ELKHART BRASS
Fire Fighting Equipment

Self-Educting
Master Stream Foam Nozzles

SM-1000-HF
SM-1000E-HF
SM-2000-HF
SM-2000E-HF

98445000 Rev. A

Table of Contents

I. Product Safety

Important:
Before installing and operating this equipment, read & study this manual thoroughly. In addition, the following points should be adhered to ensure the safety of equipment and personnel:

1. All personnel who may be expected to use this equipment must be thoroughly trained in its safe and proper use.

2. Before flowing water from this device, check that all personnel (fire service and civilian) are out of the stream path. Also, check to make sure stream direction will not cause avoidable property damage.

3. Become thoroughly familiar with the hydraulic characteristics of this equipment and the pumping system used to supply it. To produce effective fire streams, operating personnel must be properly trained.

4. Whenever possible, this equipment should be operated from a remote location. Do not needlessly expose personnel to dangerous fire conditions.

5. Never attempt to view or change the SM-1000-HF, SM-1000E-HF, SM-2000-HF, or SM-2000E-HF foam nozzle proportioning rate settings while the nozzle is in operation.

6. The nozzle must be properly mated and tightened. Failure to do so could result in leaks or may cause injury or death.

7. After each use and on a scheduled basis, inspect equipment per Maintenance on page 5 instructions.

II. Installation

NOTE: The 55 gallon drum of foam concentrate should be positioned as close to the monitor as possible without interfering with the desired travel of the monitor.

1. Attach the nozzle to the monitor discharge. Hand tighten with the foam inlet nipple down.
2. Remove the small bung hole plug from the 55 gallon drum & install the vacuum breather. Use Teflon tape or pipe thread sealant to seal the threads.
3. Remove the large bung hole plug and install the pickup tube. Use Teflon tape to seal the threads. Tighten so that the 2.0 threaded connection at the top is pointed at the nozzle.
4. Make sure the rubber gaskets are in place before connecting one end of the pickup hose to the nipple on the nozzle, and the other to the male thread on the pickup tube. Tighten both connections.
5. Tighten the nozzle onto the monitors discharge using a spanner wrench.

III. Nozzle Operation

A) SM-1000-HF, SM-1000E-HF, SM-2000-HF, and SM-2000E-HF Master Stream Nozzles

	SM-1000-HF/SM-1000E-HF	**SM-2000-HF/SM-2000E-HF**
Inlet:	Water: 2-½" NH Foam: 1-½" NPT	Water: 3-½" NH Foam: 2" NPT
Flow:	250-1000 GPM Automatic	500-2000 GPM Automatic
Operating Pressure:	100 PSI	100 PSI
Proportioning Rate:	1% / 3% Selectable	1%
Pick up Hose:	1-½" diameter x 8' long	2" diameter x 8' long

Figure 1 - SM-1000-HF

1. Proportioning Rate

The proportioning rate on the SM-1000-HF and SM-1000E-HF can only be adjusted or viewed when the water supply valve is close.

1. Firmly grasp the flood plate/baffle head assembly.
2. Rotate until the desired proportioning rate arrow is pointing at the foam inlet port. See ***Figure*** .
3. Listen for audible click noise indicating that the nozzle is in the detented position.

Note: It may be necessary to use a strap wrench in order to rotate the assembly into place. Use care to avoid damage to the nozzle.

