

wilkins 720a pressure vacuum breaker manual

wilkins 720a pressure vacuum breaker manual is an essential resource for understanding the installation, operation, maintenance, and troubleshooting of the Wilkins 720A pressure vacuum breaker (PVB). This device is widely used in plumbing systems to prevent backflow and protect potable water supplies from contamination. The manual provides detailed instructions and specifications, enabling professionals and homeowners alike to ensure proper function and regulatory compliance. This article offers a comprehensive overview of the Wilkins 720A PVB, covering its components, installation guidelines, maintenance procedures, and common troubleshooting tips. Additionally, it highlights the importance of adhering to local plumbing codes when working with pressure vacuum breakers. Below is the table of contents outlining the key sections covered in this article.

- Overview of the Wilkins 720A Pressure Vacuum Breaker
- Installation Instructions
- Operation and Functionality
- Maintenance and Inspection
- Troubleshooting Common Issues
- Compliance and Safety Considerations

Overview of the Wilkins 720A Pressure Vacuum Breaker

The Wilkins 720A pressure vacuum breaker is a backflow prevention device designed to protect potable water systems from contamination due to back-siphonage. It is commonly installed on lawn irrigation systems, fire sprinkler systems, and other outdoor water systems where backflow risk is present. The device operates by introducing atmospheric air into the system when a vacuum or negative pressure occurs, thus preventing contaminated water from flowing backward into the clean water supply.

Key Components

The Wilkins 720A PVB consists of several critical parts that work together to maintain backflow prevention:

- **Check Valve Assembly:** Prevents reverse flow of water.

- **Air Inlet Valve:** Opens to admit air during negative pressure events.
- **Test Cocks:** Allow for testing and monitoring of the device's functionality.
- **Relief Valve:** Releases pressure buildup within the unit.
- **Body and Cover:** Durable construction typically made from brass or bronze for corrosion resistance.

Specifications and Standards

The Wilkins 720A pressure vacuum breaker complies with industry standards including ASSE 1020 and is approved by the American Water Works Association (AWWA). It is rated for pressures up to 175 psi and temperatures ranging from 33°F to 140°F. Understanding these specifications is critical when selecting and installing the device to ensure compatibility with the plumbing system.

Installation Instructions

Proper installation of the Wilkins 720A PVB is crucial for optimal performance and compliance with plumbing codes. The manual outlines step-by-step installation procedures designed for plumbing professionals and qualified personnel.

Location Selection

The device must be installed at least 12 inches above the highest downstream outlet to maintain air gap requirements. It should be positioned in an accessible location for maintenance and testing purposes, away from sources of potential contamination or freezing conditions.

Installation Steps

1. Shut off the main water supply before beginning installation.
2. Install the PVB on a horizontal pipe run with the arrow on the body pointing in the direction of water flow.
3. Use approved fittings and thread sealant to connect the device securely.
4. Ensure the unit is installed vertically with the air inlet valve pointing upwards.
5. Verify that test cocks are accessible and properly capped after installation.
6. Turn the water supply back on and check for leaks and proper operation.

Additional Installation Tips

- Do not install the device in a location prone to freezing temperatures unless proper insulation or heat is provided.
- Maintain adequate clearance for future testing and repairs.
- Follow all local plumbing codes and regulations during installation.

Operation and Functionality

Understanding how the Wilkins 720A pressure vacuum breaker functions is essential to appreciate its role in protecting water supplies. The device allows water to flow in the intended direction under normal conditions but prevents backflow by admitting air when negative pressure occurs.

Normal Operation

During regular water flow, the check valve remains open, allowing water to pass through freely. The air inlet valve stays closed to maintain system pressure and prevent air from entering the water supply.

Backflow Prevention Mechanism

If a vacuum or negative pressure develops downstream, the check valve closes, and the air inlet valve opens. This action admits atmospheric air into the system, breaking the vacuum and preventing contaminated water from being siphoned back into the potable water supply.

Pressure Relief

The relief valve helps release any excess pressure that may accumulate, ensuring the system remains within safe operating parameters and preventing potential damage to the device or connected plumbing.

Maintenance and Inspection

Routine maintenance is vital to ensure the Wilkins 720A pressure vacuum breaker continues to function effectively and complies with regulatory requirements. The manual provides detailed maintenance schedules and procedures.

Regular Inspections

Visual inspections should be conducted periodically to check for signs of wear, corrosion, or damage. The test cocks can be used to perform operational tests to verify that the check valve and air inlet valve are working correctly.

Cleaning Procedures

Cleaning involves dismantling the device carefully to remove debris or mineral buildup that may impede valve operation. Lubricating moving parts with approved lubricants can also help maintain smooth functionality.

Testing Requirements

Annual testing by certified backflow prevention testers is typically required by local codes. These tests assess the device's ability to prevent backflow effectively and may involve pressure differential measurements and valve performance checks.

Troubleshooting Common Issues

Despite proper installation and maintenance, issues may arise that affect the Wilkins 720A pressure vacuum breaker's performance. The manual includes troubleshooting guidelines to identify and resolve common problems.

Leaking or Dripping

Leaks around the test cocks or body may indicate worn gaskets or damaged seals. Tightening fittings or replacing faulty components can usually resolve these issues.

Failure to Prevent Backflow

If backflow occurs, the check valve or air inlet valve may be malfunctioning due to debris, corrosion, or mechanical failure. Cleaning or replacing the affected parts is necessary to restore proper function.

