

**DATA SHEET  
#SPS503**

# MEDIUM ANGLE "AUTO-SPRAY NOZZLES"

**Model**

- Type MA: 90° Pattern "Auto-Spray" Medium Angle Nozzle, Full Cone, High Velocity, Directional.

**Approvals**

- U.L. Listed, ULC Listed, FM Approved, MEA Accepted, No. 192-98-E.

**To Specify**

- Furnish and install "Automatic" Sprinkler Brand "Auto-Spray" Medium Angle Nozzle.

**Design Features**

"AUTO-SPRAY" is the most efficient method of applying water on fires involving flammable liquids or solids that are violent and stubborn to extinguish. Ordinary methods of fire protection are not effective. The "AUTO-SPRAY" NOZZLES provide a high velocity directional spray. It is designed to impart sufficient velocity to the water spray to prevent dissipation of discharge before it reaches the surface to be protected. Interior spiral deflectors and a center jet break the water into a directional full cone spray.

"AUTO-SPRAY" NOZZLES are the high velocity solid cone type, and are designed primarily for use with deluge-type systems operated by separate detection, such as, rate-of-rise detection, vapor, smoke, electronic or photo-electric detection units. They do not employ a fusible link arrangement.

Medium Angle type "AUTO-SPRAY" NOZZLES produce a conical pattern 90° in diameter and are available in eight orifice sizes. These nozzles are available for 1" and 1-1/4" pipe connections.

Possible objectives of an "AUTO-SPRAY" system as per NFPA #15 are:

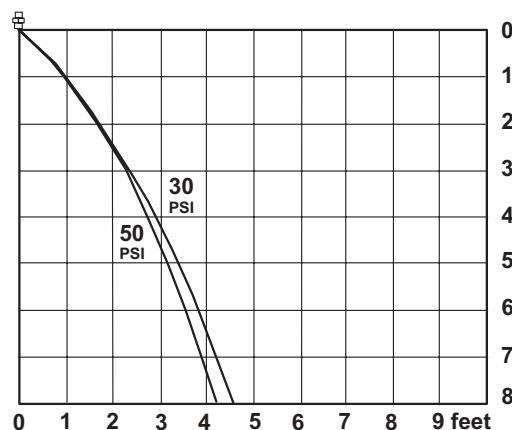
- a.) Extinguishment of fire.
- b.) Control of burning.
- c.) Exposure protection.
- d.) Prevention of fire.

"AUTO-SPRAY" is designed to satisfy these objectives by producing a coherent, uniform pattern which can be aimed at the specific area to be protected.



"AUTO-SPRAY" NOZZLES have relatively large water ways which make clogging from foreign material unlikely. It is therefore not necessary to remove and clean each nozzle after operation. A self-cleaning "AUTO-SPRAY" strainer is normally installed in the water supply line to prevent any foreign material from entering the system.

The internal construction of the "AUTO-SPRAY" NOZZLE is such that a stream of water entering the nozzle is split into two segments. The first segment is directed by turbine vanes at the second segment, which flows straight through the nozzle in such a way that a controlled turbulence is produced at the orifice and breaks up the stream. The arrangement and number of these internal vanes produces the great variety of available patterns, and also atomizes the water spray so that uniform discharge throughout the pattern can be achieved.



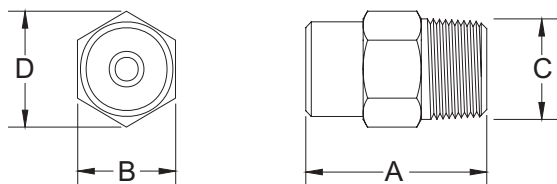
**DISCHARGE PATTERN CHART**

# “AUTO-SPRAY” NOZZLES SUBMITTAL SHEET

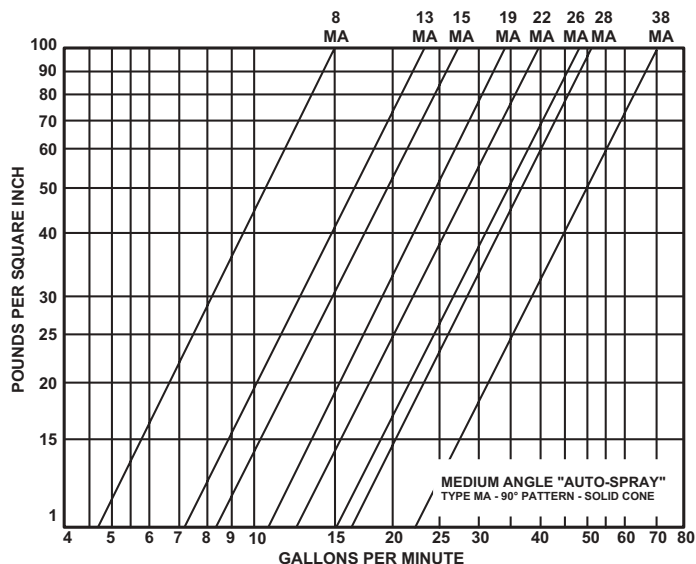
## MEDIUM ANGLE “AUTO-SPRAY” NOZZLE - TYPE MA - 90° PATTERN

