

QWORK WD15047

QWORK Automatic Timed Condensate Drain Valve (Model WD15047) User Manual

Comprehensive instructions for installation, operation, and maintenance.

1. INTRODUCTION

This manual provides detailed instructions for the QWORK Automatic Timed Condensate Drain Valve, Model WD15047. This device is designed to automatically remove condensate from compressed air systems, preventing water accumulation that can lead to corrosion, equipment damage, and reduced air quality. Proper installation and operation are crucial for the longevity and efficiency of your compressed air system.

2. PRODUCT OVERVIEW AND FEATURES

The QWORK Automatic Timed Condensate Drain Valve is a 2-way direct-acting valve equipped with a timer for precise condensate discharge. It is suitable for various industrial applications, including gas tanks, drip legs, and other compressed air system components.

- **Type:** 2-way direct-acting valve, specifically designed for air compressor tank drainage.
- **Adjustable Timing:** Features an adjustable time interval (OFF) from 0.5 to 45 minutes and an adjustable discharge time (ON) from 0.5 to 10 seconds.
- **Built-in Safety:** Includes a test button for manual operation and system integrity checks.
- **Wide Temperature Range:** Operates effectively in ambient temperatures from -40°C to 60°C (-40°F to 140°F).
- **Power Supply:** AC 110V-120V/50Hz.
- **Reliable Operation:** Ensures consistent and efficient control of gas flow and condensate removal.



Figure 2.1: Complete kit of the QWORK Automatic Timed Condensate Drain Valve, including the controller, solenoid valve, steel hose, elbow fitting, and power cord.

3. SAFETY INFORMATION

Read and understand all instructions before installing or operating this device. Failure to follow these instructions may result in property damage, personal injury, or death.

- Always depressurize the compressed air system before attempting any installation, maintenance, or repair.
- Ensure the power supply is disconnected before making any electrical connections or adjustments.
- Wear appropriate personal protective equipment (PPE), such as safety glasses, during installation and maintenance.
- Verify that the power supply voltage matches the valve's requirements (AC 110V-120V/50Hz).

- Do not modify the product in any way. Use only original replacement parts if necessary.
- Ensure all connections are properly sealed to prevent air leaks.
- The valve operates at high pressure. Exercise caution and ensure secure mounting.

4. PACKAGE CONTENTS

Verify that all components are present and undamaged upon unpacking.

- Automatic Timed Condensate Drain Valve (Solenoid Valve with Controller)
- Steel Braided Hose (approx. 10-1/4 inches / 260mm)
- 1/4 Inch NPT Drain Valve Elbow Fitting (with blue handle)
- Power Cord (approx. 6 feet / 1.8m)
- PTFE Thread Seal Tape
- Additional NPT fittings (as pictured)



Figure 4.1: All components included in the QWORK Automatic Timed Condensate Drain Valve package.

5. SPECIFICATIONS

Feature	Specification
Model Number	WD15047
Material	Alloy Steel
Valve Type	2-way Direct-acting
Inlet Connection Size	0.25 Inches NPT
Outlet Connection Size	0.25 Inches NPT
Number of Ports	1
Time Interval (OFF)	0.5 - 45 minutes (adjustable)
Discharge Time (ON)	0.5 - 10 seconds (adjustable)
Power Supply	AC 110V-120V/50Hz
Ambient Temperature Range	-40°C to 60°C (-40°F to 140°F)
Item Weight	1.94 pounds
Package Dimensions	8.19 x 4.29 x 3.43 inches

