

Watts LF25AUB-Z3

Watts LF25AUB-Z3 Water Pressure Reducing Valve Instruction Manual

Model: LF25AUB-Z3 | Brand: Watts

1. PRODUCT OVERVIEW

The Watts LF25AUB-Z3 Series 1" Lead-Free Water Pressure Reducing Valve is engineered to safeguard plumbing systems and optimize water consumption in various settings, including commercial, industrial, and residential applications. This standard model effectively reduces incoming water pressure to a manageable, preset level. Its design incorporates a replaceable seat module, NPT threaded female union inlet by NPT female outlet connections, and a bypass feature to manage thermal expansion pressure. The valve is constructed from lead-free cast copper silicon alloy, ensuring compliance with safety standards.

2. KEY FEATURES

- **Lead-Free Construction:** Manufactured from lead-free cast copper silicon alloy, ensuring safe water delivery.
- **Pressure Reduction:** Reduces incoming water pressure to protect plumbing systems and reduce water consumption.
- **Adjustable Pressure Range:** Allows for an adjustable pressure range between 25 to 75 psi (172 to 517 kPa), with a factory standard setting at 50 psi (345 kPa).
- **High Maximum Operating Pressure:** Suitable for pressures up to 300 psi (20.7 bar).
- **Thermal Expansion Bypass:** Includes a bypass feature to control thermal expansion pressure, allowing water to flow back into the main supply when outlet pressure exceeds main supply pressure due to thermal expansion.
- **Wide Temperature Range:** Operates effectively within a temperature range of 33°F (0.5°C) to 180°F (82°C).
- **Easy Maintenance:** Features a replaceable seat module and is designed for straightforward in-line serviceability.
- **Durable Components:** Includes a removable integral stainless steel strainer, high-temperature diaphragm, and a sealed spring case with stainless steel cage screws for robust performance, even in waterwork pit installations.
- **Versatile Connections:** NPT threaded female union inlet by NPT female outlet connections simplify

installation.

3. SPECIFICATIONS

Attribute	Value
Model Number	LF25AUB-Z3
Size	1 Inch
Material	Lead-Free Cast Copper Silicon Alloy (Brass)
Inlet Connection Type	NPT Female Union
Outlet Connection Type	NPT Female
Adjustable Pressure Range	25 to 75 psi (172 to 517 kPa)
Standard Setting	50 psi (345 kPa)
Maximum Operating Pressure	300 psi (20.7 bar)
Temperature Range	33°F (0.5°C) to 180°F (82°C)
Dimensions (L x W x H)	3.9 x 7.4 x 8.5 inches
Item Weight	5.05 pounds

4. SETUP AND INSTALLATION

Proper installation of the Watts LF25AUB-Z3 valve is crucial for optimal performance and longevity. It is recommended that installation be performed by a qualified plumber or technician.

4.1 Pre-Installation Checklist

- Ensure the main water supply is turned off before beginning installation.
- Verify that the installation location is accessible for future maintenance.
- Confirm the valve size (1 inch) matches your plumbing system requirements.
- Gather necessary tools: pipe wrenches, thread sealant (Teflon tape or pipe dope), and a pressure gauge for verification.

4.2 Installation Steps

1. **Prepare the Pipe:** Cut a section of the main water line where the valve is to be installed. Ensure the cut ends are clean and free of burrs.
2. **Orient the Valve:** The valve has an arrow indicating the direction of water flow. Ensure the arrow points in the direction of water flow from the main supply into your home. The NPT female union inlet connects to the incoming water supply, and the NPT female outlet connects to the household plumbing.
3. **Apply Thread Sealant:** Apply an appropriate thread sealant (e.g., Teflon tape or pipe dope) to the male threads of the pipes that will connect to the valve's union and outlet.
4. **Connect the Valve:** Securely connect the valve to the plumbing lines. Use pipe wrenches to tighten connections, but do not overtighten to avoid damaging the valve or pipes.
5. **Check for Leaks:** Slowly turn on the main water supply and carefully inspect all connections for leaks. Tighten

any leaking connections as needed.

6. **Verify Pressure:** Use a pressure gauge connected to a nearby hose bib or test port to verify the outlet pressure. The valve comes factory preset to 50 psi.

End Connection FLEXIBILITY



Threaded



Solder



WATTS®

Image: End Connection Flexibility. The valve supports various connection types for simplified installation.

5. OPERATING INSTRUCTIONS

The Watts LF25AUB-Z3 valve is designed to maintain a consistent outlet pressure. The factory setting is typically 50 psi, but it can be adjusted within its specified range.

5.1 Adjusting Outlet Pressure

1. **Locate Adjustment Screw:** The pressure adjustment screw is located at the top of the valve, typically covered by a cap or a locknut.
2. **Loosen Locknut (if present):** If there is a locknut, loosen it before making adjustments.
3. **Adjust Pressure:**
 - To **increase** the outlet pressure, turn the adjustment screw clockwise.

