

36 Gallon Bladder Tank/ Foam Station

Features

Options

- 36 gallon bladder tank with fittings and valves only
- 36 gallon bladder tank with fittings and valves pre-piped to a 2 in. proportioner
- 36 gallon handline foam station

Bladder Tank

- Fill cap opening provides ease of filling without the need for a funnel or fill pump. In addition, fill opening provides convenient access for checking agent fill level.
- Exterior surfaces finished in red standard paint system or coated with a red "CR" epoxy finish for use in marine, offshore or other corrosive environments.
- Tank interior coated with high build epoxy for use with both fresh and salt water.
- Internal tank perforated center tube allows unrestricted agent discharge.
- Can be used with all CHEMGUARD foam concentrates and proportioner sizes.
- Can be used for foam/water supply to any type discharge device suitable for use with selected foam concentrate.
- Operating, refilling and maintenance instruction plate provided.

With Proportioner

- 2 in. proportioner provides capability of variable flow range with minimum pressure loss.
- Fewer design restrictions on hose and/or piping lengths between proportioner and discharge device when compared to foam eductor-type systems.
- Can be used with all CHEMGUARD foam concentrates.
- Concentrate shut-off valve provided to allow water-only operation.

Handline Foam Station

- Fewer design restrictions on hose and/or piping lengths between proportioner and discharge device when compared to nozzle and foam eductor combinations.
- Can be used with all CHEMGUARD foam concentrates, depending on nozzle selection.
- Concentrate shut-off valve provided to allow water-only operation.



009828

Application

The CHEMGUARD 36 Gallon Bladder Tank, when coupled with a standard proportioner, becomes a self-contained foam proportioning system which requires no external power supply other than pressurized water. Compact in size, these bladder tanks and foam stations are ideal for supplying foam solution to various handline nozzles. Other design applications include small fixed systems protecting flammable liquid storage areas. Fixed systems typically use sprinkler heads, foam makers or other types of foam discharge devices available from Tyco Fire Protection Products to provide uniform foam blanketing over the hazard area.

The CHEMGUARD 36 Gallon Foam Station satisfies the guidelines of NFPA 409 for supplementary foam-water hand hose line system for aircraft hanger protection. Other applications include use in and around off-shore platforms, truck loading racks, chemical process/refining plants and heliports.

Description

Bladder Tank

The 36 gallon capacity bladder tank stores a foam liquid concentrate in 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, which is forced through the concentrate discharge line to any size CHEMGUARD proportioner.

Bladder Tank With Proportioner/Foam Station

The bladder tank is available pre-piped to a 2 in. proportioner consisting of a body, inlet nozzle and metering orifice, all of which are corrosion-resistant brass. The metering orifice is sized according to the type and percentage of concentrate used and is secured with a stainless steel retaining ring. The proportioner is connected to the pressurized water line and concentrate discharge line. It properly regulates the amount of concentrate injected into the water stream over a wide flow range. The foam solution is then supplied to a handline nozzle or other appropriate foam discharge device.

Approvals

Bladder Tank

The CHEMGUARD 36 Gallon Bladder Tank carries the American Society of Mechanical Engineers (ASME) code stamp, is UL Listed and FM approved with various CHEMGUARD proportioner and foam concentrate combinations as indicated in the proportioner foam systems data sheet.

Bladder Tank with Proportioner and Foam Station

The CHEMGUARD 36 gallon tank with 2 in. proportioner is UL Listed with various CHEMGUARD foam concentrates. For specific concentrates and corresponding flow ranges, consult Tyco Fire Protection Products Technical Services.

Specifications

Bladder Tank

The 36 gallon bladder tank shall be designed and constructed in accordance with the latest revisions to ASME code, Section VIII, Division 1 for unfired pressure vessels with a Maximum Allowable Working Pressure (MAWP) of 175 psi (12.07 bar). 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 (15.8 bar). The tank shall be 36 gallons nominal capacity with overall dimensions as indicated in the drawing below. The tank shall be constructed of steel complying with 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.

There shall be a water channel, permanent and non-movable, 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 Hi-Build epoxy sealer.

The tank shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent used. The bladder shall comply with UL 162, "Foam Equipment and Liquid Concentrates." The bladder material shall be constructed to conform with the inside tank dimensions.

