

Taco 003-BC4-PNP

Taco 003-BC4-PNP Bronze Circulator User Manual

Model: 003-BC4-PNP

1. INTRODUCTION

This manual provides essential instructions for the safe installation, operation, and maintenance of the Taco 003-BC4-PNP Bronze Circulator. This circulator is designed for efficient circulation of hot or chilled fresh water in various applications, including domestic hot water recirculation, heat recovery units, water source heat pumps, and potable water systems. Please read this manual thoroughly before installation and operation to ensure proper function and longevity of the unit.

2. SAFETY INFORMATION

- Always disconnect power before servicing the unit.
- Installation and servicing must be performed by qualified personnel in accordance with local codes and regulations.
- Ensure proper grounding to prevent electrical shock.
- Do not operate the circulator without water in the system.
- Wear appropriate personal protective equipment (PPE) during installation and maintenance.
- The circulator operates at 115 Volts. Verify power supply matches unit requirements.

3. PRODUCT OVERVIEW

The Taco 003-BC4-PNP is a compact, bronze circulator pump featuring a 1/2-inch sweat connection, a line cord for power, and an integrated analog timer. Its robust bronze construction makes it suitable for potable water applications. The unique replaceable cartridge design simplifies maintenance by containing all moving parts.



Figure 1: Taco 003-BC4-PNP Bronze Circulator. This image displays the complete circulator unit, highlighting its bronze pump housing, motor, and the electrical connection box on top. The 1/2-inch sweat connection point is visible on the pump volute.

4. SETUP AND INSTALLATION

4.1 Pre-Installation Checks

- Inspect the circulator for any shipping damage.
- Ensure the installation location provides adequate space for maintenance and ventilation.
- Confirm that the system fluid is compatible with bronze construction.

4.2 Mounting

The circulator is designed for wall mount installation. Securely fasten the unit to a stable surface using appropriate hardware. Ensure the motor is level to prevent premature wear.

4.3 Plumbing Connections

Connect the circulator to the system piping using the 1/2-inch sweat connections. Ensure all connections are watertight. Use appropriate soldering techniques for sweat connections, taking care not to overheat the circulator body.

4.4 Electrical Connections

The unit comes with a line cord. Connect the line cord to a dedicated 115 Volt, 60 Hz grounded electrical outlet. Ensure the circuit is protected by a fuse or circuit breaker of appropriate rating. The circulator consumes 200 watts.

5. OPERATING INSTRUCTIONS

5.1 Initial Startup

1. Ensure the system is filled with water and properly vented to remove air.
2. Verify all plumbing and electrical connections are secure.
3. Plug the line cord into the grounded outlet. The circulator will begin operation according to the timer settings.

5.2 Analog Timer Operation

The integrated analog timer allows for scheduled operation of the circulator. Refer to the timer's specific instructions for setting desired on/off periods. Typically, pins or segments on the timer dial are used to designate operating times. Ensure the current time is correctly set on the timer for accurate scheduling.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your circulator.

6.1 Replaceable Cartridge

The Taco 003-BC4-PNP features a unique replaceable cartridge (part number 007-003RP) that contains all moving parts. This design allows for easy service. To replace the cartridge:

1. Disconnect power to the circulator.
2. Close isolation valves on both sides of the circulator to drain the unit.
3. Remove the bolts securing the motor housing to the pump volute.
4. Carefully remove the old cartridge.
5. Install the new cartridge, ensuring the O-ring is properly seated.
6. Reassemble the unit, open isolation valves, and restore power.

Always use genuine Taco replacement parts for best results.

