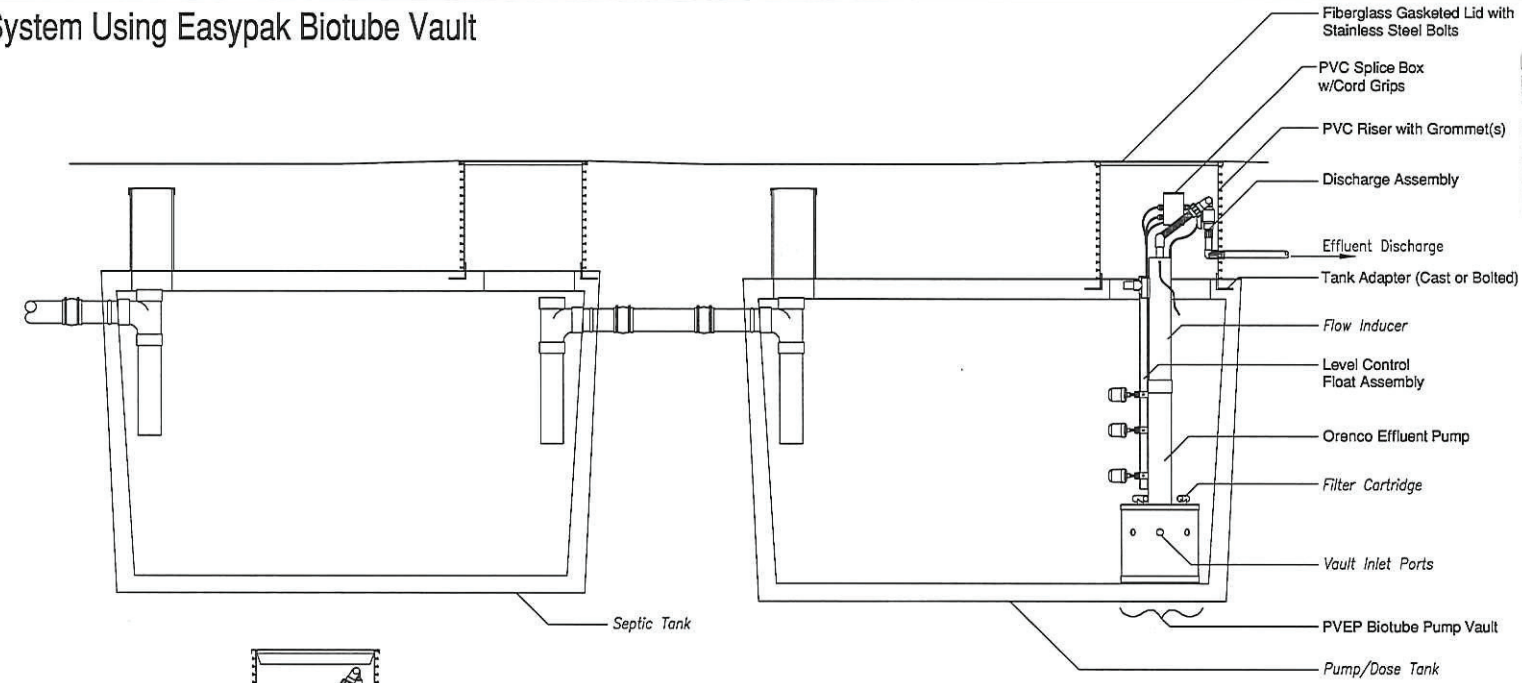
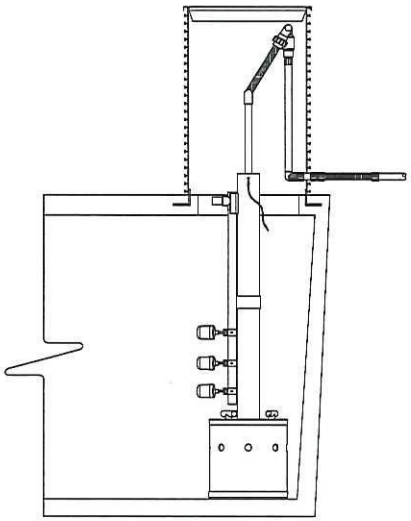
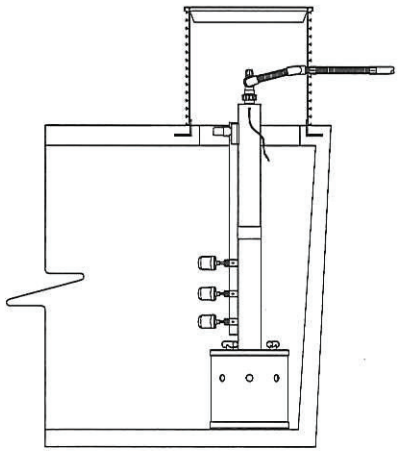
Pump System Using Easypak Biotube Vault





Easypak Cold Weather Discharge



Easypak Drain Back Discharge

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20130377

Designed By: Engineering	Drawn By: Chris Jordan	Title: Pump System Using Easypak Biotube Vault		Orenco Systems® Incorporated
Approved By:	Drawing: 1 OF 1	Drawing No. NDW-TD-EZ-1	Scale: 1" = 2'-0"	
Date Approved:	Revision: 1	Date: 1/19/09		

20130377

Biotube® EasyPak™ Pump Package

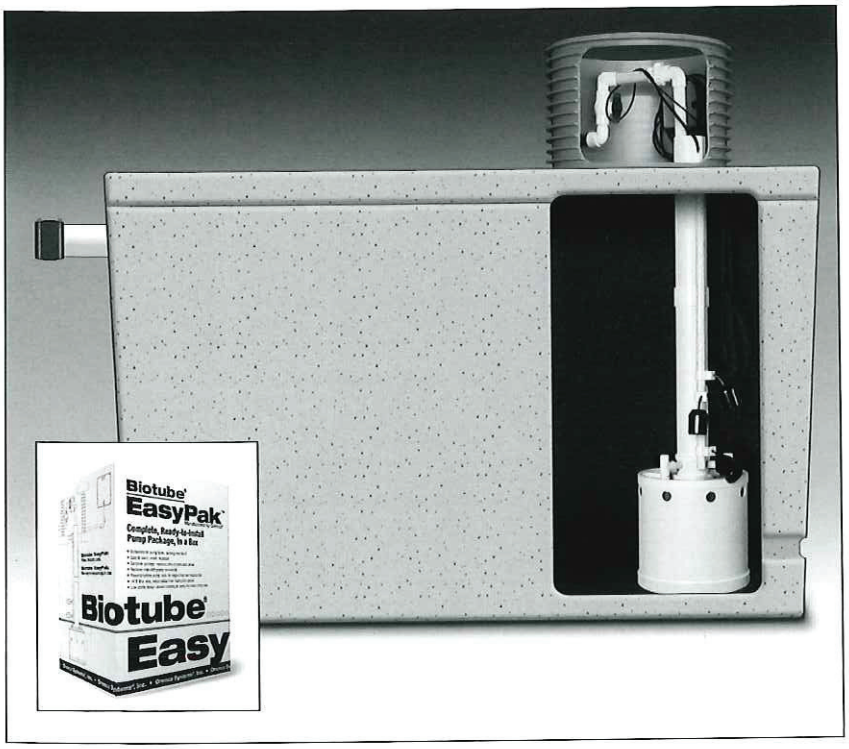
Applications

Orenco's Biotube® EasyPak™ Pump Package is the first pump package designed specifically for use in pump tanks to filter and pump effluent to dispersal*. It includes the following components:

- EasyPak™ pump vault
- 4-inch (100-mm) turbine effluent pump
- Biotube® filter cartridges (3)
- Flow inducer
- Float switches with sliding collars
- Discharge plumbing assembly
- Splice box
- Control panel (demand dosing or timed dosing)

The kit saves time for the installer and protects the drainfield from clogging. Choose a system for demand dosing (to a gravity drainfield) or timed dosing (to a pressurized drainfield or mound).