The tank assembly shall contain a perforated center tube of P.V.C. or other material compatible with the foam concentrate to assure that foam concentrate will be discharged without restriction to flow.

The tank assembly shall be fitted with a 4 in. inside diameter fill opening in the top head and provided with a fill cap. The cap shall consist of a cast brass body with two handles extending from opposite sides of the cap to permit hand tightening without the use of tools so that the cap is free from leakage under normal operating pressure. The cap shall be equipped with a 5/32 in. thick rubber gasket inserted in a machined recess. A safety vent hole shall be located in the fill cap so that the cap will vent while at least 3 1/2 threads are still engaged.

The following valves shall be assembled to each tank: a bladder drain/fill valve, tank shell drain valve and tank shell vent valve. These valves shall be 1 in. 1/4 – turn ball valves with bronze body, hard chromium plated bronze ball, bronze stem, stainless steel locking nut and handle, and high performance TEFLON* seats and stuffing box ring. Each valve shall have a nameplate secured to it identifying the valve name and operating position. Each valve shall be provided with a ring pin and chain attached for securing the valve in the operating position. All pipe and fittings shall be Schedule 40 ASTM B-43 Brass and B-145 Bronze, respectively.

2-Inch Proportioner

The proportioner body and inlet nozzle shall be of low zinc (less than 15%) brass. The nozzle and foam orifice retaining rings shall be of stainless steel.

The proportioner body shall be designed with a female NPT inlet and a male NPT outlet. The body shall be clearly marked with a flow direction arrow, and the type and percent of foam concentrate that it was designed to proportion.

The convergent inlet nozzle shall have a rounded inlet and a smooth machined finish to ensure minimum stream constriction and maximum velocity. It shall be retained by a stainless steel retaining ring. The inlet nozzle shall terminate in the foam concentrate annulus chamber and be concentric with and set back from the proportioner recovery section.

The foam concentrate metering orifice shall be machined to the proper diameter for the agent. It shall rest on a machined surface to prevent leakage and shall be secured by a removable stainless steel retaining ring.

A concentrate valve shall be installed in the foam concentrate line leading to the proportioner to allow water-only operation. This valve shall meet the valve specifications outlined above.

Foam Station Hose Reel

A metal hose reel with straight-through internal fittings, designed to provide a minimum pressure drop, shall be provided. The reel shall be capable of holding 75 ft (23 m) or 100 ft (33 m) of 1 1/2 in. hose with nozzle and shall be manual rim rewind. The reel shall be provided with a locking mechanism to prevent unwinding of the hose. The hose shall be continuous flow type, oil and chemical resistant, with a minimum working pressure of 175 psi (12.07 bar) and tested to 400 psi (27.6 bar). The nozzle shall be variable stream (water/AFFF), rated for a nominal flow of 95 gpm (379 Lpm) at 100 psi (6.9 bar).

Ordering Information

Part No.	Equipment Description	Approximate Shipping Weight	
		lb	(kg)
702600	36 Gallon Bladder Tank, Standard Red Paint	300	(136)
702601	36 Gallon Bladder Tank, Red "CR" Epoxy Paint	300	(136)
702602	36 Gallon Bladder Tank, pre-piped to 2 in. Proportioner, Standard Red Paint	330	(150)
702603	36 Gallon Bladder Tank, pre-piped to 2 in. Proportioner, Epoxy Paint	330	(150)
702604	36 Gallon Foam Station with 75 ft (23 m) Hose Reel and Nozzle, Standard Red Paint	550	(250)
702605	36 Gallon Foam Station with 75 ft (23 m) Hose Reel and Nozzle, Epoxy Paint	550	(250)
702606	36 Gallon Foam Station with 100 ft (33 m) Hose Reel and Nozzle, Standard Red Paint	575	(260)
702607	36 Gallon Foam Station with 100 ft (33 m) Hose Reel and Nozzle, Red 'CR' Epoxy Paint	575	(260)

For other design options such as additional hose lengths, alternate nozzles, fixed systems other discharge devices and special applications, contact Tyco Fire Protection Products Technical Services.

