

# Shield - High Velocity Water Spray Nozzle

**Model** : SDHV-A Without strainer  
: SDHV-AS with strainer

## TECHNICAL DATA:

RATED WORKING PRESSURE : 12.3 Kg./Sq.Cm. (175 PSI)

MAXIMUM EFFECTIVE WORKING PRESSURE : 3.5 TO 10.5 Kg./Sq.Cm. (50 to 150 PSI)

END CONNECTION : 3/4" BSPT  
(3/4" NPT OPTIONAL)

MATERIAL : Housing & Scroll-Brass IS : 291

INCLUDED WATER SPRAY ANGLE AND K-FACTOR	SPRAY ANGLE METRIC (US)	K-FACTOR
	75°	22 (1.54)
	80°	18 (1.26)
	90°	32 (2.24)
	100°	26 (1.82)

WEIGHT : 0.170 Kg. (approximately)

FINISH : Brass Finish Nickel Chrome Plated (optional)

APPROVALS : UL Listed and TAC approved

ORDERING INFORMATION : Specify K-Factor; spray angle and finish.



## MAINTENANCE

The spray nozzle must be handled with due care. For best results, the nozzle should be stored in the original packing in which it has been shipped. It is advised to ship the nozzle in the same package in future transit. Nozzle which is visibly damaged should not be installed. Use Teflon tape or soft thread sealant on the male thread of the nozzle. It is recommended that the water spray system be inspected by an authorised technical personnel. The nozzle must be checked for corrosion, external and internal obstruction, blockage if any. The nozzle should be cleared or replaced if required. The system must be operated with optimum water flow at least three times in a year or as per the provision of NFPA/TAC or local authority having jurisdiction. The owner is solely responsible for maintaining the waterspray system and components therein, so that it performs properly in actual condition.

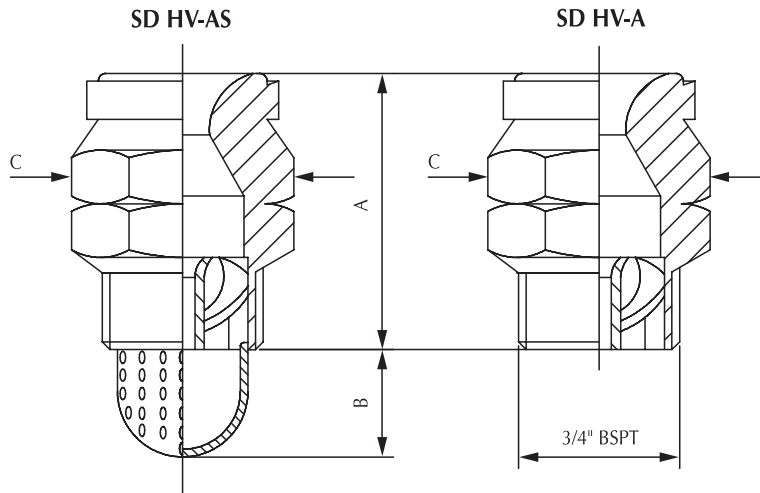
Shield High Velocity Water Spray Nozzles are internal swirl plate type open nozzles designed for use in fixed water spray or deluge system for the fire protection application.

These nozzles produce solid, uniform and dense core of high velocity water spray to effect fire control. Nozzles are normally used to cool the surface as well as for extinguishment. Nozzles are typically used for Deluge protection of special hazards such as oil filled transformers, switch-gear, chemical process equipments, conveyor system and flammable liquid storage areas..

The minimum desirable pressure to achieve a reasonable spray pattern is 3.5 Kg./sq.cm. (50psi). The water distribution pattern as shown in the graph in following pages giving maximum effective axial distance from the nozzle. The spray pattern shown is with indoor application. The system designer must consider wind velocity while designing the system for out door application. Field obstruction if any affecting the spray pattern of the nozzle must be considered. The nozzle may be oriented in any position which is deemed necessary to cover the hazard.



