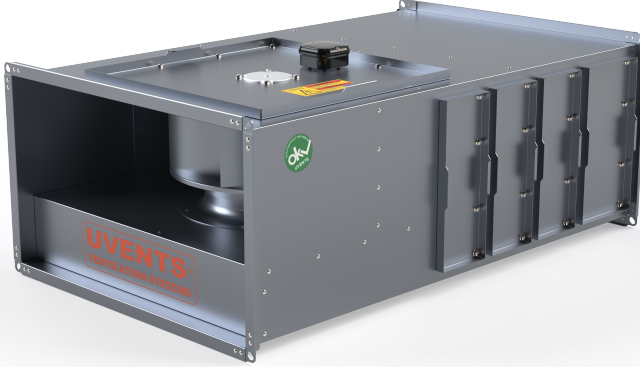


UVENTS

UVS-USVU

DUCT FAN FOR SHELTER FILTRATION SYSTEMS

Installation, Operation & Maintenance Manual



READ FIRST

Keep this manual with the fan. Mechanical installation and electrical work must be performed by qualified personnel.

Product overview

UVS-USVU is a compact centrifugal fan unit for rectangular shelter ventilation systems. A direct-driven radial impeller moves air through a galvanized-steel casing containing G4 prefiltration, activated-carbon odour filtration and NBC filtration. Separate access panels allow inspection and replacement of the filter stages, fan and motor. The supplied filter configuration must match the approved order documentation.

ACTIVE RANGE
3 models

AIRFLOW
1,500–4,000 m³/h

FILTRATION
G4 • carbon • NBC

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1 Safety

DANGER

Isolate all electrical supplies, lock out against restart and verify absence of voltage before removing guards, opening the terminal box or servicing the fan.

- Connect protective earth. Electrical work must follow the motor nameplate, supplied diagram and applicable local rules.
- Keep access panels and protective components fitted and secured during operation. Do not operate without the specified filter.
- Never open the unit while energized. Isolate against unexpected restart and wait until the impeller has stopped.
- Do not operate in explosive atmospheres or highly corrosive service unless the exact supplied unit is approved for that environment.
- Sharp sheet-metal edges may be present. Wear suitable gloves and lift only from structural casing points; never use a panel, cable or terminal box.

2 Technical data

Model	Phase	V	A	Rated W	r/min	Max m³/h	Max Pa
50-35	1~	230	0.39	210	2,700	1,500	500
80-40	1~	230	0.60	230	1,400	3,300	550
90-45	1~	230	0.78	430	1,380	4,000	600

Selector values are used for the active models. The installed motor nameplate is the primary source for electrical connection and protection settings.

Property	Series information
Construction	Galvanized-steel casing; aluminium-sheet impeller
Impeller / drive	Centrifugal; direct drive
Filtration	G4 prefilter; activated-carbon odour filter; NBC filter
Protection / insulation	IP44 / Class F
Supply / frequency	230 V single-phase / 50 Hz
Operating temperature	-20 °C to +50 °C

Warranty

Two-year warranty against manufacturing defects, subject to UVENTS warranty terms. Incorrect installation or wiring, operation outside declared limits, unauthorized modification, transport damage after delivery and inadequate maintenance may invalidate coverage.

3 Before installation

- Confirm the model and ordered filter configuration; inspect casing, flanges, access panels, every filter stage, impeller, motor, cable and terminal box for transport damage.
- With power isolated, check free impeller rotation, correct filter seating, airflow orientation and secure fasteners.
- Verify the 230 V single-phase supply, environment and duty against the unit and motor nameplates.
- Provide independently supported ductwork, service space for removal of every filter stage and suitable lifting equipment.

4 Installation

1. Orient the unit to the airflow arrow and keep every filter access panel, the motor and terminal box accessible.
2. Lift from structural casing points; keep clear of suspended loads.
3. Support the unit and ducts independently on a stable, level structure; do not deform the casing.
4. Align, fasten and seal the rectangular duct connections. Prevent duct loads from acting on the unit.
5. Provide sufficient clearance to withdraw each filter stage and to service the fan. Weather-protect the unit if installed outdoors.
6. Recheck fasteners, panels, filter sequence and seating, impeller clearance, seals and airflow direction.

