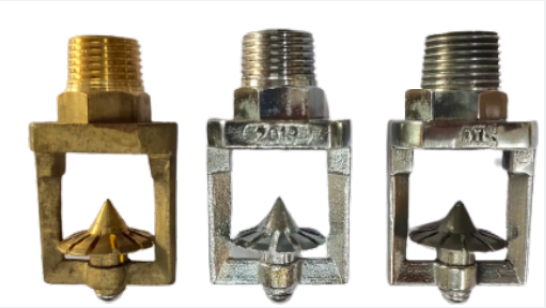
UL LISTED MEDIUM VELOCITY WATER SPRAY NOZZLE

Models MVN-B (brass) and MVN-S (stainless steel 316)

TECHNICAL DATA

MODEL	MVN-B (Brass Material) MVN-S (Stainless Steel 316 Material)
TYPE	MVN-B & MVN-S are without strainer. Optional strainers are available on request.
MAX. WORKING PRESSURE	12 Bar (175 PSI)
END CONNECTION	1/2" NPT (1/2" BSPT optional)
MATERIAL	Refer Table-I in original certification documentation.
WATER SPRAY ANGLE	140 deg, 120 deg (UL Listed), 160 deg, 110 deg, 100 deg, 90 deg, 80 deg & 65 deg
K FACTOR	MVN-B & MVN-S - Metric (US): K-18 (1.26), K-22 (1.54), K-30 (2.10), K-35 (2.45), K-41 (2.87), K-51 (3.57), K-64 (4.48), K-79 (5.53), K-102 (7.14). Other K-Factors are available on request.
FINISH	MVN-B: Natural Brass finish / Nickel-Chrome plated / Electroless Nickel plated. MVN-S: Natural finish.
APPROVALS	UL Listed. For approval data refer UL Listing certificate.
ORDERING INFORMATION	Specify K-Factor, spray angle, finish, model and end connection.



OPEN TYPE - DIRECTIONAL SPRAY

Fixed fire protection / deluge water spray applications

DESCRIPTION

The Spraybest Medium Velocity Water Spray Nozzles are open type (non-automatic) nozzles, designed for directional spray application in fixed fire protection system.

Medium velocity water spray nozzle has a deflector, which discharges water in a directional cone shaped pattern of small droplet size. The water is uniformly distributed over the surface to be protected.

MVWS Nozzles are effectively designed to apply water to exposed vertical, horizontal, curved and irregular shaped surfaces to allow cooling to prevent excessive absorption of heat from external fire and avoid structural damage or spread of fire. In some application nozzles may be installed to control or extinguish the fire depending on water design density as per applicable codes. The nozzle is used in deluge water spray system for special hazard fire protection application.

As the design and intent of specific water spray system may vary considerably, MV nozzle is made available in several combinations of orifice sizes (K-factors) and spray angles.

The minimum desirable pressure to achieve a reasonable spray pattern is 1.4 Kg./Sq.cm. The water distribution pattern as shown in the graphs on the following pages is at an average pressure of 2.0 Kg/Sq.cm. The change in pressure between 1.4 to 3.5 Kg./sq.cm. does not affect considerable change in spray angle.

The spray pattern shown is with indoor application. System designer must consider wind velocity while designing the system for outdoor application. Field obstruction if any affecting the spray pattern of the nozzle must also be considered. The nozzle may be oriented to any position as deemed necessary to cover the hazard.

