

APPENDIX J

Certificate Number: Sample

C E R T I F I C A T E O F O R I G I N

CITY OF LACEY ENGINEERED WASTEWATER COLLECTION SYSTEM 8000 GALLON SMALL COMMUNITY SYSTEM (Using 8000 Gallon 2-Compartment Tank)

The following Collection System On-Lot Package is certified to have been manufactured by Orenco Systems[®], Inc., Sutherlin, Oregon. The On-Lot Package equipment listed below is covered by an extended factory warranty under the terms and conditions of Orenco Systems' Certificated Products Limited Warranty in effect at the time of sale.

On-Lot Package Code: PSA20-DAX2RODS-LACEY8000

Adhesive:(3) ADH100
Splice Box:.....(2) SBEX1-4, (6) SBHSY, (7) SBHSB
Biotube[®] Pump Vault:.....(1) PVU84-3625-L
Float Assembly:.....(1) MFAGT-YP,G,W-39V-LACEY (20,25,29)
Discharge Assembly:.....(2) HV100BPR-80, (2) HVX100PR-80
Check Valve:.....(2) PPSC-10
Effluent Pump:.....(2) PF200512-20
Control Panel:.....(1) DAX2RODS-LACEY (090111DC1.2)
Homeowner's Manual:.....(1) PMHOMEMANUAL
Installation Manual:.....(1) PMPSPPINST
Certificate of Origin:(1) NCF-CO-LACEY-8000

Additional Orenco Equipment Required for a Complete Installation:

PVC Access Risers & Accessories:.....(1) RR30XX+SX+SX, (1)RLA30, (2) G1, (2) RR24XX, (2) RLA,24
Fiberglass Access Lids:.....(1) FL30G-4B, (2) FL24G-4B
Fiberglass Tank:.....(1) T8000-LACEY
Service Connection Valve Assembly.....(1) SC125-LACEY

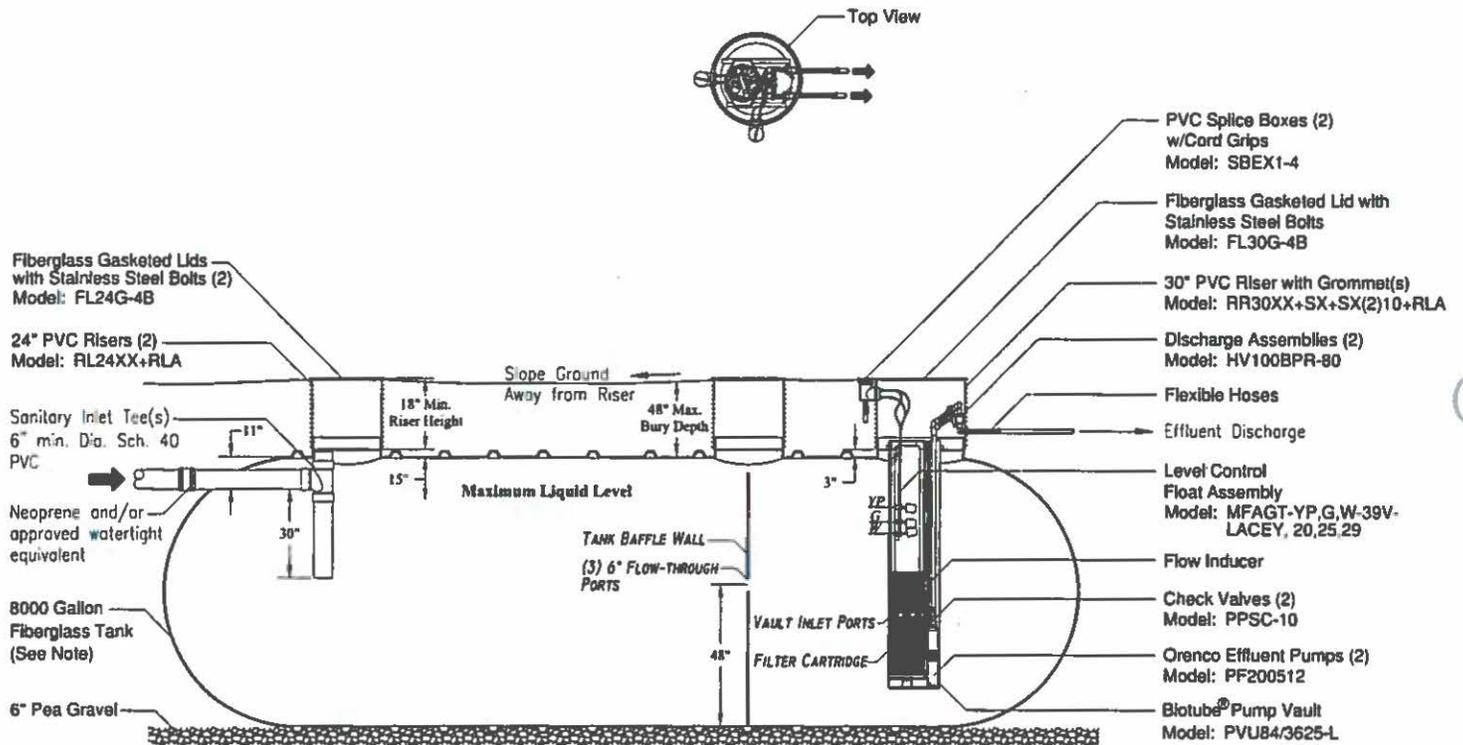
For Customer Use:

Site address: _____
Lot number: _____
Development: _____
Installer: _____ Install Date: _____
Vendor: _____
City Inspector: _____



8000 Gallon Fiberglass Tank with PSA20-DAX2RODS-LACEY-8000-WA Pumping System - Duplex

Scale: 1" = 4'-0"



Note: 1) 8000 Gallon, 8' Diameter Fiberglass Tank.
 Approved Tank Manufacturers are Containment Solutions and Xerxes
 (see Section 7E.065 of the City of Lacey Development Guidelines for
 fiberglass tank construction requirements).
 Tank shall be installed and anchored per manufacturers instructions.

Float Settings			
Function	Code	Dim from Top of Tank	Dim from PVU Flange
HWA / Lig ON	YP	17"	20"
Lead Pump ON	G	19"	25"
Lead Pump OFF	W	23"	29"
Redundant OFF	W	26"	29"

ADH100 Adhesive

Submittal
Data Sheet



Applications

ADH100 is used to bond PVC risers to Oreco grade rings and PRTA series tank adapters.

General

ADH100 is a single component opaque adhesive formulated to bond PVC risers to Oreco grade rings and PRTA series tank adapters. Upon curing, the seal created is both water and chemical resistant.

Standard Model

ADH100



Specifications

Gel time is approximately 10 minutes; ultimate bond strength occurs after 24 - 72 hours at 70° - 85° F. Cure time is increased greatly with a decrease in temperature; not recommended for use in temperatures below 32° F.

Expected shelf life is approximately 5 years when stored at temperatures between 45° - 85° F.

External Splice Box

Applications

The Orengo® External Splice Box attaches outside the access riser of an underground tank. It is engineered specifically for water and wastewater treatment systems and is especially suited for use in locations prone to high groundwater and other wet conditions. Its separate conduit hubs, large volume, and optional dividers make it useful for maintaining isolation of high and low voltage wires where needed. It has four cord grips which accommodate power cords for floats and pumps of 0.170 - 0.470 inches (4.3 - 11.9 mm) in diameter. Unused cord grips can be plugged watertight with the supplied cord grip plugs. Each External Splice Box is provided with a hole-cutting template to simplify installation on the riser.

General

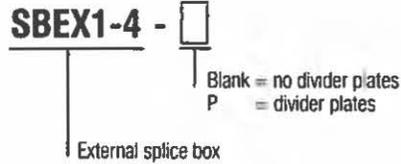
To specify the Orengo External Splice Box for your installation, require the following:

- Watertight for prolonged submergence per UL listing (Type 6P)
- Attachment external to access riser to allow inspection with no need to open the riser lid
- Volume of 100 in.³ (1639 cm³) for easy wiring access and to accommodate multiple wiring configurations
- Bottom entry, so conduit or direct-bury cable always remains below minimum burial depth
- Molded of UL (f1) rated plastic, resistant to cold and UV exposure, suitable for external applications
- Optional divider plates available for isolating high and low voltage wires from separate conduits or direct-bury cable

Standard Models

SBEX1-4, SBEX1-4-P

Nomenclature



The External Splice Box is molded of a UL (f1) rated PVC alloy. It has a UL Type 6P listing for prolonged submergence.



