

Copeland ZR72KCE-TF5-950

Copeland ZR72KCE-TF5-950 R22 Scroll Compressor User Manual

Model: **ZR72KCE-TF5-950** | Brand: **Copeland**

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Copeland ZR72KCE-TF5-950 R22 Scroll Compressor. Copeland compressors are engineered for higher efficiency, lower sound levels, superior durability, and unsurpassed reliability, offering cost-effective solutions for various HVAC/R applications. Please read this manual thoroughly before attempting any procedures.

2. SAFETY INFORMATION

WARNING: Improper installation, operation, or maintenance can result in property damage, personal injury, or death. Only qualified and authorized personnel should install or service this equipment.

- Always disconnect power before servicing the compressor.
- Ensure proper grounding to prevent electrical shock.
- Handle refrigerant with care. Refer to local regulations for proper handling and disposal.
- Wear appropriate personal protective equipment (PPE) including safety glasses and gloves.
- Do not operate the compressor if any parts are damaged or missing.
- This compressor operates with R22 refrigerant. Do not use other refrigerants unless explicitly approved by Copeland.

3. PRODUCT OVERVIEW

The Copeland ZR72KCE-TF5-950 is a 6.1 Ton R22 Scroll Compressor designed for robust performance in HVAC/R systems. It features a 73,500 BTU/HR capacity and operates on 208/230V, 3-phase power.



Figure 1: Copeland ZR72KCE-TF5-950 R22 Scroll Compressor. This image shows the main unit of the compressor, a black cylindrical device with various connection points and labels.

Key Features:

- **High Efficiency:** Engineered for optimal energy use.
- **Low Sound Levels:** Designed for quieter operation.
- **Superior Durability:** Built for long-lasting performance.
- **Unsurpassed Reliability:** Consistent and dependable operation.
- **R22 Refrigerant Compatibility:** Specifically designed for R22 systems.
- **Line Size:** 1/2" ODF Discharge & 7/8" ODF Suction.



Figure 2: Genuine Copeland Compressor Seal. This image displays a circular stamp with the text "GENUINE COPELAND COMPRESSOR" indicating authenticity.

4. SETUP AND INSTALLATION

Installation should only be performed by a certified HVAC technician. Refer to the system manufacturer's guidelines for specific installation procedures.

1. **Unpacking:** Carefully remove the compressor from its packaging. Inspect for any shipping damage.
2. **Mounting:** The compressor features a mounting base of 7-1/2" x 7-1/2". Ensure the mounting surface is level and capable of supporting the compressor's weight (approximately 125 lbs). Additional mounting hardware may be required.
3. **Piping Connections:** Connect the suction line to the 7/8" ODF suction port and the liquid line to the 1/2" ODF discharge port. Ensure all connections are clean and properly brazed to prevent leaks.
Note: Piping and mounting may not be as shown in general product images; refer to actual unit for precise configuration.
4. **Electrical Wiring:** Connect the compressor to a 208/230V, 3-phase power supply. Follow all local electrical codes and the wiring diagram provided with your HVAC system. Ensure correct phase rotation.
5. **Evacuation and Charging:** Evacuate the system to a deep vacuum. Charge the system with R22 refrigerant according to the system manufacturer's specifications.
6. **Leak Check:** Perform a thorough leak check on all connections.

Important Note: Cross-reference comparisons do not imply that all products compared are exact in reference to form, fit, and function. Review specifications carefully prior to purchase. Additional mounting, piping, and field modifications may be required.

5. OPERATING INSTRUCTIONS

Once installed and charged, the compressor operates as part of the overall HVAC/R system. Ensure the

system controls are correctly configured.

- **Initial Startup:** After installation, allow the system to stabilize before initial startup. Monitor pressures and temperatures.
- **Normal Operation:** The compressor will cycle on and off as dictated by the system's thermostat and controls to maintain desired temperature.
- **Monitoring:** Regularly monitor system performance, including suction and discharge pressures, superheat, and subcooling.

6. MAINTENANCE

Regular maintenance is crucial for the longevity and efficient operation of your compressor. All maintenance should be performed by qualified personnel.

