

ELKHART BRASS

Fire Fighting Equipment

X-Stream®

Electrically Actuated **Nozzles**

SM500E – SM2000E

Installation, Operation, & Maintenance Instructions



98349000 REV. A

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 NEMA 4 rating and void warranty coverage of the enclosure and all components within.
- All equipment must be installed in accordance with local codes (NFPA 70 or 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



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 nozzles are constructed from rugged, lightweight Elk-O-Lite. The enclosed stainless steel spring mechanism adjusts automatically to flow fluctuations and sets the discharge orifice size accordingly to maintain a constant pressure. The design of the nozzle assures you of efficient fire streams from straight stream through wide fog.

Manual X-Stream® Nozzle Features:

- **Inlet** – 2.5” or 3.5” N.H. Threaded female swivel
- **Construction** – Elk-O-Lite and stainless steel
- **Stream Adjustment** – 12 V or 24 V electric actuator adjusts nozzle from straight stream to wide fog
- **Flow** – SM-500 – Flow: 350GPM @ 75psi – 1000GPM @ 75psi
SM-500(HP) – Flow: 350GPM @ 100psi – 1000GPM @ 100psi
SM-1000 – Flow: 350GPM @ 65psi – 1000GPM @ 75psi
SM-1250 – Flow: 350GPM @ 50psi – 1250GPM @ 75psi
SM-2000 – Flow: 500GPM @ 50psi – 2000GPM @ 85psi
(See Nozzle flow graphs on page 7 and check catalog for current specifications)
- **Actuators** – 12 VDC or 24 VDC
 - Will not cause damage or increase in current when motor is stalled
 - Instantaneous start, stop, and reverse
 - Long life and exceptional reliability
- **Pattern Adjustment Range** – Nozzle stops are factory set at 100° (0° to 100°)
- **Manual Override** – A ¾” Hex nut; located at end of push rod of nozzle actuator.

 **WARNING: Do not take motor cover off the nozzle actuator assembly. 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 inlet before installing onto monitor or Stream Shaper.
2. Position nozzle so the actuator assembly is located on the top of the nozzle. You may position the actuator assembly on the left side of the nozzle as well; however, we recommend the top position for optimal clearance, manual override accessibility, and durability.
3. Then tighten the nozzle swivel base to the Stream Shaper or monitor.
4. Connect power cable to the electrical plug on the nozzle actuator assembly.

IV SPECIFICATIONS

General Specs

- Input Power 12 VDC or 24 VDC
- Electrical Load 3 AMPS
- Nozzle Dimensions $\text{Ø}6\ 7/8'' \times 9\ 5/16''$ L (SM500E, SM1000E, SM1250E)
- Nozzle Dimensions $\text{Ø}7\ 15/16'' \times 10\ 1/16''$ L (SM2000E)
- Nozzle Weight Approx. 10 lbs
- Operating Temperature Range -40°C to $+85^{\circ}\text{C}$

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.

