DD-F SERIES · DUCTED DEHUMIDIFIERS WITH FRESH-AIR INTAKE

DanVex DD-56F

Ducted dehumidifier · 45–75 L/day · Full Inverter · fresh air + HEPA



Compact ducted dehumidifiers that combine moisture control, fresh-air introduction and high-grade filtration in one concealed unit — for homes, clinics, small commercial and office spaces, and spaces with demanding air-quality requirements.

A two-intake / one-outlet architecture mixes return air with outdoor fresh air through a motorised fresh-air damper, filters it through G4 + HEPA H13, and runs on a standard single-phase outlet at very low noise.

Residential homes · Healthcare clinics · Commercial & office · Educational facilities · Demanding air quality · IT & server closets

KEY FEATURES

- **Motorised fresh-air damper** — motorised damper mixes return air with outdoor fresh air
- **Inverter compressor + EEV** — inverter compressor and fan modulate to match load; EEV meters refrigerant for efficiency
- **5-in-1 air quality sensor** — CO_2 · PM2.5 · TVOC · RH · T° monitored on the return airstream
- **HEPA H13 filtration** — second stage after the G4 prefilter, retaining ≥99.95% of particles at MPPS
- **Quiet operation** — from < 32 dB(A) with pyramid-profile acoustic insulation; suitable for occupied rooms
- **Wi-Fi + Modbus RTU RS-485** — app control and BMS/SCADA integration on every model

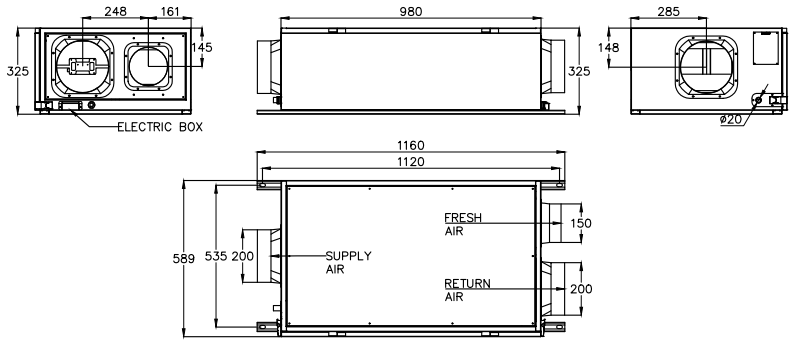
SPECIFICATIONS

Dehumidification capacity (30 °C / 80% RH)	**45–75 L/day**
Supply airflow	**450–600 m³/h**
Return airflow	**450–600 m³/h**
Fresh airflow	**0–200 m³/h**
External static pressure	**120 Pa**
Working humidity range	**45–100% RH**
Operating temperature range	**+5 … +38 °C**
Voltage / Frequency	**220–230 V, 1-phase / 50–60 Hz**
Rated power (variable)	**550–970 W**
Current	**2.5–4.4 A**
Compressor	**Inverter**
Fan	**Inverter-driven, variable speed**
Expansion valve	**EEV (electronic)**
Refrigerant	**R-32 × 600 g**
Defrost system	**Hot Gas Defrost**

Heat exchanger protection	**E-Coating**
Filtration	**G4 prefilter + HEPA H13 final filter**
Air purification	**UV steriliser + anion generator; Antifungus internal treatment**
Air quality sensor	**5-in-1: CO_2 · PM2.5 · TVOC · RH · T°**
Fresh-air damper	**Automatic, CO_2-driven, motorised; manual override**
Connectivity / BMS	**Wi-Fi + Modbus RTU RS-485**
Noise level at 1 m	**< 32 dB(A)**
Return air duct	**Ø 200 mm**
Supply air duct	**Ø 200 mm**
Fresh air duct	**Ø 150 mm**
Dimensions (L×W×H)	**1160 × 590 × 325 mm**
Package size (L×W×H)	**1220 × 640 × 450 mm**
Net weight	**67 kg**
Gross weight	**72 kg**

