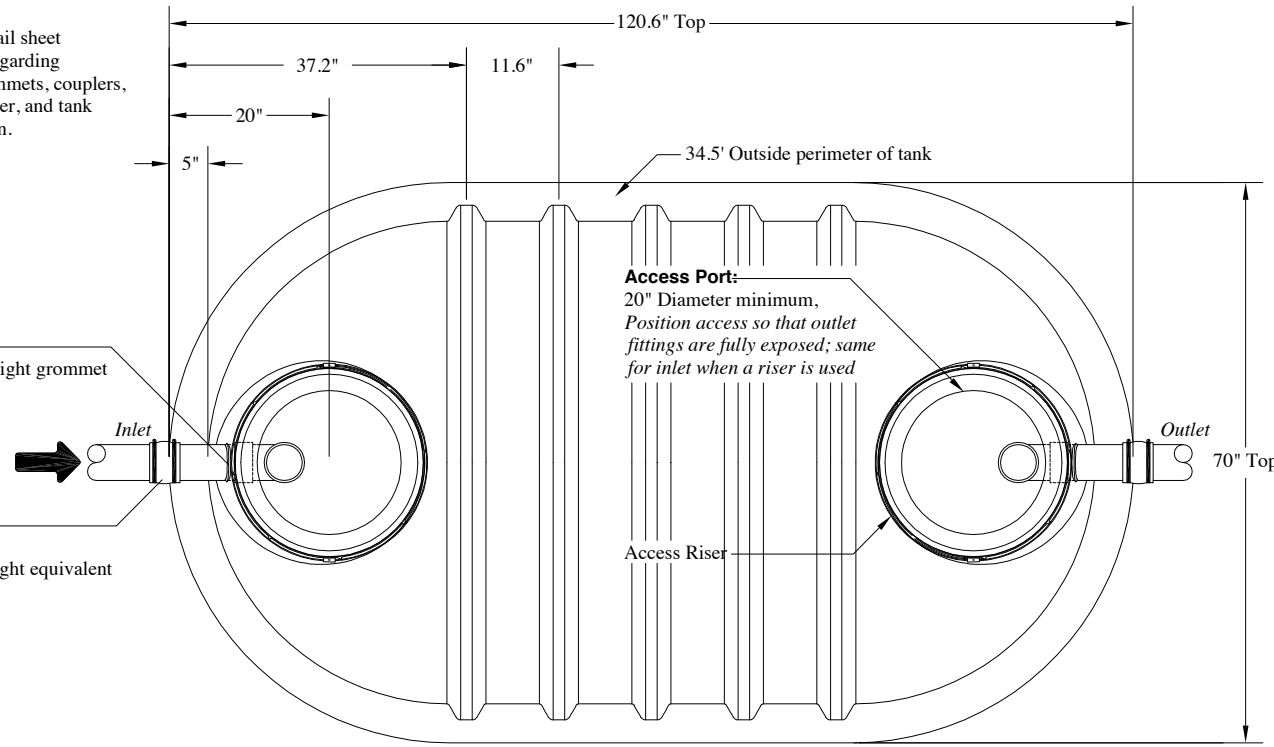


**Note:**

See general detail sheet for all details regarding seep rings, grommets, couplers, access ports, riser, and tank seam connection.

