

# RECOMMENDED SPECIFICATIONS FOR AREO-POWER STORAGE TANKS

## A. General

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1. The above-ground storage tank shall be as manufactured by Areo-Power Unitized Fueler, Inc., and as shown on tank construction drawing number APB710.
2. The unit shall consist of a steel 20,000 gal above-ground horizontal cylindrical storage tank mounted on saddles within a containment dike providing secondary containment of at least 110% of primary tank capacity.
3. The entire tank / dike assembly shall be listed by Underwriters Laboratories, Inc. (UL) and labeled with the UL *"Closed Top Diked Aboveground Tank for Flammable Liquids"* label.

## B. Materials

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1. The tank, dike 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.

## C. Size and Dimensions

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1. The primary tank shall be 120" diameter by 34'0" long. The shell steel thickness shall be 1/4" and tank heads shall be 5/16".
2. The containment dike shall be 12'0" wide by 41'0" long by 6'0" high. The containment dike steel thickness shall be 1/4".

## D. Primary Tank Fittings

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1. All fittings will be sized and located as indicated on tank construction drawing number APB710.
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 tanks will be furnished with 6" high steel supports.
2. The containment dike shall be furnished with support dunnage to allow for visual inspection of containment dike bottom. The size and location of supports shall be as indicated on tank construction drawing number APB710.
3. The unit will be provided with a drip pan type pump platform of the size and location indicated on drawing number APB710.
4. The unit shall be provided with removable 12 ga. (min) steel rainshields designed to minimize water and debris from entering the diked area. The rainshield design will allow

for easy visual interior dike inspection while allowing the dike area to be naturally ventilated to avoid possible vapor collection.

5. 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 while a 1" sch 40 overflow pipe diverts spills in excess of 3 gal in to the containment dike.
6. The 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,
7. The tank assembly shall be provide with an emergency vent protection hood 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.
8. An emergency vent diverter shall be provided such that under emergency conditions the first 9 gallons (approximately) of product emitted from the emergency vent will be contained in a tank top reservoir using a weir plate. Emissions in excess of 9 gallons shall be directed to the containment dike via a chute of rectangular cross section having an area of 48 square inches.
9. The containment dike shall be provided with a sump and 3/4" sch 40 drawoff pipe to allow liquid to be pumped out of the dike.
10. 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.
11. The tank and dike shall be provided with separate lifting lugs such that the primary tank and dike may be lifted separately.

#### **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 coated with red oxide primer.

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2. 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 high solids gray primer.

-or-

3. 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 UL 142.