- To **decrease** the outlet pressure, turn the adjustment screw counter-clockwise.

4. **Monitor Pressure:** Use a reliable pressure gauge connected to a downstream hose bib or test port to accurately monitor the pressure as you adjust.
5. **Tighten Locknut:** Once the desired pressure is set (within the 25-75 psi range), tighten the locknut (if present) to secure the setting.

Note: Avoid setting the pressure too high, as excessive pressure can damage household plumbing and appliances. Most residential plumbing is designed for a maximum of 80 psi.



Image: Tool-Free Pressure Adjustments. The valve allows for easy pressure adjustments from the top.

6. MAINTENANCE

Regular maintenance ensures the continued optimal performance and extends the lifespan of your Watts LF25AUB-Z3 valve.

6.1 Routine Checks

- **Annual Pressure Check:** Periodically check your household water pressure using a pressure gauge to ensure the valve is maintaining the desired setting.
- **Leak Inspection:** Visually inspect the valve and surrounding connections for any signs of leaks.
- **Strainer Cleaning:** The valve includes a removable integral stainless steel strainer. If you notice a significant drop in water pressure or flow, the strainer may be clogged and require cleaning. Consult a professional for this procedure if you are unsure.

6.2 Servicing

The valve is designed for easy in-line serviceability, featuring a replaceable seat module. For internal servicing or replacement of components, it is highly recommended to contact a certified plumbing professional. Attempting repairs without proper knowledge and tools can lead to damage or improper function.



Image: Fast & Easy Maintenance. The valve is designed for service directly in line from the top.

7. TROUBLESHOOTING

This section provides general guidance for common issues. For complex problems, consult a qualified plumber.

Problem	Possible Cause	Solution
High Water Pressure Downstream	Valve setting too high; debris in valve; worn diaphragm/seal.	Adjust pressure setting (Section 5.1); clean strainer; consult professional for internal inspection/repair.
Low Water Pressure Downstream	Valve setting too low; clogged strainer; insufficient incoming pressure.	Adjust pressure setting (Section 5.1); clean strainer; check main supply pressure.
Water Hammering	Pressure fluctuations; air in pipes; valve malfunction.	Ensure stable pressure setting; bleed air from system; if persistent, consult professional.
Valve Leaking	Loose connections; damaged seals/gaskets; internal component failure.	Check and tighten connections; consult professional for seal replacement or internal repair.

