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Goodman HKR-05 Auxiliary Heat Strip 5Kw User Manual

Model: HKR-05

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Goodman HKR-05 Auxiliary Heat Strip 5Kw. Please read this manual thoroughly before attempting any installation or service to ensure proper function and to prevent potential hazards.

1.1 Safety Information

- **WARNING:** Installation and servicing of this equipment must be performed by qualified, experienced technicians. Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or death.
- **DANGER:** Disconnect all electrical power to the unit before installing or servicing. Failure to do so may result in electrical shock, injury, or death.
- Always wear appropriate personal protective equipment (PPE) during installation and maintenance.
- Ensure all local and national electrical codes are followed during installation.

2. PRODUCT OVERVIEW

The Goodman HKR-05 is a 5Kw auxiliary electric heat strip designed for use with compatible Goodman HVAC systems. It provides supplemental heating, typically used in conjunction with a heat pump during colder temperatures or as an emergency heat source. The unit features pre-tested, pre-wired components for single-phase models, an electric heat limit control, and rust-resistant nickel chromium heating elements.



Figure 1: Goodman HKR-05 Auxiliary Heat Strip. This image shows the compact design of the 5Kw electric heat strip, featuring its electrical connections and heating elements.

2.1 Key Features

- 5 Kilowatt (Kw) heating capacity.
- Pre-tested and pre-wired for single-phase applications.
- Integrated electric heat limit control for safety.
- Durable, rust-resistant nickel chromium heating elements.
- Suitable for rooftop or ground-level horizontal installation.
- Approved for manufactured or modular homes.

3. SPECIFICATIONS

Attribute	Value
Model Number	HKR-05
Heating Capacity	5 Kilowatts (Kw)
Phase	Single Phase
Heating Elements	Nickel Chromium, Rust Resistant
Safety Features	Electric Heat Limit Control
Installation Type	Rooftop or Ground-Level Horizontal
Dimensions (L x W x H)	14.5 x 9.5 x 8.25 inches

Attribute	Value
Item Weight	3.03 pounds
Circuit Breaker	Not Included
Manufacturer	Goodman

4. INSTALLATION / SETUP

Installation of the HKR-05 Auxiliary Heat Strip should only be performed by a qualified HVAC technician. Refer to the specific Goodman air handler or furnace installation manual for detailed wiring diagrams and compatibility information. The following steps are general guidelines.

4.1 Pre-Installation Checks

1. Verify that the HKR-05 is compatible with your existing HVAC system.
2. Ensure the electrical supply matches the requirements of the heat strip (5Kw, single phase).
3. Confirm that the installation location (e.g., air handler cabinet) has adequate space and proper airflow.
4. Turn off all power to the HVAC system at the main electrical panel before proceeding.

4.2 Installation Steps

1. **Mounting:** Securely mount the HKR-05 heat strip within the designated compartment of the air handler or furnace, following the manufacturer's instructions for the specific HVAC unit. Ensure it is positioned for optimal heat distribution and airflow.
2. **Electrical Connections:** Connect the pre-wired leads of the heat strip to the corresponding terminals in the HVAC unit's control board or power distribution block. Refer to the wiring diagram provided with your air handler/furnace. Ensure all connections are tight and secure.
3. **Grounding:** Ensure the heat strip is properly grounded according to local electrical codes.
4. **Circuit Breaker:** Install the appropriate circuit breaker(s) in your electrical panel, sized correctly for a 5Kw electric heater. *Note: The HKR-05 does not include a circuit breaker.*
5. **Final Checks:** Double-check all wiring connections for correctness and security. Ensure no wires are pinched or exposed.

5. OPERATION

The Goodman HKR-05 Auxiliary Heat Strip operates automatically in conjunction with your HVAC system's thermostat and control board. It is designed to provide supplemental heat when the primary heating source (e.g., heat pump) cannot meet the heating demand, or when the system is set to "Emergency Heat" mode.

5.1 Normal Operation

- When the thermostat calls for heat and the outdoor temperature is below the heat pump's efficient operating range, or if the heat pump cannot maintain the set temperature, the auxiliary heat strip will be energized.
- The heat strip will cycle on and off as needed to maintain the desired indoor temperature.

5.2 Emergency Heat Mode

- If your HVAC system has an "Emergency Heat" setting, selecting this mode on your thermostat will typically disable the heat pump and rely solely on the auxiliary heat strip for heating. This mode is generally used if the heat pump is malfunctioning.

Note: Electric auxiliary heat consumes more electricity than a heat pump. Use it judiciously to manage energy costs.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your auxiliary heat strip. It is recommended that a qualified technician perform annual inspections and maintenance.

6.1 Recommended Maintenance Tasks

- Power Disconnection:** Always disconnect all electrical power to the HVAC system at the main electrical panel before performing any maintenance.
- Visual Inspection:** Annually inspect the heating elements for any signs of damage, corrosion, or excessive dust accumulation.
- Cleaning:** Gently clean any dust or debris from the heating elements and surrounding area using a soft brush or vacuum cleaner. Ensure no foreign objects are lodged within the unit.
- Electrical Connections:** Check all electrical connections for tightness and signs of overheating or corrosion. Tighten any loose connections.
- Air Filter:** Ensure the air filter in your HVAC system is clean and replaced regularly as per your system's recommendations. A dirty filter can restrict airflow and reduce heating efficiency.

7. TROUBLESHOOTING

If you experience issues with your Goodman HKR-05 Auxiliary Heat Strip, refer to the following common troubleshooting steps. For complex issues, contact a qualified HVAC technician.

7.1 Common Issues and Solutions

Problem	Possible Cause	Solution
No heat from auxiliary strip	<ul style="list-style-type: none">Power supply offTripped circuit breakerFaulty thermostat settingBlown fuse or tripped limit switchWiring issue	<ul style="list-style-type: none">Check main electrical panel for power.Reset the circuit breaker.Ensure thermostat is set to "Heat" or "Emergency Heat" and temperature is above ambient.Inspect fuses and limit switches (qualified technician only).Have a qualified technician inspect wiring.
Insufficient heat	<ul style="list-style-type: none">Dirty air filterRestricted airflowUndersized unit for spaceMalfunctioning heating element	<ul style="list-style-type: none">Replace or clean air filter.Check for obstructions in ductwork or vents.Consult with an HVAC professional.Have a qualified technician inspect and replace elements if necessary.
Burning smell	<ul style="list-style-type: none">Dust accumulation on elements (common for first use after long period)Overheating components	<ul style="list-style-type: none">The smell should dissipate quickly. If it persists, turn off power and contact a technician.Immediately turn off power and contact a qualified technician.

8. WARRANTY AND SUPPORT

Goodman products are manufactured to high standards and are typically covered by a limited warranty. Specific warranty terms and conditions may vary. Please refer to the warranty documentation included with your complete HVAC system or contact Goodman customer support for details.

8.1 Customer Support

For technical assistance, warranty claims, or to locate a qualified service technician, please visit the official Goodman website or contact their customer service department. Always provide your model number (HKR-05) and serial number when seeking support.

Goodman Official Website: www.goodmanmfg.com

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