AD COMPACT SERIES · ADSORPTION DEHUMIDIFIERS

DanVex AD-550

Adsorption dehumidifier · 3 kg/h · single-phase



Compact desiccant dehumidifiers for cold and low-humidity spaces where refrigerant units lose efficiency. They dry the air with an adsorption rotor rather than condensation — working below freezing, reaching very low target humidity, and needing no condensate drainage. Quiet enough for occupied rooms, archives and laboratories.

Cold storage · Server rooms · Archives & museums · Small pharma rooms · Restoration · Specialty manufacturing

KEY FEATURES

- **Adsorption (desiccant) drying** — works below freezing and down to very low RH where condensation units cannot
- **Single-phase supply** — single-phase 220–230 V supply; compact cabinet for tight installations
- **Quiet operation** — from < 45 dB(A), suitable for occupied rooms, labs and archives
- **No condensate drainage** — moisture is carried out on the regeneration airstream — no condensate to plumb
- **Ducted by design** — process and regeneration ducts attach to the cabinet, integrated into the room air layout
- **Dual-fan design** — separate process and regeneration fans for maximum drying efficiency

SPECIFICATIONS

Drying capacity (20 °C / 60% RH)	**3 kg/h**
Operating temperature range	**−20 … +40 °C**
Working range	**2–100% RH**
Process airflow	**550 m³/h**
Regeneration air / Static pressure	**200 m³/h / 50 Pa**
Power / current	**3.8 kW / 20 A**
Voltage / Frequency	**220–230 V 1-ph / 50–60 Hz**
Regeneration	**Electric heater**
Noise level (1 m)	**< 65 dB(A)**

Process duct in/out	**Ø 125 / Ø 125 mm**
Regen duct in/out	**Ø 80 / Ø 80 mm**
BMS protocol	**Modbus RTU RS-485**
Dimensions (L×W×H)	**578 × 420 × 867 mm**
Package size (L×W×H)	**680 × 500 × 1045 mm**
Net weight	**55 kg**
Gross weight	**64 kg**
Filters	**G3**
Housing	**AISI 304 stainless steel**

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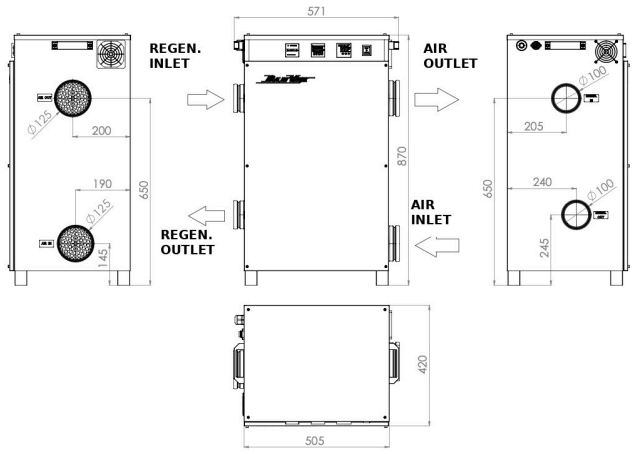
DIMENSIONS & VIEWS



Dimensions in mm. Views: end panels with process and regeneration air connections, front view, plan view.

UNIT L×W×H	PACKAGE L×W×H	NET / GROSS WEIGHT	DUCTS PROCESS · REGEN
578 × 420 × 867 mm	**680 × 500 × 1045 mm**	**55 kg / 64 kg**	**Ø 125 mm · Ø 80 mm**

SCOPE OF SUPPLY

- Adsorption unit, AISI 304 stainless steel housing, 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	220–230 V, 1-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 COMPACT SERIES — MODEL RANGE

Parameter	AD-200	AD-400	AD-550
Drying capacity (20 °C / 60% RH)	0.6 kg/h	2.2 kg/h	**3 kg/h**
Process airflow	180–200 m³/h	400 m³/h	**550 m³/h**
Regeneration air / Static pressure	60 m³/h / 50 Pa	130 m³/h / 50 Pa	**200 m³/h / 50 Pa**
Power / current	1.2 kW / 6 A	2 kW / 10 A	**3.8 kW / 20 A**
Noise level (1 m)	< 45 dB(A)	< 50 dB(A)	**< 65 dB(A)**
Process duct in/out	Ø 100 / Ø 100 mm	Ø 125 / Ø 125 mm	**Ø 125 / Ø 125 mm**
Dimensions (L×W×H)	442 × 292 × 678 mm	680 × 425 × 400 mm	**578 × 420 × 867 mm**
Net weight	28 kg	35 kg	**55 kg**

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.