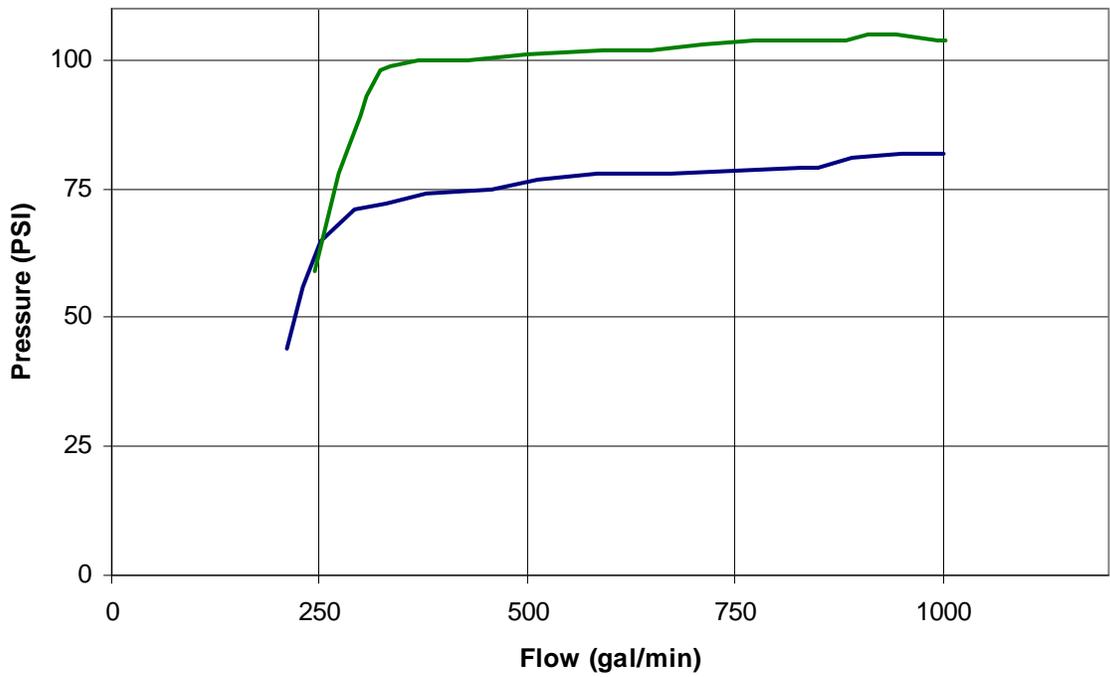
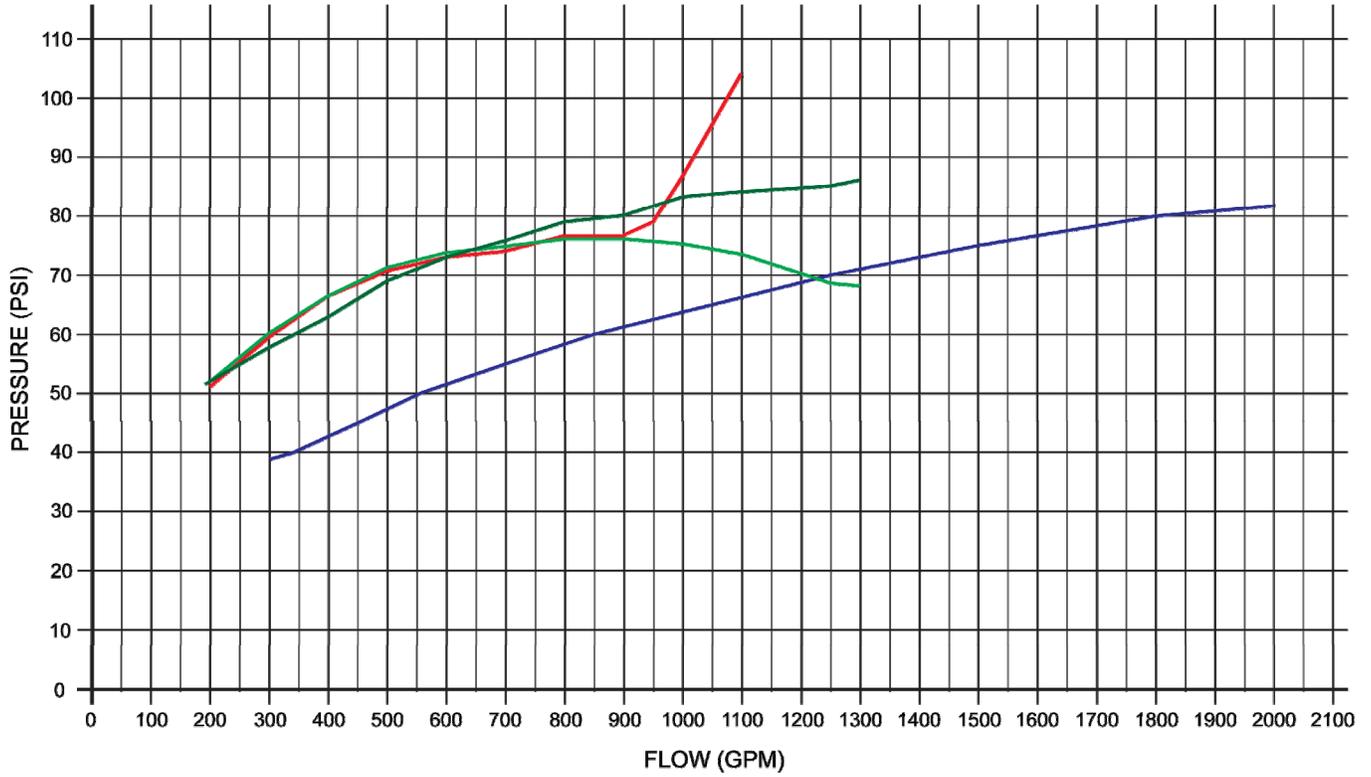
Manual Override Operation

