Watts 007 QT

Watts 007 QT 1/2-inch Double Check Valve Assembly Instruction Manual

1. Product Overview

The Watts 007 QT 1/2-inch Double Check Valve Assembly is engineered to prevent the backflow of contaminated water into a potable water supply system. This device is suitable for non-health hazard, continuous pressure applications. Its robust bronze body construction ensures durability and ease of maintenance. The assembly provides protection against both backsiphonage and backpressure backflow, safeguarding water quality.

Key features include:

- Cast Bronze body construction for durability.
- Designed to prevent reverse flow of polluted water.
- Ideal for non-health hazard continuous pressure applications.
- Protection against backsiphonage and backpressure backflow.
- Ease of maintenance with a single cover and top entry design.
- Replaceable seats and seat discs.
- Modular construction and compact design.
- Top-mounted ball valve test cocks.
- Low pressure drop.
- No special tools required for servicing.

Image 1.1: Watts 007 QT 1/2-inch Double Check Valve Assembly. This image displays the bronze body construction and overall compact design of the valve assembly.

2. Safety Information

WARNING: Improper installation or maintenance of this device can lead to serious injury or property damage. Always adhere to local plumbing codes and regulations.

- **Professional Installation Recommended:** Installation should be performed by a qualified plumber or certified backflow prevention device tester.
- **Local Codes:** Always check with local inspection authorities for specific installation requirements and compliance.
- **Pressure Limits:** Do not exceed the maximum working pressure of 175 psi (12.06 bar). Exceeding this limit can cause device failure and potential hazards.
- **Water Quality:** This device is for non-health hazard applications. For health hazard applications, a different class of backflow preventer may be required.
- **Eye Protection:** Always wear appropriate eye protection when installing, maintaining, or testing the device.
- **System Shutdown:** Ensure the water supply is completely shut off and depressurized before beginning any installation or maintenance procedures.

3. Setup and Installation

The Watts 007 QT Double Check Valve Assembly is designed for horizontal or vertical installation, depending on local codes and specific model requirements. Ensure proper orientation for optimal performance.

3.1 Pre-Installation Checks

- Verify that the product model (007 QT, 1/2-inch) matches your application requirements.
- Inspect the valve for any signs of shipping damage.
- Ensure all necessary tools and materials are available, including appropriate pipe fittings and sealing compounds.
- Confirm compliance with all local plumbing codes and regulations.

3.2 Installation Steps

1. **Shut Off Water Supply:** Locate the main water shut-off valve and turn off the water supply to the area where the backflow preventer will be installed. Drain the system to relieve pressure.
2. **Select Location:** Choose an accessible location for installation that allows for future maintenance and testing. The device should be installed downstream of the main water meter and upstream of any connections that could introduce contaminants.
3. **Prepare Piping:** Cut and prepare the existing piping to accommodate the 1/2-inch inlet and outlet connections of the valve assembly. Ensure pipe ends are clean and free of burrs.
4. **Install Valve:** Install the Watts 007 QT assembly into the pipeline, ensuring the flow arrow on the valve body points in the direction of water flow. Use appropriate thread sealant on all connections.
5. **Tighten Connections:** Securely tighten all connections to prevent leaks, but do not overtighten, which could damage the bronze body or fittings.
6. **Open Water Supply:** Slowly open the main water shut-off valve to gradually repressurize the system. Check all connections for leaks.
7. **Initial Testing:** After installation, the device should be tested by a certified backflow prevention device tester to ensure proper operation and compliance with local regulations.

4. Operation

The Watts 007 QT Double Check Valve Assembly operates automatically to prevent backflow. It contains two independently operating check valves that close to prevent reverse flow when a backflow condition occurs.

- Under normal flow conditions, both check valves are open, allowing water to pass through freely with minimal pressure drop.
- If the pressure downstream of the device becomes greater than the supply pressure (backpressure), or if the supply pressure drops below atmospheric pressure (backsiphonage), the check valves will close.
- The design ensures that if one check valve fails, the other provides a secondary barrier against backflow.
- The top-mounted ball valve test cocks allow for easy testing of the device's functionality by a certified technician.

5. Maintenance

Regular maintenance and testing are crucial to ensure the continued proper function of your Watts 007 QT Double Check Valve Assembly. This device is designed for ease of service.

5.1 Annual Testing

Local regulations typically require annual testing of backflow prevention devices by a certified tester. This ensures the device is operating correctly and providing the required level of protection.

5.2 Servicing and Repair

The modular construction and top-entry design facilitate easy servicing. If testing indicates a malfunction, the internal components can be accessed and replaced without removing the entire assembly from the pipeline.

- **Disassembly:** To access internal components, ensure the water supply is off and the system is depressurized. Remove the single cover.
- **Component Replacement:** The seats and seat discs are replaceable. Use genuine Watts replacement parts to ensure compatibility and performance. No special tools are required for servicing, making repairs straightforward.
- **Reassembly:** Reassemble the device carefully, ensuring all seals are properly seated and the cover is securely fastened.
- **Post-Service Testing:** After any servicing or repair, the device must be retested by a certified backflow prevention device tester to confirm proper operation.

6. Troubleshooting

This section provides guidance for common issues. For complex problems or issues related to backflow prevention, always consult a certified professional.

6.1 Common Issues and Solutions

- **Leakage from Test Cocks:**
  - *Cause:* Test cock not fully closed or damaged O-ring.
  - *Solution:* Ensure test cocks are fully closed. If leakage persists, the O-ring or test cock assembly may need replacement.
- **Constant Drip/Leak from Valve Body:**
  - *Cause:* Damaged or worn check valve seats/discs, or debris lodged in the check valve.
  - *Solution:* Shut off water, depressurize, and inspect the internal check valve components. Clean any debris or replace worn seats/discs.
- **Reduced Water Flow/Pressure:**
  - *Cause:* Debris accumulation within the valve, or a check valve partially closed.
  - *Solution:* Isolate the valve, depressurize, and inspect for debris. If a check valve is stuck, it may require cleaning or replacement of components.
- **Failure During Annual Test:**
  - *Cause:* Internal component failure, debris, or improper installation.
  - *Solution:* A certified backflow tester will diagnose the specific issue. Follow their recommendations for repair or replacement.

If you encounter issues not listed here or are unsure about a repair, contact Watts customer support or a qualified plumbing professional.

7. Specifications

Model Number	007 QT (Part # 0062131)
Size	1/2 inch
Material	Bronze, Silicone
Exterior Finish	Bronze
Inlet Connection Size	0.5 Inches
Inlet Connection Type	Double Check Valve Assembly
Outlet Connection Size	0.5 Inches
Outlet Connection Type	FNPT
Maximum Operating Pressure	175 psi (12.06 bar)
Number of Ports	2
Item Weight	3.45 pounds
Product Dimensions (L x W x H)	1 x 0.39 x 0.39 inches
Specification Met	ASSE 1015, AWWA C510, CSA B64.5, IAPMO PS31

8. Warranty and Support

For specific warranty information regarding your Watts 007 QT Double Check Valve Assembly, please refer to the documentation included with your purchase or visit the official Watts website. Warranty terms typically cover manufacturing defects under normal use and service.

8.1 Customer Support

If you require technical assistance, have questions about installation, operation, or maintenance, or need to inquire about replacement parts, please contact Watts customer support:

- **Watts Official Website:** www.watts.com
- Refer to the product packaging or the Watts website for current contact numbers and email addresses.

When contacting support, please have your product model number (007 QT) and any relevant purchase information readily available.