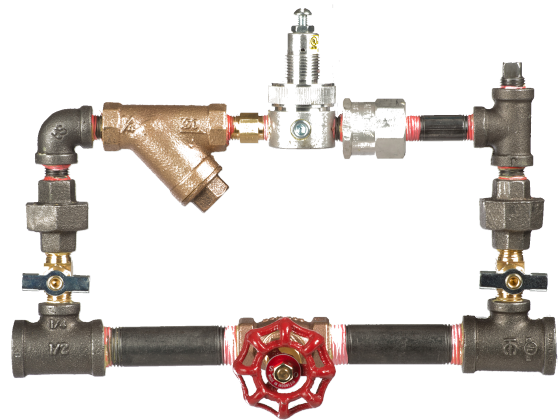


MODEL H-1 AIR MAINTENANCE DEVICE

GENERAL DESCRIPTION

Globe's Model H-1 Air Pressure Maintenance Device is an automatic, field-adjustable device of the pressure reducing type. It is used to control the supervisory air pressure in a dry pipe sprinkler system, preaction system, or dry pilot line system of a dry pilot sprinkler actuated deluge or preaction valve. The H-1 is utilized in applications where there is a compressed air (or nitrogen) source which is at a higher pressure than the desired system pressure. Pressure sources include plant air supplies having their own automatic compressor controls, or nitrogen supplies having single stage cylinder mounted pressure regulators.

The 1/2" globe valve is opened to admit air speedily to the dry pipe system, also known as the "Fast Fill". It is closed once the desired system air pressure has been established. As pressure drops on the system side of the 1/4" check valve, the regulator and metering orifice operate automatically to replace small losses of air which periodically occur in the system due to temperature or other system variations. The regulator and metering orifice limit the volume of air introduced to assure that the rate of air replacement is less than that from a operated sprinkler so that system activation may take place.



**MODEL H-1
AIR MAINTENANCE DEVICE**

TECHNICAL DATA

Approvals

- cULus
- FM
- NYC-DOB MEA 335-91-M

Maximum Pressure

- 175 psi (12.3 kg/cm²)

Pressure Range Output

- 15-50 psi (1.05-3.51 kg/cm²)

Required Pressure Differential

- 2 1/2 psi (0.176 kg/cm²)

End Connections

- 1/2" Female NPT

Physical Dimensions

- 9 11/16" X 7 3/4" (246 mm X 197 mm)

INSTALLATION

The Globe Model H-1 Automatic Air Pressure Maintenance Device must be installed in accordance with the following instructions.

NOTE:

Moisture build-up can adversely affect performance. Ensure the Model H-1 Air Maintenance Device is installed in such a manner as to avoid the collection of water in the regulator device. Suitable consideration must be given to the removal of excessive moisture from the compressed air supply.

- STEP 1.** Make connections a minimum of 1/2 inch (DN15) pipe size between the inlet air supply and the Model H-1 Device, as well as between the Model H-1 Device and the system to pressurize.
- STEP 2.** Install a 1/2 inch (DN15), non-spring loaded, rubber-faced, swing-type check valve between the Model H-1 Device and the system to pressurize. A check valve of this type is provided in the air supply trim of GLOBE dry pipe valves, preaction valves, and dry pilot trim.

SETTING PROCEDURE

The GLOBE Model H-1 Automatic Air Maintenance Device must be set in accordance with the following instructions:

- STEP 1.** Determine the pressure that meets the minimum requirements of the system from the appropriate system technical literature.
- STEP 2.** Close the Model H-1 By-Pass Valve, and close the Model H-1 Air Supply Control Valve.
- STEP 3.** Open the control valve in the air supply trim of the system to pressurize and then reduce the system air pressure to 0 psi.
- STEP 4.** Close the control valve in the air supply trim of the system to pressurize.
- STEP 5.** Remove the system pressure gauge from its connection and temporarily install it in the 1/4 inch NPT Gauge Test Port.

CAUTION:

Before removing the plug, make certain that the piping to which the Model H-1 Gauge Test Port is connected is at 0 psi. Failure to do so may result in personal injury or property damage.

