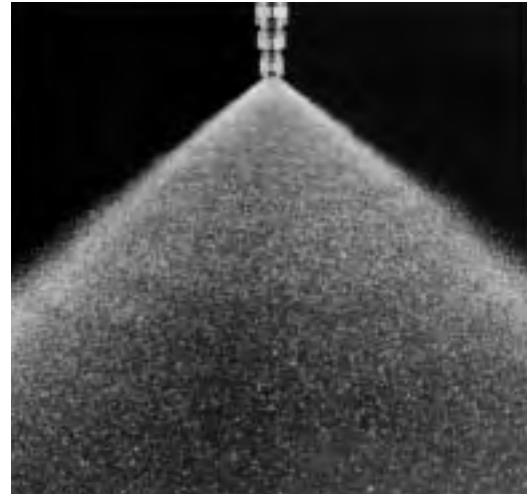


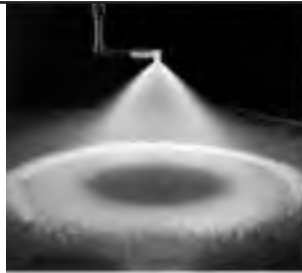
**SPRAY CHARACTERISTICS/PATTERNS**

Because spray nozzles are designed to perform under many different spraying conditions. It is likely that there is more than one spray nozzle that would meet your general requirements.

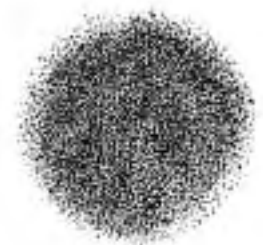
Following is a discussion of spray characteristics to help explain the criteria by which each candidate spray nozzle must be evaluated in order to achieve the most efficient spray performance in your individual application. More specific information may be obtained by contacting a KMI sales engineer.

**HOLLOW CONE**

The hollow cone spray pattern is essentially a circular ring of liquid. This pattern is generally formed by use of an inlet tangential to a whirl chamber, or by an internal grooved vane immediately upstream from the orifice. The whirling liquid results in a hollow cone configuration as it leaves the orifice.

**FULL CONE**

A full cone spray pattern is round, square, or oval in coverage, and completely filled with spray drops. This spray pattern is normally formed by using an internal vane, which imparts controlled turbulence to the liquid prior to the orifice. Full cone coverage can also be accomplished with smaller drop size by use of a header arrangement of atomizing or fine spray nozzles.

**SOLID STREAM**

A solid stream spray pattern is basically a uniform stream of liquid emitted through a drilled hole. However, modern solid stream nozzles have been refined by use of proper inlet chamber proportions and contours ahead of the orifice and/or by addition of internal flow stabilizing vanes. These nozzles provide prolonged solid stream integrity and delay the start of breakup and drop formation after leaving the nozzle orifice.

