AIR HANDLING UNITS

SolutionAir™
Purpose Built for Your Application

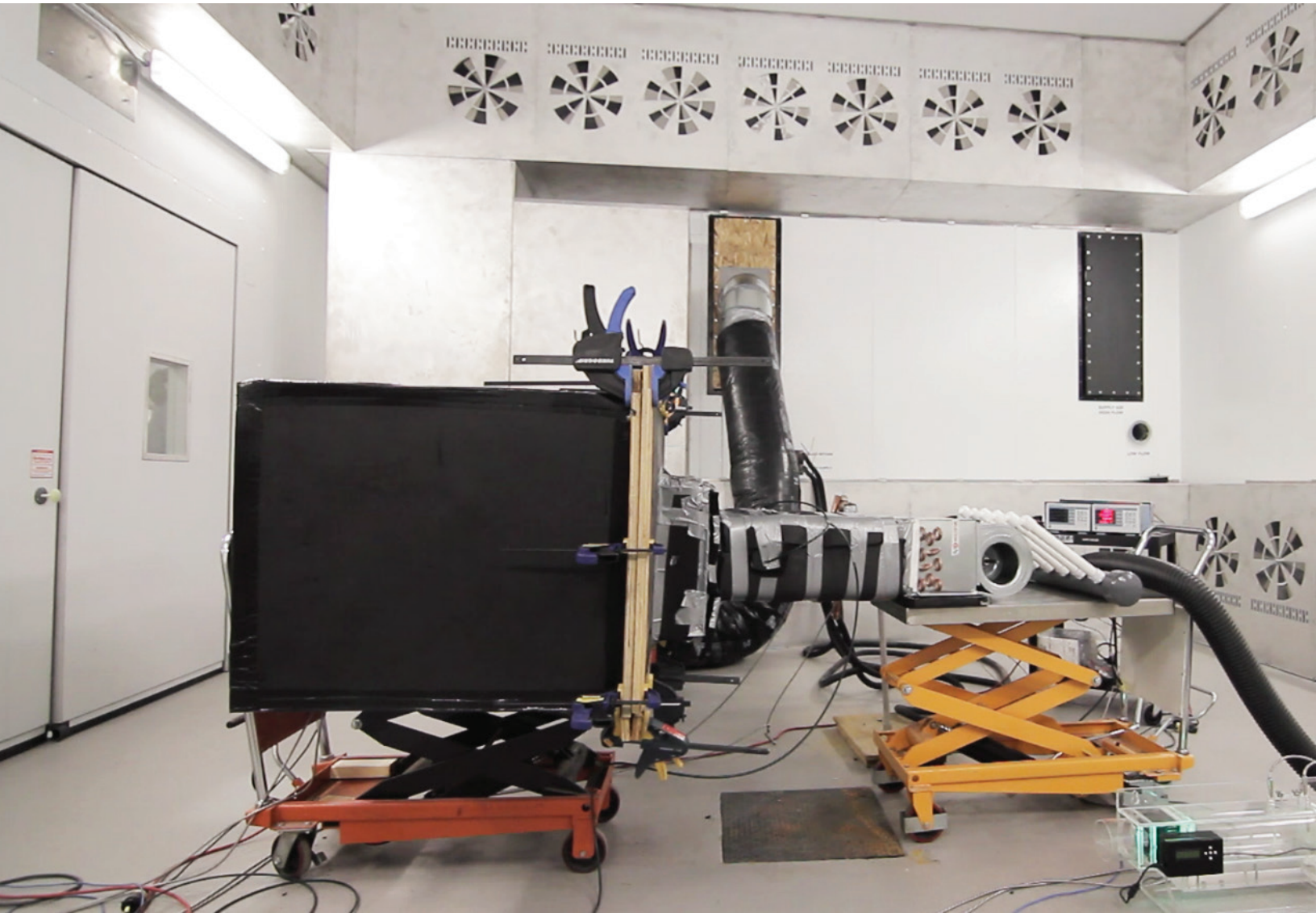
AIR HANDLING UNITS

Air handlers can range from simple units with a fan and chilled water coils, all the way to more complex products with hydronic heating, cooling, energy recovery and more. This product moves air into a space, whether it's 100% outdoor air or recirculated return air, and is used across a wide variety of commercial and industrial applications.

