

Robertshaw 700-504

Robertshaw 700-504 Millivolt Combination Gas Valve Instruction Manual

Model: **700-504** | Brand: **Robertshaw**

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Robertshaw 700-504 Millivolt Combination Gas Valve. This control is designed for use with wall thermostat-actuated systems and integrates a manual gas cock, an automatic pilot safety valve, and a millivolt operator. The automatic pilot safety mechanism ensures gas shutoff in the event of a pilot outage.

For additional product information, please visit the [Robertshaw Store](#).

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Read and understand these instructions thoroughly before installing or servicing this equipment.

- Installation and service must be performed by a qualified installer, service agency, or gas supplier.
- Ensure all gas connections are properly sealed and leak-tested before operation.
- Do not attempt to operate the valve if any part has been submerged in water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system that has been submerged.
- Always turn off the main gas supply before performing any service or maintenance.
- Verify proper ventilation in the area where the gas valve is installed.

3. PRODUCT OVERVIEW

The Robertshaw 700-504 Millivolt Combination Gas Valve is a robust control unit designed for various gas appliances. It integrates several critical functions into a single compact device.

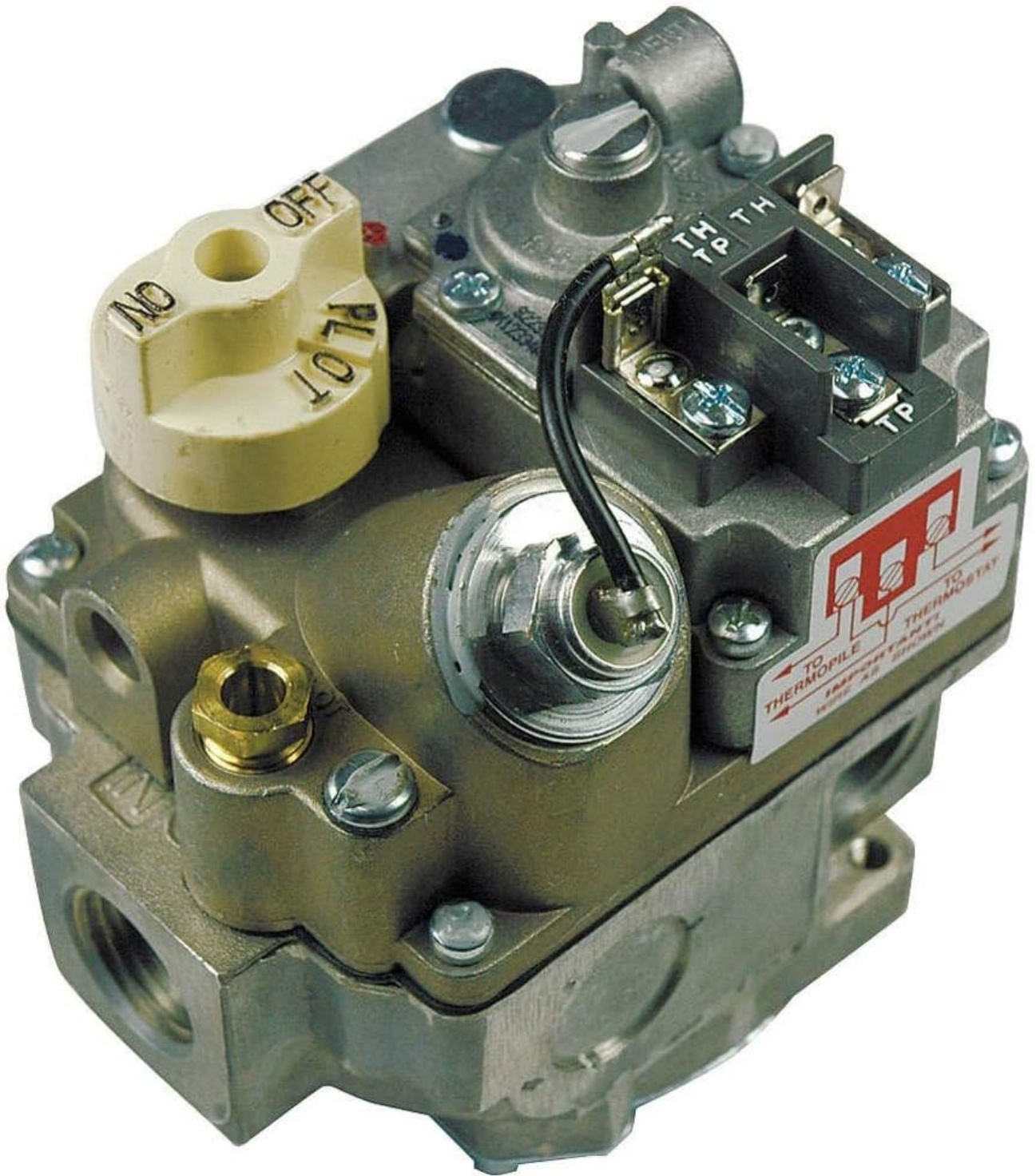


Figure 1: Robertshaw 700-504 Millivolt Combination Gas Valve. This image displays the overall structure of the gas valve, highlighting its various components such as the manual gas cock, pilot outlet, and electrical terminals.

Key Components:

- **Manual Gas Cock:** Allows for manual control of gas flow (ON/OFF/PILOT).
- **Automatic Pilot Safety Valve:** Shuts off gas supply if the pilot flame is extinguished.
- **Millivolt Operator:** Responds to thermostat signals to open and close the main gas valve.
- **Pilot Outlet:** Connection point for the pilot gas line.
- **Regulator Vent:** Ensures proper pressure regulation.
- **Thermostat/Thermopile Terminals:** Electrical connections for the thermostat and thermopile.
- **Metal Filter Screen:** Located at the outlet to prevent debris from entering the system.

Product Demonstration (700 Series):

The following videos provide a visual overview of the Robertshaw 700 series millivolt gas valves, demonstrating key features and components. While the specific model shown in the videos is 700-506, the general design and functionality are similar across the 700 series, including the 700-504 model.

