

AIR HANDLING UNITS



Typical Applications

Air handlers are used in a wide range of commercial and industrial applications.

Some examples of their use include:

providing conditioned outdoor air directly to a space to maintain thermal conditions, to downstream HVAC equipment for further conditioning, or to maintain pressure within a space.

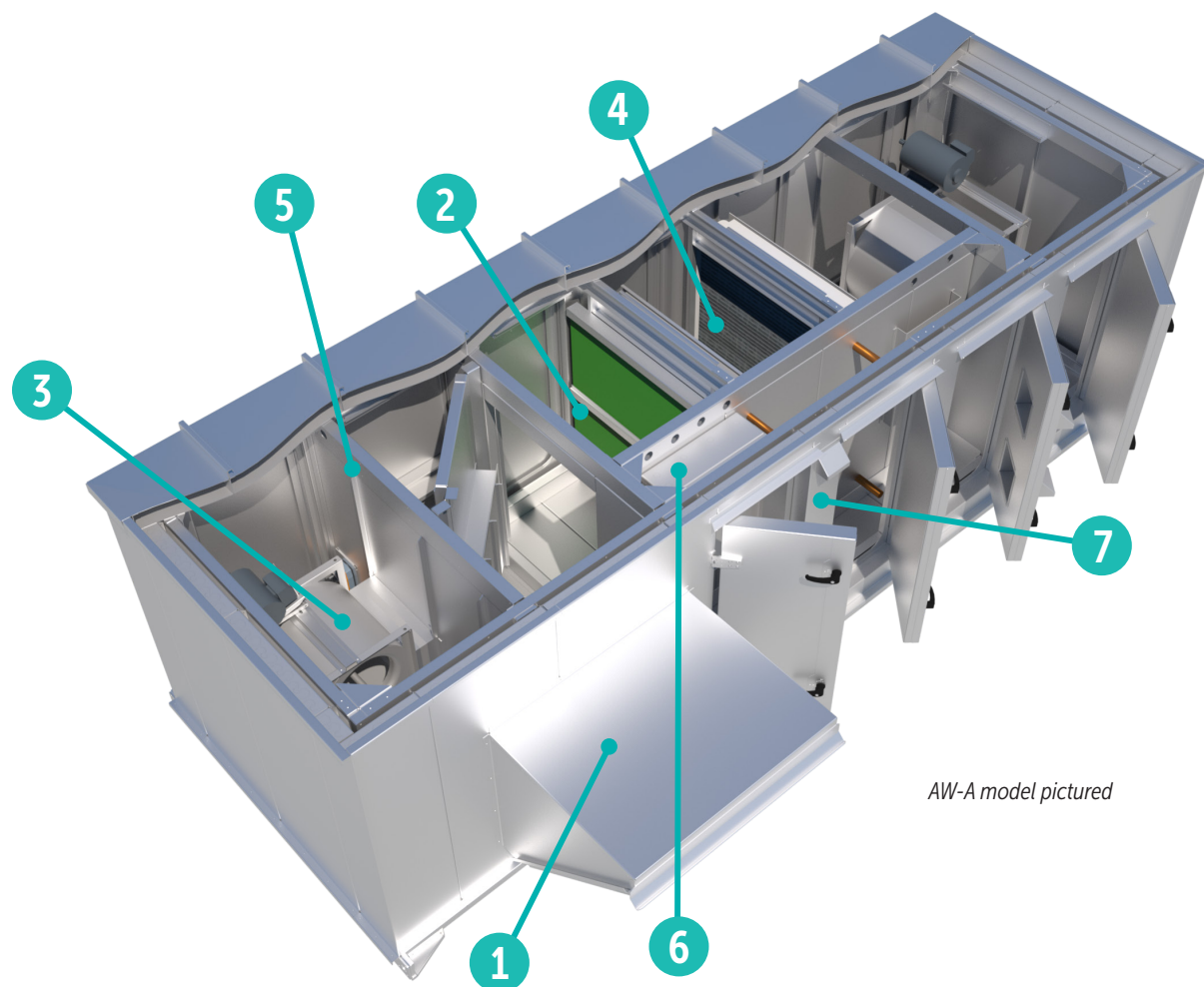
Specific applications can vary from schools, to restaurants, to offices.

SolutionAir offers configurable designs to meet your needs and specifications.

Features

- + Output range:
 - 3,500 to 50,000 CFM
- + 0 to 6 in. W.C static pressure
- + Factory tested
- + CSA approved design
- + Highly configurable with multiple energy recovery, heating and cooling options.

