



OPERATING INSTRUCTIONS AKROMATIC™ 2000 NOZZLES

The following is intended to provide the basic instructions for operating an Akromatic 2000 nozzle.

GENERAL

- 500-2000 GPM at 80 psi.
- Maximum operating pressure 200 psi/14 bar.
- Not for use on electrical fires.
- Not recommended for use with salt water.
- After use with foam, flush with fresh water.
- Charge all lines slowly to facilitate a controlled water pressure build-up during start-up.
- For firefighters use ONLY.
- For use with water or standard firefighting foams ONLY.
- Ensure your Akromatic is properly matched to your eductor.
- Do not use Akromatic nozzles in portable hose holders.
- Ensure the Akromatic is aimed in a direction that is safe, prior to operating.
- Masterstream nozzles are not to be used on the end of a hose.
- Ensure that the thread on the nozzle swivel is matched to the thread on the hose connection.
- If any tags or bands on the nozzle are worn or damaged and cannot be easily read, they should be replaced.
- Do not overtighten the nozzle onto the appliance connection.
- The nozzle is configured for optimum performance. Do not alter in any manner.
- The device the Akromatic mounts to must be strong enough to support the reaction force created when flowing the nozzle.

An Automatic Nozzle, by definition is:

- 1) A nozzle designed to maintain a constant operating pressure over a wide range of flows.
- 2) A nozzle that effectively uses available water for maximum performance within its operating range.

The functions of the Automatic Nozzle are to:

- 1) Efficiently apply the available water at the optimum pressure within its operating range.
- 2) Allow the maximum flow of the available water at the optimum nozzle pressure within its operating range.
- 3) Eliminate the need for the nozzleman to adjust the nozzle for varying flow rates.
- 4) Cover a wide flow range which reduces the need for different nozzle sizes and styles.

OPERATING INSTRUCTIONS

DETERMINING FLOW

In determining flows or attempting to achieve specific flows with an automatic nozzle, it is important to understand that:

1. Nozzle pressure is as much a factor in flow as friction loss. Different nozzle pressures result in different flows at the same pump pressure.
2. Different baffle mechanisms react to water differently and thus operate at different nozzle pressures.
3. Nozzle reaction is mainly a result of flow. The greater the nozzle reaction, the greater the flow.

Due to the Akroflow Modulated Flow Mechanism, the Akromatic Nozzle will more closely maintain approximately 80 P.S.I. nozzle pressure over the nozzle's operating range. Consequently, you can use the following formula to determine given flows:

EP=FL+NP (+loss or gain due to elevation)

EP=Engine Pressure

FL=Friction loss for hose size, length and desired GPM

NP=Nozzle Pressure

Note: Loss or gain due to elevation=approximately 1/2 P.S.I. per foot of height difference between the nozzle and the pump.

With an Akromatic 2000 nozzle, assign 80 P.S.I. nozzle pressure at all times.

PATTERN CHANGE

- To change the spray pattern rotate the pattern sleeve/bumper. Rotate it clockwise for straight stream (designated by a I) and counterclockwise for wide fog (designated by a V).

MAINTENANCE

- Under normal conditions, periodically flushing the nozzle with clean water and cleaning grit and dirt from around exterior moving parts will allow the nozzle to operate properly.
- Over time the seals may need to be replaced. This can be accomplished by purchasing the appropriate Akron repair parts. Use qualified maintenance mechanics or return the nozzle to Akron Brass for repair.

WARNING

- Your nozzle should be inspected prior and after each use, to ensure it is in good operating condition.
- Periodically, an unanticipated incident may occur where the nozzle is used in a manner that is inconsistent with standard operating practices and those listed in IFSTA. A partial list of potential misuses follows:
 - Operating above maximum rated pressure and flow.
 - Not draining, and allowing water to freeze inside nozzle.
 - Dropping nozzle from a height where damage is incurred.
 - Prolonged exposures to temperatures above +130° F, or below -25° F.
 - Operating in a corrosive environment.
 - Other misuse that might be unique to your specific firefighting environment.

Also, there are many “tell tale” signs that indicate nozzle repair is in order, such as:

- Controls that are either inoperable or difficult to operate.
- Excessive wear.
- Poor discharge performance.
- Water leaks.

If any of the above situations are encountered, the nozzle should be taken out of service and repaired, plus tested by qualified nozzle technicians, prior to placing it back into service.



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