H3/V3 Series

HORIZONTAL AND VERTICAL INDOOR AIR HANDLING UNITS

V3 Series

H3 Series

Features:

- 450 to 10,000 cfm with overlapping cabinet sizes for application flexibility
- Horizontal or vertical models with left or right hand connections
- R-410A or chilled water cooling coils
- Factory installed high efficiency gas, electric, hot water, or steam heating
- Matching condensing units available for a complete split system solution
- Split system heat pump configurations
- Direct drive backward curved plenum supply fans
- Double wall rigid polyurethane foam panel construction reduces air leakage and radiated sound
- Corrosion resistant stainless steel drain pans
- Optional modulating hot gas reheat humidity control
- Labeled components for quick and easy installation

Application Flexibility
Minimizes Installation Time and Reduces Cost

- *Makeup Air Applications Up to 100% Outside Air*
- *Dehumidification And Filtration Capabilities*
- *Easy Installation And Maintenance*
- *Heat Pump Split Systems*

H3/V3 Series
Indoor Air Handlers

H3/V3 Series air handling units are designed and engineered for a wide variety of heating, cooling, dehumidifying, filtering and ventilating applications. Double wall rigid polyurethane foam panel construction and direct drive backward curved plenum fans provide quiet, energy efficient operation.

▲ Electronically Commutated Motor (ECM) driven supply fan provides precise air flow control, building pressure control, and reduced power consumption without an additional VFD.

▲ Customers can select AAON controls or factory installed customer provided controls.

Superior Features

- Cabinet construction consists of double wall rigid polyurethane foam insulated panels with thermal breaks that increase thermal resistance, reduce cabinet leakage, inhibit microbial growth, reinforce structural integrity, attenuate radiated sound and are easy to clean.
- H3 Series indoor air handling units are designed with an extremely low horizontal profile for overhead and low clearance installations. V3 Series air handling units are designed for small closets or mechanical rooms and narrow clearances.
- Electronically Commutated Motor (ECM) variable speed direct drive backward curved plenum fans offer a high efficiency system that reduces operating expenses.
- Double sloped stainless steel drain pans eliminate standing water which can support microbial growth and stainless steel construction prevents corrosion that can lead to water leaks and contaminants in the air stream.
- Access into fan and coil sections is quick and easy through service doors with quarter-turn handles. Filter service doors include quarter turn fasteners and internal filter racks for ease of filter service.
- LED service lights in the control panel are operated by an on/off toggle switch
- Factory installed thermostatic expansion valves (TXV) for optimized system performance and efficiency.
- Factory run test report, wiring diagram and Installation, Operation and Maintenance manual with startup form are provided in the control compartment of every unit.

Premier Features

- Available for Constant Volume, VAV, Single Zone VAV, and Makeup Air applications with up to 100% outside air.
- Factory provided or customer provided controller can be selected to meet existing or new building control architecture.
- 96% efficient condensing gas heater with 3:1 modulation in the V3 Series and 93% efficient condensing gas heater with 5:1 modulation in the H3 Series for high efficiency heat with precise supply air temperature control.
- Split system modulating hot gas reheat humidity control option is available with a matching condensing unit to provide precise humidity control necessary to maintain occupant comfort, without the temperature swings common with on/off reheat systems.
- Split system heat pump configuration allows matching with an air-source heat pump condensing unit for energy efficient heating and cooling.
- Factory installed total or sensible energy recovery wheels provide energy efficient heating and cooling. Aluminum wheel option is available on the V3 Series.
- Factory installed mixing boxes for application flexibility. Mixing boxes can include on/off dampers, modulating dampers or fixed position dampers on the outside air and return air streams. AAON low leakage dampers meet the California Title 24 damper air leakage requirement.
- Coils are available with polymer e-coatings to minimize corrosion and improve air quality.
- Multiple high efficiency filtration options, with up to a MERV 14 efficiency rating are available with or without monitoring devices.
- SCR (Silicon Controlled Rectifier) electric heat control for reduced power consumption, longer heater life and improved occupant comfort.
- 10 kAIC electrical rating
- High performance hot water or steam heating coils allow unit to tie into a boiler system.
- Chilled water cooling coils allow unit to tie into existing chilled water system.
- Safety options such as phase and brownout, return air and supply air firestat, and return air smoke detectors protect the unit and occupants.
- Corrosion resistant exterior/interior paint exceeds a 2,500 hour salt spray test. The paint increases longevity of the unit, especially in harsh environments with salt water or chemical exposure.

