

ProCom TC

ProCom Ventless Thermocouple Model TC Instruction Manual

Brand: ProCom | Model: TC

INTRODUCTION

The ProCom Ventless Thermocouple Model TC is a critical safety component designed for use in various gas heating appliances, including ventless gas fireplaces, wall heaters, patio heaters, and fire pits. Its primary function is to detect the presence of a pilot flame. If the pilot flame extinguishes, the thermocouple signals the gas valve to shut off the gas supply, preventing the release of unburnt gas and ensuring safe operation of the appliance.

This manual provides detailed instructions for the proper installation, operation, maintenance, and troubleshooting of your ProCom Ventless Thermocouple Model TC. Please read all instructions carefully before proceeding with installation or maintenance.

SETUP AND INSTALLATION

Proper installation of the thermocouple is essential for the safe and efficient operation of your gas appliance. If you are unsure about any step, it is recommended to consult a qualified service technician.

Safety Precautions:

- **Turn off Gas Supply:** Before beginning any work, ensure the gas supply to the appliance is completely shut off at the main valve.
- **Disconnect Power:** If the appliance has an electrical connection, disconnect it.
- **Allow to Cool:** Ensure the appliance has cooled down completely before handling any components to prevent burns.
- **Ventilation:** Work in a well-ventilated area.

Installation Steps:

1. **Access the Pilot Assembly:** Carefully remove any covers or panels necessary to access the pilot light assembly where the thermocouple is located.
2. **Disconnect Old Thermocouple:** Locate the existing thermocouple. It will typically have a small copper

tube leading from the pilot assembly to the gas valve. Disconnect the lead from the gas valve (usually a threaded connection).

3. **Remove Mounting Hardware:** Unfasten any clips, screws, or nuts that secure the thermocouple tip within the pilot assembly.
4. **Remove Old Thermocouple:** Carefully remove the old thermocouple from the appliance.
5. **Position New Thermocouple:** Insert the new ProCom Model TC thermocouple into the pilot assembly. Ensure the tip of the thermocouple is positioned correctly within the pilot flame, typically about 3/8 to 1/2 inch into the flame, as specified by your appliance's manufacturer.
6. **Secure Mounting:** Secure the thermocouple with its mounting hardware (e.g., M8x1 connection nuts, clips). Ensure it is firmly in place but do not overtighten.
7. **Connect to Gas Valve:** Connect the lead of the new thermocouple to the gas valve. Hand-tighten first, then use a wrench to tighten securely, but avoid overtightening to prevent damage.
8. **Check for Leaks:** After installation, turn the gas supply back on. Apply a soapy water solution to all gas connections. If bubbles appear, there is a leak. Tighten the connection or re-seal as necessary.
9. **Test Operation:** Follow your appliance's instructions to light the pilot and main burner to ensure proper operation.

Installation Videos:

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Video Description: This video demonstrates the features and application of a 39.5-inch M8x1 gas heater thermocouple, highlighting its high-quality copper material and temperature resistance. It shows the thermocouple's length, end connection nuts, and its suitability for gas fireplaces, patio heaters, and fire pits.

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Video Description: This video provides a close-up view of a replacement thermocouple, showcasing its design and components. It is presented as a replacement part for Desa LP Vent Free Wall heaters, demonstrating its physical characteristics.

OPERATING INSTRUCTIONS

The ProCom Ventless Thermocouple Model TC is a passive safety device that works in conjunction with your appliance's gas valve. It does not require direct user operation.

- **Flame Detection:** When the pilot light is lit, the thermocouple's tip is heated, generating a small electrical current (millivoltage). This current holds the gas valve open, allowing gas to flow to the pilot and main burner.
- **Safety Shut-off:** If the pilot flame goes out for any reason, the thermocouple cools down, and the electrical current ceases. This causes the gas valve to close, stopping the flow of gas to the appliance and preventing a dangerous gas buildup.
- **Normal Operation:** For your appliance to operate correctly, the pilot flame must consistently heat the thermocouple tip. If the pilot light struggles to stay lit, it may indicate an issue with the thermocouple or pilot assembly.

MAINTENANCE

Regular inspection and occasional cleaning can help ensure the longevity and reliable operation of your ProCom Ventless Thermocouple.

- **Annual Inspection:** It is recommended to inspect the thermocouple annually, or more frequently if the appliance is used heavily.

- **Visual Check:** Look for any signs of physical damage, such as bends, kinks, or corrosion on the copper tube or the tip.
- **Clean the Tip:** If soot or carbon buildup is visible on the thermocouple tip, gently clean it with a soft brush or fine-grit sandpaper. Ensure the gas supply is off and the appliance is cool before cleaning. Excessive buildup can insulate the tip, preventing it from generating sufficient millivoltage.
- **Proper Positioning:** Verify that the thermocouple tip remains correctly positioned within the pilot flame.

TROUBLESHOOTING

If your gas appliance is experiencing issues related to the pilot light or main burner ignition, the thermocouple may be a contributing factor. Here are some common symptoms and solutions:

Symptom: Pilot light will not stay lit after releasing the pilot button.

- **Possible Cause 1:** Thermocouple tip is not adequately heated by the pilot flame.
- **Solution:** Check the positioning of the thermocouple tip. It should be fully enveloped by the pilot flame. Adjust if necessary.
- **Possible Cause 2:** Soot or carbon buildup on the thermocouple tip.
- **Solution:** Turn off the gas supply and allow the appliance to cool. Gently clean the thermocouple tip with a soft brush or fine-grit sandpaper.
- **Possible Cause 3:** Weak or faulty thermocouple.
- **Solution:** If positioning and cleaning do not resolve the issue, the thermocouple may be worn out or defective and requires replacement.
- **Possible Cause 4:** Faulty gas valve.
- **Solution:** If a new, properly installed thermocouple does not resolve the issue, the gas valve itself may be faulty. This requires professional service.

Symptom: Main burner does not ignite, or shuts off unexpectedly, but the pilot light remains lit.

- **Possible Cause:** While less common if the pilot stays lit, a weak thermocouple signal could still be an issue, or there might be other problems with the gas valve or appliance controls.
- **Solution:** Ensure the pilot flame is strong and consistently heating the thermocouple. If the issue persists, consult your appliance's manual or a qualified technician, as the problem may lie beyond the thermocouple.

SPECIFICATIONS

Model	TC
Length	Approximately 39.5 inches (100 cm)
Connection Type	M8x1 Threaded Connection
Material	High-Quality Copper
Millivolt Output	30 Millivolt (typical)
Temperature Resistance	Up to 650°C

Compatibility	Suitable for various ventless gas heating appliances (fireplaces, wall heaters, patio heaters, fire pits) requiring a 30mV thermocouple with M8x1 connection.
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WARRANTY AND SUPPORT

For warranty information, technical assistance, or to inquire about replacement parts, please contact ProCom customer service. Keep your purchase receipt as proof of purchase for any warranty claims.

Contact Information: Please refer to the ProCom official website or your product packaging for the most current customer service contact details.