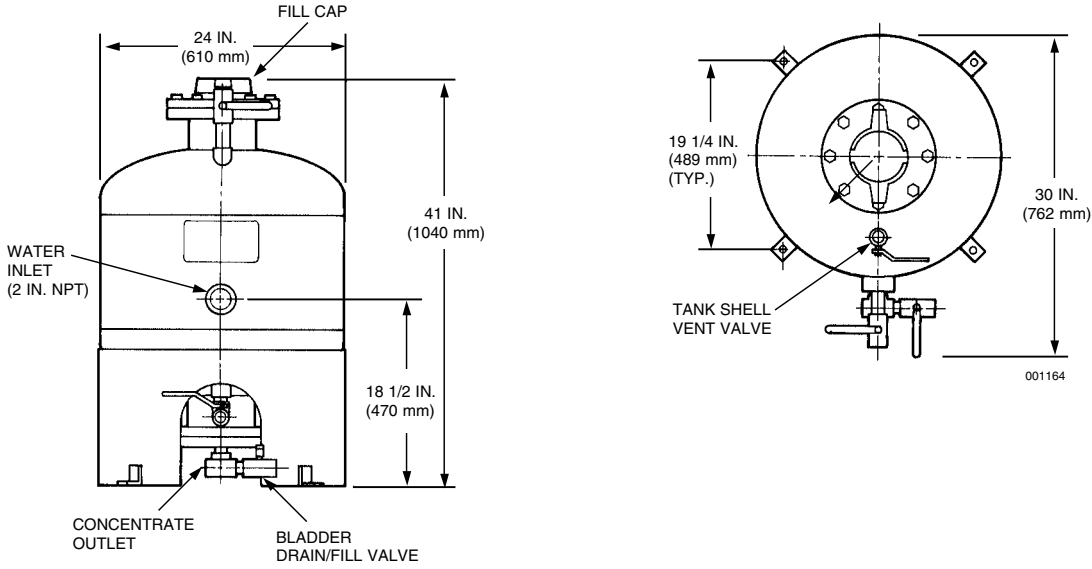
Note: The converted metric values in this document are provided for dimensional reference only and do not reflect an actual measurement.

*TEFLON is a trademark of its respective owner.

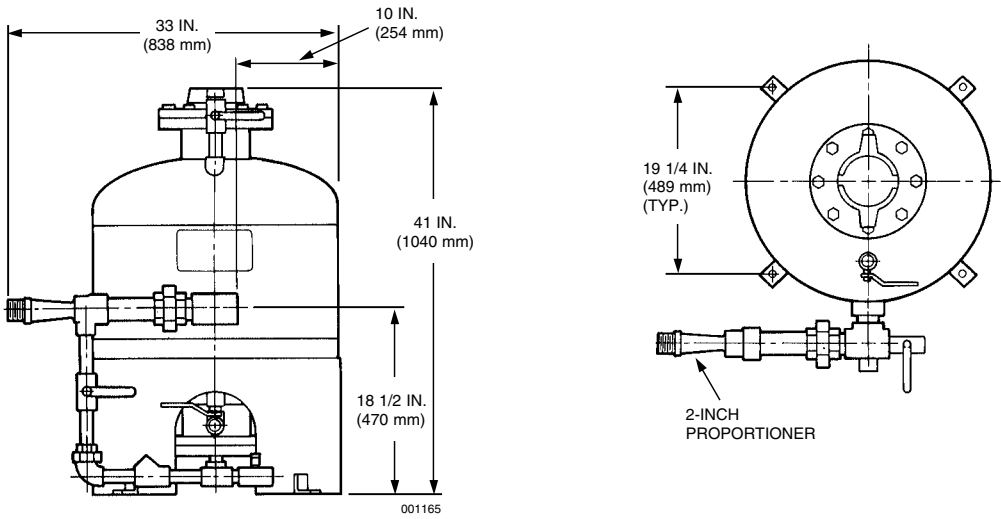
CHEMGUARD and the product names listed in this material are marks and/or registered marks. Unauthorized use is strictly prohibited.

Foam Station Dimensions

36 GALLON BLADDER TANK WITH FITTINGS AND VALVES ONLY



36 GALLON BLADDER TANK WITH FITTINGS AND VALVES PRE-PIPED TO A 2-INCH PROPORTIONER



36 GALLON HANDLINE FOAM STATION

