

INSTRUCTION SHEET

Nitrogen / Air Maintenance Device for Fire Sprinkler Systems
Model **NAMD-1**

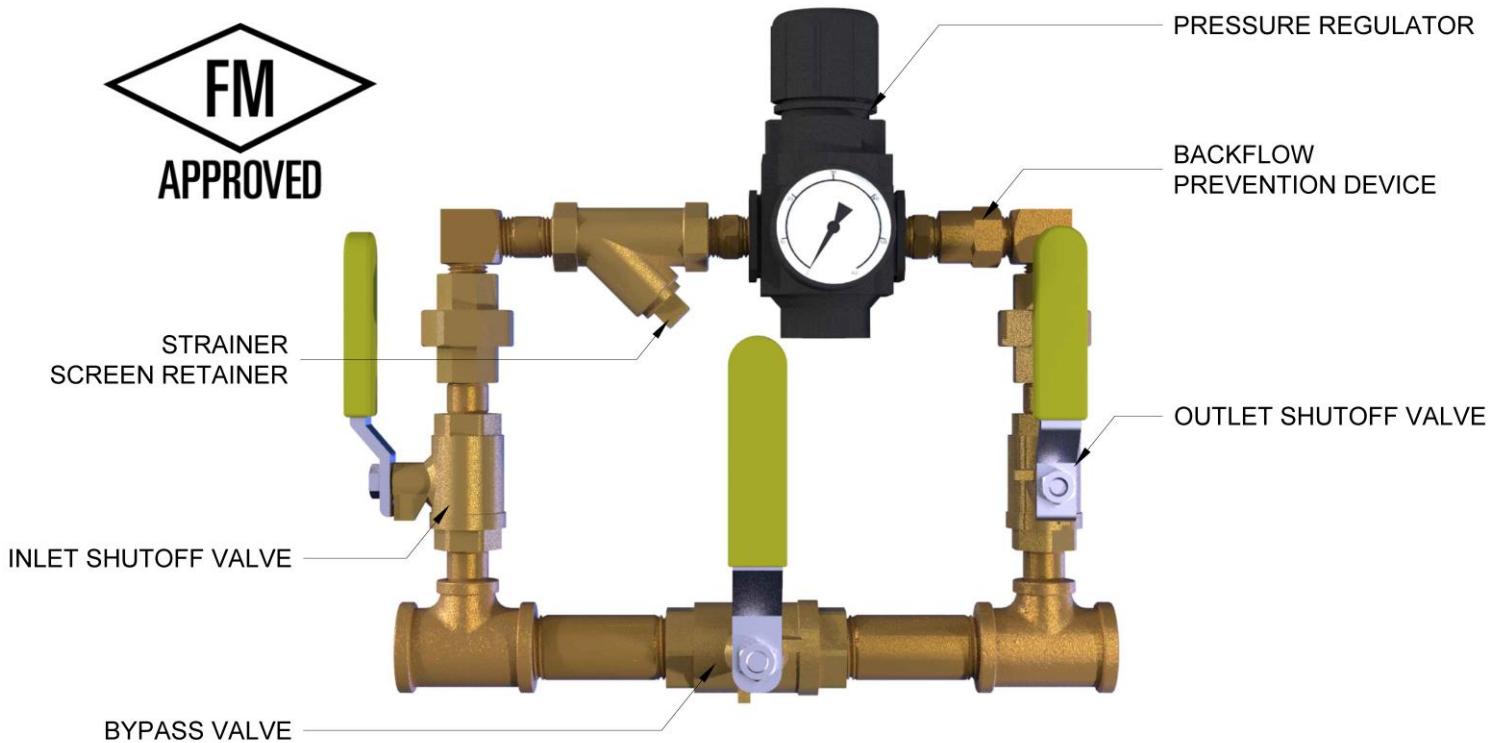


Figure 1

DESCRIPTION

The **UNITED Fire Systems Model NAMD-1** is an FM Approved device for controlling the nitrogen and / or air pressure in preaction and dry-pipe fire sprinkler piping. The device is equipped with a high-precision pressure regulator capable of providing accurate regulation over a wide range of inlet pressures and gas flows. This is especially important for sprinkler corrosion inhibiting systems supplying nitrogen to the sprinkler system, since most nitrogen systems provide less gas flow than a conventional air compressor.

SPECIFICATIONS

Model No.:	NAMD-1
Material (other than regulator):	Brass
Material (regulator body):	Zinc
Inlet:	1/2" NPT Female
Outlet:	1/2" NPT Female
Inlet Pressure Range:	0-175 PSIG (0-1200 kPa gauge)
Outlet Pressure Range:	15-60 PSIG (100-410 kPa gauge)
Maximum Pressure:	175 PSIG (1200 kPa)
Temperature Range:	-30°F to +150°F (-34°C to +65°C)
Dimensions (approx.):	9.75" L x 8.25" H (248 mm x 210 mm)
Weight (approx.):	7 lbs. (3.2 kg)

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1. INSTALLATION INSTRUCTIONS – READ AND UNDERSTAND BEFORE INSTALLATION



DO NOT disassemble the **Model NAMD-1** device!

- 1.1. Install the **Model NAMD-1** device in the nitrogen / air pressure supply line to the sprinkler valve trim.
- 1.2. **UNITED Fire Systems** highly recommends installing one (1) **Model NAMD-1** device for each sprinkler valve.
- 1.3. The device may be installed in any orientation.
- 1.4. Install the device as close as possible to the sprinkler valve receiving the pressure.
- 1.5. Locate the device in as a convenient place as possible, where the ball valves may be easily operated and the pressure gauge observed.
- 1.6. If the rigidity of the inlet and outlet piping is sufficient, no additional bracketing should be necessary. Otherwise, use standard split ring hangers and hardware to attach the device to the wall or other solid mounting location.



