

## Marley Engineered Products 1VLD4

# Dayton Unit Heater Motor Instruction Manual

Brand: Marley Engineered Products | Model: 1VLD4

## 1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Dayton Unit Heater Motor, Model 1VLD4. This motor is designed as a replacement component for various unit heater applications, ensuring efficient air circulation within heating systems. It is a 1/4 horsepower (hp) motor operating at 1050 RPM with a 120V electrical requirement.

The motor features a PSC (Permanent Split Capacitor) design, a 1/2" x 2.5" shaft with a flat, and a clockwise rotation. Its robust construction is designed for durability and reliable performance in demanding environments.

## 2. SAFETY INFORMATION

**WARNING:** Electrical shock hazard. Always disconnect power before installing, servicing, or cleaning this motor. Failure to do so can result in serious injury or death.

- Installation and servicing must be performed by qualified personnel in accordance with all local and national electrical codes.
- Ensure the power supply matches the motor's voltage and amperage requirements (120V, 4.7 amps).
- Proper grounding is essential to prevent electrical shock.
- Do not operate the motor if it is damaged or if any electrical connections are loose.
- Keep hands, tools, and clothing clear of moving parts during operation.

## 3. PRODUCT FEATURES

- **Power Output:** 1/4 horsepower (hp)
- **Speed:** 1050 Revolutions Per Minute (RPM)
- **Electrical Rating:** 4.7 amps, 120 Volts
- **Shaft Dimensions:** 1/2 inch diameter x 2.5 inches length with a flat side
- **Rotation:** Clockwise (CW) when viewed from the shaft end
- **Motor Diameter:** 5 inches

- **Motor Case Length:** 3.5 inches
- **Mounting:** Four mounting studs at the shaft end, spaced 4.5 inches on center (square pattern)
- **Motor Type:** Permanent Split Capacitor (PSC)

## 4. SETUP AND INSTALLATION

Before beginning installation, ensure all power to the unit heater is disconnected at the circuit breaker or fuse box. Verify the new motor's specifications match the requirements of your unit heater system.



*Figure 1: Dayton Unit Heater Motor showing shaft, mounting studs, and capacitor.*

1. **Preparation:** Carefully unpack the motor and inspect it for any shipping damage. Gather necessary tools, including screwdrivers, wrenches, wire strippers, and electrical tape.
2. **Removal of Old Motor:** Disconnect all wiring from the old motor, noting the connections for proper reinstallation. Remove any mounting hardware securing the old motor to the unit heater. Carefully detach the fan blade or blower wheel from the old motor shaft.
3. **Mounting the New Motor:** Attach the fan blade or blower wheel to the new motor's 1/2" x 2.5" shaft, ensuring it is securely fastened. Position the new motor within the unit heater housing, aligning the four mounting studs (4.5" O.C. square) with the corresponding holes. Secure the motor using appropriate nuts and washers.
4. **Electrical Connections:** Connect the motor's wiring to the unit heater's electrical system. Ensure all

connections are tight and insulated. Refer to the unit heater's wiring diagram for specific connections. The motor operates on 120V.

5. **Final Check:** Before restoring power, double-check all mechanical and electrical connections. Ensure no wires are pinched and that the fan blade rotates freely without obstruction.

## 5. OPERATING INSTRUCTIONS

Once the Dayton Unit Heater Motor is correctly installed and all safety checks are complete, restore power to the unit heater. The motor will begin operation when the unit heater's thermostat or control system calls for heat and fan operation.

- **Initial Start-up:** Observe the motor during its first operation. Listen for any unusual noises or vibrations. Ensure the fan blade rotates smoothly and in the correct direction (Clockwise from shaft end).
- **Normal Operation:** The motor is designed for continuous duty within its specified voltage and temperature ranges. It should operate quietly and efficiently.
- **Power Requirements:** The motor requires a 120V AC power supply and draws approximately 4.7 amps during operation. Ensure the circuit can handle this load.

## 6. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your Dayton Unit Heater Motor. Always disconnect power before performing any maintenance.

- **Cleaning:** Periodically clean the exterior of the motor and fan blade to prevent dust and debris buildup, which can impede airflow and cause overheating. Use a soft brush or compressed air.
- **Inspections:** Annually inspect all electrical connections for tightness and signs of wear or corrosion. Check the motor mounting for security.
- **Lubrication:** This motor is typically designed with sealed bearings that do not require lubrication. Do not attempt to lubricate unless specifically instructed by the manufacturer.
- **Vibration Check:** If unusual vibrations occur, check for loose mounting hardware or an unbalanced fan blade.

