

# HYDRO FOAM NOZZLE FOR MONITOR

MODEL - VARSHA-HF40



## TECHNICAL DATA

NOZZLE FLOW RANGE	As per Table-I
WATER INLET CONNECTION	Swivel female 3" BSP
FOAM CONCENTRATE CONNECTION	Female 1 1/4 BSP INLET
INDUCTION	3%
PICK UP TUBE	3.0 mtrs. long clear PVC with SS dip tube
MATERIAL OF CONSTRUCTION	Hard Anodized Aluminium/ Bronze / Stainless Steel
MAXIMUM WORKING PRESSURE	12 bar (175 PSI)
JET & SPRAY PATTERN	With Spinning teeth 100 degree angle
WEIGHT (Approx)	Aluminium material - 5.7Kg Bronze material - 12.7Kg Stainless steel - 12.2Kg

## APPLICATION

VARSHA HF40 – Hydro Foam Nozzles have been designed for wide flow range from 1900 to 2850 LPM (500 to 750 US GPM) for use with Monitors.

These are fixed flow nozzles, simple and rugged with superior stream and reach. The straight stream from maximum reach can be easily changed to wide fog pattern under flow condition by rotation of the pattern adjustment sleeve. The nozzle is provided with spinning teeth.

The nozzle is made out of hard coat anodized Aluminium, Bronze or Stainless Steel with SS internals. It is a self inducing nozzle equipped with a foam concentrate pick up tube of 3.0 meters long with a swivel connection.

The nozzle can be used as a water nozzle and when foam supply is established, it acts as a self inducing Foam Nozzle. The performance data shows effective stream trajectory in stand still air condition. The maximum overall reach of last drop is approximately 3-5% more than the effective stream performance data. The jet stream may get effected considerably with tail or head wind.

## MAINTENANCE

The nozzle must be inspected regularly for possible damage or dirt around the moving parts. If any abnormal conditions observed such as poor discharge, excessive wear, water leak, corrosion effect, damage etc., then nozzle must be taken out of service and repaired by qualified technician.



The debris trapped in the nozzle may effect the nozzle performance. To remove trapped debris, the water flow must be stopped and thereafter carefully unscrew and remove the nozzle deflector. Clean the nozzle and reassemble.

While reassembling the nozzle or as a normal preventive maintenance, water proof lubricant must be used on seal and moving parts for smooth operation. The nozzle must be operated periodically under full flow jet as well as under fog pattern.

Under normal condition water must be flown through the nozzle periodically and dirt from around exterior moving parts must be cleaned, allowing nozzle to operate properly.

The nozzle must be inspected prior to and after each use. Greasing the moving parts and 'O' ring is required periodically. Over a time the seals may need to be replaced.

The owner is responsible for maintenance of the nozzle in proper operating condition.

After use with foam, flush with fresh water.

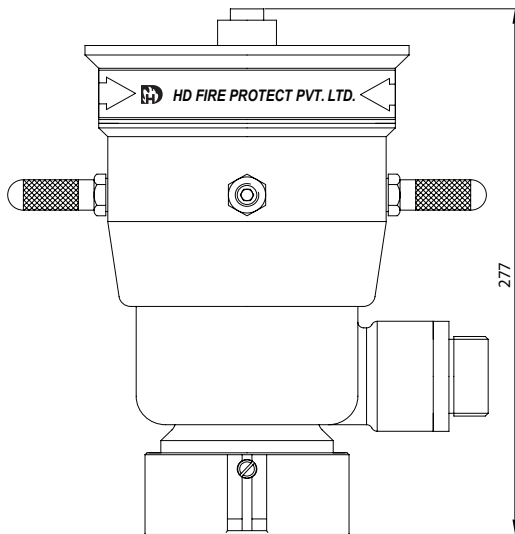
## CAUTION

A trained personnel for fire fighting, with appropriate guidance and training must use the product to reduce the risk or injury. The nozzle must be fixed to the monitor carefully. The mismatched or damaged threads may cause leakage or uncouple the nozzle under operation.

