

AIR HANDLING UNITS

Flexibility, Design, and Performance Wrapped into One



 **KRUEGER**[®]

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PROVIDING YOU WITH AIR HANDLING SOLUTIONS



Krueger, a name you know and trust.

The name you know and trust for air distribution solutions also provides you with air-handling solutions! Whether your application is for a commercial or institutional facility, an industrial manufacturing operation, or even a critical environment, you will find an air-handling unit (AHU) that is sure to meet your needs.

Application Flexibility

Changing standards and stricter codes can present design challenges, particularly with regard to indoor air quality (IAQ), acoustics, energy consumption, and controls. By identifying these requirements up front, we are able to design an AHU that will meet even the most stringent demands.

Dimensional Flexibility

Space constraints are a reality on most construction projects, so why settle for a fixed offering? By providing you with a range of size options, from basic indoor units up to penthouse mechanical-equipment rooms, and variable aspect-ratios, you can design the AHU to fit your application precisely. We realize that rectangular-shaped units may not work all the time, so in those instances, you can rest assured that Krueger can work with you to engineer an AHU that will adapt to just about any space.

Material Flexibility

Krueger offers a complete line of construction materials, including galvanized steel, pre-painted steel, stainless steel, and aluminum.

Component Flexibility

To enable you to meet any AHU requirement, Krueger provides every available air-handling component. Of course, as technology creates new capabilities, you can be certain that they will be integrated into our offering.

FIND AN AIR-HANDLING SOLUTION FOR ANY APPLICATION

- Commercial space: office buildings, theaters, performance halls
- Institutional space: schools, universities, churches
- Industrial manufacturing: automotive, aerospace, chemical, petrochemical

Breathe easy knowing you have IAQ features built in.

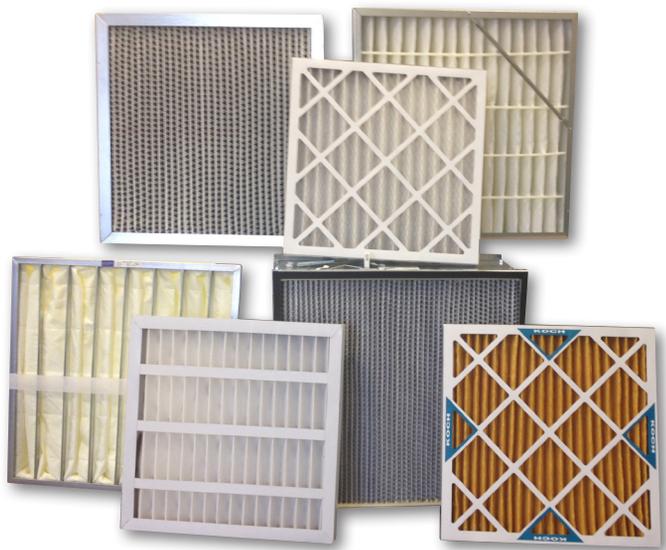
Superior Casing Performance

Because indoor air quality (IAQ) is now vital to your project's success, your AHU's performance is absolutely critical. That is why Krueger's AHUs offer advanced features that can meet any IAQ challenge you face.

It all begins with casing performance. Casing leakage can deteriorate the quality of the air supplied to the occupants by allowing dirty, unfiltered air to leak into the airstream downstream of the filters. To minimize leakage, all our AHUs employ superior casing construction. As a minimum, air leakage is limited to a miniscule 0.5 CFM/ft² at ±4" w.g.

Filter Out Impurities

A complete line of filters is available for all Krueger AHUs. For light or prefiltering-duty, use our pleated and extended-surface filters. For more stringent requirements, 60% to 95% efficient rigid or bag filters can be specified.



A complete line of filters is available, including pleated, rigid, and bag.

Hygienic Drain-Pan Design

Micro-organisms can flourish in drain pans when cooling-coil condensate remains during "off" or "heating" cycles. Our AHUs move that condensate out of the unit with multi-sloped drain pans that ensure positive drainage. All pan designs also offer accessibility for periodic cleaning, now required by ASHRAE Standard 62-2001.



Multi-sloped drain pans ensure positive drainage.

