Trust a Part 7837231

Viessmann Vitodens 100-W Vitodens 050-W Expansion Vessel 7837231 Instruction Manual

Model: 7837231 | Brand: Trust a Part

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of the Viessmann Vitodens 100-W and Vitodens 050-W Expansion Vessel, model 7837231. This 8-liter expansion vessel is a critical component in your central heating system, designed to manage pressure fluctuations and ensure efficient boiler operation. Please read these instructions carefully before proceeding with installation or maintenance.

Important Safety Notice: Installation and servicing of this expansion vessel must be carried out by a qualified and competent heating engineer in accordance with all local and national regulations and safety standards.

2. Product Overview

The expansion vessel (part number 7837231) is an 8-liter capacity component specifically designed for use with various Viessmann Vitodens 100-W and Vitodens 050-W domestic boilers. Its primary function is to absorb the expansion of water as it heats up within a sealed central heating system, preventing excessive pressure build-up and potential damage to the boiler and pipework.

This expansion vessel is compatible with the following Viessmann boiler models:

- Vitodens 100-W BPJA 29KW Combi Boiler (7501298)
- Vitodens 100-W WB1C 19KW System Boiler (7499423)
- Vitodens 100-W WB1C 30KW System Boiler (7499426)
- Vitodens 100-W WB1C 26KW Combi Boiler (7499425)
- Vitodens 100-W WB1C 30KW Combi Boiler (7499427)
- Vitodens 100-W BPJA 25KW (7501297)
- Vitodens 100-W WB1C 35KW Combi Boiler (7499429)
- Vitodens 100-W WB1C 26KW System Boiler (7499424)
- Vitodens 050-W BPJC 29KW Combi Boiler (7537906)
- Vitodens 050-W BPJC 35KW (7537947)

- Vitodens 050-W BPJD 29KW Combi Boiler (7202938)
- Vitodens 050-W BPJD 35KW (7202989)
- Vitodens 100-W B1KA 26KW Combi Boiler (7543422)
- Vitodens 100-W B1KA 30KW Combi Boiler (7543424)
- Vitodens 100-W B1KA 35KW Combi Boiler (7543426)
- Vitodens 100-W B1HA 19KW System Boiler (7543420)
- Vitodens 100-W B1HA 26KW System Boiler (7543421)
- Vitodens 100-W B1HA 30KW System Boiler (7543423)
- Vitodens 100-W B1HA 35KW System Boiler (7543425)
- Vitodens 100-W WB1C 35KW System Boiler (7499428)
- Vitodens 100-W WB1C 30KW Combi Boiler (7441745)
- Vitodens 100-W B1KC 26KW Combi Boiler (7570673)
- Vitodens 100-W B1HC 19KW System Boiler (7570671)
- Vitodens 100-W B1HC 26KW System Boiler (7570672)
- Vitodens 100-W B1HC 30KW System Boiler (7570674)
- Vitodens 100-W B1HC 35KW System Boiler (7570676)

Figure 1: The Viessmann Vitodens 100-W / 050-W Expansion Vessel (Part No. 7837231). This image shows the overall

shape and connection points of the expansion vessel.

3. Setup and Installation

Installation of the expansion vessel should only be performed by a qualified and certified heating engineer. Incorrect installation can lead to system malfunction, damage, or safety hazards.

3.1. Safety Precautions

- Always isolate the boiler from the electrical supply before commencing any work.
- Ensure the heating system is fully depressurized and drained before removing the old expansion vessel.
- Wear appropriate personal protective equipment (PPE).
- Refer to the specific boiler manufacturer's instructions for detailed steps related to your boiler model.