The **Model NAMD-1** device is designed to operate in one direction only. Refer to **Figure 1** to positively identify the **INLET** and **OUTLET** ports of the device.

- 1.7. Attach the piping from the pressure source to the **INLET** of the device. Piping shall be 1/2" nominal pipe size minimum. Use Teflon tape on the male pipe threads of the pipe only. DO NOT permit pipe thread sealant to enter the device.
- 1.8. Attach the piping from the **OUTLET** of the device to the proper connection point on the sprinkler valve trim. Piping shall be 1/2" nominal pipe size minimum. Use Teflon tape on the male threads of the pipe only. DO NOT permit pipe thread sealant to enter the device.
- 1.9. Proceed to the **COMMISSIONING** instructions below.

2. COMMISSIONING

- 2.1. Ensure all three (3) ball valves on the **Model NAMD-1** device are **CLOSED**.
- 2.2. Determine proper supervisory pressure for the sprinkler valve which the device is connected to.
- 2.3. Pull pressure regulator adjustment knob UP.
- 2.4. Turn pressure regulator adjustment knob COUNTERCLOCKWISE to remove all force from the regulating spring.
- 2.5. Apply nitrogen pressure from sprinkler corrosion inhibiting system to the device inlet.
- 2.6. Leak check the piping from the pressure source to the Model NAMD-1 device. Piping should be as leak-free as possible. Correct all leaks before proceeding.
- 2.7. Gradually open inlet shutoff valve. Pressure gauge on the device pressure regulator should indicate pressure.



When adjusting pressure regulator, always approach the desired adjustment from a LOWER to a HIGHER pressure.

- A. If pressure adjustment (as indicated on device pressure gauge) is LOW, turn pressure regulator adjustment knob CLOCKWISE to increase pressure to desired setting.
- B. If pressure adjustment (as indicated on the device pressure gauge) is HIGH, turn pressure regulator adjustment knob COUNTERCLOCKWISE to reduce pressure 3-5 PSIG below desired setting, then turn knob CLOCKWISE to increase pressure to desired setting.

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2. COMMISSIONING (continued)

- 2.8. Turn pressure regulator adjustment knob clockwise until pressure gauge indicates 2-3 PSIG above the desired supervisory pressure determined in step 2.2.
- 2.9. Gradually open outlet shutoff valve. Nitrogen pressure will reach the sprinkler valve trim.
- 2.10. Leak check the piping from the **Model NAMD-1** device to the sprinkler valve trim. Piping should be as leak-free as possible. Correct all leaks before proceeding.
- 2.11 Check that pressure gauge continues to indicate 2-3 PSIG above supervisory pressure. Adjust if necessary.
- 2.12. Push pressure regulator adjustment knob DOWN.

3. OPERATION

MODE	INLET Shutoff Valve	OUTLET Shutoff Valve	BYPASS Valve
No Gas Supply To Sprinkler Valve	Closed	Closed	Closed
Initial-Fill With Air	Closed	Closed	OPEN
Supply System With Nitrogen	OPEN	OPEN	Closed
DO NOT Operate	OPEN	OPEN	OPEN

4. INSPECTION AND MAINTENANCE

4.1 Monthly

- 4.1.1 Inspect the **Model NAMD-1** device valve position. Use Table 1 to verify that valve position is in accordance with desired MODE.
- 4.1.2 Inspect the pressure gauge. Verify that indicated pressure is 2-3 PSI above the desired supervisory pressure of the connected sprinkler valve. Refer to **2. COMMISSIONING** if regulator adjustment is required.

4.2 Annual At least annually, inspect and clean the device strainer screen.



DANGER

Ensure that **Model NAMD-1** device is completely depressurized before inspecting and cleaning the strainer screen. Failure to do so can result in death or serious personal injury!



IMPORTANT

When ball valves have been CLOSED, the nitrogen / air supply is not available to pressurize the sprinkler system piping. Take required precautions to prevent inadvertent sprinkler valve operation. Notify applicable personnel of possible “low air” signals.

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4. INSPECTION AND MAINTENANCE (Continued)

4.2 Annual (Continued)

- 4.2.1 Ensure there is no pressure present in the **Model NAMD-1** device.
- 4.2.2 Hold device so that torque applied to strainer screen retainer does not move the device.
- 4.2.3 Refer to **Figure 1**. Apply suitable wrench to HEX on strainer screen retainer. Do NOT remove square plug.
- 4.2.4 Remove strainer screen retainer. Retain for replacement.
- 4.2.5 Examine rubber seal on strainer screen retainer. If damaged during removal, leakage may occur.
- 4.2.6 Remove strainer. Empty any loose material, and then flush with clean water. If necessary, use a wire brush to remove trapped particles. Dry strainer screen thoroughly before replacement.
- 4.2.7 If strainer screen is damaged, replace with new strainer screen UFS P/N 30-500003-401.
- 4.2.8 Insert strainer screen.
- 4.2.9 Replace strainer screen retainer, tightening wrench-tight.
- 4.2.10 See 2. COMMISSIONING to return Model NAMD-1 device to service.
- 4.2.11 Leak check the strainer screen retainer / strainer body connection. Correct leak if necessary.

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