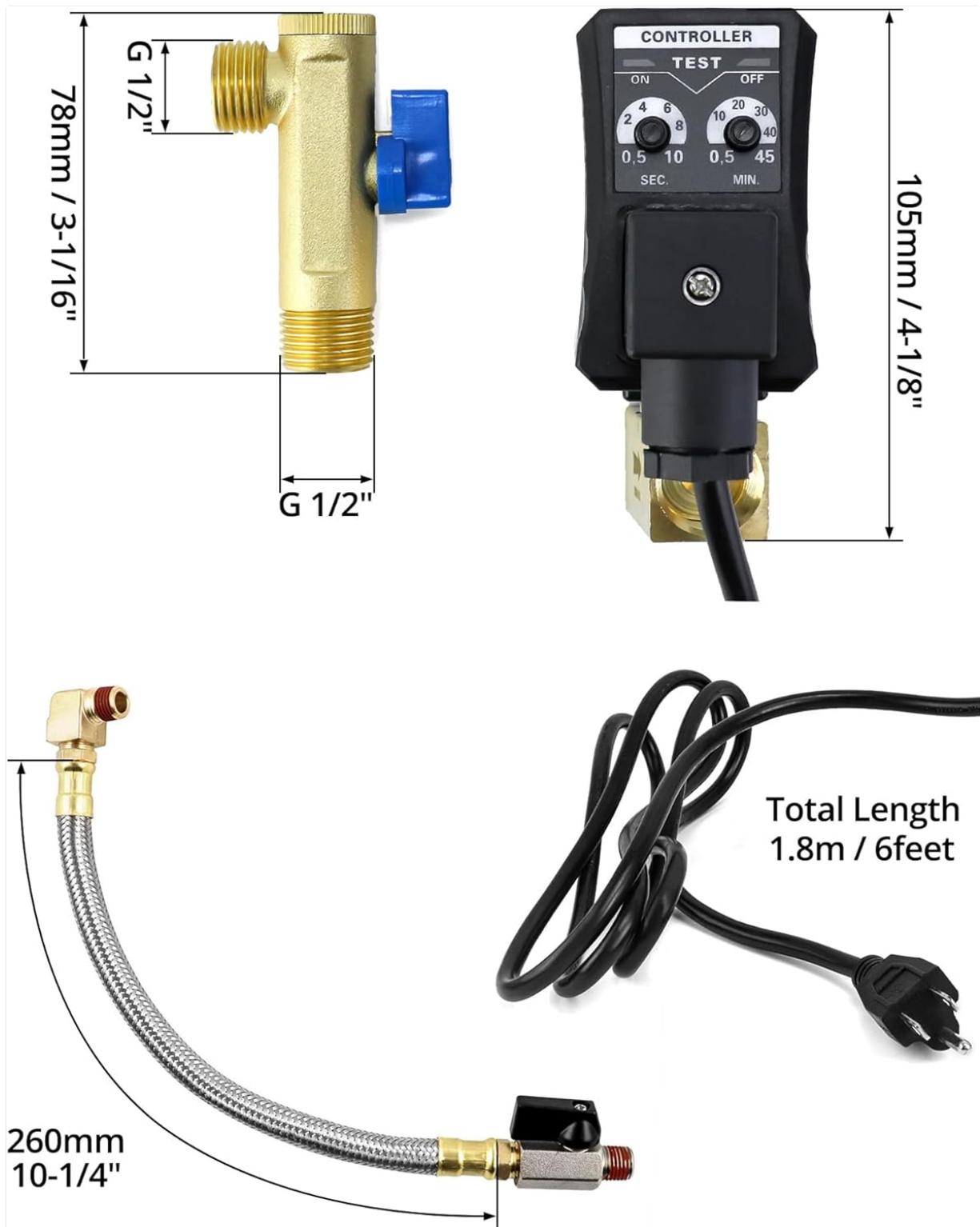


Figure 5.1: Dimensional diagram of the valve components, including the controller and elbow fitting.

6. SETUP AND INSTALLATION

Proper installation is critical for the reliable operation of the automatic drain valve. Ensure the compressed air system is depressurized before beginning.

1. **Depressurize System:** Turn off the air compressor and completely drain all air pressure from the tank and associated lines.
2. **Identify Drain Point:** Locate the lowest point of your air receiver tank or the condensate collection point in your air system where water accumulates. This is typically where a manual drain valve is located.
3. **Prepare Connections:** The valve uses 1/4 inch NPT connections. Apply PTFE thread seal tape (Teflon

tape) generously to all male pipe threads to ensure a leak-free seal. Wrap the tape clockwise around the threads, typically 5-7 wraps.

