K3G450-PA31-03/F01 ebmpapst 380-480V EC Centrifugal Fan

SKU: K3G450-PA31-03/F01

Price: $5,499.73

Categories: Fans

Tags: ebmpapst

Product Link:
https://www.elecspares.com/product/k3g450-pa31-03-f01-ebmpapst-380-480v-ec-centrifugal-fan/

Product Description

The ebmpapst K3G450-PA31-03/F01 is an ultra-high-performance 3-phase EC Centrifugal Fan module from the RadiPac series, featuring a 450 mm backward-curved aluminum impeller. Driven by the heavy-duty M3G150-FF (Size 150) GreenTech EC motor, this 33.2 kg industrial unit operates on a 380-480 VAC supply and is designed for high-static pressure applications such as AHUs and industrial cooling grids. At its optimum efficiency point, it delivers 8710 m^3/h with a static pressure increase of 1212 Pa, reaching a peak speed of 2490 RPM with a power consumption of 4.5 kW. The unit is constructed with a 5-blade aluminum impeller, a galvanized steel inlet nozzle, and a black-painted steel support bracket. Equipped with advanced MODBUS V6.0, an integrated PI controller, and RFID (ISO 15693) compatibility, the K3G450-PA31-03/F01 offers a mission-critical, IE5-level cooling solution with IP55 protection, capable of operating in extreme temperatures down to -40 °C.

K3G450-PA31-03/F01 Fan Parameters
Manufacturer: ebmpapst
Model Number: K3G450-PA31-03/F01
Motor Model: M3G150-FF (Size 150)
Phase: 3~
Type: EC Centrifugal Fan Module (RadiPac with Support Bracket)
Impeller Size: 450 mm
Dimensions: 450 mm (Impeller Diameter) - See drawing for 33.2kg frame footprint
Nominal Voltage: 400 VAC
Nominal Voltage Range: 3~ 380 - 480 VAC
Frequency: 50 / 60 Hz
Speed: 2480 RPM (at max load) / 2490 RPM (at opt. efficiency)

