

## FIKE ENGINEERED NOZZLES FOR FM-200® CLEAN AGENT SYSTEMS

*FM-200 is also known by its ASHRAE designation HFC-227ea*

### DESCRIPTION

The function of the Fike Engineered Discharge Nozzle in a fire extinguishing system is to distribute the Clean Agent in a uniform, predetermined pattern and concentration. The nozzles are designed to complete the discharge of Clean Agent in 10 seconds or less when installed within the design limitations of the Fike Design, Installation and Maintenance Manual, P/N 06-202 or 06-215 and the Fike Flow Calculation computer program.

Fike Engineered Discharge Nozzles are available in sizes of 3/8" (10mm) through 2" (50mm). Each nozzle is available in 180 and 360 degree discharge patterns.

The Discharge Nozzle size refers to the size of Schedule 40 or 80 steel pipe to which it can be connected. The nozzle discharge orifices are drilled perpendicular to the center line of the threads. The nozzles are mounted to allow the agent to be discharged on a horizontal axis.

Nozzle orifices are available in a wide range of sizes to provide accurate Clean Agent flow results. All nozzles have been tested for their ability to discharge the Clean Agent under extreme conditions.

Nozzle orifice drilling must be done at the Fike factory, or other UL listed nozzle drill station, only after "As-Built" calculations of the installed piping system(s) have been performed, using the Fike Flow Calculation computer program.

The Fike Discharge Nozzle used shall be Factory Mutual (FM) approved and Underwriters Laboratories (UL) listed.

### ARCHITECT AND ENGINEERING SPECIFICATIONS

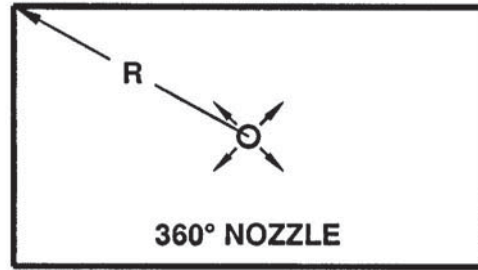
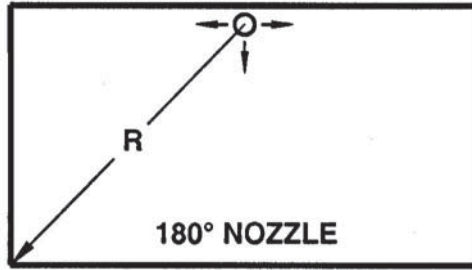
The nozzle used to disperse Clean Agent shall be a Fike Series 80. The nozzle shall be available in 3/8" (10mm) thru 2" (50mm) sizes. Each size shall be available in both 180 and 360 degree dispersion patterns. The nozzle used shall have pipe threads that correspond to the nozzle size. All nozzles shall have an orifice size determined by a UL listed and FM approved flow calculation program. All nozzle orifice drilling shall be performed by the manufacturer or a UL listed nozzle drilling facility.



### APPROVALS

- UL Listed - Ex4623
- ULC Listed - CEx1136
- FM Approved - 0Y4A8.AF

## NOZZLE SIZE AND AREA COVERAGE



Nozzle Area Coverage		
Nozzle Type	"R" Dimension	Ceiling Height Range
180 Degree	45' - 8" (13.92)	1.0 to 16.0 (0.3 to 4.9)
360 Degree	29' - 8" (9.04)	1.0 to 16.0 (0.3 to 4.9)

NOZZLE SIZE		180° NOZZLE	360° NOZZLE
(NPT)	(mm)	PART NUMBER	PART NUMBER
3/8"	(10)	80-060	80-052
1/2"	(15)	80-061	80-053
3/4"	(20)	80-062	80-054
1"	(25)	80-063	80-055
1 1/4"	(32)	80-064	80-056
1 1/2"	(40)	80-065	80-057
2"	(50)	80-066	80-058

### NOTES:

- The maximum allowable area of coverage includes any area within the radius distance from the nozzle ("R" dimension) to the most extreme wall or corner.
- Nozzles should be located on center line of hazard area.
- When working with ceiling heights exceeding the values tabulated above, the hazard volume must be broken down into vertically stacked hazard volumes, with heights less than the maximums shown in the table. It is imperative that unusual applications of this nature be handled by experienced design engineers and, in most cases, operational tests should be performed before the system is put into service.
- Dimensions and nozzle data shown are taken from the UL listed and FM approved Design, Installation & Maintenance Manual - P/N 06-202 or 06-215.
- 180 and 360 degree nozzles may be placed a maximum of 1 foot (30.5cm) down from the ceiling, and 180 degree nozzles may be placed a maximum of 1 foot (30.5cm) from the wall.
- Nozzle threading is NPT.