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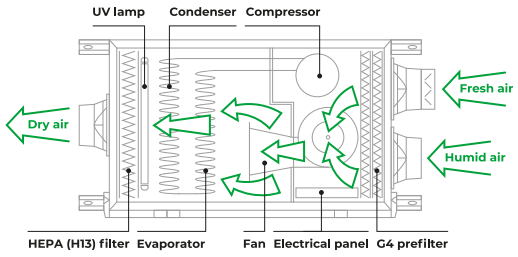
DIMENSIONS & VIEWS



Dimensions in mm. Views: end panel with return and fresh-air intakes, front elevation, connection panel with electric box and Ø20 drain, plan view with supply, fresh-air and return duct connections.

UNIT L×W×H	PACKAGE L×W×H	NET / GROSS WEIGHT	DUCTS RETURN / SUPPLY / FRESH
1160 × 590 × 325 mm	**1220 × 640 × 450 mm**	**67 kg / 72 kg**	**Ø 200 mm / Ø 200 mm / Ø 150 mm**

AIRFLOW DIAGRAM



Airflow: return air and outdoor fresh air are mixed by the motorised damper, filtered (G4 → HEPA H13), dehumidified, UV-treated and delivered through a single supply outlet.

SCOPE OF SUPPLY

- Ducted dehumidifier unit — G4 + HEPA H13 filters fitted; UV steriliser, anion generator, 5-in-1 sensor, Wi-Fi and Modbus RTU RS-485 integrated; factory refrigerant charge (R-32)
- Digital touch-screen controller
- Power supply cable

INDICATIVE COVERAGE

~80–130 m² — guide value for typical conditions; size by moisture load for basements, pools and process applications.

INSTALLATION & CONNECTIONS

Mounting	Concealed installation in a ceiling cavity or technical space (Ultra-Slim housing); powder-coated steel cabinet also permits installation outside the served room. Suspend from structure using the housing brackets; keep the unit level for correct condensate drainage. Leave service access on the inspection-panel side.
Duct connections	Return air Ø 200 mm (room), fresh air Ø 150 mm (outdoor intake), supply air Ø 200 mm. Two intakes, one supply outlet. For recirculation-only operation leave the fresh-air duct unconnected or keep the damper closed.
Condensate drain	Positive-pressure drainage. Connect the drain pipe to a drain line with continuous fall (min. 1:50); no standing water in the unit or drain line.
Electrical supply	220–230 V, 1-phase, 50–60 Hz. Dedicated circuit with protection sized per local code. Connection by a certified electrician.
Control & BMS	Digital touch-screen controller (setpoints, sensor readings, error diagnostics, filter timer). Modbus RTU RS-485 for BMS/SCADA; Wi-Fi for app control and monitoring. Auto-restart after power interruption. Modbus register map available on request.
Service	Compressor, main board, heat exchangers and refrigerant piping form a single removable module — replaceable on site in about 15 minutes without dismounting the unit or brazing. Filter-replacement timer alerts when service is due.

DD-F SERIES — MODEL RANGE

Parameter	DD-36F	DD-56F	DD-96F	DD-136F
Dehumidification capacity (30 °C / 80% RH)	32–44 L/day	**45–75 L/day**	98–145 L/day	110–155 L/day
Supply airflow	410–500 m³/h	**450–600 m³/h**	650–870 m³/h	800–1150 m³/h
Return airflow	410–500 m³/h	**450–600 m³/h**	570–870 m³/h	770–1150 m³/h
Fresh airflow	0–200 m³/h	**0–200 m³/h**	0–300 m³/h	0–380 m³/h
External static pressure	120 Pa	**120 Pa**	150 Pa	180 Pa
Rated power (variable)	460–850 W	**550–970 W**	920–1260 W	1100–1860 W
Current	2.0–3.8 A	**2.5–4.4 A**	4.1–5.7 A	5.0–8.5 A
Refrigerant	R-32 × 550 g	**R-32 × 600 g**	R-32 × 720 g	R-32 × 850 g

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. Dehumidification capacity measured at 30 °C / 80% RH.

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