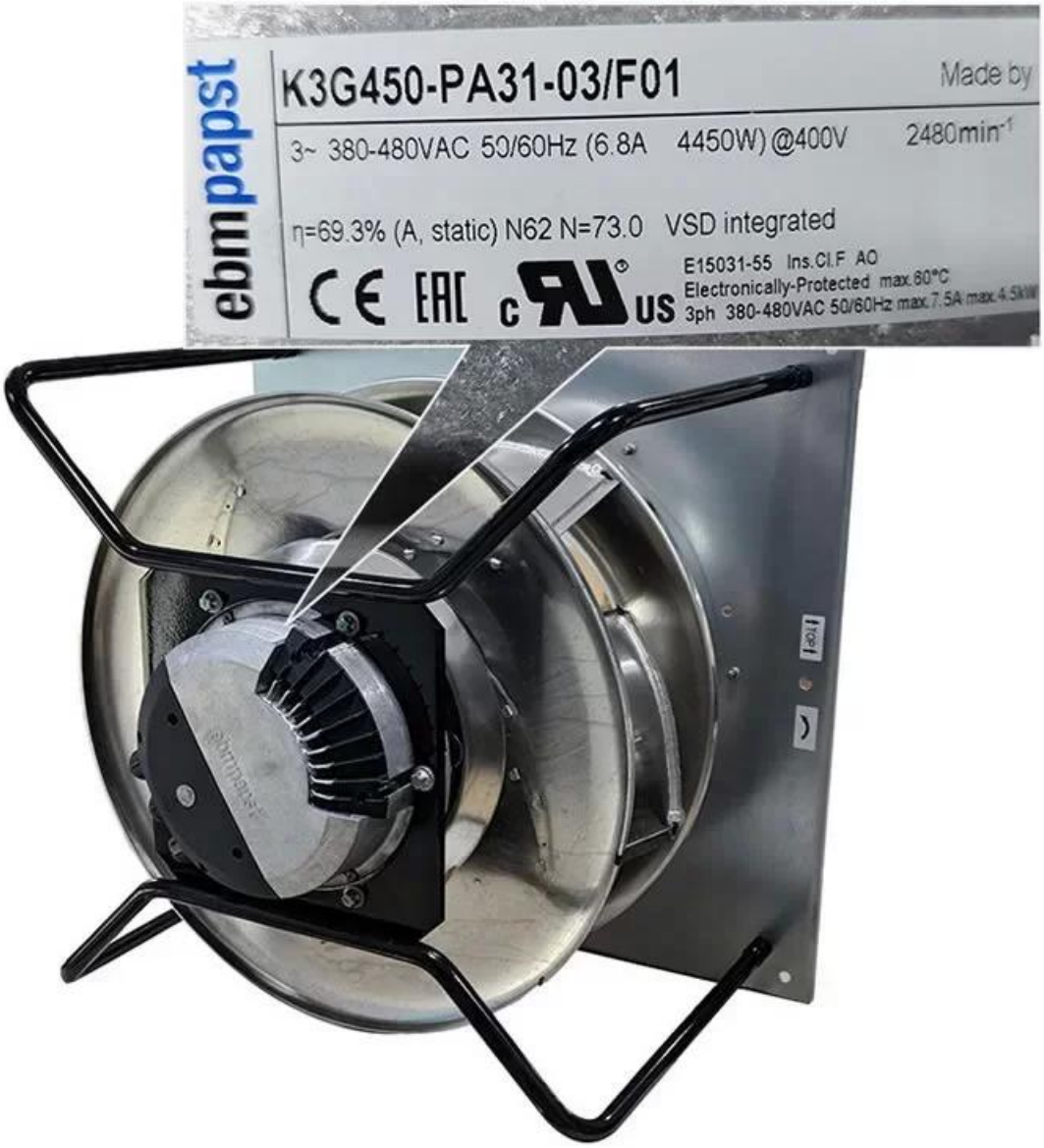
Power Consumption: 4500 W (Max) / 4350 W (at opt. efficiency)
Current Draw: 6.8 A (@ 400 VAC)
Overall Efficiency (ηes): 69.6 %
Efficiency Grade: N 73.4
Max. Airflow: 8710 m^3/h (at opt. efficiency)
Max. Static Pressure: 1212 Pa (at opt. efficiency)
Weight: 33.2 kg
Rotor Surface: Painted black
Electronics Housing: Die-cast aluminum
Impeller Material: Sheet aluminum
Support Plate Material: Sheet steel, galvanized
Support Bracket Material: Steel, painted black
Inlet Nozzle Material: Sheet steel, galvanized
Number of Blades: 5
Direction of Rotation: Clockwise (viewed toward rotor)
Degree of Protection: IP55
Insulation Class: F
Environmental Protection Class: H1
Operating Temp. Range: -40 °C to +40 °C (Occasional start-up below -25°C permitted)
Max. Storage Temp: +80 °C
Min. Storage Temp: -40 °C
Installation Position: See product drawing
Condensation Drainage: Rotor side holes included
Mode of Operation: S1 (Continuous duty)
Motor Bearing: Ball bearing
Technical Features:
- MODBUS V6.0 / RS-485 MODBUS-RTU
- RFID (ISO 15693 compatible)
- Integrated PI controller
- External 15-50 VDC parameterization input
- Voltage output 3.3-24 VDC (Pmax = 800 mW)
- Alarm relay & Operation/alarm LED display
- Soft start & Motor current limitation
- Thermal overload protection (Motor & Electronics)
- Line undervoltage / Phase failure detection
EMC Immunity: Acc. to EN 61000-6-2 (Industrial)
EMC Emission: Acc. to EN 61000-6-3 (Household/Professional)
Touch Current: <= 3.5 mA (per IEC 60990)
Electrical Hookup: Terminal box
Motor Protection: Reverse polarity and locked-rotor protection
Protection Class: I (with protective earth connection)
Conformity & Approvals: CE, EN 61800-5-1, EAC, UL 1004-7, CSA C22.2 No. 77