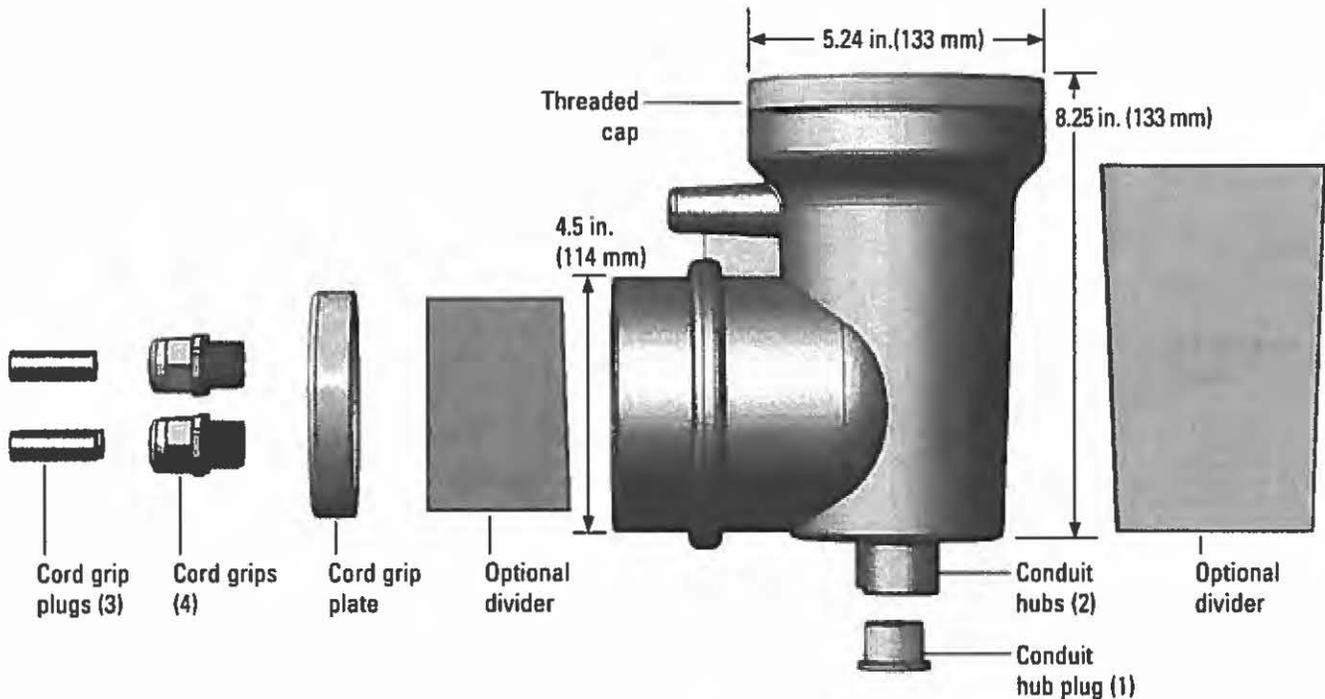
External Splice Box (continued)

Physical Specifications

Volume	100 in. ³ (1639 cm ³)
Cord grips	4 per SBEX
Cord grip plugs	3 per SBEX
Cord diameters accommodated	0.170- 0.470 in. (4.3 - 11.9 mm)
Conduit hubs	2
Conduit hub plug	1
Conduit sizes accommodated	¾ in. 1 in. (with coupling) ½ in. (with fitting or bell end)
Diameter of hole into riser	5 in. (127 mm) (hole-cutting template included)

Materials of Construction

Splice box	PVC alloy
Cord grips	Nylon
Cord grip plugs	EPDM rubber
O-rings	Buna rubber
Conduit hub plug	PVC per ASTM D-1784



84-inch Universal Biotube® Pump Vaults

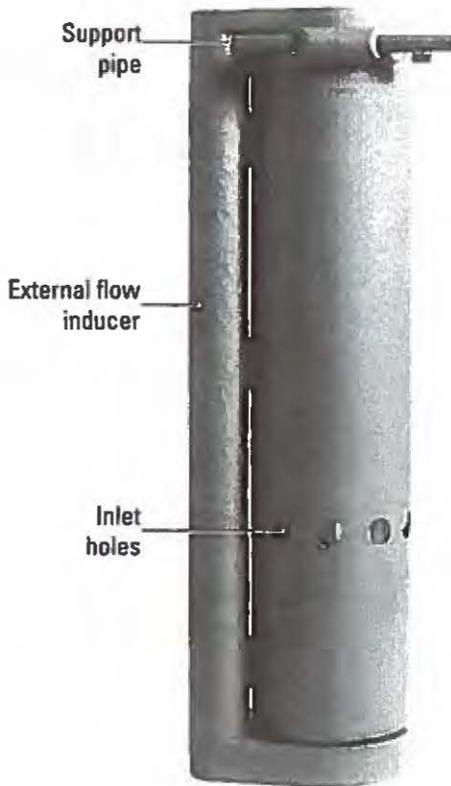
For use with Oreco 4-in. Submersible Effluent Pumps

Applications

Oreco 84-inch Biotube® Pump Vaults are used to filter effluent that is pumped from septic tanks or separate dosing tanks in STEP systems and onsite wastewater treatment systems. They remove two-thirds of suspended solids, on average. Pump vaults house a Biotube effluent filter and one or two Oreco high-head effluent pumps and can be used in single-compartment septic tanks with flows up to 40 gpm. When flows are greater than 40 gpm, a double-compartment septic tank or separate dosing tank is recommended.

General

The Oreco 84-inch Biotube Pump Vault includes a molded polyethylene housing with an internal filter cartridge constructed of polypropylene and PVC. Schedule 80 PVC support pipes are included to suspend the vault in a tank opening. The filter cartridge can be removed without pulling the pump or the vault. Effluent enters through inlet holes around the perimeter of the Biotube vault and flows through the Biotubes to the external flow inducer. The external flow inducer accommodates one or two pumps. Oreco Biotube Pump Vaults are covered by U.S. patents #4,439,323 and 5,492,635.