Our air handling units (AHU's) can be designed for indoor or outdoor use, as rooftop units (RTU), as dedicated outdoor air systems (DOAS), or configured to your application requirements.

Psychrometric Chamber

SolutionAir has built a state-of-the-art psychrometric lab to test heating and cooling for rooftop units and several complementary mechanical products. The lab offers precise performance and longevity testing on configured rooftop units with packaged DX up to 26 tons and cooling/heating cool capacity testing in accordance with AHRI 400 and AHRI 410. The Psychrometric Chamber's room conditioning equipment can condition to a wide range of temperature and humidity set-points, and the water supply has an expanded range of temperature, flow and pressure capable of exceeding any of our products' fluid supply requirements.



Additional Industry-Leading Test Facilities

Gas Testing Laboratory

A CSA certified Gas Laboratory allows SolutionAir to conduct product testing and safety certification in-house without the need for CSA personnel to be on site, resulting in:

+ Faster product development cycle.
+ Testing and certification of new products.
+ High quality results for customer demonstrations, configured units & control testing, training and site issue analysis.

Environmental Chamber

RegenCore units are tested to the highest industry standards in the Environmental Chamber.

+ Maintains temperatures from -40°C/F to +40°C (104°F).
+ Paired with a configured SolutionAir air handling unit to simulate building return air (heating, cooling and introducing humidity).
+ Enables precise energy balances and accurate efficiency measurement, making RegenCore the industry's only product with fully-tested indoor and outdoor performance data.

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 conditions, to downstream 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
+ Up to 0 to 6 in. W.C static presure
+ Factory tested
+ CSA approved design
+ Highly configurable with multiple energy recovery, heating and cooling options.

