REZNOR®

Revision: H-IOM (10-26) 1042427-E

Revision: H-IOM (09-25) 1042427-D

DESTRATIFICATION FAN INSTALLATION, OPERATION, AND MAINTENANCE

MODEL H

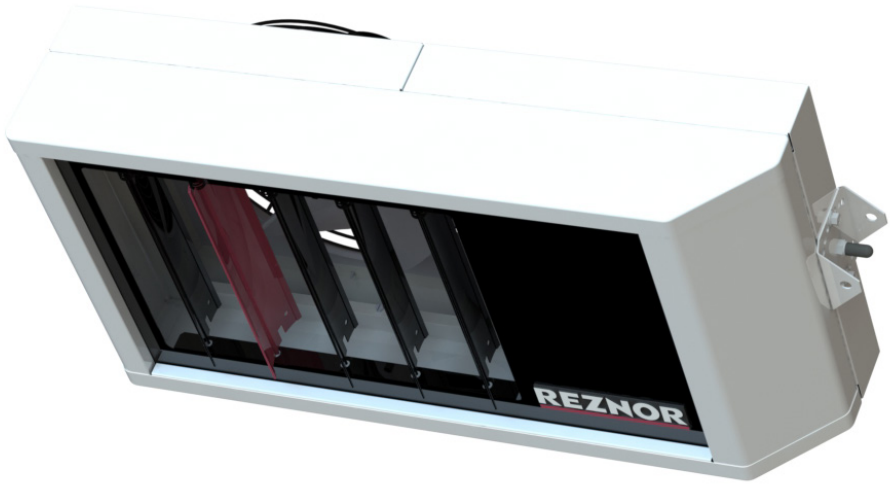


TABLE OF CONTENTS

GENERAL INFORMATION **2**
- Important Safety Information 2
- Certification 3
- Warranty 3
- Unit Location 3
- Weights 3
- Dimensions 4

INSTALLATION **5**
- Unpacking and Inspection 5
- Pre-Installation Checklist 5
- Unit Suspension 5
- Electrical Connections 6
  - Supply Wiring Connection 7
  - Control Connections 7

CONTROLS **8**
- Disconnect Switch 8
- Thermostat 8
- Remote ON/OFF Switch 8
- Multiple Fan Control 8

OPERATION **8**
- Pre-Startup Checklist 8
- Startup 8

MAINTENANCE **9**
- Service Checklist 9
- Maintenance Procedures 9
  - Electrical Component Replacement 9
  - Fan and Motor Assembly Maintenance 9

TROUBLESHOOTING **11**

INSTALLATION RECORD (TO BE COMPLETED BY INSTALLER) **12**

DO NOT DESTROY. PLEASE READ CAREFULLY. KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

GENERAL INFORMATION

- This unit has been tested for capacity and efficiency so as to provide many years of safe and dependable comfort providing it is properly installed and maintained. With regular maintenance, this unit will operate satisfactorily year after year. Abuse, improper use, and/or improper maintenance can shorten the life of the appliance and create unsafe hazards.
- To achieve optimum performance and minimize equipment failure, it is recommended that periodic maintenance be performed on this unit. The ability to properly perform maintenance on this equipment requires certain tools and mechanical skills.

Important Safety Information

Please read all information in this manual thoroughly and become familiar with the capabilities and use of your appliance before attempting to operate or maintain this unit. Pay attention to all dangers, warnings, cautions, and notes highlighted in this manual. Safety markings should not be ignored and are used frequently throughout to designate a degree or level of seriousness.

DANGER: A danger statement describes a potentially hazardous situation that if not avoided, will result in severe personal injury or death and/or property damage.

WARNING: A warning statement describes a potentially hazardous situation that if not avoided, can result in severe personal injury and/or property damage.

CAUTION: A caution statement describes a potentially hazardous situation that if not avoided, can result in minor or moderate personal injury and/or property damage.

NOTE: A note provides important information that should not be ignored.

⚠ WARNING ⚠

- **This appliance is not intended for use by persons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.**
- **Children should be supervised to ensure that they do not play with the appliance.**

⚠ CAUTION ⚠

To prevent damage to the unit or to its internal components, it is recommended that two wrenches be used when loosening or tightening nuts. Do not over tighten!

Certification

These destratification fans are listed by Intertek for use in the United States and in Canada.

