ELKHART BRASS

Fire Fighting Equipment

X-Stream®

Industrial Electrically Actuated Nozzles

SM-1250BE-HL (NP), SM-1250BE-HLGM (NP), SM-2000BE-HL (NP), & SM-2000BE-HLGM (NP)

Installation, Operation, & Maintenance Instructions

98344006 REV. A

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PRODUCT SAFETY

Important:

Before installing and operating this equipment, read & study this manual thoroughly. Proper installation is essential to safe operation. In addition, the following points should be adhered to in order to ensure the safety of equipment and personnel:

- All personnel who may be expected to operate this equipment must be thoroughly trained in its safe and proper use.
- Before flowing water from this device, check that all personnel (fire service and civilian) are clear of the stream path. Also confirm stream direction will not cause avoidable property damage.
- 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.
- Always open and close valves supplying this equipment slowly, so that the piping fills with water slowly, thus preventing the possible occurrence of water hammer.
- After each use, and on a scheduled basis, inspect equipment per instructions in the maintenance section.
- Keep fingers and hands clear of moving parts
- Disconnect power prior to servicing controls.
- Any modifications to the electrical enclosure will destroy the IP 67 rating and void warranty coverage of the enclosure and all components within.
- All equipment must be installed in accordance with the National Electric Code, NFPA 70, and EN/IEC 60079-14 as appropriate and in areas where equipment classification is suitable.

WARNING: Do not attempt to disconnect or work on any electrical equipment in this system unless power is removed or the area is known to be non-hazardous.

NOZZLE INFORMATION:

DETAILS:

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*PARTS DRAWING – Please visit our website at www.elkhartbrass.com for the most current parts drawings.

I NOZZLE CALLOUT

SM-1250BE-HL (NP)
Master Stream Nozzle

II OVERVIEW

The Select-O-Matic nozzle is the most efficient and effective master stream combination nozzle available to the fire service today. It is designed to flow and maintain sufficient pressure to apply that flow as an effective fire stream. No manual gallonage setting is necessary; the spring mechanism within the nozzle adjusts automatically to provide the desired flow. This nozzle is ideal for any master stream application: ladder pipe, deck gun, portable monitor, elevated platform, etc.

Select-O-Matic industrial nozzles are constructed from rugged, heavy-duty brass. The enclosed stainless steel spring mechanism adjusts automatically to flow fluctuations and sets the discharge orifice size accordingly. The design of the nozzle assures you of efficient fire streams from straight stream through wide fog.

Electric X-Stream® Nozzle Features:

- **Inlet** – 3.5" N.H. Threaded female swivel
- **Construction** – Electroless nickel plated brass and stainless steel
- **Stream Adjustment** – Electric with manual override adjusts from straight stream to wide fog (Knob does not move when actuated electrically)
- **Automatic Nozzle** – Compensates for varying water supply conditions to maintain stream reach covering a wide range flows down to 500 GPM.
- **Flow** – SM-1250BE-HL Flow: 1250GPM @ 72 PSI
  SM-1250BE-HLGM Flow: 1250GPM @ 72 PSI
  SM-2000BE-HL Flow: 2000GPM @ 82 PSI
  SM-2000BE-HLGM Flow: 2000GPM @ 72 PSI
- **Motors** – 120 VAC IP-67 rated synchronous motors (non-arcing)
  - UL recognized for Class I, Division 2 use
  - Constant torque and current output in start, running, and stall
  - Will not cause damage or increase in current when motor is stalled
  - Instantaneous start, stop, and reverse
  - Residual (Power Off) torque is always present
  - Long life and exceptional reliability
- **Pattern Adjustment Range** – Nozzle stops are factory set at 100° (0° to 100°)
- **Manual Override** – Hand wheels provided for straight stream and fog stream movements. Hand wheel will not rotate when nozzle is operated electrically.
- CE ATEX 94/9/EC Certification (Group II, Category 3) Available as an option
- Meets NEC (NFPA 70) Article 501 requirements for use in Class I, Groups "A, B, C, & D," Division-2 & Article 505 – Class I, Zone 2, AEx nA IIC T4 hazardous location areas.
- FM approved for Class I, Division 2, Groups A, B, C, D, & T4
- FM approved to IP-67

WARNING: Do not take cover off or disassemble Nozzle Motor. If cover is/has been removed, the warranty is void and the service life of the motor is significantly reduced.

