

Manuals.plus /

› Kohler /

› KOHLER GP876851 Rite-Temp Pressure-Balancing Cartridge and Mixer Cap Kit Instruction Manual

Kohler GP876851

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Model: GP876851

1. PRODUCT OVERVIEW

The KOHLER GP876851 Rite-Temp Pressure-Balancing Cartridge and Mixer Cap Kit is designed to maintain a consistent water temperature in your shower, preventing sudden fluctuations in temperature due to changes in water pressure. This kit is compatible with KOHLER shower valves K-304 and K-11748 platforms.



Image 1: KOHLER GP876851 Rite-Temp Pressure-Balancing Cartridge and Mixer Cap Kit. This image displays the main components of the kit, including the pressure-balancing unit and the mixer cap.

2. SAFETY INFORMATION

This product includes a temperature limit stop feature to prevent scalding. It is crucial to adjust this limit stop correctly to ensure the maximum hot water temperature does not exceed 120° Fahrenheit (49° Celsius). Refer to the 'Temperature Adjustment' section for detailed instructions.

CAUTION: This high temperature limit stop must be adjusted by the installer to prevent scalding or burns.

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Video 1: This video explains the internal workings of the shower valve, how the mixing cap regulates water temperature, and provides an important safety tip regarding the temperature limit stop. It demonstrates how to adjust the maximum water temperature setting.

3. COMPONENTS INCLUDED

The KOHLER GP876851 kit typically includes the following genuine KOHLER parts:

- GP800820 Pressure-Balancing Unit (PBU)
- GP77759 Mixer Cap
- Small O-rings (for PBU)
- Silicone Grease
- Collar Screws

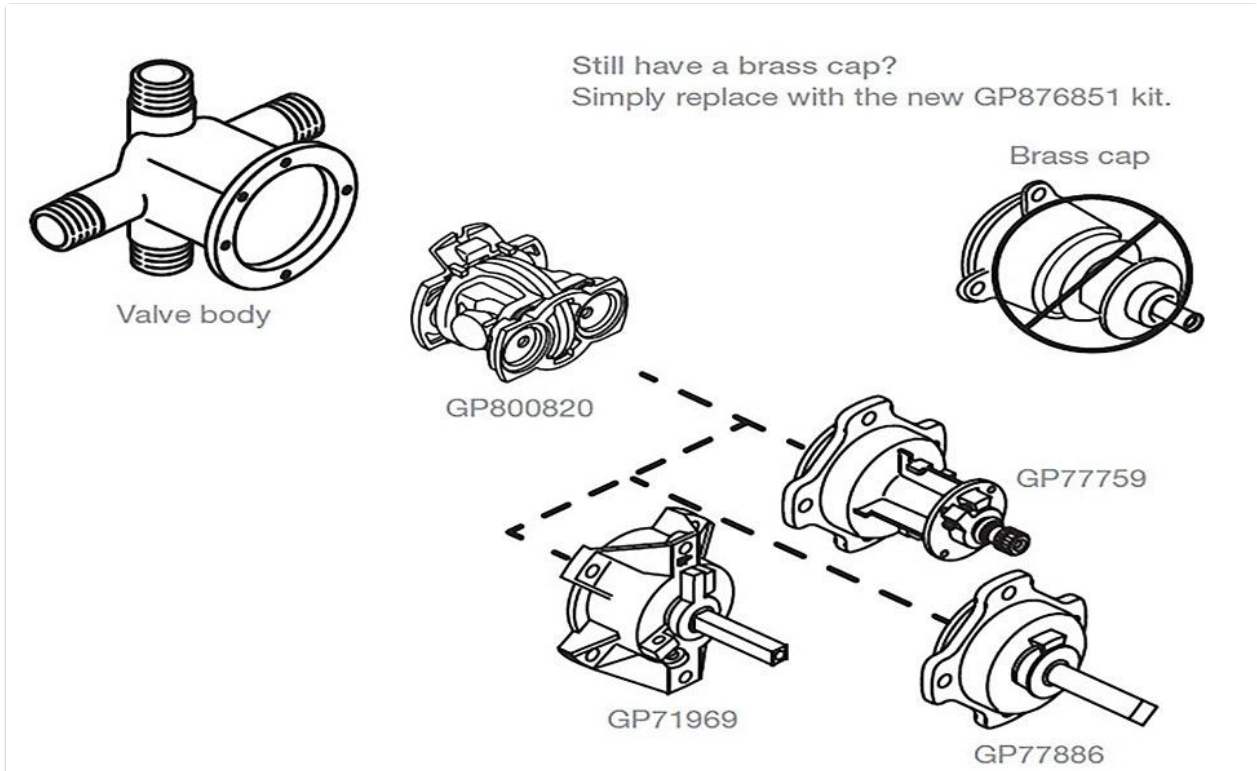


Image 2: Exploded view diagram showing the valve body, GP800820 pressure-balancing unit, GP77759 mixer cap, and other related components for KOHLER shower valves.

4. INSTALLATION INSTRUCTIONS

Follow these steps to replace your KOHLER Rite-Temp Pressure-Balancing Cartridge and Mixer Cap. It is recommended to watch the provided video tutorials for visual guidance.

