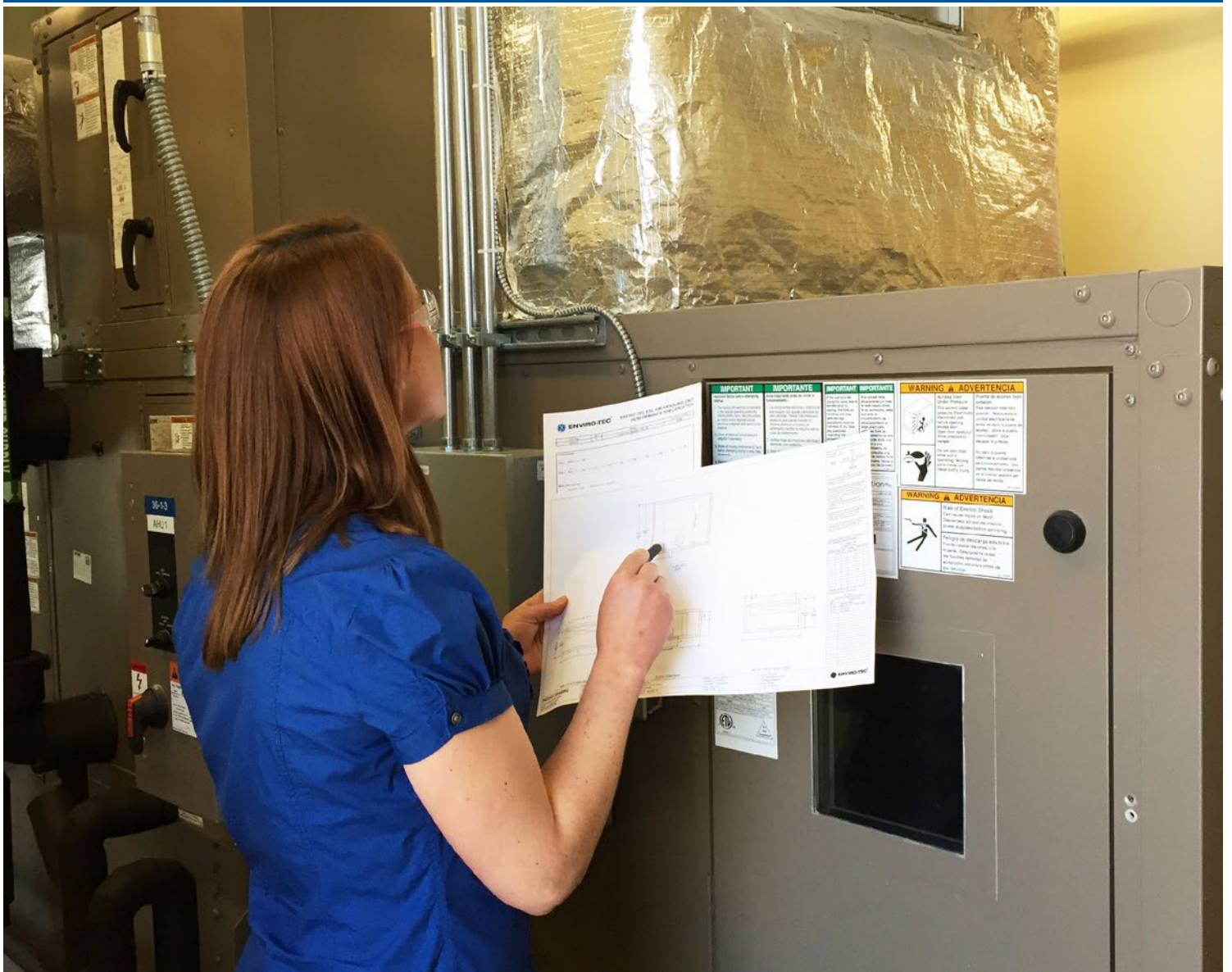


# ENVIRO-TEC® ESL Air-Handling Units



# ENVIRO-TEC ESL Air-Handling Units experience and flexibility



*Air-handling for all types of commercial, institutional and industrial facilities.*

## Names you know and trust

**ENVIRO-TEC ESL Air-Handlers** are an indoor line with no limits, ranging from basic units to those suitable for penthouse mechanical-equipment rooms. And whatever the air-handling challenge — IAQ, acoustics, energy, you name it — ENVIRO-TEC has the experience to build an ESL Air-Handling Unit that will meet your needs.

In the air-handling business, the reputation and experience of the manufacturer is as important as the product. ENVIRO-TEC has been manufacturing equipment since the 1970s and is a company dedicated to providing uncompromising solutions for your air-handling needs.

For commercial and institutional facilities, for industrial manufacturing and process operations, ESL Air-Handling Units can be built to handle any requirement.

## Design it your way, every time, every way

**Dimensional flexibility:** Space constraints are a reality on most construction projects. ESL Air-Handling Units offer 36 sizes so you can find the unit to fit the application and the space.

**Material flexibility:** We offer various types of construction steel including galvanized, pre-painted, and stainless.

**Component flexibility:** To enable you to meet the majority air-handling unit requirements, ESL units offer a variety of available air-handling components. And as technology creates new capabilities, ENVIRO-TEC will apply these to our ESL line.