**patent pending*



No more "pump on a block," Orenco's new EasyPak® is the first pumping system designed just for pump tanks. And it pumps nearly to the bottom of the tank! EasyPak comes completely pre-packaged, with a 5-year warranty, and ready to install.

Standard Features & Benefits

- A complete system in one box
- Easy to select, install, and maintain
- Drops right into a pump tank
- All parts designed to work together
- Vault keeps out sludge, but allows pumping to nearly the bottom of the tank to meet large reserve capacity requirements
- Turbine pump lasts four times longer than centrifugal pumps
- Turbine pump withstands the frequent starts and stops that timed dosing requires
- 5-year warranty
- Patented Biotube® filter has 14 ft² (1.3 m²) of filter area
- Snap-in float stem and adjustable float collars keep floats securely in position, speeding installation and servicing
- Built of molded ABS and PVC for long life
- Demand dosing and timed dosing systems available
- Free EasyPak Design Aid CD-ROM available. To order, call Orenco at 800-348-9843. Or you can download everything at orenco.com

APS-PTV-1
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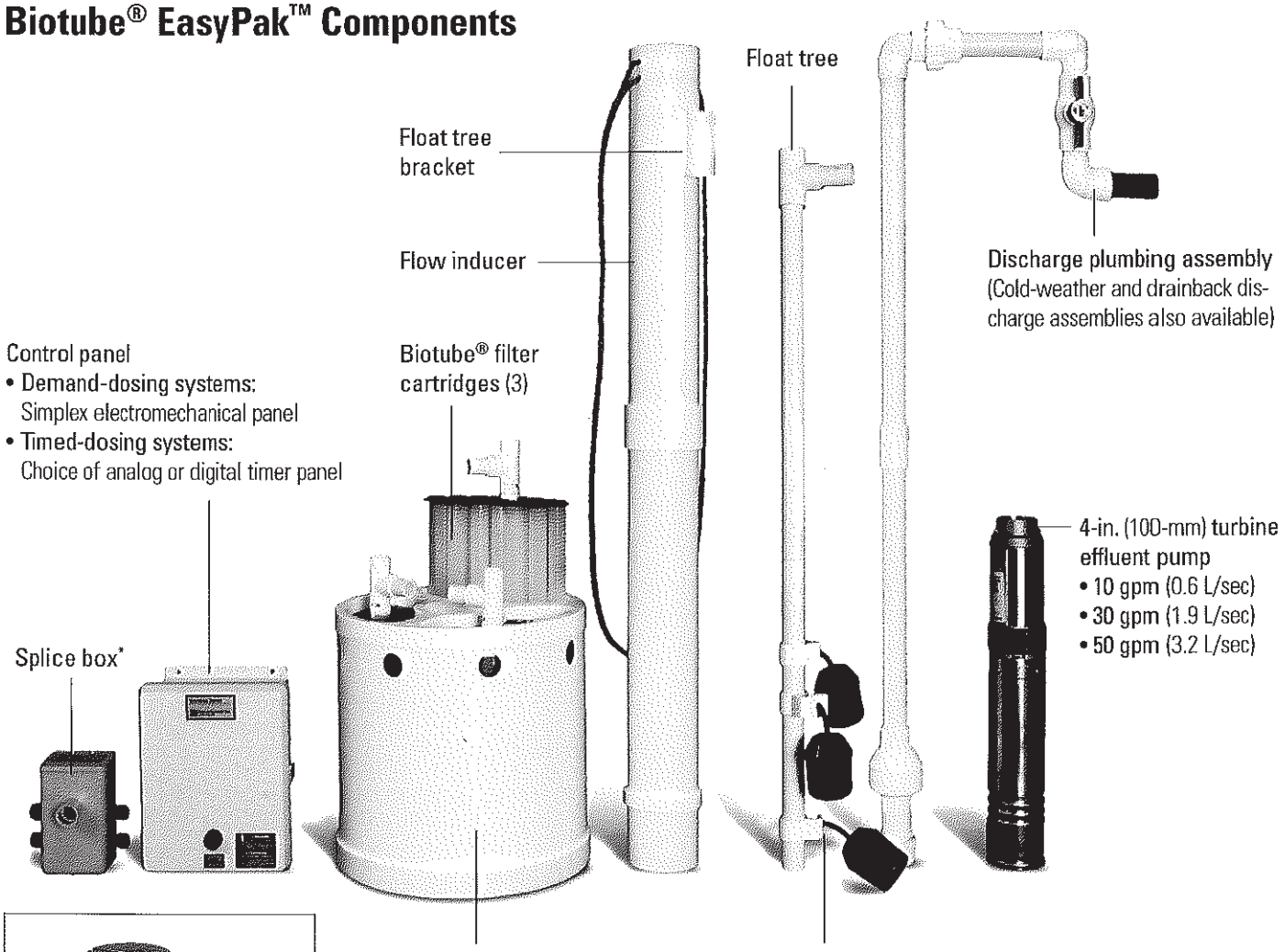
Biotube® EasyPak™ Components



*External splice box also available

Model Code for Ordering

BEP ☐ ☐ ☐

Discharge assembly:
Blank = Standard
DB = Drainback
CW = Cold weather

Panel:
DD = Demand dosing
TDA = Timed dosing, analog
TDD = Timed dosing, digital

Pump flow rate (nominal):
10 = 10 gpm (0.6 L/sec) with ¼-in. (6-mm) flow control
30 = 30 gpm (1.9 L/sec)
50 = 50 gpm (3.2 L/sec)

Biotube EasyPak™ pump vault, 15-inch (380-mm) vault

To Order

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

Distributed By:

Biotube® EasyPak™ Design Criteria

Orenco Systems® Incorporated
800-348-9843

System Description

Orenco's EasyPak™ pumping systems are designed for pumping effluent from a dosing tank that is separate from the septic tank. The EasyPak pump vault includes three Biotube® effluent filter cartridges that filter out solids, so that only clear effluent is pumped out of the dosing tank. This reduces biological loading and clogging of downstream components, saving money on O&M and extending the life of drainfields, secondary treatment systems, and other parts of the septic system.