Warranty

Refer to the limited warranty form in the literature bag provided with the unit. The warranty is void if:

- Wiring is not in accordance with the diagram furnished with the unit.
- The air delivery system is modified.
- Improper installation of suspension system.

Unit Location

⚠ CAUTION ⚠

Do not install the unit where it may be exposed to water spray, rain, or dripping water.

NOTE: Do not install the unit near high temperature heat sources. Do not install the unit in a position in which the downward air column created by the fan is directly bisected by another airflow source. Do not install the unit close to any object that might interfere with fan operation or allow fan blades to come into contact with any object.

Refer to **Table 1** for mounting height and airflow data.

Table 1. Unit Mounting Height and Airflow

Unit Size	Mounting Height (Feet)		Nominal Airflow Rate (CFM)	Nominal Area (Square Feet)	Airflow Volume (Cubic Feet)
	Minimum*	Maximum			
25	10	25	600	1000	25,000
35	18	35	1000	1500	52,500
50	25	50	1500	1500	75,000
60	30	60	2000	2000	120,000

*If the unit will be mounted below the listed minimum mounting height, it is recommended that multiple smaller fans be considered for installation.

Weights

Table 2. Weights

Unit Size			
25	35	50	60
Pounds (kg)			
22 (10)	28 (13)	38 (18)	43 (20)

Dimensions

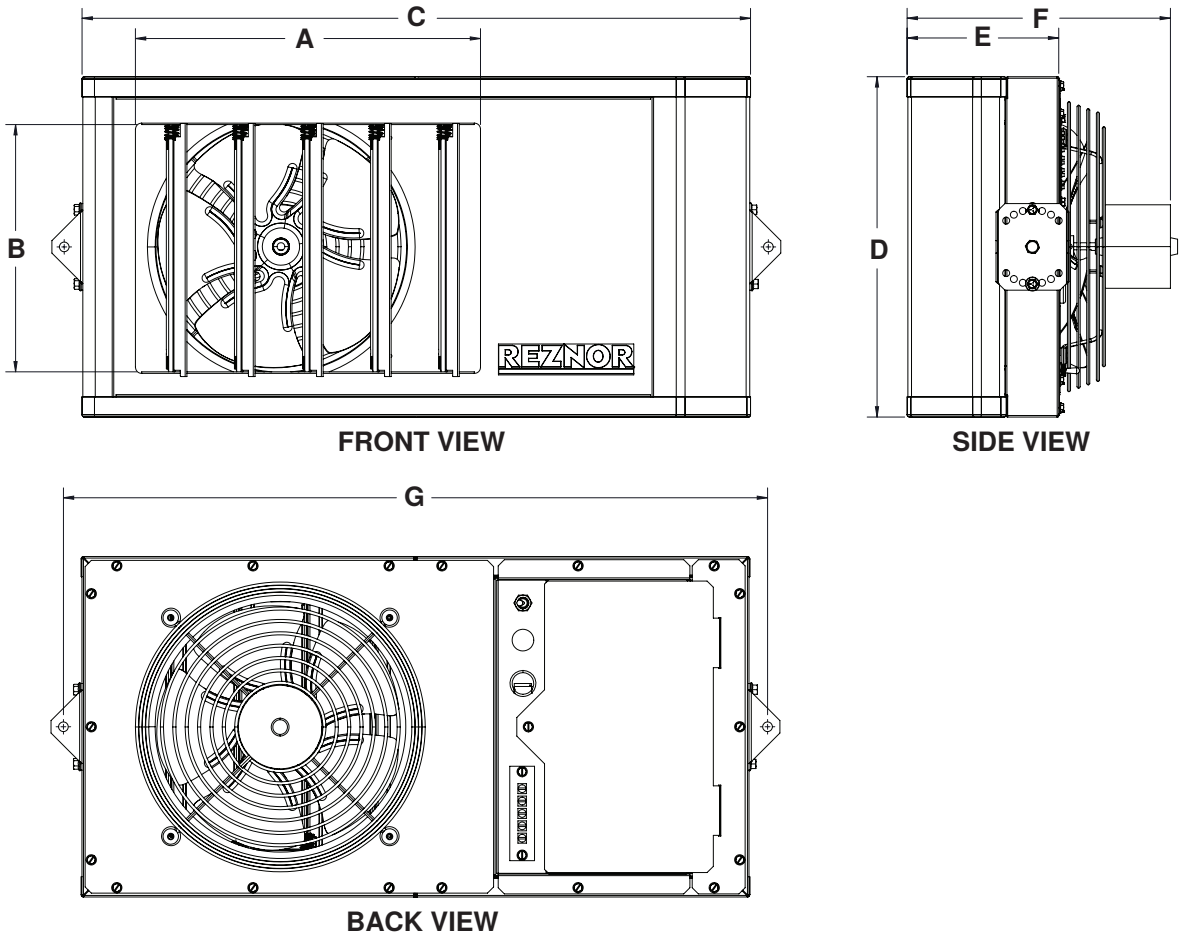


Figure 1. Dimensions (Refer to Table 3)