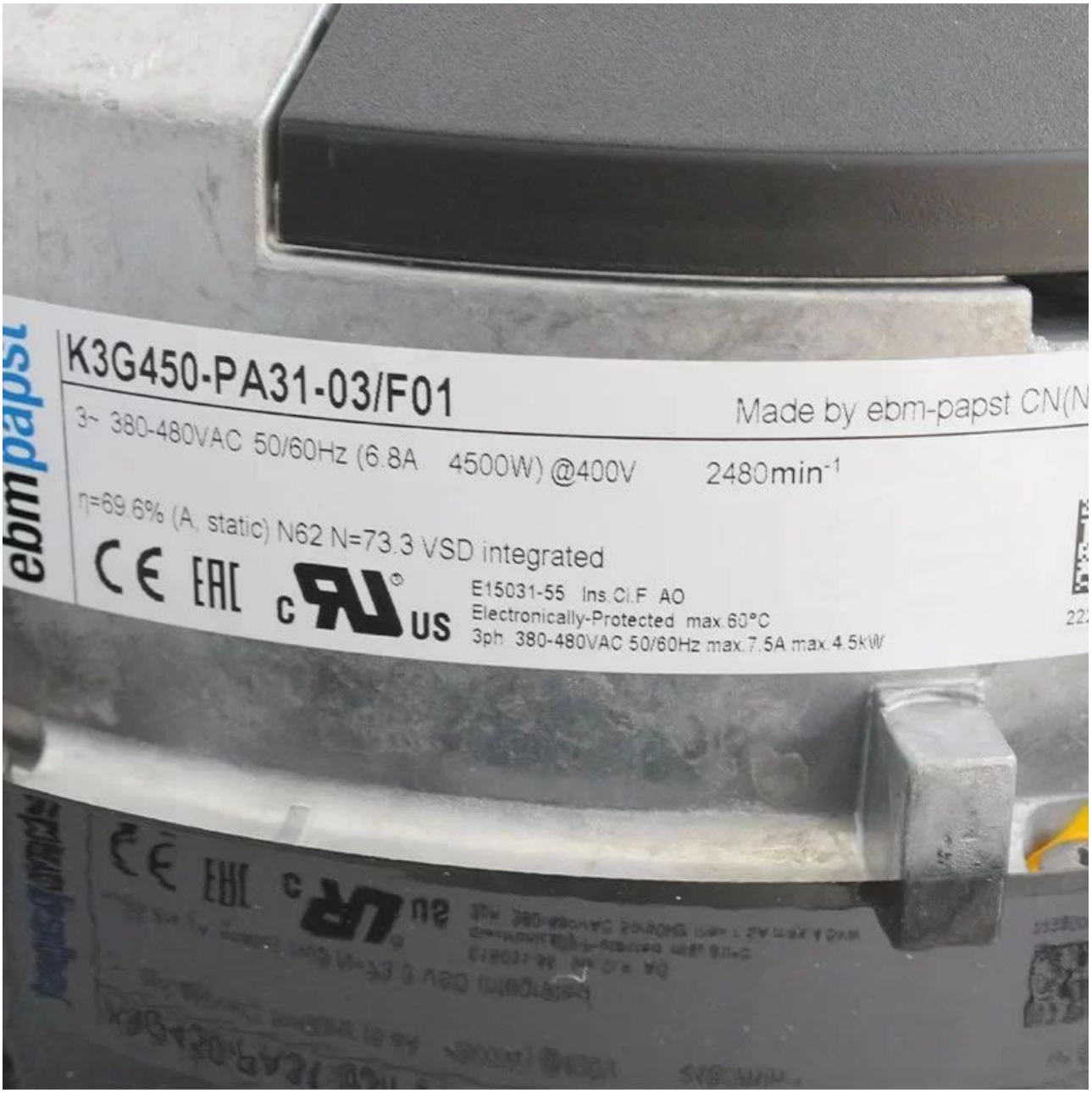
Application

The ebmpapst K3G450-PA31-03/F01 is a mission-critical, ultra-high-power RadiPac module engineered for the most demanding industrial air-moving environments, such as large-scale Air Handling Units (AHU), Clean Room recirculation systems, and high-density Data Center FanGrids. Featuring a heavy-duty 4500 W M3G150-FF motor and a 5-blade backward-curved aluminum impeller, this unit is specifically optimized to deliver a massive static pressure increase of 1212 Pa, ensuring consistent air volumes (8710 m^3/h) even through high-efficiency HEPA filters or dense cooling coils.

The integration of MODBUS V6.0 and RFID (ISO 15693) compatibility allows for advanced predictive maintenance and effortless asset management, enabling technicians to read operational data wirelessly via mobile devices. With its specialized support bracket and black-painted steel structure, the 33.2 kg unit is built for extreme mechanical stability under S1 continuous-duty cycles. Furthermore, its ability to perform occasional start-ups at -40°C and its robust IP55/H1 protection make it an ideal choice for outdoor HVAC infrastructure, industrial process cooling, and commercial refrigeration plants operating in harsh global climates.