Medium Angle type nozzles produce a conical pattern 90° in diameter and are available in eight orifice sizes. These nozzles are available for 1” and 1-1/4” pipe connections.

| Nozzle No. | Pipe Conn. (Male) | Orifice K Factor | Flow Rate in gpm for given psi |      |      |      |      |      |      |      |      |      |      |
|------------|-------------------|------------------|--------------------------------|------|------|------|------|------|------|------|------|------|------|
|            |                   |                  | 10                             | 15   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  |
| 8 MA       | 1”                | 1.5              | 4.7                            | 5.6  | 6.7  | 8.2  | 9.5  | 10.6 | 11.6 | 12.5 | 13.4 | 14.2 | 15.0 |
| 13 MA      | 1”                | 2.3              | 7.3                            | 8.9  | 10.3 | 12.6 | 14.5 | 16.3 | 17.6 | 19.2 | 20.6 | 21.8 | 23.0 |
| 15 MA      | 1”                | 2.7              | 8.5                            | 10.5 | 12.1 | 14.8 | 17.1 | 19.1 | 20.9 | 22.6 | 24.1 | 25.6 | 27.0 |
| 19 MA      | 1”                | 3.4              | 10.8                           | 13.2 | 15.2 | 18.6 | 21.5 | 24.0 | 26.3 | 28.4 | 30.4 | 32.3 | 34.0 |
| 22 MA      | 1”                | 4.0              | 12.6                           | 15.5 | 17.9 | 21.9 | 25.3 | 28.3 | 31.0 | 33.5 | 35.8 | 37.9 | 40.0 |
| 26 MA      | 1-1/4”            | 4.8              | 15.2                           | 18.6 | 21.5 | 26.3 | 30.4 | 33.9 | 37.2 | 40.2 | 42.9 | 45.5 | 48.0 |
| 28 MA      | 1-1/4”            | 5.1              | 16.1                           | 19.8 | 22.8 | 27.9 | 32.3 | 36.1 | 39.5 | 42.7 | 45.6 | 48.4 | 51.0 |
| 38 MA      | 1-1/4”            | 7.0              | 22.1                           | 27.1 | 31.3 | 38.3 | 44.3 | 49.5 | 54.2 | 58.6 | 62.6 | 66.4 | 70.0 |



| Physical Characteristics |            |          |        |          |
|--------------------------|------------|----------|--------|----------|
| Nozzle Number            | Dimensions |          |        |          |
|                          | A          | B        | C      | D        |
| 8 MA                     | 2-1/16”    | 1-5/16”  | 1”     | 1-17/32” |
| 13 MA                    | 2-1/16”    | 1-5/16”  | 1”     | 1-17/32” |
| 15 MA                    | 2-1/16”    | 1-5/16”  | 1”     | 1-17/32” |
| 19 MA                    | 2-1/16”    | 1-5/16”  | 1”     | 1-17/32” |
| 22 MA                    | 2-1/16”    | 1-5/16”  | 1”     | 1-17/32” |
| 26 MA                    | 2-1/2”     | 1-11/16” | 1-1/4” | 1-15/16” |
| 28 MA                    | 2-1/2”     | 1-11/16” | 1-1/4” | 1-15/16” |
| 38 MA                    | 2-1/2”     | 1-11/16” | 1-1/4” | 1-15/16” |



**DISCHARGE CHARACTERISTICS**

### Ordering Information and Discharge Characteristics

| Nozzle Number | Type         | Pipe Conn. Male | Angle of Pattern | Part No. | Order (Check One) |
|---------------|--------------|-----------------|------------------|----------|-------------------|
| 8 MA          | Medium Angle | 1”              | 90°              | 1415058  |                   |
| 13 MA         | Medium Angle | 1”              | 90°              | 1415059  |                   |
| 15 MA         | Medium Angle | 1”              | 90°              | 1415060  |                   |
| 19 MA         | Medium Angle | 1”              | 90°              | 1415061  |                   |
| 22 MA         | Medium Angle | 1”              | 90°              | 1415062  |                   |
| 26 MA         | Medium Angle | 1-1/4”          | 90°              | 1415066  |                   |
| 28 MA         | Medium Angle | 1-1/4”          | 90°              | 1415067  |                   |
| 38 MA         | Medium Angle | 1-1/4”          | 90°              | 1415068  |                   |

This information is only a general guideline. The company reserves the right to change any portion of this information without notice. Terms and conditions of sale apply and are available on request.

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