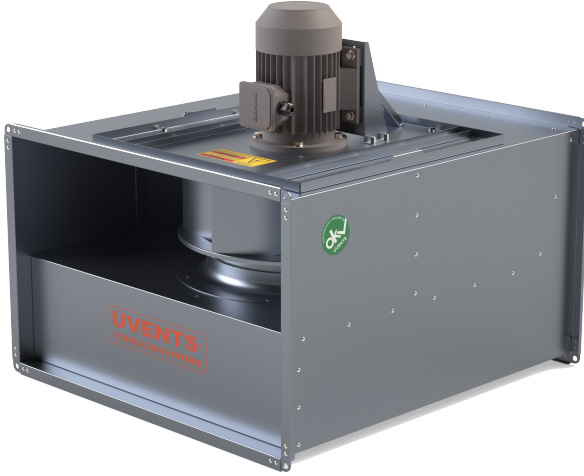


UVENTS

UVS-FGDK

EXTERNALLY MOTORIZED DUCT 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-FGDK is a direct-driven rectangular duct fan with its motor positioned outside the airflow. Its backward-curved centrifugal impeller and galvanized-steel casing provide efficient air movement and convenient access for service. The series is suitable for general and industrial ventilation, including appropriately designed kitchen-extract systems. This manual covers models 315 through 560.

ACTIVE RANGE
315–560

AIRFLOW
1,600–9,800 m³/h

MAX PRESSURE
300–675 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.
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- 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, corrosive, sticky, hot or abrasive material unless the exact supplied configuration and project documentation approve it. In grease-laden kitchen extract, provide and maintain suitable upstream metal filtration.

2 Technical data

Model	Max m³/h	Max Pa	rpm	V 3~	W	A	kg
FGDK 315	1,600	300	1,440	230/380	250	0.87	35
FGDK 355	2,300	375	1,420	230/380	370	0.87	36
FGDK 400	3,300	450	1,470	230/380	550	1.60	52
FGDK 450	5,000	525	1,450	230/380	750	1.90	49
FGDK 500	7,000	600	1,400	230/380	1,100	2.60	74
FGDK 560	9,800	675	1,440	230/380	1,500	2.90	91

All models: 50 Hz, three-phase AC, four-pole motor, IP55, insulation class F, IE3 and direct drive. Normal operating temperature: -20 °C to +50 °C. Selector regulation range: 25–60 Hz; VFD use remains subject to the installed motor and project requirements. The installed motor nameplate is primary for connection and protection settings.

Property	Series information
Fan / drive	Centrifugal duct fan / direct drive
Impeller	Backward-curved galvanized-steel impeller
Casing	Galvanized sheet steel, rectangular connections
Motor arrangement	Externally mounted, outside the airflow
Standard feature	On/off maintenance isolator
Speed control	VFD regulation within approved motor limits

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 the casing, impeller, motor, maintenance isolator, supports, 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, filter arrangement 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 in the approved duct orientation on a rigid support frame. Use all casing fixing points and suitable vibration isolation; do not distort the rectangular casing during tightening.
3. Support ducts independently. Align both rectangular connections without forcing the casing 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.

- All UVS-FGDK 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.
- The selector lists inverter regulation from 25 to 60 Hz. Use a VFD only when approved for the supplied motor and application; program motor nameplate values, minimum/maximum frequency 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

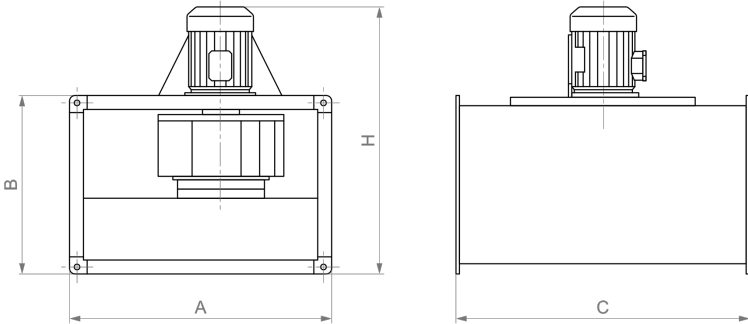
- Confirm secure mounting, aligned ducts, fitted guards, earth continuity, correct protection, removed foreign objects and free impeller rotation.
- Start briefly and verify rotation. Then check voltage, current, airflow, pressure, noise, vibration, motor temperature and VFD operation where fitted.
- 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, conveyed-air cleanliness and filter loading.
- Inspect fasteners, support frame, vibration isolators, guards, duct connections, impeller deposits/wear, motor, maintenance isolator, 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, isolator, 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 support; buildup; impeller contact	Stop and isolate; inspect, clean and secure.
High current	Wrong duty/rotation; blockage; VFD setting	Stop; verify system, nameplate and settings.

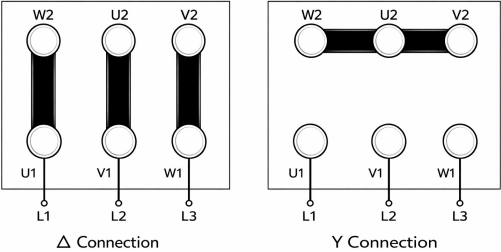
8 Dimensions and installation reference



Model	A	B	C	H
FGDK 315	550	300	565	520
FGDK 355	650	350	750	570
FGDK 400	650	400	750	640
FGDK 450	750	450	800	690
FGDK 500	850	550	900	835
FGDK 560	1,050	550	1,050	835

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

Fan supported • 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-FGDK model with the product or project records.
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