

UVENTS

UVS-AL-K

ALUMINUM-HOUSING CENTRIFUGAL FAN

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-AL-K is a compact, base-mounted, direct-driven centrifugal fan with an aluminum housing and straight-blade aluminum impeller. It is intended for clean-air duties requiring relatively high pressure, including machinery cooling, combustion-air supply and general industrial ventilation. This manual covers UVS-AL-K4 and UVS-AL-K6.

ACTIVE RANGE
AL-K4 and AL-K6

AIRFLOW
3,000–4,000 m³/h

MAX PRESSURE
3,000–3,800 Pa

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1 Safety

DANGER

Isolate the electrical supply, lock out against restart and verify absence of voltage before opening the casing, removing a guard or touching the impeller.

- Connect protective earth. Electrical work must follow the installed motor nameplate, terminal-box diagram and local regulations.
- The impeller may start unexpectedly and can retain momentum after shutdown. Keep hands, tools and loose clothing clear until complete stop.
- Guard every accessible inlet and outlet. Never operate with a missing guard, loose cover, damaged casing or foreign object inside the fan.
- The fan is heavy and may have sharp sheet-metal edges. Use rated lifting equipment, stable support and suitable gloves; never lift by the motor, cable or inlet/outlet.
- Do not convey explosive, sticky, hot, abrasive or heavily contaminated air. Use with corrosive atmospheres requires written confirmation that the exact supplied fan and motor are suitable.

2 Technical data

Model	Max m ³ /h	Max Pa	rpm	V 3~	kW	A	kg
AL-K4	3,000	3,000	2,800	380	1.50	2.8	32
AL-K6	4,000	3,800	2,800	380	3.00	5.5	48

Both models: 380 V, 50 Hz, three-phase AC, two-pole motor, IP55, insulation class F, IE3 and direct drive. Normal operating temperature: -20 °C to +50 °C. VFD operation is permitted only within the 25–60 Hz selector range and the installed motor limits. The motor nameplate is primary for connection and protection settings.

Property	Series information
Fan / drive	High-pressure centrifugal fan / direct drive
Impeller	Straight-blade centrifugal impeller
Housing / impeller material	Aluminium
Mounting / connections	Base-mounted / round inlet and round outlet
Bottom chassis	Optional; verify the supplied configuration

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 model, duty point and accessories against the approved selection. Inspect casing, impeller, motor, base, vibration isolators, guards, cable and terminal box for damage.
- Verify the electrical supply against the motor nameplate. Confirm the support can carry the fan mass, operating forces and connected duct loads without distortion.
- Check that the conveyed air is compatible with the fan, system design and project requirements. Provide safe service clearance and suitable inlet/outlet guarding.

4 Installation

1. Lift only from structural lifting points with rated equipment. Keep clear of suspended loads and never lift by the motor, terminal box, cable or connection spigots.
2. Install on a level, rigid machine surface, support frame or optional bottom chassis. Use every supplied fixing point and suitable vibration isolation where required; do not distort the aluminium housing during tightening.
3. Support ducts independently. Align connections without forcing the fan and use suitable flexible connectors where vibration transmission must be limited.
4. Provide a straight, unobstructed inlet where practical and avoid abrupt fittings at the inlet. Keep the outlet arrangement consistent with the approved system design.
5. Fit protective guards wherever the inlet, outlet, shaft or rotating parts are accessible. Seal and protect outdoor installations if specifically approved for outdoor duty.
6. Before energizing, verify secure fasteners, correct alignment, free impeller rotation, removed foreign objects, complete guards and clear inlet/outlet.

5 Electrical connection

WARNING

Only a qualified electrician may connect the fan. The diagram supplied with the installed motor and its nameplate take priority over this general reference.

- Both UVS-AL-K models use three-phase motors. Verify the exact voltage, frequency, current, terminal links and protection requirements on the installed motor nameplate.
- Connect protective earth and provide a lockable local isolator, short-circuit protection, contactor and overload protection set to the installed motor.
- After a brief start, verify rotation direction against the casing arrow. Isolate before correcting phase sequence; never attempt correction while energized.
- VFD operation is listed from 25 to 60 Hz. Use it only when approved for the supplied motor and application; program the motor nameplate values, permitted frequency range and acceleration limits correctly.
- Close the terminal box and cable glands to preserve the declared protection. Keep cables away from sharp edges, vibration and hot surfaces.

6 Commissioning and operation

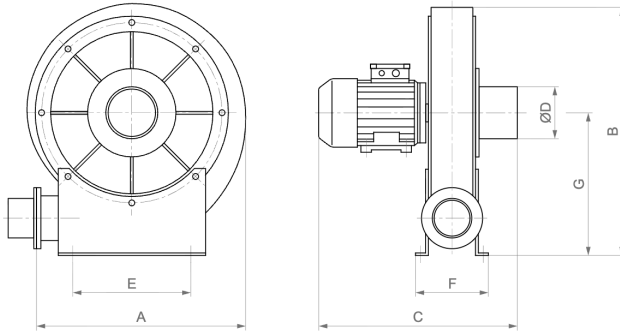
- Confirm secure mounting, aligned ducts, fitted guards, earth continuity, correct protection, removed foreign objects and free impeller rotation.
- Start briefly and verify rotation. Then check voltage, current, airflow, pressure, noise, vibration, motor temperature and VFD operation where fitted.
- Stop immediately for rubbing, severe vibration, smoke, electrical smell, overheating, excessive current or loose components. Correct the cause before restart.

7 Maintenance and troubleshooting

- Isolate and lock out all supplies and wait for complete stop before service. Inspection frequency should be adjusted to operating conditions and conveyed material.
- Inspect fasteners, base, vibration isolators, guards, duct connections, impeller deposits/wear, motor, terminals, cable, corrosion, noise and vibration.
- Clean deposits evenly without bending blades or removing balance weights. Qualified personnel must assess cracks, severe wear, deformation or persistent vibration.

Problem	Possible cause	Safe action
No start	Supply, protection, VFD or wiring	Isolate; check nameplate diagram and protection.
Low airflow	Blocked duct; wrong rotation; deposits	Clear safely; verify rotation and clean.
Noise/vibration	Loose base; buildup; impeller contact	Stop and isolate; inspect, clean and secure.
High current	Wrong duty/rotation; blockage; VFD setting	Stop; verify system, nameplate and settings.

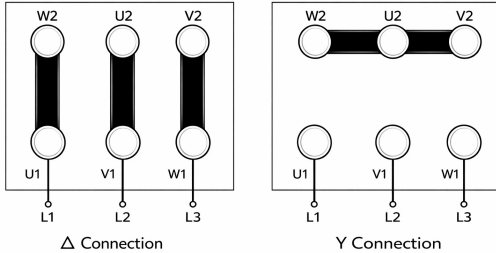
8 Dimensions and installation reference



Model	A	B	C	D	E	F	G
AL-K4	560	510	250	120	300	160	300
AL-K6	590	620	350	140	400	180	350

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

9 Electrical connection reference



General reference only. Follow the diagram supplied with the installed motor. The motor nameplate and terminal-box diagram take priority; terminal links, supply voltage and protection settings must not be inferred.

FINAL CHECK

Base secure • ducts aligned • inlet/outlet guarded • earth connected • protection set • rotation correct • pressure and current verified.

Compliance documentation: retain the declaration supplied for the exact UVS-AL-K model with the product or project records.
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