Air Inlet Valve Sticking

The air inlet valve may stick open or closed if dirt or mineral deposits accumulate. Regular cleaning and lubrication help prevent this problem.

Compliance and Safety Considerations

Adhering to safety standards and plumbing codes is essential when working with the Wilkins 720A pressure vacuum breaker. The manual emphasizes compliance with state and local regulations to ensure public health and system integrity.

Code Compliance

The device meets requirements set forth by organizations such as the American Society of Sanitary Engineering (ASSE) and the American Water Works Association (AWWA). Installation and testing must follow these standards as well as local plumbing codes.

Safety Precautions

Proper handling and installation techniques are critical to prevent injury and system damage. The manual advises on wearing protective equipment and ensuring system depressurization before maintenance.

Record Keeping

Maintaining accurate records of installation dates, inspections, maintenance, and test results is important for regulatory compliance and ongoing system management.

Frequently Asked Questions

What is the Wilkins 720A Pressure Vacuum Breaker used for?

The Wilkins 720A Pressure Vacuum Breaker is used to prevent backflow contamination in irrigation and plumbing systems by allowing air to enter the system when negative pressure occurs, thereby protecting potable water supplies.

Where can I find the Wilkins 720A Pressure Vacuum Breaker manual?

The Wilkins 720A Pressure Vacuum Breaker manual can typically be found on the official Wilkins website or through authorized distributors. Additionally, many plumbing supply websites offer downloadable PDF versions of the manual.

How do I install the Wilkins 720A Pressure Vacuum Breaker according to the manual?

According to the Wilkins 720A manual, the device should be installed at least 12 inches above the highest point of downstream piping or irrigation heads to ensure proper air intake and backflow

prevention. It must be installed in a horizontal position with proper support and accessible for maintenance.

What maintenance does the Wilkins 720A Pressure Vacuum Breaker require?

The Wilkins 720A requires periodic inspection and testing as outlined in the manual, including checking for leaks, cleaning or replacing internal parts such as the check valve and air inlet valve, and ensuring that the device is free of debris to maintain proper function.

Can the Wilkins 720A Pressure Vacuum Breaker be used for both residential and commercial irrigation systems?

Yes, the Wilkins 720A Pressure Vacuum Breaker is designed to be versatile and can be used in both residential and commercial irrigation systems to protect potable water from backflow contamination.

Additional Resources

1. Wilkins 720A Pressure Vacuum Breaker: Installation and Maintenance Guide

This comprehensive manual covers the essential steps for installing and maintaining the Wilkins 720A pressure vacuum breaker. It includes detailed diagrams, troubleshooting tips, and maintenance schedules to ensure optimal performance. Ideal for plumbers, irrigation specialists, and DIY enthusiasts alike.

2. Understanding Pressure Vacuum Breakers: Theory and Practical Applications

This book delves into the fundamental principles behind pressure vacuum breakers, including the Wilkins 720A model. Readers will learn about the mechanics of backflow prevention, system design, and how these devices protect potable water systems. Practical case studies and real-world examples enhance understanding.

3. Backflow Prevention Devices: A Comprehensive Guide for Professionals

Focusing on a variety of backflow prevention devices, this guide includes an in-depth section on the Wilkins 720A pressure vacuum breaker. It covers installation best practices, regulatory standards, and common issues encountered in the field. The book is a valuable resource for plumbers and water system inspectors.

4. Wilkins Valve Series: Product Catalog and Technical Specifications

This catalog provides detailed technical information and specifications for the entire Wilkins valve series, including the 720A pressure vacuum breaker. It offers insight into product features, material composition, and compatibility with various plumbing systems. Useful for engineers and procurement specialists.

5. Plumbing Code Essentials: Backflow Prevention and Cross-Connection Control

Designed to align with national plumbing codes, this book explains requirements related to backflow prevention devices like the Wilkins 720A. It covers legal standards, inspection procedures, and compliance strategies to help professionals adhere to regulations. Includes diagrams and code excerpts for clarity.

6. DIY Plumbing Repairs: Installing and Servicing Pressure Vacuum Breakers

Targeted at homeowners and amateur plumbers, this manual simplifies the process of installing and servicing pressure vacuum breakers such as the Wilkins 720A. Step-by-step instructions with photos guide readers through common repairs and maintenance tasks. Safety tips and tool recommendations are also included.

7. Water System Protection: Ensuring Safe Drinking Water with Backflow Devices

This book highlights the importance of backflow prevention in safeguarding drinking water quality. It discusses various devices, including the Wilkins 720A, and their role in preventing contamination. The text combines scientific explanations with practical advice for water utility managers and technicians.

8. Advanced Troubleshooting for Pressure Vacuum Breakers

Aimed at experienced professionals, this book provides advanced techniques for diagnosing and resolving issues with pressure vacuum breakers like the Wilkins 720A. It covers complex scenarios, part replacement, and system integration challenges. The book is an excellent reference for service technicians and engineers.

9. Wilkins 720A Pressure Vacuum Breaker: User Manual and Safety Guidelines

This user manual offers detailed instructions tailored specifically to the Wilkins 720A model. It emphasizes safety procedures, operational tips, and maintenance checklists to maximize device lifespan. Clear illustrations and FAQs make it accessible for both new users and seasoned professionals.

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