6.2 General Inspection

Periodically inspect the circulator for leaks, unusual noises, or vibrations. Ensure electrical connections are tight and free from corrosion. Keep the area around the circulator clean and free of obstructions.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your circulator.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Circulator does not run	No power; faulty wiring; seized motor; timer not set correctly.	Check power supply and circuit breaker. Verify wiring. Inspect motor for obstructions. Adjust timer settings.
Noisy operation	Air in system; cavitation; worn bearings; foreign object in pump.	Bleed air from system. Ensure adequate water pressure. Replace cartridge if bearings are worn. Inspect pump for debris.
Leaking from pump	Loose connections; damaged O-ring or gasket; cracked housing.	Tighten plumbing connections. Replace O-ring or gasket (part of cartridge). Inspect housing for damage.
Insufficient flow	Clogged impeller; air in system; incorrect piping; undersized unit.	Inspect and clean impeller. Bleed air from system. Verify piping configuration. Consult a professional if unit is undersized.

If troubleshooting steps do not resolve the issue, contact a qualified service technician.

8. SPECIFICATIONS

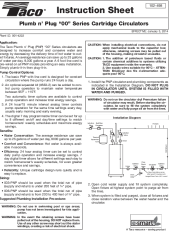


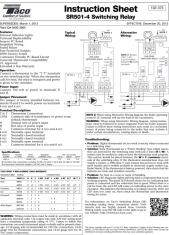

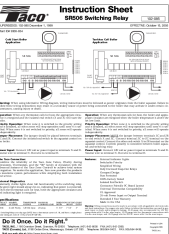
Model	003-BC4-PNP
Brand	Taco
Material	Bronze
Connection Size	1/2-Inch Sweat
Voltage	115 Volts
Wattage	200 Watts
Item Weight	5.5 pounds
Product Dimensions	5 x 4 x 7 inches
Mounting Type	Wall Mount
Upper Temperature Rating	32.02 Degrees Celsius
Lower Temperature Rating	30 Degrees Celsius
Included Components	003-BC4-PNP (Circulator with Line Cord and Analog Timer)
Replaceable Cartridge O-Ring	007-003RP

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Taco website or contact their customer service department. Keep your purchase receipt as proof of purchase.

For further assistance, you may visit the [Taco brand page on Amazon](#) or contact your local distributor.

Related Documents - 003-BC4-PNP

	<p>Taco Plumb n' Plug "00" Series Cartridge Circulators - Instruction Sheet</p> <p>Comprehensive instructions for installing and operating Taco's Plumb n' Plug (PNP) "00" Series cartridge circulators. This guide details application, pump control options, benefits like water conservation and comfort, sizing guidelines, plumbing installation procedures, and programming instructions for both analog and digital timers. It also includes a limited warranty statement.</p>
	<p>Taco Timer and Aquastat Instruction Sheet - Installation and Operation</p> <p>Detailed instruction sheet for Taco's Timer and Aquastat combination units (models 265-1, 265-3, 563-2). Covers application, installation, electrical hook-up, analog and digital timer programming, and warranty information.</p>
	<p>Taco Hot-LinkPlus-e: High-Efficiency Hot Water Recirculation System Installation & Specs</p> <p>Learn about the Taco Hot-LinkPlus-e system, an ECM high-efficiency hot water recirculation system. Features include instant hot water, water savings, SmartPlug control, and easy installation without a dedicated return line. Includes technical specifications and installation guide.</p>
	<p>Taco SR501-4 Switching Relay Instruction Sheet and Wiring Guide</p> <p>Detailed instruction sheet for the Taco SR501-4 Switching Relay, covering features, operation, wiring diagrams, specifications, troubleshooting, and warranty information for HVAC professionals.</p>
	<p>Taco 0026e ECM High-Efficiency Circulator Instruction Sheet</p> <p>Instruction sheet for the Taco 0026e ECM High-Efficiency Circulator, detailing its features, applications, installation, wiring, programming, and troubleshooting. This variable speed circulator offers significant energy savings and replaces older single and 3-speed models.</p>
	<p>Taco SR506 Switching Relay Instruction Sheet</p> <p>Instruction sheet for the Taco SR506 Switching Relay, detailing wiring diagrams, operation, priority settings, jumper placement, power input, external diagnostics, and specifications for both Cold Start Boiler and Tankless Coil Boiler applications. Includes features and manufacturer information.</p>

