



# MULSIFYRE® NOZZLE TEMPLATES & RANGEFINDERS

## MODELS F822 THRU F834

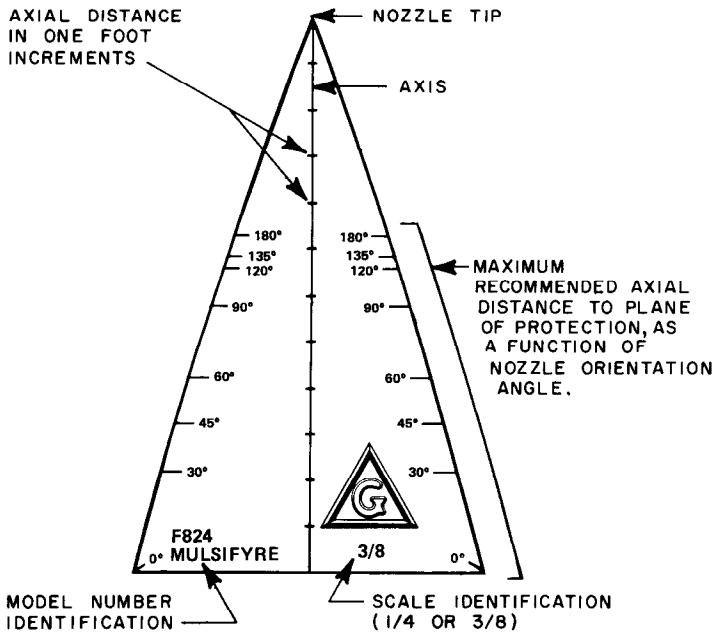
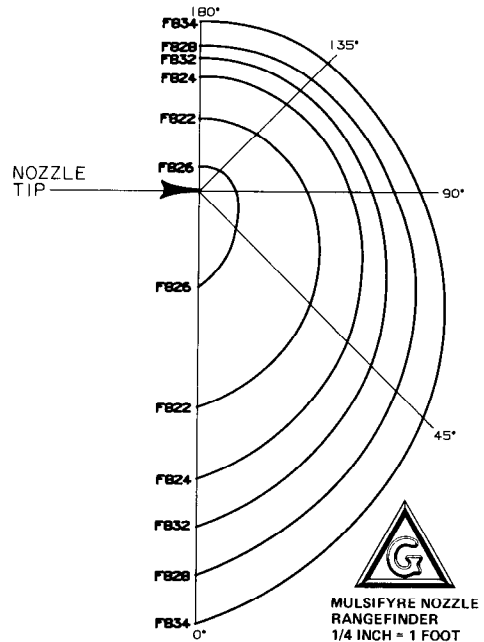


FIGURE A  
TYPICAL MULSIFYRE TEMPLATE



NOTE: CURVES REPRESENT AXIAL DISTANCE FROM NOZZLE TIP TO PLANE OF PROTECTION AS A FUNCTION OF THE ORIENTATION ANGLE.

FIGURE B  
TYPICAL MULSIFYRE RANGEFINDER

### GENERAL DESCRIPTION

The Mulsifyre Templates and Rangefinders are intended to be used as an aid for designing water spray fixed systems for fire protection when using the Model F822 through F834 Mulsifyre Nozzles described on Technical Data Sheet TD675. The fourteen piece template and rangefinder package provides the design spray profiles and maximum recommended axial distance to plane of protection, for the six different Mulsifyre Nozzles, in two common drawing scales: 1/4 inch equals 1 foot and 3/8 inch equals 1 foot.

### STANDARDS

The Mulsifyre Templates and Rangefinders must be used in conjunction with the information provided in Technical Data Sheet TD675.

### WARNING

The design of individual water spray fixed systems can vary considerably, depending on the characteristics and nature of the hazard, the basic pur-

