



HV NOZZLE TEMPLATES & RANGEFINDERS

TYPE HV (HIGH VELOCITY)

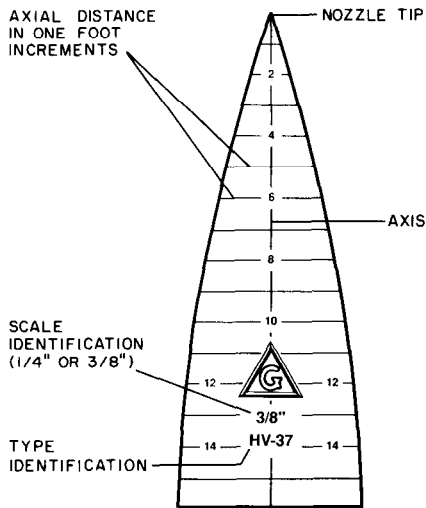


FIGURE A
TYPICAL HV TEMPLATE

GENERAL DESCRIPTION

The HV Templates and Rangefinders are intended to be used as an aid for designing water spray fixed systems for fire protection when using the Type HV-14 through HV-60 Nozzles described on Technical Data Sheet TD680. The sixteen piece template and rangefinder package provides the design spray profiles and maximum recommended axial distance to plane of protection, for the six different HV Nozzles, in two common drawing scales: 1/4 inch equals 1 foot and 3/8 inch equals 1 foot.

STANDARDS

The HV Templates and Rangefinders must be used in conjunction with the information provided in Technical data Sheet TD680.

WARNINGS

The design of individual water spray fixed systems can vary considerably, depending on the characteristics and nature of the hazard, the basic purpose of the spraying system, the configuration of the hazard, and wind/draft conditions. Because of

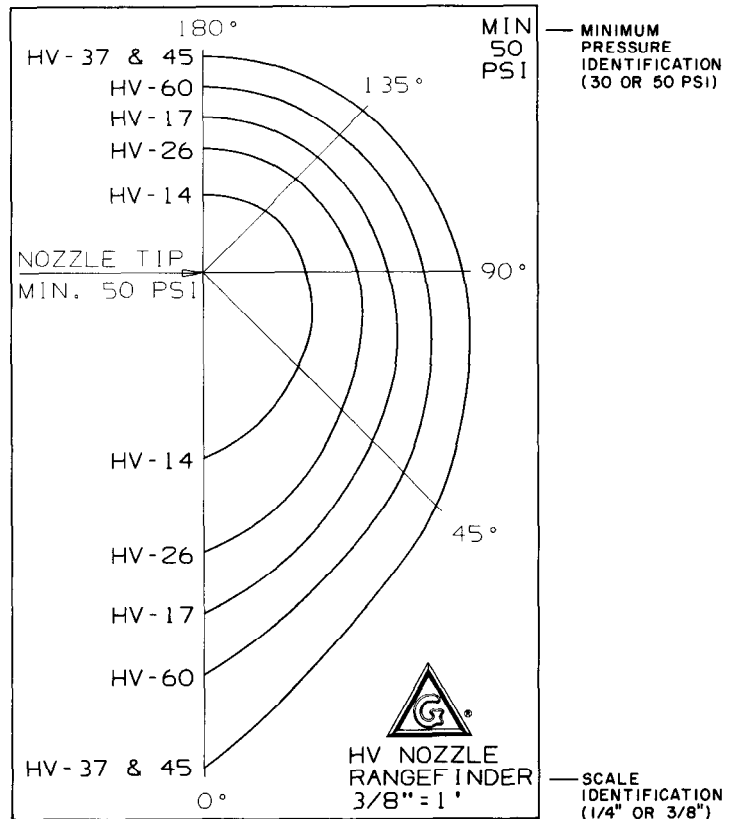


FIGURE B
TYPICAL HV RANGEFINDER

NOTE:
Curves represent axial distance from nozzle tip to plane of protection as a function of the orientation angle.

