



Manufacturers of Tough and Durable Polyprene® Water & Foam Tanks and PolyBilt Bodies for the Fire Industry

### BID DOCUMENT DESCRIPTION FOR POLYPRENE® TANK

The tank shall have a rated capacity in U.S. gallons, complete with lifetime warranty. The tank manufacturer shall mark the tank and furnish notice that indicates proof of warranty. The purpose of the notice is to inform department personnel who store or use the tank that the unit is under warranty.

The tank shall be constructed of Polyprene® sheet stock. This material shall be non-corrosive, stress relieved thermoplastic, black in color and U.V. stabilized for maximum protection. The tank shall be of a special configuration and is so designed to be completely independent of the body and compartments. All exterior tank joints and seems shall feature Pro Lock™ design, which includes snap-in tank components for a mechanical lock as well as extrusion welding and the *Bent Edge*®, and all joints shall be tested for maximum strength and integrity. The top of the tank is fitted with removable lifting eyes designed with a 3 to 1 safety factor to facilitate easy removability.

The transverse and longitudinal swash partitions shall be manufactured of Polyprene® material. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow and meet NFPA rules. All swash partitions interlock with one another and are welded to each other as well as to the walls and floor of the tank.

The tank shall have a combination vent and fill tower. The fill tower shall be constructed of ½” thick Polyprene® and shall be a minimum dimension of 8”x 8” outer perimeter. The tower shall be located in the left front corner of the tank unless otherwise specified by the purchaser. The tower shall have a ¼” thick removable Polyprene® screen and a Polyprene® hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum of schedule 40 pipe with a minimum I.D. of 4” that is designed to run through the tank, and shall be piped behind the rear wheels where specified by the purchaser so as to maximize traction.

The tank cover shall be constructed of recessed and mechanically locked ½” thick black Polyprene®, stress relieved, U.V. stabilized material. A minimum of two lifting dowels shall be drilled and tapped ½” x 2” to accommodate the lifting eyes.

There shall be one (1) sump standard per tank. The sump shall be constructed of ½” black Polyprene® and be located in the left front corner of the tank, unless specified otherwise. On all tanks that require a front suction, a schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the front of the tank to the sump location. The sump shall have a minimum 3” FNPT threaded outlet on the bottom for a drain plug. This shall be used as a combination cleanout and drain. All tanks shall have an anti-swirl plate located approximately 2 ½” above the dip tube.

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There will be two (2) standard tank outlets: one for tank to sump suction line at which shall be a minimum of 2 ½" FNPT coupling; and one for a tank fill line which shall be a minimum of 1 ½" FNPT coupling. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1,000 G.P.M at 100 psi. The addition of rear suction fittings, nurse valve fittings, dump valve fittings, and through tank sleeves to accommodate rear discharge piping must be specified. All auxiliary outlets and inlets must meet N.F.P.A. 1900 guidelines in effect at the time of manufacture.

Unless otherwise specified, the tank shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area.

Unless otherwise specified, the tank must be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of ¼" x 2" and a minimum Rockwell hardness of 60 durometer. Additionally, the tank must be supported around the entire bottom outside perimeter and captured both front and rear as well as side to side to prevent tank from shifting during vehicle operation.

Unless otherwise specified, a picture frame type cradle mount shall be utilized with a minimum 2"x 2" x ¼" mild steel, stainless steel or aluminum angle. Where aluminum or steel tubing and channel sub frames are incorporated in the body structure, the use of corner angles having a minimum dimension of 4"x 4" x ¼" by 6" high are permitted for the purpose of capturing the tank.

Although the tank is designed as a free-floating suspension unit, it is required that the tank have adequate hold down restraints to minimize movement during vehicle operation. If proper retention has not been incorporated into the apparatus hose floor structure, an optional mounting restraint system shall be located on the top of the tank, halfway between the front and rear on each side of the tank. These stops can be constructed of steel, stainless steel or aluminum angle having minimum dimensions of 3" x 3" x ¼" and shall be approximately 6 to 12 inches long. These brackets must incorporate a hard rubber isolating pad with a minimum thickness of ¼" affixed on the underside of the angle. The angle should then be bolted to the body side wall of the vehicle while extending down to rest on the top outside edge of the upper side wall of the tank.

Internal mounting block design and hose bed floor must be so designed that the floor slat supports extend full width from side wall to side wall and are not permitted to drop off the edge of the tank or in any way come in contact with the individual covers where a puncture could occur.

Hose floor loading must support up to 200 lbs. per square foot and must be evenly distributed whenever possible. Other equipment such as generators, portable pumps, etc., must not be mounted directly to the tank top unless provisions have been designed into the tank for that purpose. The tank shall be completely removable without disturbing or dismantling the apparatus structure.