INTRODUCTION OF BLADDER TANK SYSTEM

- Bladder (Diaphragm) Proportioning Tank system has been included in NFPA -11, Standard for Low-Expansion Foam.

- The Bladder Tank Foam Proportioning System utilizes the water pressure to inject foam concentrate into a water supply and automatically proportions foam concentrate over wide range of flow and pressure, with very low pressure drop.

- This system uses water pressure as a source of power with the added advantage of a collapsible bladder that physically separates the foam concentrate from the water supply.

- The reinforced elastomeric bladder can be used with all types of foam concentrates.

- One of the most common systems used for foam proportioning.

- Very efficient system ideal for range of foam discharge devices like foam chamber, sprinklers and monitors.
FEATURES AND BENEFITS

- Ease of operation, systems require no outside source of power or pump other than flowing water under pressure for delivery of foam solution to the discharge devices.
- Supports wide range of flow & pressure rates, without any adjustments.
- Very Low Pressure Drop
- Design simplicity minimizes system failure due to mechanical or operation error.
- Cost advantage as compared to foam pumps or foam dosing systems.
- Minimized installation costs compared to other proportioning methods.
- Reduced system size and water demand can be realized in certain applications.
- Easy retrofit into existing extinguishing systems.
- Tank manufactured as per ASME Section VIII Div 1, ASME Boiler and Pressure Vessel Code.
- UL Listed as Manual System & FM Approved as auto system
- With CE Mark
- Multiple proportioners can be connected to one bladder tank to support various Hazard locations.
- HD Bladder tanks come pre-piped with ratio controller mounted on the tanks.
**TYPICAL SCHEMATIC & SEQUENCE OF OPERATION**

**OPERATION**

1. Water remains in pressurized condition up to the inlet of deluge valve. Deluge valve is normally closed.
2. As soon as fire is detected, signal goes to deluge valve for actuation.
3. The detection signal to deluge valve could be manual (Manual Release), through energizing of the solenoid valve or through Wet or Dry Pilot detection line.
4. Deluge valve actuates immediately, releasing water through outlet to the bladder tank proportioner.
5. Bladder tank mixes water & foam with 97:3 ratio and provides foam solution through outlet line.
6. This foam solution can go to various foam discharge devices like foam sprinklers, monitors and foam pourers.
HD ADVANTAGE

- Bladder tanks are designed by us as per latest standard of ASME Code
- Material complying to ASME
- Tank is provided with all accessories like sight glass, ladder, safety valve, porportioner, foam filling kit, etc.
- Complete in-house facility from designing, manufacturing to performance testing.
- Fabrication shop certified to manufacture ASME pressure vessels.
- UL Listed or FM Approved, Optional CE Mark or ASME U Stamp.
- HD has complete range of foam discharge devices like foam chamber, foam maker, foam sprinklers, foam monitors, etc.
- Complete technical support provided for site installations.