III INSTALLATION INSTRUCTIONS

Installation Steps

1. Insure the gasket is present in the nozzle before installing onto monitor Stream Shaper (Model# 284-B).
2. Position nozzle so the motor is located on the top of the nozzle. You may position the motor on the left side of the nozzle as well; however, we recommend the top position for optimal clearance.
3. Tighten the Stream Shaper to monitor using a spanner wrench. Then tighten the nozzle swivel base to the Stream Shaper.
4. Install cable plug to the receptacle on the nozzle motor aligning locator key in plug with key in receptacle. Screw swivel down tight on male thread of receptacle.

Important: Installation shall comply with the National Electric Code & NFPA 70.

IV SPECIFICATIONS

General Specs

- Input Power — 120 VAC (50/60Hz.) 1 Phase
- Electrical Load — 0.30 AMPS
- Nozzle Dimensions — Ø6 7/8" X 9 5/16" L (SM-1250)
- Nozzle Dimensions — Ø7 15/16" X 9 7/8" L (SM-2000)
- Nozzle Weight — Approx. 32 lbs
- Operating Temperature Range — -40°C to +85°C

ATEX Product Marking (if ordered)

- CE Ex II 3 G c T4

V OPERATING INSTRUCTIONS

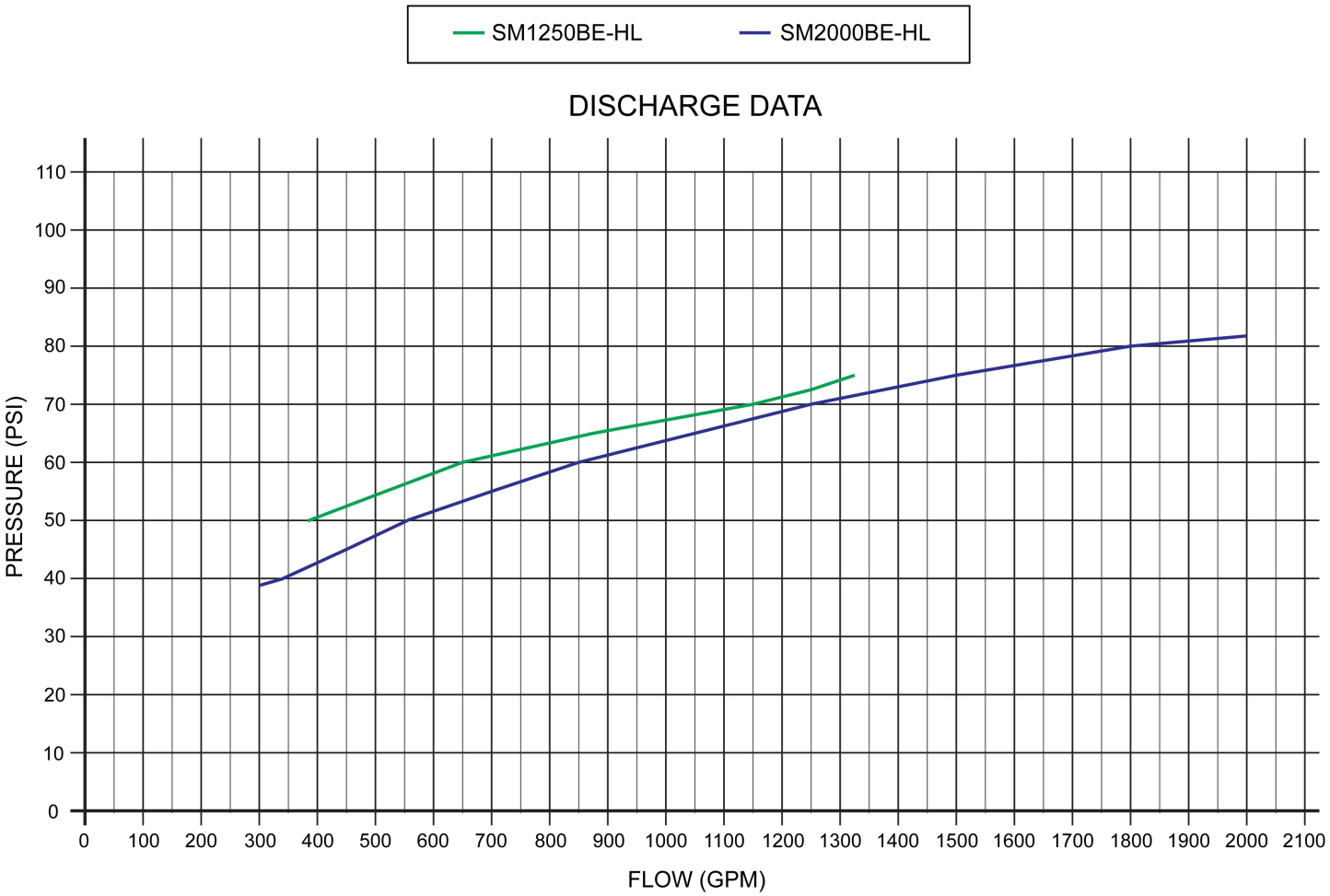
Nozzle is normally electrically actuated through Monitor Control System. It will free wheel at both ends of stroke (fog and straight stream). Please note that the nozzle does not have a shut-off function.