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

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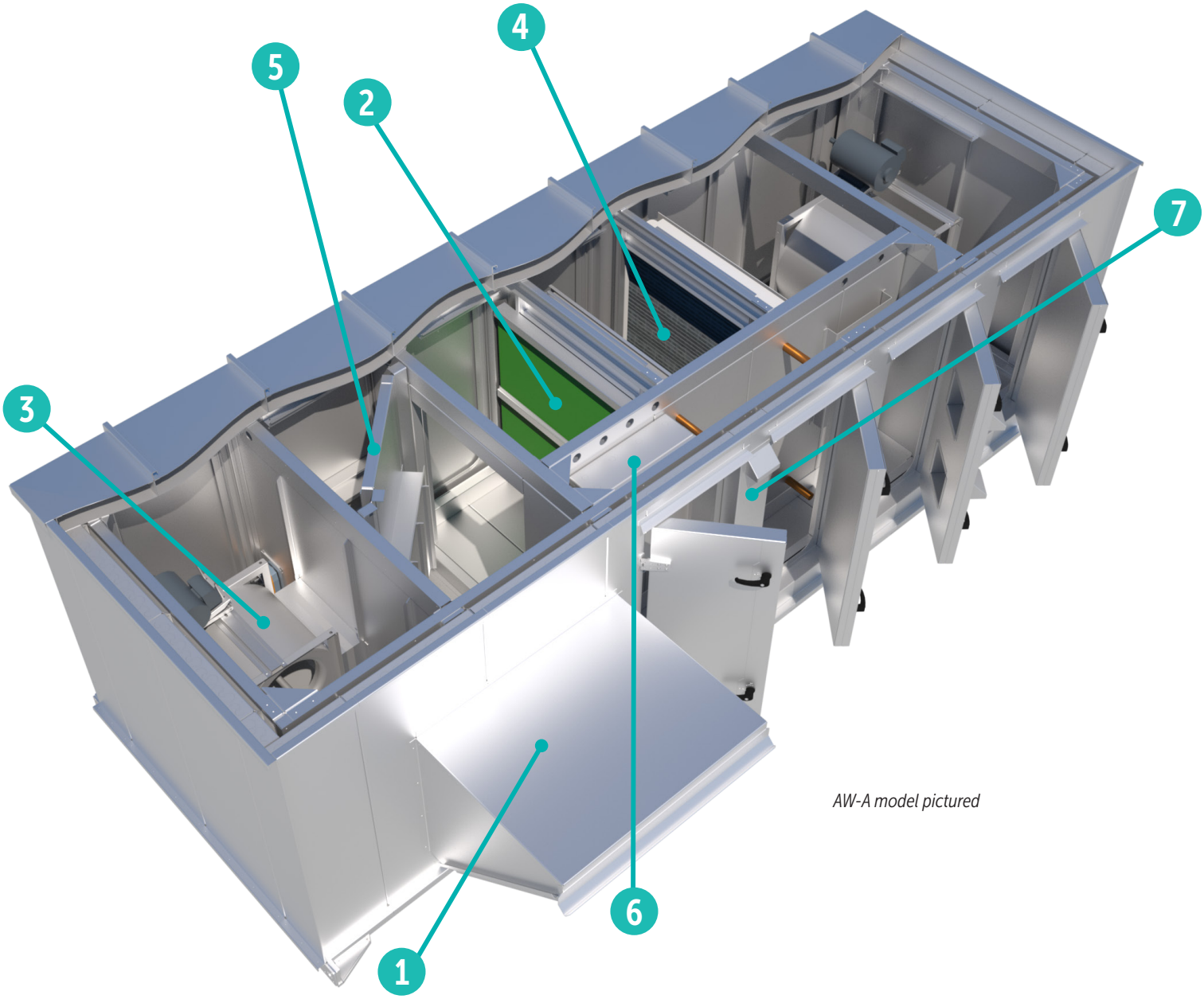


