

This document sets forth the “**Specifications**” for each copolymer polypropylene fire apparatus wetside tank, dryside tank, foam tank/modules, T-tank, skid tank and general duty tank (a “**Tank**”) sold by Pro-MEC Engineering Services, Inc. (“**Pro-MEC**”). These Specifications and the sale of the Tank are subject to Pro-MEC’s Terms and Conditions of Sale and the rest of the parties Agreement, as defined in such Terms and Conditions. These Specifications set forth the complete and exclusive Specifications with respect to the Tank under the Agreement, unless the Agreement expressly provides otherwise.

## GENERAL

The Tank shall have a capacity of \_ U.S. gallons and shall be constructed of copolymer polypropylene material. This material shall be UV stabilized, stress-relieved, noncorrosive thermoplastic. Dimensional thicknesses of the Tank shell and baffling vary depending on application and design. Material thickness range between 3/8" and 1".

## DESIGN

Each Tank is designed to the customer’s specification and/or drawing submittal. An approval drawing is sent to the customer prior to commencing manufacturing. Upon receipt of the signed approval drawing, the Tank is scheduled for production. Any changes to the approved design shall be communicated via a written change order document; additional charges may apply.

## CONSTRUCTION

The foam and/or water Tank shall be constructed in a certain configuration to ensure optimum performance throughout the lifetime of the Tank. It is designed to be completely independent of the body panels and compartments. All joints and seams shall be welded using the latest technology and techniques as prescribed by the German Welding Society (DVS) and American Welding Society (AWS). Moreover, all welding fabricators shall be trained by DVS Certified personnel. All baffles are designed and constructed to permit optimal air movement and venting to maximize waterflow throughout the filling / emptying process. All baffles are constructed utilizing a Finger-Loc designed and welded together as well as the walls of the Tank. Tank Construction meets all requirements of NFPA 1901.

## WATER FILL TOWER AND TOP

Water Tanks are designed with a combination vent and manual fill tower. Fill tower lids are typically constructed out of blue polypropylene material indicating that it is a water-only fill tower. The tower shall have a removable polypropylene screen and a hinged cover. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of Ø4", schedule 40 polypropylene pipe that is designed to run through the Tank, and shall be piped to discharge water behind the rear wheels as required per NFPA. The Tank top shall be constructed of polypropylene and UV stabilized, to incorporate a locking design, which allows for individual removal, inspection and replacement, as necessary. Tank tops are capable of supporting loads up to 200 lbs per sq. foot when evenly distributed. Other equipment such as generators, portable pumps, etc., must not be mounted directly to the Tank top unless provisions have been designed into Tank for that purpose. The apparatus shall be designed to permit complete removal of the Tank without disturbing or dismantling the apparatus.

## FOAM FILL TOWER

Foam Tanks have a manual fill tower. The fill tower shall be constructed of polypropylene. Each foam fill tower lid shall be constructed of a colored material (green for Class A foam, yellow for Class B foam and black for other foams) indicating foam-type utilized. The tower shall have a removable polypropylene screen and stainless-steel hinged cover. A pressure vacuum vent shall be provided in the lid or side of the fill tower.

## CLEAN OUT / DRAIN SUMP

There shall be one (1) clean out sump standard per Tank. The sump shall be constructed of a minimum of polypropylene and be located as required per design. On all Tanks that require a front suction, a 3" 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 Ø3" FNPT outlet on the bottom for a drain plug per NFPA. This shall be used as a combination clean-out and drain. All Tanks shall have an anti-swirl plate located approximately 3" above the inside floor.

## OUTLETS

There will be two (2) standard tank outlets: one for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump, and, one for tank fill line, which shall be sized according to the NFPA minimum size chart for booster tanks. 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 1000 GPM. The addition of rear suction fittings, nurse valve fittings, dump valve fittings, coolant line fittings, and through-the-tank sleeves to accommodate rear discharge piping must be specified before final quoting. All auxiliary outlets and inlets must meet all NFPA guidelines in effect at the time of manufacture.

## **MOUNTING**

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 400 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 360 square inches of unsupported area.

The Tank must be isolated from the subframe supports through the use of rubber isolation strips (minimum Shore A, 60 durometer) with a minimum 1/4" x 1" dimensions (larger is permitted). The subframe must be designed as to not allow the rubber to become dislodged during normal operation of the vehicle. Additionally, the Tank must be supported around the entire bottom outside perimeter and captured both in the front and rear as well as side to side to prevent Tank from shifting during vehicle operation.

A subframe mount with a minimum of 2" x 2" x 1/4" structural grade material shall be designed and provided by others or the use of corner angles having a minimum dimension of 4" x 4" x 1/4" by 6" high are permitted for the purpose of capturing the Tank.

## **CAPACITY CERTIFICATION**

All Tanks shall be tested and certified as to capacity. Each Tank is weighted empty and full to provide calculated fluid capacities; each Tank shall be delivered with a Certificate of Capacity providing each.

## **CENTER OF GRAVITY**

Center of Gravity calculations can be provided to apparatus manufacturers upon request. This information may be used by the apparatus manufacturer in assessing an apparatus' NFPA compliance.

## **WARRANTY**

PMES warranties the Tank according to the Fire Aparatus Thank Lifetime Limited Warranty, Effective: January \_\_, 2026, Revision 1, which is incorporated into these Specifications and the Agreement.

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