Figure 1

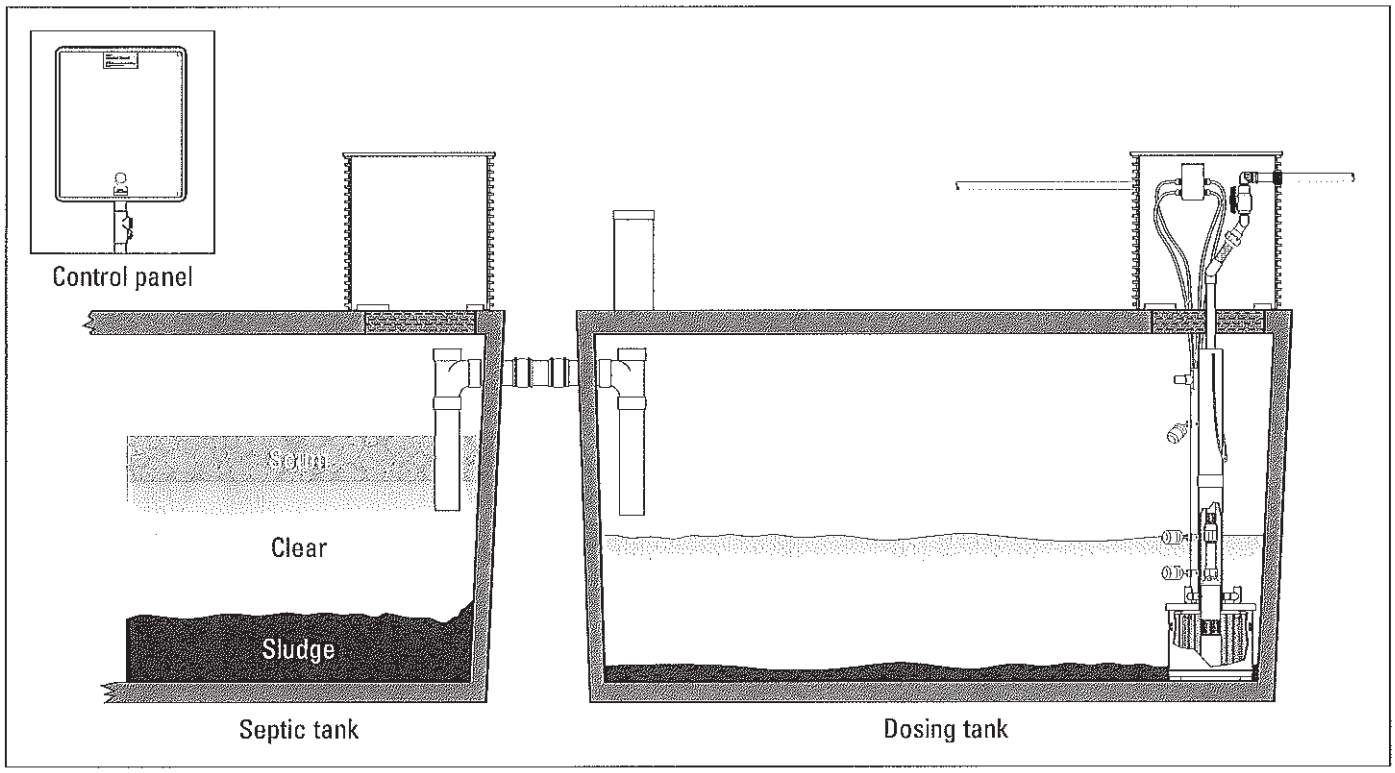


Figure 1 shows a typical household system with a septic tank and dosing tank. Raw sewage enters the septic tank and separates into three distinct zones: a scum layer, a clear layer, and a sludge layer. An outlet tee from the septic tank allows effluent from the clear layer to flow into the dosing tank. The EasyPak pump package in the dosing tank pumps filtered effluent to the drainfield or other downstream component.

Pumping System

Figure 2 shows the components of an EasyPak pumping system for a dosing tank.

1. Riser and lid (ordered separately from EasyPak package) — The riser and lid on the dosing tank provide access to the pumping equipment.
2. Splice box — In the electrical splice box, wires from the control panel are spliced with the cords from the pump and float switches.
3. Biotube PVEP Pump Vault (with three filter cartridges) — A specially configured pump vault with filter allows pumping from the bottom half of the dosing tank.
4. Orenco 4-in. turbine effluent pump — A 4-in. turbine effluent pump moves the effluent to the distribution point. (See Appendix 1.)
5. Float switch assembly — Float switches affixed via float collars to a quick-disconnect float stem are mounted onto the pump vault to monitor and control the liquid level inside the dosing tank.
6. Discharge plumbing assembly (DPA) — A discharge plumbing assembly connects the pump to the point of discharge from the dosing tank. (See Appendix 3.)
7. Control panel — A control panel to govern the operation of the pump is mounted within sight of the pump system. (See Appendix 2.)

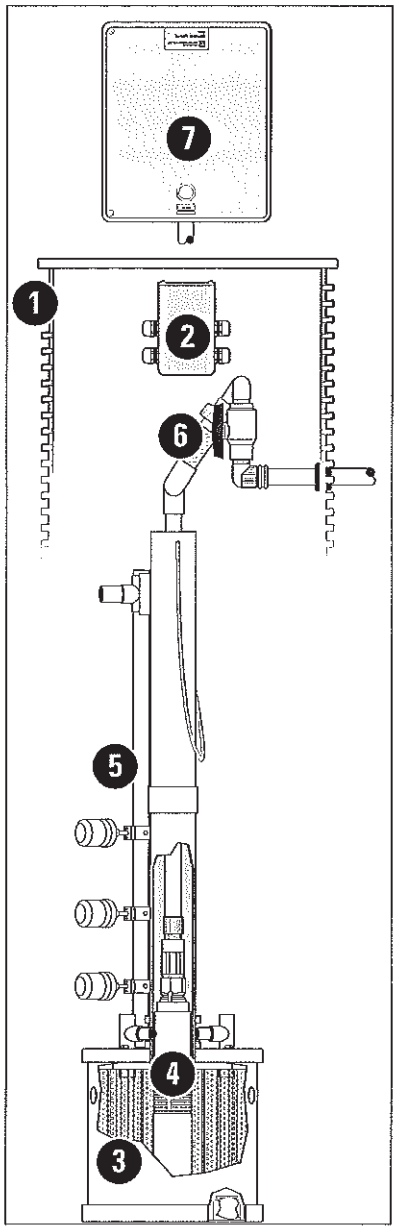


Figure 2

Package Selection

All EasyPak pump packages are available in both demand-dose and timed-dose applications. There are two basic packages, based on dose method and flow rate:

1. Demand-dose — The typical package for demand-dose systems is the BEP10DD.

   The BEP10DD accommodates flows up to 10 gpm (15 gpm without ¼-in. flow control) and can be used to pump from a dosing tank to a gravity drainfield (distribution box, hydrosplitter, etc.). BEP30DD and BEP50DD systems are available for demand-dose applications that require flows greater than 15 gpm.

2. Timed-dose — The typical package for timed-dose systems is the BEP30TDD.

   The BEP30TDD accommodates flows up to 40 gpm and can be used for pumping from a dosing tank to a final dispersal area (pressurized drainfield, sand filter, etc.). BEP10TDD systems are available for timed-dose applications with flows of 10 gpm or less, such as drip irrigation. BEP50TDD systems are available for timed-dose applications that require flows of 40 gpm or more, such as large, pressurized drainfields.

Design Tools

The EasyPak Design Aid CD-ROM allows system designers and specifiers to select the correct system for the application. When information about the drainfield or sand filter is entered, a PumpSelect™ program, which has been specially designed for EasyPak, calculates the pump flow rate and TDH required for the system. For help in calculations, see Appendix 3 in this document, "Headloss in Discharge Assemblies."

Standard EasyPak™ Packages

Demand Dose			*Timed Dose*		
Model code	**Discharge**	**Maximum flow rate**	**Model code**	**Discharge**	**Maximum flow rate**
BEP10DD	Standard	15 GPM	BEP10TDD	Standard	15 GPM
BEP10DD-DB	Drainback	15 GPM	BEP10TDD-DB	Drainback	15 GPM
BEP10DD-CW	Cold Weather	15 GPM	BEP10TDD-CW	Cold Weather	15 GPM
BEP30DD	Standard	40 GPM	BEP30TDD	Standard	40 GPM
BEP30DD-DB	Drainback	40 GPM	BEP30TDD-DB	Drainback	40 GPM
BEP30DD-CW	Cold Weather	40 GPM	BEP30TDD-CW	Cold Weather	40 GPM
BEP50DD	Standard	65 GPM	BEP50TDD	Standard	65 GPM
BEP50DD-DB	Drainback	65 GPM	BEP50TDD-DB	Drainback	65 GPM
BEP50DD-CW	Cold Weather	65 GPM	BEP50TDD-CW	Cold Weather	65 GPM

Accessory Equipment

The following products may be required to complete the package:

- Access Risers with Fiberglass Lids
- Riser Tank Adapters with Bolt-Down Kit
- Adhesives
- Anti-Siphon Valve
- Grommets

See Orenco's *General Onsite Products Catalog Supplement* to order these products.

Appendix 1: 4-in. Turbine Pumps

In onsite wastewater and pressure distribution systems, Orenco's 4-in. turbine effluent pumps are commonly used because of several advantages they offer compared with other types of pumps in those applications:

1. *High cycle life*. Orenco 4-in. turbine pumps regularly reach lifetime cycle counts of more than one million.
2. *Scouring velocity*. Orenco 4-in. turbine pumps provide more than sufficient energy to flush laterals and help keep orifices clear.
3. *Pump run-dry*. The pump has 24 hr run-dry capability with no deterioration in pump life or performance.
4. *Durable operation*. Orenco 4-in. turbine pumps can operate for extended periods in the "no discharge" condition or at heads greater than the maximum "shut-off" head.
5. *Ease of maintenance*. A ½-hp turbine pump weighs about 25 lb and can be removed by one person for maintenance or repairs without the need for a lifting mechanism.
6. *Excellent abrasion and corrosion resistance*. Orenco's pumps are constructed entirely of 300-series stainless steel and thermoplastics.

Appendix 2: Control Panels

Orenco's EasyPak simplex control panels provide pump control based on dose method. Demand-dose panels are specifically engineered for pumping from dosing tanks into such applications as conventional gravity systems. Timed-dose panels are specifically engineered for applications that require programmable timers, such as pressurized drainfields and secondary treatment systems. Shared features of both control panels include the following:

- Motor-start contactor for increased system life
- 20A Auto/Off/Manual toggle switch for easy troubleshooting and maintenance.
- Resettable control circuit breaker that negates the need for easily lost or forgotten fuses
- Discrete, touch-safe terminal locations for simple, intuitive pump and float wiring
- Fiberglass enclosure, for increased durability over plastic
- Easily accessed external "Push to Silence Alarm" button, for homeowner control over audible alarms

Demand-dose panels include the following features:

- Audible and visual alarms to signal high level conditions.
- Audible alarm silence relay keeps the audible alarm off until power is removed then restored.
- Auto reset feature resets the alarm when the tank liquid level returns to normal

Timed-dose panels include the following features:

- Choice of digital or analog timers
- Digital timing is accurate to within 1%
- Multiple timer settings allow for optimum dosing during both normal and peak flow conditions
- Built-in programming keys for adjusting timer settings in the field without a portable computer
- Built-in elapsed time meter and counters
- Audible and visual alarms to signal high level and low level conditions
- High and low-level alarm conditions differentiated by steady or blinking light
- Silenced alarms automatically reactivated after 12 hours if condition is not corrected
- Timed delays on float inputs to prevent chattering
- Visual indicators of float position

Appendix 3: Headloss in Discharge Assemblies

Headlosses through discharge assemblies are very difficult to calculate theoretically because of the interdependence of the various types and positions of fittings and valves. Simple addition of K values for fittings and valves gives very inaccurate results. Empirically derived equations and curves for specific types of discharge assemblies are much more accurate. Equations for headlosses through discharge assemblies of the type illustrated in Figure 2 are shown in Table 1. These equations are developed by measuring actual headlosses that occur under operating conditions.

Table 1: Headloss equations for selected discharge assemblies

Nominal pipe diameter	*Model number*	*Equation**
1"	HV100BC	$H_L = 0.044Q^2$
1 ¼"	HV125BC	$H_L = 0.007Q^2$
2"	HV200BC	$H_L = 0.002Q^2$

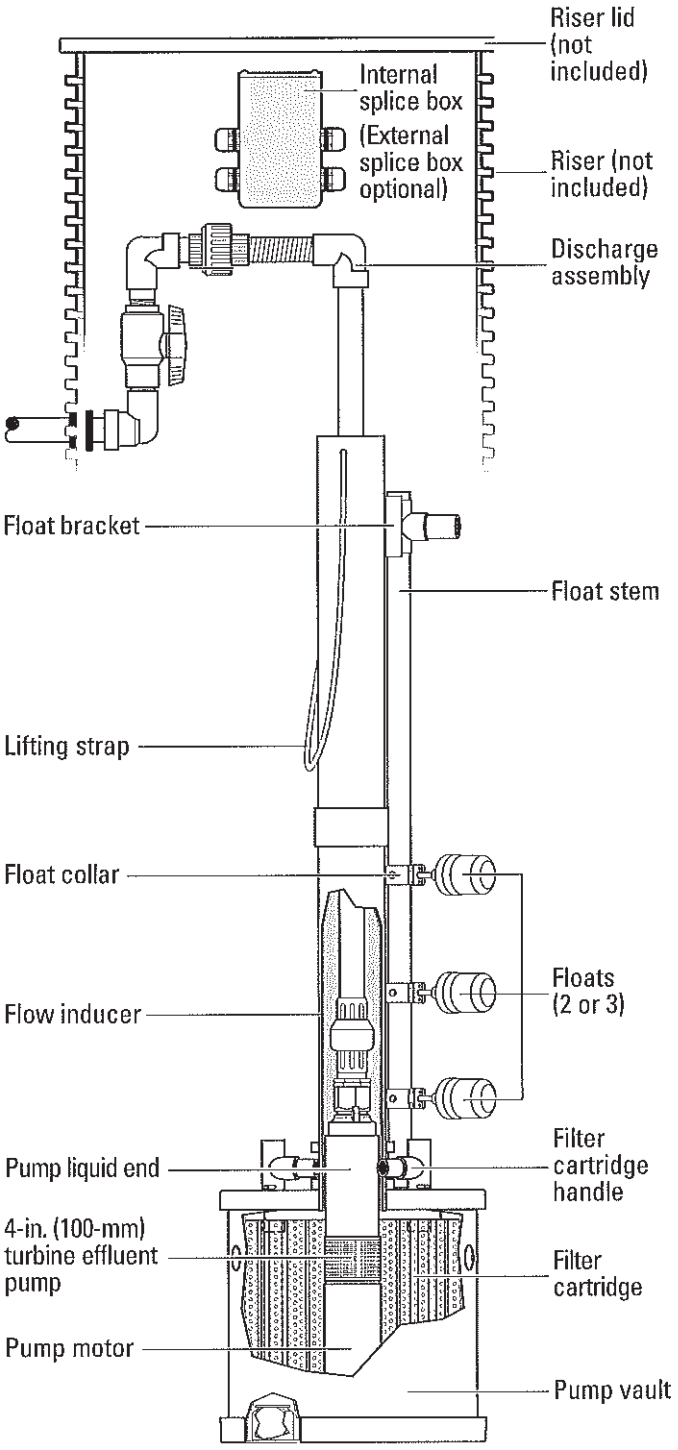
** Q = flow*

Technical Data Sheet

Biotube® EasyPak™ Pump Package

Orenco Systems® Incorporated
800-348-9843

60-Hz Series Pump Packages



Biotube EasyPak® pump package components. (Control panel not shown: see p. 4.)

General

Orenco's Biotube® EasyPak™ Pump Package is the first complete pump package specifically for filtering and pumping effluent from pump tanks. The EasyPak pump package makes it easy to select and install the correct pump package for the pump tank. (U.S. Patents #4,439,323 and #5,492,635. Additional U.S. and international patents pending.)

This document provides detailed information on the EasyPak pump vault, effluent filter cartridges, 4-in. (100-mm) 60-Hz turbine effluent pump, and control panel. For more information on other EasyPak components, see the following Orenco technical documents:

- *Float Switch Assemblies* (NTD-MF-MF-1)
- *Discharge Assemblies* (NTD-HV-HV-1)
- *Splice Boxes* (NTD-SB-SB-1)
- *External Splice Box* (NTD-SBEX-1)

Applications

The Biotube EasyPak pump package is designed to filter and pump effluent from a pump tank to gravity or pressurized dispersal.

The unique low profile, submersible design of the pump vault makes it well suited to applications where large reserve volumes are required, or when pumping from near the bottom of the tank.

Complete packages for on-demand dosing or timed dosing at 10, 30, and 50 gpm (0.6, 1.9, and 3.2 L/sec) and 50 Hz or 60 Hz are available.

Standard Models

BEP10DD, BEP10DDCW, BEP30TDD, BEP30TDDCW, BEP50TDD, BEP50TDDCW

Nomenclature

BEP □ □ □

- Discharge assembly:
  - Blank = Standard
  - DB = Drainback
  - CW = Cold weather
- Panel:
  - DD = Demand dosing
  - TDA = Timed dosing, analog
  - TDD = Timed dosing, digital
- Pump flow rate (nominal):
  - 10 = 10 gpm (0.6 L/sec) with ¼-in. (6-mm) flow control
  - 30 = 30 gpm (1.9 L/sec)
  - 50 = 50 gpm (3.2 L/sec)
- Biotube EasyPak™ pump vault, 15-inch (380-mm) vault

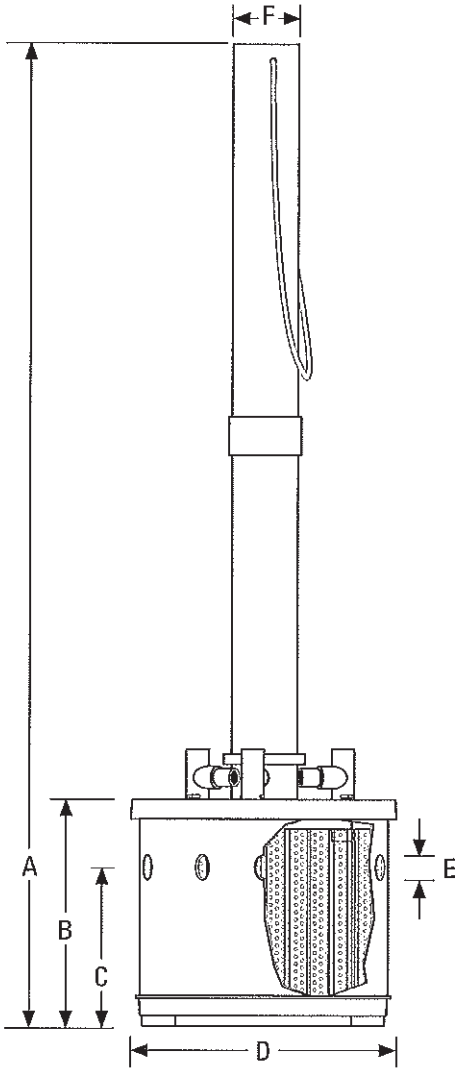
Biotube® EasyPak™ Pump Package (continued)

EasyPak™ Pump Vault

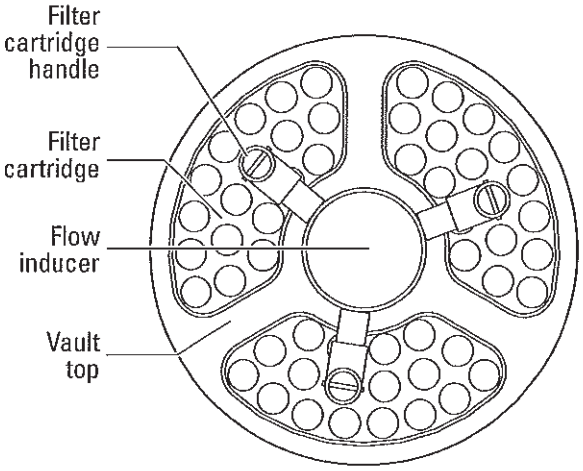
Materials of Construction	
Vault body	PVC
Vault top	ABS
Vault base	Fiberglass
Flow inducer	PVC
Lifting strap	Hollow-braided poly
Dimensions, in. (mm)	
A - Overall height (adjustable)	64 (1625)
B - Vault height	15 (380)
C - Inlet hole center height	12 (305)
D - Vault diameter	15.75 (400)
E - Inlet hole diameter (8 total)	1.38 (35)
F - Flow inducer diameter, nominal	4 (100)

Biotube® Filter Cartridge

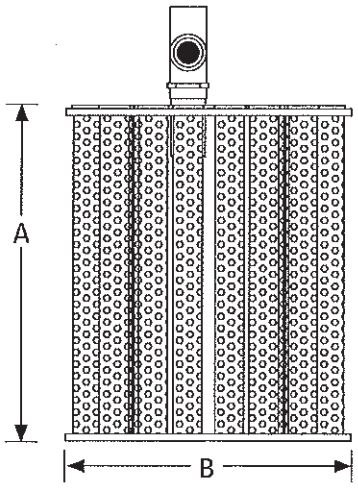
Materials of Construction	
Filter tubes	Polypropylene
Cartridge end plates	Polyurethane
Handle	PVC
Dimensions, in. (mm)	
A - Cartridge height	12 (305)
B - Cartridge width	10.3 (262)
Performance	
Number of filter cartridges	3
Biotube® mesh opening	0.125 in. (3 mm)
Total filter flow area	4.5 ft^2 (0.4m^2)
Total filter surface area	14 ft^2 (1.3m^2)
Maximum flow rate	75 gpm (4.7 L/sec)



EasyPak® pump vault



Filter cartridges in vault, top view



Biotube® filter cartridge, front view

4-in. (100-mm) Turbine Effluent Pumps

EasyPak™ Turbine Effluent Pumps are constructed of lightweight, corrosion-resistant stainless steel and engineered plastics.

Power cords for EasyPak turbine effluent pumps are 10-ft (3.1 m) 16/3 Type SOOW 600-V motor cable, suitable for Class I, Division 1 and Division 2 applications (not compatible with Franklin Electric Super Stainless motors).

Materials of Construction

Discharge:	Glass-filled polypropylene (10- and 30-gpm) Stainless steel (50-gpm)
Discharge bearing:	Engineered thermoplastic (PEEK)
Diffusers:	Glass-filled PPO (Noryl GFN3)
Impellers:	Celcon® acetal copolymer (10-gpm) Noryl GFN3 (30- and 50-gpm)
Intake screens:	Polyethylene
Suction connection:	Glass-filled polypropylene (10-gpm) Stainless steel (30- and 50-gpm)
Drive shaft:	Stainless steel, 300 series
Coupling:	Sintered stainless steel, 300 series
Shell:	Stainless steel, 300 series
Motor:	Filled with lubricating coolant. Includes thermal overload protection.

Specifications

Nominal flow (gpm)	Length in. (mm)	Weight lb (kg)	Discharge in., nominal*	Impellers
10	22.0 (559)	23.0 (10.4)	1.25	6
30	20.5 (508)	21.0 (9.5)	1.25	3
50	19.5 (495)	24 (10.9)	2.00	2

Performance

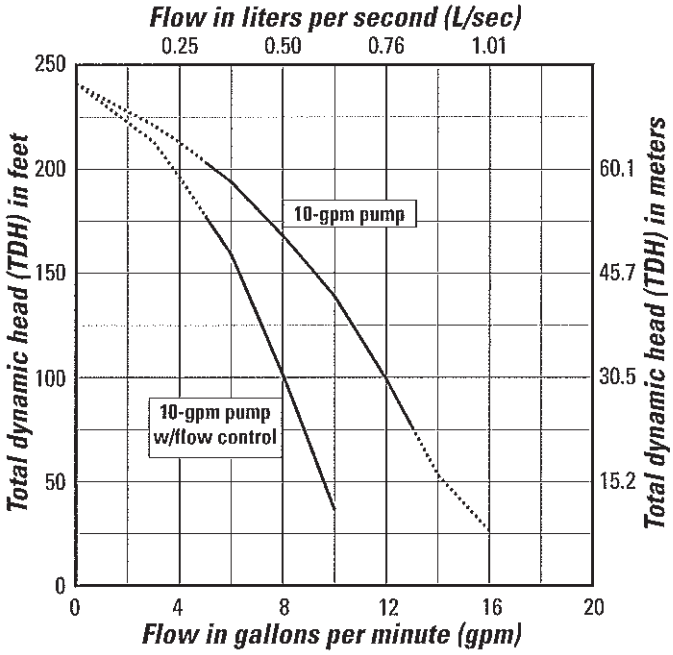
Nominal flow (gpm)	Horsepower (kW)	Design flow amps	Rated cycles per day	Minimum liquid level, in. (mm)**
10	0.5 (0.37)	12.4	300	16 (406)
30	0.5 (0.37)	11.9	300	20 (559)
50	0.5 (0.37)	12.1	300	24 (610)

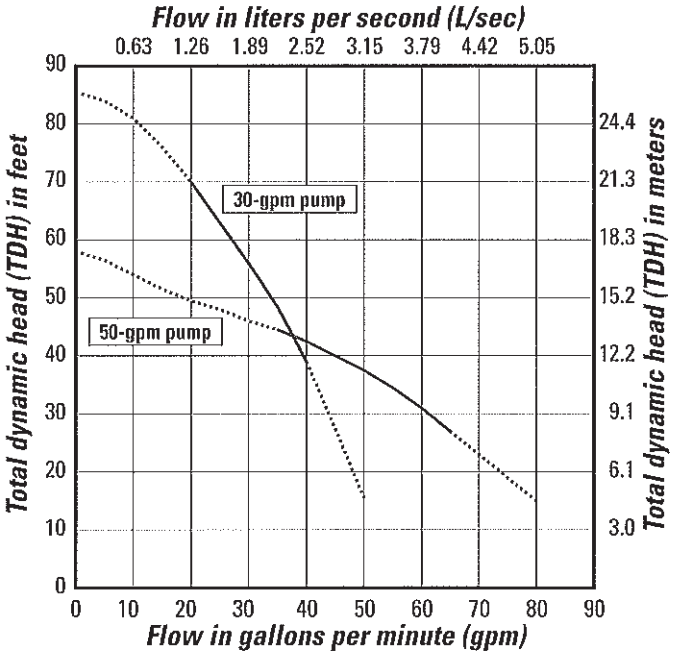
* *Discharge is female NPT threaded, U.S. nominal size, to accommodate Orenco® discharge hose and valve assemblies. Consult your Orenco Distributor about fittings to connect discharge assemblies to metric-sized piping.*

** *Minimum liquid level is for single pumps when installed in an Orenco Biotube® EasyPak™ Pump Vault.*

Pump Curves

Pump curves, such as those shown here, can help you determine the best pump for your system. Pump curves show the relationship between flow (gpm) and pressure (TDH), providing a graphical representation of a pump's optimal performance range. Pumps perform best at their *nominal flow rate*, measured in gpm.





Biotube® EasyPak™ (continued)

Control Panel (Demand Dose)

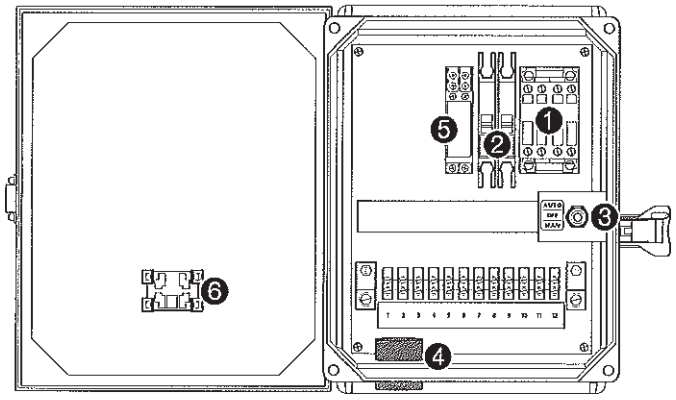
Orenco's EasyPak® demand dose control panels are specifically engineered for the EasyPak pump package and are ideal for applications such as demand dosing from a pump tank into a conventional gravity drainfield.

Materials of Construction	
Enclosure	UV-resistant fiberglass, UL Type 4X
Hinges	Stainless steel
Dimensions, in. (mm)	
A - Height	11.5 (290)
B - Width	9.5 (240)
C - Depth	5.4 (135)
Specifications	
Panel ratings	120 V, 3/4 hp (0.56 kW), 14 A, single phase, 60 Hz
1. Motor-start contactor	16 FLA, 1 hp (0.75 kW), 60 Hz; 2.5 million cycles at FLA (10 million at 50% of FLA)
2. Circuit breakers	120 V, 10 A, OFF/ON switch, Single pole
3. Toggle switch	Single-pole, double-throw HOA switch, 20 A
4. Audio alarm	95 dB at 24 in. (600 mm), warble-tone sound, UL Type 4X
5. Audio alarm silence relay	120 V, automatic reset, DIN rail mount
6. Visual alarm	7/8-in. (22-mm) diameter red lens, "Push-to-silence", 120 V LED, UL Type 4X

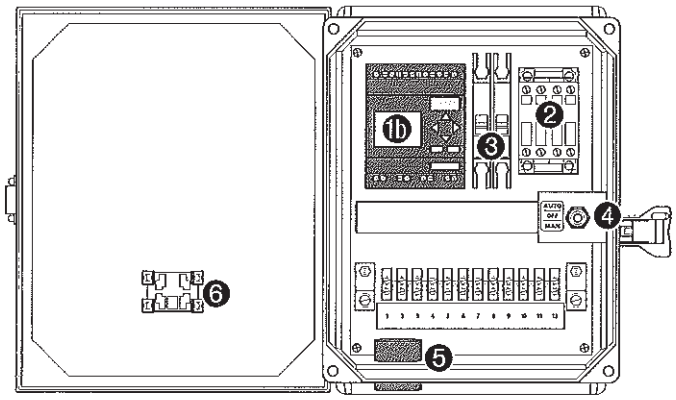
Control Panel (Timed Dose)

Orenco's EasyPak timed dose control panels are specifically engineered for the EasyPak pump package and are ideal for applications such as timed dosing from a pump tank into a pressurized drainfield or mound. Analog or digital timers are available.

Materials of Construction	
Enclosure	UV-resistant fiberglass, UL Type 4X
Hinges	Stainless steel
Dimensions, in. (mm)	
A - Height	11.5 (290)
B - Width	9.5 (240)
C - Depth	5.4 (135)
Specifications	
Panel ratings	120 V, 3/4 hp (0.56 kW), 14 A, single phase, 60 Hz
Dual-mode	Programmable for timed- or demand-dosing (digital timed-dosing panels only)
1a. Analog timer	120 V, repeat cycle from 0.05 seconds to 30 hours. Separate variable controls for OFF and ON time periods
1b. Digital timer	120-V programmable logic unit with built-in LCD screen and programming keys. Provides control functions and timing for panel operation
2. Motor-start contactor	16 FLA, 1 hp (0.75 kW), 60 Hz; 2.5 million cycles at FLA (10 million at 50% of FLA)
3. Circuit breakers	120 V, 10 A, OFF/ON switch. Single pole 120 V
4. Toggle Switch	Single-pole, double-throw HOA switch, 20 A
5. Audio alarm	95 dB at 24 in. (600 mm), warble-tone sound, UL Type 4X
6. Visual alarm	7/8-in. (22-mm) diameter red lens, "Push-to-silence", 120 V LED, UL Type 4X



Control panel, demand-dose



Control panel, timed-dose (digital timer model shown)

Biotube® EasyPak™ Pump Package

20130377

Orenco Systems® Incorporated
1-800-348-9843

Installation and Maintenance Instructions

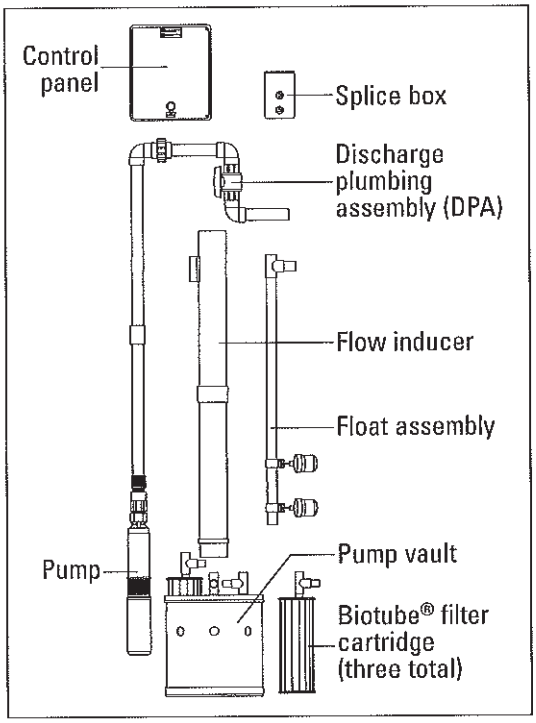
Before You Begin

This document covers assembling and installing the Biotube® EasyPak™ Pump Package,* as well as instructions for annual maintenance. For instructions on installing and wiring your splice box, see the Orenco® document *Splice Boxes: Installation, Operation, and Maintenance Instructions Model SB_* (EIN-SB-SB-1). For instructions on installing and wiring your control panel, see the Orenco document *Panel Installation* (EIN-CP-GEN-1). Read and understand all of these instructions before you install your EasyPak kit.

Installation Instructions

Before starting your installation, make sure that the EasyPak package you have matches your system's needs. Open the EasyPak box and check the contents of the box for compatibility with your system. Make sure you have the correct adapter for your discharge plumbing assembly-to-discharge-line connection. Also check that the pump included with your EasyPak package meets the head and flow requirements for your system.

You'll need to know the float heights specified for your system. If these are not specified on the system plans, contact the system's designer.



Biotube® EasyPak™ kit components

Step 1: Prep the Vault Assembly

NOTE: You will need PVC cement for these steps.

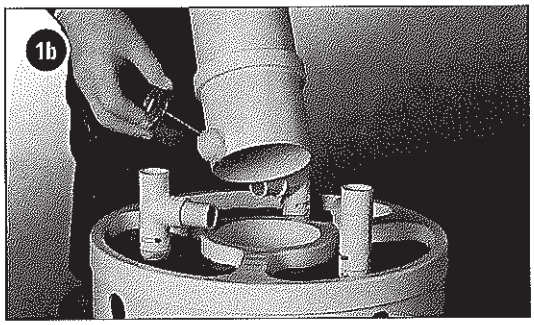
Step 1a: Rotate the cartridge handles on the filter cartridges away from the center hole.

WARNING: DO NOT apply primer to the vault cap. The cap is ABS, and primer will weaken the joint.

Step 1b: Glue the bottom of the flow inducer (the end with the retaining ring) into the center hole of the vault cap.

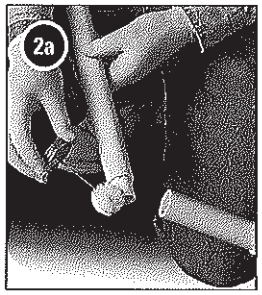
Step 1c: Glue the upper and lower halves of the flow inducer together. Position the upper half so the float assembly, when installed, will not interfere with removal of the filter cartridges.

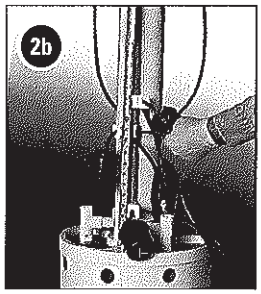
Step 1d: Rotate the cartridge handles to their secured position, facing inwards.

