



FIRE CONTROLS PVT. LTD.



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3 D HAZCHEM MULTIPURPOSE (3-in-1) AQUA - FOAM - DCP TYPE FIRE MONITOR OF 1000 GPM CAPACITY.

TECHNICAL DATA SHEET

GENERAL DESCRIPTION

The 3 D Hazchem Multipurpose 3 in 1 Monitor is specially designed to throw Water, Foam, Dry Chemical Powder and spray, Jet & Fog through single nozzle to fight against hydrocarbon / polar solvent fire by a single fire fighter. The Multipurpose 3 in 1 Monitor is provided with non-aspirating type nozzle capable to discharging 1000 US GPM (3785 LPM) at 100 psi (7 bar) inlet pressure over a range of 60 meters in horizontal direction and 15 meters in vertical direction.

Water operated Jet Ratio Controller Pump (JRCP) is provided suitable for feeding foam concentrate solution to the monitor nozzle from distance of 50 meters & above. The Monitor has facility for converting Water / Foam / Jet to fog and vice-versa and also Dry Powder can be jetted from the centre of nozzle very quickly and easily, even during continuous operation. Monitor is provided with self-locking swivel gear bearing for rotation in horizontal and vertical direction through hand wheel operation even under high operating pressures. The monitor assembly is designed to withstand the nozzle reaction force experienced during the operation of jet/ fog.

SALIENT FEATURES

1. High Discharge Capacity of 1000 US GPM (3785 LPM) at 100 psi (7 bar) inlet pressure
2. Excellent Horizontal throw of 60 meter long and above
3. Water, Foam, Dry Chemical Powder and Fog through single nozzle to fight against hydrocarbon / polar solvent fire by a single fire fighter.
4. Quick change over of Water, Foam, Dry Powder and jet to fog or spray even under water pressure
5. Low Expansion of Foam, so less loss of foam due to breakage and thermal updraft and more cooling effect on burning surface.
6. Monitor can be placed 50 meter away from the foam concentrate & feed foam solution by JRCP
7. Easy manoeuvrability in horizontal and vertical plane
8. Almost maintenance free

APPLICATION

The Monitor is highly effective with water and foam for fast knockdown of Fire at Oil & Gas Plants, Off Shore & On Shore Platforms, Oil Refineries, Petroleum Storage Tanks & Depots, Chemical & Fertilizer Plants, Steel Plants, Power Plants, Air Port Run-Ways, Ammunition Depots, Defence Stores, Naval Ships And Submarine, Ships & Oil tankers, Fire Fighting Vessels / Tugs, Ports & Jetties Etc.

THE TECHNICAL DETAILS OF THE UNIT SHALL BE AS UNDER:-

MONITOR:

- A) Size : 4 inch.
- B) Body : S.S. seamless steel pipe, bend etc.duly treated with anti-corrosive paint,gunmetal swivel joint for horizontal and vertical movement duly covered gear operation.
- C) Rotation : 360 degree.
- D) Elevation : 90 deg. (+75 deg., -15 deg.)

SWIVEL JOINT:

- A) Material : LTB-Gr.2
- B) Gear Wheel : LTB-Gr.2
- C) Worm : Gunmetal

NOZZLE:

- a) Material of construction : LTB-Gr.2
- b) Type of foam used : AFFF/ATC Foam.
- c) Discharge capacity : 1000 GPM
- d) Horizontal Throw (min) at nozzle water pressure of 100 psi (7 bar)
 - 1. Water : 60 meters
 - 2. Foam : 55 meters
 - 3. DCP : 40 meters
- e) Foam Expansion : Min. 1:3 / 4.
- f) Fog (curtain) : 160 deg.
- g) K-factor : 100.
- h) Friction Loss : Less than 10 PSI through monitor.

Semi Fog for tank cooling and dissipation of vapours and gases at a distance of 10 meters and above

FLANGE:

- a) Material : S.S
- b) Specification : ANSI-B-16.5 150#

OTHER CONSTRUCTION DETAILS:

- a) Welding : Radiography type.
- b) Working Pressure : 7 Kg/cm².
- c) Painting : Two coats of red enamel paint.

JET RATIO CONTROLLER PUMP:

Water Operated Foam Pump (JRCP) suitable for feeding foam concentrate solution to the monitor nozzle from a distance of 50 meters and above. The inlet and outlet of JRCP shall be provided with 63 mm male and female coupling respectively.

- a) Material : LTB Gr.-2
- b) Housing : Stainless Steel
- c) Inlet / outlet : LTB Gr.-2

DRY CHEMICAL POWDER (DCP) SYSTEM:

A DCP System consists of 04 Nos. of 75 Kg. DCP Fire Extinguisher mounted on trolley with common discharge manifold and individual CO₂ / N₂ expellant cylinders of adequate capacity to maintain pressure of 12 bar and for flushing the complete system after use. Pressure gauges, safety valves, control on /off valve etc. are provided for monitoring and controlling of the DCP system. Each vessel is provided with filler cap of 3" and drain of 2" size. A DCP vessel is manufactured as per ASME code. The DCP Vessels are tested at 32 bar hydro test pressure. The extinguisher is painted with 2 coats of primer and two coats of P.O. fire red paint.

