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> KOHLER K-8304-KS-NA Rite-Temp Pressure-Balancing Valve Body and Cartridge Kit Instruction Manual

Kohler K-8304-KS-NA

KOHLER K-8304-KS-NA Rite-Temp Pressure-Balancing Valve Body and Cartridge Kit Instruction Manual

This manual provides detailed instructions for the installation, operation, and maintenance of the KOHLER K-8304-KS-NA Rite-Temp Pressure-Balancing Valve Body and Cartridge Kit with Service Stops.

1. INTRODUCTION

The KOHLER K-8304-KS-NA Rite-Temp Pressure-Balancing Valve Body and Cartridge Kit is designed to provide consistent water temperature and anti-scald protection for your showering experience. This system simplifies plumbing projects and offers flexibility for future design changes. This manual will guide you through the installation, operation, and maintenance of your valve kit.

2. PRODUCT OVERVIEW AND KEY FEATURES

The Rite-Temp valve system incorporates advanced pressure-balancing technology to ensure a stable water temperature, protecting against sudden temperature fluctuations. It is constructed from durable materials for long-term reliability.



Figure 2.1: Main components of the K-8304-KS-NA kit, including the valve body, pressure balance cartridge, and mud guard.

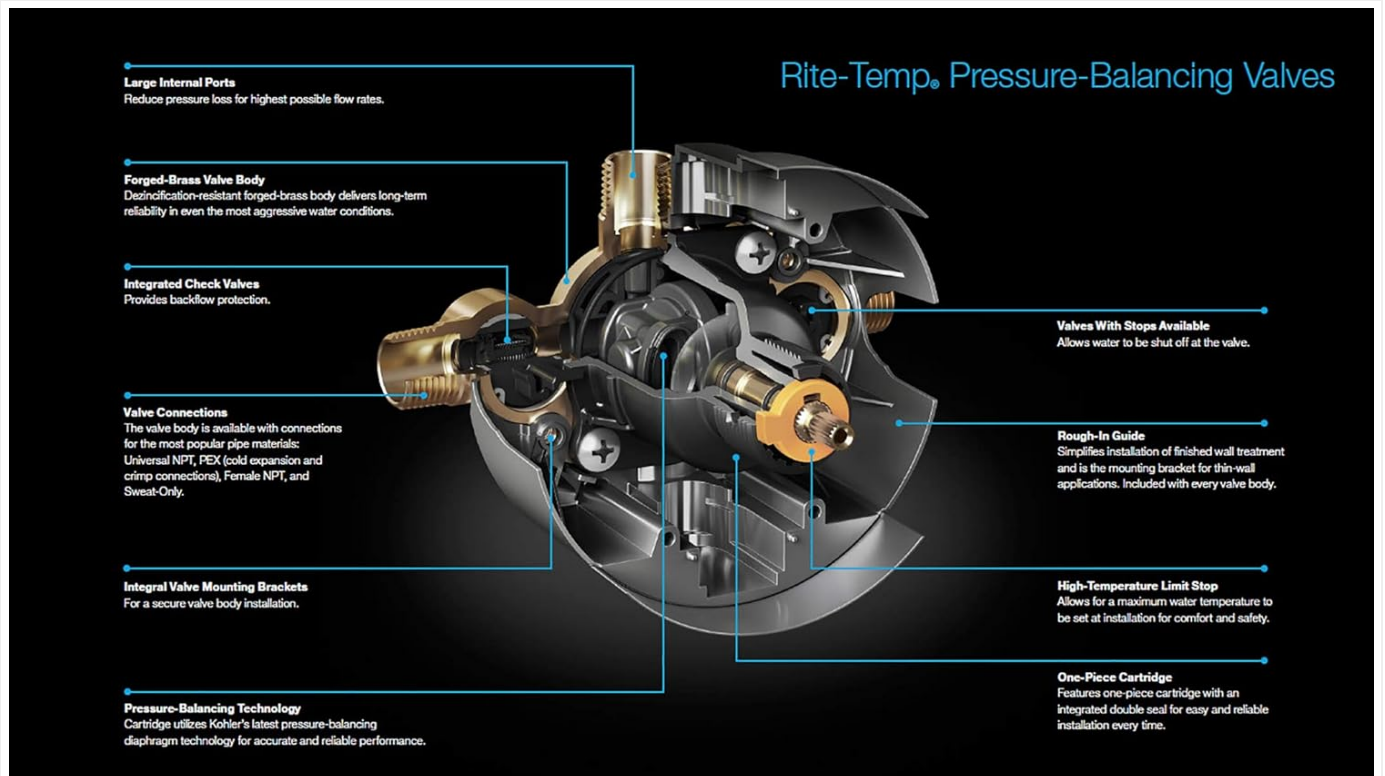


Figure 2.2: Detailed diagram highlighting the internal components and features of the Rite-Temp valve.