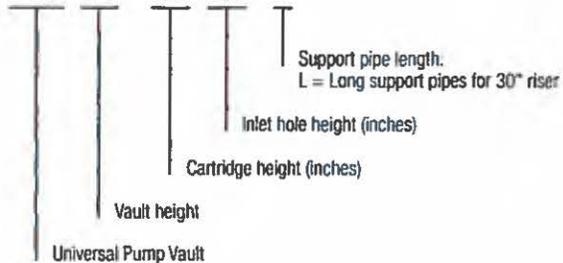
Side view

Standard Models

PVU84-3625-L

Nomenclature

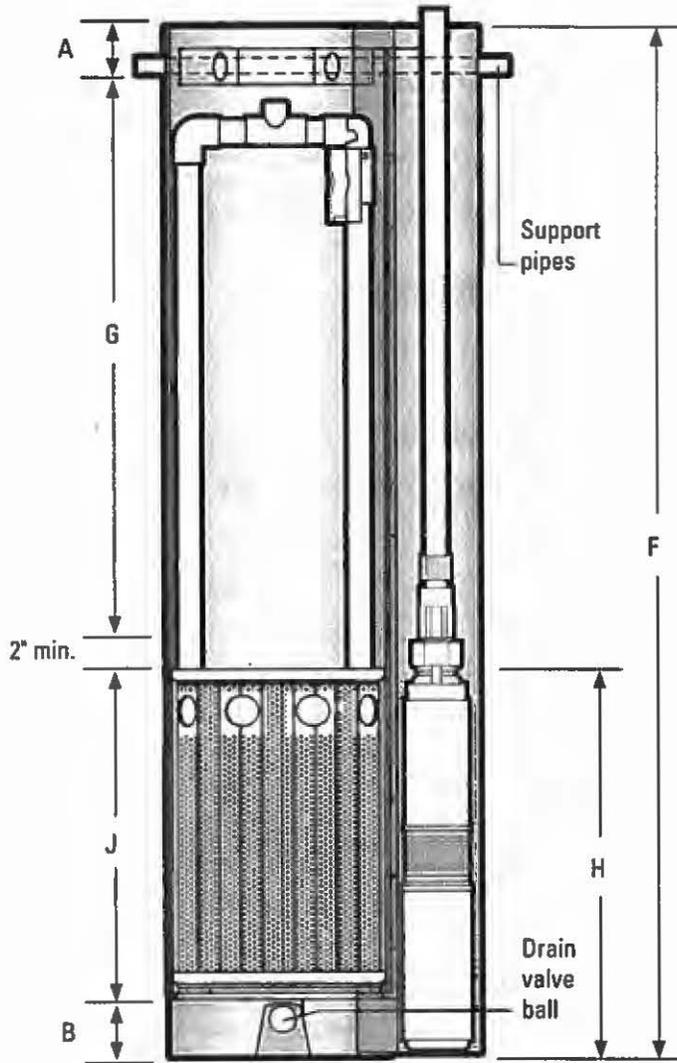
PVU 84 - 36 25 - L



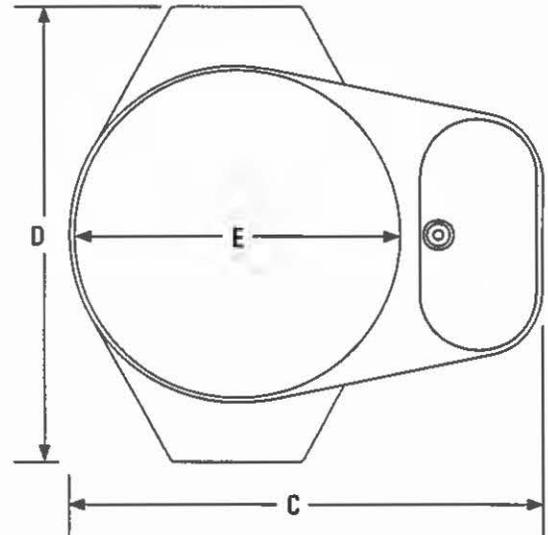
Materials of Construction

Support pipe:	Schedule 80 PVC
Biotube® vault:	Polyethylene
Biotube cartridge:	Polypropylene/PVC
Float stem:	Schedule 40 PVC
Drain valve ball:	Polypropylene

Universal Biotube® Pump Vaults (continued)



Side view cutaway



Top view

Dimensions

A	3.0 in.
B	4.0 in.
C	17.3 in.
D	16.6 in.
E	12.0 in.

Specifications

Model	PVU84-3625-L
Vault height (F)	84 in.
Lowest float setting point (G)	38 in.
Inlet hole height (H)*	25 in.
Biotube® cartridge height (J)	36 in.
Biotube mesh opening	0.125 in.
Filter flow area	8.8 ft ²
Filter surface area	29.0 ft ²
Maximum flow rate	140 gpm

* May vary depending on the configuration of the tank

Float Switch Assemblies

Applications

Float switches are used to signal liquid level positions for alarm and pump control applications. Oranco float switch assemblies can be mounted in pump vaults, effluent screens, pump basins, and risers.