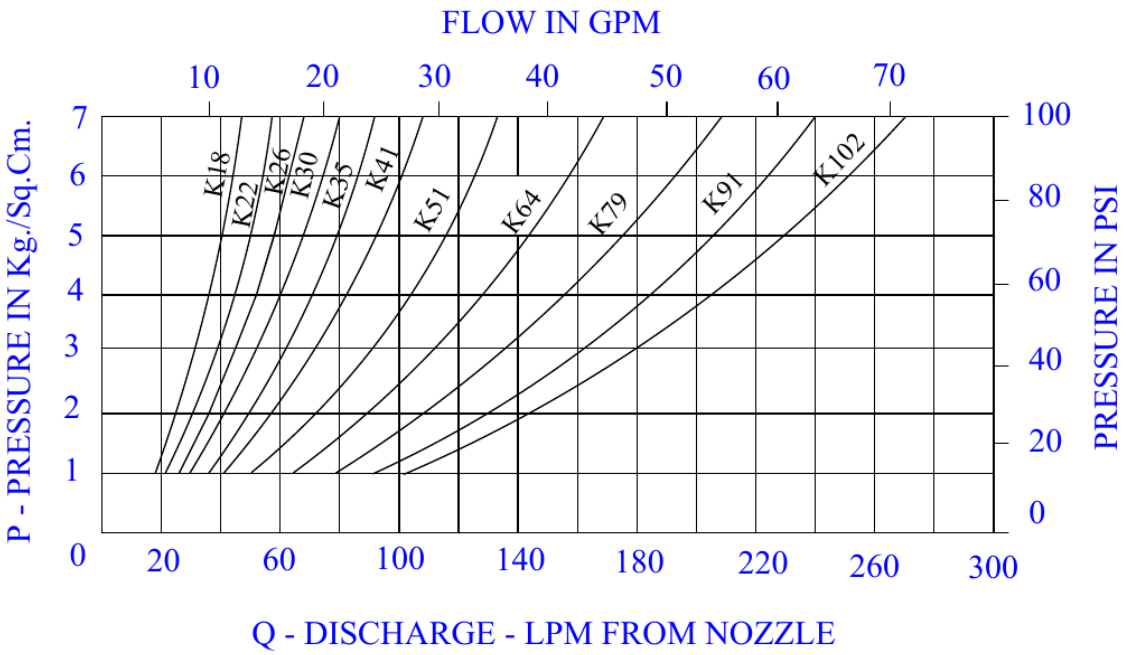
DESIGN NOTE

System designer must consider the applicable codes, authority having jurisdiction, water quality and wind/obstruction effects.

MVN-B / MVN-S MEDIUM VELOCITY WATER SPRAY NOZZLE

Discharge characteristics & 65 deg spray pattern

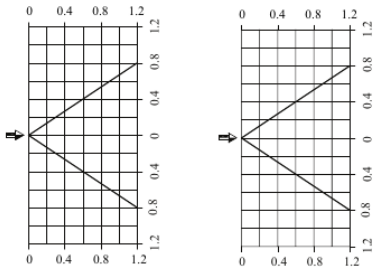
DISCHARGE CHARACTERISTICS

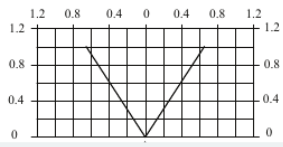


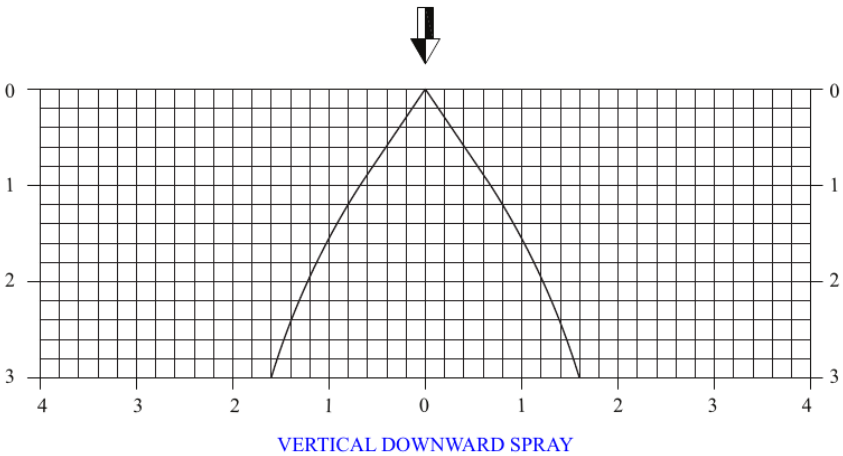
Q =K √ P where P is supply pressure in Kg/sq.cm., K= nozzle constant (K-factor) in metric
US K factor = Metric K factor MK ÷ 14.2745

