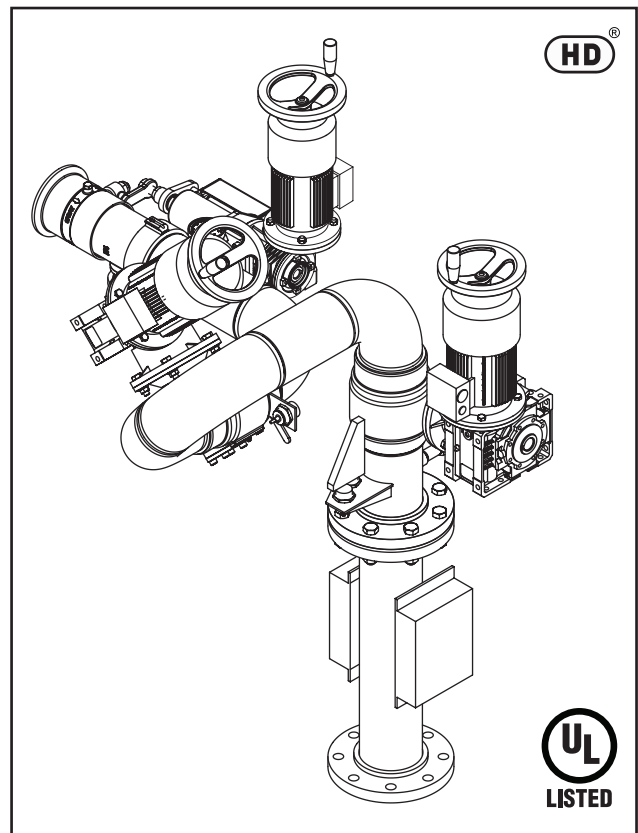


ELECTRIC REMOTE CONTROLLED MONITOR VARUN 443



TECHNICAL DATA

MONITOR MODEL	VARUN 443
NOMINAL SIZE	4 inch (100 mm)
MAX. SERVICE PRESSURE	175 psi (12 bar)
NOZZLE MODEL	VARSHA H4-V VARSHA H4-VJ VARSHA H4 (Refer Table-1)
FACTORY HYDRO TEST PRESSURE	350 psi (25 bar)
MOTOR FOR HORIZONTAL, VERTICAL, JET TO FOG MOVEMENT	3 Phase 415V, AC, Explosion Proof, Zone-1 GR IIA, IIB, IIC Standard Supply: PESO Approved Optional Supply: ATEX Approved
OPERATING TEMPERATURE	-5 To 65 deg temperature
JUNCTION BOX	Explosion Proof, Zone-1, GR IIA, IIB, PESO Approved Cabling upto the Motors vide Fire Retardant Low Smoke Flexible Cables and Explosion Proof Cable Glands Optional: weather proof
STAND POST	Monitor supplied with 4 inch or 6 inch stand post, mounted with junction box, pre-cabled
MANUAL OVERRIDE	Handwheel for emergency manual override provided
MONITOR ELEVATION	-45 deg to +85 deg
MONITOR ROTATION	0 to 340 deg
JET & SPRAY	Jet & Spray adjustable electrically with manual override
NOZZLE THRUST REACTION IN KG	Flow in lpm x $\sqrt{\text{pressure in kg/cm}^2}$ x 0.0228
APPROVAL	Basic Monitor and Nozzle are UL Listed
FINISH	Red RAL 3001 standard supply



DESCRIPTION

The basic monitor and nozzle are UL-Listed. Monitor and nozzle are made from corrosion resistant stainless steel. The monitor is added with electric motor to form Electric Remote-Controlled Monitor. The nozzle can be fix flow, variable flow with self-inducting mechanism or through a Jet Ratio Controller. The premix water-foam solution can also be used. Foam concentrate can be proportioned at the nozzle for variable flow locally, or through the jet ratio controller and foam atmospheric concentrate storage tank. In addition, manual operation can be accomplished locally by using monitor hand-wheel. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, jetty, terminals, and many applications.

The monitor possesses several design features that provide ease of operation, minimum maintenance, and resistance to normally destructive environments. Monitor has welded stainless steel 4-inch (100 mm) waterway. The vertical and horizontal rotations are through stainless steel swivel joints with double row of stainless-steel ball bearing. Both vertical and horizontal movements are controlled with enclosed worm gear. The water vanes in discharge tube reduces the turbulence and friction loss, thus improving the nozzle performance.

The motors are provided for horizontal & vertical movements and jet to fog operation. Different nozzles can be provided as given in Table-1. Manual override through hand wheel is provided for local operation, which automatically disengages as soon as motor power operation resumes.

