling is crucial for HVAC in critical environments like hospitals and data centers because it allows for simulating and optimizing airflow patterns, temperature distribution, and contaminant control – all essential for maintaining a safe, comfortable, and energy-efficient environment.



Investing in **XNRGY Climate Systems** means investing in the health and well-being of your entire healthcare community and the environment.



Breathe New Life into Your Healthcare Facility. Contact us today to discuss your specific needs and **let XNRGY Climate Systems be your partner** in creating a healthy and comfortable environment for everyone.

Together, let's create a healthier and more sustainable environment.