SPRAY PATTERN

SPRAY ANGLE 65°







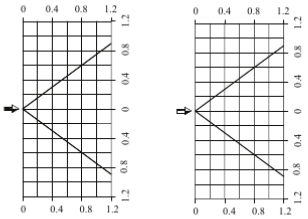
Discharge relation: Q = K x sqrt(P), where P is supply pressure in kg/cm2 and K is the metric nozzle constant.
US K-factor = Metric K-factor / 14.2745. All dimensions shown in spray pattern diagrams are in meters.

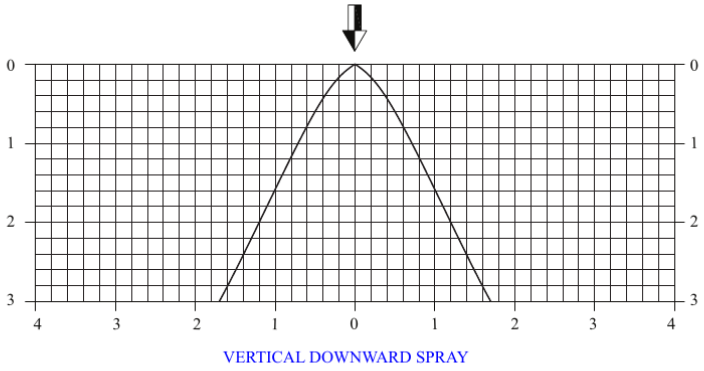
MVN-B / MVN-S MEDIUM VELOCITY WATER SPRAY NOZZLE