Table 3. Dimensions

Unit Size	Dimension (See Figure 1)						
	A	B	C	D	E	F	G
	Inches (mm)						
25	14 (356)	10-1/8 (257)	27 (686)	13-3/4 (349)	6-1/4 (159)	12 (305)	28-1/2 (724)
35		13 (330)		16-3/4 (425)			
50	16-3/8 (416)	21-1/8 (537)		24-3/4 (629)		13 (330)	
60						15 (381)	

INSTALLATION

Unpacking and Inspection

The unit was test-operated and inspected at the factory prior to packaging and was in operating condition. If, upon removing it from its packaging, the unit is found to have incurred any damage in shipment, document the damage with the transporting agency and contact an authorized Factory Distributor. If you are an authorized Distributor, follow the FOB freight policy procedures.

Pre-Installation Checklist

- ❑ Read this manual and become familiar with the installation requirements.
- ❑ Before beginning, make preparations for necessary supplies, tools, and manpower.
- ❑ Check to see if there are any field-installed options (refer to **Table 4**) that need to be assembled/installed prior to unit installation. Ensure that all options ordered are at the installation site.

Table 4. Field-Installed Options

Option	Description
CL1	Single-stage thermostat
CL22	Two-stage thermostat
CL31, CL32	Multiple unit control: option CL31 includes components for one control unit and one additional unit—option CL32 includes components for each additional non-control unit
CL90	BACnet-capable thermostat
CM1	Locking thermostat cover
CM1B	Large locking thermostat cover
CM3	Bracket assembly for mounting thermostat on unit
CN3F	Remote ON/OFF switch in 2 × 4 box

Unit Suspension

⚠ WARNING ⚠

- **Before suspending the unit, check the supporting structure to verify that it has sufficient load-carrying capacity to support the weight of the unit (refer to Weights section).**
- **DO NOT add additional weight to a suspended unit.**

NOTE: An accessory kit (PN 1042414) that contains hanger bracket assemblies, a Reznor logo, and hole plugs is shipped with the unit. Hangers and hardware are not factory-installed. Intall hole plugs if the Reznor logo is not used.

Suspend the unit using 3/8-inch field-supplied threaded rods (maximum length is 10 feet (3 meters)) and hex nuts. The rods are secured to two hanger brackets (see **Figure 2**) that are shipped with the unit in the accessory kit. The hanger brackets may be rotated to one of six positions in order to mount the unit at a desired angle.