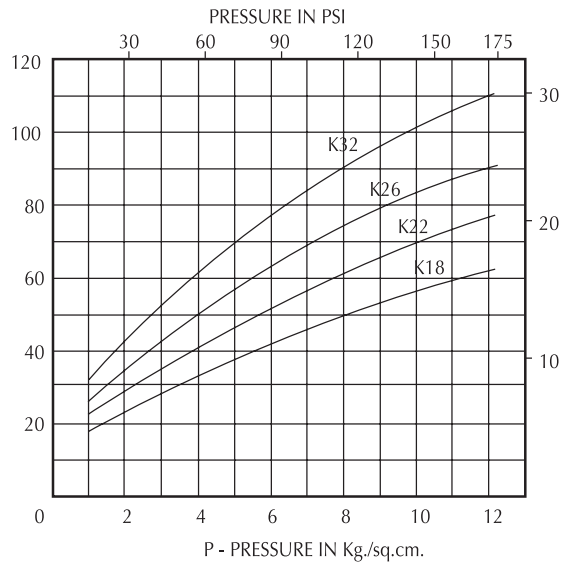
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## DIMENSION In millimetres ( Approximate )

NOZZLE FACTOR & SPRAY ANGLE	A	B	C (A/F)
K 22 x 75	49	21	30
K 18 x 80	44	21	30
K 32 x 90	49	21	30
K 26 x 100	55	21	30

## DISCHARGE CHARACTERISTICS



$\sqrt{Q} = K \sqrt{P}$ , where P is supply pressure in Kg./sq.cm., K-is nozzle constant in Metric  
 US K Factor = Metric K Factor : - 14.2745

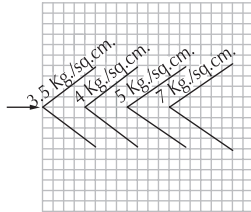


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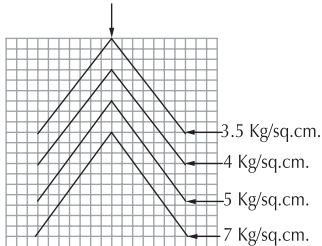
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## SPRAY PATTREN