1. **Shut Off Water Supply:** Locate and turn off the main water supply to your home or the specific shut-off valves for the shower.
2. **Bleed Water Pressure:** Open a nearby faucet to relieve any remaining water pressure in the lines.
3. **Close/Cover Drain:** Place a cloth or screen over the shower drain to prevent small parts from falling into it.
4. **Remove Valve Trim:** Carefully remove the shower handle and the decorative trim plate. This usually involves unscrewing a set screw on the handle and then removing screws securing the trim plate.
5. **Remove Mixer Cap:** Once the trim is off, you will see the existing mixer cap. Note the 12 o'clock position of any tabs on the cap for reinstallation reference.
6. **Remove Pressure-Balancing Unit (PBU):** Using pliers, carefully pull out the old pressure-balancing unit from the valve body. Check for any missing o-rings that might be stuck inside the valve body.
7. **Inspect Valve Body:** Examine the inside of the valve body for any debris, mineral buildup, or burrs. Clean as necessary.
8. **Prepare New PBU:** Apply a small amount of the provided silicone grease to the two small o-rings and place them into the oval grooves on the back of the new pressure-balancing unit.
9. **Insert New PBU:** Align the 'COLD' marking on the new pressure-balancing unit with the cold water inlet (typically on the right side when facing the valve) and push it straight into the valve body. Do not twist.
10. **Install New Mixer Cap:** Orient the new mixer cap with its tab at the 12 o'clock position and place it onto the valve body.
11. **Reinstall Collar and Adapter:** Place the metal collar (ensuring the 'TOP' marking is correctly oriented) and the plastic adapter back onto the valve, securing them with the provided screws.
12. **Partially Open Water Supply:** Slowly turn the main water supply back on partially.
13. **Check for Leaks:** Open the shower valve slightly and check for any leaks around the valve body. If no leaks are present, fully open the water supply valve.
14. **Adjust Temperature Limit Stop:** Refer to the 'Temperature Adjustment' section to set the maximum hot water temperature.
15. **Reinstall Handle and Trim:** Reattach the shower handle and trim plate.

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Video 2: This video provides a detailed guide on how to replace the KOHLER Mixing Cap and Pressure Balancing Unit, covering each step of the removal and installation process.

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Video 3: This video demonstrates the process of changing a KOHLER Posi-Temp cartridge, offering an alternative visual perspective on the replacement procedure.

5. OPERATION

The shower valve operates by rotating the handle to control both water flow and temperature. The Rite-Temp technology ensures that once a temperature is set, it remains consistent even if water pressure changes elsewhere in the home.

- **Off Position:** The handle is typically in the 6 o'clock position.
 - **Cold Water:** Rotating the handle counter-clockwise from the off position will increase the flow of cold water.
 - **Warm Water:** Further rotation counter-clockwise will introduce hot water, mixing it with the cold to achieve a warm temperature.
 - **Hot Water:** The maximum hot water setting is typically around the 11 o'clock position, limited by the anti-scald device.
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6. TEMPERATURE ADJUSTMENT

The maximum hot water temperature is controlled by a limit stop on the mixer cap. This is a critical safety feature to prevent scalding. The recommended maximum temperature is 120° Fahrenheit (49° Celsius).

1. **Measure Water Temperature:** Run hot water from a nearby faucet for several minutes. Use a digital thermometer to measure the water temperature.
2. **Adjust Water Heater (if necessary):** If the water temperature is consistently above 120°F (49°C), it is recommended to lower the temperature setting on your water heater.
3. **Adjust Limit Stop:** The limit stop is a small red component on the mixer cap, secured by a set screw (often requiring a 5/64th inch hex key).
 - To increase maximum hot water temperature, turn the set screw outwards.
 - To decrease maximum hot water temperature, turn the set screw inwards.
4. **Test and Verify:** After adjusting, re-test the shower water temperature with the digital thermometer to ensure it does not exceed 120°F (49°C) and meets your preference.

Refer to Video 1 in the 'Safety Information' section for a visual demonstration of the temperature limit stop adjustment.

7. MAINTENANCE

Regular maintenance helps ensure optimal performance and longevity of your KOHLER shower valve components.

- **Check for Leaks:** Periodically inspect around the shower valve for any signs of water leaks. Address any leaks promptly to prevent water damage.
 - **Clean Components:** If disassembling for any reason, gently clean any mineral deposits or debris from the valve body and cartridge components.
 - **Lubricate O-rings:** When replacing or reinstalling the cartridge, always apply a thin layer of silicone grease to the o-rings to ensure a proper seal and smooth operation.
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8. TROUBLESHOOTING

Here are some common issues and their potential solutions:

- **Constant Drip/Leak from Shower Head:** This often indicates a worn-out pressure-balancing unit or mixer cap. Replacing the GP876851 kit is the recommended solution.
- **Water Temperature Fluctuations:** If the water temperature changes unexpectedly during a shower, the

pressure-balancing unit may be failing. Replacement of the GP876851 kit is recommended.

- **No Hot Water or Insufficient Hot Water:**
 - Check your water heater settings.
 - Verify the temperature limit stop on the mixer cap is not set too low (refer to 'Temperature Adjustment' section).
 - A faulty mixer cap or pressure-balancing unit can also cause this.
- **Stiff or Hard-to-Turn Handle:** This can be due to mineral buildup or lack of lubrication on the cartridge components. Cleaning and lubricating, or replacing the kit, may resolve this.

9. SPECIFICATIONS

- **Model Number:** GP876851
- **Material:** Plastic
- **Item Dimensions (L x W x H):** 7.5 x 4.5 x 2.5 inches
- **Item Weight:** 7.5 ounces
- **Included Components:** GP800820 Pressure-Balancing Unit, GP77759 Mixer Cap
- **Compatibility:** KOHLER Shower Valves K-304 & K-11748 Platforms

10. WARRANTY AND SUPPORT

For detailed warranty information and customer support, please refer to the official KOHLER website or contact KOHLER customer service directly. Keep your purchase receipt for warranty claims.