Unit Suspension—Continued

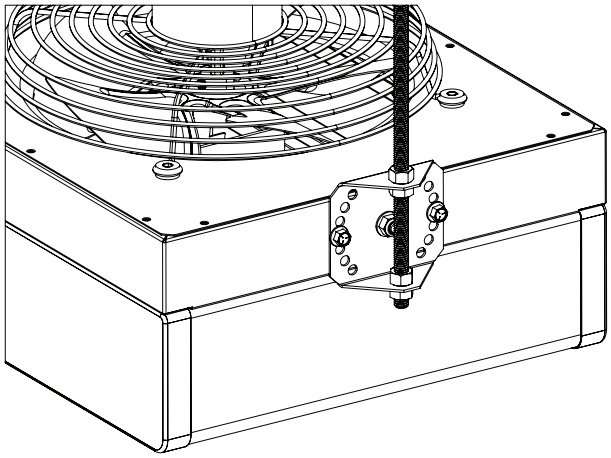


Figure 2. Hanger Bracket

1. If Reznor logo from accessory kit is desired, snap logo into two sets of holes located on front face of unit. If logo is not used, install hole plugs from accessory kit in holes.
2. Remove rubber cap from threaded stud on each side of unit and slide center hole of hanger brackets from accessory kit over studs—each stud acts as pivot when adjusting bracket angle. Install 5/16-inch hex nuts (see **Figure 2**) from accessory kit on studs to secure brackets.
3. Position hanger brackets to desired angle and secure each bracket using two 1/4-inch bolts (see **Figure 2**) from accessory kit installed in selected threaded holes in each bracket.
4. Install field-supplied hex nut on each field-supplied threaded rod about 6 inches from bottom of rod. Insert rod into top hole of each hanger bracket and install second and third field-supplied hex nuts.
5. Insert rod into bottom hole of each hanger bracket and install fourth field-supplied hex nut. Adjust rods/nuts for desired mounting height and tighten all hex nuts flush against brackets (see **Figure 2**).
6. Install threaded rods and hex nuts to unistrut, metal framing, or other structurally-sound attachment points to suspend unit. Ensure that load-bearing structure adequately supports weight of unit(s) and suspension hardware.

Electrical Connections

⚠ CAUTION ⚠

Ensure that all wiring is in accordance with the wiring diagram provided with the unit.

All electrical wiring and connections, including electrical grounding MUST be made in accordance with the *National Electric Code* ANSI/NFPA No. 70 (latest edition) or, in Canada, the *Canadian Electric Code*, Part 1 (CSA C.22.1). In addition, the installer should be aware of any local ordinances that might apply.

NOTE: IMPORTANT: Units with voltage option AK19 are factory-wired for 230V/240V supply. Field adjustments to the unit wiring are required for 208V applications. Refer to the wiring diagram to change the white transformer wire from the 240 terminal to the 208 terminal.

Supply Wiring Connection

- Check the rating plate on the unit for the supply voltage and current requirements.
- The supply wiring enters as shown in **Figure 3** and connects to pigtail leads from the disconnect switch (see **Figure 3**) and ground wire.

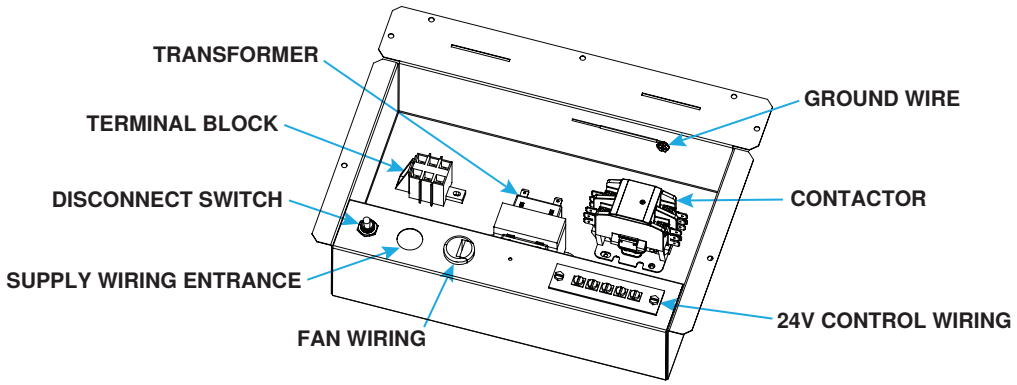


Figure 3. Typical Control Box

Control Connections

- The terminal strip for 24V control connections is located on the outside of the control box at the back of the unit as shown in **Figure 3**. The strip has five terminals: C, R, G, W1, and W2.
- The remote ON/OFF switch connections are the R and G terminals.
- The thermostat connections are the C, R, and G terminals.
- If the installation features a model H fan and a Reznor unit heater controlled by a single two-stage thermostat, ensure that the wiring is in accordance with the wiring diagram shown in **Figure 4**.

