

FIGURE 1

CHEMGUARD® Horizontal Pre-Piped Bladder Tanks with Proportioner

Application

The CHEMGUARD® Pre-Piped Bladder Tank is a complete balanced pressure proportioning system. A pre-piped bladder tank offers the foam system designer fixed dimensions inclusive of the proportioner/ratio controller. This takes away some of the uncertainty when sizing the foam equipment room and piping layout. Plus, the installer has the advantage of a pre-fabricated foam system, eliminating loose components and simplifying the installation. Its operation requires no external power other than a pressurized water system. The bladder tank may be used with any CHEMGUARD foam agent and with any suitable discharge device.

CHEMGUARD bladder tanks have numerous applications including truck loading racks, aircraft hangers, dip tanks, pump rooms, helipads, etc.

Description

The CHEMGUARD Pre-Piped Bladder Tank is a steel pressure vessel which stores a foam concentrate contained within an elastomeric bladder. The concentrate is discharged from the tank by incoming water applying pressure to the bladder. This applied energy is transferred to the concentrate, supplying pressurized concentrate to the proportioner. All tank models feature perforated tubes which allow improved agent discharge.

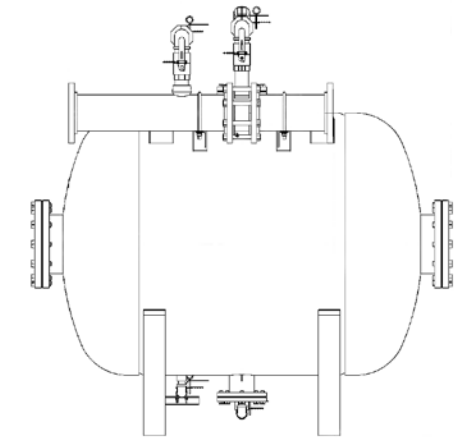
CHEMGUARD bladder tanks are available in a variety of nominal capacities as listed in the tank information tables. Pre-piped models listed in this data sheet are for use in manually operated systems. For automatically operated systems, please contact Tyco Fire Protection Products Technical Services.

Features incorporated into the CHEMGUARD pre-piped bladder tanks include the following:

- Water pressurized bladder construction, alleviating the requirement for foam pumps or other energy sources
- Valves that are pinned in the normal operative positions and are supplied with nameplates identifying their functions and operating instructions
- Proportioner and piping attached to side of tank – no need for additional bracing
- Corrosion-resistant (CR) foam concentrate piping
- Exterior tank surfaces finished with a red “CR” epoxy finish for use in marine or corrosive environments
- Tanks with a high-build epoxy coated interior for use with both fresh and salt water

Approvals

CHEMGUARD bladder tanks and proportioners are Underwriters Laboratories (UL) listed with various CHEMGUARD foam concentrates and bear the “UL” label along with an American Society of Mechanical Engineers (ASME) code stamp.



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Standard bladder tanks 200 gallons (757 L) and larger are CE marked in conformance with the 97/23/EC Pressure Equipment Directive. Tanks less than 200 gallons (757 L) are acceptable based on sound engineering practices of ASME code.

Specifications

The CHEMGUARD horizontal bladder tanks shall be designed and constructed in accordance with the latest revisions to ASME code, Section VIII for unfired pressure vessels with a maximum allowable working pressure (MAWP) of 175 psi (12.1 bar) and tested to the pressure specified by the applicable codes and standards. Tanks shall be pressure tested per the design pressure and all applicable codes and standards. ASME tanks shall be tested to no less than 230 psi (15.9 bar). CE Marked tanks shall be tested to no less than 255 psi (17.6 bar). The tank shall be of (specify) gallon nominal capacity and overall dimensions as indicated in the appropriate diagram and corresponding information table. The tank shall be constructed of steel complying to ASME specifications possessing a tensile strength of not less than 70,000 psi (4827 bar).

The tank heads shall be 2-to-1 ellipsoid to ensure strength while reducing overall tank weight.

All tank openings larger than 1 in. (25 mm) diameter shall be divided to prevent bladder blow-out. There shall be a water channel between the water inlet opening and water drain opening to establish a water path between the tank shell interior and the bladder.

The tank interior shall have all welds and edges ground smooth. It shall be cleaned, sand blasted to a near white surface, and immediately coated with a high build epoxy coating. The tank data plate shall be of a material compatible with the tank shell and must be seal welded with appropriate procedure and material to the tank. (This ensures that the data plate will reflect the overall condition of the tank and that no corrosion occurs undetected behind the data plate.) The data plate shall contain as a minimum ASME code stamp; year of manufacture, maximum allowable working pressure (MAWP), National Board Number, minimum material thicknesses, minimum design metal temperature (MDMT), and type of head. The tank shall also have a label specifying the type of foam concentrate the system was designed to use, the quantity of the concentrate, and any other pertinent warnings