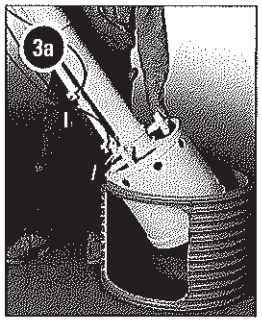


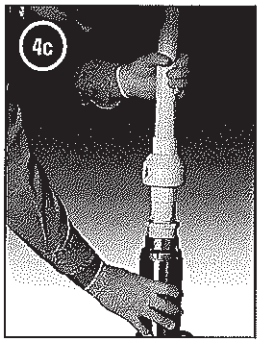
** Biotube® EasyPak™ U.S. Patents #4,439,323 and #5,492,635. Other patents pending.*

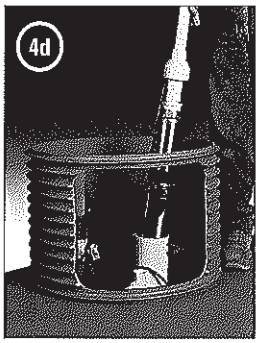
Installation and Maintenance Instructions (continued)

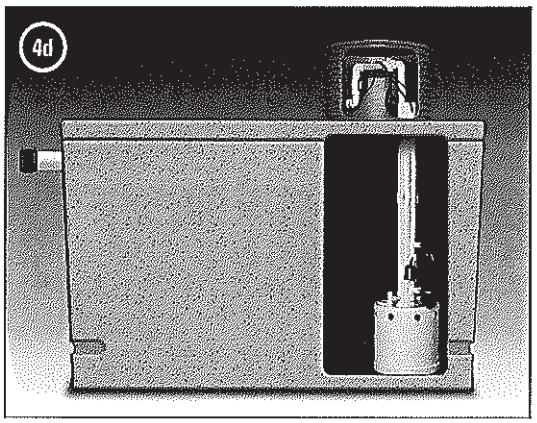












Step 2: Prep the Float Assembly

NOTE: You will need PVC cement for these steps.

Step 2a: Glue the upper and lower halves of the float assembly.

Step 2b: Clip the float assembly into the float bracket on the flow inducer, and adjust the float levels.

Step 3: Install the Vault Assembly

CAUTION: Do not let the float cords fall into the tank when you install the vault assembly.

Step 3a: Make sure the filter cartridge handles are secured against the flow inducer. Then use the lifting strap to gently lower the vault assembly into the tank. To help sink the vault, run clear water into the vault as you lower it.

Step 3b: Coil the float cords and secure them out of the way in the riser.

Step 4: Prep and Install the Discharge Plumbing Assembly (DPA)

CAUTION: Do not lift the pump by the cord. Doing so can damage the pump.

NOTE: Be sure to make any adjustments to the DPA (lengthening or shortening, if necessary) before installing the pump/DPA assembly. You will need PVC cement, Teflon® tape or paste, and pipe lubricant for these steps.

NOTE: In order to assure proper clearance and accessibility, 2" DPAs must exit the access riser at 90° from the splice box when an internal splice box is used.

Step 4a: Glue the straight sections of the DPA together.

Step 4b: Apply Teflon paste or tape to the threads on the bottom of the DPA, and screw it into the top of the pump.

Step 4c: Connect the DPA pieces together at the union.

Step 4d: Lower the pump/DPA assembly into the vault assembly. Coil the pump cord and secure it in the riser. Lubricate the DPA discharge nipple and the riser discharge grommet, and run the nipple through the grommet.

CAUTION: If electrical connections are not immediately made, be sure that the pump and float cords are secured in the riser, not hanging in the tank, to prevent water from wicking up the cords and damaging components.

Step 5: Install the Splice Box

For information on installing the splice box, see *Splice Boxes: Installation, Operation, and Maintenance Instructions Model SB_* (EIN-SB-SB-1).*

Step 6: Install and Wire the Control Panel

For information on installing and wiring the control panel, see *Panel Installation* (EIN-CP-GEN-1).*

* *These documents are included with the components to which they refer. You can also download them from Orenco's Document Library at www.orenco.com.*

Maintenance Instructions

The EasyPak™ Pump Package should be inspected whenever the septic tank is pumped or the system is serviced, to make sure it's functioning properly and to clean the Biotube® filter cartridges.

Step 1: Remove the Float Tree, Pump/DPA, and Vault Assembly

NOTE: Place components on a waterproof plastic tarp during servicing.

Step 1a: Unbolt the lid from the pump tank and the septic tank. Set the lids and bolts aside.

WARNING: Failure to turn off power can result in injury and death!

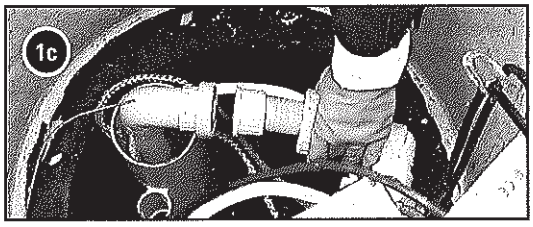
Step1b: Turn off system power at the control panel by flipping the control and pump circuit breakers to the "OFF" position.

CAUTION: Do not lift the pump by the power cord.

Step 1c: Close the ball valve, and unscrew the union on the DPA. Remove the pump/DPA assembly from the vault.

Step 1d: Remove the float assembly from the flow inducer.

Step 1e: Remove the vault from the tank by the lifting strap. The vault is heavy. Use proper lifting techniques and equipment when lifting the vault.



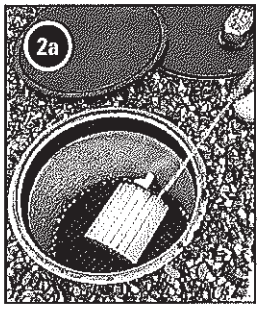
Step 2: Clean the Components and Splice Box

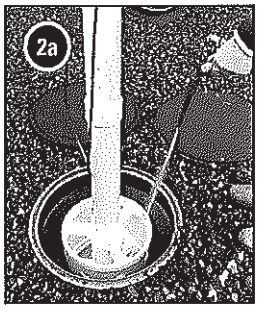
Step 2a: Remove the filter cartridges from the vault assembly. Wash the buildup on the cartridges into the septic tank. Wash any buildup on the inside of the vault assembly into the septic tank as well.

Note: An Orenco riser grate (shown) provides a handy surface for cleaning components.

Step 2b: Remove and clean the outer screen on the pump. Inspect the inner screen on the pump, and wash it off if needed. Immediately reinstall the outer screen on the pump when finished.

Step 2c: Unfasten the splice box lid and check it for water. Remove any standing water from the splice box with a turkey baster or sponge. Replace the splice box lid and screw it back down.





Step 3: Reinstall the Vault Assembly, Float Tree, and Pump/DPA

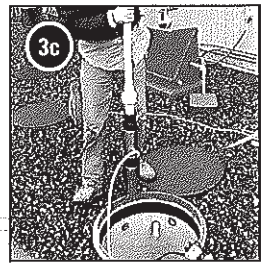
Step 3a: Place the filter cartridges back in the vault assembly and secure them; then lower the vault into the tank. To help sink the vault, run clear water into the vault as you lower it to the tank bottom.

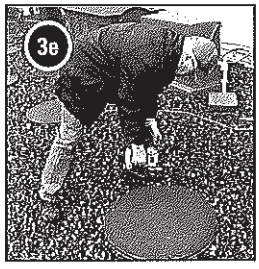
Step 3b: Reconnect the float tree to the float tree bracket.

Step 3c: Lower the pump/DPA assembly into the vault, reconnect the union on the DPA, and open the ball valve on the DPA.

Step 3d: Flip the control and pump circuit breakers back to the "ON" position.

Step 3e: Bolt down the pump tank lid and septic tank lid when you are finished.





Step 4: Record Inspection and Maintenance Activity

Record your inspection results and any maintenance activity.

Installation and Maintenance Instructions (continued)

EasyPak™ Installation/Inspection/Maintenance Form

Record your EasyPak™ installation information, as well as inspection and cleaning results and any other maintenance activity performed on the EasyPak Pump Package.

Date of Installation:_____ **EasyPak™ Model:**_____

Installation Remarks:_____

Date of Inspection and Cleaning	Other Maintenance Performed?	Notes