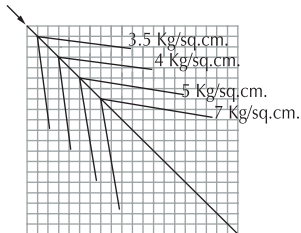
### K22 X 75



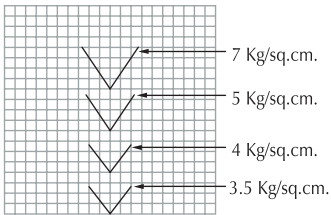
SPRAY HORIZONTAL



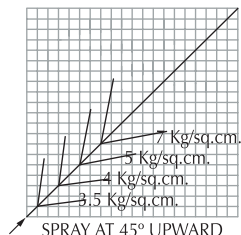
SPRAY VERTICALLY DOWNWARD



SPRAY AT 45° DOWNWARD

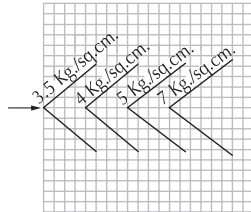


SPRAY VERTICALLY DOWNWARD

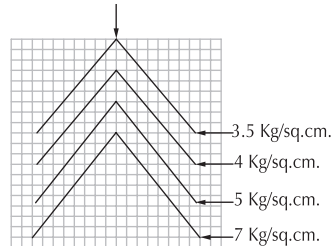


SPRAY AT 45° UPWARD

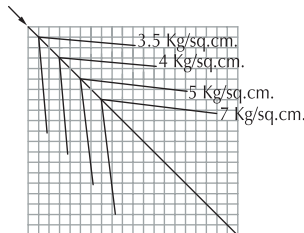
### K18 X 80



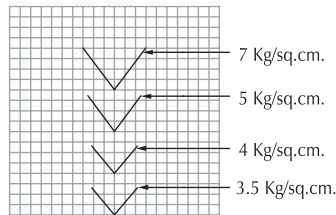
SPRAY HORIZONTAL



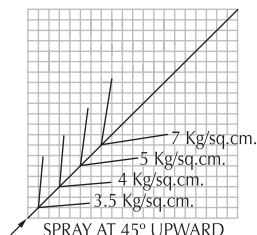
SPRAY VERTICALLY DOWNWARD



SPRAY AT 45° DOWNWARD

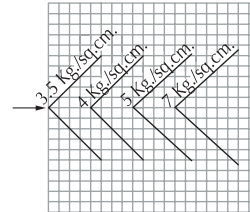


SPRAY VERTICALLY DOWNWARD

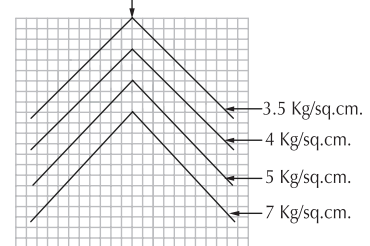


SPRAY AT 45° UPWARD

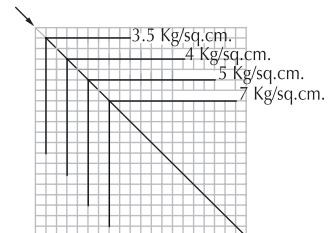
### K32 X 90



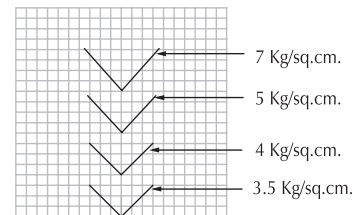
SPRAY HORIZONTAL



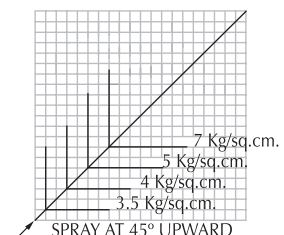
SPRAY VERTICALLY DOWNWARD



SPRAY AT 45° DOWNWARD



SPRAY VERTICALLY DOWNWARD



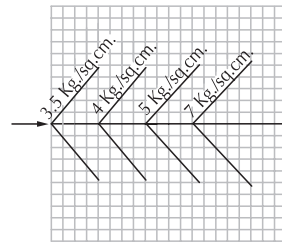
SPRAY AT 45° UPWARD



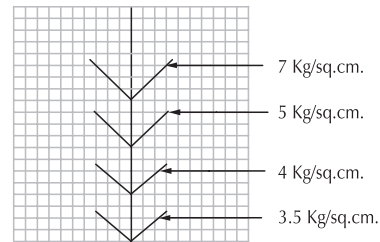
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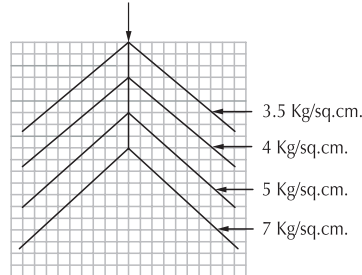
## K26 X 100



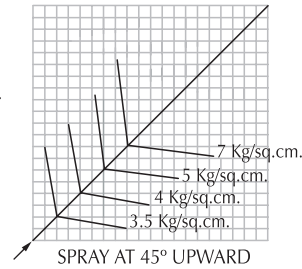
SPRAY HORIZONTAL



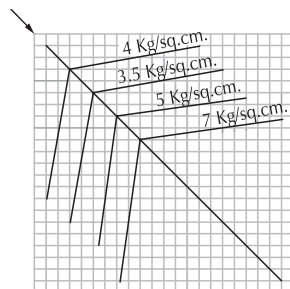
SPRAY VERTICALLY UPWARD



SPRAY VERTICALLY DOWNWARD



SPRAY AT 45° UPWARD



SPRAY AT 45° DOWNWARD

Note : One square is 200 X 200mm.

The equipment presented in this bulletin is to be installed in accordance with the latest publication standards of NFPA, TAC or other similar organisations and also with the provision of government codes or ordinances wherever applicable.

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