

## Features

- Designed for use with nitrogen generators and air compressors
- Assembled in USA using corrosion resistant components
- No power required for operation
- Provided with a corrosion resistant mesh screen (50 or 60 mesh) to prevent the entry of particles into the regulator and sprinkler system
- Manual bypass to allow quick filling of sprinkler systems after operation or maintenance



## Description

The Advanced Air Maintenance Device (AAMD) is a field adjustable pressure regulating device used to keep nitrogen or air pressure at the correct level in dry pipe and preaction fire sprinkler systems. It can also be used to control pressure in dry pilot line systems of dry pilot actuated deluge or preaction valves.

The AAMD is used in sprinkler systems with an automatically controlled compressed nitrogen or air source that is at a pressure higher than required for proper system operation. These sources can include nitrogen generators and air compressors dedicated to the fire sprinkler system and “plant” air or nitrogen systems. The AAMD includes a manual bypass that, after sprinkler system maintenance or operation, allows quick filling of the sprinkler system.

## Technical Specifications

Service Temperature	35°F - 140°F (1.6°C - 60°C) and up to 99% relative humidity
Service Use	Automatic Sprinkler NFPA 13
Pressure Gauge	0 - 80 psi (0 - 5.52 bar)
Outlet Pressure Range	5 - 70 psi (0.34 - 4.83 bar)
Maximum Inlet Pressure	200 psi (13.79 bar)
Size	See Fig. 2
Weight	3.3 lbs.

Specifications subject to change without notice.

## Installation

The AAMD must be installed between the nitrogen or air supply and the sprinkler system. Each sprinkler system must have a dependable nitrogen or air supply capable of filling the system within 30 minutes in accordance with NFPA standards. The AAMD should be installed in an accessible location to permit periodic inspection and field adjustment.

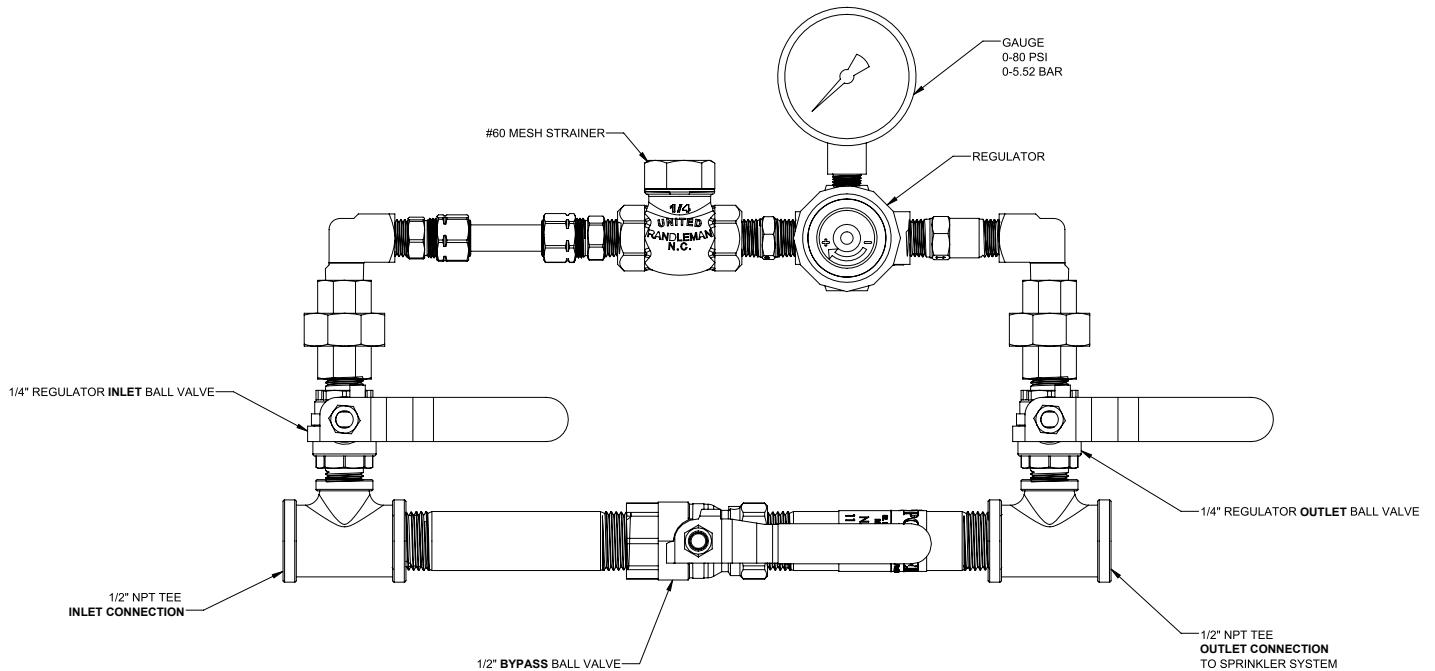
In accordance with NFPA standards, each sprinkler system is required to have its own dedicated air maintenance device.