**Grommet:**  
Approved watertight grommet

**Coupler:**  
Neoprene and/or approved watertight equivalent

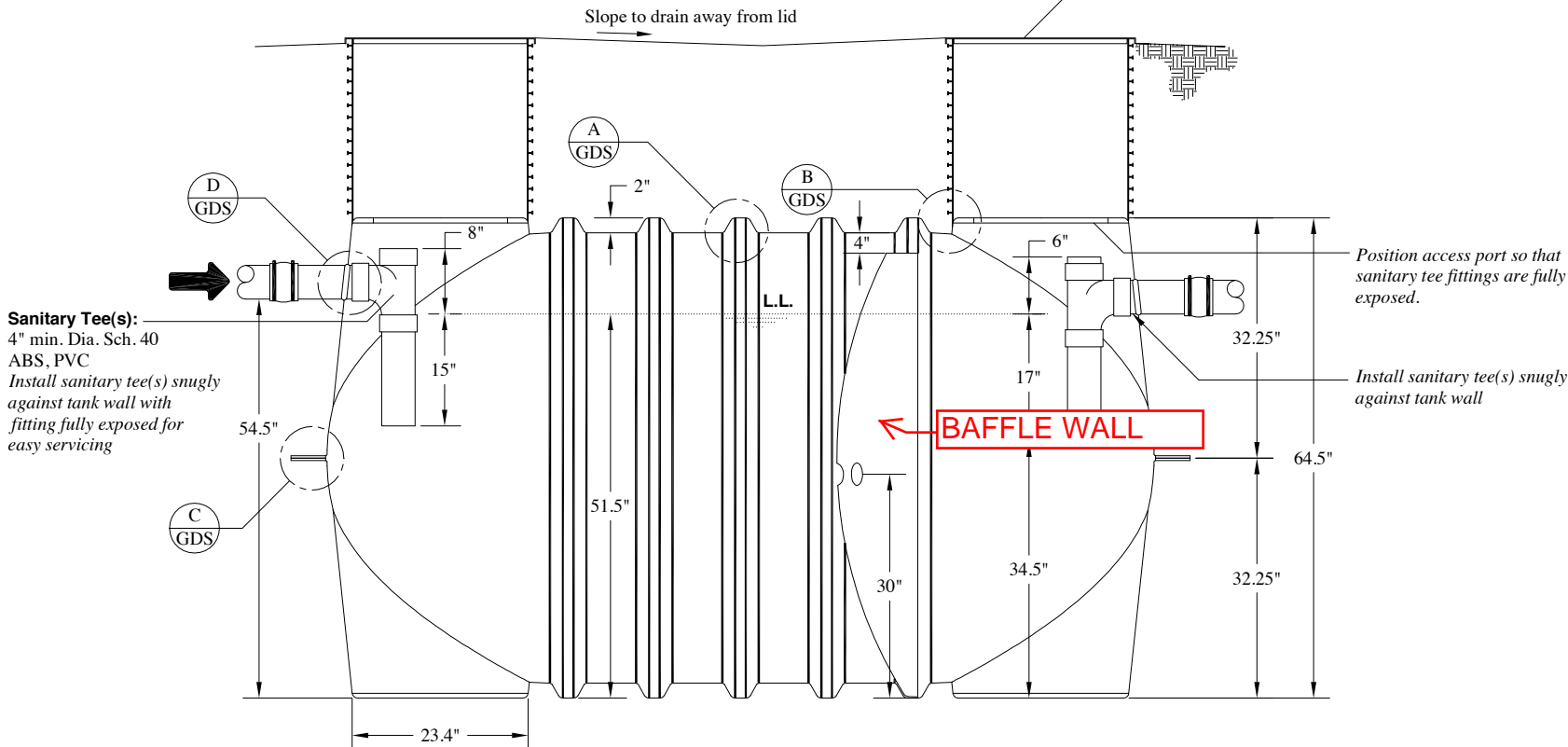


**Top View**

**Riser and Lid:**

24" Dia. ribbed PVC riser w/latching lid and polyurethane gasket or approved  
 All risers shall be attached in a permanent and watertight manner  
 30" Dia. required per 340-17-200 when depth of bury is greater than 36"  
 Lids shall be kept securely fastened at all times with stainless steel bolts

Slope to drain away from lid



**Side View 1000 Gallon Tank**

**General Notes:**

**Tank Volumes:** Total Volume: 1210 gal±  
 Operating Volume: 1050 gal± @ 51-1/2"  
 Unit volume at typical operating depth : 18 gal./in±

**Loads:** Top = 500 psf minimum  
 Lateral Load = 62.4 pcF, EFP  
 Concentrated Wheel Load = 2500 lb.  
 The septic tank shall be capable of withstanding long-term hydrostatic loading, in addition to the soil loading, due to a water table maintained at ground surface.  
 Soil Bearing = 1000 psf (re-evaluate support base if soil bearing is less or unequal)

**Fiberglass:** Method of calculations:  
 1. Fiberglass tanks shall be analyzed using finite element analysis for buried structures.  
 2. Calculations shall address the following:  
 • strength  
 • buckling  
 • deflection of 5% of the tank diameter, based on service load (including long-term deflection lag)  
 • buoyancy  
 3. Performance testing

Resin: polyester (ortho, iso, dcpd)  
 Reinforcement: Fiberglass (25-35%). The thickness for different regions of the tanks shall be described and shown in drawings for each individual tank.