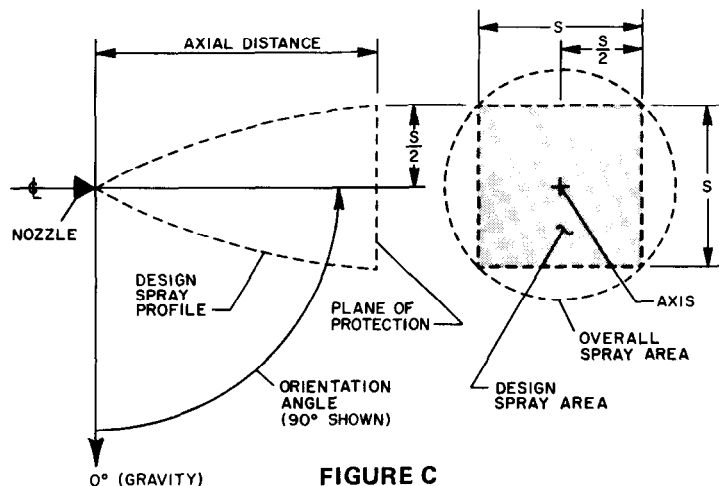
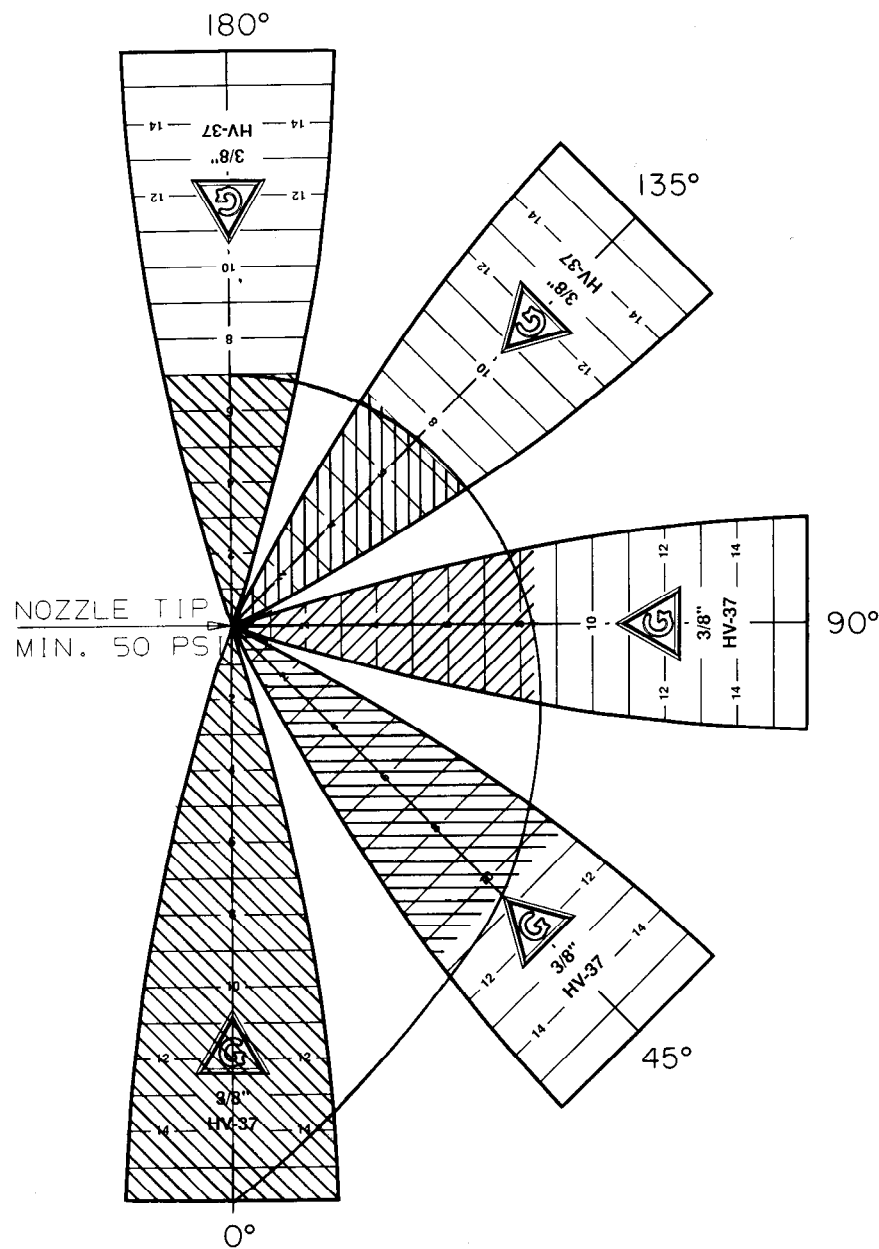


FIGURE C



- NOTES:**
1. Cross-hatched areas represent effective areas.
 2. Not to scale.

FIGURE D
EFFECTIVE SPRAY PROFILES OF HV NOZZLES
AS A FUNCTION OF NOZZLE ORIENTATION ANGLE
(ONLY THE RANGEFINDER FOR HV-37 SHOWN
FOR ILLUSTRATIVE PURPOSES)

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.

TECHNICAL DATA

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

Each Rangefinder (Ref. Figure B) is marked with a minimum design pressure of either 30 psi or 50 psi, and each Rangefinder is marked with a 1/4" or 3/8" scale to indicate for use with either 1/4 inch or 3/8 inch equals 1 foot scaled drawings. The Rangefinders are transparent 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 still to be defined.

The "Design Spray Profile" provided by the HV Template 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".

Figure D illustrates the use of the HV-37 Rangefinder Curve with the HV-37 Template. For illustrative purposes, the effective design spray profiles of the HV-37 are shown for nozzle orientation angles of 0°, 45°, 90°, 135° and 180°. The effective range for other orientation angles can be similarly determined.

ORDERING PROCEDURE

HV Templates:

Specify: HV Nozzle Templates and Rangefinders per TD680T.

Order from your local distributor.