High Efficiency and Application Flexibility

Facts about AAON H3/V3 Air Handlers

Energy Efficient. . . When matched with AAON condensing units, AAON split systems provide consistent comfort with low energy consumption. Double wall foam insulated construction and direct drive backward curved plenum fans set a high standard of performance.

Lower in First Cost. . . Many factory installed options and standard factory wiring allow AAON air handling units to be ready for quick and easy field installation and startup; saving time and money on the jobsite.

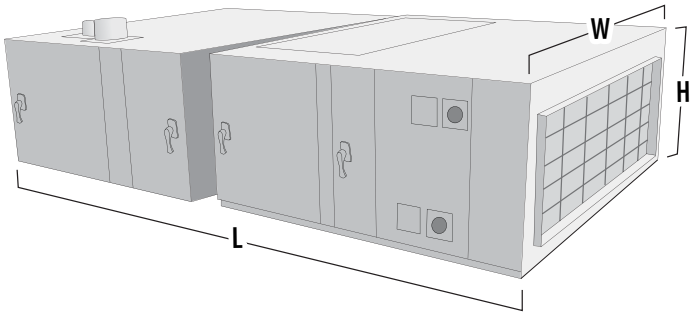
Lower in Maintenance Cost. . . Service access doors with lockable quarter-turn handles, LED service lights in the control panel, and labeled components with color-coded wires and wiring diagram make servicing the unit less time consuming.

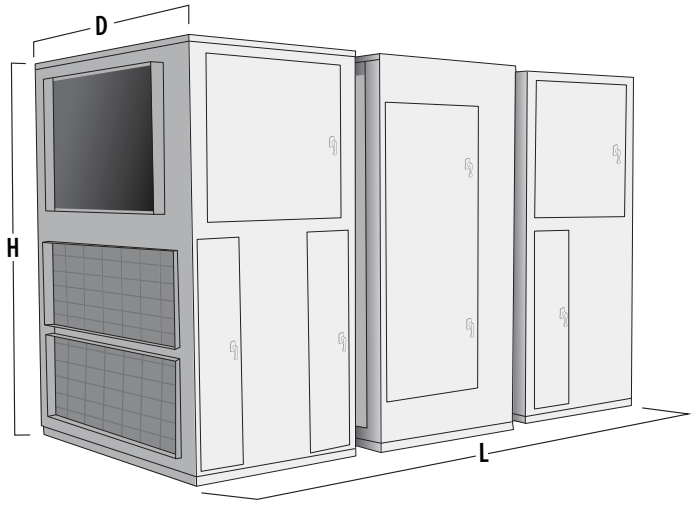
Reliability. . . Construction features, such as double wall rigid polyurethane foam panels and access doors, make H3/V3 air handling units long lasting. Factory engineered, designed and installed options are more reliable than field installed add-on options.

Wide cfm Range & Static. . . H3/V3 Series air handling units are available from 450 to 10,000 cfm with overlapping cabinet sizes that allow the air handling unit to match the exact requirements and the backward curved plenum fans provide a large static pressure range.

Flexibility. . . AAON air handling units can be used in many different applications such as education facilities, health care buildings, office space and much more. With superior features and premier options, AAON provides air handling solutions.

Ease of Installation. . . Air handling units are designed to fit through 36 inch wide by 80 inch tall doors for ease of installation and retrofit applications. E cabinet filters, energy recovery wheels, and mixing box units may be shipped from the factory in a split configuration.





H3/V3 Model	Nominal cfm	H3			V3		
		Width*	Height	Length*	Depth*	Height*	Length*
A	450 - 1,200	30	22	56	30	42	32
B	1,000 - 2,000	42				52	
C	1,800 - 4,000	60	27		42	72	
D	3,000 - 6,000	84			56		34
E	5,200 - 10,000	100	34	59		92	56

All dimensions are in inches.

** Dimensions may vary depending on options selected*

Control Panel Options

Internal Control Panel

The internal control panel keeps all low voltage controls internal to the air handling unit. Blower access for H3 Series units can be through the top, bottom, or supply end of the unit. All three openings are designed the same so that the duct flanges and access panels are interchangeable. Blower access for the V3 Series units can be through the front, back, or top of the unit.

External Control Panel

The external control panel option provides additional space for electric heat controls and other control features and options.

Removable Internal Control Panel

The removable internal control panel keeps all low voltage controls internal to the air handling unit and gives a single side access for all components. The low voltage control panel section can be removed by unsnapping the quick connects & unbolting four bolts.

