



M2 SERIES

Modular Air Handler



1,000 to 16,000 CFM

The M2 can be configured for a variety of applications including:

Total Energy Recovery
100% Outside Air

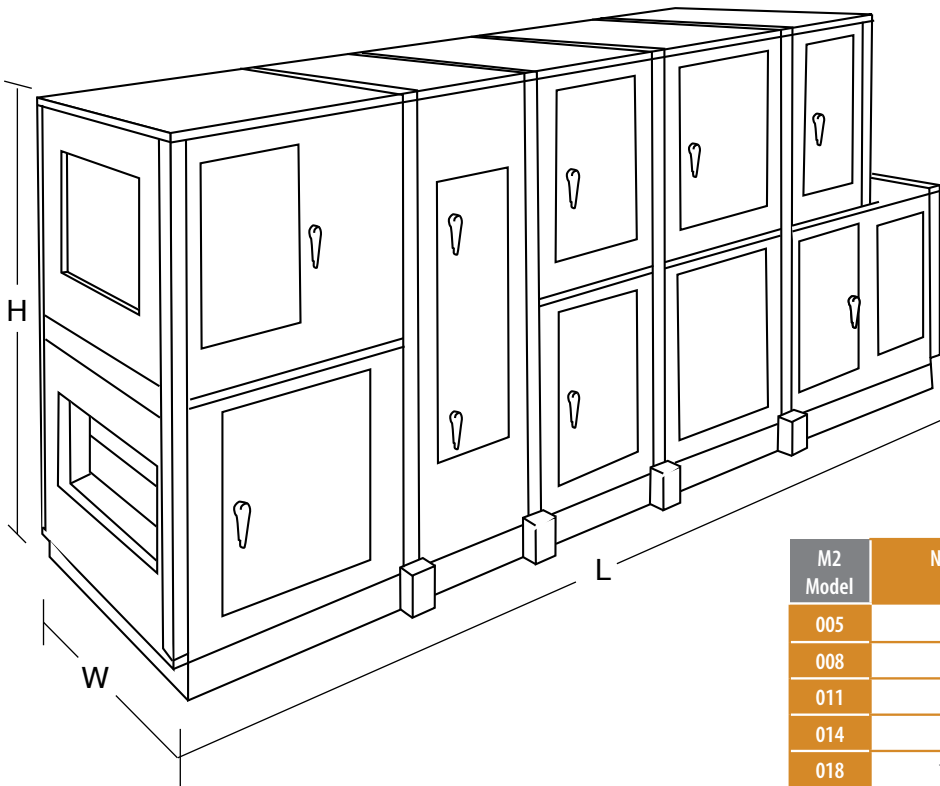
Dehumidification
Indoor Air Quality

Comfort or Process
Heating and Cooling



Superior Features

- Blowers are backward inclined centrifugal plenum style with aluminum construction
- Cabinet design allows air leakage of less than 1% at +/- 6" of static pressure
- Double wall cabinet construction increases exterior sound dampening and is easier to clean than single wall construction
- Double wall galvanized cabinet construction incorporates high performance composite panels that are insulated with closed cell polyurethane foam. Double wall doors provide better thermal and acoustic insulation, remain flatter and seal better against door frame gaskets than doors with single wall construction.
- Easy access doors are hinged with removable pin stainless steel hinges and use quick release latches.
- Delivery options include factory assembled or shipped in modules. Large cabinet dual deck modules are provided factory assembled to prevent unnecessary lifting in the field.
- Unit specific color-coded wiring diagrams are provided in point-to-point and ladder form, laminated, and permanently affixed inside the control compartment.
- Sloped stainless steel drain pan eliminates standing water that can support microbial growth. Stainless steel construction ensures the pan itself will not corrode leading to contaminants in the air stream.
- Controls are located in a compartment that is isolated from the air stream for easy service.



