# MASTER STREAM NOZZLE FOR MONITOR
## MODEL - VARSHA 50

HD FIRE PROTECT LIMITED

## TECHNICAL DATA

| | |
|---|---|
| NOZZLE FLOW RANGE | As per Table - I |
| WATER INLET CONNECTION | Swivel female 4" BSP |
| MATERIAL OF CONSTRUCTION | Bronze, Stainless Steel, Hard Anodized Aluminium with Stainless Steel internals |
| MAXIMUM SERVICE PRESSURE | 12 bar (175 psi) |
| JET & SPRAY PATTERN | With Spinning teeth 120 degree angle |
| WEIGHT (Approx) | Bronze Nozzle -13.2 kg<br>Stainless Steel Nozzle -12.0 kg<br>Aluminium Nozzle - 7.8 kg |
| APPROVAL | FM Approved |




## DESCRIPTION

VARSHA 50, is fixed gallonage master stream nozzle, designed for heavy-duty use on fixed monitors. The nozzle is factory set for required flow between 800 to 2000 gpm. The flow can be changed in the field by replacing plunger or addition of spacer. The flow pattern easily changeable under flowing condition. Superior fog pattern with field changeable spinning teeth. Excellent for AFFF application when used with premix water-foam solution.

The nozzle is available with three different materials, bronze, stainless steel and hard coat anodized aluminium, all with stainless steel internals.

The performance data shown in this catalogue is effective stream trajectory in stand still air condition. The maximum overall reach of last water drop is approximately 3-5% more than the effective stream performance data given. The effective stream decreases by about 10% when used as foam nozzle with premixed water foam solution. 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 are 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 or replaced.

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 re-assembling 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 straight stream and for fog pattern.

Under normal condition water must be flown through the nozzle periodically and dirt, 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, nozzle should be flushed with fresh water.

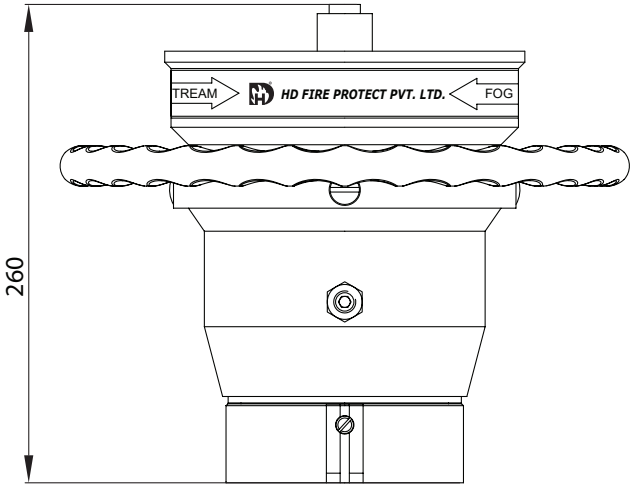
## CAUTION ⚠

A trained personnel for fire fighting, with appropriate guidance & 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 during operation.

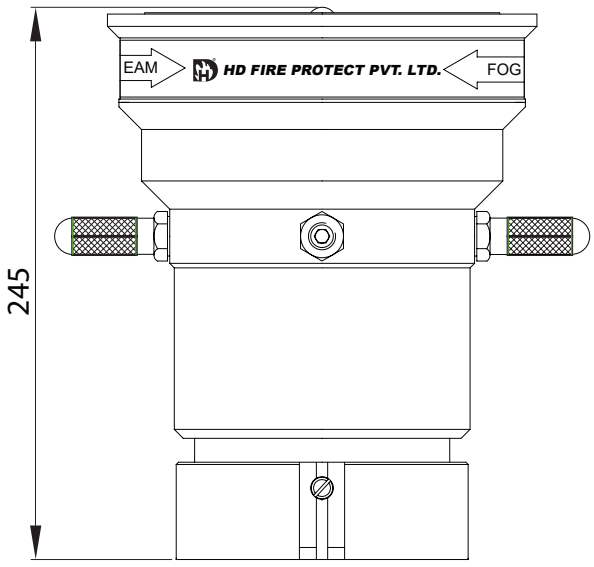
Application of water or foam on an electric appliance can cause serious injury by electrocution, as water is a conductor of electricity.