Product Images


ebmpapst
K3G450-PA31-03/F01
Made by
3~ 380-480VAC 50/60Hz (6.8A 4450W) @400V
2480min-1
η=69.3% (A, static) N62 N=73.0 VSD integrated
E15031-55 Ins.Cl.F AO
Electronically-Protected max.80°C
3ph 380-480VAC 50/60Hz max.7.5A max.4.5kW


ebmpapst
K3G450-PA31-03/F01
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3~ 380-480VAC 50/60Hz (6.8A 4500W) @400V 2480min-1
η=69.6% (A, static) N62 N=73.3 VSD integrated
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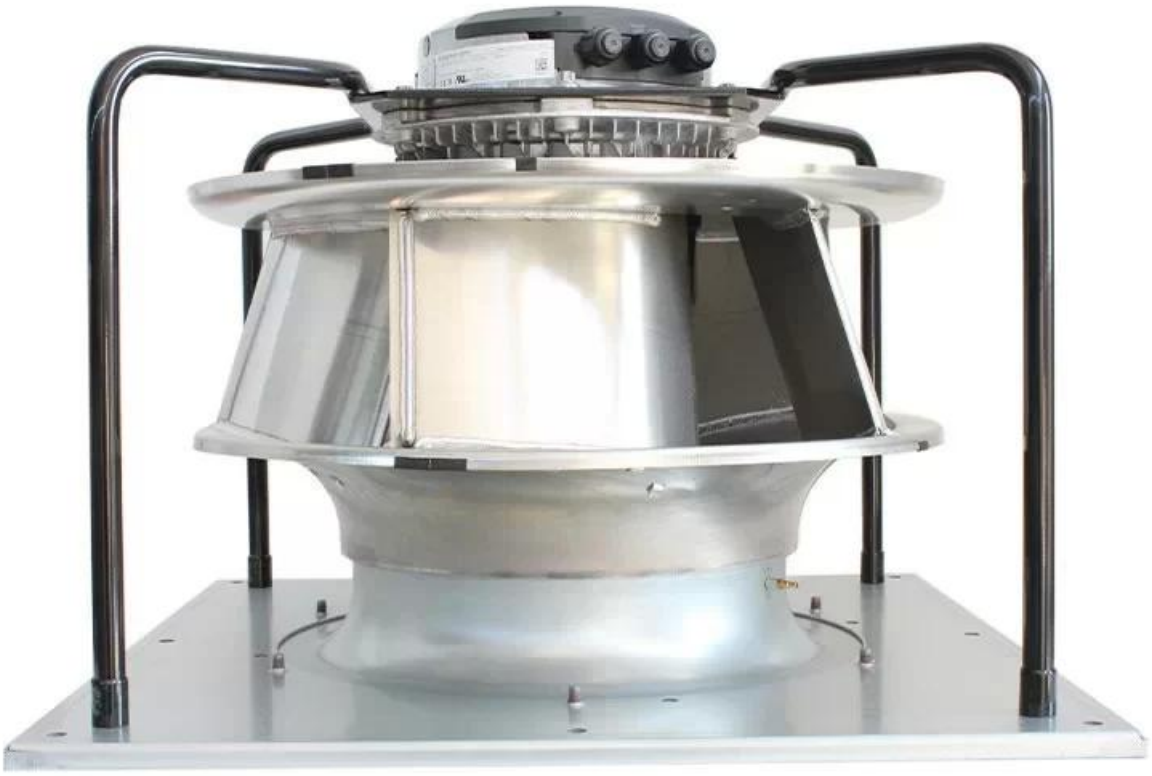

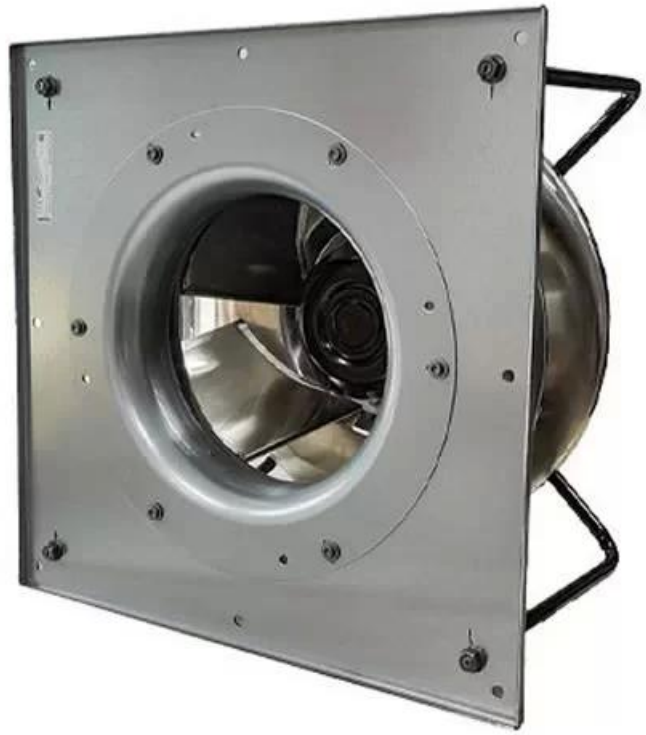

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