

Solution

Air-Handling Units



One Line, No Limits...



Experience and flexibility



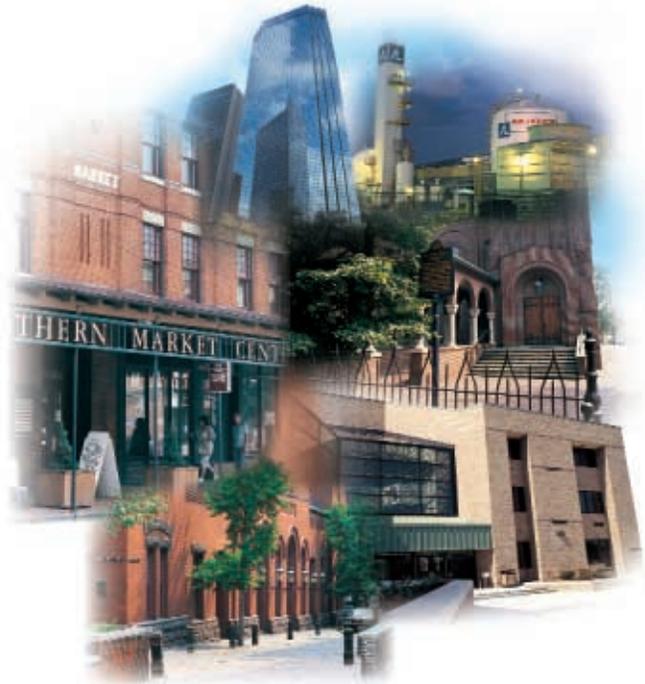
Names you know and trust

Solution™ air-handling units (AHUs) from YORK®—the only names you need to know for an AHU line that has no limits, ranging from basic indoor units up to penthouse mechanical-equipment rooms. And whatever the air-handling challenge—IAQ, acoustics, energy, controls, you name it—YORK has the experience to build a Solution AHU that will meet your needs.



In the air-handling business, the reputation and experience of the manufacturer is as important as the product. YORK has been manufacturing air-handling equipment since the 1950s. Then, in the 1990s, YORK acquired two of the most well-known and respected AHU companies in the business: the PACE Company and the Miller-Picking Corporation. Their 100-plus years of experience have now been joined with the worldwide engineering, manufacturing, service, and support of YORK, a Fortune 500 firm with a 125-year legacy in HVACR technology. The result is a company dedicated to providing uncompromising solutions for your air-handling needs.

For commercial and institutional facilities, for industrial manufacturing and process operations, and for critical hygienic applications in hospitals and cleanrooms, Solution AHUs can be built to handle any requirement—no limits.



Design it your way, every time, every way

Dimensional flexibility: Space constraints are a reality on most construction projects. Why be constrained by fixed AHU sizes? Solution AHUs offer variable aspect-ratio, so you can design the unit to fit the application and the space. And if rectangular-shaped units can't fit the space, units can be configured to fit within just about any existing space or around any obstacle. L- and T-shaped units, stacked units, notched units—you name it, we can do it.

Material flexibility: We offer a complete line of construction materials, including G-90 galvanized steel, pre-painted steel, stainless steel, and aluminum.

Component flexibility: To enable you to meet any AHU requirement, Solution units offer every available air-handling component. And as technology creates new capabilities, YORK will apply these to our Solution line.

Experience? We've built AHUs for all these:

- Commercial space: office buildings, theaters, performance halls
- Institutional space: schools, universities, churches
- Industrial manufacturing: automotive, aerospace, chemical, petrochemical
- Hygienic systems: hospitals, life sciences, R&D facilities, food processing, cleanrooms
- Process manufacturing: pharmaceutical, electronics, semiconductor

The smart way to raise your IAQ

Superior casing performance

Because indoor air quality (IAQ) is now vital to your project's success, your AHU's performance is absolutely critical. That's why Solution 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 air stream downstream of the filters. To minimize leakage, all Solution AHUs employ superior casing construction. As a minimum, air leakage is limited to a miniscule 1% at ± 8 " w.g. If needed, the leakage can be limited to only 0.5% at as high a design pressure as required.



Filter out impurities

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

trap particles as small as 0.3 microns with 99.97% effectiveness. Ultra-HEPA filters can remove particles as small as 0.1 microns. Activated carbon filters are excellent at removing odors and volatile-organic compounds from the airstream.

