# Biotube® Pump Vault

## Applications

Orenco's patented* Biotube® Pump Vaults pump and filter effluent from septic tanks or dosing tanks to drainfields, advanced treatment, or effluent collection systems. The filter prevents large solids from leaving the tank, dramatically improving wastewater quality and extending the life of downstream treatment systems.

Each pump vault comes with a Biotube filter cartridge, a float stem bracket, and support pipes. It can accommodate either one (Simplex) or two (Duplex) High Head Effluent Pumps, their discharge assemblies, and a float switch assembly, all of which are ordered separately.

*The unique Biotube filter cartridge provides a large filter surface area (see specs on back) in a small space, to resist clogging while providing maximum long-term protection.*

*Vaults with no support pipe brackets are available. They rest on the bottom of the tank and increase the space available in the riser for equipment.*

## Standard Features & Benefits

- Installs quickly in new or existing tanks
- Easy access design allows filter cartridge removal without pulling the pump or vault; simplifies filter inspection and maintenance
- Patented Biotube filter has several times the filtering capacity of other pump vaults
- Removes approximately two-thirds of suspended solids, on average
- Accommodates Simplex or Duplex configuration, for use with one or two pumps
- Float stem bracket allows easy removal and adjustment of float assembly
- Sturdy, molded polyethylene and corrosion-proof construction ensure long life

## Biotube Filtering Process

Effluent from the relatively clear zone of the septic tank, between the scum and sludge layers, enters the Biotube Pump Vault through inlet holes in the housing. Effluent then flows between the Biotubes, utilizing the Biotubes' entire surface for filtering. Particles larger than the Biotube's mesh are prevented from leaving the tank.

*Covered by patent numbers 5,492,635 and 4,439,323

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**www.orenco.com**
**www.vericomm.net**

## Model Code for Ordering

### Biotube® Pump Vault

**PVU □□-□□□□-□**

- Support pipe length:
  - Blank = standard support pipes for 24" riser
  - L = long support pipes for 30" riser
  - NB = no bracket (for support pipe)
- Inlet hole height: 13", 19", 25", custom (specify)
- Cartridge height: 18", 24", 36"
- Vault height: 48", 57", 68", 72", 78", 84", 95", custom (specify)
- Universal pump vault (for simplex and duplex applications)

*Orenco's Biotube Pump Vault is available in standard and customized configurations. Contact Orenco or your nearest distributor for sizing recommendations.*

*Easy access design allows filter cartridge removal without pulling the pump or vault; simplifies filter inspection and maintenance.*

### Biotube Cartridge Effective Filter and Flow Area

| Cartridge Height | Filter Area | Flow Area |
|---|---|---|
| 18 in. (457 mm) | 14.5 $ft^2$ (1.3 $m^2$) | 4.4 $ft^2$ (0.4 $m^2$) |
| 24 in. (610 mm) | 19.7 $ft^2$ (1.8 $m^2$) | 5.9 $ft^2$ (0.5 $m^2$) |
| 36 in. (914 mm) | 30.0 $ft^2$ (2.8 $m^2$) | 9.0 $ft^2$ (0.8 $m^2$) |

## Biotube Pump Vault Components

** The distance between the top of the vault and the bottom of the support bracket is 3 inches (76 mm), so the vault extends that far above the opening on which the support pipes rest.*

## To Order

Call your nearest Orenco Systems®, Inc. distributor. For nearest distributor, call Orenco at 800-348-9843 or go to www.orenco.com and click on "Distributor Locator."

## Tank Access and Riser Diameter

| Biotube Application | Minimum Tank Access Diameter | Recommended Tank Access Diameter | Minimum Riser Diameter |
|---|---|---|---|
| PVU with Simplex Pump | 19 in. (483 mm) | 20 in. (508 mm) | 24 in. (610 mm) |
| PVU with Duplex Pumps | 19 in. (483 mm) | 20 in. (508 mm) | 30 in. (762 mm) |
| PVU with Recirculating Splitter Valve* | 23 in. (584 mm) | 23 in. (584 mm) | 30 in. (762 mm)** |

** RSV2Q or RSV3Q for AdvanTex® Treatment Systems*

***24-in. riser can be used with no-bracket (NB) PVU.*

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