M2 Model	Nominal CFM	Width	Height	Length*	
005	3000	50	32	*Length varies depending on options selected	
008	4500		44		
011	6000	62	48		
014	7500		54		
018	10,000	84	48		
022	12,000		54		
026	14,500		84		64
					64

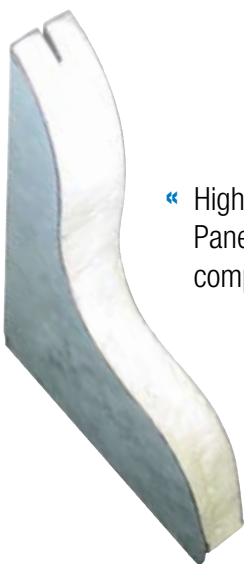
All dimensions are in inches



« Easy slide out access to energy recovery wheel



Easy access doors are »
hinged with remov-
able pin stainless steel
hinges and use quick
release latches



« High Performance Foam
Panel construction with
complete Thermal Break

Premier Options

- Access sections can be customer selected and placed in the construction of the unit. The sections allow easy field installation of components such as airflow monitoring stations, humidifiers or other devices important to occupant comfort. Access sections also provide easy access for maintenance and cleaning when required.
- Corrosion protection is provided for the coils with either a polymer coating or copper construction.
- Electric and hot water preheat prevents hydronic coil freeze instances.
- Electric, hot water or steam heat provides the flexibility to meet the requirements for indoor applications.
- Face and bypass dampers provide capacity control of the coil.
- Factory installed hot gas bypass connection for the evaporator coil to prevent freeze up and allow the unit to match the space load at low load conditions.
- Factory or field mounted controls can be provided to meet the existing control architecture or designed to meet the needs of a new construction project.
- Marine service lights in each air stream compartment are controlled by a single switch.
- Multiple options and monitoring devices are available in the filter section for improved indoor air quality.
- Electric and hot water heating are available.
- Modulating hot gas reheat dehumidifies while maintaining uniform and consistent space temperatures.
- Phase and brownout protection protects the unit from local power fluctuations.
- Premium efficiency and/or oversized motors provide flexibility in the unit selection.
- Stainless steel coil casing provides extended coil assembly useful life.
- Unit can be provided with a factory installed, field wired, 115 volt, 15-amp ground fault service receptacle.



M2 series Indoor Air Handler Features

Indoor Air Quality Features

- Drain pans are sloped to ensure positive drainage and constructed from stainless steel to provide resistance to corrosion.
- The cabinet interior metal liner is cleanable, and easily wiped down. The use of foam paneling rather than fiberglass insulation eliminates the potential for trapping dirt or moisture in the interior of the air handler.
- Access to the unit interior for maintenance is made easy with standard hinged doors that open against pressure. Adhering to the unit's maintenance schedule is an important element in combating mold growth and maintaining indoor air quality.
- Cabinet composite panel construction allows M2 to offer a leakage rate of less than 1% at +/- 6" of static pressure (w.g), and aids in minimizing the infiltration of unconditioned air.
- Each unit can be shrink-wrapped and covered with a tarp for shipping to prevent damage due to weather and road debris as well as during storage prior to installation.



Energy Efficiency

The M2's standard backward inclined plenum fans are more energy efficient, quieter, and can handle higher static pressures, and are easier to clean than comparable forward curved blowers. A clean fan not only requires less energy than a dirty one, but also maintains capacity and reduces stress on the unit.

Foam paneling provides more insulating value than ½ lb density fiberglass insulation. 2" AAON foam insulation provides thermal conductivity of R=12.5 BTU/hr-ft²-°F (1" paneling provides R=6.25 BTU/hr-ft²-°F) while 2" ½ lb. density fiberglass only offers R=3 BTU/hr-ft²-°F.

Acoustical Features

When compared with single wall cabinet construction, the M2 has greater sound insulation capabilities due to the composite paneling.

Additionally, vibration isolation mounts are sized for fan and motor assemblies to minimize undesirable noise.



Control Features

AAON's pre-engineered factory installed and commissioned controls are manufacturer tested to ensure consistent quality, and reduce field labor costs associated with development and installation of unique control strategies.

AAON also features factory installed "controls by others", allowing the customer to specify the type and manufacture of the controller. This flexibility allows the unit to match an existing building control architecture.

Energy Wheel

The AAONAIRE Energy Wheel is a total energy recovery wheel, transferring both sensible and latent energy from the incoming air stream to the exhaust and preconditioning the supply air. This saves energy by reducing mechanical heating and cooling use, and also lowers costs by increasing effective system capacity by 30% or more which allows smaller equipment to be selected.

Polymer e-coat

A uniformly thick polymer coating is applied to the entire coil by an immersion process that minimizes the potential for gaps in coverage that may occur with spray coating. The polymer coil coating provides corrosion protection for more than 6000 hours in salt spray testing, while maintaining the thermal performance of the coil.

