

PORTABLE WATER/FOAM MIST FIRE FIGHTING SYSTEM
(BACK PACK TYPE)

1. Scope:

The Water Mist based firefighting system that utilizes very fine water spray to extinguish fire. It is considered as most efficient firefighting agent with exceptionally high heat absorbing capacity and latent heat of vaporization. Water droplets with size of 1 to less than 1000 micron (μ) are referred to as mist (1mm = 1000 micron. It creates a blanket thus making the atmosphere inert around the fire and extinguished the fire efficiently and promptly.

2. General requirements:

- (i). Back Pack system shall be suitable for Class A, Class B & live electrical fires up to 1000V/1m distance.
- (ii). The equipment shall be capable to form water droplet of size above 250 microns and delivered to the fire with Kinetic Force strong enough to overcome the convection currents of fire.
- (iii). The Water Mist system shall be capable of carrying 10 liters of water which can discharge in the form of fine mist through a discharge gun using compressed air.
- (iv). The system shall also be capable to operate in a combination of water with foam for fighting petrol/ diesel fires as well as for solid fire of class A, B and electrically generated fire.
- (v). The material of the vessel shall be light weight anti corrosive alloy aluminium or composite alloy. The filling port with cap shall be on the top of the vessel.
- (vi). Compressed air cylinder shall be of 02 litres (Water Capacity) charged at 200 bar. The cylinder and valve shall have approval of CCE Nagpur.
- (vii). Extinguishing gun-
Weight of gun and nozzle shall not be more than 1000 gm. Single gun shall be useful for A, B & Electrical fire.
- (viii). Lancing distance-
Approx. 12m or more.
Electrical Fires - up to 1000 V/ 1 m distance as per EN 3 standard
Operating time- 20 to 25 sec.
Flow rate - 24 litres/min
- (ix). Rating:
Class A - 55 A
Class B - 233 B
Electrical fire up to 1000V
- (x). Length of hose shall be more than 1.2 m.
- (xi). Back pack shall be ergonomically shaped and harnesses shall be of fire resistant type material.
- (xii). Operating temperature- $T_{min} +5^{\circ}C$; $T_{max} +60^{\circ}C$.
- (xiii). Overall weight of the charged system shall not be more than 30 kg.
- (xiv). Working pressure - above 30 bar.

3. Certification/ Approvals:

- (i). Certification standards: CCE Nagpur, DIN EN 3, CE etc.
- (ii). The system shall have built in safety valve for adjusting pressure.

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(iii). The complete system shall be tested by an internationally approved laboratory/CBRI Fire Lab. Roorkee for compliance to DIN EN 1866-1:2007-10 and EN 3-7:2004+A1:2007 (E). CCE Nagpur etc. and other national/international standards as applicable for all clauses mentioned in the standard.

4. Accessories:

One spare cylinder of same type shall be supplied.

5. Warranty:

- (i). The unit shall carry warranty for a period of 01 year from the date of acceptance of the material.
- (ii). After sales service and availability of spare parts shall be available for entire life of the material.

6. Training:

The supplier shall demonstrate the system after delivery at the consignee's premises. Operational and general maintenance training of the above system shall be given to operational staff at user site immediately after supply.

7. Marking:

The equipment and its accessories shall be marked for capacity, manufacturer's name, month/ year of manufacturing etc.

8. Authorisation:

If the supplier is not a manufacturer of system, they shall submit valid authorisation letter from the original manufacturer of their Indian corporate office along with offer. The manufacturer or their Indian corporate office shall have confirmed in writing for availability of all spares and after sales service support for the entire life of the equipment from the date of supply of the above system. Without which the offer shall be rejected.

9. Pre-dispatch Inspection:

Pre-dispatch inspection shall be carried out by the representative of management and CISF (detailed by FHQ).

[Signature]
05/01/18
Assistant Commandant
CISF, Unit B.H.E.L. Jhansi (U.P.)