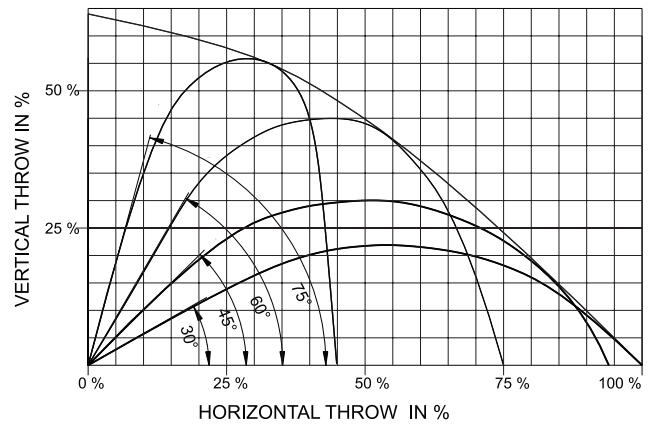
Application of water or foam on an electric appliance can cause serious injury by electrocution, as water is a conductor of electricity.

The water supply to the nozzle must be gradual. Sudden surge of water supply must be avoided. The monitor mounting must be supported properly to support the nozzle reaction force.

Maximum permissible suction lift is 2 meters.



STREAM TRAJECTORY  
CROSS REF. IN % - JET REACH & HEIGHT



Note : Foam shut off valve is optional

## PERFORMANCE DATA

TABLE - I

SET FLOW RATE LPM (GPM)	FOAM CONCENTRATE INDUCTION RATE	PRESSURE KG/CM. SQ. (PSI)	ACTUAL FLOW RATE LPM (GPM)	STRAIGHT STREAM FOAM RANGE METERS (FEET)
1900 (500)	3%	5.6 (80)	1700 (450)	39.0 (128)
		7.0 (100)	1900 (500)	46.0 (151)
		8.4 (120)	2081 (550)	47.0 (154)
2650 (700)	3%	5.6 (80)	2370 (626)	46.0 (151)
		7.0 (100)	2650 (700)	53.0 (174)
		8.4 (120)	2903 (767)	54.5 (179)
2850 (750)	3%	5.6 (80)	2550 (673)	48.0 (157)
		7.0 (100)	2850 (750)	54.0 (177)
		8.4 (120)	3122 (825)	54.5 (179)

PERFORMANCE DATA FOR FOAM STREAM RANGE ARE BASED AT 30 DEG. NOZZLE ELEVATION IN STILL AIR CONDITION AND WITH HD MONITOR. THE REACH IS FOR FOAM, WHEN USED AS WATER THE WATER REACH WILL INCREASE BY ABOUT 10%. THE ABOVE NOZZLE DATA IS WITH HD MONITOR INLET PRESSURE.

### LIMITED WARRANTY

HD FIRE PROTECT PVT. LTD. hereby referred to as HD FIRE warrants to the original purchaser of the fire protection products manufactured by HD FIRE and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by HD FIRE. Products or Components supplied or used by HD FIRE, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. HD FIRE shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. HD FIRE will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. HD FIRE shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by HD FIRE. HD FIRE shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. HD FIRE shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall HD Fire's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

### NOTICE :

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

The information provided by us is to the best of our knowledge and belief, and consist of general guidelines only. Site handling and installation control is not in our scope. Hence we give no guarantee for result and take no liability for damages, loss or penalties whatsoever, resulting from our suggestion, information, recommendation or damages due to our product.

Product development is a continuous programme of HD FIRE PROTECT PVT. LTD. and hence the right to modify any specification without prior notice is reserved with the company.



**HD FIRE PROTECT PVT. LTD.**  
Protecting What Matters Most to You

D-6/2, ROAD NO. 34, WAGLE INDUSTRIAL ESTATE, THANE 400 604, INDIA.  
 • TEL: + (91) 22 2158 2600 • FAX: +(91) 22 2158 2602  
 • EMAIL: info@hdfire.com • WEB: www.hdfire.com