

Febco F825GYA

Febco 825YA Series 1-1/2 Inch Bronze Reduced Pressure Zone Backflow Preventer Assembly with Flood Sensor

Model: F825GYA | Brand: Febco

1. INTRODUCTION

This instruction manual provides essential information for the proper installation, operation, and maintenance of the Febco 825YA Series 1-1/2 Inch Bronze Reduced Pressure Zone (RPZ) Backflow Preventer Assembly. This device is designed to protect potable water systems from contamination due to back-siphonage or backpressure from high-hazard fluids. It features a durable bronze body, quarter-turn shutoff valves, angle union connections, and an integrated flood sensor with SentryPlus Alert technology for enhanced monitoring. Adherence to these instructions is crucial for ensuring the device's performance and compliance with plumbing codes.

2. SAFETY INFORMATION

- Installation and maintenance must be performed by qualified personnel in accordance with local codes and regulations.
- Always depressurize the system before attempting any installation, maintenance, or repair work.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves, during all procedures.
- Ensure all connections are properly sealed to prevent leaks.
- Do not modify the backflow preventer assembly or its components. Use only genuine Febco replacement parts.
- The flood sensor is an alert system and does not directly control the valve's operation. Regular inspections and maintenance are still required.

3. PRODUCT OVERVIEW

The Febco 825YA Series RPZ Backflow Preventer is engineered for reliability and ease of service. Key components include a bronze body, two independently operating spring-loaded check valves, a hydraulically dependent differential relief valve, and quarter-turn shutoff valves. The integrated flood sensor provides real-time alerts for excessive relief valve discharge.

Key Features:

- **Bronze Construction:** Ensures durability and corrosion resistance.
- **Reduced Pressure Zone Design:** Provides maximum protection against back-siphonage and backpressure.
- **Quarter-Turn Shutoff Valves:** For easy isolation during maintenance.
- **Angle Union Connections:** Facilitates installation and removal.
- **Integrated Flood Sensor:** Detects excessive relief valve discharge and sends alerts via SentryPlus Alert technology.
- **In-Line Serviceability:** Modular design allows for easy repair without removing the entire assembly.
- **Low Head Loss:** Efficient design minimizes pressure drop across the device.



Figure 1: Front view of the Febco 825YA Series Reduced Pressure Zone Backflow Preventer Assembly.

Ideal Backflow Solutions for All Applications



WATTS®

Figure 2: Close-up view of the integrated flood sensor on the backflow preventer, designed to detect water discharge.



Figure 3: Certifications for the backflow preventer, including ASSE 1003, CSA, and American Water Works Association (AWWA) standards.

4. SETUP AND INSTALLATION

Pre-Installation Checks:

- Verify that the product model and size match the system requirements.
- Inspect the assembly for any signs of shipping damage.
- Ensure all necessary tools and materials are available.
- Confirm compliance with all local plumbing codes and regulations.

Installation Steps:

1. **System Preparation:** Shut off the main water supply and drain the system.
2. **Positioning:** Install the backflow preventer in a horizontal position, ensuring adequate clearance for maintenance and testing.

3. **Connections:** Connect the inlet and outlet piping to the assembly's angle union connections. Ensure proper alignment and tighten all connections securely to prevent leaks.
4. **Flood Sensor Installation:** The flood sensor is pre-installed. An add-on connection kit (sold separately) is required for sensor activation. Refer to the video and image below for guidance on connecting the activation module.
5. **System Startup:** Slowly open the main water supply valve to gradually fill the system and the backflow preventer. Bleed any trapped air from the system.
6. **Leak Check:** Inspect all connections for leaks.
7. **Initial Testing:** Perform an initial test of the backflow preventer by a certified backflow prevention device tester to ensure proper operation.