General

All models listed are UL listed and CSA certified for use in water or sewage.

Floats are typically ordered in assemblies that include one or more floats mounted on a 1" PVC float stem. ABS float collars are used to provide secure mounting that is easily adjustable.

Standard Models

MFAGT-YGW27V-LACEY

Nomenclature

MF AGT - YGW 27 V - LACEY

Application:
V = pump vault (Lacey, WA float settings)

Stem length:
27 = 27 in.

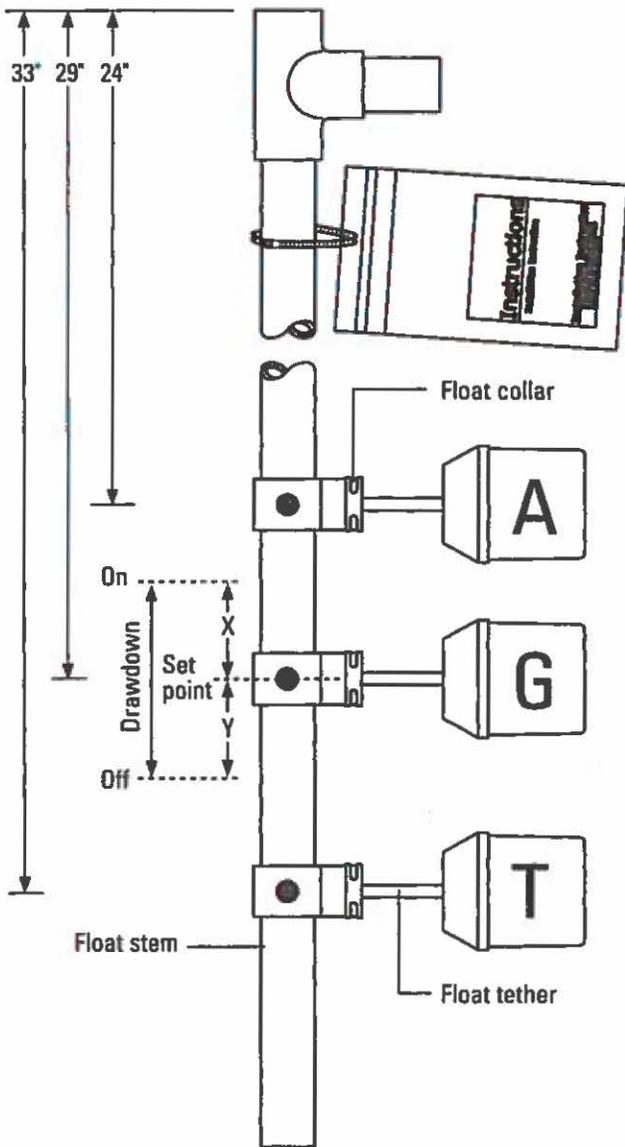
Color code:
Y = yellow
G = green
W = white

Float switch models:
A = signal-rated mercury float switch, normally open
G = motor-rated mercury float switch, normally open
T = signal-rated mercury float switch, normally closed

Mechanical or mercury float switch assembly

Materials of Construction

Float housing	Impact-resistant, noncorrosive PVC plastic for use in liquids up to 140° F
Float cord	Flexible 2-conductor (UL, CSA) SJOW; water-resistant (CPE); neoprene coating
Float collar	ABS



The "On" and "Off" positions describe normally open floats.

Float Switch Assemblies

Signal- and Motor-Rated Float Switch Matrix

Float	State ¹	Type ²	IR ³	Volts	Amps	hp	Tether	X	Y	Drawdown ⁴
Signal-rated mercury floats⁴ (for control switch applications)										
A Model ^a	Normally open	Mercury	Yes	n/a	n/a	n/a	2.00 in.	n/a	n/a	n/a
T Model	Normally closed	Mercury	Yes	n/a	n/a	n/a	2.00 in.	n/a	n/a	n/a
Motor-rated floats (for pump switch applications)										
G Model	Normally open	Mercury	No	120 V	15A	¾ hp	2.00 in.	1.50 in.	3.00 in.	4.50 in.
				240 V	15A	2 hp	3.00 in.	1.75 in.	3.00 in.	4.75 in.
							4.00 in.	2.00 in.	3.50 in.	5.50 in.

a. Suitable for use with VCOM and MVP

Notes

¹ State: normally open or normally closed

The default state of a float — normally open or normally closed — refers to the contact positions in the float when the float is resting (down). Float switches have an internal contact. The terms “normally open” (N/O) and “normally closed” (N/C) refer to the state of the float switch contact in the down position. A normally open float switch has an open contact (off) in the down position and a normally closed float switch has a closed contact (on) in the down position. Different panel functions require different types of float switches. Most applications require float switches that are normally open. One notable exception is the redundant off and low-level alarm function that requires a normally closed float switch, except with MVP and VCOM panels.

² Type

Floats have mechanical or mercury contactor types. The important distinction between these is that mercury floats are not rated for potable water.