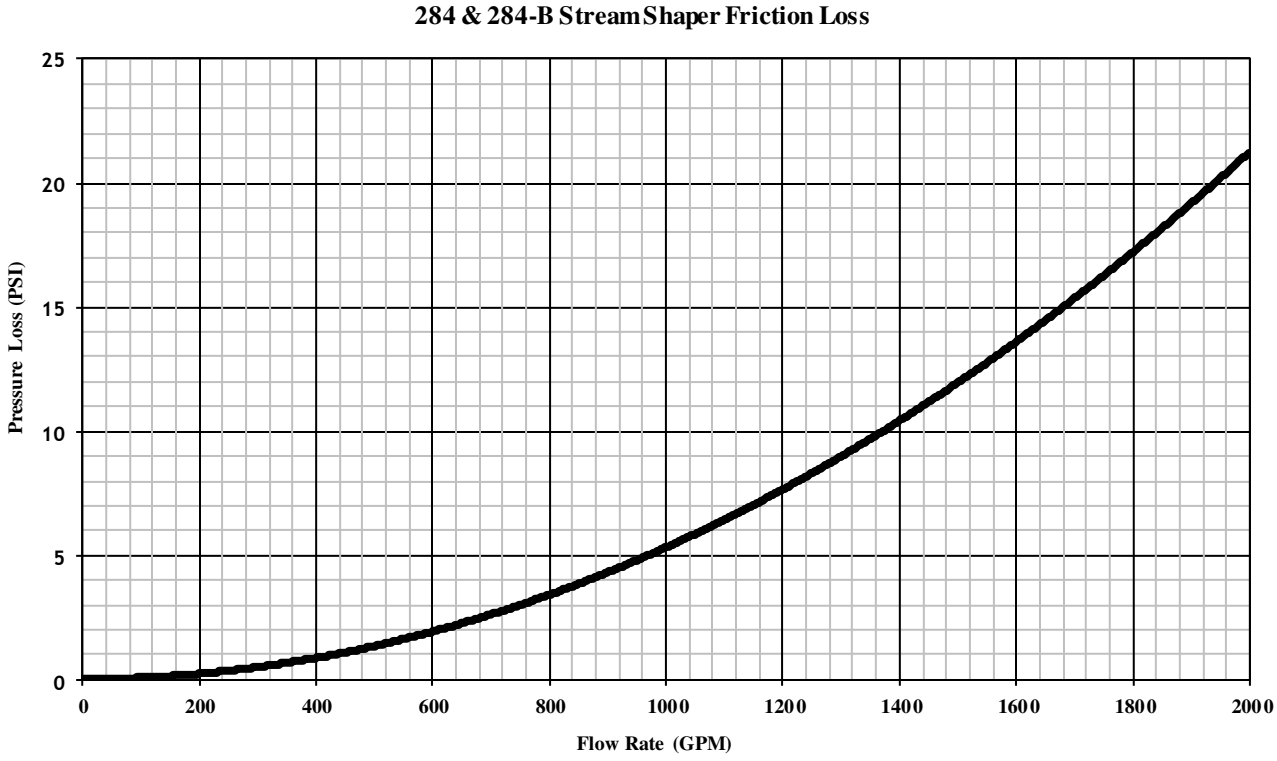
When monitor is not in use, return it to its designated park position. We recommend storing in full fog facing downward to allow nozzle to drain. However, some operating requirements may override this.