Hygienic drain-pan design

Micro-organisms can flourish in drain pans when cooling-coil condensate remains there during "off" or "heating" cycles. Solution 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. For added protection against microbial growth, ultraviolet lamps are available to kill fungus and molds, minimizing allergens and allergy-causing irritants.



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's neither too little nor too much.



IAQ features to help you clear the air:

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

Put your AHUs 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. Solution 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, 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

In extreme ambient conditions, heat transfer through the casing must be controlled. All Solution 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 1%, or even 0.5%.

Energy-saving fans

In an AHU, the fan is the largest energy consumer. Solution 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), Solution AHUs offer the most efficient method of VAV fan control: the YORK Air-Modulator™ drive. Factory-mounting reduces jobsite labor costs and provides single-source responsibility.



Features that save dollars and make sense:

- Variable-speed drives
- Heat pipes
- Heat wheels
- High R-value insulation
- Fixed-plate heat exchangers
- High-efficiency motors

Reduce noise and complaints

When noise matters

Applications such as theaters, performance halls and churches consider acoustics to be as critical as occupant comfort. That's why Solution 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's the first place to look when reducing noise. Solution AHUs are available with a nearly endless array of low-noise fans, including the exclusive P-91™ plenum fan—one of the quietest available. Its extruded-aluminum blades are precisely positioned within the wheel, ensuring quiet and predictable performance.

Minimize vibration noise

Solution AHUs 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, YORK sales engineers can design a Solution 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 ARI-260-compliant acoustical calculation tools based on thousands of hours of real-world testing on hundreds of units.



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

Take control of your application

Eliminate the problems caused by jobsite-installed controls

When AHU controls are installed at the jobsite, costs can go up and reliability can go down. To eliminate these problems, Solution AHUs can be equipped with OptiLogic™ controls which are engineered, installed, and commissioned in the factory.



Factory-installation improves quality, saves time

While a Solution AHU is being manufactured, YORK technicians can easily access all its segments. So, there are no accessibility problems to cramp the quality of the controls installation, which can occur on the jobsite. Also, all sensing probes have been pre-engineered to determine their best mounting location, ensuring accurate and reliable readings.

Factory-commissioning ensures accurate operation

OptiLogic controls go through a detailed commissioning process in the factory. The testing ensures that each control works appropriately before the Solution AHU is shipped. As part of this examination, a report is generated and shipped with the unit. This extensive commissioning is virtually impossible to duplicate in the field.

Factory-engineering speeds field connections

Solution AHUs are factory-engineered to simplify field connection of the controls. For example, coil valves are shipped uninstalled, but pre-wired with a flexible conduit with quick-connects.



In some instances, the AHU is too large to ship in one piece, and must be split. To ensure fast and easy jobsite assembly of the OptiLogic controls, labeled quick-connects come standard on all shipping splits.

You are in command with OptiLogic controls:

- Outside-air actuator
- Return-air actuator
- Filter differential-pressure sensor
- Mixed-air-temperature sensor
- Hot-water valve and actuator
- Duct static-pressure transducer
- Chilled-water valve and actuator
- Fan differential-pressure switch
- Fan start/stop relay
- Supply-air-temperature sensor
- Fan VFD-speed input
- Whatever you need

Support when you need it

YORK has the experience and support you demand

If your facility's HVAC system has unique dimensional, thermal, acoustic, hygienic, or environmental requirements, you need the unrivaled resources of YORK Solution AHUs. 150 years of combined manufacturing experience, coupled with worldwide support and resources, mean uncompromising solutions for all your air-handling needs.



Support before the sale

To unburden specifiers from the time-consuming task of system layout, we employ a powerful design tool: the YORKworks™ program, software specially developed for specifying YORK products.



Using the YORKworks program, our sales engineers can select and configure Solution AHUs, draft specifications, prepare schedules, and produce AutoCAD® drawings right on their computer. For highly complex configurations or performance requirements, a team of factory engineers are available to support our sales engineers.

Support after the sale

As assurance that your Solution AHUs will meet your performance expectations, YORK offers validation- and witness-testing at our factory for a variety of parameters: airflow, sound, vibration, and air-leakage, to name a few. YORK Service can provide certified technicians for jobsite installation and commissioning, drawing on a force of more than 3,000 technicians in over 300 locations worldwide. Project management services are also available.

Solution AHUs are an easy choice:

- 150 years of combined manufacturing experience
- Worldwide support and resources
- Powerful design tools: YORKworks software
- Backed by factory engineering team
- Factory validation- and witness-testing
- Servicing available from YORK Service
- Availability of project management services