³ IR (intrinsically safe relay)

Approved for use with intrinsically safe, Class I, Division 1 applications, where reliable float switch operation with very low current is required.

⁴ Drawdown

Drawdown (in inches) refers to the difference in liquid level between a float switch’s activation and deactivation points. Drawdown can be altered by adjusting the tether length of the float switch cord. When selecting float switches, keep in mind that any float switch that can directly start and stop a pump (one that has no motor contactor in the control panel) should have a drawdown capability, to avoid rapid cycling of the pump.

Discharge Assemblies

Applications

Oranco Discharge Assemblies are used to convey effluent from a pump to the exterior of a riser or pump basin. They come in high-head configuration, for use with submersible turbine pumps. An external flex extension is recommended for installations where tank settling may occur to avoid line breakage during settling. Discharge assemblies for use in 1500-gallon STEP tanks include a ¼" flow control orifice.

General

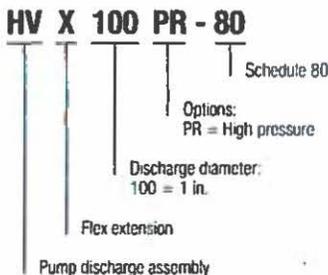
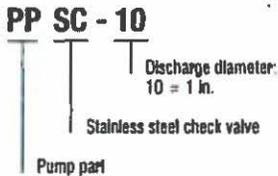
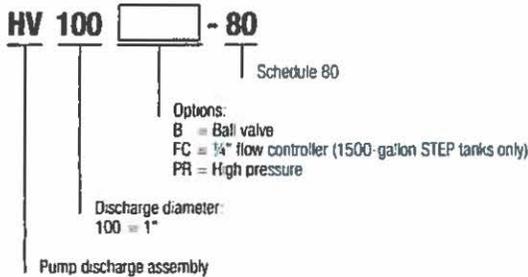
Oranco Discharge Assemblies are corrosion-resistant and adjustable for a proper fit. Discharge assemblies are composed of PVC valves and flexible hose that simplify installation and maintenance. The flexible hose damps vibrations from the pump and allows for easy installation. All parts are either solvent welded or threaded and sealed with Teflon® paste.

Teflon® is a registered trademark of DuPont.

Standard Models

HV100BPR80, HV100BFCPR-80, HVX100PR-80, PPSC-10

Nomenclatures



Materials of Construction

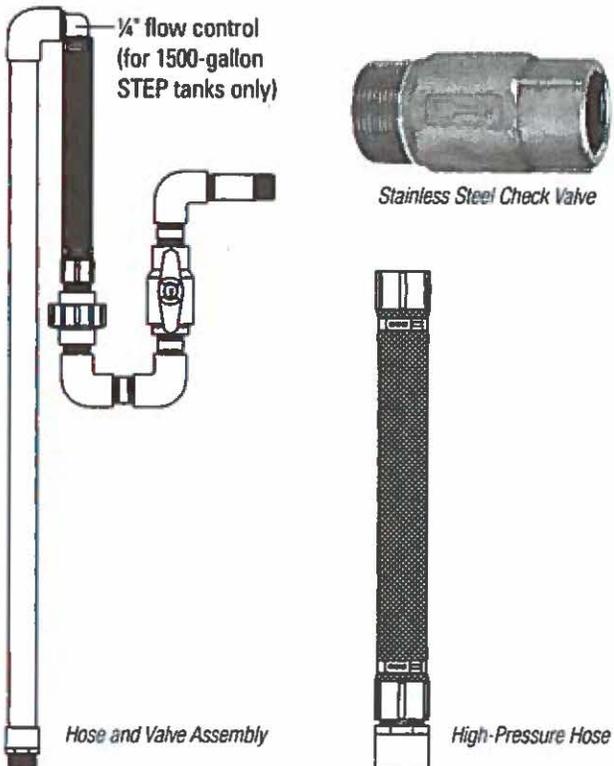
Component	Material
Ball valve	Schedule 40 PVC
Flowmatic check valve	Stainless steel
Pipe and fittings	Schedule 80 PVC
Flexible hose	PVC
External flex hose	PVC
Flow control disc	Schedule 80 PVC
Gate valve	Schedule 80 PVC
Unions	Schedule 80 PVC
High-pressure flex hose	Special elastomer compound

Component Working Pressure Ratings

Valves	150 psi (10 bar) at 73° F (23° C)
Unions	150 psi (10 bar) at 73° F (23° C)

High-Pressure Hose Specifications

Thickness and working pressures at 73° F (23° C)		
Size (Nominal)	Wall thickness	Working pressure
1.00 in.	0.235 in.	250 psi



