



Data Sheet 11.12

Issue A



High Velocity Water Spray Nozzle Model (HV-H & HV-HB)

Product Description

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, diesel engines, flammable liquid storage areas and similar hazards. The minimum desirable pressure to achieve a reasonable spray pattern is 2.1 Bar (30 psi).

The water distribution pattern is 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 outdoor application.

The spray pattern is drawn considering maximum of 0.6m/s. Field obstruction if any affecting the spray pattern of the nozzle must be considered. The nozzle may be oriented in any position as deemed necessary to cover the hazard.

Recommended Pressure

2.1 bar to 7 bar pressure at Nozzle is recommended or effective application requiring high velocity water delivery for rapid extinguishment of all fires by emulsification.

The Nozzles incorporate an inbuilt Strainer, but still main pipeline strainer is required in the system. The Blow-off cap can be used to prevent the depositing of foreign material in the water way of the nozzle.

The use of Blow-off cap is optional and not UL listed.

Technical Data

Maximum Working Pressure

- 12 Bar (175Psi)

Weight

- HV-HB Brass - 250g
- HV - H Stainless Steel - 220g

Finish

- HV-HB - Brass, Nickel Chrome Plated (optional)
- HV-H - Natural

End Connection

- 1" BSPT
- 1" NPT (Optional)



Spray Angle

	Spray Angle	K- Factor
Included water Spray Angle And K-Factor	100°	48
	100°	58
	75°	61
	90°	78

Material

Material		
Part	HV-HB	HV-H
Body	Brass IS291 equivalent to B21	ASTM A351 CF8M
Swirl Plate	Brass IS291 equivalent to B21	Stainless Steel 316
Strainer	Copper	Stainless Steel 316



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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.

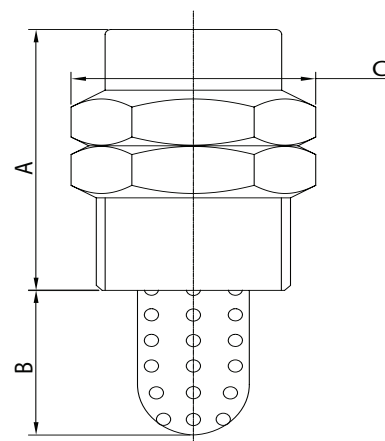
Use Teflon tape or soft thread sealant on the male thread of the nozzle. It is recommended that the water spray system be inspected by an authorised technical personnel.

The nozzle must be checked for corrosion, external and internal obstruction, blockage if any. The nozzle should be cleaned 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.

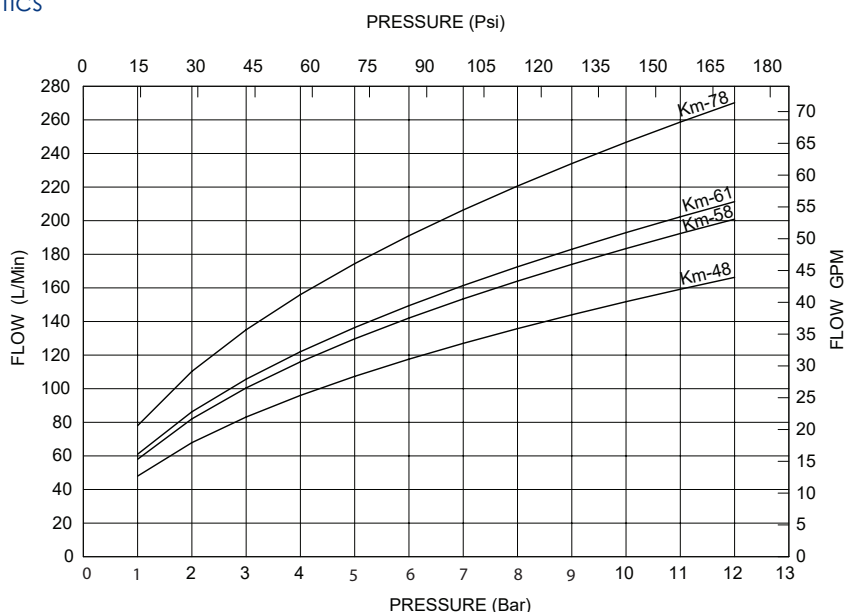
The owner is solely responsible for maintaining the water spray system and components therein, so that it performs properly when required.

Dimension

Nozzle Factor and Spray Angle	A	B	C (A/F)
48x100 °	52	29	36
58x100 °	52	29	36
61x75 °	52	29	36
78x90 °	52	29	36

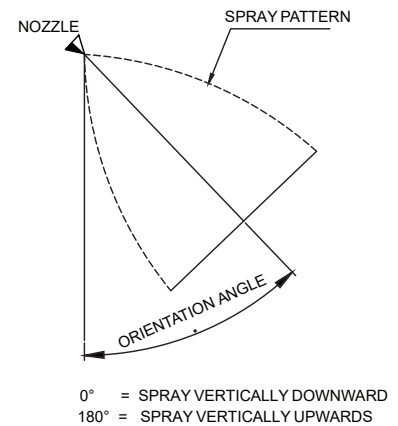
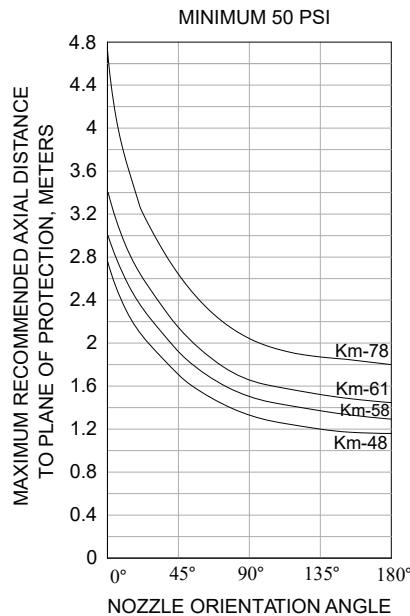
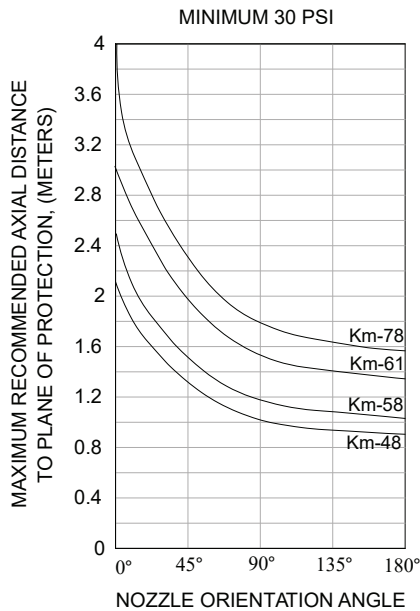


Discharge Characteristics



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Maximum Recommended Axial Distance vs
Nozzle Orientation



Spray Patterns