- STEP 6.** Open the Air Supply Control Valve in the Model H-1 Device.
- STEP 7.** While observing the relocated pressure gauge, adjust the output pressure of the Pressure Regulator. Loosen the lock nut below the pressure setting screw. Rotate the screw clockwise, as viewed from the top end of the Pressure Regulator, to increase pressure, and counter-clockwise to decrease pressure.

NOTE:

When decreasing pressure, the air pressure must be relieved downstream of the Pressure Regulator by temporarily opening the control valve in the air supply trim of the system to pressurize, assuming that the system to depressurized.

- STEP 8.** After the Pressure Regulator is set, tighten the lock nut below the pressure setting screw to secure the regulator in place.
- STEP 9.** Close the Air Supply Control Valve in the Model H-1 Device.

CAUTION:

Before removing the pressure gauge, make certain that the piping to which the Model H-1 Gauge Test Port is connected is at 0 psi. Failure to do so may result in personal injury or property damage.

- STEP 10.** Return the system air pressure gauge to its normal location. Re-install the 1/4 inch pipe plug in the Model H-1 Gauge Test Port. Apply pipe-thread sealant sparingly to the plug threads only.
- STEP 11.** Open the control valve in the air supply trim to the system to pressurize.
- STEP 12.** Open the Air Supply Control Valve in the Model H-1 Device.
- STEP 13.** Open the By-Pass Valve in the Model H-1 Device.
- STEP 14.** Close the By-Pass Valve after the system is pressurized to approximately 5 psi (0,4 bar) less than the minimum required system pressure determined in Step 1.
- STEP 15.** After the system pressure stabilizes, note the air pressure value and compare with the requirement. Re-adjust the Pressure Regulator, as required.

NOTE:

If the system was over-pressurized during manual fill, open a suitable connection to the system and manually reduce the pressure to the desired value. The

Model H-1 Automatic Air Maintenance Device then automatically maintains the preset system pressure. The Check Valve prevents the Pressure Regulator from bleeding down the system pressure.

- STEP 16.** In order to minimize the time for system trip in the event of a sprinkler operation, set the system pressure at the minimum required value.

CARE AND MAINTENANCE

The GLOBE Model H-1 Automatic Air Maintenance Device must be maintained and serviced in accordance with the following instructions, in addition to any specific requirements of the NFPA Standards. Any impairment must be immediately corrected.

NOTE:

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection system from the proper authorities and notify all personnel who may be affected by this action.

