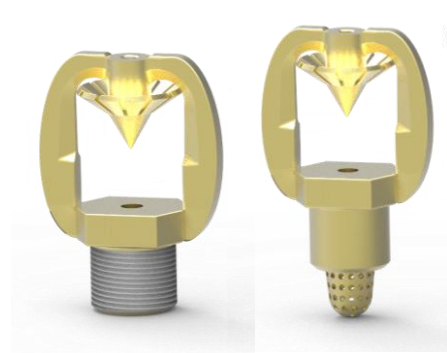


## SPRAY SYSTEM OPEN NOZZLES

Model 15MV

Medium velocity nozzle

MV-1 & MV-1F / MV-2 & MV-2F / MV-3



### PRODUCT DESCRIPTION

The nozzles model MV are designed for use in water spray fixed system for fire protection applications. The nozzles are open (non-automatic). They are available in multiple orifice sizes, spray angles and base materials to meet design application requirements. The nozzle discharge uniformly filled cone of medium velocity water droplets.

Spray nozzles are designed to apply cooling water to exposed vertical, horizontal, curved, and irregular shaped surfaces to allow cooling of objects externally when exposed to an adjacent fire.

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.

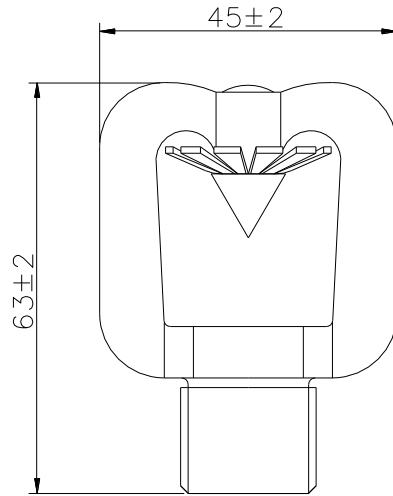
When discharge pressures above this are applied, the coverage area will decrease because the spray pattern tends to draw inward at higher pressures.

Optional blow-off plugs are available for protection from dust and insect infestation and other accumulation of debris. NFPA 15 requires main pipeline strainer for waterways less than 3/8".

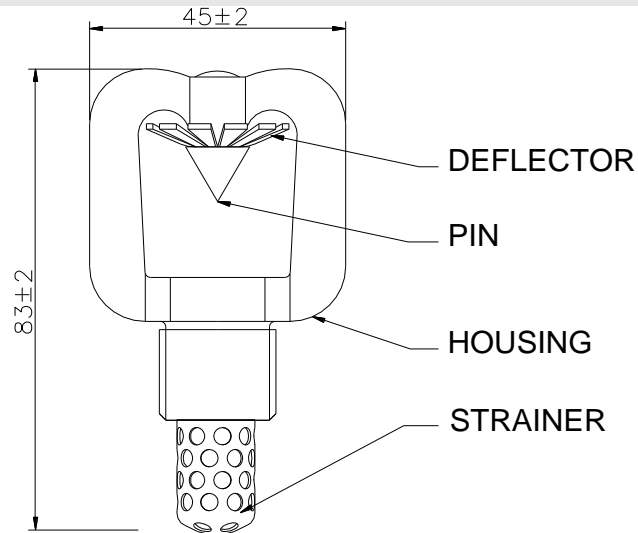
### TECHNICAL DATA

<b>Models</b>	MV-1 & MV-1F: Brass Material MV-2 & MV-2F: Stainless Steel Material MV-3: Aluminum Bronze Material
<b>Type</b>	MV-1, MV-2 & MV-3: Without strainer. MV-1F & MV-2F: With strainer
<b>Maximum Working Pressure</b>	12 bar (175 psi)
<b>Effective Working Pressure</b>	1,4 to 3,5 Kg/Sq.cm (20 to 50 psi)
<b>End Connection</b>	1/2" NPT [1/2" BSPT Optional]
<b>Included Water Spray Angle &amp; K-Factor</b>	65°, 80°, 90°, 100°, 110°, 120° & 140°
<b>K Factor Metric (Us)</b>	<b>MV-1/-2/-3:</b> K 18 (1.26), K 22 (1.54), K 30 (2.11), K 35 (2.46), K 41 (2.88), K 51 (3.58), K 64 (4.05), K 79 (5.55), K 91 (6.40), K 102 (7.17) <b>MV-1F/-2F:</b> K 18 (1.26), K 22 (1.54), K 30 (2.11), K 35 (2.46), K 41 (2.88)
<b>Weight (Approx.)</b>	0,110 Kg
<b>Installation wrench</b>	Model AG-N
<b>Finish</b>	<b>MV-1/-1F:</b> Natural Brass Finish, Chrome Plated Nickel, Electroless Nickel Plated or Epoxy Powder Coated <b>MV-2 / -2F / -3:</b> Natural Finish