Spray patterns - 80 deg / 90 deg / 100 deg

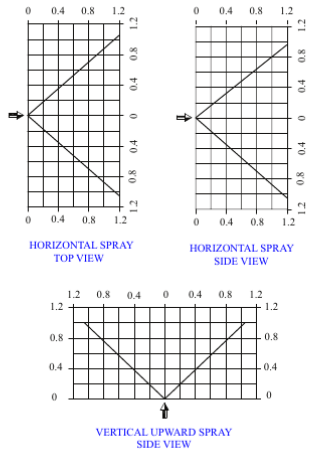
SPRAY PATTERN

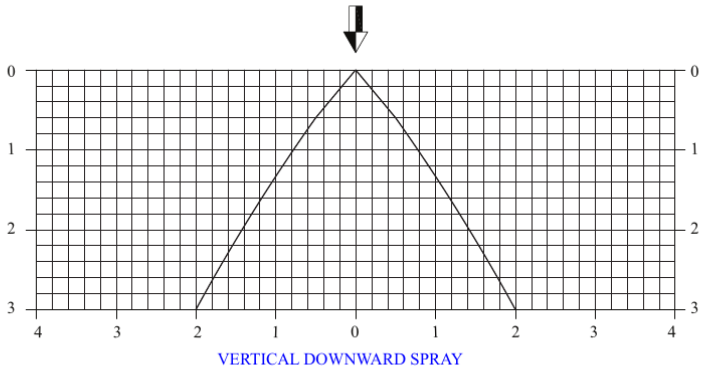
SPRAY ANGLE 80°



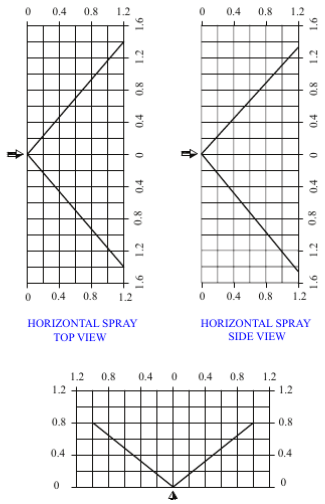


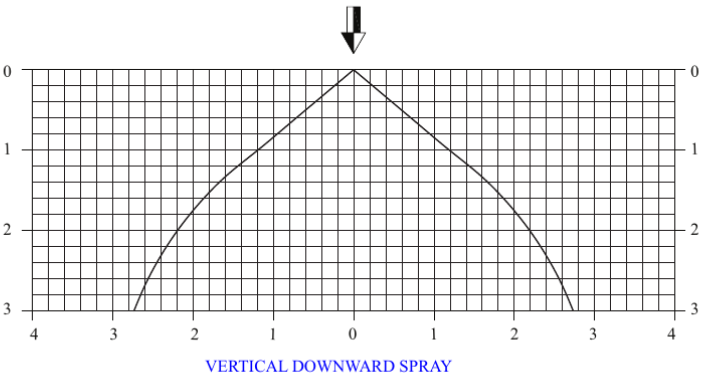
SPRAY ANGLE 90°





SPRAY ANGLE 100°



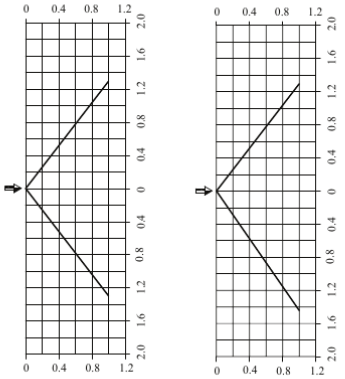


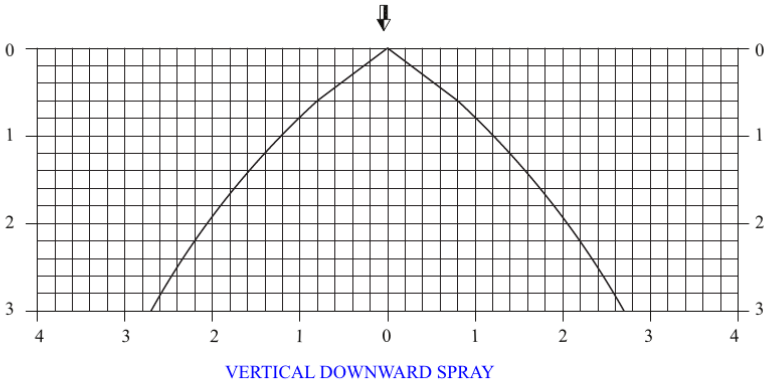
MVN-B / MVN-S MEDIUM VELOCITY WATER SPRAY NOZZLE