### EXPERIENCE? Our Air-Handling expertise spans various applications:

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

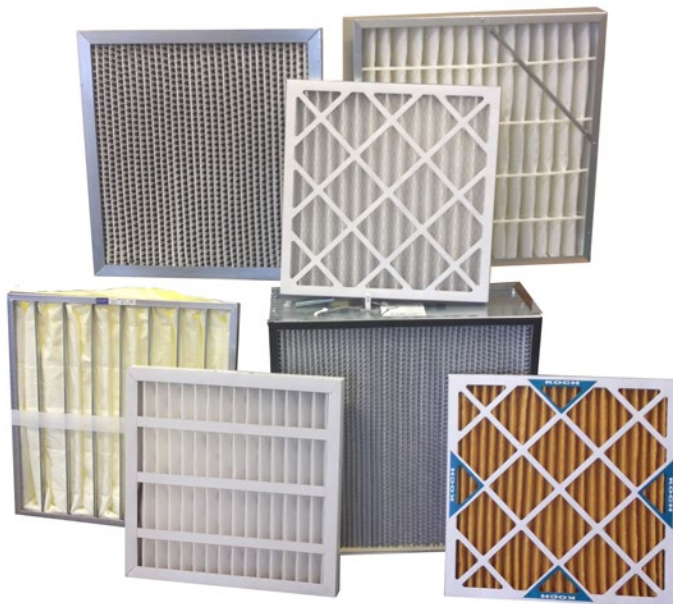
# The smart way to raise your IAQ

## Superior casing performance

Because indoor air quality (IAQ) is vital to your project's success, your air-handling unit's performance is absolutely critical. That's why ESL Air-Handling Units offer advanced features that can meet your toughest challenges. 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 ESL Air-Handling Units employ superior casing construction, limiting air leakage 0.5cfm/ft<sup>2</sup>±4" w.g.

## Filter out impurities

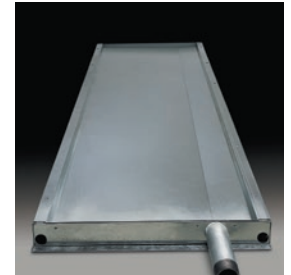
A complete line of filters is available for all ESL Air-Handling Units. For light- or prefiltering duty, use our pleated and extended-surface filters. For more stringent requirements, 60% to 95% efficient rigid or bag filters can be specified.



Multiple filter options available, including pleated, rigid, and bag

## Hygienic drain-pan design

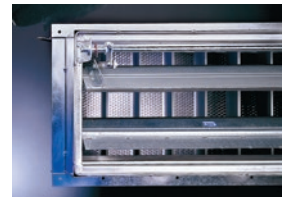
Micro-organisms can flourish in drain pans when cooling-coil condensate remains there during "off" or "heating" cycles. ESL Air-Handling Units move that condensate out of the unit with multi-sloped drain pans that ensure positive drainage. All pan designs also offer accessibility for periodic cleaning, 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 ESL uses 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's neither too little nor too much.



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

### IAQ FEATURES TO HELP YOU CLEAR THE AIR:

- Double-wall construction
- IAQ drain pans
- AMS-60 dampers
- Perforated liners
- Low-leak dampers
- P-cone fan monitoring
- Multiple filter types

# Put your Air-handling units on an energy diet

## Designed to save energy

Our industry has taken a leadership role by creating energy-performance guidelines, such as ASHRAE 90.1. ESL Air-Handling Units 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, reducing 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 cools and dehumidifies 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 ESL casings offer a minimum of R-7 to R-13 insulation in the floors, walls and roof. To prevent energy-robbing air leaks, units are designed for a maximum casing leakage of 0.5cfm/ft<sup>2</sup>±4” w.g.

## Reduce fan operating costs

In an air-handling unit, the fan is the largest energy consumer. ESL 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.

If the air system is designed for variable-air volume (VAV), ESL Air-Handling Units offer the most efficient method of VAV fan control. Factory-mounting an ENVIRO-TEC variable-speed drive reduces jobsite labor costs and provides single-source responsibility.

## Increase fans — decrease energy

Critical applications, such as life-science facilities or process operations, demand efficient and redundant air-handling operations. ESL Air-Handling Units meet this need by offering dual fans. When the dual fan is selected, the design can also increase efficiency by operating the fans at their most efficient points.



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



*Variable-speed drives offer dramatic fan-energy savings.*

### FEATURES THAT SAVE DOLLARS AND MAKE SENSE

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

# Reduce noise complaints

## When noise matters

Applications such as theaters, performance halls and churches consider acoustics to be as critical as occupant comfort. That's why ESL Air-Handling Units 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's the first place to look when reducing noise. ESL Air-Handling Units are available with a variety of low-noise fans. Plenum fans generate less ductwork noise than do standard DWDI fans. Varying the number of blades in a fan wheel can also improve its sound characteristics.

## Minimize vibration noise

ESL Air-Handling Units 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, ENVIRO-TEC sales engineers can design an ESL Air-Handling Unit to meet your critical sound requirements.

## Tested sound levels

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



*Theatres, performance halls, and churches often consider acoustics as critical as occupant comfort.*



*ESL Air-Handling Units offer a variety of techniques to improve fan acoustics.*

### SOUND 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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