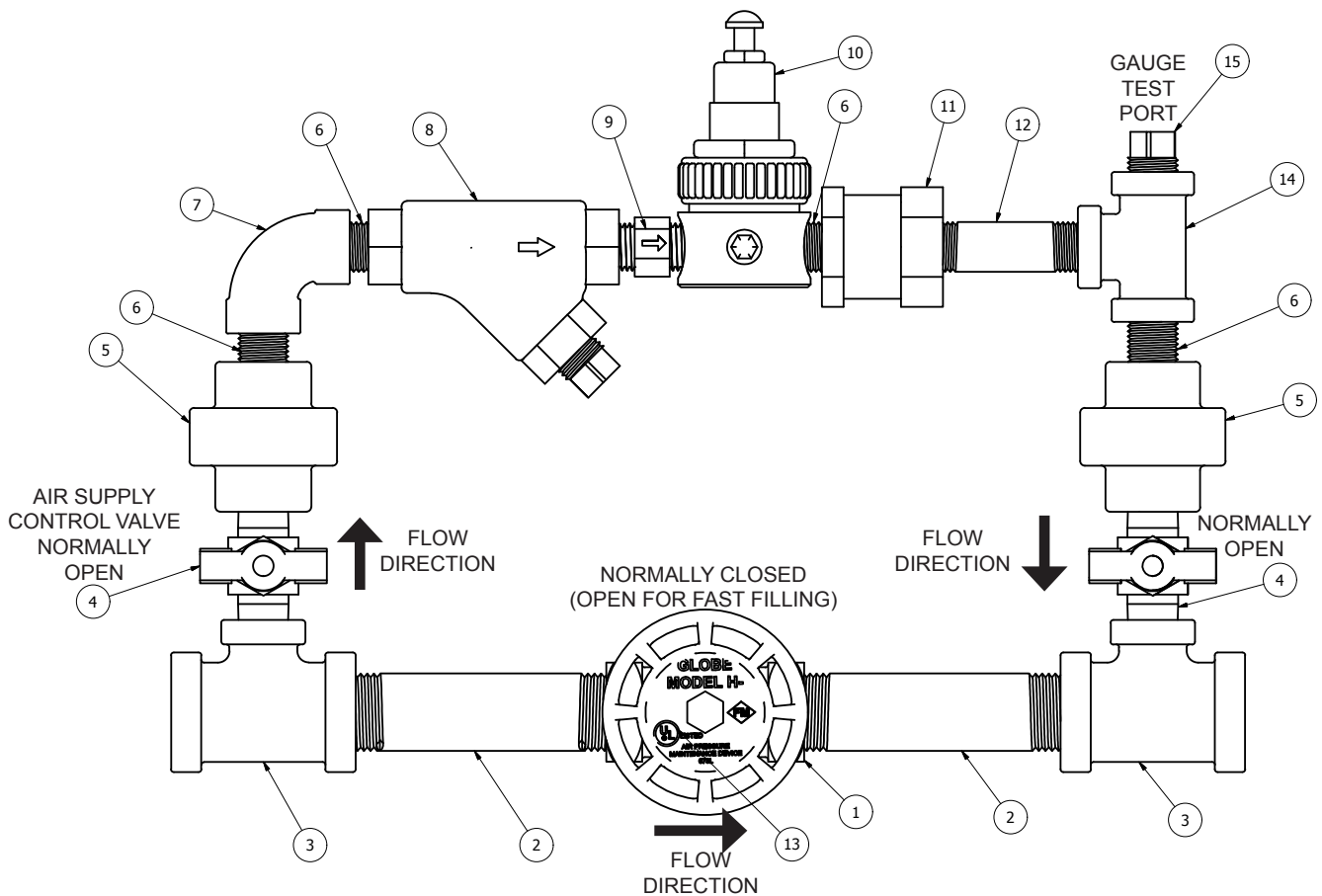
- It is recommended that accumulated moisture be removed from air supply moisture filtration equipment at least quarterly. More frequent inspections may be necessary in particularly humid environments.
- After placing a fire protection system in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.
- Responsibility lies with owners for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (for example, NFPA 25), in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or sprinkler manufacturer regarding any questions.
- Automatic sprinkler systems are recommend to be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national code.
- The Model H-1 Device must be inspected quarterly in accordance with the following instructions.

STEP 1. Verify that the By-Pass Valve is closed.

STEP 2. Close the Model H-1 Air Supply Control Valve and clean out the 1/4 inch Strainer located at the inlet to the Restrictor. Be sure to reinstall the strainer screen and tighten the cap securely.

STEP 3. Open the Model H-1 Air Supply Valve and verify that the control valve in the air supply trim to the system to pressurize is open.

STEP 4. Verify that the system pressure is essentially the same as the previously established requirement.



ITEM	DESCRIPTION	QTY.	ITEM	DESCRIPTION	QTY.
1	1/2" GLOBE VALVE	1	9	METERING ORIFICE	1
2	1/2" X 3 1/2" NIPPLE	2	10	AIR REGULATOR	1
3	1/2" X 1/2" X 1/4" TEE	2	11	1/4" CHECK VALVE	1
4	1/4" NEEDLE VALVE	2	12	1/4" X 2" NIPPLE	1
5	1/4" UNION	2	13	NAMEPLATE FOR "H" A.M.D.	1
6	1/4" X CLOSE NIPPLE	4	14	1/4" TEE	1
7	1/4" ELBOW	1	15	1/4" PLUG	1
8	1/4" STRAINER	1			

FIGURE 1:H-1 AIR MAINTENANCE DEVICE

ORDERING INFORMATION

MODEL H-1 AIR MAINTENANCE DEVICE

SPECIFY: Model H-1, PN:

H-1 AIR MAINTENANCE DEVICE . . . 320585

REPLACEMENT PARTS

1/4" NEEDLE VALVE320586
 1/4" STRAINER320587
 AIR REGULATOR320590
 1/4" CHECK VALVE320589
 METERING ORIFICE320588

GLOBE® PRODUCT WARRANTY

Globe agrees to repair or replace any of its own manufactured products found to be defective in material or workmanship for a period of one year from date of shipment.

For specific details of our warranty please refer to Price List Terms and Conditions of Sale (Our Price List).

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