

# RECOMMENDED SPECIFICATIONS FOR AREO-POWER FG1 STORAGE TANKS

## A. General

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1. The above-ground storage tank system shall be as manufactured by Areo-Power Unitized Fueler, Inc., and as shown on tank construction drawing number APB810.
2. The unit shall consist of a 5000 gal.thermally insulated Fireguard™ type II double wall steel above-ground horizontal cylindrical storage tank mounted on saddles. The double wall tank shall be provided with 110 % secondary containment.
3. The tank shall be a UL2085 listed by Underwriters Laboratories, Inc. (UL) and labeled with the UL *"Insulated Secondary Containment Aboveground Tank for Flammable Liquids"* label.

## B. Materials

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1. The tank and all steel appurtenances shall be fabricated from commercial or structural grade carbon steel. Only new materials shall be used.
2. All carbon steel shall comply with the latest edition of the Specification for Structural Steel, ASTM A36; or the Specification for Steel, Carbon (0.15 Maximum, Percent), Hot Rolled Sheet and Strip, Commercial Quality, ASTM A569.
3. Insulating material shall be lightweight and porous to allow for leak migration to a leak monitoring point. The insulation material shall be as specified by the Steel Tank Institutes Standard for Fireguard™ Tanks and shall have an R factor of 2.1.

## C. Size and Dimensions

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1. The primary tank shall be 8'0" diameter by 13'4" long. The shell steel thickness shall be 1/4" and tank heads shall be 1/4". The outer shell of the double wall tank shall be 12" larger in diameter and length, giving a 6"annular space for lightweight insulation material.

## D. Primary Tank Fittings

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1. All fittings will be sized and located as indicated on tank construction drawing number *APB810*.
2. All fittings shall be protected with plastic thread protectors to prevent damage to threads and minimize foreign matter from entering the tank during shipping.

## E. Assembly and Appurtenances

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1. The double wall tank shall be furnished with 3" high saddle supports.
2. The lightweight insulation material shall not be exposed to weathering and shall be completely protected from damage between the two steel walls of the double wall tank.
3. The primary tank shall be provided with a fill containment sump designed to contain spills of up to 3 gal.(approximately) in a tank top reservoir.
4. The inner and outer tank shall be furnished with a 8" emergency vent designed to relieve internal tank pressure in excess of 0.5 psig. The emergency vent shall have a

419,261 cubic feet per hour (cfh) rating at 2.5 psig.

5. The tank assembly shall be provide with an emergency vent protection hood for the primary tank vent designed to prevent snow, ice and debris from rendering the emergency vent ineffective while allowing the vent to operate as intended. The hood shall provide a cross sectional venting area of 160 square inches. The hood assembly is to be constructed such that under under emergency conditions 9 gallons (approximately) of product emitted from the emergency vent will be contained in a tank top reservoir.
6. The unit will be provided with stairs, landing and handrails designed in accordance with OSHA requirements. The top of the staircase shall attach to the front head of the tank to allow easy tank top filling. The stair frame and handrails shall be fabricated from carbon steel. Stair treads and fill platforms shall be constructed of slip resistant grating.
7. The tank shall be provided with lifting lugs.

#### **F. Exterior Coating for Steel Parts**

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1. All exterior steel surfaces (including the interior of the containment dike) shall be factory grit blasted to the Steel Structures Paint Councils Surface Preparation Specification No. 7 (SSPC-SP7) and coated with the manufactures standard white finish (epoxy, polyurethane, enamel at manufacturers option).

#### **G. Factory Testing Requirements**

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1. The tank shall be factory tested in accordance with the requirements of UL2085.