The ANSUL® bladder tank is one component in a balanced pressure proportioning system. In operation, required nozzle water pressure is supplied by an external pressurized water system. The bladder tank, in conjunction with any ANSUL® foam agent, can be used in a balanced pressure proportioning system. The bladder tank is designed to be compatible with most ANSUL® foam concentrates, with a concentration range of 175 psi (12.1 bar) to 400 psi (27.6 bar) in 10% dilutions.

The ANSUL® bladder tank is a steel pressure vessel which stores foam concentrate contained within an elastomeric bladder. The concentrate is discharged from the tank by incoming water pressure, as specified by the applicable codes and standards. The bladder tank is designed to be compatible with the agent to be used. The bladder material is tested by Underwriters Laboratories for compatibility with the agent. The bladder material is normally polyvinyl chloride (PVC) or a material compatible with the agent, with holes of no more than 1/2-in. (13 mm) diameter. Special foams may be used with other materials, as indicated in the appropriate diagram and corresponding information tables. The tank shall be designed and constructed in accordance with the proportion of the type of foam concentrate stored within, the operating position, and the quantity of concentrate, as indicated in the appropriate diagram.

Features incorporated into the ANSUL® bladder tank include the following:

- Water proportioning bladder construction, allowing the requirement for foam pumps or other energy sources.
- Valves that are plumbed in the normal operating positions and are supplied with valvesets identifying their functions and connections.
- Tanks are supplied with corrosion-resistant piping.
- Exterior tank surfaces finished in red standard system paint or optional finish (Note 1) for use in marine or corrosive environments.
- Tanks with a high build epoxy coated interior for use with both fresh and salt water.

**Ordering Information**

The ANSUL® bladder tank shipping assembly part numbers and approximate shipping weights are listed in the data sheet. Part numbers vary according to tank requirements. For tanks with special engineering options, such as special pressure ratings, seawater rating, or trim and finish options, contact the Technical Services Department.

**Specification**

The ANSUL® vertical and horizontal tank heads shall be designed and constructed in accordance with the latest revisions to ASME code; Section VIII, Division I for unfired pressure vessels with a maximum working pressure of 175 psi (12.1 bar) and tested to the pressure applicable codes and standards. The tank heads shall be as welded to the tank and machined to fit within the tank. All tank heads are ANSUL® standard or “CR” red per ANSUL specification or equivalent. The tank head shall be stamped with a ring pin and chain attached for securing the valve in the operating position. The valve names shall coincide exactly with those in the tank instruction manual. All valves shall have a nameplate secured to it depicting the valve name and operating position. Also, the valve shall have a tag pin and sheet attached for securing the valve in the operating position. The valve sheet shall be welded to the valve with appropriate procedure and material to the tank. The tank heads shall also have a welder identification mark or other marking system identified by ASME code.

The tank heads shall be dry fit checked to ensure proper concentricity before welding. All tank heads shall be pressure tested to at least 200 psi (13.8 bar). All 200 psi (13.8 bar) rated head tests shall be tested to at least 250 psi (17.2 bar). 

The tank heads shall be designed to fit within the tank. All 200 psi (13.8 bar) rated head tests shall be pressure tested to at least 250 psi (17.2 bar).

The tank heads shall be as welded to the tank and machined to fit within the tank. All tank heads are ANSUL® standard or “CR” red per ANSUL specification or equivalent. The tank head shall be stamped with a ring pin and chain attached for securing the valve in the operating position. The valve names shall coincide exactly with those in the tank instruction manual. All valves shall have a nameplate secured to it depicting the valve name and operating position. Also, the valve shall have a tag pin and sheet attached for securing the valve in the operating position. The valve sheet shall be welded to the valve with appropriate procedure and material to the tank. The tank heads shall also have a welder identification mark or other marking system identified by ASME code.
**Nominal Capacity**

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<th>1300 (4921)</th>
<th>1200 (4542)</th>
<th>1100 (4164)</th>
<th>700 (2650)</th>
<th>400 (1514)</th>
<th>200 (757)</th>
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<tr>
<td>A</td>
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<td>37 (940)</td>
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<td>30 (762)</td>
<td>25 (635)</td>
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<td>128 (327)</td>
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<tr>
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<td>4.9 (124)</td>
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*Note: Dimensions are rounded to nearest inch.*