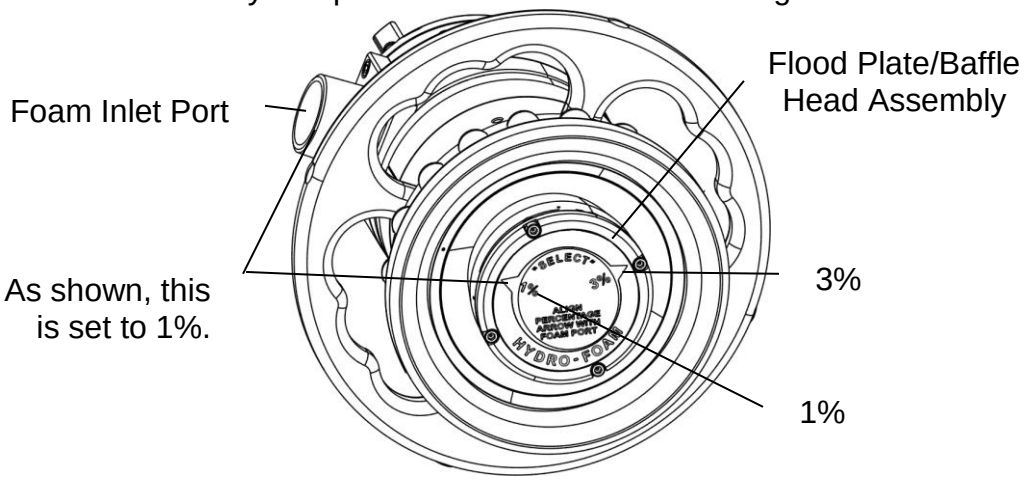

Figure 2

2. Pattern Control

Manual

1. Grasp the handle firmly.
2. Rotate clockwise for straight stream. Rotate counter-clockwise for full fog. The full stroke of the pattern requires 180° of input rotation.

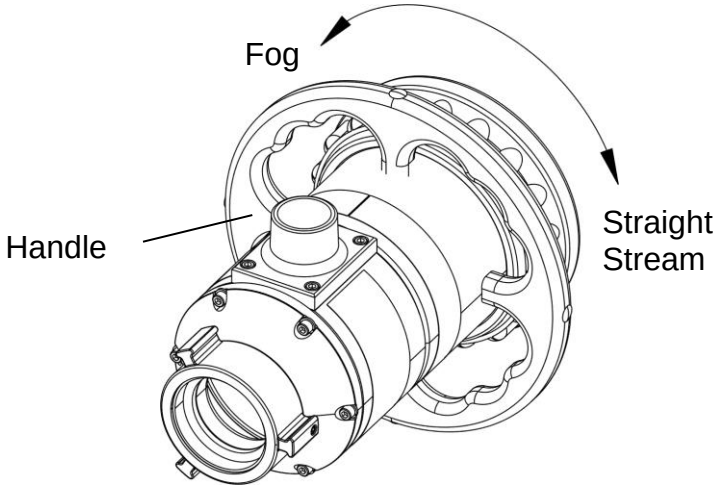

Figure 3

Electrical

The SM-1000E-HF and SM-2000E-HF nozzle uses a 11-15 VDC/1-2 Amp motor to adjust pattern control. Positive power to the male contact with respect to the female contact will generate a fog pattern. Positive power to the female contact will generate a straight stream.

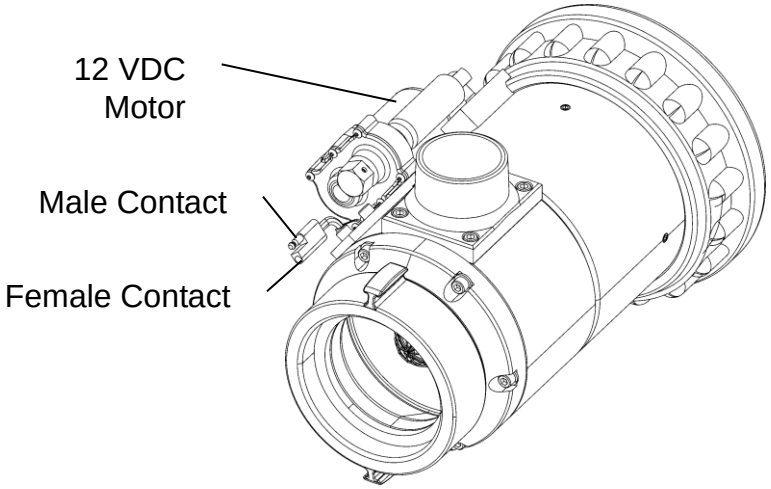

Figure 4

IV. Maintenance

A) Cleaning

The nozzle should be flushed thoroughly after each use. This is accomplished by flowing the nozzle with a clean water source for both water and foam inlets. Ensure the nozzle is set to the largest proportioning rate.

