



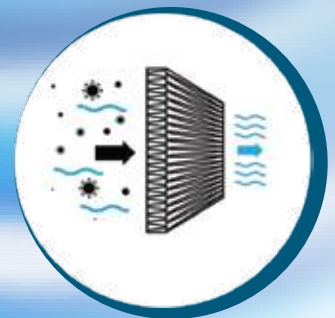
Air Handling Unit with Wheel Dehumidifier



**Adjusting the environment
temperature humidity**

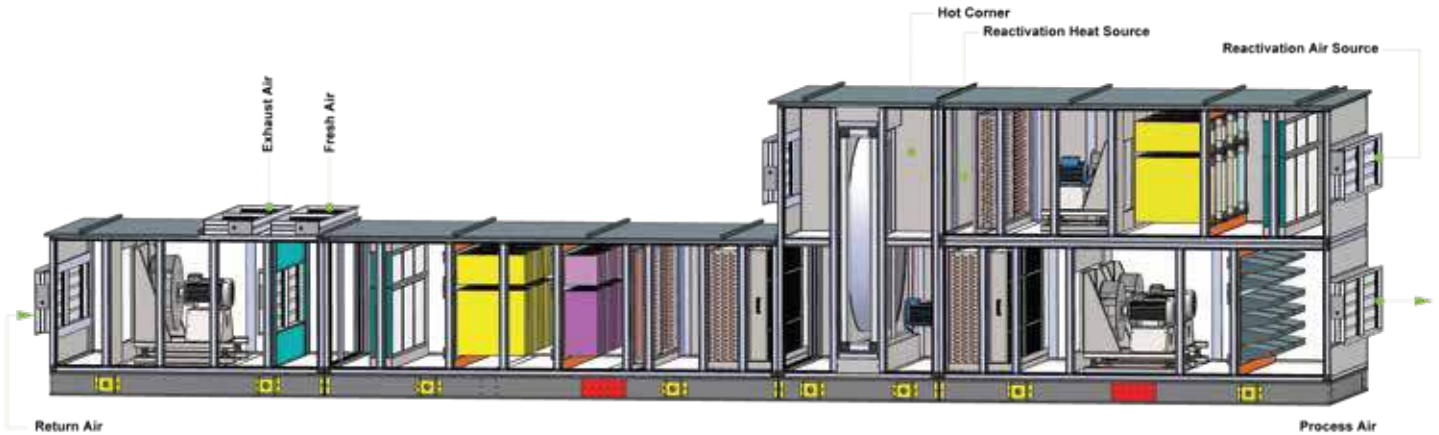


**Based on Advanced
Technology**



**Complete Air
Filtration**

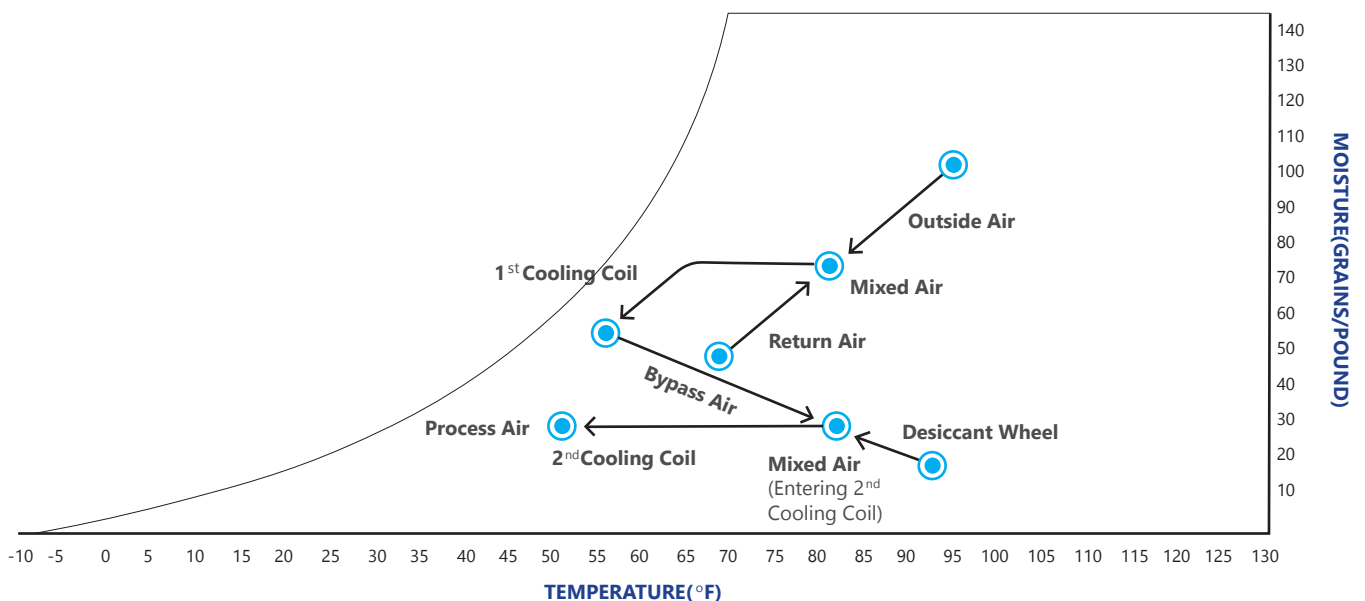




Sample Application:

Advanced Manufacturing & Battery Production

Return air mixes with outside air and passes through the cooling coil, which removes moisture and sensible heat. The cool air then passes through the desiccant wheel, which removes additional moisture and adds sensible heat to the air. The post-cooling coil removes sensible heat to maintain the correct air temperature. Processes that require extreme dew point depression, cool supply air, or both, commonly use this combination.



Air Handling Unit with Wheel Dehumidifier

For applications requiring precise humidity levels such as advanced manufacturing, pharmaceuticals or archival storage, **Arad Energy Ersas**' active desiccant wheel technology maximizes efficiency and removes more moisture than traditional cooling coils.

Active desiccant technology incorporates a desiccant wheel and a heated drying cycle to remove moisture from the air.

Traditional cooling coils are then used to reduce the temperature of the air to the desired levels.

How it works

- 1st Cooling Coil**

Cools air and removes moisture

- Desiccant Wheel**

Acts as a dry sponge absorbing moisture - air gets warmer

- Bypass**

During dry conditions, air can bypass desiccant wheel

- 2nd Cooling Coil**

Cools air to comfortable temperature

- Process Heating Source**

Heats air during colder seasons



Adjusting the environment temperature humidity

The device has the ability of control the air (18 to 22 °C) and the humidity (with RH below %15) at the same time by using a moisture absorbent wheel.



Based on Advanced Technology

Air handling unit wheel dehumidifier is a knowledge-based product of Arad Energy Ersas Company and it has been made as a technological product according to the best modern methods of designing and manufacturing air conditioning products. It has been also manufactured based on the latest advanced technologies.