Ensure Adequate Ventilation

An adequate supply of ventilation air is critical for the health of facility occupants. However, having to condition too much outside air can drive up energy costs. The solution is the AMS-60 damper, which incorporates an airflow-measuring station. The AMS-60 damper simultaneously measures and controls the volume of ventilation air, making sure it is neither too little nor too much.



The AMS-60 damper measures and controls ventilation-air volume.

FEATURES THAT HELP CLEAR THE AIR

- Double-wall construction
- IAQ drain pans
- AMS-60 dampers
- Perforated liners
- Low-leak dampers
- P-cone fan monitoring
- All filter types (flat, angle, etc.)

Designed with efficiency in mind.



Heat-recovery wheels reduce the cost of conditioning ventilation air.



Variable-speed drives offer dramatic fan-energy savings.

FEATURES THAT SAVE DOLLARS

- Variable-speed drives
- Heat wheels
- High R-value insulation
- High-efficiency motors

The Design

Our industry has taken a leadership role by creating energy-performance guidelines, such as ASHRAE 90.1. Krueger AHUs are designed with ASHRAE 90.1 in mind and can help you curb your energy intake.

Stretch Your Dollars with Energy Recovery

The exhaust airstream represents an energy-saving opportunity. An energy-recovery wheel can economically transfer heat and moisture between the exhaust-air and fresh-air paths, which can reduce the cost of conditioning the fresh air.

Take advantage of “free” cooling with an economizer section. During spring and fall operation, cool/dry outside air can cool and dehumidify the facility, reducing the need for mechanical refrigeration.

Keep Heat Where It Belongs

Superior casing performance affects more than just indoor air quality. In extreme ambient conditions, heat transfer through the casing must be controlled. All our casings offer a minimum of R-7 to R-14 insulation in the floors, walls, and roof. Higher R-value insulations are also available. To prevent energy-robbing air leaks, units are designed for a maximum casing leakage of 0.5 cfm/ft².

Reduce Fan Operating Costs

In an AHU, the fan consumes the largest amount of energy. That is why Krueger fans offer a range of energy-saving options. High or premium-efficiency motors can be specified. Direct-drive plenum fans eliminate belt-and-pulley energy losses.

When the air system is designed for variable-air volume (VAV), our AHUs offer the most efficient method of VAV fan control. With a factory-mounted Krueger variable-speed drive, you can reduce jobsite labor costs and gain single-source responsibility.

Reducing sound without sacrificing performance.

When Noise Matters

Applications such as theaters, performance halls, and churches consider acoustics to be as critical as occupant comfort. That is why Krueger's AHUs ensure your success with a wide range of noise-reducing technologies that will quiet any complaint.

Fans That Whisper

Since the fan is the primary moving part in an air-handling system, it is the first place to look when reducing noise. Our AHUs are available with a variety of low-noise fans. Plenum fans generate less ductwork noise than standard DWDI fans. Varying the number of blades in a fan wheel can also improve its sound characteristics.

Minimize Vibration Noise

Krueger AHUs also offer an array of construction and isolation techniques to help control vibration noise and its transmission. All fans are mounted on an isolated steel base. The entire fan assembly is dynamically balanced to ensure vibration-free operation. Direct-drive plenum fans can further reduce vibration by eliminating the belt-and-pulley mechanism.

Attenuate Remaining Sounds

What little noise is left can be further reduced with direct methods of sound attenuation. Using sound-absorbing walls, and sound traps in the fan and discharge-plenum sections, Krueger can engineer a custom AHU to meet your critical sound requirements.

Tested Sound Levels

Being able to reliably predict the sound performance of an AHU is an engineering challenge. Our acousticians have created AHRI-260-compliant, acoustical-calculation tools based on many hours of real-world testing.



Krueger AHUs offer a variety of techniques to improve fan acoustics.

TECHNIQUES TO IMPROVE ACOUSTICS

- Standard low-noise fans
- Direct-drive plenum fans
- Vane-axial fans
- Sound attenuators
- Sound-absorptive panels
- Inertia bases
- Special balancing and vibration-isolation options



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Providing You with Air Distribution & Equipment Solutions

Let us know how we can assist you in your next building application. Contact your local Krueger representative or visit us on the web at www.krueger-hvac.com for more information.

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