- **Annual Inspection:** Have a qualified technician inspect the compressor and system annually.
- **Cleanliness:** Keep the area around the compressor clean and free of debris to ensure proper airflow and heat dissipation.
- **Electrical Connections:** Periodically check electrical connections for tightness and signs of corrosion.
- **Refrigerant Levels:** Ensure proper refrigerant charge. Low or high charge can lead to compressor damage.
- **Oil Analysis:** For critical applications, periodic oil analysis can help detect potential issues early.

7. TROUBLESHOOTING

This section provides general guidance for common issues. For complex problems, contact a qualified HVAC technician.

Problem	Possible Cause	Solution
Compressor not starting	No power, faulty thermostat, tripped breaker, motor overload.	Check power supply, reset breaker, inspect thermostat, check motor protector.
Compressor running but no cooling	Low refrigerant charge, restricted airflow, faulty expansion valve.	Check refrigerant levels, clean coils, inspect expansion valve.
Unusual noise from compressor	Loose mounting, internal mechanical issue, liquid slugging.	Check mounting bolts, consult technician for internal issues, ensure proper superheat.
High discharge pressure	Overcharge of refrigerant, dirty condenser coil, non-condensables in system.	Verify charge, clean condenser, evacuate and recharge system.

8. SPECIFICATIONS

Specification	Value
Model Number	ZR72KCE-TF5-950

Specification	Value
Capacity	73,500 BTU/HR (6.1 Ton)
Refrigerant	R22
Voltage	208/230V
Phase	3 (Three)
Discharge Connection Size	1/2" ODF
Suction Connection Size	7/8" ODF
Mounting Base	7-1/2" x 7-1/2"
Product Dimensions	48 x 48 x 48 inches
Item Weight	125 Pounds
Manufacturer	Copeland - Emerson
Special Features	Silent Operation, Heavy Duty, Unique Line Size Design

9. WARRANTY AND SUPPORT


For technical support or inquiries, please contact your authorized Copeland distributor or service center. Please note the following regarding returns:

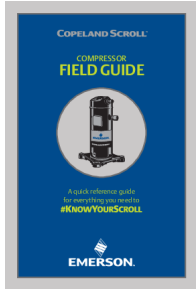
- **Return Policy:** This item is generally *not eligible for return*. Please verify with your point of purchase for specific return policies.
- **Protection Plans:** Third-party protection plans may be available for purchase separately.

Always refer to the official Copeland website or documentation for the most current warranty information.

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Related Documents - ZR72KCE-TF5-950

	<p>Copeland Scroll Compressor Training Kit - Instruction Guide</p> <p>An instructional guide for the Copeland Scroll compressor training kit, providing an overview, assembly instructions, technical details, and learning resources for HVACR professionals.</p>
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[Copeland Scroll Compressor Field Guide](#)

A comprehensive reference guide for Emerson's Copeland Scroll compressors, detailing mobile app features, refrigerants, oils, product families, nomenclature, and manufacturing information for HVACR professionals.



[Copeland Scroll™ X-Line Outdoor Refrigeration Unit User Manual \(AE5-1412 R2\)](#)

User manual for Emerson's Copeland Scroll™ X-Line Outdoor Refrigeration Units (Model AE5-1412 R2). Provides detailed guidance on installation, operation, safety, diagnostics, and troubleshooting for HVACR professionals.



[Copeland Scroll IZSI Condensing Unit User Manual](#)

Comprehensive user manual for Copeland Scroll IZSI condensing units, detailing installation, operation, maintenance, safety, and technical specifications for refrigeration applications. Learn about scroll compressor technology and CoreSense features.



[Copeland Scroll Compressors ZP*K6 Series: Application Engineering Bulletin AE4-1400 R2](#)

Technical bulletin detailing the application, features, safety, and service procedures for Emerson's Copeland Scroll ZP*K6 R-410A compressors, covering installation, operation, and troubleshooting for HVAC/R systems.



[Copeland Scroll Compressors Sound Jacket Installation Instructions](#)

Detailed installation instructions for Copeland scroll compressors sound jackets, covering introduction, installation steps, and general recommendations for optimal sound attenuation.