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White-Rodgers 21D64-2

White Rodgers 21D64-2 Universal Silicon Nitride Hot Surface Igniter

MODEL: 21D64-2 | BRAND: WHITE-RODGERS

1. Product Overview

The White Rodgers 21D64-2 Universal Silicon Nitride Hot Surface Igniter is designed to upgrade existing silicon carbide integrated or non-integrated ignition systems. This nitride igniter offers enhanced durability and a longer lifespan compared to traditional silicon carbide igniters. It integrates seamlessly into existing Hot Surface Igniter (HSI) systems, ensuring consistent performance for furnace ignition.

Key Features:

- Nitride Igniter with 15.5-inch leads for extended reach.
- Includes one universal mounting bracket and a screw-mounting adapter bracket for versatile installation.
- Supplied with two ceramic wire nuts for secure electrical connections.



Image 1: White Rodgers 21D64-2 Universal Silicon Nitride Hot Surface Igniter in its retail packaging, showing the igniter and installation instructions.

2. Safety Information

WARNING: Installation and service of heating equipment should be performed by a qualified installer or service agency. Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life.

- Always disconnect the electrical power supply to the furnace before attempting any installation, service, or maintenance.
- Turn off the gas supply to the furnace before working on the ignition system.
- Avoid touching the igniter element with bare hands. Oils from skin can shorten the igniter's lifespan.
- Ensure all electrical connections are secure and properly insulated using the provided ceramic wire nuts.
- Verify that the igniter is correctly positioned and securely mounted to prevent damage during operation.

3. Package Contents

The 21D64-2 kit typically includes the following components:

- 1 x White Rodgers 21D64-2 Universal Silicon Nitride Hot Surface Igniter with 15.5-inch leads.
- 1 x Universal Mounting Bracket.
- 1 x Screw-Mounting Adapter Bracket.
- 2 x Ceramic Wire Nuts.

4. Installation Instructions (Setup)

Follow these general steps for installing the 21D64-2 igniter. Always refer to your furnace manufacturer's specific instructions for detailed guidance.

1. **Safety First:** Disconnect all electrical power and turn off the gas supply to the furnace.
2. **Access Igniter:** Locate and carefully remove the access panel(s) to expose the existing hot surface igniter.
3. **Disconnect Old Igniter:** Disconnect the wiring from the old igniter and carefully unmount it from its position. Note its orientation and mounting method.
4. **Select Bracket:** Choose the appropriate universal mounting bracket or screw-mounting adapter bracket from the kit that matches your furnace's existing igniter mounting configuration.
5. **Mount New Igniter:** Securely attach the new 21D64-2 igniter to the selected bracket. Then, mount the assembly into the furnace, ensuring it is positioned correctly according to the original igniter's placement. Avoid overtightening.
6. **Wire Connections:** Connect the igniter leads to the furnace wiring using the provided ceramic wire nuts. Ensure connections are tight and secure. Do not use standard plastic wire nuts, as they may melt.
7. **Restore Access:** Replace any removed access panels.
8. **Test Operation:** Restore gas and electrical power to the furnace. Initiate a heating cycle to verify proper ignition and operation. Observe the igniter glowing and the burner igniting.



Image 2: The White Rodgers 21D64-2 igniter held in a hand, illustrating its approximate size and form factor for installation reference.

5. Operating Principles

The White Rodgers 21D64-2 igniter functions as a critical component in a Hot Surface Ignition (HSI) system. When a call for heat is initiated, the furnace control board sends voltage to the igniter, causing its silicon nitride element to heat up rapidly to a very high temperature. This glowing hot surface then ignites the gas flowing from the burner. Once the flame is established and detected by the flame sensor, the igniter's power is typically cycled off until the next call for heat. This process ensures safe and efficient ignition of the furnace burners.

6. Maintenance

Silicon nitride igniters are known for their durability and long life, requiring minimal routine maintenance. However, periodic visual inspection can help ensure continued reliable operation:

- **Visual Inspection:** During annual furnace servicing, visually inspect the igniter for any signs of cracking, chipping, or discoloration that might indicate wear or damage.
- **Cleanliness:** Ensure the igniter remains free from dust, debris, or carbon buildup, which can impede its heating efficiency. Use a soft brush or compressed air if cleaning is necessary, taking care not to damage the element.
- **Avoid Contact:** When handling, avoid touching the igniter element with bare hands. Skin oils can create hot spots and reduce the igniter's lifespan.

7. Troubleshooting

If your furnace is not igniting, consider the following troubleshooting steps related to the igniter:

- **Igniter Not Glowing:** If the igniter does not glow red when a call for heat is initiated, first check the electrical connections to ensure they are secure. Verify that the furnace is receiving power. If connections are good and power is present, the igniter may be faulty and require replacement.
- **Igniter Glows but No Ignition:** If the igniter glows but the gas does not ignite, this could indicate an issue with the gas supply, gas valve, or flame sensor. Ensure the gas supply to the furnace is open.
- **Visible Damage:** Inspect the igniter for any visible cracks, breaks, or severe discoloration. A damaged igniter will not function correctly and must be replaced.

- **Intermittent Ignition:** Loose wiring connections or a weakening igniter can cause intermittent ignition. Recheck all connections.

If troubleshooting steps do not resolve the issue, it is recommended to contact a qualified HVAC technician for diagnosis and repair.

8. Specifications

Specification	Detail
Model Name	White Rodgers 21D64-2 Universal Silicon Nitride Hot Surface Igniter
Part Number	21D64-2
Material	Silicon Nitride
Item Dimensions (L x W x H)	6.3 x 4.3 x 1.4 inches
Item Weight	0.2 Pounds
Thread Size	15.5 inch (leads)
Connector Type	Adapter
Number of Pieces	1 (igniter)
UPC	786710529443

9. OEM Cross-Reference

The White Rodgers 21D64-2 is a universal replacement igniter designed to replace over 150 types of igniters. For specific compatibility with various furnace brands and models, refer to the cross-reference chart provided on the product packaging or consult the White-Rodgers official documentation.



21D64-2

Replaces over 150 types of ignitors listed below

Universal OEM Cross Reference

Table with 5 columns listing various OEM brands and their corresponding part numbers for cross-reference. Brands include AMERICAN APPLIANCE, ENERCO TECH, MOR-FLO, ARCO AIR, Goodman/Amana, Nordyne, ARMSTRONG AIR, Carrier/Bryant/Payne, NORTON, CLAIRE BROTHERS, Coleman/EVCON, L. B. White Company, COMFORT ZONE, Luxaire/Moncrief, Detroit Radiant, MAJESTIC, DMO INDUSTRIES, Metzger, Dornback Furnace, Modine, DUCANE, and Weil McLain Co. Part numbers range from 271B to 99911564.

*For Carrier sealed combustion furnaces, you must use Assembly 6 and reuse existing orange gasket.



CONTAINS: ignitor and leads, 2 ceramic wire nuts, universal brackets, instruction booklet and furnace label

Ignitor only is CSA approved



Made in China www.white-roddgers.com www.emersonclimate.com

Image 3: Back of the White Rodgers 21D64-2 packaging, displaying a comprehensive OEM cross-reference chart for compatibility.

10. Warranty and Support

This product comes with a manufacturer's warranty. For detailed information regarding the warranty period, terms, and conditions, please refer to the documentation included with your purchase or visit the official White-Rodgers website. For technical assistance, installation queries, or warranty claims, please contact White-

Rodgers customer support directly.