Video 1: Overview of a 700-506 Millivolt Combination Gas Valve. This video highlights the various parts of the gas valve, including the gas cock dial, pilot outlet, regulator vent, and thermostat/thermopile connections. It also shows the inlet and outlet sizes and the metal filter screen.

Video 2: Detailed look at the 700-506 Gas Valve. This video provides a closer inspection of the gas valve's features, including the gas cock dial, pilot outlet, regulator vent, and the metal filter screen at the outlet. It also details the inlet and outlet connection types and sizes.

Video 3: 700 Series Millivolt Gas Valve Parts. This video showcases the components of a 700 series millivolt gas valve, emphasizing its construction and the various connection points. It provides a comprehensive view of the valve from multiple angles.

4. SPECIFICATIONS

Feature	Detail
Brand	Robertshaw
Model Number	700-504
Item Weight	2 pounds
Product Dimensions (L x W x H)	4 x 4 x 4 inches
Inlet Connection Size	4 Inches (Note: Product title indicates 1/2" x 3/4", please verify with product labeling)
Inlet Connection Type	Flare
Outlet Connection Type	Flare
Number of Ports	2
Global Trade Identification Number (GTIN)	00662013632847
UPC	696333261166, 662013632847
Manufacturer	Park Supply of America
Batteries Included?	No
Batteries Required?	No

5. SETUP AND INSTALLATION

Installation of this gas valve should only be performed by a qualified professional in accordance with all local codes and regulations.

General Installation Steps:

- 1. Turn Off Gas Supply:** Ensure the main gas supply to the appliance is completely shut off.
- 2. Disconnect Power:** Disconnect all electrical power to the appliance.

3. **Remove Old Valve:** Carefully disconnect and remove the existing gas valve, noting all connections (gas lines, electrical wiring).
4. **Prepare New Valve:** Inspect the new Robertshaw 700-504 valve for any damage. Ensure all necessary fittings are available.
5. **Install New Valve:** Mount the new valve in the correct orientation. The valve can be mounted in any position except upside down.
6. **Connect Gas Lines:** Connect the gas inlet and outlet lines to the valve. Use appropriate pipe sealant on all threaded connections to prevent leaks.
7. **Connect Electrical Wiring:** Connect the thermostat and thermopile wires to the designated terminals (TH, TP, TH/TP) as indicated on the valve label. Refer to the appliance manufacturer's wiring diagram.
8. **Leak Test:** After all connections are made, slowly turn on the main gas supply. Use a soap solution to check all gas connections for leaks. Bubbles indicate a leak. Tighten connections as needed and re-test.
9. **Restore Power:** Once leak testing is complete and no leaks are detected, restore electrical power to the appliance.