3.2. Installation Steps (General Guide)

1. **Isolate and Drain:** Turn off the boiler and isolate it from the mains electricity. Close the isolation valves to the heating system and drain the system completely.
2. **Depressurize:** Ensure the system pressure gauge reads zero.
3. **Remove Old Vessel:** Carefully disconnect and remove the existing expansion vessel. Be prepared for residual water.
4. **Prepare New Vessel:** Inspect the new Viessmann expansion vessel (7837231) for any signs of damage. Ensure the pre-charge pressure is correct for your system (typically 0.75 to 1.0 bar, but check boiler manual).
5. **Install New Vessel:** Connect the new expansion vessel to the system using appropriate fittings and seals. Ensure all connections are tight and secure.
6. **Refill and Repressurize:** Slowly refill the heating system with water, bleeding air from radiators as you go. Monitor the system pressure gauge until the recommended operating pressure is reached (usually 1.0 to 1.5 bar when cold).
7. **Check for Leaks:** Thoroughly inspect all connections for any signs of leaks.
8. **Restore Power:** Once satisfied, restore electrical power to the boiler and recommission the system according to the boiler manufacturer's instructions.

Figure 2: A closer view of the Viessmann Expansion Vessel, showing the product label and connection points. This detail is important for verifying the part number and understanding connection orientation during installation.

4. Operating Principle

The Viessmann Vitodens expansion vessel operates on a simple yet crucial principle. Inside the vessel, a flexible diaphragm separates a sealed air or nitrogen charge from the heating system water. As the water in your central heating system heats up, it expands. This expanded water is pushed into the expansion vessel, compressing the air/nitrogen charge on the other side of the diaphragm. When the system cools down, the water contracts, and the compressed air/nitrogen pushes the water back into the system, maintaining a stable operating pressure. This prevents the pressure relief valve from constantly opening and releasing water, which would lead to frequent system top-ups and potential damage.

5. Maintenance

Regular maintenance is essential to ensure the longevity and efficient operation of your expansion vessel and the entire heating system. It is recommended that a qualified engineer checks the expansion vessel as part of the annual boiler service.

5.1. Annual Checks

- **Pre-charge Pressure:** The pre-charge pressure of the expansion vessel should be checked annually. This involves isolating the vessel from the system, draining it, and using a pressure gauge to check the air-side pressure. Adjust if necessary to match the boiler manufacturer's specification (typically 0.75 to 1.0 bar).
- **Visual Inspection:** Inspect the vessel for any signs of corrosion, leaks, or physical damage.
- **Diaphragm Integrity:** If water comes out when the air valve is pressed, it indicates a ruptured diaphragm, and the vessel needs immediate replacement.

6. Troubleshooting

If you experience issues with your central heating system, a faulty expansion vessel could be a contributing

factor. Always consult a qualified heating engineer for diagnosis and repair.

6.1. Common Symptoms of a Faulty Expansion Vessel

- **Frequent Boiler Pressure Drops:** The system pressure repeatedly drops, requiring frequent topping up.
- **Pressure Relief Valve Discharging:** The pressure relief valve (PRV) frequently opens and discharges water, especially when the system heats up.
- **Fluctuating Pressure Gauge:** The system pressure gauge shows significant and rapid fluctuations between high and low pressures.
- **Cold Radiators (Partial):** Inconsistent heating across radiators, potentially due to air in the system caused by pressure issues.

If you observe any of these symptoms, it is crucial to contact a qualified heating engineer to inspect your system and expansion vessel.

7. Specifications

Feature	Detail
Product Name	Expansion Vessel
Manufacturer	Viessmann (supplied by Trust a Part)
Model Number	7837231
Capacity	8 Liters
Compatibility	Viessmann Vitodens 100-W and Vitodens 050-W domestic boilers (see Section 2 for full list)
Condition	New

8. Warranty and Support

This Viessmann expansion vessel, when purchased from Trust a Part, comes with a**12-month warranty**. This warranty covers manufacturing defects and ensures the product is free from faults for a period of 12 months from the date of purchase.
For any warranty claims, technical support, or assistance with installation and troubleshooting, please contact your supplier or a qualified heating engineer. Do not attempt to repair the expansion vessel yourself, as this could void the warranty and pose safety risks.
Trust a Part specializes in boiler and central heating spare parts and has over 25 years of experience in the field. For further assistance, please refer to their official contact channels.