4. **Install Elbow Fitting:** If your drain point is a 1/2 inch port, use the provided elbow fitting. This fitting is labeled as G 1/2" (BSPP parallel thread) for connection to the tank and typically NPT for the valve. Thread this fitting into the drain port of your air tank. Ensure the blue handle is in the closed position (perpendicular to the flow). *Note: G-threads (BSPP) are parallel and require significant thread sealant (PTFE tape) to create a seal, unlike tapered NPT threads. Apply PTFE tape generously to ensure a leak-free connection.*



Figure 6.1: The elbow fitting with a blue handle, used for adapting connections and providing a manual shut-off.
Note the G 1/2" marking on the fitting.

5. **Connect Solenoid Valve:** Thread the solenoid valve assembly onto the elbow fitting or directly into your 1/4 inch NPT drain port. Ensure the flow arrow on the solenoid valve body points downwards, indicating the direction of condensate discharge.



Figure 6.2: The solenoid valve body showing the flow direction arrow and electrical coil.

- 6. Attach Steel Hose:** Connect the steel braided hose to the outlet of the solenoid valve. The other end of the hose should be directed to a suitable drain or collection container for condensate. Ensure the small manual valve on the hose is in the open position (handle parallel to the hose) for normal operation.

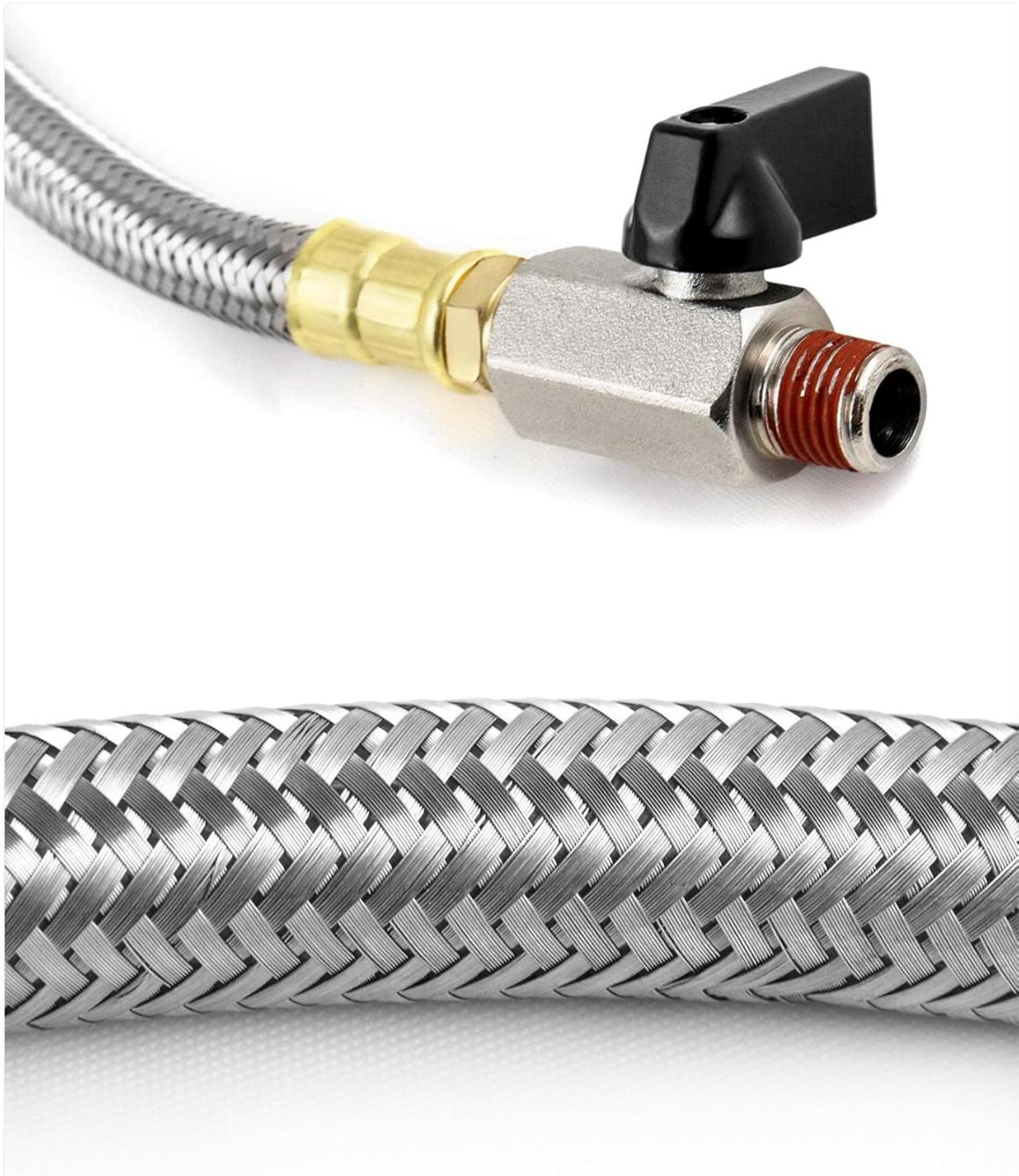


Figure 6.3: The steel braided hose, designed for directing condensate away from the system.

7. **Secure Connections:** Tighten all connections firmly but do not overtighten, which can strip threads or damage components.
8. **Electrical Connection:** Plug the power cord into a standard AC 110V-120V/50Hz outlet.
9. **Test for Leaks:** Slowly repressurize the air system and check all connections for leaks using a soapy water solution. Tighten any leaking connections as needed.

7. OPERATION

The controller allows you to set the interval between drain cycles and the duration of each discharge.



Figure 7.1: The controller unit showing the 'ON' (discharge time) and 'OFF' (interval time) adjustment knobs, and the 'TEST' button.

- **"OFF" Knob (Interval Time):** This knob controls the time between discharge cycles. It is adjustable from 0.5 minutes to 45 minutes. Rotate the knob clockwise to increase the interval, and counter-clockwise to decrease it.
- **"ON" Knob (Discharge Time):** This knob controls how long the valve remains open during a discharge cycle. It is adjustable from 0.5 seconds to 10 seconds. Rotate the knob clockwise to increase the discharge duration, and counter-clockwise to decrease it.