PF Series 4" Submersible Effluent Pump



Orengo Systems
Incorporated
800-348-9843

Applications

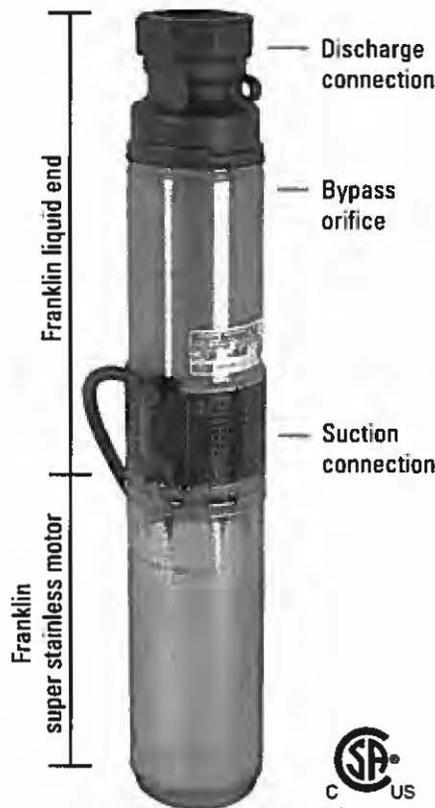
Orengo® 4" Submersible Effluent Pumps are designed to transport screened effluent (with low TSS counts) from septic tanks or separate dosing tanks. All our pumps are constructed of lightweight, corrosion-resistant stainless steel and engineered plastics; all are field-serviceable and repairable with common tools; and all standard 60-Hz PF Series models are CSA certified to the U.S. and Canadian safety standards for effluent pumps, meeting UL requirements.

High-Head Effluent Pumps from Orengo® are used in a variety of applications, including pressurized drainfields, packed bed filters, mounds, aerobic units, effluent irrigation, effluent sewers, wetlands, lagoons, and more. These pumps are designed to be used with a Biotube® pump vault.

Features/Specifications

Orengo 4" Submersible Effluent Pump has the following features:

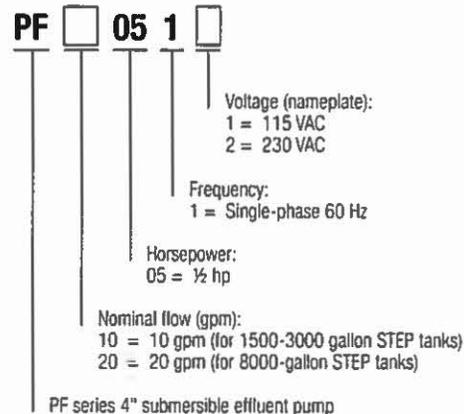
- Minimum 24-hour run-dry capability with no deterioration in pump life or performance
- 1/8" bypass orifice (patent pending) to ensure flow recirculation for motor cooling and to prevent air bind
- Liquid end repair kits available for better long-term cost of ownership
- TRI-SEAL™ floating impeller design
- Super stainless Franklin Electric motor, rated for continuous use and frequent cycling
- Type SOOW 600-V motor cable (suitable for Class I, Division 1 and Division 2 applications)
- Five-year warranty on pump or retrofit liquid end from date of manufacture against defects in materials or workmanship



Standard Model

PF100511, PF20512

Nomenclature



PF Series High-Head Effluent Pumps

Specifications

Model	Design gpm (in.)	Horsepower	Phase	Nameplate voltage	Actual voltage	Design flow amps	Max amps	Impellers	Discharge size ¹	Length (in.)	Min. liquid level ² (in.)	Weight ³ (lb)	Rated cycles/day
PF100511	10	0.50	1	115	120	12.7	12.7	6	1 ¼ in.	23.0	16	26	300
PF200512	20	0.50	1	230	240	6.4	6.5	4	1 ¼ in.	22.5	18	26	300

¹ The 1 ¼-in. NPT discharge is 2 ½-in. octagonal across flats; Discharge is female NPT threaded, U.S. nominal size, to accommodate Orenco® discharge hose and valve assemblies.

² Minimum liquid level is for single pumps when installed in an Orenco Biotube® Pump Vault or Universal Flow Inducer. In other applications, minimum liquid level should be top of pump. Consult Orenco for more information.

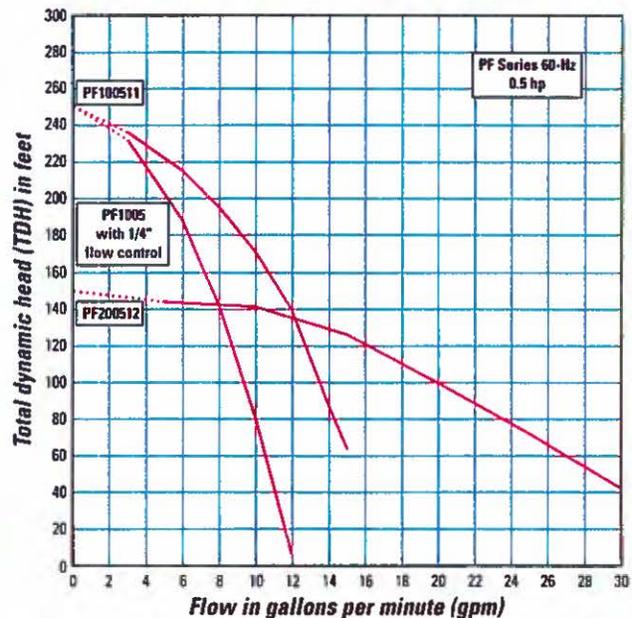
³ Weight includes carton and 10-ft cord.