Key Features:

- **Pressure-Balancing Technology:** Maintains outlet temperature within +/- 3 degrees Fahrenheit during water pressure fluctuations, providing anti-scald protection and consistent comfort.
- **Durable Construction:** Composed of forged dezincification resistant brass, offering long-term resistance to aggressive water conditions.
- **Versatile Connections:** Features 1/2" universal NPT and direct sweat inlets and outlets, providing 5 GPM (18.9 LPM) and a maximum flow rate of 45 psi.
- **Integrated Service Stops:** Allows for isolation of the valve for service or maintenance without shutting off the main water supply to the entire home.
- **Single Lever Design:** Provides intuitive temperature regulation, cycling from off through cold to hot.
- **Adjustable High-Temperature Limit Stop:** Allows control over the maximum water temperature for enhanced safety.
- **Reversible Cartridge Design:** Simplifies installation in standard, back-to-back, or thin wall configurations.
- **Rough-in Guide and Mud Guard:** Included for simplified installation and protection during construction.
- **Compliance:** Meets ASME A112.18.1/CSA B125.1 and ASSE 1016/ASME A112.1016/CSA B125.16 standards.

3. COMPONENTS INCLUDED

Your KOHLER K-8304-KS-NA kit includes the following essential components:

- **Valve Body:** The main brass housing for water connections.
- **Pressure Balance Cartridge:** The internal mechanism responsible for temperature regulation and anti-scald function.
- **Rough-in Guide:** A protective cover and depth guide for installation.
- **Mud Guard:** Protects internal components during rough-in.
- **Mounting Screws/Bolts:** For securing the valve body to the wall framing.



Figure 3.1: The valve body with the pressure balance cartridge removed, showing the internal structure.

4. SETUP AND INSTALLATION

Proper installation is critical for the optimal performance of your Rite-Temp valve. It is recommended that installation be performed

by a qualified plumber or experienced individual. Always consult local plumbing codes before beginning installation.

4.1 Pre-Installation Considerations

- Ensure you have the correct KOHLER trim kit (sold separately) that is compatible with the K-8304-KS-NA valve body.
- Turn off the main water supply before starting any plumbing work.
- Clear the installation area and ensure adequate access to the wall cavity.

4.2 Installation Steps Overview

The installation process generally involves three main steps:

1. **Install Valve Body:** Secure the brass valve body to the wall framing.
2. **Install Cartridge:** Insert the pressure balance cartridge into the valve body.
3. **Install Trim:** Attach the decorative trim kit (handle, faceplate, etc.) once the wall is finished.

Three easy installation steps:

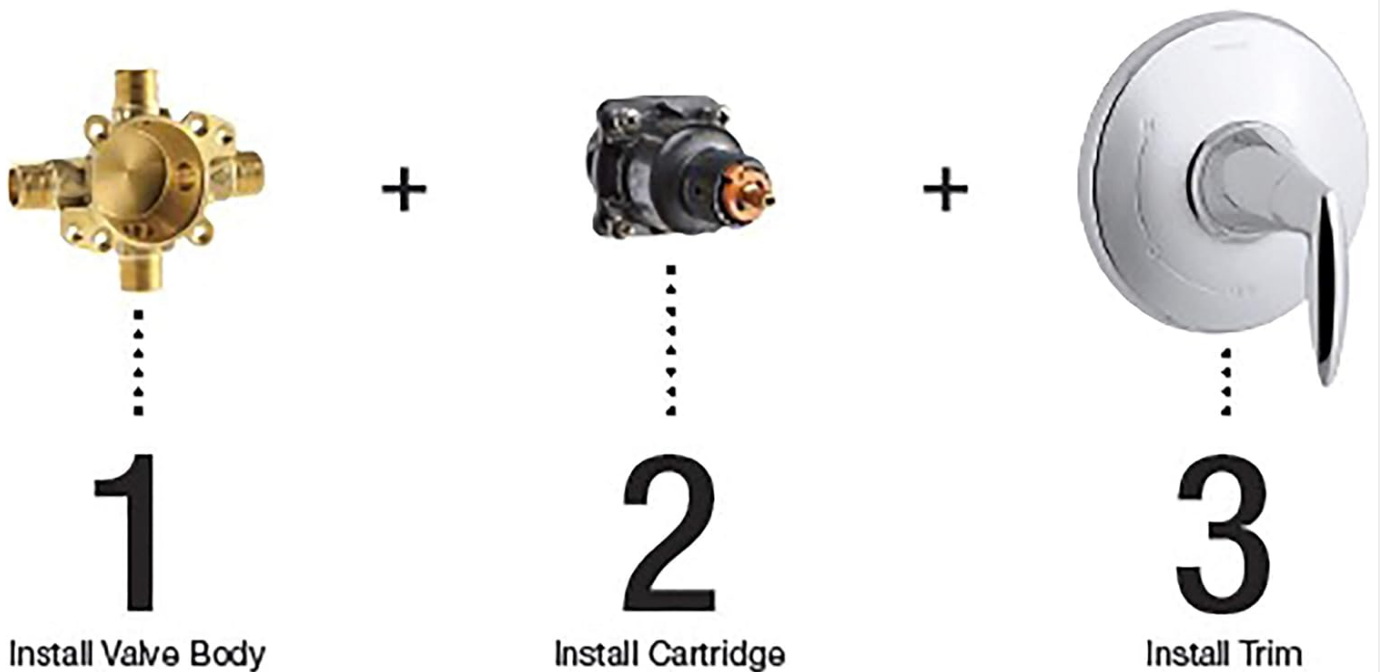


Figure 4.1: Visual representation of the three primary installation steps for the Rite-Temp system.

4.3 Detailed Valve Body Installation

The valve body is designed for flexible installation in various wall types, including standard, back-to-back, and thin wall setups. The rough-in guide assists in achieving the correct depth for the finished wall.



Figure 4.2: The valve body securely mounted within wall studs, connected to plumbing lines.