- **"TEST" Button:** Pressing this button will manually open the valve for the duration set by the "ON" knob, allowing you to test the function or manually drain condensate outside of the timed cycle.

Recommended Settings: Start with a shorter "OFF" interval (e.g., 5-10 minutes) and a short "ON" discharge time (e.g., 1-2 seconds). Observe the amount of condensate discharged and adjust the settings as needed based on your system's humidity and usage. In high-humidity environments or with heavy compressor use, more frequent or longer discharge times may be required.

8. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your automatic drain valve.

- **Regular Inspection:** Periodically inspect the valve and all connections for leaks, corrosion, or damage.
- **Clean Valve Internals:** Over time, rust debris and contaminants can accumulate and potentially cause the valve to stick open or closed.
 - a. Depressurize the air system and disconnect power.
 - b. Carefully remove the solenoid valve assembly.
 - c. Disassemble the valve body (refer to manufacturer's diagrams if available).
 - d. Clean any debris, rust, or sludge from the internal components, especially the plunger and seat.
 - e. Reassemble the valve, ensuring all seals and O-rings are correctly seated.
 - f. Reinstall the valve and test for proper operation and leaks.
- **Check Power Cord:** Ensure the power cord is free from cuts, fraying, or damage.
- **Drain Line Clearance:** Ensure the discharge hose is clear and unobstructed, allowing condensate to drain freely.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Valve does not open (no discharge)	No power; incorrect timer settings; clogged valve.	Check power connection and outlet. Adjust "OFF" time to a shorter interval. Press "TEST" button. If still no operation, clean valve internals (see Maintenance).
Valve opens but does not close (stuck open)	Debris or rust inside valve; faulty solenoid.	Depressurize system and clean valve internals thoroughly (see Maintenance). If problem persists, the solenoid may need replacement.
Air leaks from connections	Insufficient thread sealant; loose connections; damaged threads.	Depressurize system. Reapply PTFE thread seal tape generously to connections. Ensure connections are tightened properly. Inspect threads for damage.
Condensate not draining effectively	"ON" time too short; "OFF" time too long; discharge hose obstructed.	Increase "ON" time. Decrease "OFF" time. Check discharge hose for kinks or blockages.

10. WARRANTY AND SUPPORT

For warranty information or technical support, please contact QWORK customer service directly. Refer to your purchase documentation or the QWORK official website for contact details.

QWORK Official Website: [Visit the QWORK Store on Amazon](#)