## 7. TROUBLESHOOTING

If the motor is not functioning as expected, refer to the following common issues and solutions. Always disconnect power before attempting any troubleshooting or repairs.

Problem	Possible Cause	Solution
Motor does not start	No power supply; Loose wiring connections; Faulty capacitor; Motor overload.	Check circuit breaker/fuse. Verify all electrical connections. Inspect capacitor for bulging or leaks (replace if faulty). Allow motor to cool if overloaded.
Motor runs hot	Insufficient airflow; Overload; Incorrect voltage.	Clean fan blades and motor housing. Ensure proper ventilation. Verify motor is not undersized for the load. Check supply voltage.
Unusual noise or vibration	Loose mounting; Unbalanced fan blade; Worn bearings.	Tighten mounting hardware. Inspect fan blade for damage or debris. If bearings are worn, motor replacement may be necessary.

If troubleshooting steps do not resolve the issue, contact a qualified technician or Marley Engineered Products

customer support.

## 8. SPECIFICATIONS

Attribute	Value
Brand	Marley Engineered Products
Part Number / Model	1VLD4 (CECOMINOD074408)
Horsepower (hp)	0.25 hp (1/4 hp)
Speed (RPM)	1050 RPM
Voltage	120 Volts
Amperage	4.7 amps
Shaft Dimensions	1/2" diameter x 2.5" length with flat
Rotation	Clockwise (CW) from shaft end
Motor Diameter	5 inches
Motor Case Length	3.5 inches
Mounting Studs	4 studs, 4.5" O.C. (square) at shaft end
Material	Copper
Item Weight	13 Pounds
UPC	663001325239

## 9. WARRANTY INFORMATION

This Dayton Unit Heater Motor comes with a **1 Year Manufacturer Warranty**. This warranty covers defects in materials and workmanship under normal use and service. For specific terms and conditions, or to make a warranty claim, please retain your proof of purchase and contact Marley Engineered Products directly.

## 10. CUSTOMER SUPPORT

For technical assistance, replacement parts, or further information regarding your Dayton Unit Heater Motor, please contact Marley Engineered Products customer support. Have your model number (1VLD4) and purchase details ready when contacting support.

*Note: Specific contact details are not provided in this manual. Please refer to the manufacturer's official website or product packaging for the most current contact information.*

## Related Documents - 1VLD4

	<p><a href="#">Marley Engineered Products Unit Heater Accessories Installation Guide</a></p> <p>Installation instructions for various accessories for Marley Engineered Products MUH, HUHAA, and Dayton unit heaters, including internal thermostats, remote fan switches, fan relays, and power disconnect switches. Covers model numbers MT1, MT2, FS, RFS1, RFS2, HRTA, DS25, and DS60.</p>
	<p><a href="#">Marley Engineered Products UH724STA Horizontal/Vertical Unit Heater Installation, Operation &amp; Maintenance Instructions</a></p> <p>Comprehensive guide for the Marley Engineered Products UH724STA horizontal/vertical unit heater, covering installation, operation, maintenance, and warranty information. Includes safety precautions, technical specifications, and wiring diagrams.</p>
	<p><a href="#">Marley Engineered Products "K" Series (Model A) Fan Forced Wall Heater Installation and Maintenance Instructions</a></p> <p>Comprehensive installation and maintenance guide for Marley Engineered Products "K" Series (Model A) fan forced wall heaters, covering safety precautions, installation procedures for new construction and existing walls, wiring diagrams, operation, maintenance, and warranty information.</p>
	<p><a href="#">Marley Engineered Products UH Series Unit Heaters Installation and Maintenance Manual</a></p> <p>Comprehensive installation and maintenance guide for Marley Engineered Products UH Series Unit Heaters (5KW to 30KW), covering safety, specifications, mounting, wiring, and warranty information.</p>
	<p><a href="#">Marley UH Series Unit Heaters 5KW-30KW: Installation, Operation &amp; Maintenance Manual</a></p> <p>Comprehensive guide for Marley UH Series Unit Heaters (5KW-30KW), covering installation, operation, maintenance, safety precautions, specifications, dimensions, and warranty information. Includes essential safety warnings and technical details for commercial and industrial use.</p>
	<p><a href="#">Marley UH Series Thermostat Accessories Installation Guide (UHTA-1, UHTA-2)</a></p> <p>Installation instructions, specifications, and wiring diagrams for Marley Engineered Products UH Series Thermostat Accessories (UHTA-1 Single Pole, UHTA-2 Double Pole). Includes safety warnings and limited warranty information.</p>