Complete Air Filtration

By using various filters which include different sorts of filters such as plated, bag, Hepa, Olpa and active carbon filter. This machine is able to filter hovering particles in ambient air up to %99.99.

Popular Options & Standard Features

- Double-wall insulated & rugged outdoor construction 1,000 hour salt-spray tested finish
- 2-inch or 4-inch panel filters, 6-inch or 12-inch cartridge filters
- Epoxy coatings (coils and unit exterior)
- Factory tested hydrologic system
- Multiple independent water circuits
- LonWorks, BACnet, N2 or Modbus communications
- Gas, electric, steam or hot water heat
- Wheel reactivation: Natural gas or electric

Benefits

A full face air seal separates the process and reactivation air streams, and comes with a minimum 25,000 hour operational life expectancy

- Seamless integration with standard models
- Low operating costs and high energy efficiency
- Consistent dehumidification without over-cooling
- Backed by **Arad Energy Ersa** warranty over 10,000 service providers



Industries

- **Advanced Manufacturing**

Due to the energy-intensive nature of producing many modern electronics, it's vital to capture and redirect that energy from a cost standpoint. Our custom HVAC solutions .

Utilize energy recovery devices like enthalpy wheels and plate heat exchangers to reduce run times and maximize energy efficiency.

- **Pharmaceutical & Healthcare**

Our highly efficient dehumidification systems offer precise humidity control to meet air quality standards for pharmaceutical manufacturing environments and surgical suites.

- **Archival Storage**

Desiccant wheel technology is extremely effective for applications that require low dew-point depression and cooler supply air levels, like archival storage.

Unit Performance	AEE Product	2	4	8	16	46	55	XTI
	Process Air Range	to 2,000 CFM	to 4,000 CFM	to 8,000 CFM	to 16,000 CFM	to 46,000 CFM	to 55,000 CFM	to 70,000 CFM
	Cooling Type	DX,CHW	DX,CHW	DX,CHW	DX,CHW	DX,CHW	DX,CHW	DX, CHW



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