Modulating hot gas reheat

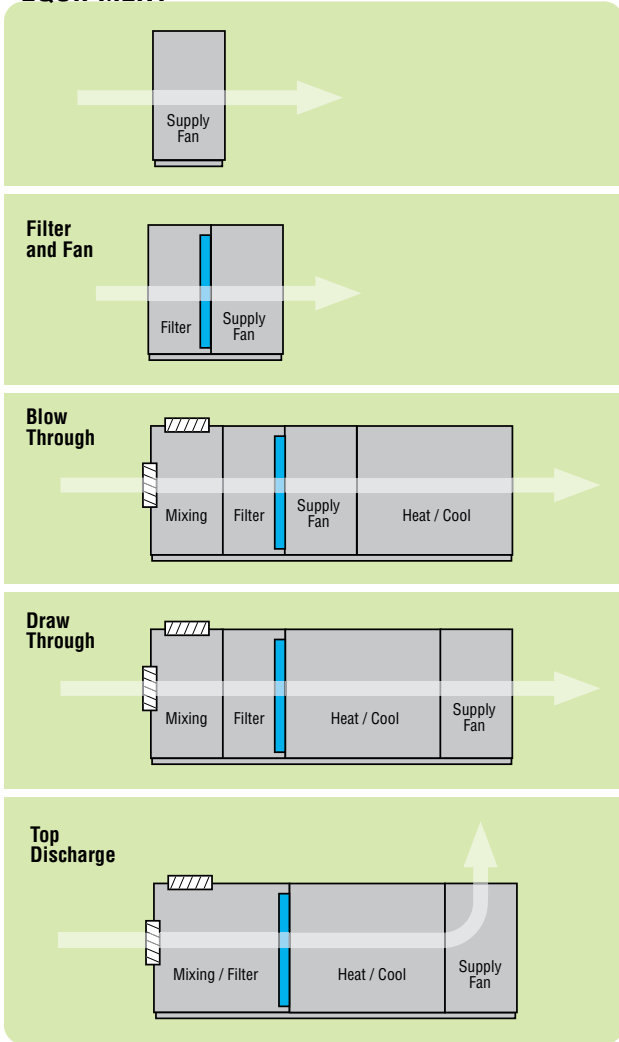
This system delivers only the amount of reheat required for space comfort, providing precise dehumidification without overcooling the space. Occupant comfort is uniform and consistent; drastic temperature swings common to on/off type reheat systems are eliminated.



M2 Sample Configurations

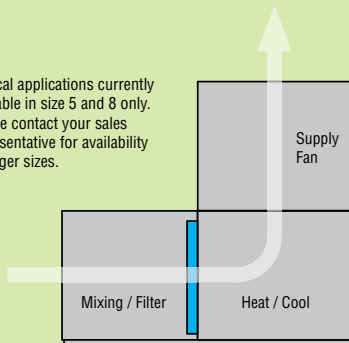
The AAON M2 Air Handler Modules provide design flexibility and ease to meet job application requirements.

EQUIPMENT



VERTICAL*

* Vertical applications currently available in size 5 and 8 only. Please contact your sales representative for availability of larger sizes.



TYPICAL APPLICATIONS

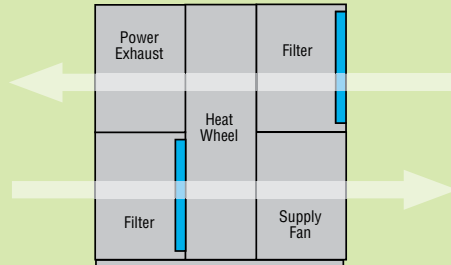
EQUIPMENT	RESULT
Chilled Water Hot Water DX Electric Heat Steam	Heat and Cool COMFORT OR PROCESS TEMPERATURE CONTROL
Reheat	Humidity Control MODULATING HOT GAS, HOT WATER, STEAM OR ELECTRIC
Heat Wheel	Energy Recovery SENSIBLE AND LATENT HEAT
Bypass	Air Quality RETURN AIR OUTSIDE AIR UP TO 100%

