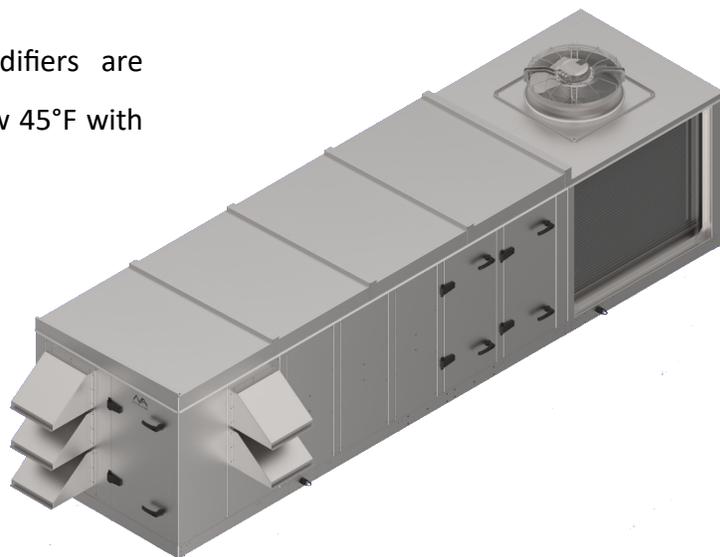


# DES/DX-DOAS Series

Energy Efficient Low Dew Point Ventilation Air  
Advanced Humidity Control

The **DES/DX-DOAS Series** of desiccant based dehumidifiers are designed to deliver ventilation air at dew points well below 45°F with minimal energy consumption. Typical applications include:

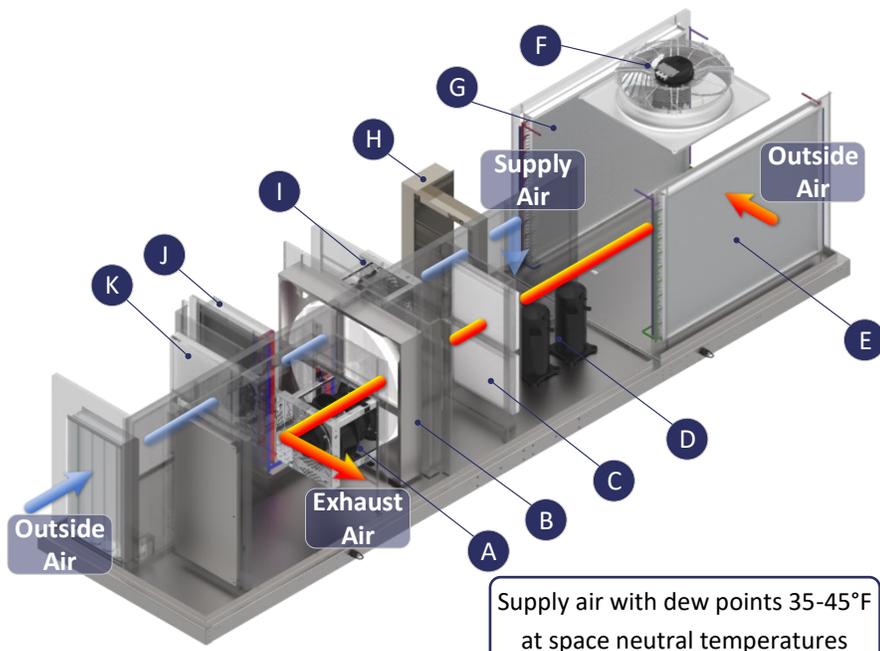
- Supermarkets
- Food processing
- Health care facilities
- Industrial production plants
- Pharmaceutical manufacturing
- Education facilities: schools and universities



## HOW IT WORKS

Two DX circuits are used, one with variable capacity, to precool outside air down to a saturated condition. The cool saturated air then passes through the desiccant wheel where it is further dehumidified to the set point, supplying air to the space at dew points significantly below 45°F if required. Waste condenser heat from the main DX circuit is used to regenerate the desiccant wheel. Utilizing waste heat to regenerate the desiccant wheel minimizes the precooling required to achieve a required supply air dew point. Consequently, the energy consumption is considerably less when compared to overcool/reheat equipment.