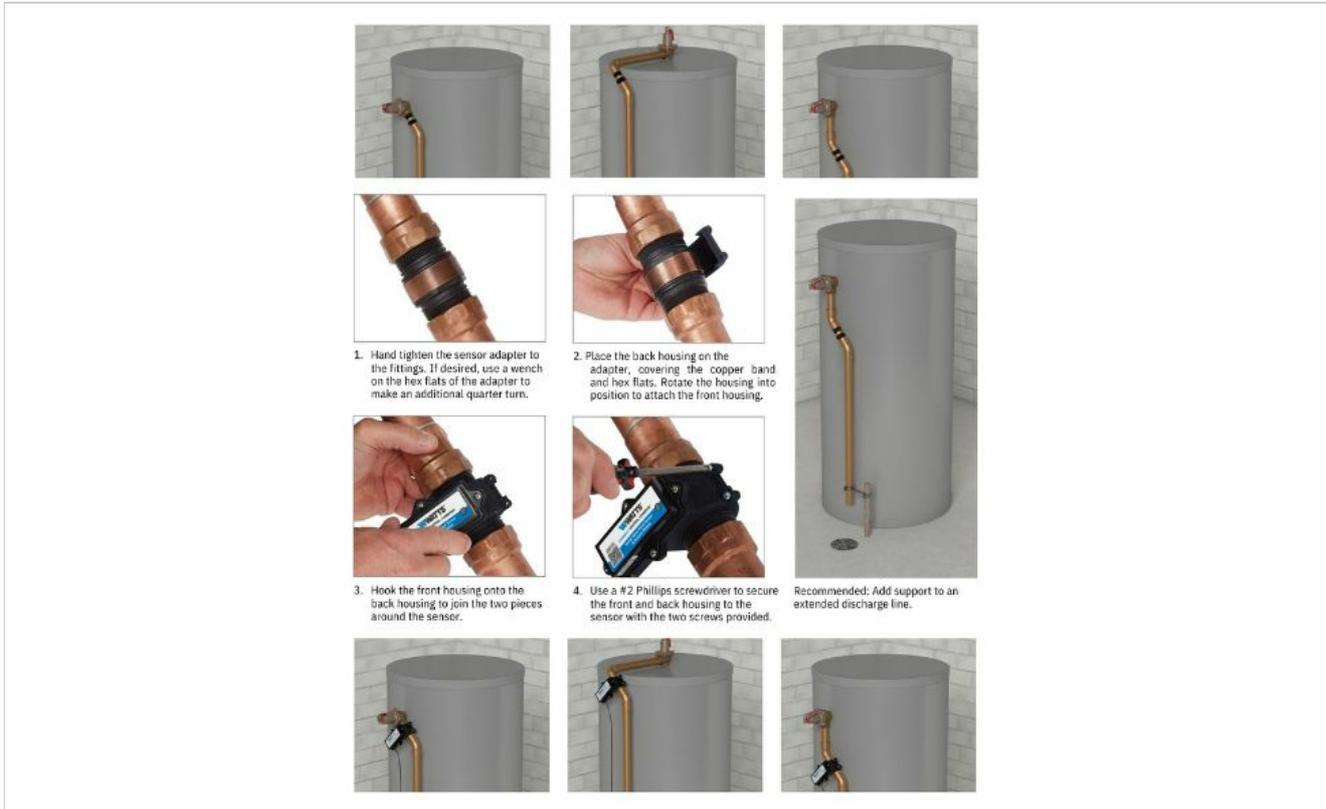


Figure 4: Installation steps for the flood sensor activation module. Ensure proper connection for real-time alerts.

Video 1: This video provides an overview of the flood sensor and its integration with backflow prevention devices, highlighting its role in detecting excessive relief valve discharge and sending real-time alerts. It demonstrates the activation process and the benefits of real-time notifications for preventing water damage.

5. OPERATING INSTRUCTIONS

The Febco 825YA Series backflow preventer operates automatically to protect the potable water supply. Once installed and tested, it requires no manual intervention for its primary function of backflow prevention.

Flood Sensor Operation:

The integrated flood sensor continuously monitors for excessive water discharge from the relief valve. When an abnormal discharge is detected, the SentryPlus Alert technology sends real-time notifications to designated personnel, allowing for prompt action to prevent potential flooding and water damage. Ensure the flood sensor activation module is properly connected and configured according to the manufacturer's instructions for optimal performance. For more information on the flood protection system, visit watts.com/floodprotectionsystem.

6. MAINTENANCE

Regular maintenance is essential to ensure the long-term reliability and performance of the backflow preventer. All maintenance should be performed by qualified personnel.

Routine Maintenance:

- **Annual Testing:** The backflow preventer must be tested annually by a certified backflow prevention device tester, or more frequently if required by local codes.
- **Visual Inspection:** Periodically inspect the assembly for any signs of leaks, corrosion, or damage. Check the quarter-turn shutoff valves for smooth operation.
- **Cleaning:** Keep the area around the backflow preventer clean and free from debris.
- **Flood Sensor Check:** Verify the flood sensor's status indicators and ensure it is communicating correctly with the SentryPlus Alert system.

In-Line Serviceability:

The Febco 825YA Series is designed for easy in-line service. The modular relief valve and check valves can be accessed and serviced without removing the entire assembly from the pipeline, simplifying maintenance procedures and reducing downtime.

LOW Head Loss

- ✔ Features two independently operating spring loaded "Y" pattern check valves



Figure 5: The design allows for in-line serviceability, enabling maintenance without full removal of the unit.

7. TROUBLESHOOTING

This section provides solutions for common issues encountered with the Febco 825YA Series backflow preventer. For problems not listed or if solutions do not resolve the issue, contact qualified service personnel.

| Problem | Possible Cause | Solution |
|-----------------------------------|--|---|
| Water discharge from relief valve | Fouled or worn check valve, low supply pressure, backpressure condition. | Inspect and clean/replace check valves. Verify adequate supply pressure. Address backpressure source. |
| Continuous drip from relief valve | Debris under the relief valve seat, worn relief valve diaphragm. | Flush the relief valve. Inspect and replace the relief valve diaphragm if necessary. |

| Problem | Possible Cause | Solution |
|---------------------------------|--|--|
| No flow through the device | Shutoff valves closed, debris blocking flow, severe backpressure. | Ensure shutoff valves are fully open. Inspect for blockages. Address backpressure. |
| Flood sensor not sending alerts | Activation module not connected, power issue, communication error, sensor malfunction. | Verify activation module connection and power. Check SentryPlus Alert system status. Consult manufacturer support. |

8. SPECIFICATIONS

| Specification | Detail |
|--------------------------------|---|
| Model Number | F825GYA |
| Size | 1 1/2 Inch |
| Material | Bronze |
| Inlet Connection Type | Threaded |
| Outlet Connection Type | Flange |
| Item Weight | 34.6 pounds |
| Product Dimensions (L x W x H) | 16.54 x 12.99 x 9.84 inches |
| Specification Met | ASME, ANSI, NSF |
| Included Components | Valve |
| Flood Sensor | Integrated, compatible with SentryPlus Alert Technology |

9. WARRANTY AND SUPPORT

For specific warranty information regarding your Febco 825YA Series Backflow Preventer Assembly, please refer to the documentation provided with your product or visit the official Febco website. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase.

For technical support, replacement parts, or service inquiries, please contact Febco customer service or an authorized Febco distributor. Contact information can usually be found on the manufacturer's website or on the product packaging.