SPECIAL APPLICATIONS

EQUIPMENT	RESULT
Preheat	Preheat HOT WATER, STEAM OR ELECTRIC
Hot Gas Bypass	Hot Gas Bypass PART LOAD SYSTEM PROTECTION
Bypass Face	Face and Bypass HOT WATER OR CHILLED WATER SPECIAL TEMPERATURE AND HUMIDITY CONTROL

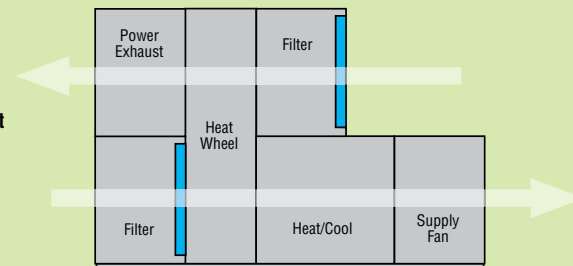
Energy Recovery with AAONAIRE®

**AAONAIRE®
Heat Recovery Unit (HRU)**



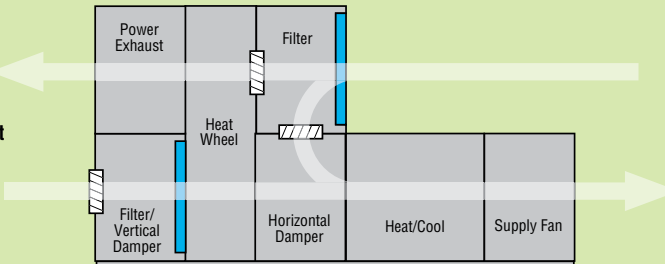
AAONAIRE® HRU With:

- DX or CW Cool
- HW, Steam or Electric Heat



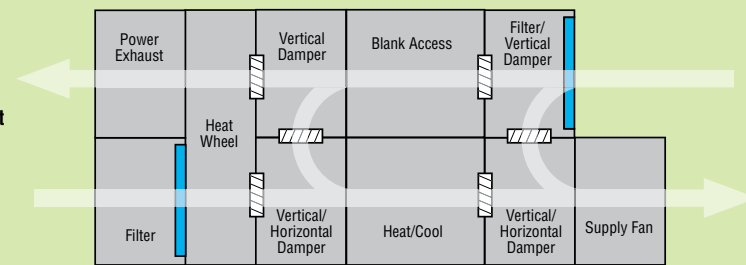
AAONAIRE® HRU With:

- DX or CW Cool
- HW, Steam or Electric Heat
- OA/RA Mixing



AAONAIRE® HRU With:

- DX or CW Cool
- HW, Steam or Electric Heat
- OA/RA Mixing
- RA Bypass





Customer Commitment – AAON encourages environmentally responsible design by incorporating many energy saving features into our superior heating and cooling products. In addition to energy efficiency, AAON also offers environmentally friendly R-410A refrigerant capability in all our cooling and heat pump equipment. As countries throughout the world phase out CFC and HCFC refrigerants, R-410A is becoming the global standard and AAON is leading the way!



Rooftop Units



2 - 5 Tons



2 - 30 Tons



26 - 70 Tons



45 - 230 Tons

Condensing Units



2 - 5 Tons



8 - 40 Tons



45 - 230 Tons

Air-Cooled or Evaporative-Cooled Chiller



35 - 365 Tons

Boiler



500 - 6,000 MBH

Custom Indoor or Outdoor Air Handling Units



Direct Fired
1,500 - 100,000+ CFM



1,500 - 218,000 CFM • Indirect Fired



1,500 - 120,000+ CFM

Outdoor Air Handling Units



800 - 2,000 CFM



800 - 12,000 CFM



10,400 - 28,000 CFM



18,000 - 68,000 CFM

Indoor Air Handling Units



1,000 - 16,000 CFM



16,000 - 51,500 CFM



800 - 10,000 CFM

It is the intent of AAON to provide accurate up-to-date specification data. However, in the interest of ongoing product improvement, AAON, Inc. reserves the right to change specifications and/or design of any product without notice, obligation, or liability.

AAON® products are covered by one or more of the following U.S. patents:
5,738,167; 5,826,641; 5,839,505; 6,715,312; 6,792,767; 6,802,543; 6,929,452.

AAON and AAONAIRE are registered trademarks of AAON, Inc.

D-PAC and AAONEcat32 are trademarks of AAON, Inc.

Heatflow and AAON Suite are trademarks of AAON Coil Products, Inc.

