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American Standard R121

American Standard R121 Pressure Balance Rough Valve Body User Manual

Model: R121

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your American Standard R121 Pressure Balance Rough Valve Body. This valve is designed to maintain a consistent water temperature in your bath or shower, preventing sudden changes in temperature due to fluctuations in hot or cold water supply pressure. It is compatible with various American Standard trim kits, which are sold separately.

PRODUCT FEATURES

- **Cast Brass Valve Body:** Constructed from durable brass, ensuring longevity and suitability for prolonged contact with water.
- **Ceramic Disc Valve Cartridge:** Provides reliable, drip-free performance over its lifetime. Allows for precise temperature adjustment with a 125° handle rotation from off to hot.
- **Pressure Balancing Valve Cartridge:** Actively maintains a constant output water temperature, compensating for pressure changes in the hot and cold water lines.
- **Diaphragm System:** Engineered to prevent cross-flow and resist mineral deposits, making it suitable for areas with hard water.
- **Back-to-Back Capability:** Facilitates quick and easy reversal of hot and cold water connections during installation.
- **Adjustable Hot Limit Safety Stop:** Limits the maximum hot water temperature to reduce the risk of accidental scalding.
- **Exclusive Plaster Guard:** Protects the valve during installation and functions as a mounting plate for thin-wall applications. Its two-piece design allows for valve testing before trim installation.
- **Wide Rough-in Range:** Accommodates rough-in depths from 1-5/8" to 3-1/4".

SAFETY INFORMATION

Always turn off the main water supply before attempting any installation or maintenance. It is recommended to have this product installed by a qualified plumber to ensure proper function and compliance with local codes. The adjustable hot limit safety stop is a critical feature for preventing scalding; ensure it is set appropriately during installation according to household needs and local regulations.

INSTALLATION

Installation of the American Standard R121 Pressure Balance Rough Valve Body should be performed by a professional plumber. Refer to the detailed installation guide included with your product for specific instructions and diagrams. Key considerations during installation include:

- **Rough-in Depth:** Ensure the valve is installed within the specified rough-in range of 1-5/8" to 3-1/4".
- **Plaster Guard:** Utilize the plaster guard to protect the valve during wall finishing and as a guide for proper depth.
- **Water Connections:** The valve features universal inlets/outlets. The back-to-back capability allows for flexible hot and cold water line connections.
- **Testing:** The two-piece plaster guard design allows for pressure testing of the valve prior to the installation of the decorative trim kit.



Figure 1: Front view of the American Standard R121 Pressure Balance Rough Valve Body, showing the main brass housing, threaded connections for water lines, and the white ceramic cartridge assembly with a red ring.



Figure 2: Angled view of the American Standard R121 Pressure Balance Rough Valve Body, illustrating the brass valve body with "American Standard" embossed, threaded connections, and a black protective cover (plaster guard) partially installed.

OPERATION

Once installed and connected to a compatible trim kit, the R121 valve operates by balancing the pressure of incoming hot and cold water. This ensures that the water temperature remains stable even if there are pressure drops in either the hot or cold supply lines (e.g., when a toilet is flushed). The ceramic disc cartridge allows for smooth and precise control of water temperature through the handle of your chosen trim kit.

MAINTENANCE

The American Standard R121 valve is designed for minimal maintenance. The diaphragm system is engineered to resist mineral deposits, which helps prevent common issues in hard water areas. If you experience a decrease in water flow or inconsistent temperature, it may indicate a need to inspect or clean the valve cartridge. Always consult a qualified plumber for internal valve maintenance.

- **Cleaning:** Avoid harsh chemicals on exposed trim parts. Clean with a soft, damp cloth.
- **Cartridge Replacement:** In the event of a leak or persistent temperature issues, the ceramic disc valve cartridge may need replacement. This is a task best handled by a professional.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Inconsistent water temperature (too hot/cold)	Pressure imbalance in supply lines, faulty cartridge, hot limit safety stop setting.	Verify hot limit safety stop setting. Inspect for blockages in supply lines. If issues persist, the cartridge may need inspection or replacement by a professional.
Water dripping or small leak from valve	Loose connections, damaged O-rings, faulty valve cartridge.	Ensure all connections are secure. If the leak persists, the valve cartridge or seals may require replacement. Contact a qualified plumber.
Low water flow	Mineral buildup in valve or supply lines, partially closed stop valves.	Check that all shut-off valves are fully open. If mineral buildup is suspected, professional cleaning or cartridge replacement may be necessary.

For complex issues or if troubleshooting steps do not resolve the problem, contact a certified plumbing professional.

SPECIFICATIONS

Brand	American Standard
Model Number	R121
Material	Brass, Ceramic
Product Dimensions (L x W x H)	4.06 x 4.06 x 4.06 inches
Item Weight	2.33 pounds
Exterior Finish	Brass
Inlet Connection Type	Integrated
Outlet Connection Type	Integrated
Number of Ports	4
Specification Met	ASSE 1016, ASSE 1070
UPC	012611567919

WARRANTY AND SUPPORT

The American Standard R121 Pressure Balance Rough Valve Body is backed by a **Limited Lifetime**

Warranty. This warranty covers defects in material and workmanship under normal use and service. For detailed warranty terms and conditions, please refer to the official American Standard warranty documentation included with your purchase or visit the American Standard website. For technical support, replacement parts, or warranty claims, please contact American Standard customer service. Contact information can typically be found on the manufacturer's website or in the packaging materials.

American Standard Website: www.americanstandard-us.com

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