A stand post mounted with junction box, is provided below the monitor. The cabling from junction box to monitor motor is supplied pre-wired. Field wiring from junction box to control panel is to be carried out by the user.

Local as well as main control panel can be used in safe area or explosion proof area. The horizontal, vertical and nozzle jet to fog operations can be carried out through joysticks in the safe area panels, and through push buttons in the explosion proof panels. Panel can also be supplied with additional push button/lamps to remotely operate the motorized water supply valves to the monitor.

NOZZLE OPERATION INSTRUCTIONS

In case of variable flow nozzle, to select a particular flow, press the knob and rotate to match the arrow of knob marking line on the nozzle. If nozzle is self-inducting and variable flow nozzle, then set the concentrate induction valve by rotating the knob of inductor valve. Refer to the individual monitor/nozzle product catalogue for more information.

INSTALLATION, TESTING & MAINTENANCE

Read the installation, electric wiring and maintenance instructions provided with the monitor, thoroughly before using the product.

The monitor must be installed and operated carefully by a trained person, having good knowledge of the equipment. Before connection of the monitor to supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage. All movements must be checked through local and main control panel.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with full flow in accordance to the guidelines of the organisation having local jurisdiction. The owner is responsible for maintaining the equipment in proper operating condition.

Periodical flushing of the monitor & nozzle with clean water and movement of moving parts, will allow product to operate as designed. Regular visual inspection of motor and control panel is recommended. Ensure all the exposed wirings are in place and there is no damage.

CAUTION

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly. The piping must be able to withstand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

Always remember to disconnect power supply during maintenance of any monitor component.

When installing monitor it is critical that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage. Application of water or foam on an electric appliance can cause serious injury. The water supply to monitor must be increased/ decreased gradually to prevent possible water hammer occurrence.

Maximum permissible suction lift is 2 meters for self-inducting nozzle.