AW-A model pictured

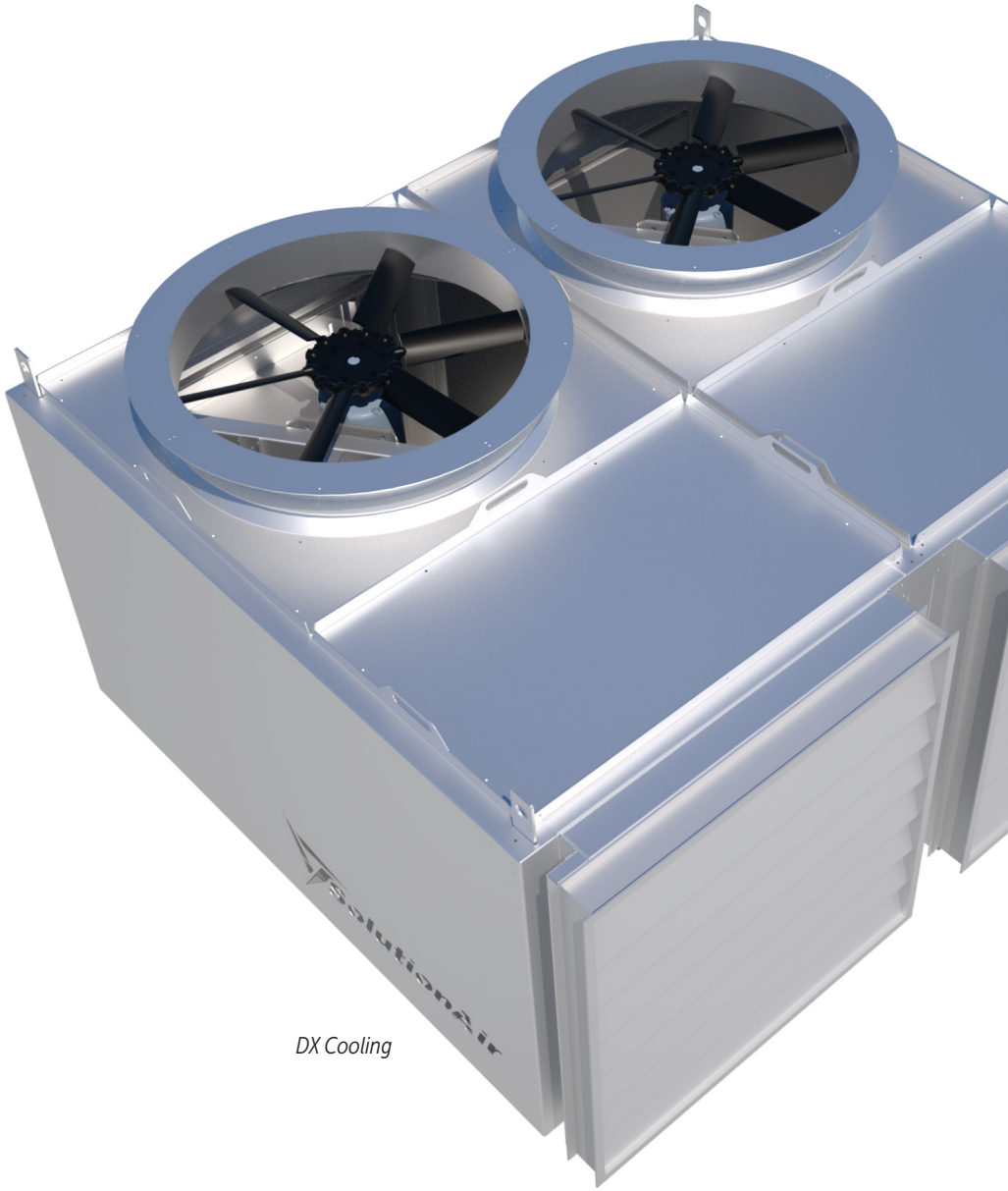
Packaged DX Cooling & Dehumidification

Standard Features

+ Packaged cooling from 8 to 128 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-stage capacity control from 14 to 128 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

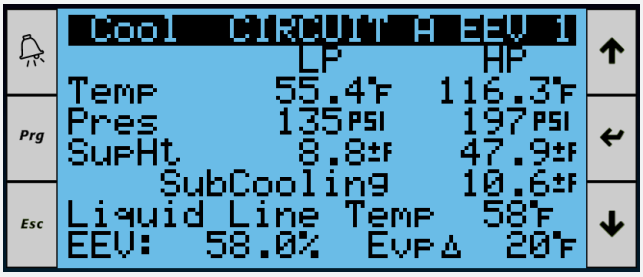
+ Split cooling from 8 to 128 tons
+ Variable capacity cooling control with digital compressors
+ 7°C/45°F low ambient and -40°F/C extreme low ambient cooling
+ Hot gas reheat



DX Cooling

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.



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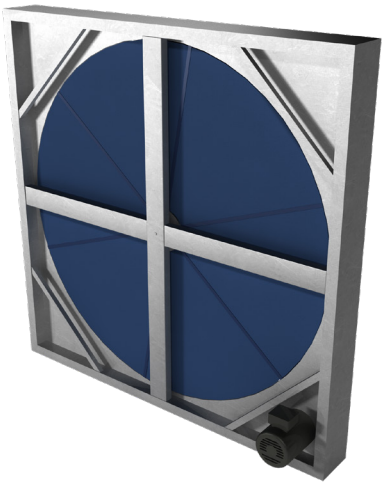

Exhaust air energy recovery

Electric heating

Additional Options

+ Energy Recovery from 2,000 to 20,000 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 1500 hour salt spray painted galvaneal 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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