- |                             |                             |
|-----------------------------|-----------------------------|
| <b>A</b> ECM Regen Fan      | <b>G</b> Condenser Coil (2) |
| <b>B</b> Desiccant Wheel    | <b>H</b> Optional Post Heat |
| <b>C</b> Regen Filters      | <b>I</b> ECM Supply Fan     |
| <b>D</b> Compressors        | <b>J</b> Evaporator Coil    |
| <b>E</b> Condenser Coil (1) | <b>K</b> OA Filters         |
| <b>F</b> ECM Condenser Fan  |                             |



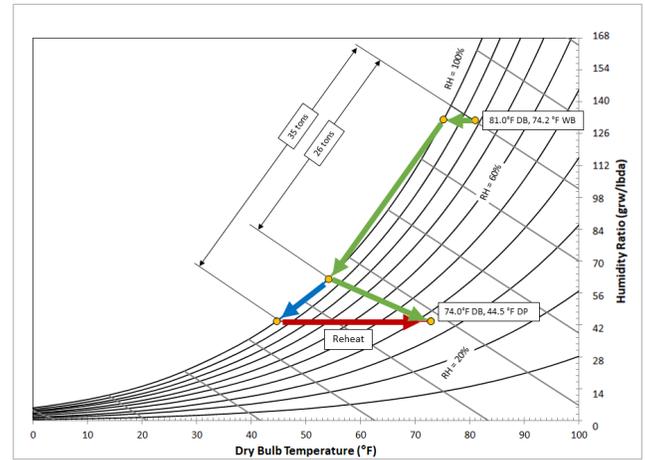
# NOVELAIRE®

Creating the Great Indoors®

## DES/DX-DOAS Series

### ENERGY SAVINGS COMPARISON

The DES/DX-DOAS units have the ability to deliver low supply air dew points with less energy usage when compared to traditional overcool/reheat equipment. The DES/DX-DOAS uses less compressor capacity to reach the same supply air conditions as shown in the psychrometric chart. By using the waste condenser heat to regenerate the desiccant wheel the psych plot follows the constant enthalpy line to the end point whereas conventional systems must mechanically cool all the way to the temperature of the required dewpoint.



### FEATURES

- Delivers low dew point make up air – well below 45°F
- Two DX circuits, one variable capacity; 454B
- 30% less compressor capacity than typical overcool and reheat units
- Low maintenance direct drive ECM fan arrays
- Proprietary low temp regenerated desiccant wheel
- Pre-painted G90, double wall, 2", R13 insulated
- Complete onboard controls with BMS interface and touchscreen
- Provides for independent humidity control
- Curb mount or pad mount
- Single-point power connection with unit mounted disconnect
- ETL listed

### SPECIFICATIONS

Unit/CFM	2000	4000	8000	12000	16000
Total Compressor Tonnage	14	26	60	80	100
Dimensions L x W x H (in)	210 x 55 x 53	256 x 65 x 76	330 x 87 x 98	354 x 101 x 114	366 x 120 x 124
Weight (lbs)	2700	6000	12500	15750	18500

### OPTIONS

**Post Heating:**

- Electric                      Gas Furnace
- Hot Water                    Steam

**Cabinet:**

- Stainless Steel
- Coated coils for corrosion resistance
- Return air and unoccupied mode

**Power:**

208/230v/3ph, 480v/3ph, & 575/600v/3ph

**Filters:**

MERV 8 & 13

**Warranty:**

Extended Warranty

## NOVELAIRE TECHNOLOGIES®

Creating the Great Indoors®

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The information contained in this document is believed to be accurate by NovelAire Technologies but is not warranted.