Fasco D258

Fasco D258 Motor User Manual

Permanent Split Capacitor Fan Coil Air-Conditioning and Heating Unit Motor

1. Introduction

This manual provides essential information for the safe and efficient use of your Fasco D258 Permanent Split Capacitor (PSC) Fan Coil Motor. Designed for air-conditioning and heating units, this motor is built for reliability and performance. Please read this manual thoroughly before installation and operation to ensure proper function and longevity of the product.



Figure 1: Fasco D258 Motor. This image displays the Fasco D258 motor, an open-ventilated permanent split capacitor fan coil unit motor. It features a cylindrical body with ventilation slots and a double shaft extending from both ends. A capacitor is visible on one side of the motor body.

2. Safety Information

Always observe the following safety precautions to reduce the risk of injury or damage to the motor and associated equipment.

- **Electrical Safety:** Disconnect power before installing, servicing, or cleaning the motor. All electrical work must be performed by a qualified electrician in accordance with local and national electrical codes.
- **Proper Grounding:** Ensure the motor is properly grounded to prevent electrical shock.
- **Ventilation:** This is an open-ventilated motor. Ensure adequate airflow around the motor during operation to prevent overheating. Do not obstruct ventilation openings.
- **Handling:** Handle the motor with care. Avoid dropping or subjecting it to severe impacts.
- **Thermal Protection:** The motor is thermally protected. If it overheats, it will shut down automatically. Allow it to cool before attempting to restart.
- **Shaft Rotation:** Be aware of the double shaft rotation during installation and operation.

3. Product Overview

The Fasco D258 motor is a robust component designed for continuous duty in fan coil applications. Its permanent split capacitor design ensures efficient and reliable operation.

Key Features:

- Thermally protected for enhanced safety.
- Interchangeable with most fan coil air-conditioning or heating units.
- Open ventilated design for effective cooling.
- Double shaft rotation for versatile installation.
- Sleeve bearing for smooth operation.

4. Setup and Installation

Follow these steps for proper installation of the Fasco D258 motor. Professional installation is recommended.

1. **Power Disconnection:** Ensure all power to the air-conditioning or heating unit is disconnected at the circuit breaker before beginning installation.
2. **Mounting:** Securely mount the motor using appropriate brackets and fasteners. Ensure the motor is level and stable. Models with bases typically have a 3-1/2" shaft height.
3. **Shaft Alignment:** Carefully align the motor shafts with the fan or blower assembly. The shafts measure 8" by 1/2" by 8".
4. **Electrical Connections:** Connect the motor wiring according to the wiring diagram provided with your specific unit or by a qualified electrician. This motor operates at 208-230V, 60Hz, with 2 speeds and 2.8-1.3 amps.
5. **Capacitor Connection:** Ensure the permanent split capacitor is correctly wired as per the motor's specifications.
6. **Final Check:** Double-check all connections and mounting points before restoring power.

5. Operating Instructions

Once installed, the Fasco D258 motor operates as part of your fan coil unit. No direct user interaction is typically required beyond the unit's controls.

- Ensure the unit's power supply matches the motor's voltage requirements (208-230V).
- The motor is designed for continuous operation within its specified temperature and load limits.

- The motor features 2 speeds, which are typically controlled by the fan coil unit's internal circuitry.

6. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your Fasco D258 motor.

- **Cleaning:** Periodically inspect and clean the motor's exterior, especially the ventilation openings, to prevent dust and debris buildup. Ensure power is disconnected before cleaning.
- **Inspection:** Annually inspect wiring for signs of wear or damage. Check mounting bolts for tightness.
- **Bearing:** This motor uses sleeve bearings, which are typically self-lubricating and require no additional lubrication under normal operating conditions.
- **Thermal Protection:** If the motor frequently trips its thermal protector, investigate the cause (e.g., restricted airflow, excessive load, incorrect voltage).

7. Troubleshooting

Refer to the table below for common issues and their potential solutions.

Problem	Possible Cause	Solution
Motor does not start	No power; Incorrect wiring; Faulty capacitor; Overheated (thermal trip)	Check power supply; Verify wiring connections; Test/replace capacitor; Allow motor to cool
Motor runs hot	Restricted airflow; Overload; Incorrect voltage	Clear ventilation; Reduce load; Verify voltage supply
Excessive noise or vibration	Loose mounting; Misaligned shaft; Worn bearings	Tighten mounting bolts; Realign shaft; Consult professional for bearing inspection
Motor hums but does not turn	Faulty capacitor; Obstruction in fan/blower	Test/replace capacitor; Remove obstruction

If troubleshooting steps do not resolve the issue, contact a qualified service technician.

8. Specifications

Detailed technical specifications for the Fasco D258 motor:

Specification	Value
Model Number	D258
Brand	Fasco
Horsepower (HP)	1/5 - 1/10 HP
RPM	1050 RPM
Voltage	208-230V
Frequency	60Hz

Specification	Value
Amperage	2.8 - 1.3 Amps
Speeds	2 Speed
Frame Size	5-inch
Bearing Type	Sleeve Bearing
Ventilation	Open Ventilated
Capacitor Type	Permanent Split Capacitor (PSC)
Shaft Dimensions	8" x 1/2" x 8" (Double Shaft)
Motor Length	3-3/8"
Material	Copper
Product Dimensions	22.5 x 7.25 x 5.5 inches
Weight	9.8 Pounds
Manufacturer	Fasco Motors

9. Warranty and Support

Fasco products are manufactured to high standards and are typically covered by a manufacturer's warranty against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the documentation included with your purchase or contact Fasco customer support directly.
For technical assistance, replacement parts, or warranty claims, please contact your authorized Fasco dealer or visit the official Fasco website for support contact information.

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