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› Supco BC28X100 Cap Tube Instruction Manual

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Supco BC28X100 Cap Tube Instruction Manual

Model: BC28X100 | Brand: Supco

INTRODUCTION

This manual provides essential information for the proper handling, installation, and maintenance of the Supco BC28X100 Cap Tube. This genuine OEM capillary tube is designed for precise flow control in various refrigeration and HVAC systems. Adhering to these instructions will ensure optimal performance and longevity of the component.



This image displays the Supco BC28X100 capillary tube, coiled for packaging. The tube is made of copper and features small yellow protective caps on both ends to prevent contamination during storage and transport.

SAFETY INFORMATION

Always prioritize safety when working with tools and refrigeration components. Failure to follow safety guidelines can result in injury or damage to equipment.

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves, when handling and cutting tubing.
- Use proper tubing cutters to ensure clean, burr-free cuts. Avoid using pliers or other tools that may deform the tube.

- Be aware of sharp edges after cutting.
- Ensure proper ventilation if brazing or soldering is required for installation.
- Keep the tube ends capped until installation to prevent contamination from dirt, moisture, or debris.

SETUP

Proper setup is crucial for the accurate metering function of the capillary tube.

1. **Uncoiling:** Carefully uncoil the required length of capillary tube. Avoid kinking or sharply bending the tube, as this can restrict flow and impair performance.
2. **Measuring and Cutting:** Measure the exact length required for your application. Capillary tube length and internal diameter are critical for proper refrigerant flow. Use a specialized capillary tube cutter or a sharp tubing cutter to make a clean, square cut. Ensure no burrs are left inside the tube.
3. **Cleaning:** Before installation, ensure the internal and external surfaces of the cut tube are clean and free of any debris or contaminants.
4. **Installation:** Connect the capillary tube to the system components (e.g., condenser outlet and evaporator inlet) using appropriate brazing or flaring techniques as per system specifications. Ensure all connections are leak-free.
5. **System Evacuation:** After installation, evacuate the refrigeration system thoroughly to remove all non-condensable gases and moisture before charging with refrigerant.

OPERATING PRINCIPLES

The Supco BC28X100 capillary tube functions as a fixed metering device in refrigeration and air conditioning systems. It controls the flow of refrigerant from the high-pressure condenser to the low-pressure evaporator. The precise internal diameter (.028 ID) and length of the tube create a pressure drop, allowing the liquid refrigerant to flash into a vapor-liquid mixture as it enters the evaporator, facilitating the cooling process.

Unlike thermostatic expansion valves (TXVs), capillary tubes do not have moving parts and provide a constant flow restriction. Their performance is highly dependent on the system's design and operating conditions.

MAINTENANCE

Capillary tubes are generally low-maintenance components due to their simple design. However, periodic inspection of the refrigeration system can help identify potential issues.

- **Visual Inspection:** Periodically inspect the exposed sections of the capillary tube for any signs of physical damage, kinks, or corrosion.
- **Leak Detection:** Check all brazed or flared connections for refrigerant leaks using appropriate leak detection methods.
- **System Performance Monitoring:** Monitor the overall performance of the refrigeration system. A significant drop in cooling capacity or unusual pressure readings may indicate an issue with the capillary tube or other system components.

TROUBLESHOOTING

Issues related to capillary tubes often manifest as poor system performance. Here are some common problems and potential causes:

Symptom	Possible Cause	Solution
Poor Cooling / High Suction Pressure	Partially blocked capillary tube (e.g., moisture, debris, oil slug)	Evacuate and flush system, replace filter-drier, replace capillary tube if blockage persists.

Symptom	Possible Cause	Solution
Poor Cooling / Low Suction Pressure	Refrigerant undercharge or leak	Locate and repair leak, recharge system to correct specifications.
Excessive Compressor Cycling	Incorrect capillary tube length/ID for system, or system overcharge	Verify correct capillary tube specifications; adjust refrigerant charge.
No Cooling	Completely blocked capillary tube	Replace capillary tube. Investigate source of blockage (e.g., system contamination).

Note: Troubleshooting refrigeration systems often requires specialized knowledge and tools. If you are unsure, consult a qualified HVAC/R technician.

SPECIFICATIONS

Detailed specifications for the Supco BC28X100 Cap Tube:

- Part Number:** BC28X100
- Internal Diameter (ID):** 0.028 inches
- Length:** 100 feet (1200 inches)
- Material:** Copper
- Item Package Quantity:** 1
- Measurement System:** English
- ASIN:** B00IYY5PMW
- UPC:** 687152212224
- Typical Application:** Refrigeration and HVAC systems as a metering device.

WARRANTY AND SUPPORT

For specific warranty information regarding the Supco BC28X100 Cap Tube, please refer to the documentation provided with your purchase or visit the official Supco website. For technical support, product inquiries, or assistance with troubleshooting beyond the scope of this manual, please contact Supco customer service directly. Contact information can typically be found on the manufacturer's website or product packaging. You may also find additional resources and frequently asked questions on the [Supco official website](#).

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question