The laminate properties listed here along with the minimum thickness as shown in the details are considered design minimums that must be maintained during the manufacturing of the tanks. The primary strength properties are listed below:

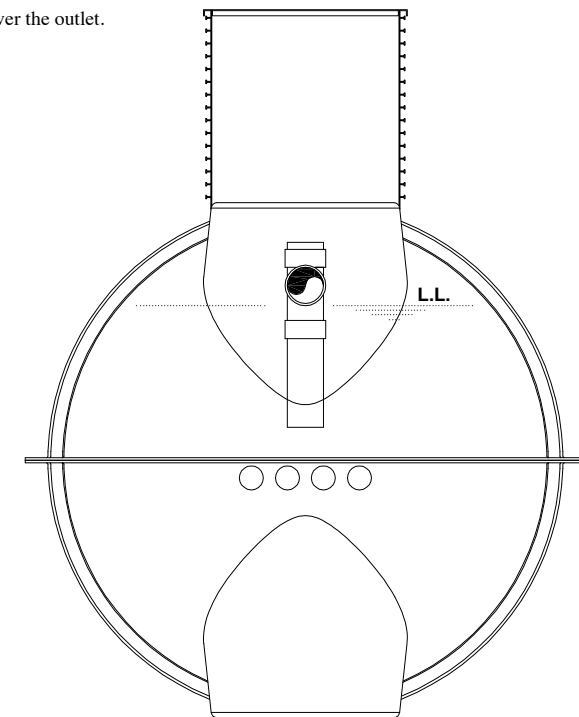
Property	Type I Laminate
Tensile modulus $E_t$	1,000,000 psi
Flexural modulus $E_f$	800,000 psi
Shear modulus $G$	400,000 psi
Ult. Tensile strength $F_t$	11,000 psi
Ult. Flexural strength $F_b$	18,000 psi
Ult. compressive strength $F_c$	21,000 psi
Ult. Shear In-Plane $F_s$	7,800 psi
Interlaminar Shear $F_{ls}$	1,500 psi

The tank shall be constructed with a glass fiber and resin content specified by the manufacturer and with no exposed glass fibers. Any permanent metal part shall be 300 series stainless steel.

**Installation:** Installation, bedding, compaction, etc., shall be in strict compliance with the manufacturers standards and state or local rules and or guidelines. All tanks shall be set level on a minimum 4 inch thick compacted sand or approved granular bedding overlying a firm uniform base. The base shall be stable and uniform in order to ensure equal bearing across the tank bottom. Installations with 18 inches or less of ground cover may require additional buoyancy considerations as described in the manufacturers instructions. A minimum cover of 12 inches is required over the tank in areas subject to occasional light wheel loads.

**Test:** Tanks shall be tested and certified watertight per manufacturers recommendations and or any prevailing rules or guidelines, whichever is more restrictive.

**Tank Markings:** Place marking on the upper most surface over the outlet.  
 Liquid capacity: 1000 gal. ±  
 Max burial depth: 4ft.  
 Max traffic (wheel): 2500 lbs.  
 Date manufactured: \_\_\_\_\_  
 Permit no.: \_\_\_\_\_



**End View**



Orengo Systems®

Title: IAPMO 1000 Gal Septic Tank

Drawing No.

Scale: NONE

Drawn By: CHRIS JORDAN

Drawing: 1 OF 3

Date: 12/19/2006

Designed By: ENGINEERING

Approved By:

Date Approved:

U.S. Patents  
 5,480,561  
 4,439,323 and 5,492,635  
 Other Patents Pending  
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