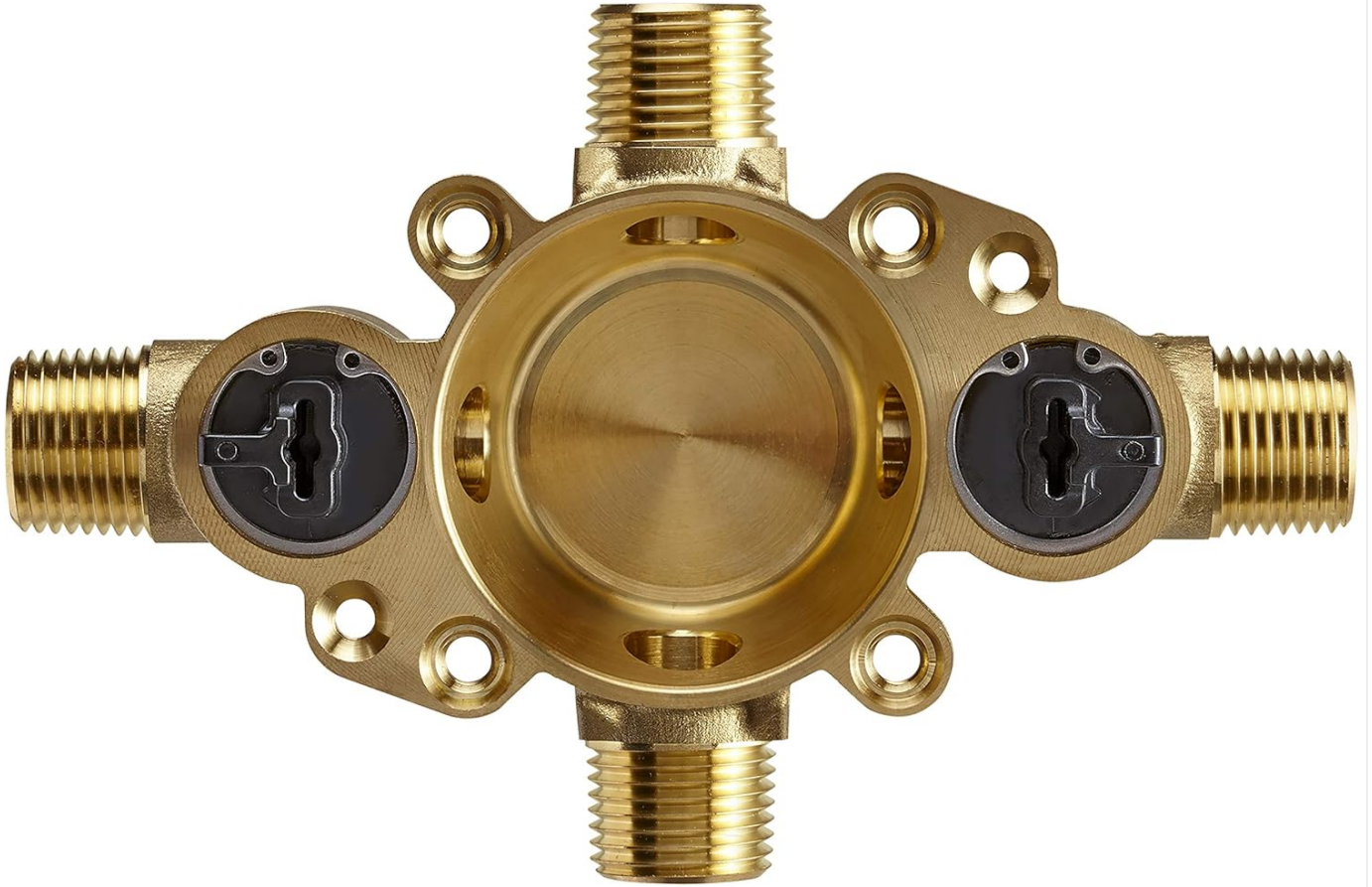


Figure 4.3: Top-down view of the valve body, illustrating the integrated service stops for water isolation.