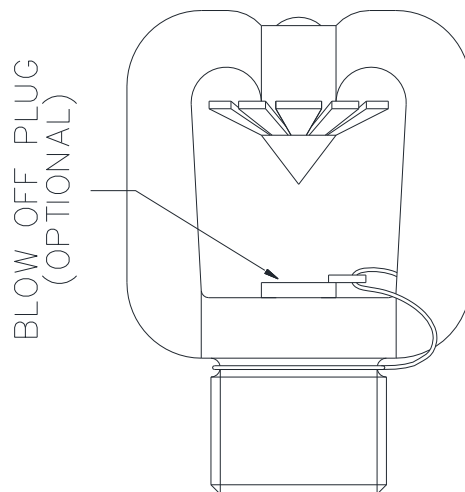
### MODEL MV-1, MV-2 & MV-3



### MODEL MV-1F & MV-2F

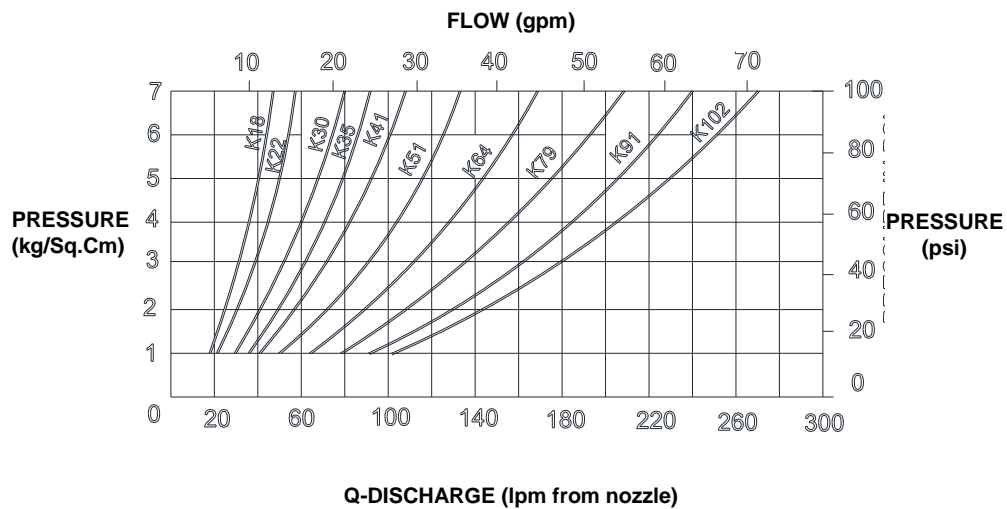


### NOZZLES WITH BLOW-OFF PLUG



MATERIAL OF CONSTRUCTION			
Component	Model MV-1 & MV-1F	Model MV-2 & MV-2F	Model MV-3
Housing	Brass	A351-CF8M	Aluminium Bronze
Pin	Brass	ASTM-A479 Gr 31803	Ph. Bronze
Deflector	Brass	ASTM A240 Gr 2205	Ph. Bronze
Strainer	Copper (For 15MV-1FUF)	Stainless Steel (For 15MV-2FUF)	-
Blow-Off Cap	Elastomer	Elastomer	Elastomer

## DISCHARGE CHARACTERISTICS



$Q = K \cdot \sqrt{P}$  Where:

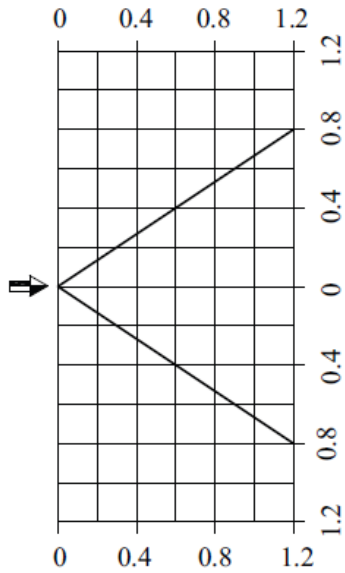
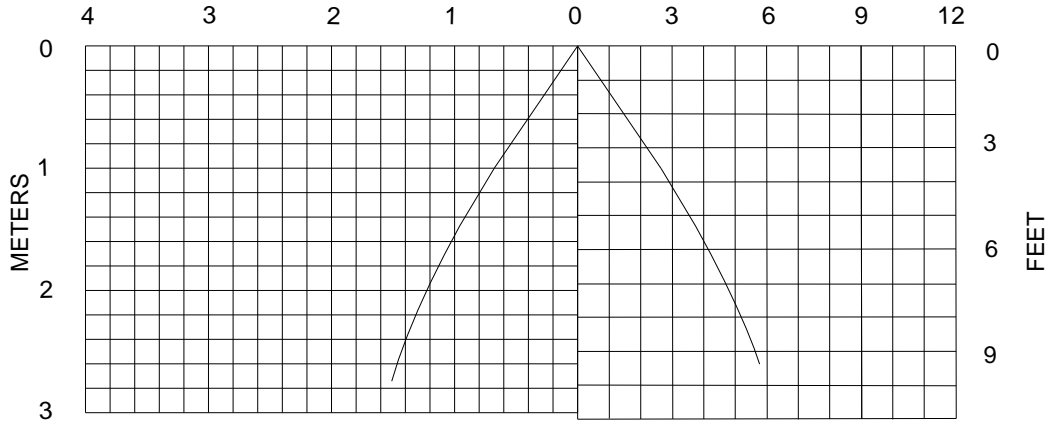
P is supply pressure in Kg/sq.Cm.

