

# DECKER

Adsorption dehumidifier



## Product Description

**DECKER** adsorption dehumidifier (DAD) is designed to efficiently work in low dewpoint applications down to  $-60^{\circ}\text{C}$ . DAD unit's body and access panel are made of EGI steel and thermo break aluminum profile. Its airtight construction helps to deliver accurate conditions and features provide versatility to adapt the system for different requirements. Standard units are completely equipped with process and reactivation fans, heaters, filters, base control package ready for installation.

## Adsorption Rotor Technology

### Highest desiccant content:

The HSG rotor has a very high, 82% active silica Gel content. It can be used for most environments and applications.

The H4M rotor has a very high, 39% 4A Molecular Sieve content 43% Silica Gel content. It will perform well when entering air is dry and or hot or when the environment is alkaline. It is also suitable when the application calls for a low dewpoint.

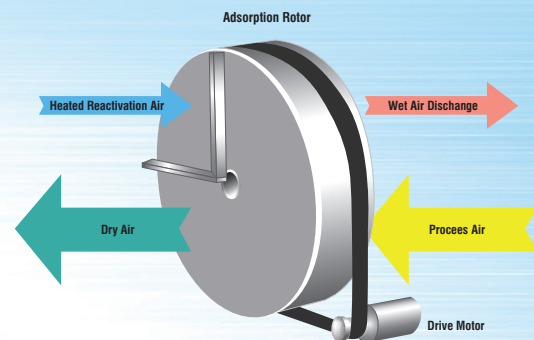
**Fire resistance:** the rotor media provided Air Holdings AB has been tested according to ASTM E-84 and achieved a flame spread index of 0 and a smoke index of 0

**Unique moisture adsorption:** the density of dry media is approximately  $240\text{kg/m}^3$ . The media can pick up approximately 40% of its dry weight as moisture in humid environment. There is no limit for how high humidity the rotor can stand as long as the droplets are not introduced into the rotor during operation

**High surface strength:** the surface compression strength of the rotor is more than 200 kpa

## Installation & Operation

- Start/stop/humidistat and diagnostic fault display
- Pressure and airflow test points
- Replaceable G4 filter – enhances air quality
- Replaceable process fan – enhances external static pressure

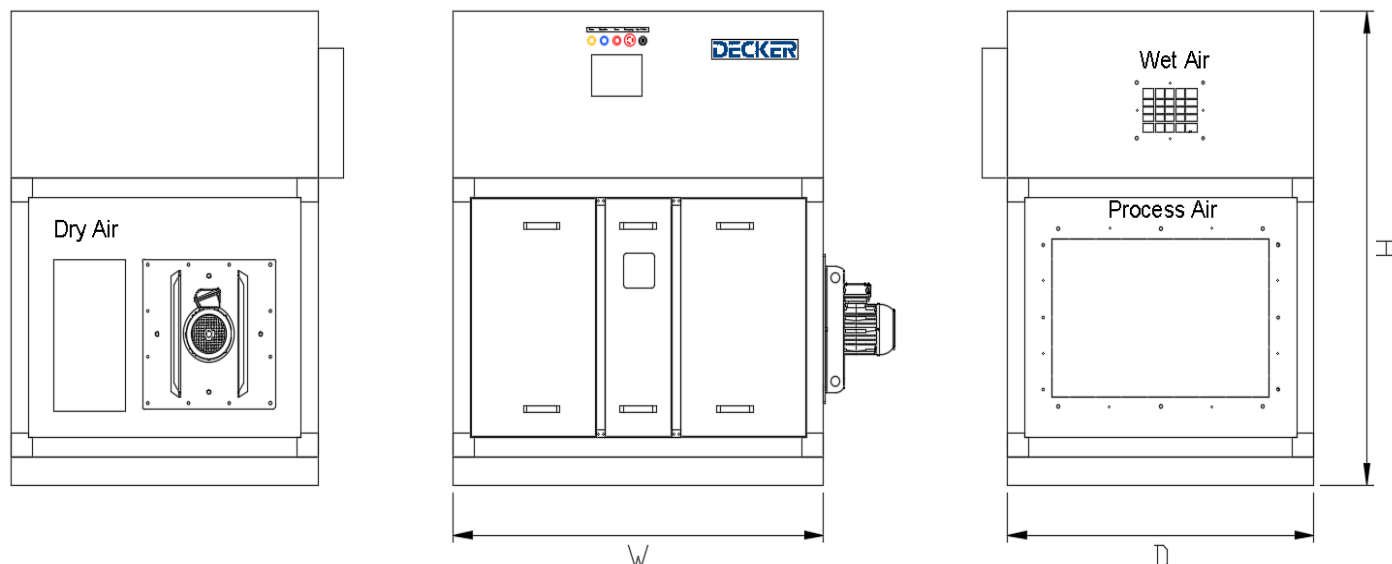


## Benefits

- Rotor configuration options – HSG/H4M
- Latest technology absorption rotor from Sweden
- The control system is designed for stand-alone operation or control for both Pre-cooling and Post-cooling
- The electrical system is designed to be simple
- Reactivation heater Choices electric heater or steam heater
- Self-cleaning adsorption rotor

## Applications

- ♦ Lithium battery
- ♦ Manufacturing industry
  - Printing
  - Electronic parts
  - Film
  - Automobile factory
  - Food factory
  - Metal molding
- ♦ Defense, aviation and space industries
- ♦ Medicine and pharmaceuticals
- ♦ Power stations
- ♦ Warehouses (refrigerated, tent and prefabricated)
- ♦ Powder conveying
- ♦ Research
- ♦ Pool air conditioning
- ♦ Ship coating



| Width (W)<br>(mm) | Depth (D)<br>(mm) | Height (H)<br>(mm) | Process air<br>inlet (mm) | Dry air<br>outlet (mm) | Reactivation<br>air inlet<br>(mm) | Wet air<br>outlet (mm) | Weight<br>(kg) |
|-------------------|-------------------|--------------------|---------------------------|------------------------|-----------------------------------|------------------------|----------------|
| 1450              | 1200              | 1700               | 850 x 550                 | 275 x 475              | 390 x 400                         | 230 x 160              | 425            |

## Technical specifications

Dehumidification capacity (\*) (kg/h): 20.39

Air filter: G4

Power source: 3Ph/380V/50Hz

Total power consumption (kW): 33.58

Noise level (dBA) (\*\*): 72

### Process air

- Rated airflow (m<sup>3</sup>/h): 3,750
- External static pressure (Pa): 300
- Fan motor power (kW): 4.0

### Reactivation air

- Rated airflow (m<sup>3</sup>/h): 833
- External static pressure (Pa): 200
- Fan motor power (kW): 0.75

### Gear motor

- Motor power (W): 25.0

### Reactivation air heater

- Electric heater power (kW): 28.8
- Temperature increase across heater (°C): 100
- High temperature cut-out (°C) : 160 ± 10

(\*) Conditions at 20°C/60%RH

(\*\*) Sound pressure level calculated in free field,  
10m from unit, direction factor Q=2

## Dehumidification capacity