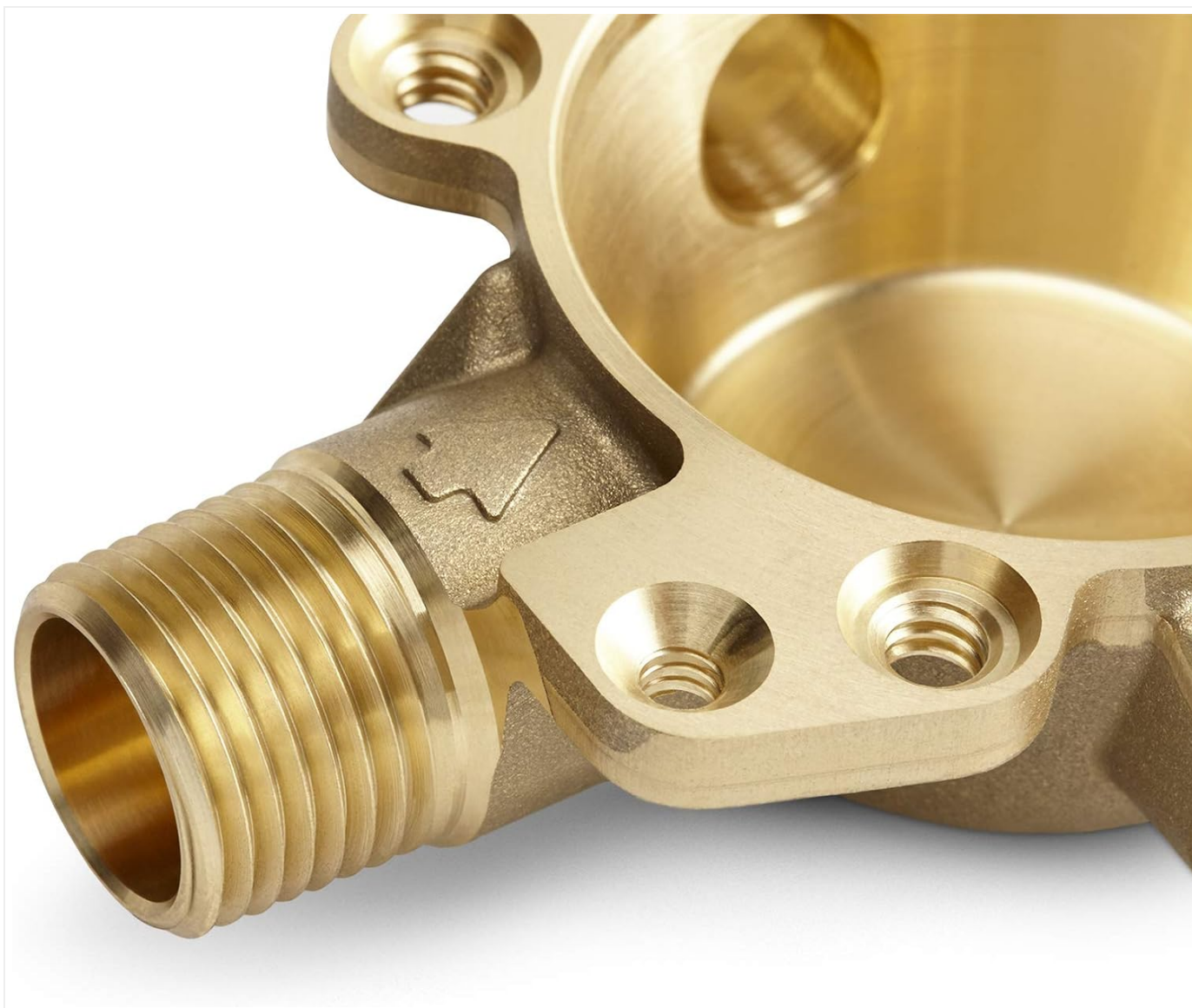


Figure 4.4: Detail of the 1/2-inch NPT threaded connection point on the valve body.

The valve body includes integrated service stops, which are essential for future maintenance. These allow you to shut off water to the valve without affecting the rest of your plumbing system. A test cap is also provided for flushing the system and pressure-testing before the final trim installation.

5. OPERATING INSTRUCTIONS

Once installed with a compatible trim kit, your Rite-Temp valve provides simple and precise control over your shower's water temperature.

5.1 Temperature Control

- The single lever handle (part of your trim kit) controls both water flow and temperature.
- Rotate the handle to cycle from the "off" position, through cold water, and then to hot water.
- The pressure-balancing cartridge automatically adjusts to maintain your selected temperature, even if water pressure changes elsewhere in your home.

5.2 High-Temperature Limit Stop

For safety, the valve includes an adjustable high-temperature limit stop. This feature allows you to set a maximum hot water temperature to prevent accidental scalding. Refer to your trim kit's instructions for specific adjustment procedures.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your KOHLER Rite-Temp valve.

- **Cartridge Replacement:** The one-piece cartridge design simplifies replacement if needed. Utilize the integrated service stops to shut off water to the valve before attempting any cartridge service.
- **Cleaning:** Clean the exterior of your trim kit according to its specific care instructions. Avoid abrasive cleaners that can damage finishes.
- **Winterization:** If the valve is installed in an unheated area subject to freezing temperatures, follow standard plumbing practices for winterization to prevent damage.

2 PRESSURE-BALANCING CARTRIDGE

Superior performance and reliability



One-Piece Cartridge Design

Kohler's one-piece cartridge design makes installation quick and easy. The cartridge features a double O-ring seal design to ensure reliable and water-tight installation every time.

Figure 6.1: The one-piece pressure-balancing cartridge, designed for easy installation and maintenance.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Rite-Temp valve.

Problem	Possible Cause	Solution
Low Water Flow	Debris in the valve body or cartridge; partially closed service stops.	Ensure service stops are fully open. Turn off water, remove cartridge, and inspect for debris. Flush the valve body if necessary.
Inconsistent Water Temperature	Faulty pressure-balancing cartridge; incorrect installation of cartridge.	Verify the cartridge is correctly seated. If the problem persists, the cartridge may need replacement.
Water Not Hot Enough	High-temperature limit stop set too low; water heater temperature too low.	Adjust the high-temperature limit stop (refer to trim kit instructions). Check your water heater settings.
Leaking from Valve	Improperly installed connections; damaged O-rings on cartridge; loose screws.	Check all connections for tightness. Inspect cartridge O-rings for damage and replace if necessary. Ensure mounting screws are secure.

Note: For complex issues or if you are unsure about any step, it is always recommended to contact a professional plumber.

8. SPECIFICATIONS

Attribute	Detail
Model Number	K-8304-KS-NA
Brand	Kohler
Material	Forged De-zincification Resistant Brass
Item Dimensions (L x W x H)	4.5 x 3 x 7 inches
Item Weight	1.36 pounds
Inlet Connection Size	1/2 Inches
Inlet Connection Type	National Pipe Tapered (NPT)
Outlet Connection Size	0.5 Inches
Outlet Connection Type	Sweat
Flow Rate	5 GPM (18.9 LPM) at 45 psi
Specification Met	ASME A112.18.1/CSA B125.1, ASSE 1016/ASME A112.1016/CSA B125.16

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The KOHLER K-8304-KS-NA Rite-Temp Pressure-Balancing Valve Body and Cartridge Kit is covered by the **KOHLER Faucet Lifetime Limited Warranty**. This warranty covers defects in material and workmanship for the original consumer purchaser. For full terms and conditions, please refer to the official KOHLER warranty documentation or visit the KOHLER website.

9.2 Customer Support

For technical assistance, replacement parts, or warranty claims, please contact KOHLER customer service. You can find contact information on the official KOHLER website or within the packaging materials of your product.



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