▲ V3 Series Removable Internal Control

Makeup Air Capability

AAON H3 and V3 Series units have makeup air capability and can be specified with up to 100% outside air. High capacity cooling coils are available to handle the higher latent load of outside air. Modulating SCR electric heat or modulating gas heat is available to provide energy efficient, consistent supply air temperature heating. V3 gas heat is 96% efficient with 3:1 modulation, and H3 gas heat is 93% efficient with 5:1 modulation. Modulating humidity control is also available to provide dehumidification without over cooling when the outside air humidity is above setpoint.

H3 Series Modulating 93% efficient gas heater

V3 Series with Modulating SCR electric heat

Energy Recovery Wheel Options

V3 Series Energy Recovery Wheel

H3 Series Energy Recovery Wheel

Energy Recovery Wheel

AAONAIRE energy recovery wheels are available on the H3/V3 Series to increase the system energy efficiency and indoor air quality. AAONAIRE energy recovery systems provide energy savings by recycling energy instead losing energy through exhaust air streams. AAONAIRE systems also enhance indoor air quality by allowing larger amounts of outside air to be provided to the space and through improved humidity control. AAONAIRE systems save money through both an initial HVAC equipment reduction and ongoing lifecycle operating savings. For much of the country, the payback for the AAONAIRE system is less than one year. After the payback period, the system will continue to provide savings for the life of the product.

The V3 Series picture above includes three possible split modules:1) exhaust air section, 2) the energy recovery wheel and return air section, and 3) the supply air fan and coil section. Low voltage quick connects make wiring split modules simple and fast. The V3 Series has an additional aluminum energy recovery wheel option.

Air-Source Heat Pump Option

Energy efficient cooling and heating can be achieved by reversing the flow of the unit's refrigeration circuits. This allows the indoor coil to be used as either a cooling coil or heating coil. A heat pump is a more efficient method of heating than other forms of heating because it can reject more heat to the space per amount of energy used. A heat pump can also provide savings in operating costs, depending on current utility rates.

Direct Drive Backward Curved Plenum Fans are more energy efficient, quieter, and require less maintenance than belt driven fans. ECM driven supply, exhaust, and return fans are available for precise air flow control, building pressure control, and reduced power consumption.

Aluminum Energy Recovery Wheel

AAONAIRE® Energy Recovery Wheel

The energy recovery wheel option can be provided in all model sizes allowing reduced equipment size and operating cost savings while pre-conditioning the outside air being introduced into the conditioned space. Sensible only or enthalpy wheels are available to meet the humidity control requirement of the system. Segmented polymer wheels allow for easy cleaning. Aluminum wheels are also available for application that require aluminum construction. Bypass dampers can be selected for full economizer operation.

AMCA Certified AAON Low Leakage Dampers

Gear driven economizer eliminates the excess play and bind that occurs with linkage type economizers. Standard AMCA Certified AAON Low Leakage Dampers meet the California Title 24 damper air leakage requirement.

Standard AMCA Certified AAON Low Leakage Damper

AAON Environmentally Friendly HVAC Product Family

Outdoor Air Handling Units
(800 - 72,000 + cfm)


RQ Series


RN Series


RZ Series, Pinnacle

Condensing Units
(2-70 tons)


CB Series


CF Series

Chillers
(4-55 tons)


LF Series

Self-Contained Units
(3-70 tons)


SB Series


SA Series


M2 Series

Indoor Air Handling Units
(800 - 50,000 + cfm)


F1 Series


H3 Series


V3 Series


SA Series


M2 Series

Water-Source Heat Pumps
(½ - 230 tons)


WH Series & WV Series, ProFit & EcoFit


RQ Series


RN Series


SA Series


SB Series


RZ Series, Pinnacle


M2 Series

Packaged Rooftop Units
(2-240 tons)


RQ Series


RN Series


RZ Series, Pinnacle

Controls
(WSHP, RTU,
SELF-CONTAINED,
SPLIT SYSTEM, & CHILLER)


VCCX-2


Pioneer Gold


Pioneer Silver

BasX Solutions


Custom Air Handling Units


Data Center Cooling Systems


Modular Cleanrooms

Heating and **Cooling Products** for:

Auditoriums	Health Care Facilities	Manufacturing	Office Buildings	Schools
Convenience Stores	Homes	Museums & Libraries	Restaurants	Supermarkets
Health Clubs	Lodgings	Natatoriums	Retail Store	Indoor Agriculture

2425 S. Yukon Ave., Tulsa, OK 74107-2728

www.**AAON**.com

Manufactured, Engineered, Headquartered, and Owned **in the U.S.A.** (NASDAQ:AAON)

H3/V3 Sales • R80510 • 220317