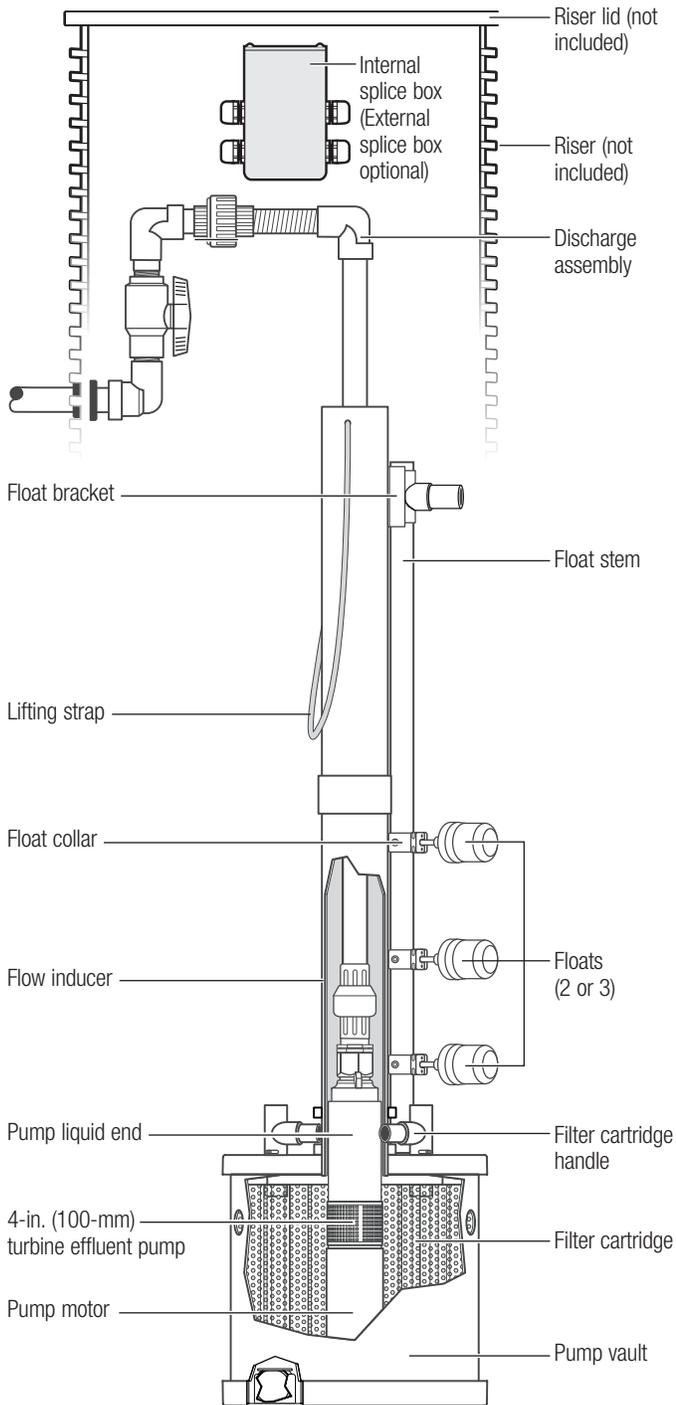


Biotube[®] EasyPak[™] Pump Package

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

Product Code Diagram



- Standard options:
 Blank = standard discharge assembly
 CW = cold weather discharge assembly
 DB = drainback discharge assembly
 SX = external splice box
 Q = cam lock
 MFV = non-mercury float

- Control panel application:
 DD = demand-dosing
 TDA = timed-dosing, analog timer
 TDD = timed-dosing, digital timer

- Pump flow rate, nominal:
 10 = 10 gpm (0.6 L/sec)
 30 = 30 gpm (1.9 L/sec)
 50 = 50 gpm (3.2 L/sec)