The nozzle tip can be adjusted easily by using the override bolt and a 3/4" drive ratchet, by rotating the bolt counter-clockwise for straight stream or clockwise for fog patterns.

VI NOZZLE HYDRAULIC DATA



DISCHARGE DATA



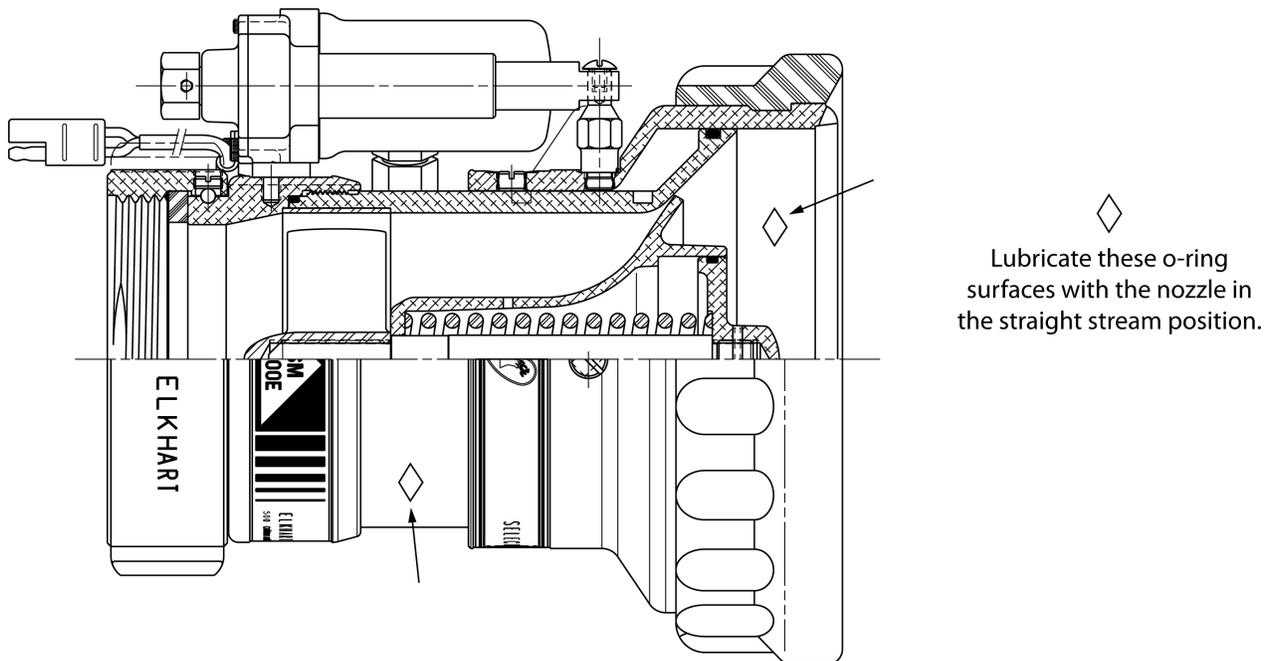
VII MAINTENANCE

Inspection

1. Cycle nozzle through all functions (straight stream, fog, etc.) to confirm that it is fully functional.
2. Run the nozzle through its entire range of motion at least once a week

Maintenance (After each use or once per month)

1. Apply a thin coating of Dow Corning #7 silicone grease or equivalent 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).
2. Run the tip back and forth through its full range of motion several times to distribute the grease.
3. Stop the nozzle tip in the wide fog position (all the way back) and wipe off any excess grease.



VIII TROUBLESHOOTING

- A. If nozzle stream cone is not tight and uniform; 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.

