

Copeland RST70C1E-TA5-901

Copeland RST70C1E-TA5-901 Medium Temperature Welded Compressor User Manual

Model: RST70C1E-TA5-901 | **Brand:** Copeland

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Copeland RST70C1E-TA5-901 Medium Temperature Welded Compressor. Please read this manual thoroughly before attempting any procedures to ensure proper handling and to prevent equipment damage or personal injury.

The Copeland RST70C1E-TA5-901 is a robust welded compressor designed for medium temperature refrigeration applications, operating on 208-230V, 3-phase power, and utilizing R404A refrigerant.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read and understand all instructions completely before proceeding.

- Always disconnect power before servicing the compressor.
- Ensure proper grounding to prevent electrical shock.
- Refrigerant systems operate under high pressure. Exercise extreme caution when handling refrigerants.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Only qualified and trained personnel should install, operate, or service this equipment.
- Do not operate the compressor in an explosive atmosphere.

3. PRODUCT OVERVIEW

The Copeland RST70C1E-TA5-901 is a hermetic welded compressor engineered for reliable performance in medium temperature refrigeration systems. Its design ensures durability and efficiency for various

commercial and industrial applications.



An image showing the Copeland RST70C1E-TA5-901 Medium Temperature Welded Compressor. The compressor is black, cylindrical with a rounded top, and features copper tubing connections on the side. It is mounted on four rubber feet.

Key Features:

- Designed for R404A refrigerant.
- Operates on 208-230V, 3-phase power supply.
- Welded hermetic construction for enhanced durability.
- Suitable for medium temperature refrigeration applications.

4. SETUP AND INSTALLATION

Proper installation is crucial for the compressor's performance and longevity. Follow these guidelines carefully:

4.1 Unpacking and Inspection

- Carefully remove the compressor from its packaging.
- Inspect for any visible damage incurred during shipping. Report any damage to the carrier immediately.
- Verify that the model number on the compressor matches your order.

4.2 Mounting

- Mount the compressor on a level, stable surface capable of supporting its weight (approximately 48 lbs).
- Utilize the provided mounting feet to minimize vibration transmission.
- Ensure adequate clearance around the compressor for proper airflow and future servicing.

4.3 Electrical Connections

- Ensure the power supply is disconnected before making any electrical connections.
- Connect the compressor to a 208-230V, 3-phase power supply as per local electrical codes and the wiring diagram provided with your refrigeration system.
- Verify proper grounding.
- All wiring should be performed by a licensed electrician.

4.4 Refrigerant System Connection

- Connect the suction and discharge lines to the appropriate ports on the compressor.
- Use proper brazing techniques to ensure leak-free connections.
- Evacuate the refrigeration system to a deep vacuum (typically 500 microns or less) to remove non-condensable gases and moisture.
- Charge the system with R404A refrigerant according to the system manufacturer's specifications.

5. OPERATING INSTRUCTIONS

Once installed and charged, the compressor is ready for operation.

5.1 Initial Startup

1. Ensure all electrical and refrigerant connections are secure and leak-free.
2. Restore power to the refrigeration system.
3. Monitor the system pressures (suction and discharge) and temperatures during the initial startup.
4. Verify that the compressor is running smoothly and quietly.

5.2 Normal Operation

The compressor is designed for continuous operation within its specified operating envelope. Refer to the system manufacturer's guidelines for optimal setpoints and control parameters.

5.3 Shutdown

For temporary shutdown, simply turn off the refrigeration system's main power switch. For extended periods of inactivity or maintenance, disconnect the main power supply to the entire system.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your compressor.

6.1 Routine Checks (Monthly)

- Inspect for any unusual noises or vibrations.
- Check for refrigerant leaks around connections using a leak detector.
- Monitor system pressures and temperatures to ensure they are within normal operating ranges.
- Visually inspect electrical connections for signs of wear or overheating.

6.2 Annual Service

- Have a qualified technician perform a comprehensive system check.
- Verify refrigerant charge and oil levels (if applicable to the system design).
- Clean condenser and evaporator coils to maintain system efficiency.

7. TROUBLESHOOTING

This section provides solutions to common operational issues. For complex problems, contact a qualified refrigeration technician.

Problem	Possible Cause	Solution
---------	----------------	----------

Problem	Possible Cause	Solution
Compressor not starting	No power; tripped breaker; faulty wiring; control issue.	Check power supply and breaker; inspect wiring; consult system wiring diagram.
Compressor runs continuously	Low refrigerant charge; dirty coils; oversized load; faulty thermostat.	Check for leaks and recharge; clean coils; verify load requirements; test thermostat.
High discharge pressure	Dirty condenser; overcharge of refrigerant; non-condensables in system.	Clean condenser; recover and recharge refrigerant; evacuate and recharge system.
Low suction pressure	Low refrigerant charge; restricted expansion valve; clogged filter drier.	Check for leaks and recharge; inspect/replace expansion valve; replace filter drier.

8. SPECIFICATIONS

Detailed technical specifications for the Copeland RST70C1E-TA5-901 Compressor:


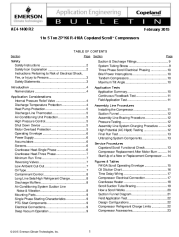
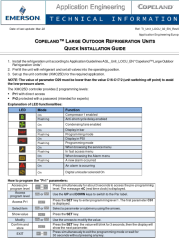

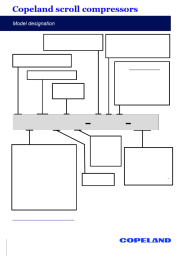

- **Model Number:** RST70C1E-TA5-901
- **Brand:** Copeland
- **Voltage:** 208-230 Volts
- **Phase:** 3 Phase
- **Refrigerant:** R404A
- **Maximum Power:** 3 Horsepower
- **Item Weight:** 48 Pounds
- **Package Dimensions:** 8 x 8 x 8 inches
- **Style:** Portable (Note: This refers to the compressor unit itself, not necessarily the entire refrigeration system)
- **Manufacturer:** COPELAND
- **ASIN:** B082MQQYLC
- **Date First Available:** December 11, 2019

9. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation provided at the time of purchase or contact your authorized Copeland distributor. General warranty terms typically cover manufacturing defects under normal use and service conditions.

For technical support, service, or replacement parts, please contact your local Copeland representative or an authorized service center. When contacting support, please have your compressor model number (RST70C1E-TA5-901) and serial number readily available.

Related Documents - RST70C1E-TA5-901

	<p>LAHA-032E-TAC Copeland Compressor Service Parts List</p> <p>Comprehensive service parts list for the Copeland LAHA-032E-TAC HFC, R-507, 60Hz, 3-Phase, 208/230 V low temperature compressor, detailing components, quantities, and descriptions for maintenance and repair.</p>
	<p>Copeland Scroll Compressors ZP*K6 Series: Application Engineering Bulletin AE4-1400 R2</p> <p>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.</p>
	<p>Copeland™ Large Outdoor Refrigeration Units Quick Installation Guide</p> <p>Quick installation guide for Copeland™ Large Outdoor Refrigeration Units, covering parameter settings, LED indicators, and basic setup for XMC25D controllers. Includes essential Pr1 parameter verification and notes on common installation issues.</p>
	<p>Copeland™ Scroll ZBKQ Compressor for Refrigeration Applications Product Catalogue</p> <p>Emerson's Copeland™ Scroll ZBKQ Compressor series offers robust, reliable, and efficient solutions for commercial refrigeration. This product catalogue details the features, benefits, technical specifications, performance data, and installation guidance for a comprehensive range of models, supporting applications with various refrigerants including R22, R404A, R134a, and more.</p>
	<p>Copeland Scroll Compressor Model Designation Guide</p> <p>A technical guide to understanding and deciphering Copeland scroll compressor model numbers, covering motor types, capacity, voltage, and application ranges.</p>
	<p>Copeland Scroll™ ZF**KAE Compressors: Application Guidelines for Low Temperature</p> <p>Comprehensive application guidelines for Copeland Scroll™ ZF**KAE low-temperature refrigeration compressors, covering safety, operating principles, installation, service, and troubleshooting.</p>