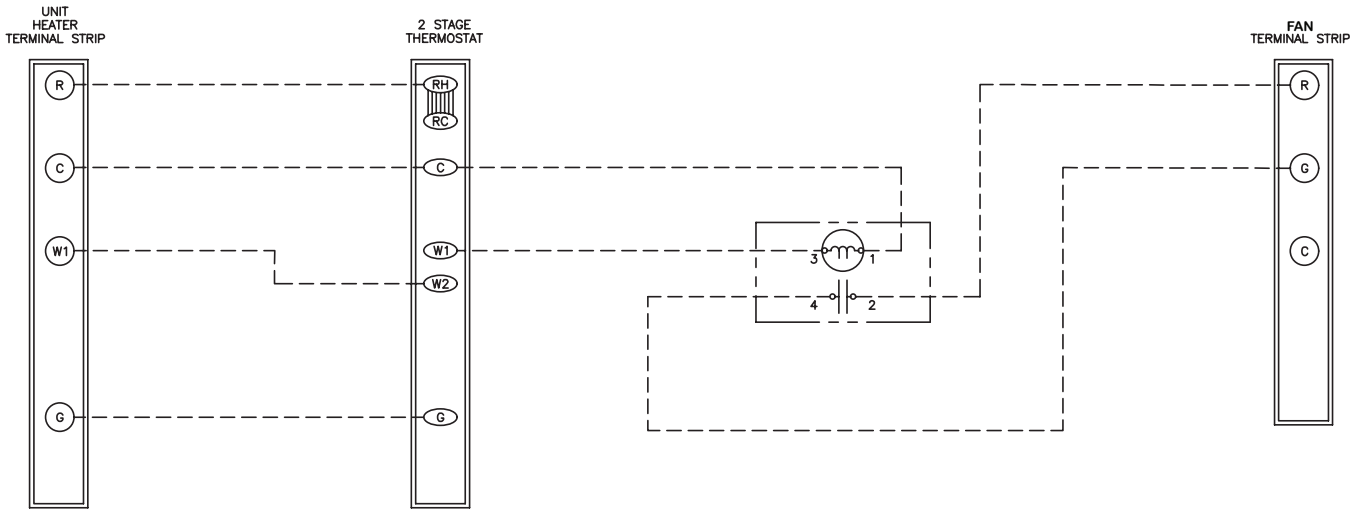


Figure 4. Fan and Unit Heater Wiring Diagram

CONTROLS

Disconnect Switch

A disconnect toggle switch (see **Figure 3**) on the back of the unit turns the unit ON and OFF. During normal use, this switch is ON. Ensure that this switch is OFF before servicing the unit.

Thermostat

The unit may be controlled by a thermostat—either an optional thermostat (refer to **Table 4**) or a field-supplied 24V thermostat that must be field-installed in accordance with the thermostat manufacturer's instructions. Pay particular attention to the requirements regarding the location of the thermostat. In accordance with the wiring diagram provided with the unit, connect the thermostat at the 24V control wiring terminal strip on the back of the unit (refer to **Control Connections** section).

Remote ON/OFF Switch

The unit may be controlled by a remote ON/OFF switch—either an optional switch (refer to **Table 4**) or a field-supplied 24V switch that must be field-installed in accordance with the switch manufacturer's instructions. In accordance with the wiring diagram provided with the unit, connect the ON/OFF switch at the 24V control wiring terminal strip on the back of the unit (refer to **Control Connections** section).

Multiple Fan Control

If the unit is ordered with the multiple fan control option, one thermostat can be used to control up to five fans. This option includes a 40VA transformer that replaces the standard transformer in the control unit and a relay assembly that connects to the additional fan(s). Option CL31 provides for control of two fans. If control of additional fans is desired (up to five total), option CL32, which is the relay assembly only, must be added to each additional fan. The option package ships separately and includes complete instructions for installation and wiring.

OPERATION

Pre-Startup Checklist

Check the following ***before*** startup:

- ❑ Check suspension—unit must be secure and at desired angle.
- ❑ Check electrical wiring—ensure that all wire gauges are as recommended—verify that fusing or circuit breakers are adequate for load use.
- ❑ Check polarity—verify that line voltage exists between black L1 wire and earth ground.
- ❑ Place literature bag that contains limited warranty form, this manual, and any control or optional information in accessible location near unit.

Startup

Startup the unit as follows:

1. Turn ON electric power to unit.
2. Place disconnect toggle switch on back of unit in ON position.
3. Set thermostat to desired setting or place remote ON/OFF switch in ON position.

MAINTENANCE

⚠ WARNING ⚠

- **Ensure that the disconnect switch is OFF before servicing the unit.**
- **Eye protection is recommended when cleaning the unit.**

⚠ CAUTION ⚠

- **When any service is completed, ensure that the unit is reassembled correctly so that no unsafe conditions are created.**
- **If replacement parts are required, use only factory-authorized parts.**

NOTE: To ensure long life and satisfactory performance, a unit that is operated under normal conditions should be inspected and cleaned at the start of each heating season. If the unit is operating in an area where an unusual amount of dust or soot or other impurities are present in the air, more frequent maintenance is recommended.

The unit is designed to operate with a minimum of maintenance. However, to ensure long life and satisfactory performance, routine service is recommended. When servicing, follow standard safety procedures and the specific instructions and warnings in this manual.

