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› 80/5 MFD 370 Volt Dual Round Run Capacitor Replacement for Rheem/Ruud RAMB-060JAZ - CAP-27L651, UpStart Components Brand

UpStart Components CAP-27L651-DL138

Instruction Manual

UPSTART COMPONENTS 80/5 MFD 370 VOLT DUAL ROUND RUN CAPACITOR

Model: CAP-27L651-DL138

1. Introduction

This manual provides essential information for the safe and effective use of the UpStart Components 80/5 MFD 370 Volt Dual Round Run Capacitor. This component is designed as a direct replacement for Rheem/Ruud RAMB-060JAZ and similar applications requiring an 80/5 MFD 370 Volt dual run capacitor. Please read this manual thoroughly before installation or maintenance.



Figure 1: The UpStart Components 80/5 MFD 370 Volt Dual Round Run Capacitor shown with its product packaging.

2. Safety Information

WARNING: Risk of Electric Shock and Injury!

- Always disconnect power to the equipment before attempting any installation, removal, or maintenance of the capacitor.
- Capacitors can store a dangerous electrical charge even after power is disconnected. Always discharge the capacitor safely before handling. Consult a qualified technician if you are unsure how to do this.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and safety glasses.
- Installation should only be performed by a qualified and licensed HVAC technician or electrician. Improper installation can lead to serious injury, property damage, or equipment failure.
- Ensure the replacement capacitor's voltage rating is equal to or higher than the original. The microfarad (MFD/uF) rating must match the original exactly.

3. Product Features

- Replacement Dual Round Run Capacitor for Rheem / Ruud RAMB-060JAZ; 80 / 5 MFD 370 Volt.
- Designed for use in a wide variety of applications to maintain optimum performance.
- Essential component for starting and running electric motors in HVAC systems.
- Constructed with durable materials for reliable operation.

4. Setup and Installation

Note: Installation should only be performed by a qualified professional.

1. **Power Disconnection:** Turn off all power to the HVAC unit at the circuit breaker or disconnect switch. Verify power is off using a voltage meter.
2. **Access Capacitor:** Locate and open the access panel to the capacitor compartment.
3. **Discharge Capacitor:** Safely discharge the old capacitor using a properly insulated screwdriver with an insulated handle by shorting the terminals. Wait at least 5 minutes for any residual charge to dissipate.
4. **Note Wiring:** Take a clear photo or draw a diagram of the existing wiring connections to the capacitor terminals (Herm, Fan, Common).
5. **Remove Old Capacitor:** Disconnect the wires and carefully remove the old capacitor from its mounting bracket.
6. **Install New Capacitor:** Place the new UpStart Components capacitor into the mounting bracket.
7. **Connect Wiring:** Reconnect the wires to the corresponding terminals on the new capacitor according to your diagram. Ensure connections are secure.
8. **Secure and Restore Power:** Close the access panel. Restore power to the unit and test its operation.



Figure 2: Side view of the capacitor, showing its cylindrical shape and label.



Figure 3: Top view of the capacitor, illustrating the three terminal connections for Herm (Hermetic Compressor), Fan, and Common.

5. Operating Principles

A dual run capacitor, like the UpStart Components 80/5 MFD 370 Volt model, is a critical electrical component in many HVAC (Heating, Ventilation, and Air Conditioning) systems. It serves two primary functions:

- **Start Function:** It provides a temporary boost of electricity to the compressor and fan motor to help them overcome initial inertia and start rotating.
- **Run Function:** Once the motors are running, the capacitor continues to provide a phase shift to the motor windings, improving efficiency and ensuring smooth, continuous operation.

The "80/5 MFD" rating indicates two separate capacitance values within one unit: 80 microfarads (MFD) for the compressor (Herm) and 5 microfarads (MFD) for the fan motor. The "370 Volt" rating specifies the maximum voltage the capacitor can safely handle.

6. Maintenance

Capacitors are wear-and-tear components and will eventually degrade. Regular inspection can help identify issues

before they lead to system failure. Replace your capacitor if you observe any of the following:

- **Bulging Top:** The top of the capacitor appears swollen or domed. This is a clear sign of internal failure.
- **Leaking:** Any signs of oil or residue leaking from the capacitor casing.
- **No Continuity:** When tested with a multimeter, the capacitor shows no continuity across its terminals, indicating an open circuit.
- **Reduced Capacitance:** A professional test reveals the capacitance (MFD/uF) has significantly dropped below its rated value.

It is recommended to have your HVAC system, including the capacitor, inspected annually by a qualified technician.

7. Troubleshooting

If your HVAC system is experiencing issues, a failing capacitor could be the cause. Common symptoms include:

- **Outdoor Unit Not Starting:** The fan or compressor in the outdoor unit does not start, but you might hear a humming sound from the unit.
- **Fan Not Spinning:** The outdoor fan motor is not spinning, even though the compressor might be running (or vice versa).
- **System Blowing Warm Air:** The compressor is not engaging, leading to the system only circulating air without cooling.
- **Tripping Breaker:** While less common for a failing capacitor, a shorted capacitor can cause the circuit breaker to trip.

If you suspect a capacitor issue, always consult a qualified HVAC technician for diagnosis and replacement. Do not attempt to troubleshoot or repair electrical components without proper training and safety equipment.

8. Specifications

Product Specifications

Brand	UpStart Components
Model Number	CAP-27L651-DL138
Capacitance	80/5 MFD (Microfarad)
Operating Voltage	370 Volts AC
Shape	Round
Material	Copper (internal components)
Product Dimensions	Approximately 2.5 x 2.5 x 6 inches
Manufacturer	UpStart Components

9. Warranty and Support

For information regarding warranty coverage or technical support for your UpStart Components capacitor, please refer to the product packaging or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.

UpStart Components Contact Information:

Website: www.upstartcomponents.com

General Inquiries: Refer to the contact section on the official UpStart Components website.