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**Horizontal Bladder Tank – See Figure 4**

<table>
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<tr>
<th>Nominal Capacity</th>
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<th>C</th>
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<td>80 (2032)</td>
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**Figure 2**

- *Bladder Vent/fill Valve*
- *Vent Valve*
- *Drain Valve*
- *Tank Shell*
- *Skirt Opening*
- *001160*

---

**Figure 3**

- *Bladder Vent/fill Valve*
- *Vent Valve*
- *Tank Shell*
- *Skirt Opening*
- *001160*

---

**Figure 4**

- *Bladder Vent/fill Valve*
- *Vent Valve*
- *Tank Shell*
- *Skirt Opening*
- *001160*

---

**Figure 5**

- *Bladder Vent/fill Valve*
- *Vent Valve*
- *Tank Shell*
- *Skirt Opening*
- *001160*
### Horizontal Bladder Tank – See Figure 4

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**Note:** Dimensions rounded to nearest inch.

### Horizontal Bladder Tank – See Figure 3

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**Note:** Dimensions rounded to nearest inch.

### Horizontal Bladder Tank – See Figure 2

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**Note:** Dimensions rounded to nearest inch.

### Horizontal Bladder Tank – See Figure 1

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<td>1.7 (43)</td>
<td>3 (76)</td>
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**Note:** Dimensions rounded to nearest inch.

### Horizontal Bladder Tank – See Figure 5

<table>
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<th>Nominal Capacity (gal.)</th>
<th>Diameter (in.)</th>
<th>J (in.)</th>
<th>E (in.)</th>
<th>L (in.)</th>
<th>M (in.)</th>
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<td>30 (760)</td>
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</tbody>
</table>

**Note:** Dimensions rounded to nearest inch.

---

*BLadder Vent/fill Valve Water inlet*  
**Pipe shown out of position for clarity**

---

*2 1/2 Or 3 iN. NPT*
Specifications

The ANSUL vertical and horizontal bladder tanks 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 working pressure of 150 psi (10.3 bar) and tested to the pressure for which the vessel is designed.
Tanks designed to ASME code shall be tested to at least 208 psi (14.0 bar). All vertical and horizontal type tanks shall be tested to at least 250 psi (17.2 bar). The tank shall be of specific galvanonon metal and overall dimensions as indicated in the appropriate diagram and corresponding information tables. The tank shall be constructed of steel complying to ASME specifications and shall possess a yield strength of not less than 275 MPa (400 KSI). The circumference, as well as the longitudinal body seam, shall be radiographed and radiographed when applicable by ASME code.

All 1 in. (25 mm) diameter and larger tank openings on the outside of the bladder shall be prevented to prevent bladder blow-out. There shall be a water channel between the water inlet and water outlet opening to establish a water path between the tank interior and the bladder.

The ANSUL bladder tank shipping assembly part numbers and approximate weights are listed in the dimension tables. Part numbers vary according to the various nominal capacities as listed in the appropriate diagram and maintenance procedures, sight gauge use and finishing options, contact the Technical Services department.

The ANSUL vertical and horizontal tank assemblies shall contain perforated center tubes which allow improved agent discharge. Vertical tank models and a variety of nominal capacities as listed in the appropriate diagram and maintenance procedures, sight gauge use and finishing options, contact the Technical Services department.

Lifting lugs shall be substantial welded tank attachments with aobar hole not less than 3 in. (10 cm) in diameter.
The task shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material and finish options, contact the Technical Services department.

The tank shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material and finish options, contact the Technical Services department.

The tank shall be capable of withstanding a maximum amount of bearing area which protects the tank shell interior and the bladder.

The tank shall be designed to conform to the inside tank dimensions.

Both the vertical and horizontal tank assemblies shall contain perforated center tubes of P.V.C. or other material compatible with the agent of not more than 24 in. (61 cm) diameter. The vertical tank assembly shall contain a single perforated center tube. The horizontal tank assembly shall contain both vertical and horizontal perforated center tubes provided with a cross fitting of compatible material.

The following shall be contained in each tank: a bladder discharge valve, valve barrier film, tank shell drain valve, and tank shell vent valve. These valves shall have a stainless steel valve body, a stainless steel valve seat, a Teflon seats and stuffing box ring. Each valve shall be 1 in., 1/4-turn ball valves with bronze bodies, hard chromium-plated bronze ball, bronze stem, stainless steel ball-out and handle, and high performance Teflon seals and stuffing box ring. Each valve shall have a nameplate secured to it depicting the valve name and operating position. Also, the valve shall have a lifting lug and shall be attached for securing the valve in the operating position. The nameplate shall be affixed on the side of the valve most readily with those in the tank instruction manual. All valves shall be identified and marked under the tank label for easy access. All pipe shall be Schedule 40 ASTM A-53 and all fittings shall be ASTM A-350 LF 2 bronze.

The bladder discharge piping shall include a tee with 1/2 in. plug for future sight gauge connection.
The tank exterior shall be prepared and finished in accordance with the appropriate paint system standard or “CR” red per ANSUL specification or equivalent.

A printed filling and maintenance manual shall be supplied with each tank. The manual shall contain system schematics, installation instructions, initial fill procedure, routine and minor with pressures, apparatus and materials, operating instructions, service and repair procedures, and field inspection manual.

Ordering Information

The ANSUL bladder tank shipping assembly part numbers and approximate shipping weights are listed in the dimension tables. Part numbers vary according to the various nominal capacities as listed in the dimension tables.

The 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 working pressure of 150 psi (10.3 bar) and tested to the pressure for which the vessel is designed.

These supports provide maximum stability and a maximum amount of bearing area which protects the tank shell interior and the bladder.

The tank shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material and finish options, contact the Technical Services department.

The tank shall be capable of withstanding a maximum amount of bearing area which protects the tank shell interior and the bladder.

The tank shall be designed to conform to the inside tank dimensions.

Both the vertical and horizontal tank assemblies shall contain perforated center tubes of P.V.C. or other material compatible with the agent of not more than 24 in. (61 cm) diameter. The vertical tank assembly shall contain a single perforated center tube. The horizontal tank assembly shall contain both vertical and horizontal perforated center tubes provided with a cross fitting of compatible material.

The following shall be contained in each tank: a bladder discharge valve, valve barrier film, tank shell drain valve, and tank shell vent valve. These valves shall have a stainless steel valve body, a stainless steel valve seat, a Teflon seats and stuffing box ring. Each valve shall be 1 in., 1/4-turn ball valves with bronze bodies, hard chromium-plated bronze ball, bronze stem, stainless steel ball-out and handle, and high performance Teflon seals and stuffing box ring. Each valve shall have a nameplate secured to it depicting the valve name and operating position. Also, the valve shall have a lifting lug and shall be attached for securing the valve in the operating position. The nameplate shall be affixed on the side of the valve most readily with those in the tank instruction manual. All valves shall be identified and marked under the tank label for easy access. All pipe shall be Schedule 40 ASTM A-53 and all fittings shall be ASTM A-350 LF 2 bronze.

The bladder discharge piping shall include a tee with 1/2 in. plug for future sight gauge connection.
The tank exterior shall be prepared and finished in accordance with the appropriate paint system standard or “CR” red per ANSUL specification or equivalent.

A printed filling and maintenance manual shall be supplied with each tank. The manual shall contain system schematics, installation instructions, initial fill procedure, routine and minor with pressures, apparatus and materials, operating instructions, service and repair procedures, and field inspection manual.

Ordering Information

The ANSUL bladder tank shipping assembly part numbers and approximate shipping weights are listed in the dimension tables. Part numbers vary according to the various nominal capacities as listed in the dimension tables.

The 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 working pressure of 150 psi (10.3 bar) and tested to the pressure for which the vessel is designed.

These supports provide maximum stability and a maximum amount of bearing area which protects the tank shell interior and the bladder.

The tank shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material and finish options, contact the Technical Services department.

The tank shall be capable of withstanding a maximum amount of bearing area which protects the tank shell interior and the bladder.

The tank shall be designed to conform to the inside tank dimensions.

Both the vertical and horizontal tank assemblies shall contain perforated center tubes of P.V.C. or other material compatible with the agent of not more than 24 in. (61 cm) diameter. The vertical tank assembly shall contain a single perforated center tube. The horizontal tank assembly shall contain both vertical and horizontal perforated center tubes provided with a cross fitting of compatible material.

The following shall be contained in each tank: a bladder discharge valve, valve barrier film, tank shell drain valve, and tank shell vent valve. These valves shall have a stainless steel valve body, a stainless steel valve seat, a Teflon seats and stuffing box ring. Each valve shall be 1 in., 1/4-turn ball valves with bronze bodies, hard chromium-plated bronze ball, bronze stem, stainless steel ball-out and handle, and high performance Teflon seals and stuffing box ring. Each valve shall have a nameplate secured to it depicting the valve name and operating position. Also, the valve shall have a lifting lug and shall be attached for securing the valve in the operating position. The nameplate shall be affixed on the side of the valve most readily with those in the tank instruction manual. All valves shall be identified and marked under the tank label for easy access. All pipe shall be Schedule 40 ASTM A-53 and all fittings shall be ASTM A-350 LF 2 bronze.

The bladder discharge piping shall include a tee with 1/2 in. plug for future sight gauge connection.
The tank exterior shall be prepared and finished in accordance with the appropriate paint system standard or “CR” red per ANSUL specification or equivalent.

A printed filling and maintenance manual shall be supplied with each tank. The manual shall contain system schematics, installation instructions, initial fill procedure, routine and minor with pressures, apparatus and materials, operating instructions, service and repair procedures, and field inspection manual.

Ordering Information

The ANSUL bladder tank shipping assembly part numbers and approximate shipping weights are listed in the dimension tables. Part numbers vary according to the various nominal capacities as listed in the dimension tables.

The 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 working pressure of 150 psi (10.3 bar) and tested to the pressure for which the vessel is designed.

These supports provide maximum stability and a maximum amount of bearing area which protects the tank shell interior and the bladder.

The tank shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material and finish options, contact the Technical Services department.
Lifting lugs shall be substantial welded tank attachments
with a clear hole not less than 2 in. (51 mm) in diameter.

The tank shall contain a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material shall be compatible with the tank shell interior and the bladder shall be compatible with the agent to be used. The bladder size shall be sufficient to conform with the inside tank dimensions.

Both the vertical and horizontal tank assemblies shall contain perforated center tubes of S.O.C. or other mate-
rial compatible with the agent, with holes of no more than 0.24 in. (6 mm) diameter. The vertical tank assembly shall contain a single perforated center tube. The horizontal tank assembly shall contain both vertical and horizontally perforated center tubes connected with a cross fitting of compatible material.

The following shall be assembled to each tank: a bladder drain/fill valve, bladder vent fill valve, tank shell drain valve, and tank shell vent valves. These valves shall be of material compatible with the agent to be used, with high chromium stainless steel ball, bore, stem, stem seat, and seat assembly piping and handle, and high performance Teflon seals and brass seat ring. Each valve shall have a nameplate secured to it desiging the valve name and spacing position. Also, the valve shall have a tag and sheet attached for registering the valve to be used. The valve names shall coincide exactly with those in the tank instruction manual. All valves shall be unplugged from under the tank for easy access. All pipe shall be Schedule 40 ASTM-B-43 and all fittings shall be ASTM-B-62 or B-584 bronze. The bladder drain/fill piping shall include a tee with 1/2 in. outside diameter piping and all fittings shall be ASTM-B-43 or B-584 bronze. The bladder drain/fill piping shall include a tee with 1/2 in. outside diameter piping and all fittings shall be ASTM-B-62 or B-584 bronze.

The tank interior shall have all welds and edges ground smooth. It shall be cleaned, grit blasted to a near white
condition, and any other pertinent warnings.

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The tank heads shall be 2 to 1 elliptical to ensure
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