Service Checklist

The following section is designed to aid a qualified service person in maintaining and servicing this equipment. At a minimum, perform the following annually:

- ❑ Clean all dirt, lint, and grease from fan blade, fan guard, and motor.
- ❑ Replace any parts that do not appear sound.
- ❑ Check for any damaged wiring and replace as necessary.

Maintenance Procedures

Electrical Component Replacement

Use a voltmeter to verify that there is 24V output from the transformer. If the transformer is not functioning, it must be replaced. If it is determined that an electrical component needs replacing, use only the factory-authorized replacement part that is designed for the unit. Always replace the control box cover.

Fan and Motor Assembly Maintenance

Inspect and clean the motor, fan guard, and blades. Remove any dirt and grease. Take care when cleaning the fan blades to prevent misalignment or imbalance. Check to ensure that the fan blade hub is secure to the shaft. If necessary, replace the assembly as follows:

1. Turn OFF electric power to unit.
2. Remove access panel and disconnect fan motor wires, capacitor wires at capacitor, and ground screw.
3. Remove assembled parts (fan guard, motor, and fan blade).
4. Disassemble and replace part(s) as needed.
5. Reassemble using replacement part(s) as needed and original parts.
6. Ensure that fan is in proper position on shaft (see **Figure 5**) and that setscrew is tightened in accordance with torque listed in **Table 5**.

Maintenance Procedures—Continued

Fan and Motor Assembly Maintenance—Continued

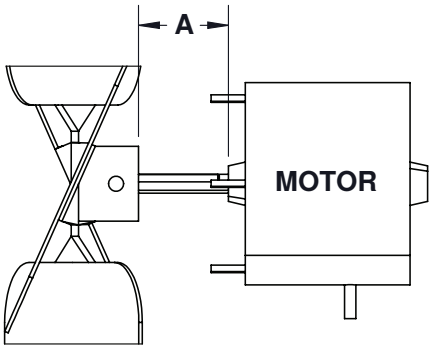


Figure 5. Fan and Motor Spacing (Refer to Table 5)

7. Position assembly on unit and secure fan guard.
8. Rotate fan blade to check for adequate clearance. If adjustment is required, loosen mounting screws, reposition fan guard, and tighten screws to 30 inch-pounds. Repeat until assembly is positioned properly.
9. Reconnect fan motor wires in accordance with wiring diagram.
10. Install access panel.
11. Turn ON electric power to unit and check for proper operation.

Table 5. Fan Blade-to-Motor Spacing

Unit Size	Dimension A* (Inches (mm))	Setscrew Torque (Inch-Pounds ±10)
25	1-1/16 (26.9875)	80
35	1-1/2 (38.1)	
50, 60	2-3/8 (60.325)	120

*See Figure 5.

TROUBLESHOOTING

Table 6. Troubleshooting		
Symptom	**Probable Cause**	**Remedy**
Unit will not start	1. No power to unit	Turn ON power and check supply fuses or circuit breaker
	2. No 24V power to thermostat	Turn up thermostat
		Check control transformer output
	3. No power to fan motor	Tighten connections at motor terminals
	4. Defective fan motor	Replace fan motor
	5. Improper thermostat location or adjustment	Refer to thermostat manufacturer's instructions
Fan motor will not run	1. Circuit open	Check wiring and connections
	2. Incorrect polarity	Reverse line volt leads to fan motor
	3. Defective fan motor	Replace fan motor
Fan motor cuts out on overload	1. Low or high voltage supply	Correct electric supply
	2. Defective fan motor	Replace fan motor
	3. Poor airflow	Clean motor, fan, and fan guard

INSTALLATION RECORD (TO BE COMPLETED BY INSTALLER)

For service or repair, contact the installer. For additional assistance, contact the distributor. For more information, contact your local Reznor representative.

Model	Serial No.	Date of Installation	Notes
	Installer	**Distributor**	
Name			
Company			
Address			
Phone No.			

For more information on Reznor HVAC products:

- **Contact your local Reznor representative at 1-800-695-1901**
- **Refer to the technical specifications, manuals, and consumer materials found at www.reznorhvac.com**

Specifications and illustrations subject to change without notice or incurring obligations.
Latest version of this manual is available at **www.reznorhvac.com**.
©2026 Reznor LLC, Saint Charles, MO. All rights reserved.
H-IOM (10-26) 1042427-E