K = nozzle constant (K-factor) in metric.

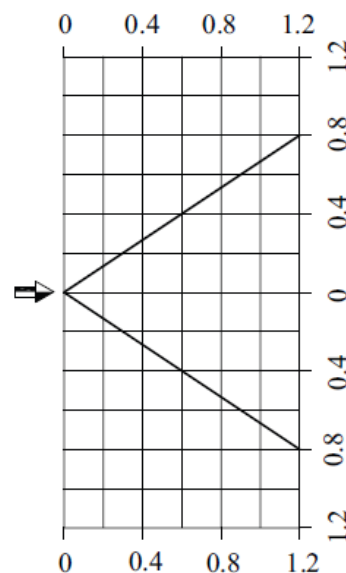
US K factor = Metric K factor / 14.2745

### SPRAY PATTERN

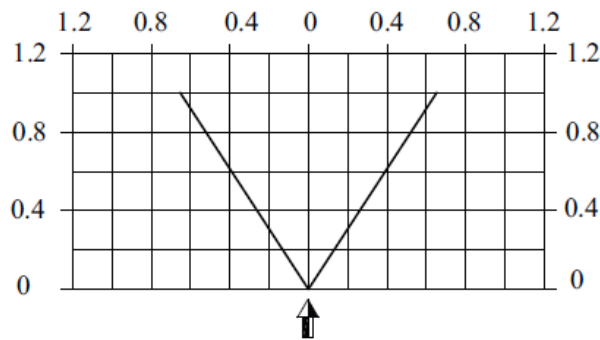
#### SPRAY ANGLE 65°



HORIZONTAL SPRAY  
TOP VIEW

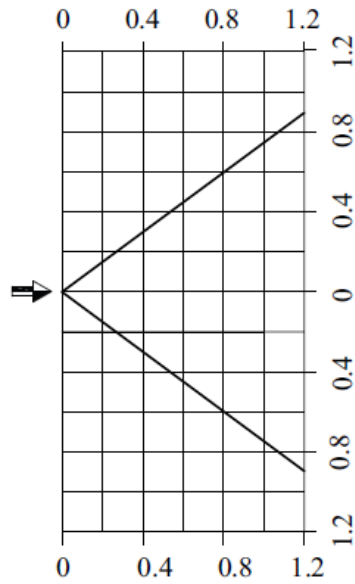
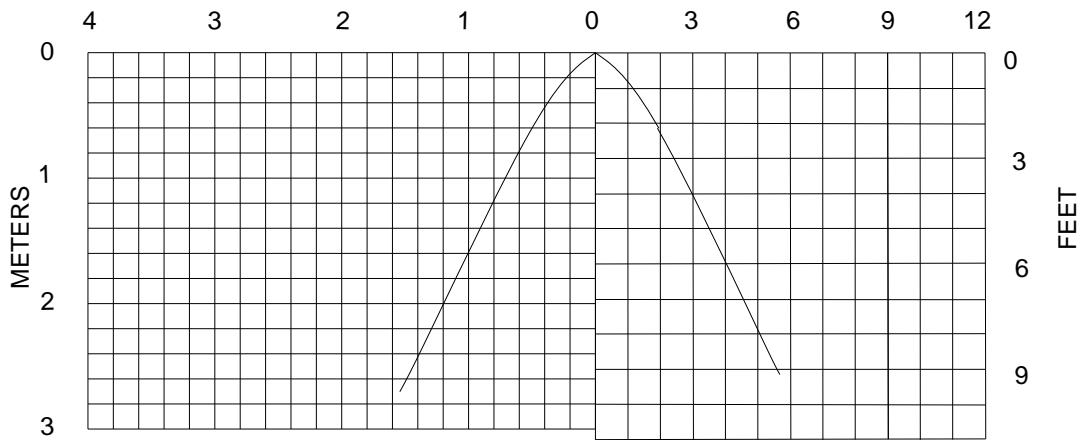