Spray patterns - 110 deg / 120 deg

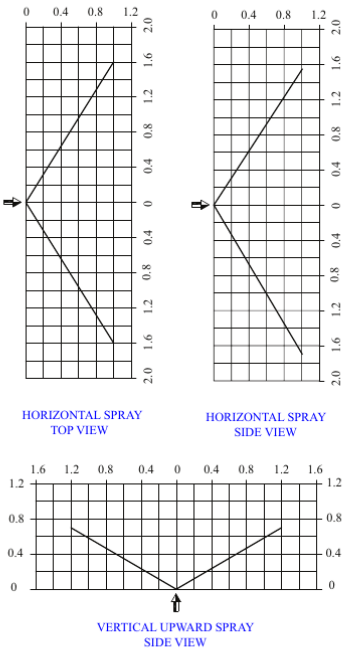
SPRAY PATTERN

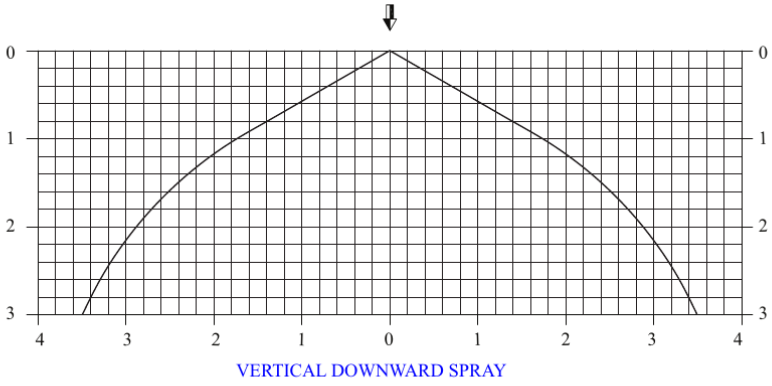
SPRAY ANGLE 110°





SPRAY ANGLE 120°





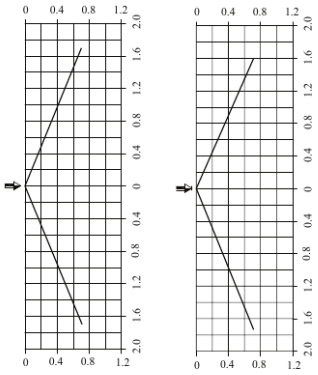
ALL DIMENSIONS ARE IN METERS

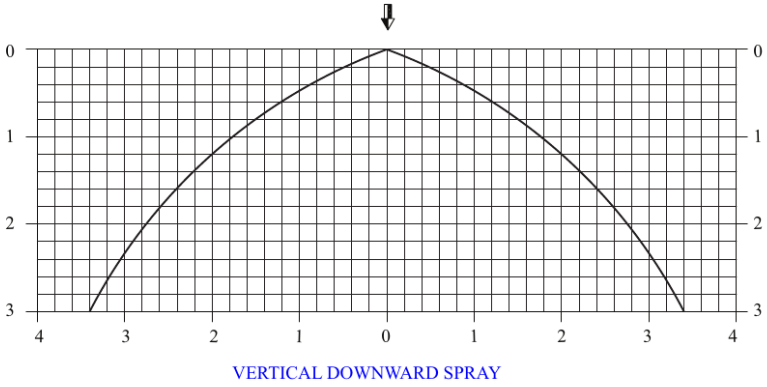
MVN-B / MVN-S MEDIUM VELOCITY WATER SPRAY NOZZLE

Spray patterns - 140 deg / 160 deg

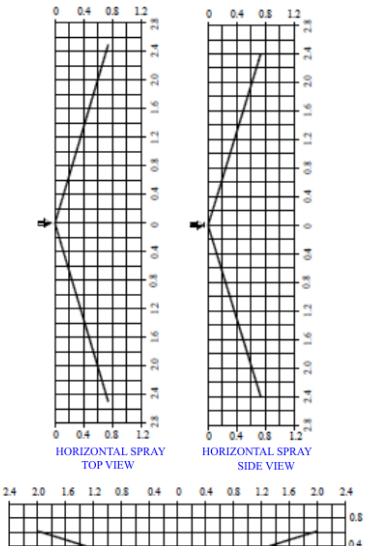
SPRAY PATTERN

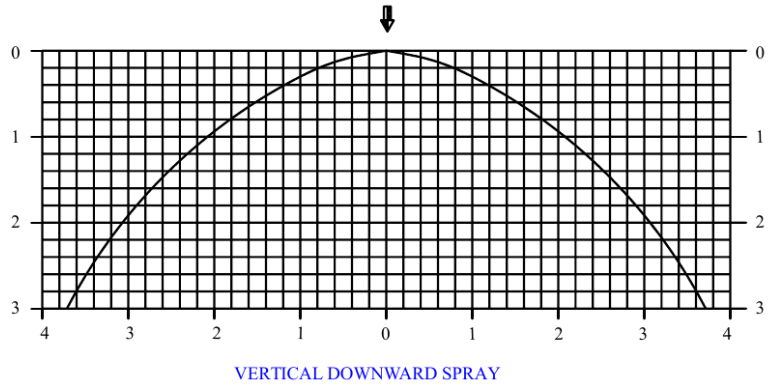
SPRAY ANGLE 140°





SPRAY ANGLE 160°





NOTE

1) The design spray patterns given in graphs include spray angles from 65 deg to 160 deg at nozzle inlet pressure of 1.4 to 4.1 Bar. When nozzle pressure above 4.1 Bar is applied, the coverage area will decrease because the spray pattern tends to draw inward at higher pressure. Consult Spraybest for pressure up to 12.1 Bar.

2) The spray data are obtained from tests in still air.