AD INDUSTRIAL SERIES · ADSORPTION DEHUMIDIFIERS

DanVex AD-1000

Adsorption dehumidifier · 7 kg/h · 3-phase



Industrial desiccant dehumidifiers for demanding cold and low-RH processes — pharmaceutical rooms, cold storage, freezers and ice rinks. An adsorption rotor dries the air down to very low humidity and operates well below freezing, where condensation dehumidifiers cannot. Three-phase, plant-scale, no condensate drainage required.

Pharma cleanrooms · Food production · Cold storage / freezers · Ice rinks · Indoor cultivation

KEY FEATURES

- **Adsorption (desiccant) drying** — operation from −20 °C and down to very low RH for cold, demanding processes
- **Robust housing** — powder-coated steel cabinet for demanding industrial atmospheres
- **Separate process & regeneration ducts** — independent supply and exhaust paths integrate into plant ductwork
- **Drying down to 2% humidity** — reaches extremely low residual humidity where condensation units cannot
- **No condensate drainage** — moisture leaves on the regeneration airstream — no condensate plumbing
- **Modbus RTU RS-485** — BMS/SCADA integration on every model

SPECIFICATIONS

Drying capacity (20 °C / 60% RH)	**7 kg/h**
Process airflow	**1100 m³/h**
Static pressure (process)	**200 Pa**
Static pressure (regen)	**150 Pa**
Regeneration airflow	**400 m³/h**
Process duct in/out	**Ø 200 / Ø 200 mm**
Regen duct in/out	**Ø 150 / Ø 150 mm**
Process air filter	**G4**
Regen air filter	**G4**
Ingress protection	**IPX3**

Operating temperature	**−20 … +40 °C**
Total power	**12 kW**
Current	**18 A**
Voltage / Frequency	**380–415 V 3-ph / 50–60 Hz**
BMS protocol	**Modbus RTU RS-485**
Drainage	**Not required**
Dimensions (L×W×H)	**640 × 877 × 1232 mm**
Package size (L×W×H)	**750 × 1010 × 1310 mm**
Net weight	**175 kg**

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DIMENSIONS

UNIT L×W×H	PACKAGE L×W×H	NET WEIGHT	DUCTS PROCESS · REGEN
640 × 877 × 1232 mm	**750 × 1010 × 1310 mm**	**175 kg**	**Ø 200 mm · Ø 150 mm**

SCOPE OF SUPPLY

- Adsorption unit with process and regeneration air filters fitted
- Digital controller
- External humidity sensor (hygrostat)
- Modbus RTU RS-485 interface

INSTALLATION & CONNECTIONS

Mounting	Ducted, stationary installation indoors or outdoors (IP-rated housing); place on a level surface with access to the control panel and filter.
Duct connections	Two separate air circuits: process air in/out (dry air to the room) and regeneration air in/out. Regeneration exhaust (wet air) must be ducted outside the treated space with an insulated duct to avoid condensation; regeneration intake from outside or from the room per the design.
Condensate	No condensate drain required — moisture leaves with the regeneration exhaust air.
Electrical supply	380–415 V, 3-phase, 50–60 Hz. Dedicated circuit sized for the regeneration heater current (see specification); connection by a certified electrician.
Control & BMS	Digital controller with temperature/humidity sensor; external humidity sensor (hygrostat) included. Modbus RTU RS-485 for BMS/SCADA. Auto-restart with settings memory after power failure.
Service	Process and regeneration air filters accessible for cleaning/replacement; silica-gel rotor is maintenance-free.

AD INDUSTRIAL SERIES — MODEL RANGE

Parameter	AD-800	AD-1000	AD-1500	AD-3000	AD-5000
Drying capacity (20 °C / 60% RH)	5 kg/h	**7 kg/h**	11 kg/h	21.6 kg/h	36 kg/h
Process airflow	820 m³/h	**1100 m³/h**	1550 m³/h	3000 m³/h	5000 m³/h
Static pressure (process)	200 Pa	**200 Pa**	200 Pa	600 Pa	600 Pa
Static pressure (regen)	150 Pa	**150 Pa**	150 Pa	400 Pa	400 Pa
Regeneration airflow	250 m³/h	**400 m³/h**	580 m³/h	990 m³/h	1650 m³/h
Process duct in/out	Ø 200 / Ø 200 mm	**Ø 200 / Ø 200 mm**	Ø 250 / Ø 250 mm	500 × 300 / 500 × 300 mm	630 × 450 / 630 × 400 mm
Regen duct in/out	Ø 150 / Ø 150 mm	**Ø 150 / Ø 150 mm**	Ø 160 / Ø 160 mm	300 × 300 / 200 × 200 mm	300 × 300 / 200 × 200 mm
Process air filter	G4	**G4**	G4	G3	G3

Specifications, dimensions and drawings are subject to change without notice and may differ from the delivered unit; verify critical dimensions against the installation manual before design work. Drying capacity measured at 20 °C / 60% RH.

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