Manual Override Operation

1. Push knob in and hold to engage manual override.
2. Turn knob clockwise to move nozzle tip into fog position, and counter-clockwise to move nozzle tip into straight stream position.

VI NOZZLE HYDRAULIC DATA

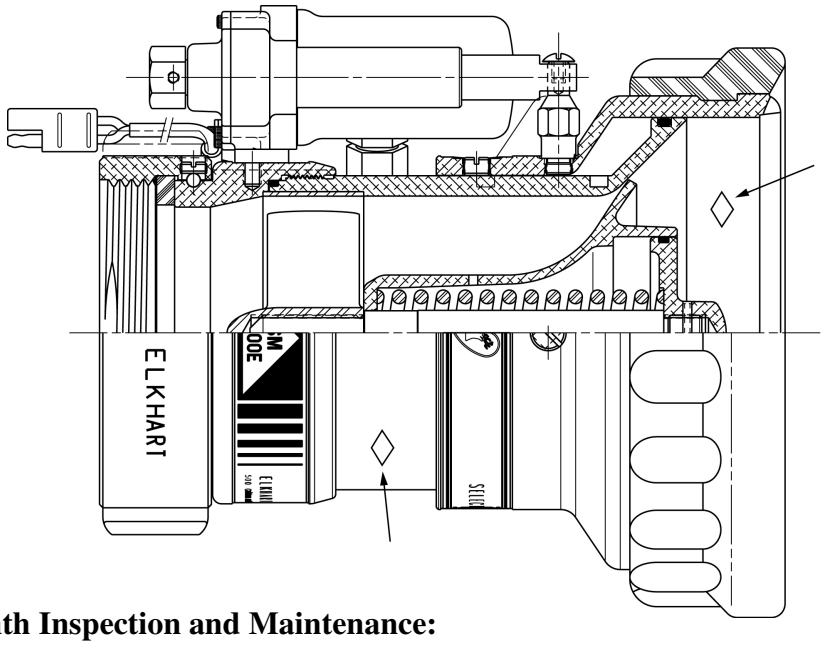




VII MAINTENANCE

Monthly Inspection and Maintenance (or after each use):

1. Cycle nozzle through all functions (straight stream, fog, etc.) to confirm that it is fully functional. If any hesitation in movement is seen, follow steps 2 through 5.
2. Apply a thin coating of Dow Corning Molykote 33, Medium (NLGI No. 2) grease to the surfaces that the nozzle tip o-rings move across (See Illustration Below). Coat these surfaces with grease while the nozzle is in the straight stream position (all the way forward).
3. Run the tip back and forth through its full range of motion several times to distribute the grease.
4. Stop the nozzle tip in the wide fog position (all the way back) and wipe off any excess grease.
5. Run the nozzle through its entire range of motion at least once a week.



◊ Lubricate these o-ring surfaces with the nozzle in the straight stream position.
(Image shown may differ from actual nozzle)

Six-Month Inspection and Maintenance:

1. Check motor control cables for wear and connectors for damage.
2. Check motor cables for binding through full movement of monitor and nozzle.
3. Check all painted surface for chips or scratches, and repaint as required.
4. Visually check all electrical equipment.

VIII TROUBLESHOOTING

A. If nozzle stream cone is not tight; take nozzle and stream shaper off monitor and clean debris out of both. Flush firewater lines with nozzle and stream shaper off monitor, then reassemble.
B. If nozzle will not move (to straight stream or fog); check electrical connection to make sure it is tight. If the electrical connection is tight and nozzle still will not move, manually cycle nozzle three (3) times, then try to move it electrically.
C. Check for power at nozzle connection

Any problems that cannot be fixed/solved with this troubleshooting guide should be taken to your Elkhart Brass Representative to get further information.

⚠ **WARNING: Do not attempt to disconnect or work on any electrical equipment in this system unless power is removed or the area is known to be non-hazardous.**

NOTES: