



December 11, 2014

ORENCO SYSTEMS
GOVERNMENT RELATIONS
NICHOLAS NOBLE
814 AIRWAY AVE
SUTHERLIN OR 97479

Re: Description: SEWAGE TANK EFFLUENT PUMP SYSTEM (STEP)
Manufacturer: ORENCO SYSTEMS
Product Name: 1500 BIOTUBE ® PUMP VAULT
Model Number(s): 1500
[1500 GALLON FIBERGLASS TANK; TOTAL TANK VOLUME 1785 GALS.; ONE OR TWO COMPARTMENTS WITH FLEXIBLE RIB/BAFFLE LOCATIONS, SEE TANK VOLUME CHARTS BY MANUFACTURER; 4 FT. MAX. DEPTH OF BURY; TANK DIMENSIONS = 168 IN. L X 72 IN. W X 64.5 IN. H]
Product File No: 20140312

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of December 2019.**

This approval supersedes the approval issued on 2/10/2010 under product file number 20100009.

This approval is contingent upon compliance with the following stipulation(s):

- This tank must be designed to withstand the pressures to which it will be subjected.
- The manufacturer must keep at the manufacturing plant a set of plans and specifications bearing the department's stamp of approval. The plans and specifications must be open to inspection by an authorized representative of the department.
- Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- The discharge rate of the pump must not exceed 40 gallons per minute.
- The capacity and float levels must comply with the follow requirements:
 1. A treatment zone equal to at least 2.088 times the design wastewater flow entering the tank,
 2. A drawdown zone based on the system design, and
 3. A one-day reserve zone above the high water alarm level based on the estimated wastewater flow.
- When this product receives wastewater from dwellings and is used as a septic tank effluent pump system, it will produce an effluent quality with a maximum monthly average value for BOD5 of greater than 30 mg/L and less than or equal to 220 mg/L, TSS of greater than 30 mg/L or less than or equal to 150 mg/L TSS, F.O.G. of less than 30 mg/L and solids of 1/8 inch or less.

- The gallon capacity per inch of the Orenco 1500 gallon STEP tank is shown in the table below.

Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity
4	35	23	566	42	1270
5	52	24	602	43	1305
6	70	25	638	44	1340
7	91	26	674	45	1374
8	113	27	711	46	1407
9	136	28	748	47	1439
10	160	29	785	48	1471
11	185	30	823	49	1502
12	211	31	861	50	1532
13	239	32	900	51	1561
14	268	33	939	52	1589
15	298	34	977	53	1615
16	329	35	1015	54	1640
17	361	36	1052	55	1664
18	393	37	1089	56	1687
19	426	38	1126	57	1709
20	460	39	1162	58	1730
21	495	40	1198	59	1748
22	530	41	1234	60	1765

- BEDDING:** Tanks to be set on a min. 4-in. compacted sand or approved granular bedding overlying a uniform base. Base to be stable and uniform in order to ensure equal bearing across tank bottom.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen Jones, M.S.
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