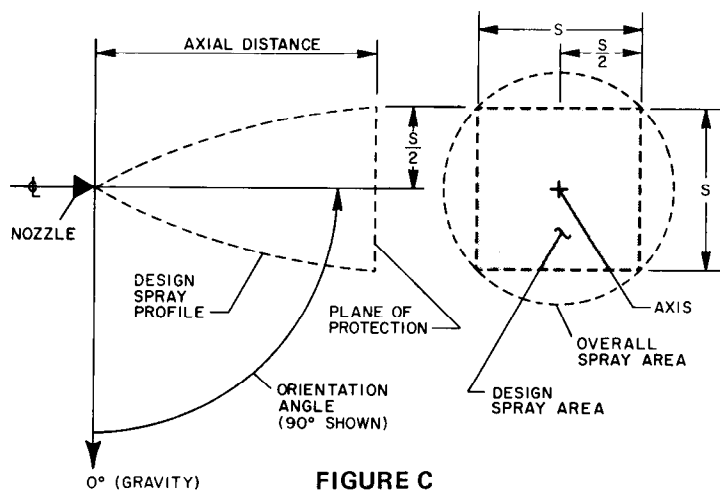


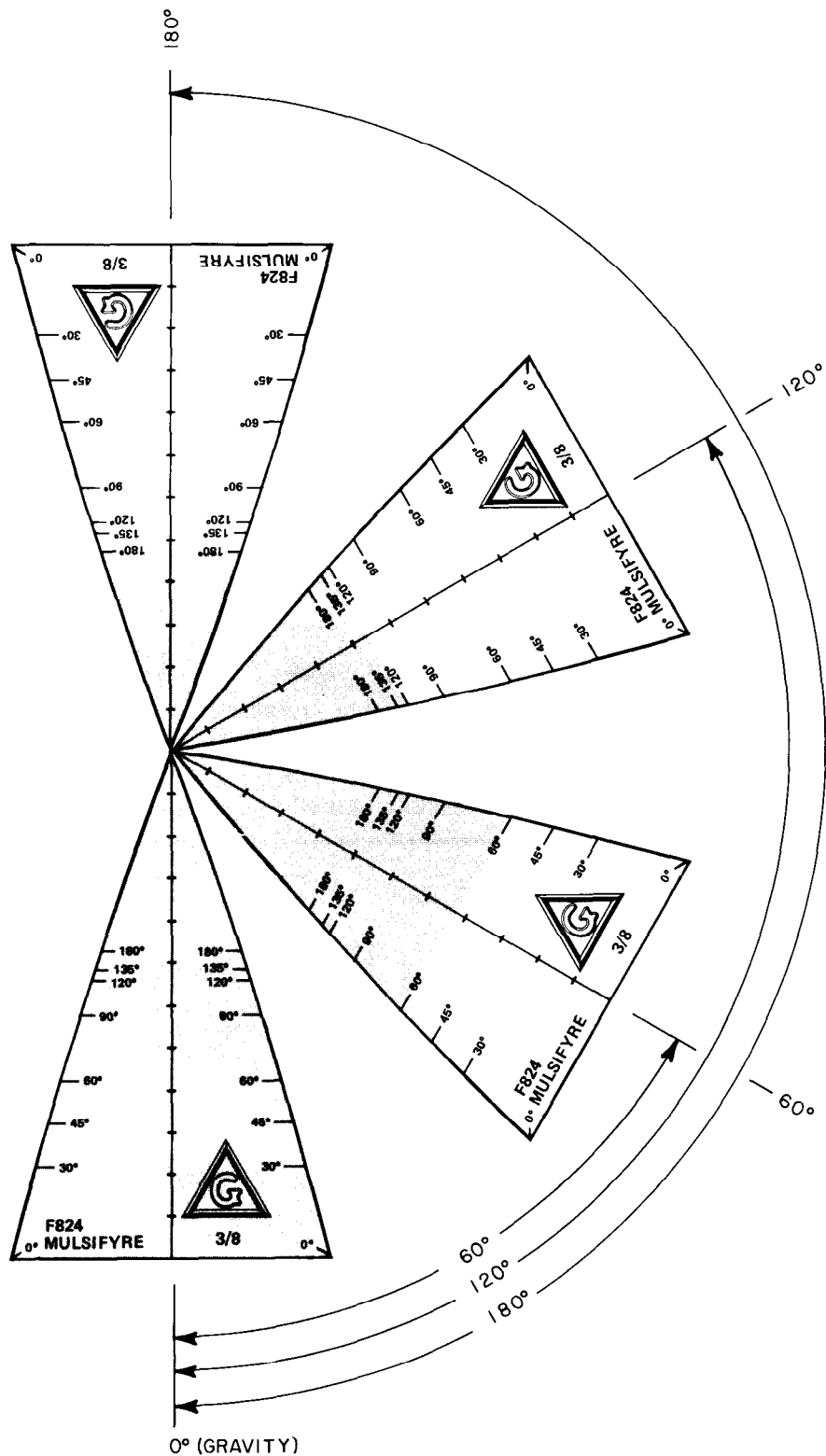
FIGURE C

pose of the spraying system, the configuration of the hazard, and wind/draft conditions. Because of these variations as well as the wide range of available nozzle spray characteristics, the design of water spray fixed systems for fire protection must only be performed by experienced designers who thoroughly understand the limitations as well as capabilities of such systems.

The design of ultrahigh speed water spray systems for fire protection applications involves a technology which is substantially different from that associated with the design of automatic sprinkler or deluge systems. The speed of water delivery from all the nozzles of such systems is highly dependent on the nozzle discharge characteristics, the design of the detection system and piping network



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NOTE: SHADED AREAS REPRESENT EFFECTIVE AREAS.

**FIGURE D**  
EFFECTIVE SPRAY PROFILES OF MULSIFYRE NOZZLES AS A FUNCTION OF NOZZLE ORIENTATION ANGLE

as well as the water supply characteristics and proper priming of the system. Consequently, the design of ultrahigh speed water spray systems for fire protection applications must only be performed by experienced designers who thoroughly understand the limitations as well as capabilities of such systems.

## TECHNICAL DATA

Each template (Ref. Figure A) is marked with a model number that corresponds to the model number of a Mulsifyre Nozzle, and each template is marked either 1/4 or 3/8 to indicate for use with 1/4 inch or 3/8 inch equals 1 foot scaled drawings.

Each rangefinder (Ref. Figure B) is marked with a 1/4 or 3/8 scale to indicate for use with 1/4 inch or 3/8 inch equals 1 foot scaled drawings. The rangefinders are printed on a transparency so that they can be used as an overlay with the templates, to determine the maximum recommended axial distance to the plane of protection for various nozzle orientation angles. The rangefinders are especially useful during preliminary layout work when the nozzle orientation angle is unknown.

The "Design Spray Profile" of the Mulsifyre Template, as shown in Figure A, corresponds to the "Design Spray Area" shown in Figure C. The "Design Spray Area" is defined as the square of length and width "S" within the circular "Overall Spray Area".

Along the edges of each template are markings to indicate the maximum recommended axial distance to the plane of protection, as a function of the orientation angle. These markings may be used in lieu of the distances shown on the rangefinders. Figure D illustrates the effective spray profiles of the Mulsifyre Nozzles for typical nozzle orientation angles of 0°, 60°, 120°, and 180°. Interpolate for orientation angles other than those indicated on the template.

## ORDERING PROCEDURE

### Mulsifyre Templates:

Specify: Mulsifyre Nozzle Templates and Rangefinders per TD675T.

### Order From:

Grinnell Corporation  
Technical Services  
1467 Elmwood Avenue  
Cranston, RI 02910