AIR HANDLING UNITS



AW-A model pictured

Components

1 Inlets

- + 100% Outdoor Air Hood
 - Half inch expanded metal bird screen
 - Motorized two position damper
 - Optional modulating inlet damper
 - Optional inlet louver

2 Filters

- + 2" MERV 8, 11 or 13
- + 12" MERV 13, 14, 15, or 16

3 Fans

- + Available direct drive backward curved or airfoil plenum fans
- + Forward curved housed fans
- + Adjustable motor mount base
- + Fan skid mounted on RIS isolators, spring isolation optional
- + Available VFD's

4 Hydronic Coils

- + Chilled water or hot water coils

5 Dampers

- + Low leak aluminum airfoil dampers
- + Optional insulated airfoil dampers

6 Controls

- + Standard factory mounted controls
- + Unit controls provide:
 - Dynamic operational limit control
 - Independently configurable I/O pins
 - Integrated energy saving management
- + Optional BACnet IP or BACnet MS/TP communication

7 Disconnect

- + Non-fused and fused disconnect available
- + Single point power connection

AIR HANDLING UNITS

Packaged DX Cooling & Dehumidification

Standard Features

- + Packaged cooling from 8 to 200 tons
- + Factory tested cooling and controls
- + Electronic expansion valves
- + Remote operable digital controller
- + Detect + Protect monitoring system
- + 2-stage capacity control from 8 to 12 tons
- + 4-12 stage capacity control from 14 to 200 tons
- + Aluminum fin, aluminum frame, and copper tube evaporator and condenser coils
- + Low fin per inch evaporator (10 FPI) and condenser (12 FPI) coils
- + 70°C/154°F high temperature rated condenser motors

Additional Options

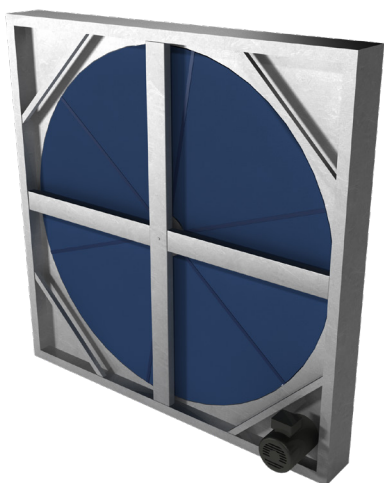
- + Split cooling from 8 to 200 tons
- + Variable capacity cooling control with digital compressors or variable speed compressors
- + 7°C/45°F low ambient and -40°F/C extreme low ambient cooling
- + Hot gas reheat
- + Variable Speed compressor as option
- + R454B refrigerate



Detect + Protect Monitoring System

- + Actively monitors:
 - Refrigerant cycle operation (sub cool, superheat, line pressures)
 - Electronic expansion valves
 - Refrigerant charge
 - VFD operation
 - Cooling capacity
- + View alarms, turn the unit on or off, change operating set points remotely through digital controller over a virtual network interface.
- + View live performance and logged data on the controller. No refrigerant gauges required.
- + Permanently connect to your system via LAN or when necessary via cellular modem.

	Cool CIRCUIT A EEV 1				↑
		LP		HP	
	Temp	55.4°F		116.3°F	
Prg	Pres	135 PSI		197 PSI	←
	SUPHT	8.8°F		47.9°F	
	SubCooling			10.6°F	
Esc	Liquid Line Temp			58°F	
	EEV:	58.0%		EVP Δ	20°F
					↓



Exhaust air energy recovery



Electric heating

Additional Options

- + Energy Recovery from 2,000 to 30,000 CFM
 - Heat wheels
 - Sensible plates
 - Heat pipes
- + Electric heat
- + Variable air volume control
- + Economizer
 - With gravity damper or return fan
- + Mixing box
- + Shipping splits
- + Vertical configuration
- + Top, bottom, side, or horizontal supply/discharge
- + Steel cabinet
 - 1" or 2" polyurethane foam or fiberglass insulation
 - 16 to 18 gauge galvanized, 304 stainless or 10,000 hour salt spray painted galvanneal steel exterior liners
 - 18 to 22 gauge galvanized or 304 stainless steel inner liner
 - 22 gauge perforated galvanized steel inner liner
 - Hinged door or removable panels with same construction as cabinet
 - Available washdown construction and checker plate floors
 - Optional acoustic liner

Energy Recovery Options

	Heat Wheel	Sensible Plates	Heat Pipe
Recovery Type	Sensible & Latent	Sensible	Sensible
Sensible Effectiveness	Up to 85%	Up to 70%	Up to 60%
Carry-Over Leakage	1 - 3%	0%	0%
Airflow Range (CFM)	2,000 - 20,000	2,000 - 20,000	2,000 - 20,000
Preheat	Below -5°C/23°F	Below -5°C/23°F	Below -5°C/23°F

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