5 Electrical connection

WARNING

Only a qualified electrician may connect the fan. Follow the motor nameplate and the diagram inside the terminal box; these take priority over general diagrams in this manual.

- All UVS-USVU models use 230 V single-phase (1~), 50 Hz supply. Connect only as shown on the supplied motor diagram and retain the installed capacitor arrangement.
- Provide protective earth, an isolator, short-circuit protection and overload protection selected from the motor nameplate.
- Keep cables clear of the airflow path, sharp edges, filter-removal paths and moving parts. Seal cable entries and close the terminal box before operation.
- Briefly start and verify airflow direction, current, noise and vibration. Do not modify the supplied electrical arrangement without UVENTS approval.

6 Commissioning and operation

- Confirm support, sealed duct connections, secure access panels, correctly sequenced and seated clean filters, clear airflow, free impeller, earth continuity, protection and terminal-box closure.
- Start and check airflow, voltage, current, vibration, noise, duct leakage, motor temperature and access-panel sealing.
- Stop for rubbing, severe vibration, smoke, overheating, abnormal current, loose panels or electrical smell. Find the cause before restart.

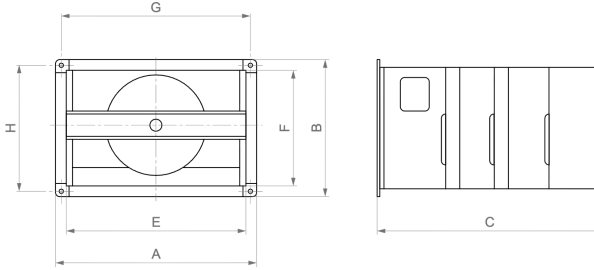
7 Maintenance

- Isolate and lock out power; wait for complete stop before opening any access panel.
- Inspect the G4 prefilter regularly and replace it when loaded, damaged or permanently contaminated. Adjust inspection frequency to operating conditions.
- Inspect the activated-carbon and NBC filters for damage, contamination, pressure-loss symptoms and expiry or replacement requirements stated in the supplied filter documentation. Do not wash or regenerate a filter unless its manufacturer expressly permits it.
- Inspect the impeller, motor, casing, supports, seals, terminals, cables, corrosion, noise and vibration. Clean deposits evenly without bending the impeller.
- Fit replacement filters of the specified type, size, grade and airflow orientation. Refit and secure every access panel and protective component before restart.

8 Troubleshooting

Problem	Possible cause	Safe action
No start	Supply/protection/wiring/overload	Isolate; check supply, diagram and protection.
Low airflow	Loaded filter stage; blocked duct; leakage	Inspect/replace filters; clear system; seal ductwork.
Odour breakthrough	Carbon filter exhausted; bypass leakage	Stop; inspect sealing and replace approved filter.
Noise/vibration	Loose support/panel; deposits; contact	Stop and isolate; inspect, clean and secure.
Motor hot/trips	Overload; incorrect supply; blocked airflow	Stop; check nameplate current, supply and system.

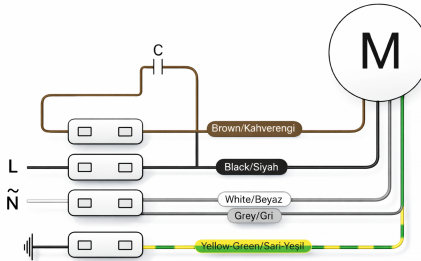
9 Dimensions and installation reference



Model	A	B	C	E	F	G	H
50-35	550	400	1,190	500	350	525	375
80-40	850	450	1,250	800	400	825	425
90-45	960	510	1,250	900	450	930	480

All dimensions are in mm. Values follow the current UVENTS selector data; use the approved project or supplied production drawing for final coordination.

10 Electrical connection reference



General reference only. Follow the diagram supplied with the installed motor. The motor nameplate and supplied connection diagram take priority; conductor colours, capacitor value and protection settings must not be inferred.

FINAL CHECK

Unit and ducts supported • filter sequence and seating verified • panels secure • earth connected • protection set • airflow, current and noise verified.

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