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.

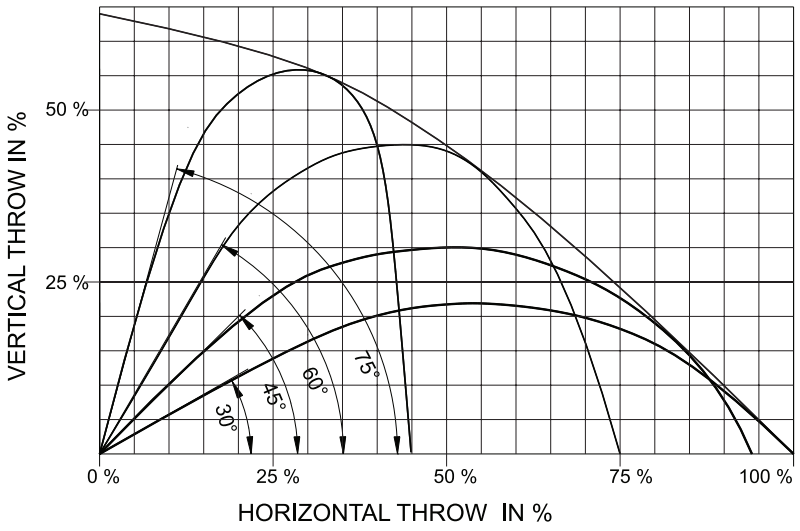
## ALUMINIUM CONSTRUCTION




## BRONZE / STAINLESS STEEL CONSTRUCTION



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




## PERFORMANCE DATA

**TABLE - I**

| SET FLOW RATE lpm (gpm) | PRESSURE kg / sq.cm (psi) | ACTUAL FLOW RATE lpm (gpm) | STRAIGHT STREAM RANGE METERS (feet) |
|---|---|---|---|
| 3030 (800) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 2710 (716)<br>3030 (800)<br>3319 (876) | 64 (210)<br>68 (223)<br>70 (229) |
| 3785 (1000) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 3385 (894)<br>3785 (1000)<br>4146 (1095) | 73 (240)<br>75 (246)<br>82 (269) |
| 4165 (1100) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 3725 (984)<br>4165 (1100)<br>4563 (1205) | 75 (246)<br>78 (256)<br>80 (262) |
| 4730 (1250) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 4230 (1118)<br>4730 (1250)<br>5181 (1370) | 75 (246)<br>79 (259)<br>80 (262) |
| * 5680 (1500) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 5080 (1342)<br>5680 (1500)<br>6222 (1643) | 76 (249)<br>80 (262)<br>81 (266) |
| * 6625 (1750) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 5925 (1565)<br>6625 (1750)<br>7257 (1917) | 75 (246)<br>81 (266)<br>82 (269) |
| * 7570 (2000) | 5.6 (80)<br>7.0 (100)<br>8.4 (120) | 6775 (1790)<br>7570 (2000)<br>8300 (2192) | 77 (253)<br>82 (269)<br>83 (272) |

PERFORMANCE DATA FOR WATER STREAM RANGE ARE BASED AT 30 DEG. NOZZLE ELEVATION IN STILL AIR CONDITION AND WITH HD MONITOR. WHEN USED WITH PREMIXED WATER FOAM SOLUTION THE FOAM REACH WILL DECREASE BY APPROXIMATELY 10% TO 15%.

* Flow with HD Monitor 433 only, for other monitors, flow is upto 1250 GPM.

THE ABOVE NOZZLE DATA IS WITH HD MONITOR INLET PRESSURE.

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