B) Pilot Assembly

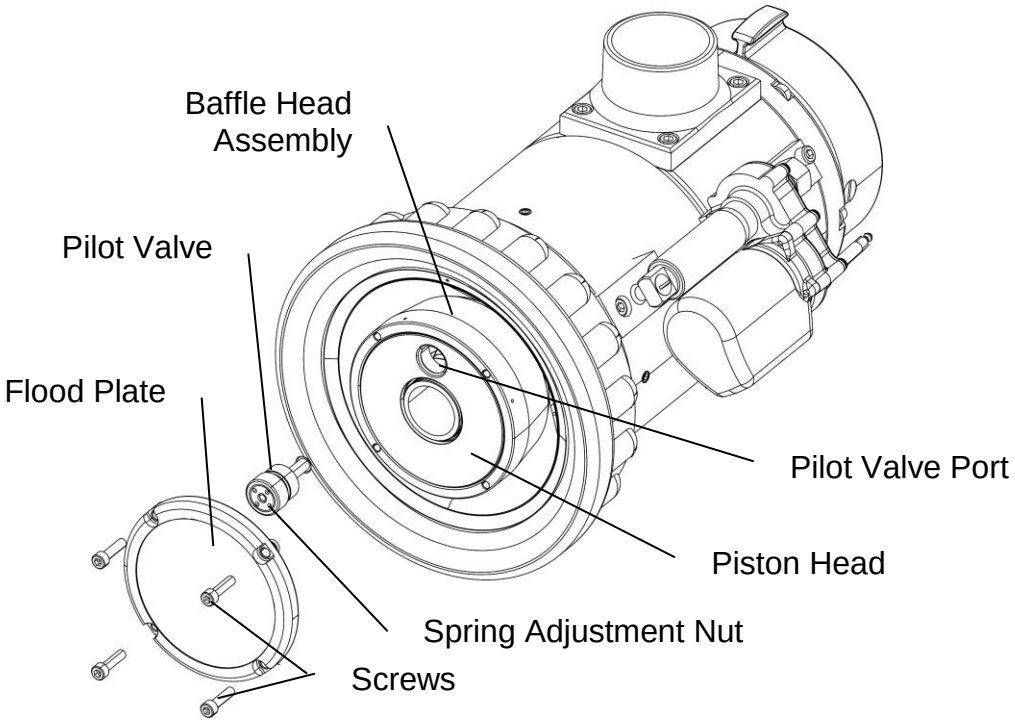

Figure 5 - Pilot Valve Assembly

1. Using a $^{5}/_{32}$" Allen wrench, remove the four screws that retain the flood plate.
2. With the aid of a pair of channel lock pliers, remove the pilot valve assembly by turning it counter clockwise.

⚠ Caution:
Do not allow the piston head and baffle head to turn. If necessary, use a strap wrench to secure it while moving the pilot valve assembly.

3. Using an air nozzle and pressurized air source, blow through the holes in the spring adjustment nut to remove any small debris.

4. Submerge the pilot valve assembly in warm soapy water. While submerged, depress and release the spring-loaded pilot several times. Do this by inserting a ¼" wood dowel (or plastic end of a pen) into the open end of the pilot guide stem.
5. Remove the assembly from the soapy water. Using an air nozzle and a pressurized air source, blow air through the holes in the spring adjustment nut to remove any debris.
6. Apply a light coating of grease to the pilot valve assembly threads and stem.
7. Re-insert the pilot valve assembly making sure that the o-ring in the back of the baffle head is aligned with the pilot valve port in the piston head. Screw the pilot valve assembly in clockwise by hand until it is firmly tight.
8. Apply a drop of Loc-Tite removable thread locker to each retaining screw. Insert the screws through the holes in the flood plate and into the baffle-head. Tighten the screws firmly using the $^{5}/_{32}$" Allen wrench.

C) Storage

After use, the nozzle should always be stored so that the tip is pointed downward. This will allow the water to drain from the nozzle.

D) General

- On a monthly basis, operate the pattern control through a full range of motion from full fog to straight stream.
- If required, apply a light coating of lithium grease to the nozzle body in the area where it contacts the pattern control sleeve.
- Inspect and clean the pilot assembly as outlined in ***Section IV Maintenance B) Pilot Assembly.*** Do this quarterly or as dictated by water conditions and frequency of use.
- Periodically check that fittings are leak free and replace gaskets as required.

Notes:

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