HORIZONTAL SPRAY  
SIDE VIEW

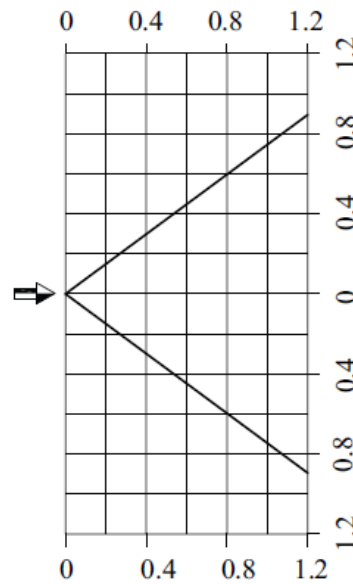


VERTICAL UPWARD SPRAY  
SIDE VIEW

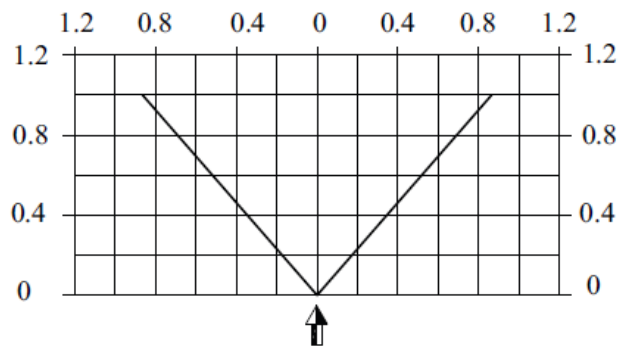
### SPRAY ANGLE 80°



HORIZONTAL SPRAY  
TOP VIEW

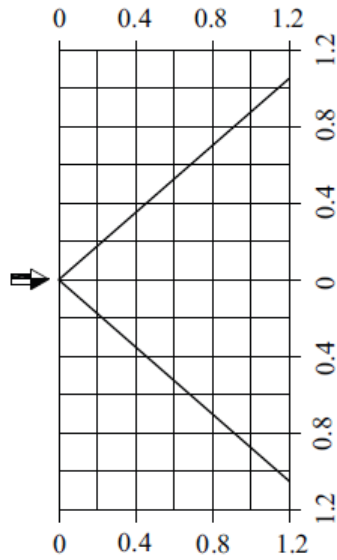
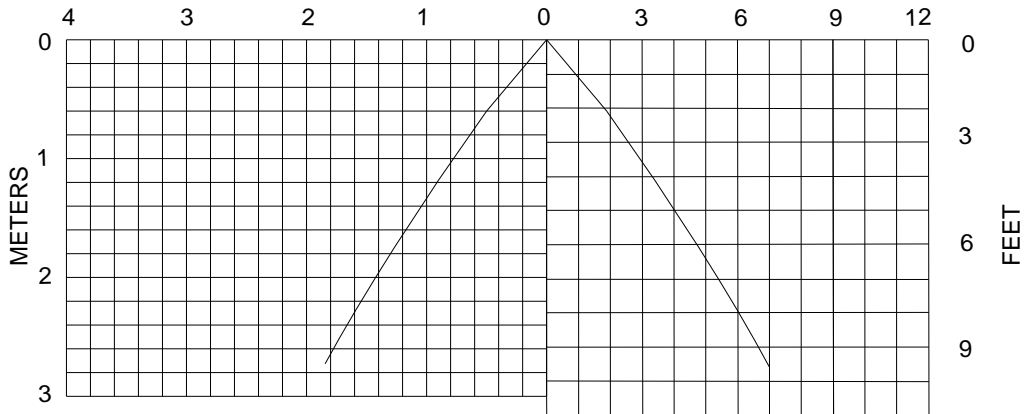


HORIZONTAL SPRAY  
SIDE VIEW

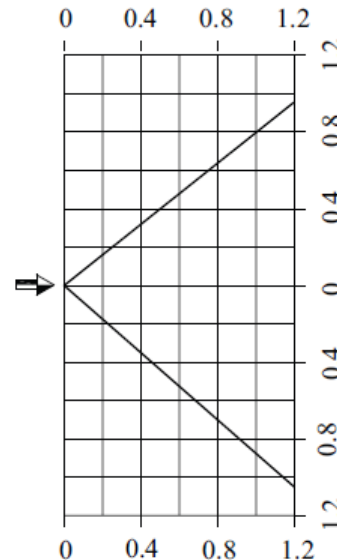


VERTICAL UPWARD SPRAY  
SIDE VIEW

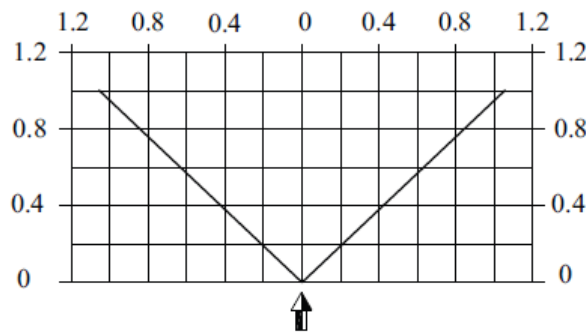
### SPRAY ANGLE 90°



HORIZONTAL SPRAY  
TOP VIEW

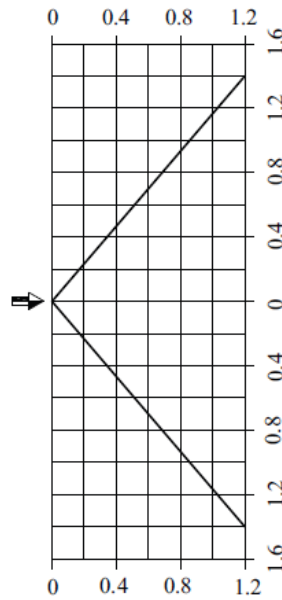
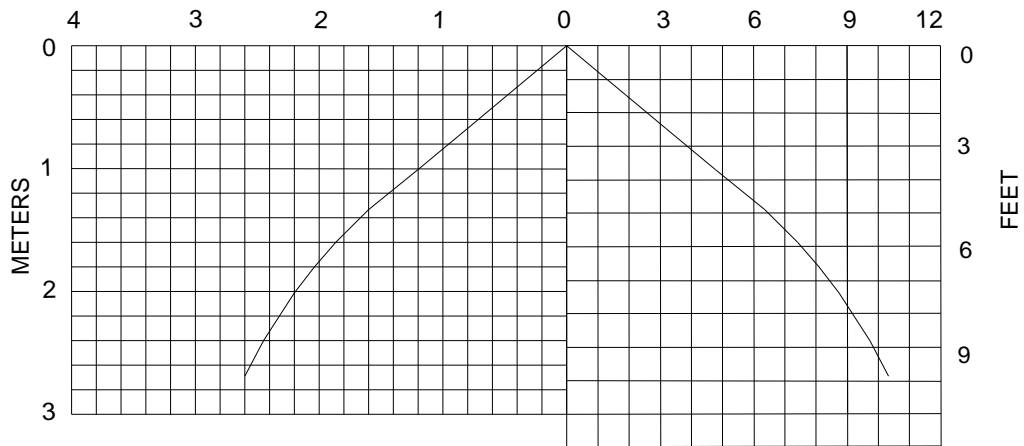


HORIZONTAL SPRAY  
SIDE VIEW

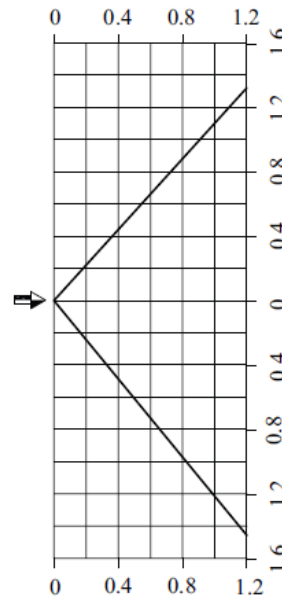


VERTICAL UPWARD SPRAY  
SIDE VIEW

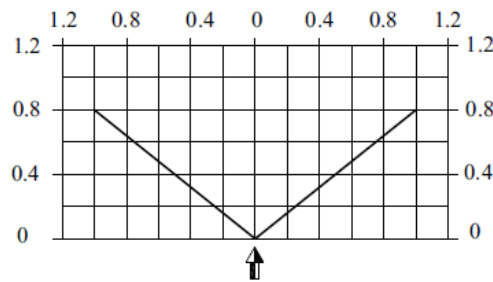
## SPRAY ANGLE 100°



HORIZONTAL SPRAY  
TOP VIEW

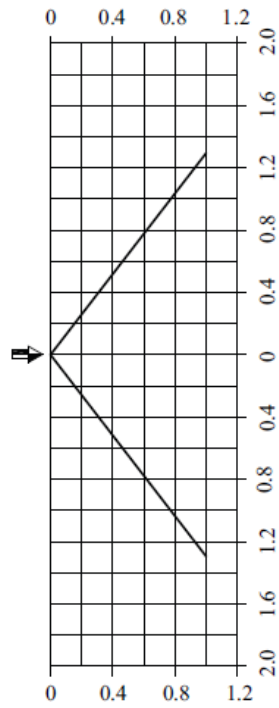
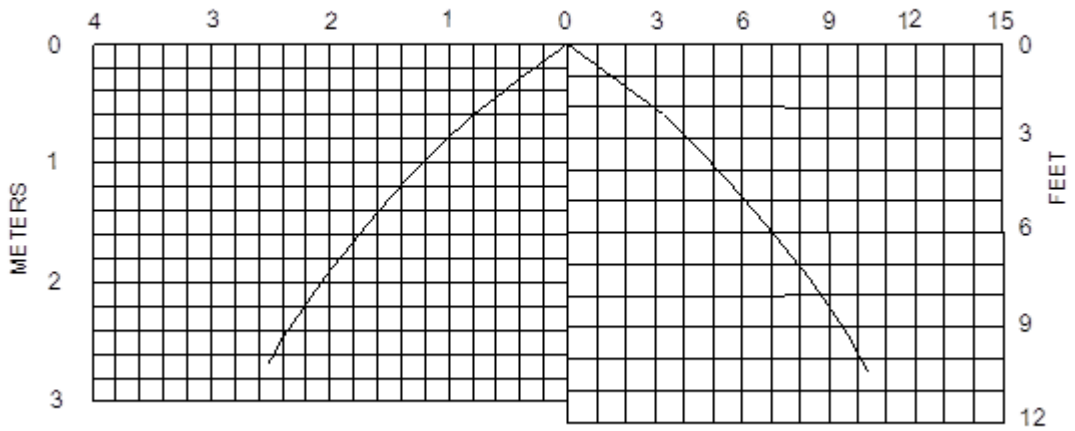


HORIZONTAL SPRAY  
SIDE VIEW

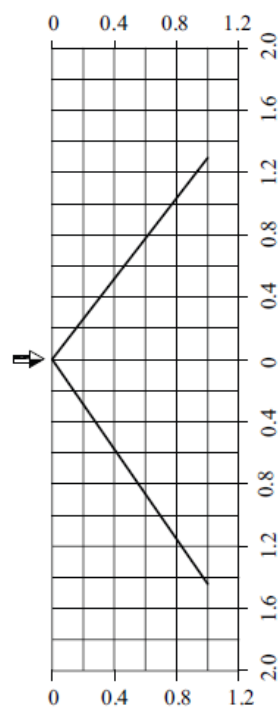


VERTICAL UPWARD SPRAY  
SIDE VIEW

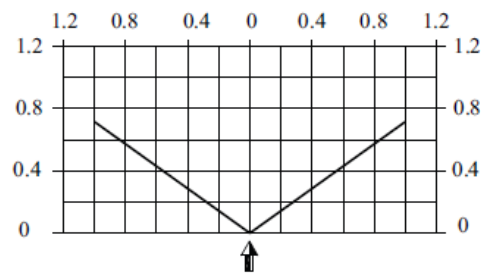
SPRAY ANGLE 110°



HORIZONTAL SPRAY  
TOP VIEW

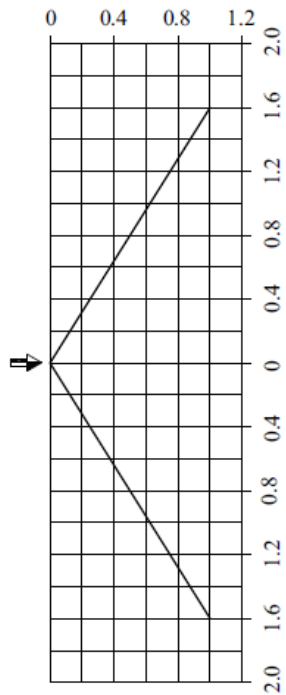
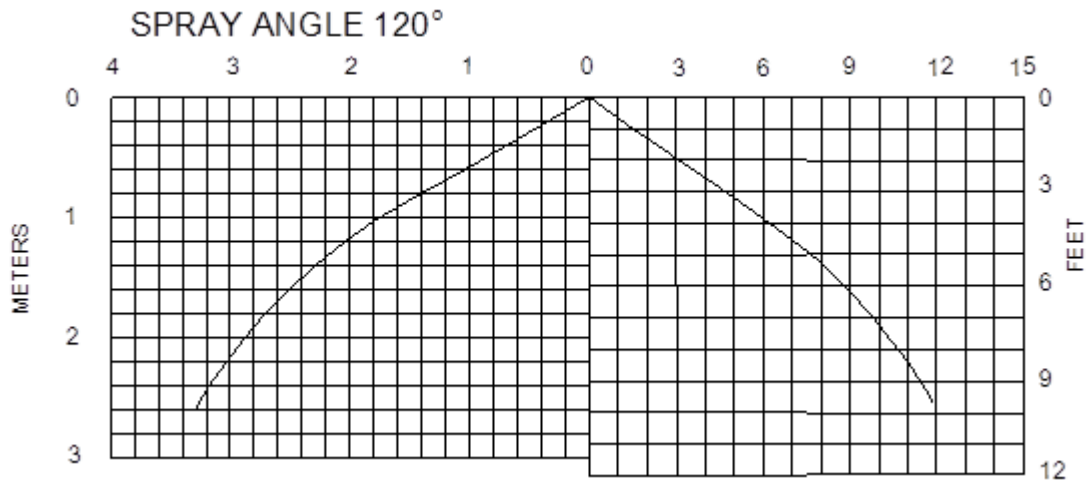


HORIZONTAL SPRAY  
SIDE VIEW

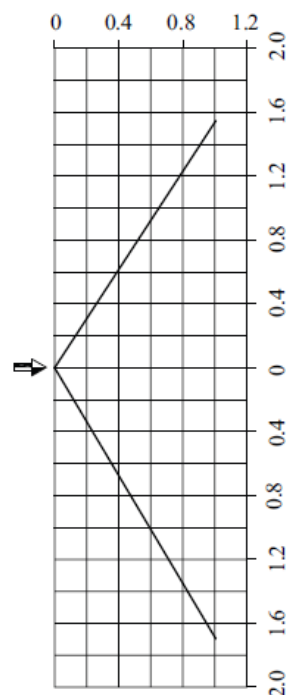


VERTICAL UPWARD SPRAY  
SIDE VIEW

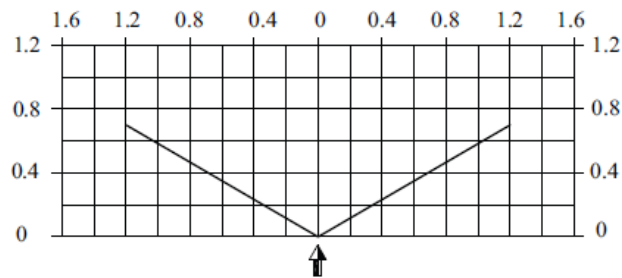




HORIZONTAL SPRAY  
TOP VIEW

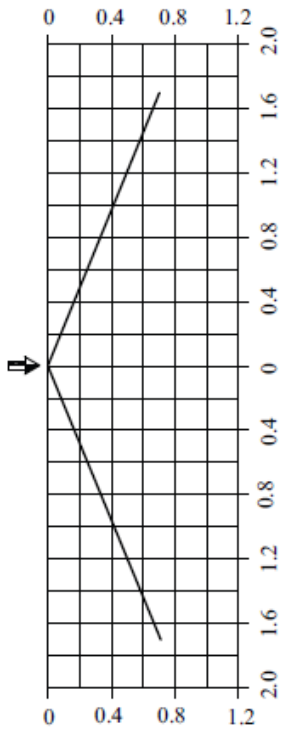
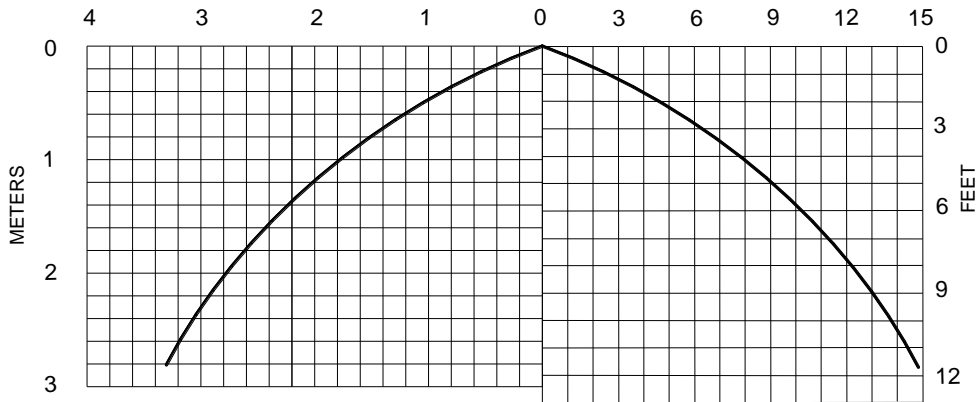


HORIZONTAL SPRAY  
SIDE VIEW

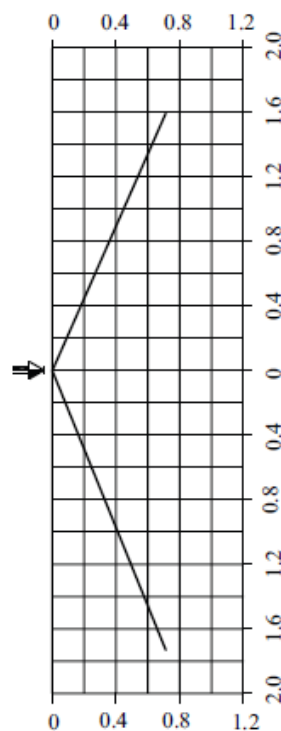


VERTICAL UPWARD SPRAY  
SIDE VIEW

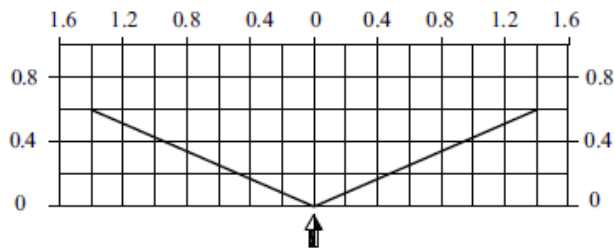
### SPRAY ANGLE 140°



HORIZONTAL SPRAY  
TOP VIEW



HORIZONTAL SPRAY  
SIDE VIEW



VERTICAL UPWARD SPRAY

## INSTALLATION AND MAINTENANCE

The spray nozzle must be handled with due care. For best results, the storage as well as any further shipment be made in original packing only.

Nozzle which is visibly damaged should not be installed. Use Teflon tape or soft thread sealant on male thread of the nozzle.

The nozzles must be hand tightened into the fitting. After hand tightening use Nozzle Wrench model AG-N for wrench tightening in to nozzle fittings. Excessive tightening torque may result into serious damage to nozzle arms and the deflector, which may affect spray pattern of the nozzle and its performance.

It is recommended that water spray system be inspected regularly by authorised technical personnel.

The nozzle must be checked for atmospheric effects, external and internal obstruction, blockage if any. The system must be operated with optimum water flow at least twice in a year or as per the provisions of NFPA /TAC or local authority having jurisdiction.

The owner is solely responsible for maintaining the water spray system and the components there in so that it performs properly when required.

**Note:** Apply pipe sealant to threads and hand tighten. Tighten the nozzle into the nozzle fitting using (only) the AG-N nozzle wrench.

## ORDERING INFORMATION

	ANGLE	K FACTOR	MATERIAL		
			BRASS	STAINLESS STEEL	ALUMINIUM - BRONZE
WITHOUT STRAINER	65°	K18 (1.26) K22 (1.54) K30 (2.1)	MV115065#	MV215065#	MV315065#
	80°	K35 (2.45) K41 (2.87) K51 (3.57)	MV115080#	MV215080#	MV315080#
	90°	K64 (4.48) K79 (5.53) K91 (6.37)	MV115090#	MV215090#	MV315090#
	100°	K102 (7.14)	MV115100#	MV215100#	MV315100#
	110°		MV115110#	MV215110#	MV315110#
	120°		MV115120#	MV215120#	MV315120#
	140°		MV115140#	MV215140#	MV315140#
WITH STRAINER	65°	K18 (1.26) K22 (1.54) K30 (2.1) K35 (2.45) K41 (2.87)	MV115065#F	MV215065#F	MV315065#F
	80°		MV115080#F	MV215080#F	MV315080#F
	90°		MV115090#F	MV215090#F	MV315090#F
	100°		MV115100#F	MV215100#F	MV315100#F
	110°		MV115110#F	MV215110#F	MV315110#F
	120°		MV115120#F	MV215120#F	MV315120#F
	140°		MV115140#F	MV215140#F	MV315140#F
PLUG FOR MEDIUM VELOCITY NOZZLES					MVTAPON
WRENCH FOR MEDIUM VELOCITY NOZZLES					MVLLAVE

\*Substitute the # for the K factor desired.

Specify:

Model	
Quantity	
K-factor	
Spray angle	
Finish	
AG-N nozzle wrench	
Blow-off plugs	

## AG FIRE SPRINKLER

AG Fire Sprinkler offers a wide selection of components. Then a list of products is presented by AG Fire Sprinkler, we can offer all these components, made with precision to protect people, anywhere, anytime.

- Sprinklers
  - Standard Coverage
  - Extended Coverage
  - Storage
  - Dry
  - Accessories
- System Valves
  - Wet
  - Dry
  - Preaction Equipment
  - Accessories
- Spray System Open Nozzles
  - High Velocity Nozzles
  - Medium Velocity Nozzles
  - Window Nozzles
  - Hydrosshield Nozzles
  - Mushroom Type Nozzles
- Foam equipment
  - Tanks
  - Proportioners
  - Foam Discharge Equipment
  - Foam Concentrates
- Deluge equipment for Water Spray and Foam
  - Clapper Deluge Valves
  - Diaphragm Deluge Valves
- Monitors
  - Manual Monitors
  - Remote Monitors
  - Monitor Nozzles
  - Towers and Trolleys
- Valves
  - Butterfly Valves
  - Gate Valves
  - Check Valves
  - Pressure Control Valves
  - Test and Drain
  - Hose, Hydrant and Fire Connection Valves
  - Fire Department Connections

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The equipment presented in this bulletin is to be installed in accordance with the latest published Standard of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.  
This documentation is not contractual. AG Fire Sprinkler reserves the right to any kind of change without notice.

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