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› Amtrol 445-1 Air Purger, 1-1/2 Inch Instruction Manual

## Amtrol 445-1

# Amtrol 445-1 Air Purger, 1-1/2 Inch Instruction Manual

Model: 445-1

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## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your Amtrol 445-1 Air Purger, 1-1/2 Inch. Please read these instructions thoroughly before installation and keep this manual for future reference. The Amtrol 445-1 Air Purger is designed to efficiently remove air from hydronic heating and cooling systems, ensuring optimal system performance and longevity.



Figure 1: Amtrol 445-1 Air Purger, 1-1/2 Inch. This image shows the main unit of the air purger, highlighting its robust cast iron construction and connection points.

## 2. SAFETY INFORMATION

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**WARNING:** Failure to follow these safety instructions could result in property damage, serious injury, or death.

- Always depressurize the system and allow it to cool before attempting any installation or maintenance.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure all connections are properly sealed to prevent leaks.
- Installation should be performed by a qualified professional in accordance with local codes and regulations.
- Do not modify the air purger in any way.
- Keep children and unauthorized personnel away from the installation area.

## 3. COMPONENTS AND PACKAGE CONTENTS

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Verify that all components are present and undamaged before beginning installation.

- Amtrol 445-1 Air Purger (1 unit)
- Instruction Manual (this document)

*Note: Additional fittings, piping, and tools required for installation are not included and must be sourced separately.*

## 4. SETUP AND INSTALLATION

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The Amtrol 445-1 Air Purger is designed for installation in the main return line of a hydronic system, typically before the expansion tank and circulator pump.

## 4.1. Pre-Installation Steps

1. **Depressurize System:** Shut down the heating/cooling system and allow it to cool completely. Drain enough water from the system to reduce pressure to zero.
2. **Identify Location:** Select a suitable location in the main return line where the air purger can be easily accessed for future maintenance. Ensure there is sufficient space for the unit and its connections.
3. **Gather Tools:** Have all necessary tools and materials ready, including pipe wrenches, thread sealant, and appropriate piping.

## 4.2. Installation Procedure

1. **Cut Pipe:** Carefully cut a section of the main return line to accommodate the air purger. Ensure clean, burr-free cuts.
2. **Apply Sealant:** Apply a suitable pipe thread sealant to the male threads of the air purger's connections.
3. **Install Purger:** Thread the air purger into the prepared section of the pipe. Ensure the flow arrow on the purger body (if present) aligns with the direction of water flow in the system.
4. **Tighten Connections:** Use pipe wrenches to securely tighten all connections. Avoid over-tightening, which can damage threads or the unit.
5. **Connect Expansion Tank (if applicable):** If an expansion tank is being installed in conjunction with the air purger, connect it to the designated port on the air purger according to the expansion tank manufacturer's instructions.
6. **Refill System:** Slowly refill the system with water, allowing air to escape through any automatic air vents in the system. Monitor pressure during refilling.
7. **Check for Leaks:** Once the system is refilled and pressurized, thoroughly inspect all connections for leaks. Tighten any leaking connections as necessary.

## 5. OPERATING INSTRUCTIONS

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The Amtrol 445-1 Air Purger operates passively to remove air from your hydronic system. Once properly installed, it requires no manual intervention for its primary function.

- **Automatic Air Removal:** As water flows through the air purger, air bubbles are separated from the water and directed upwards.
- **Air Vent Connection:** The separated air accumulates in the top chamber of the purger and is then released through an automatic air vent (sold separately) connected to the purger's top port. Ensure this air vent is functioning correctly.
- **System Performance:** A properly functioning air purger contributes to quieter system operation, improved heat transfer efficiency, and reduced corrosion within the system.

## 6. MAINTENANCE

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The Amtrol 445-1 Air Purger is designed for minimal maintenance. However, periodic checks are recommended to ensure optimal performance.

- **Annual Inspection:** Annually inspect the air purger and its connections for any signs of leaks, corrosion, or damage.
- **Check Air Vent:** Ensure the automatic air vent connected to the purger is clean and operating freely. A clogged or malfunctioning air vent can prevent proper air removal. Refer to the air vent manufacturer's instructions for specific maintenance.
- **System Flushing:** If the hydronic system is flushed, ensure the air purger is also flushed to remove any accumulated debris.

Note: Do not attempt to disassemble the air purger unless specifically instructed by Amtrol technical support.

## 7. TROUBLESHOOTING

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This section addresses common issues that may arise with your hydronic system related to air.

Problem	Possible Cause	Solution
System still has air (gurgling noises, cold spots).	<ul style="list-style-type: none"><li>Automatic air vent is clogged or faulty.</li><li>Insufficient system pressure.</li><li>Air purger installed incorrectly (e.g., wrong orientation).</li><li>New air introduced into the system.</li></ul>	<ul style="list-style-type: none"><li>Inspect and clean or replace the automatic air vent.</li><li>Check system pressure and adjust if necessary.</li><li>Verify air purger installation, ensuring flow arrow is correct.</li><li>Bleed air from radiators and other high points in the system.</li></ul>
Water leaking from air purger connections.	<ul style="list-style-type: none"><li>Loose connections.</li><li>Improper thread sealant application.</li><li>Damaged threads or unit.</li></ul>	<ul style="list-style-type: none"><li>Depressurize system, then tighten connections.</li><li>Depressurize system, disassemble, reapply sealant, and reassemble.</li><li>Contact Amtrol support for assistance if unit is damaged.</li></ul>

If troubleshooting steps do not resolve the issue, contact a qualified HVAC professional or Amtrol customer support.

## 8. SPECIFICATIONS

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Technical specifications for the Amtrol 445-1 Air Purger, 1-1/2 Inch.

Feature	Detail
Model Number	445-1
Connection Size	1-1/2 Inch (1.5 Inch)
Material	Cast Iron
Product Dimensions (approx.)	1.5"D x 1.5"W x 1.5"H
Item Weight (approx.)	7 pounds
Application	Hydronic Heating and Cooling Systems
Manufacturer	APR Supply Co. (for Amtrol)

## 9. WARRANTY AND SUPPORT

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Amtrol products are manufactured to high-quality standards. For specific warranty information regarding your Amtrol 445-1 Air Purger, please refer to the official warranty statement provided with your purchase or visit the official Amtrol website.

For technical assistance, replacement parts, or further inquiries, please contact Amtrol customer support.

- **Amtrol Official Website:** [www.amtrol.com](http://www.amtrol.com) (Note: This is a placeholder URL, please verify the actual official website.)

*website.)*

- **Customer Support:** Refer to the Amtrol website or product packaging for contact details.