

**BMW 17117573781**

# BMW E46 E53 E83 Coolant Expansion Tank with Level Sensor User Manual

## 1. INTRODUCTION

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This manual provides essential information for the installation, operation, and maintenance of your new BMW Coolant Expansion Tank with an integrated Coolant Level Sensor. The expansion tank is a critical component of your vehicle's cooling system, designed to manage coolant volume changes due to temperature fluctuations and to provide a reservoir for coolant. The integrated level sensor alerts you to low coolant conditions, helping to prevent engine overheating and potential damage.

### 1.1. Compatibility

This coolant expansion tank with level sensor is compatible with the following BMW models:

- BMW E46
- BMW E53
- BMW E83
- 320i, 323Ci, 323i
- 325Ci, 325i, 325xi
- 328Ci, 328i
- 330Ci, 330i, 330xi
- X3, X5

## 2. PRODUCT OVERVIEW

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The coolant expansion tank is constructed from durable plastic, designed to withstand the high temperatures and pressures of the engine cooling system. It features an integrated coolant level sensor, which is typically made with robust materials like stainless steel for longevity and accurate readings. The tank includes connections for coolant hoses and a cap for filling and pressure regulation.



Image 1: Close-up view of the integrated coolant level sensor.



Image 2: The coolant expansion tank, showing its main body, cap, and level sensor.

### 3. INSTALLATION GUIDE

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Proper installation is crucial for the safe and effective operation of the cooling system. If you are not experienced with automotive repairs, it is highly recommended to seek professional assistance.

#### 3.1. Safety Precautions

- Ensure the engine is completely cool before beginning any work on the cooling system. Hot coolant can cause severe burns.
- Wear appropriate personal protective equipment, including gloves and eye protection.
- Disconnect the vehicle's battery to prevent accidental electrical shorts.
- Dispose of old coolant responsibly according to local regulations.

## 3.2. Installation Steps (General)

1. **Drain Coolant:** Place a drain pan under the radiator and open the drain plug to drain the coolant.
2. **Remove Old Tank:** Disconnect all hoses connected to the old expansion tank. Unclip or unbolt the old tank from its mounting bracket.
3. **Install New Tank:** Position the new expansion tank in the mounting bracket and secure it. Connect all hoses to their respective ports on the new tank, ensuring clamps are tight.
4. **Install Sensor:** If the sensor is not pre-installed, insert the coolant level sensor into its designated port on the tank and secure it. Connect the electrical connector to the sensor.
5. **Refill Coolant:** Close the radiator drain plug. Slowly fill the expansion tank with the correct type and mixture of BMW-approved coolant.
6. **Bleed Air:** Follow your vehicle's specific procedure for bleeding air from the cooling system. This often involves running the engine with the heater on high and the expansion tank cap off until no more bubbles appear.
7. **Check for Leaks:** After bleeding, inspect all connections for leaks.
8. **Test Drive:** Take a short test drive, monitoring the temperature gauge. Recheck coolant level and for leaks after the engine cools.

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Video 1: Overview of the Coolant Expansion Tank and its components, useful for understanding installation points.

## 4. OPERATION

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The coolant expansion tank maintains the correct pressure within the cooling system and provides a space for coolant to expand and contract with temperature changes. The integrated coolant level sensor continuously monitors the coolant volume. If the coolant level drops below a safe threshold, the sensor triggers a warning light on your vehicle's dashboard, indicating that coolant needs to be added.

### 4.1. Monitoring Coolant Level

Regularly check the coolant level in the expansion tank when the engine is cold. The tank typically has 'MIN' and 'MAX' markings. The coolant level should be between these two marks. If the level is consistently low, investigate for leaks or consult a professional.

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Video 2: Detailed view of the coolant level sensor, demonstrating its design and function.

## 5. MAINTENANCE

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To ensure the longevity and optimal performance of your cooling system, regular maintenance is essential.

### 5.1. Regular Checks

- **Visual Inspection:** Periodically inspect the expansion tank for cracks, discoloration, or signs of leaks. Check hoses for cracks or swelling.
- **Coolant Level:** Check the coolant level weekly or bi-weekly, especially before long trips.
- **Cap Inspection:** Ensure the expansion tank cap is securely tightened and that its rubber seal is in good condition. A faulty cap can lead to pressure loss and overheating.

### 5.2. Coolant Type

Always use BMW-approved coolant (typically a blue or green ethylene glycol-based coolant) mixed with distilled water according to the manufacturer's specifications. Using incorrect coolant can damage the cooling system components.

## 6. TROUBLESHOOTING

Below are common issues and potential solutions related to the coolant expansion tank and level sensor.

Problem	Possible Cause	Solution
Low Coolant Warning Light On	Low coolant level, faulty sensor, electrical connection issue.	Check coolant level and add if necessary. Inspect sensor wiring. If level is correct, sensor may need replacement.
Coolant Leak from Tank	Cracked tank, loose hose connections, faulty cap.	Inspect tank for cracks; replace if found. Tighten hose clamps. Replace expansion tank cap.
Engine Overheating	Low coolant, air in system, other cooling system issues.	Check coolant level. Bleed air from the system. Consult a mechanic for further diagnosis.

## 7. SPECIFICATIONS

Key technical specifications for the BMW Coolant Expansion Tank with Level Sensor.

Feature	Detail
Brand	BMW
Material	Plastic (Tank), Stainless Steel (Sensor components)
Mounting Type	Flange Mount
Output Type (Sensor)	Push-Pull
Sensing Distance (Sensor)	12 Inches
Upper Temperature Rating	125 Degrees Celsius
Manufacturer Part Number	17117573781
OEM Part Number	17 11 7 573 781

## 8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the seller directly. Keep your proof of purchase for any warranty claims.