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

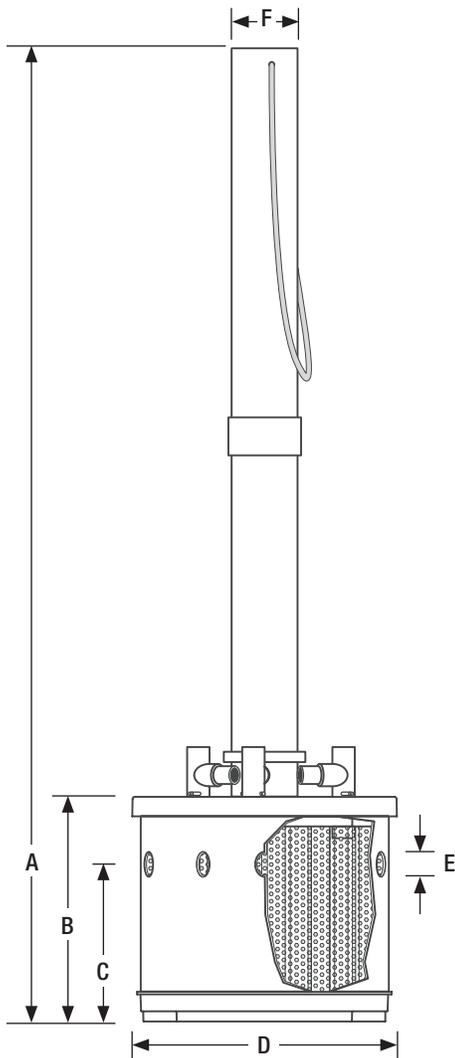
EasyPak™ Pump Vault

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)



EasyPak® pump vault

Biotube® Filter Cartridge

Materials of Construction

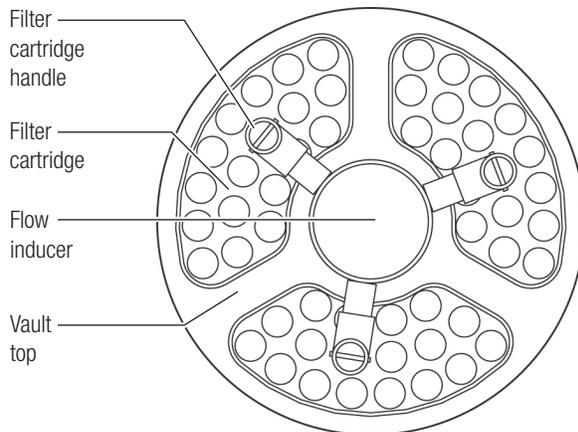
Filter tubes	Polypropylene
Cartridge end plates	Polyurethane
Handle	PVC

Dimensions, in. (mm)

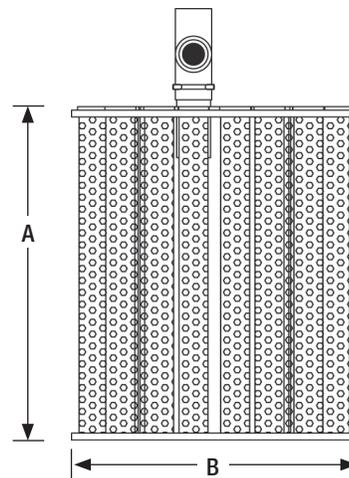
A - Cartridge height	12.0 (305)
B - Cartridge width	10.3 (262)

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)



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)	24.0 (10.9)	2.00	2

Performance

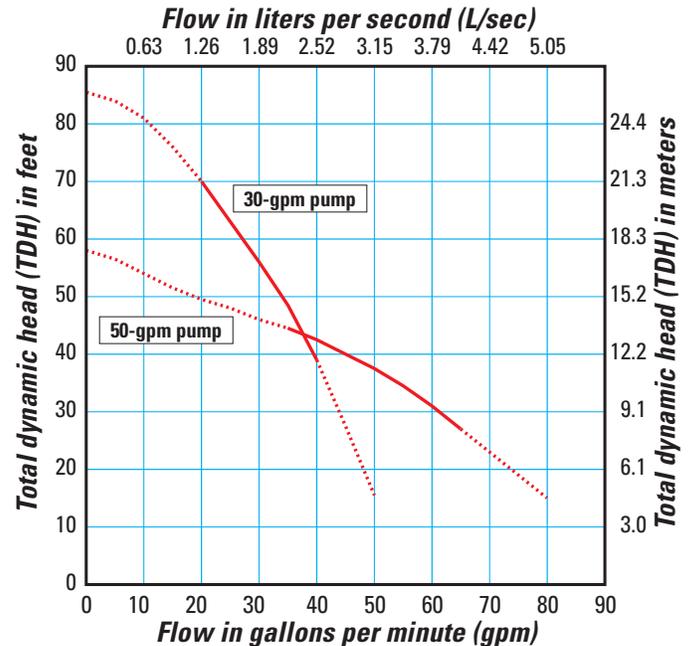
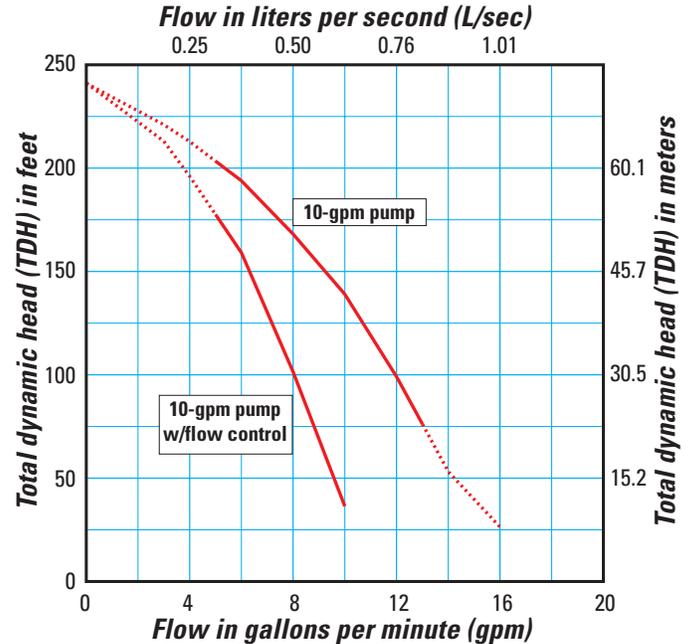
Nominal flow (gpm)	Horsepower (kW)	Design flow amps	Rated cycles per day	Minimum liquid level, in. (mm)**
10	0.5 (0.37)	12.4	300	16 (406)
30	0.5 (0.37)	11.9	300	20 (559)
50	0.5 (0.37)	12.1	300	24 (610)

* 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.



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

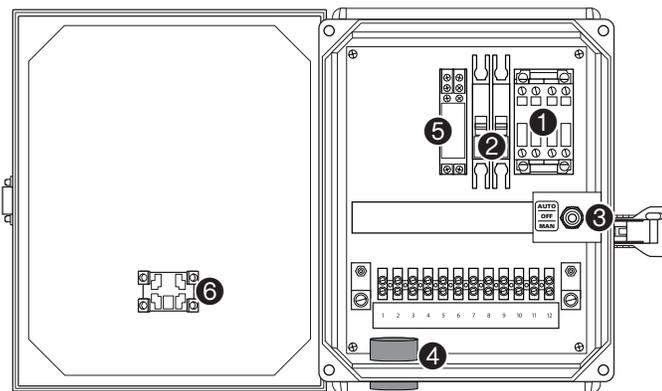
Enclosure	UV-resistant fiberglass, UL Type 4X
Hinges	Stainless steel

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, demand-dose

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

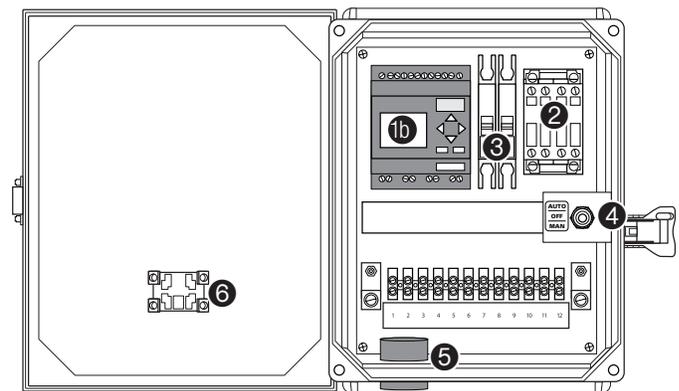
Enclosure	UV-resistant fiberglass, UL Type 4X
Hinges	Stainless steel

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, timed-dose (digital timer model shown)