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- › [Flamco](#) /
- › [Flamco Airfix A MAG-W 18/4.0 Potable Water Expansion Tank User Manual](#)

Flamco 24459

Flamco Airfix A MAG-W 18/4.0 Potable Water Expansion Tank User Manual

Model: 24459 | Brand: Flamco

[Introduction](#) [Setup](#) [Operating](#) [Maintenance](#) [Troubleshooting](#) [Specifications](#)
[Warranty & Support](#)

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Flamco Airfix A MAG-W 18/4.0 potable water expansion tank. This expansion vessel is designed to prevent pressure fluctuations and water loss in domestic hot water systems, ensuring system longevity and efficiency. Please read these instructions carefully before installation and retain them for future reference.

- Do not exceed the maximum operating pressure of 10 bar.
- Verify the pre-charge pressure before installation.

2.2 Installation Steps

1. **Choose Location:** Install the expansion tank in a location that is easily accessible for maintenance and inspection, and protected from freezing temperatures.
2. **Mounting:** Securely mount the tank using appropriate brackets if necessary. The tank can be installed in any position.
3. **Connect to System:** Connect the expansion tank to the potable hot water system, typically on the cold water supply line to the water heater, before any shut-off valves or check valves. Use appropriate fittings and sealing materials to ensure a leak-free connection.
4. **Check Pre-charge:** Before commissioning, verify the nitrogen pre-charge pressure using a pressure gauge. The factory pre-charge is 4.0 bar. Adjust if necessary to match the system's static pressure.
5. **System Fill:** Slowly fill the system with water, bleeding air from all high points. Check for leaks at all connections.



Figure 2: Exploded view of the Flamco Airfix A MAG-W expansion tank. This illustration shows the separate components of the tank and its connection valve, demonstrating how they fit together during installation.



Figure 3: Flamco Airfix A MAG-W expansion tank with the valve attached. This image depicts the expansion tank with its connection valve securely in place, illustrating the assembled unit prior to system integration.

3. OPERATING PRINCIPLES

The Flamco Airfix A MAG-W expansion tank operates by absorbing the increased volume of water that occurs when potable water is heated. This prevents excessive pressure buildup and the discharge of water through the safety relief valve, thereby conserving water and protecting the system components.

3.1 Flowthrough Technology

This expansion tank incorporates advanced 'Flowthrough' technology. This design ensures that the potable water inside the tank is continuously circulated and mixed with the system water, preventing stagnation and inhibiting bacterial growth, including Legionella. The internal membrane is ACS certified, ensuring it does

not impart any odor, color, or taste to the potable water.



Figure 4: Internal view of the Flamco Airfix A MAG-W expansion tank demonstrating water flow. This diagram illustrates the 'Flowthrough' mechanism, showing how water circulates within the tank to prevent stagnation and ensure freshness.

3.2 Nitrogen Pre-charge

The tank is pre-charged with nitrogen, an inert gas, which helps maintain the membrane's integrity and extends the life of the tank by preventing internal corrosion that could occur with oxygen-filled tanks. The pre-charge pressure is factory set to 4.0 bar.

4. MAINTENANCE

Regular maintenance ensures the optimal performance and longevity of your Flamco Airfix A MAG-W expansion tank. It is recommended to have the system inspected annually by a qualified professional.

4.1 Annual Inspection

- **Visual Check:** Inspect the tank for any signs of external damage, corrosion, or leaks.
- **Connection Integrity:** Verify that all connections are secure and free from leaks.
- **Pre-charge Pressure Check:** The nitrogen pre-charge pressure should be checked annually. To do this, the system must be depressurized and the tank isolated from the water supply. Use a suitable pressure gauge to measure the pressure at the air valve. Adjust if necessary to match the system's static pressure.
- **Functionality Test:** Observe the system's pressure fluctuations during heating cycles to ensure the expansion tank is effectively absorbing expansion.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your expansion tank.

Problem	Possible Cause	Solution
Frequent discharge from safety relief valve	Low or no pre-charge pressure in the expansion tank. Tank is undersized.	Check and adjust pre-charge pressure. Consult a professional to verify tank sizing for your system.
Water hammer or banging pipes	Incorrect pre-charge pressure. Air in the system.	Verify and adjust pre-charge pressure. Bleed air from the system.
Water leaking from air valve	Damaged internal membrane.	The tank requires replacement. Contact a qualified professional.
Corrosion on tank exterior	Environmental factors, chemical exposure.	Ensure proper ventilation and avoid exposure to corrosive substances. Replace if structural integrity is compromised.

6. SPECIFICATIONS

Feature	Detail
Model Number	24459
Brand	Flamco
Capacity	18 Liters
Pre-charge Pressure	4.0 bar (Nitrogen)
Maximum Operating Pressure	10 Bars
Material	Alloy Steel (Epoxy coated interior and exterior)
Dimensions (L x W x H)	80 x 32.8 x 32.3 cm
Weight	4.9 Kilograms

Feature	Detail
Special Features	Flow-through design, ACS certified butyl rubber membrane, galvanized steel sealing ring
Color	White

7. WARRANTY AND SUPPORT

7.1 Warranty Information

Flamco provides a commitment to quality for its products. Spare parts for the Flamco Airfix A MAG-W expansion tank are available for a period of **2 years** from the date of purchase. For specific warranty terms and conditions, please refer to the documentation provided with your product or contact Flamco customer service.

7.2 Customer Support

If you require technical assistance, have questions regarding installation, operation, or maintenance, or need to report a product issue, please contact your local Flamco distributor or visit the official Flamco website for support contact details. When contacting support, please have your product model number (24459) and purchase information readily available.