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Ebm Papst G1G170-AB31-03

Ebm Papst G1G170-AB31-03 Centrifugal Fan Instruction Manual

MODEL: G1G170-AB31-03

Brand: Ebm Papst

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Ebm Papst G1G170-AB31-03 Centrifugal Fan. This fan is designed for specific applications such as condensate low nitrogen boilers and fireplaces. Please read this manual thoroughly before installation or operation to ensure proper function and to prevent potential hazards.



2. SAFETY INFORMATION

Warning: Improper installation, operation, or maintenance can lead to serious injury or equipment damage. Always adhere to local electrical codes and safety regulations.

- Ensure power is disconnected before performing any installation, maintenance, or repair work.
- Installation and electrical connections should only be performed by qualified personnel.
- Do not operate the fan if it is damaged or if any components are missing.
- Keep hands and foreign objects away from moving parts during operation.
- Ensure proper grounding to prevent electrical shock.
- The fan operates at high speeds; avoid contact with the impeller.

3. PRODUCT OVERVIEW AND FEATURES

The Ebm Papst G1G170-AB31-03 is a high-performance centrifugal fan designed for demanding industrial applications, particularly in condensate low nitrogen boilers and fireplaces. It features a robust aluminum impeller and a high-temperature protected motor.

Key Features:

- **Model:** G1G170-AB31-03
- **Motor Type:** M1G074-CF
- **Blade Diameter:** 170mm
- **Bearing Type:** Ball Bearing
- **Voltage:** AC 230 V
- **Air Flow Volume:** 370m³/h
- **Speed:** 5650 min⁻¹ (RPM)
- **Protection Type:** IP20
- **Technical Features:** PWM control input, high-temperature protected motor
- **Material of Impeller:** Aluminium sheet



Figure 2: Close-up of the fan's intake, showing the impeller blades.

4. SETUP AND INSTALLATION

Installation of the G1G170-AB31-03 fan requires careful attention to electrical connections and mechanical mounting. It is strongly recommended that installation be performed by a certified technician.

4.1 Mechanical Installation

1. Ensure the mounting surface is stable and capable of supporting the fan's weight (approximately 4.5 kg).
2. Mount the fan securely using appropriate fasteners through the designated mounting holes. Refer to the product diagram for mounting points.
3. Ensure adequate clearance around the fan for proper airflow and heat dissipation.

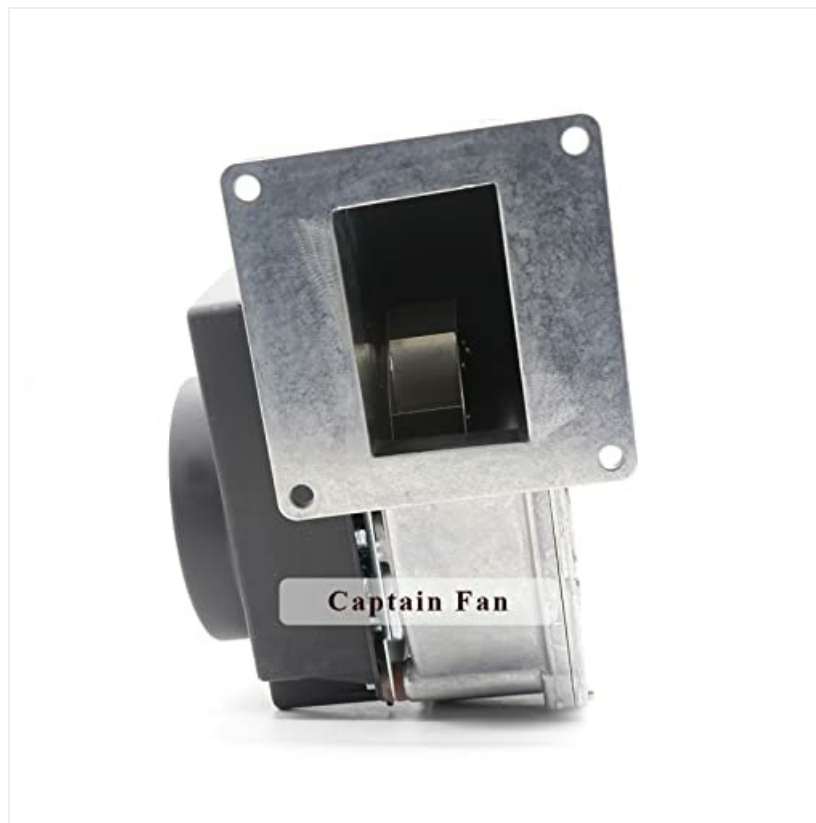


Figure 3: Exhaust port and mounting flange for integration into a system.

4.2 Electrical Connection

The fan operates on AC 230V. Connect the fan to a power source that matches its voltage and frequency specifications (50 Hz). The fan uses a 2-Pin power connector type.

- Verify that the power supply is off before making any connections.
- Connect the power cables to the fan's designated terminals. Observe correct polarity if applicable.
- Ensure all connections are secure and insulated to prevent short circuits.
- If PWM control is utilized, connect the control input according to the system's requirements.



Figure 4: Detailed view of the electrical connectors on the fan unit.

5. OPERATING INSTRUCTIONS

Once properly installed and connected, the fan is ready for operation. The fan is designed for continuous operation within its specified ambient temperature range of -25°C to $+55^{\circ}\text{C}$.