8. PRODUCT IMAGES

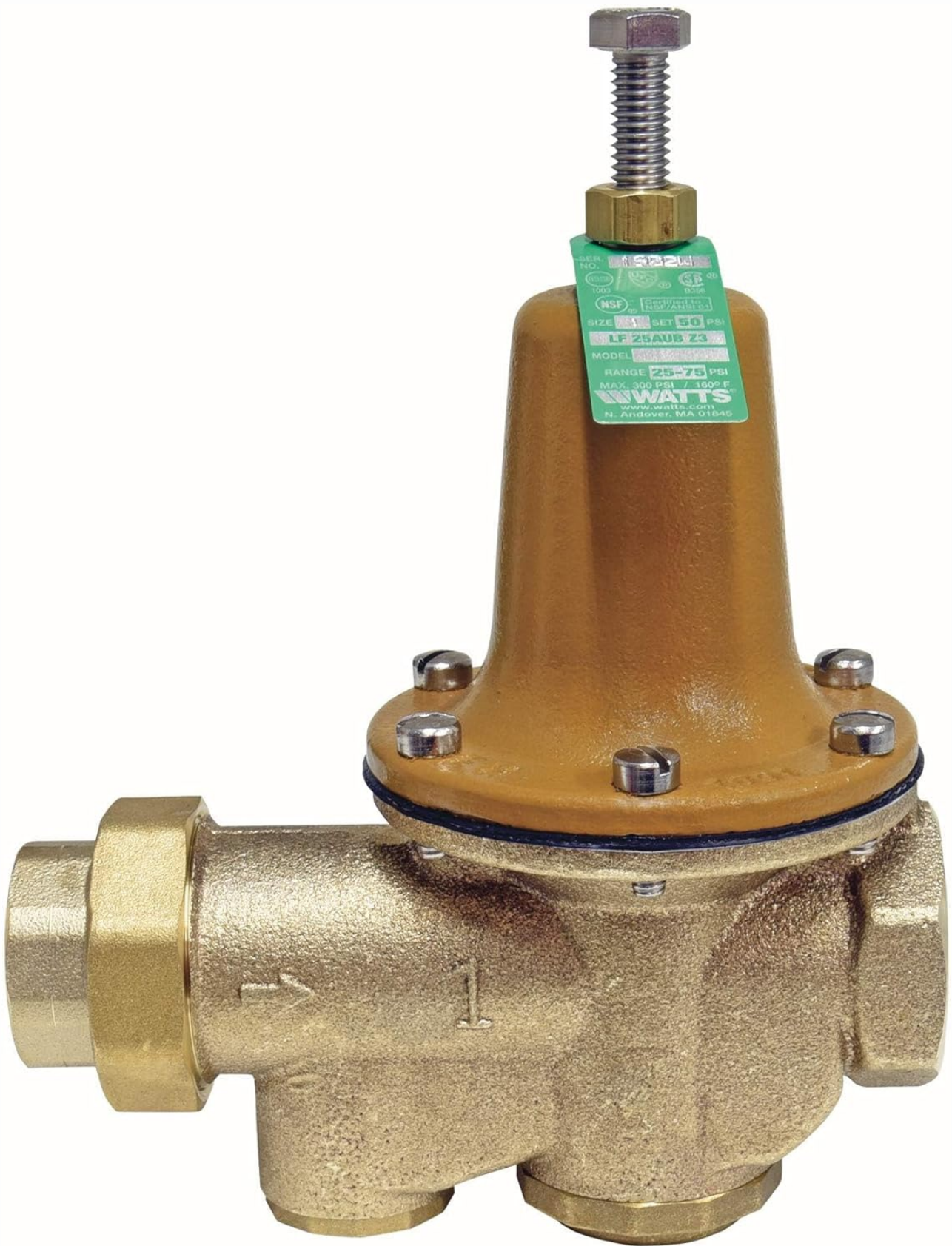


Figure 8.1: Front view of the Watts LF25AUB-Z3 Water Pressure Reducing Valve.



Figure 8.2: Internal cutaway view illustrating the valve's components, including the spring and diaphragm.



Figure 8.3: Side view of the valve, highlighting the NPT female union inlet.

Certified to Perform



1" LF25AUB-Z3

WATTS

Water Pressure Reducing Valve

- Reduces incoming water pressure
- NPT threaded female union by NPT female connectors
- Adjustable pressure range: 25 to 75psi

EDP# 0009309

ASSE 1003

NSF Certified to NSF/ANSI/CAN 61-G

CSA

UPC

Figure 8.4: Certification details for the Watts Pressure Reducing Valve, indicating compliance with industry standards.

WATTS®

AVAILABLE SIZES

1/2" – 2"



Figure 8.5: Illustration showing the range of available sizes for Watts pressure reducing valves, from 1/2" to 2".

POWERFUL Pressure Control

Manages inlet pressures
up to 300 psi

Protects systems from
pressure spikes and surges

Steady outlet pressure



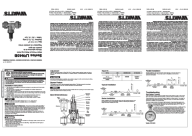


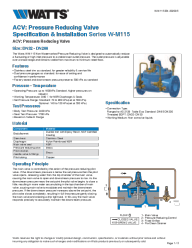


Figure 8.6: Diagram illustrating the powerful pressure control capabilities, managing inlet pressures up to 300 psi and ensuring steady outlet pressure.

9. WARRANTY AND SUPPORT

For specific warranty information and technical support regarding your Watts LF25AUB-Z3 Water Pressure Reducing Valve, please refer to the official Watts website or contact Watts customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

Watts Customer Service: Please visit www.watts.com for contact details and support resources.

	<p><u>Watts LF25AUB-Z3 Series Water Pressure Reducing Valve Installation Instructions</u></p> <p>Comprehensive installation guide for the Watts LF25AUB-Z3 Series Water Pressure Reducing Valve, detailing safety precautions, installation methods (typical, series, parallel), adjustment procedures, repair kits, and troubleshooting tips. Includes textual descriptions of diagrams and parts.</p>
	<p><u>Watts LFN45B Series Water Pressure Reducing Valve Installation and Maintenance Guide</u></p> <p>Comprehensive guide for installing, maintaining, and troubleshooting the Watts LFN45B Series water pressure reducing valve. Includes safety warnings, adjustment procedures, and warranty information.</p>
	<p><u>WATTS LFN45B Water Pressure Reducing Valve - Installation and Maintenance Manual</u></p> <p>Comprehensive guide for installing, operating, and troubleshooting the WATTS LFN45B Water Pressure Reducing Valve. Includes safety warnings, installation instructions, adjustment procedures, and problem-solving tips for plumbing systems.</p>
	<p><u>Watts N55B-M1 and LFN55B-M1 Water Pressure Reducing Valve Installation and Maintenance</u></p> <p>Detailed installation, maintenance, and troubleshooting guide for Watts N55B-M1 and LFN55B-M1 Water Pressure Reducing Valves, including diagrams and warranty information.</p>
	<p><u>Watts Pressure Reducing Valve with Hydraulic Check Feature - Stainless Series</u></p> <p>Technical overview of the Watts ACV Combination Pressure Reducing and Check Valve, detailing its operation, installation guidelines, and a list of related control valve models.</p>
	<p><u>Watts W-M115 ACV Pressure Reducing Valve: Specification & Installation Guide</u></p> <p>Comprehensive guide detailing the specifications, dimensions, flow rates, operating principles, installation, and start-up procedures for the Watts W-M115 ACV Pressure Reducing Valve. Essential information for industrial and commercial applications.</p>