6. OPERATING INSTRUCTIONS

Follow these steps to safely operate your appliance with the Robertshaw 700-504 Millivolt Combination Gas Valve.

Lighting the Pilot:

1. **Turn Gas Cock to OFF:** Rotate the manual gas cock dial to the "OFF" position and wait at least five (5) minutes to clear any accumulated gas. If you smell gas, stop and follow the "What to Do If You Smell Gas" instructions in the Safety Information section.
2. **Turn Gas Cock to PILOT:** Rotate the manual gas cock dial to the "PILOT" position.
3. **Depress and Hold:** Depress the gas cock dial fully and hold it down. While holding, light the pilot burner with a match or igniter. Continue to hold the dial down for approximately 60 seconds after the pilot lights.
4. **Release Dial:** Slowly release the gas cock dial. If the pilot flame goes out, repeat steps 1-3.
5. **Turn Gas Cock to ON:** Once the pilot remains lit, rotate the gas cock dial to the "ON" position.

Operating the Main Burner:

1. Ensure the pilot light is lit and the gas cock dial is in the "ON" position.
2. Set your wall thermostat to the desired temperature or operating mode.
3. The main burner should ignite automatically.
4. To turn off the main burner, lower the thermostat setting or turn off the appliance as per its manufacturer's instructions. The pilot light should remain lit.

To Shut Down the Appliance:

1. Set the thermostat to its lowest setting or turn off the appliance.
2. To completely shut off gas to the appliance, rotate the manual gas cock dial to the "OFF" position.

7. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your Robertshaw 700-504 gas valve. All maintenance should be performed by a qualified service technician.

- **Annual Inspection:** Have a qualified technician inspect the gas valve and associated components annually.
- **Pilot Filter:** The pilot gas filter should be checked and cleaned or replaced if necessary during annual servicing.

- **Connections:** Periodically check all gas and electrical connections for tightness and signs of wear or corrosion.
- **Ventilation:** Ensure that the appliance area remains clear of obstructions to maintain proper ventilation.

8. TROUBLESHOOTING

Before attempting any troubleshooting, ensure the main gas supply is on and the gas cock dial is in the "ON" position. If you are unsure about any step, contact a qualified service technician.

Problem	Possible Cause	Solution
Pilot will not light or stay lit.	<ul style="list-style-type: none"> • No gas supply. • Pilot orifice clogged. • Thermopile weak or faulty. • Loose thermopile connection. 	<ul style="list-style-type: none"> • Check main gas supply. • Clean or replace pilot orifice. • Test and replace thermopile if necessary. • Tighten thermopile connections.
Main burner does not ignite.	<ul style="list-style-type: none"> • Pilot not lit. • Thermostat not calling for heat. • Faulty thermostat. • Loose electrical connections. • Main gas valve operator failure. 	<ul style="list-style-type: none"> • Light pilot as per instructions. • Increase thermostat setting. • Test and replace thermostat. • Check and tighten all electrical connections. • Contact a qualified technician for valve inspection.
Gas odor detected.	<ul style="list-style-type: none"> • Gas leak. • Improper ventilation. 	<ul style="list-style-type: none"> • Immediately turn off gas supply. Ventilate area. Do not operate electrical switches. Contact gas supplier or qualified technician.

9. WARRANTY AND SUPPORT

For warranty information and technical support regarding your Robertshaw 700-504 Millivolt Combination Gas Valve, please refer to the documentation provided with your specific appliance or contact Robertshaw customer service directly. Keep your purchase receipt as proof of purchase.

Robertshaw is committed to providing quality products and support. For further assistance, please visit the official Robertshaw website or contact their customer service department.