ELECTRIC REMOTE CONTROLLED MONITOR VARUN 443

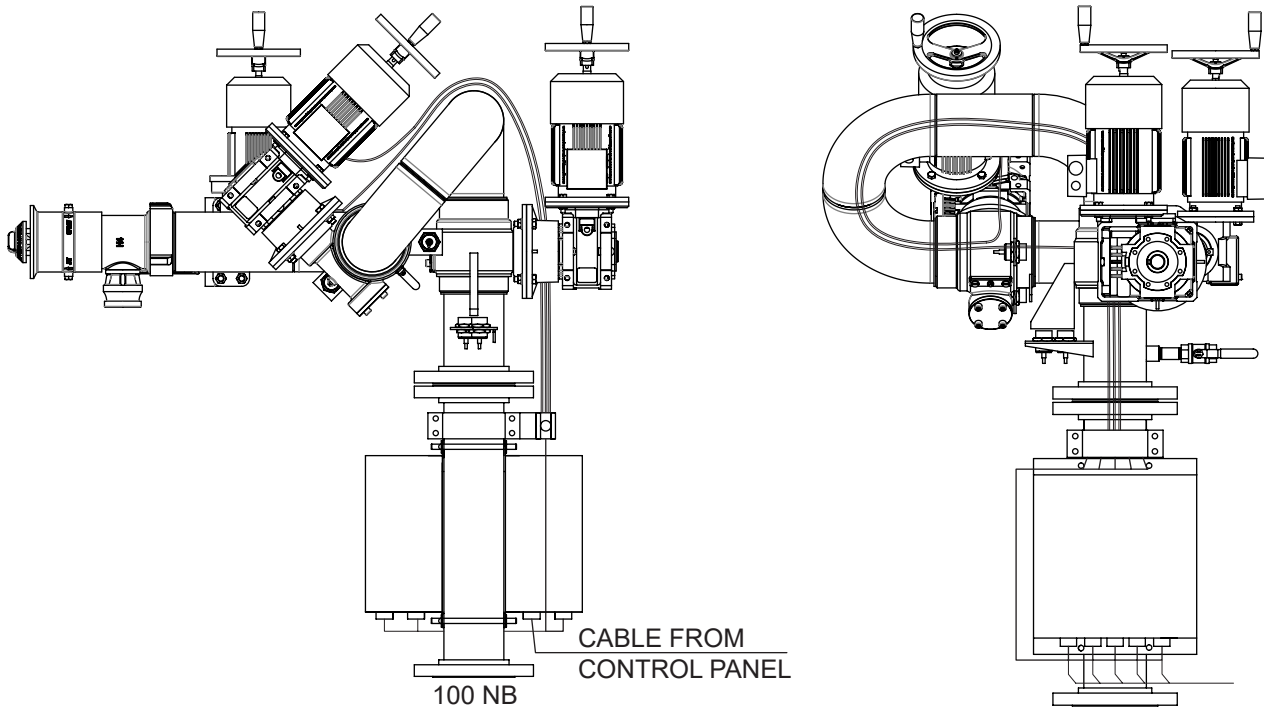


TABLE-1

NOZZLE MODEL	FLOW AT 7 bar AT MONITOR BASE	INDUCTION BY JRC	SELF-INDUCING	PREMIX
VARSHA H4-V	Variable Flow, 500-750-1000 gpm	No	Yes	Yes
VARSHA H4-VJ	Variable Flow, 500-750-1000 gpm	Yes	No	Yes
VARSHA H4	Fix Flow, 500 or 750 or 1000 gpm	No	Yes	Yes

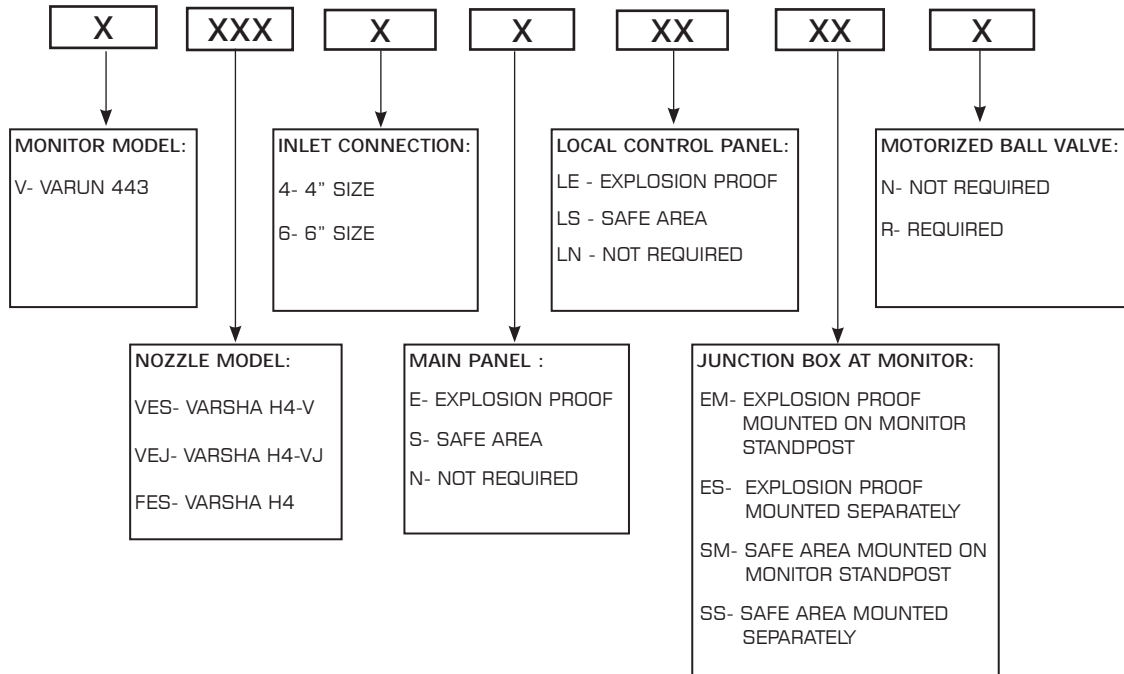
FOAM REACH DATA

SET FLOW RATE gpm	CONCENTRATE INDUCTION RATE IN %	MONITOR BASE PRESSURE IN kg/cm ²	REACH IN STILL AIR IN METRES)	
			WATER	FOAM
500	3	7	50	45
750	3	7	60	55
1000	3	7	65	60

Note :

- 1) Monitor standpost standard supply is 100 mm (4") Optional is 150mm (6")
- 2) Flow is within $\pm 5\%$ of flow
- 3) Standard Supply - SS304/ASTM A-351-CF8
Optional Supply - SS316/ASTM A-351-CF8M or SS316L/ ASTM A-351-CF3M
- 4) Foam reach data is in still air condition and nozzle elevation of 30/35 deg
- 5) Pickup tube for nozzle and JRC will be three meters long
- 6) Electrical Motor, Junction Box - explosion proof or weather proof
- 7) Main Control Panel - explosion proof with push button or weather proof with joy stick
- 8) Hose not provided for JRC, it shall be provided by installer

MONITOR ORDERING INFORMATION



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