1. **Initial Power-Up:** After installation, apply power to the unit. The fan should start operating.
2. **Monitoring:** Observe the fan for any unusual noises, vibrations, or overheating during initial operation.
3. **PWM Control (if applicable):** If connected to a PWM control system, adjust the control input to achieve the desired fan speed and airflow. The fan supports variable speed operation via PWM.
4. **Normal Operation:** The fan will maintain the set speed and airflow, providing consistent performance for its intended application.



Figure 5: Side view illustrating the integrated motor and control electronics of the fan.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Ebm Papst centrifugal fan. Always disconnect power before performing any maintenance.

- **Cleaning:** Periodically inspect the fan impeller and housing for dust, debris, or obstructions. Clean gently with a soft brush or compressed air. Do not use liquids that could damage electrical components.
- **Inspection:** Check for any signs of wear, damage, or loose connections. Pay attention to the impeller for any signs of imbalance or damage.
- **Bearing Check:** The fan uses ball bearings, which are generally maintenance-free. However, listen for unusual noises that might indicate bearing wear.
- **Electrical Connections:** Ensure all electrical connections remain tight and free from corrosion.

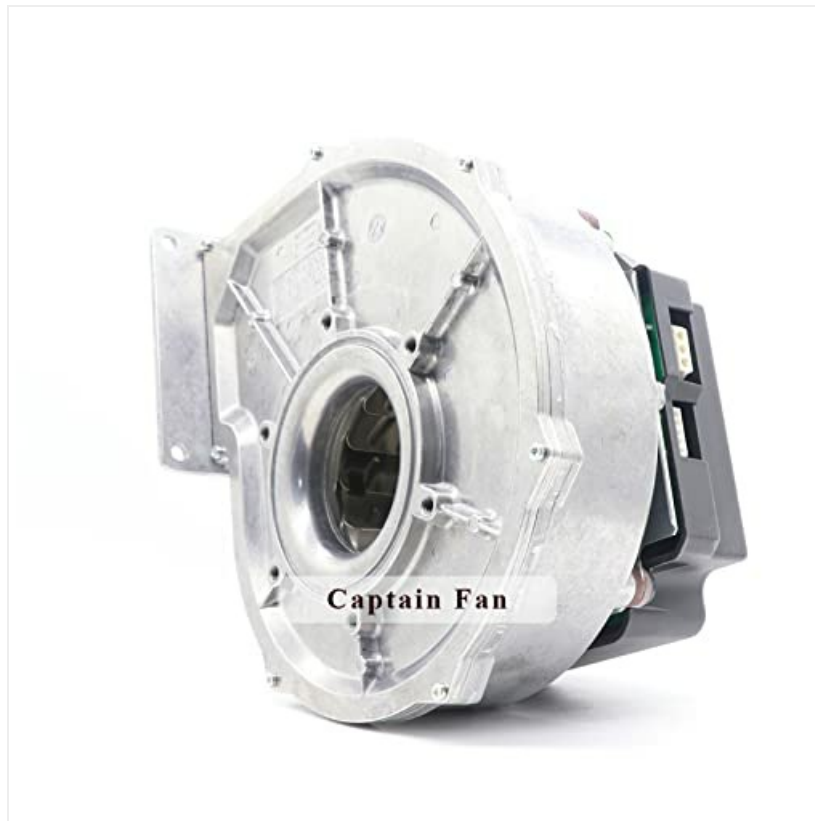


Figure 6: Side view of the fan, highlighting the motor housing and its protective cover.

7. TROUBLESHOOTING

This section provides solutions to common issues. For problems not listed here, contact qualified service personnel.

Problem	Possible Cause	Solution
Fan does not start	No power supply; Loose electrical connection; Motor fault	Check power source and circuit breaker; Secure all connections; Consult a technician for motor inspection
Excessive noise or vibration	Loose mounting; Debris in impeller; Worn bearings	Tighten mounting bolts; Clean impeller; Contact a technician for bearing replacement
Reduced airflow	Obstruction in air path; Incorrect PWM setting; Motor running slow	Clear obstructions; Adjust PWM control; Check power supply voltage
Overheating	Insufficient ventilation; Motor overload; High ambient temperature	Ensure proper airflow around the fan; Verify fan is suitable for application load; Operate within specified ambient temperature range

8. TECHNICAL SPECIFICATIONS

The following table details the technical specifications for the Ebm Papst G1G170-AB31-03 Centrifugal Fan.

Parameter	Value
Model	G1G170-AB31-03

Parameter	Value
Brand	Ebm Papst
Motor Type	M1G074-CF
Blade Diameter	170 mm
Bearing Type	Ball Bearing
Voltage	AC 230 V
Phase	1 Phase
Power Frequency	50 Hz
Power Input	315 W
Current Draw	2.15 A
Speed	5650 min ⁻¹ (RPM)
Air Flow Volume	370 m ³ /h
Pressure Increase Total psf	1601 Pa
Type of Protection	IP20
Ambient Temperature	-25°C to +55°C
Material of Impeller	Aluminium sheet
Power Connector Type	2-Pin
Compatible Devices	Desktop (Note: This seems to be a miscategorization from Amazon, the primary application is Boiler/Fireplace)
UPC	768681955797

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the seller directly. Ensure you have your product model number (G1G170-AB31-03) and purchase details available when seeking support.

The product is supplied by "Captain Fan" as per the seller information. For specific warranty terms, please consult their policies.