1. Install the AAMD in the appropriate location in between the automatic nitrogen or air supply and the sprinkler system. The AAMD can be installed in any 360-degree orientation.
2. Determine the minimum pressure required for the sprinkler system.
3. Close the 1/4" regulator inlet ball valve, 1/4" regulator outlet ball valve, and 1/2" bypass ball valve.
4. Turn on the automatic nitrogen or air supply

**Note:** Do not pressurize the sprinkler system above the set pressure of the regulator. The regulator is factory set to approximately 40 psi. If the sprinkler system pressure is different, see page 3 for field adjustment instructions.

5. Open the 1/2" bypass ball valve and fill system to 5 psi below operating pressure. Once it reaches desired pressure, close the 1/2" bypass ball valve.
6. Open the 1/4" regulator inlet ball valve and check to make sure regulator is set at 40 psi or your desired sprinkler system pressure.
7. Open the 1/4" regulator outlet ball valve and allow the sprinkler system to slowly pressurize to the desired pressure.
8. The AAMD is now operational.

Fig 1



AAMD is shown in Bypass position

## Operation

The AAMD operates by keeping the sprinkler system pressure at the proper level required for normal sprinkler system operation. The correct pressure setting is provided by the manufacturer of the dry pipe, preaction, or deluge valve. When small leaks occur in the sprinkler system, the AAMD allows small amounts of nitrogen or air into the system to keep it at the required minimum pressure. When the sprinkler system operates in a fire situation, the sudden loss of pressure overcomes the AAMD's ability to replace the lost nitrogen or air through a 3/32" restrictor orifice, allowing the valve to open as intended.

## Field Adjustment of Pressure Settings

1. Ensure that all ball valves are in closed position.
2. Pull up on the adjustment knob of the regulator until it snaps into adjustment position and open the 1/4" regulator inlet ball valve.
3. To increase sprinkler system pressure turn the adjustment knob of the regulator clockwise until the desired pressure is achieved.
4. To reduce sprinkler system pressure, turn the adjustment knob counterclockwise to at least 5 psi lower than desired pressure. Then adjust clockwise to desired pressure.

**Note:** Always approach the desired pressure from a lower pressure to avoid minor readjustment after making a change in pressure setting.

5. Once the correct sprinkler system pressure has been set, push the adjustment knob down until it snaps into the locked position.
6. Open the 1/2" bypass ball valve and fill to 5 psi below operating pressure. Once it reaches desired pressure, close the bypass valve.
7. Open the 1/4" regulator inlet ball valve and check to make sure regulator is set at the desired sprinkler system pressure.
8. Open the 1/4" regulator outlet valve and allow the sprinkler system to slowly pressurize to the desired pressure.
9. The AAMD is now operational.

## Maintenance

Periodic inspection and testing as required by NFPA 25 is recommended. The AAMD should be inspected and tested in accordance with the following:

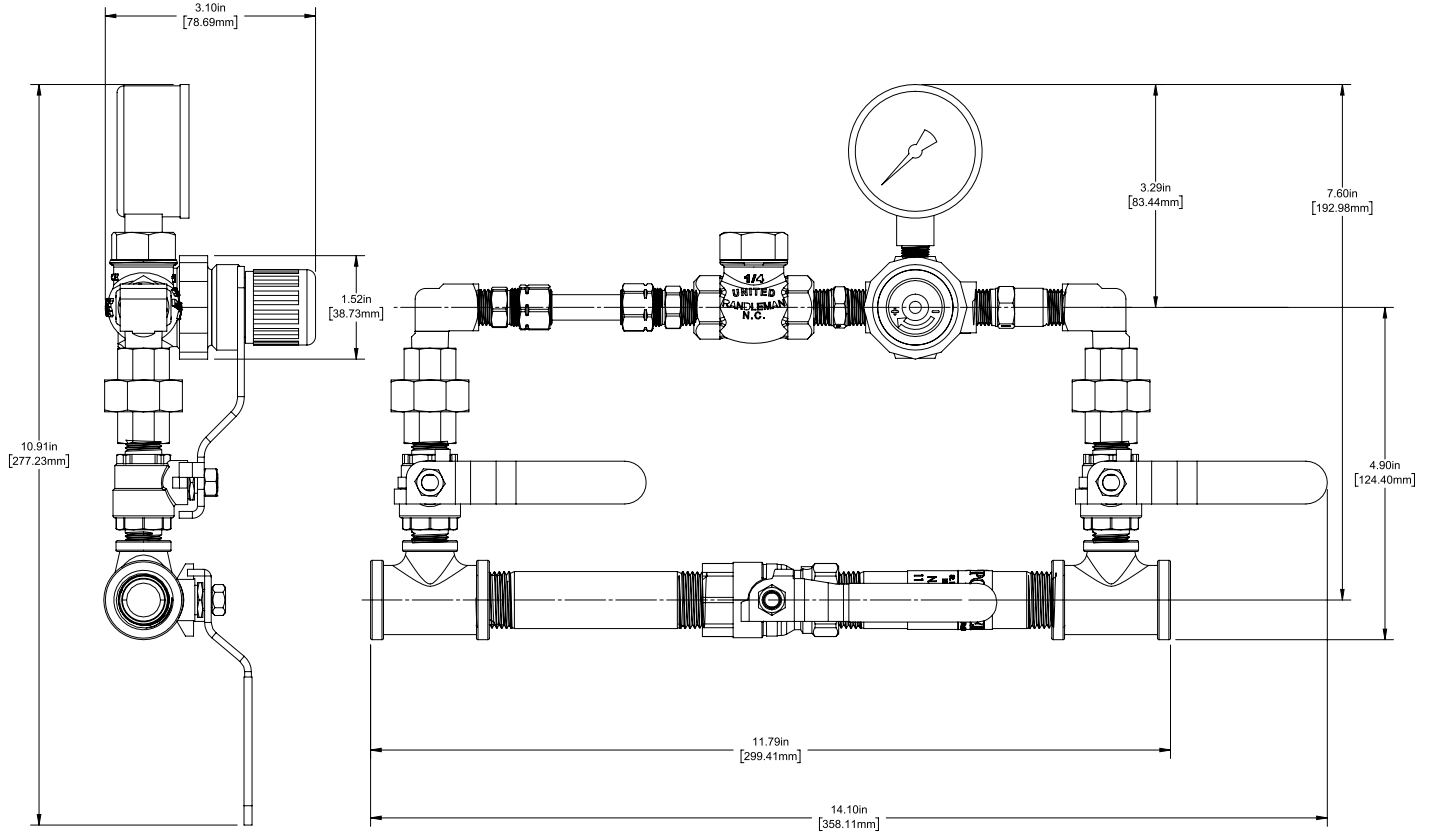
1. Verify that the 1/4" regulator ball valves are in the open position and that the 1/2" bypass ball valve is closed.
2. Ensure that the AAMD is set to the correct sprinkler system pressure. See Field Adjustment of Pressure Settings.
3. The strainer should be inspected and cleaned as needed, at least annually. To remove the screen, first close both 1/4" regulator ball valves. Remove the screen and empty any loose material, then flush with clean water. If necessary, use a wire brush to remove any particles trapped in the screen. Reinstall the strainer screen making sure that the cap is securely tightened and open both 1/4" regulator ball valves.

### CAUTION

When all ball valves are closed, the nitrogen/air supply is disconnected from the sprinkler system. Care shall be taken to ensure the sprinkler system does not activate due to loss of nitrogen/air pressure while the strainer is being cleaned.

**Dimensions**

Fig 2



**Ordering Information**

Model	Description	Stock No.
AAMD	Advanced Air Maintenance Device	1119660