Materials of Construction

Discharge:	Glass-filled polypropylene
Discharge bearing:	Engineered thermoplastic (PEEK)
Diffusers:	Glass-filled PPO (Noryl GFN3)
Impellers:	Celcon® acetal copolymer on 10-, 20, and 30-gpm models; 50-gpm impellers are Noryl GFN3
Intake screen:	Polypropylene
Suction connection:	Stainless steel
Drive shaft:	7/16 inch hexagonal stainless steel, 300 series
Coupling:	Sintered stainless steel, 300 series
Shell:	Stainless steel, 300 series
Motor:	Franklin motor exterior constructed of stainless steel. Motor filled with deionized water and propylene glycol for constant lubrication. Hermetically sealed motor housing ensures moisture-free windings. All thrust absorbed by Kingsbury-type thrust bearing. Rated for continuous duty. Protected against thermal overload and equipped with surge arrestors for added security.

Using a Pump Curve

A *pump curve* helps you determine the best pump for your system. Pump curves show the relationship between flow (gpm) and pressure (total dynamic head, or TDH), providing a graphical representation of a pump's optimal performance range. Pumps perform best at their *nominal flow rate* — the value, measured in gpm, expressed by the first two numerals in an Orenco pump nomenclature. At low flow rates, TDH varies from pump to pump, so it is represented as a dashed line in the pump curves. For most accurate pump specification, use Orenco's PumpSelect™ software.





Duplex Control Panel— Lacey, WA

Applications

Orenco Duplex Control Panels are used to control effluent pumps, alarms, and other equipment as specified in pressure sewers and onsite septic systems.

General

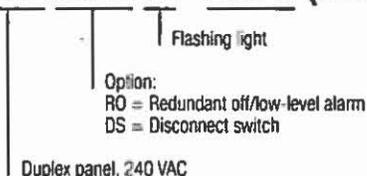
Orenco Duplex Control Panels are specifically engineered for pressure sewer (STEP) systems, onsite septic treatment systems, and pump control into conventional gravity systems. Standard features include circuit breakers, an automatic/manual/off toggle switch, automatic motor control operation, and an audible/visible high water level alarm with auto reset.

Standard Models

DAX2RODSFL-LACEY (090111DC1.2)

Nomenclature

DAX2 RODS FL - LACEY (090111DC1.2)



Material of Construction

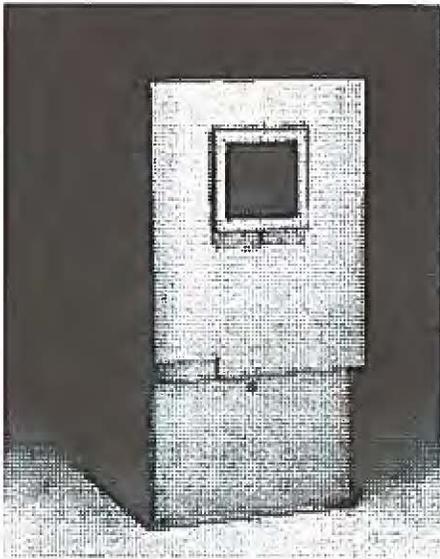
Enclosure	Type 3R stainless steel metered panel
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Dimensions

Height (in.)	48
Width (in.)	24
Depth (in.)	29

Specifications

Enclosure	Strong Box®, model SB-24SS/240V
Panel Ratings	240 V, 2 hp, 28 A, single phase, 60 Hz
Motor-Start Contactors	120 V: 28 FLA, 3 hp, 60 hz; 2.5 million cycles at FLA (10 million at 50% of FLA)
Duplex Alternator	120 V, cross wired style for independent lag pump function. Selector switch for locking one pump into lead position.
Controls Circuit Breaker	10 A, OFF/ON switch. Single-pole 120 V. DIN rail mounting with thermal magnetic tripping characteristics.
Pump Circuit Breakers	20 A, OFF/ON switches. Double-pole 240 V. DIN rail mounting with thermal magnetic tripping characteristics.
Toggle Switches	Single-pole, double-throw HOA switches. 20 A, 1hp.
Audible Alarm	95 dB at 24 in., warble-tone sound.
Visual Alarm	7/8-in. diameter red lens, "Push-to-silence." UL Type 4X rated, 1 W LED light, 120 V.
Flashing light	4-in height, 3-in. diameter, UL Type 4X rated, 13 W LED light, 120 V
Redundant Off Relay	120 V. Provides a secondary off. Sounds alarm on low level condition. DIN rail mount.
Disconnect Switch	3-pole, 40 A, 600 V,

**COMBINED COMMERCIAL METER SOCKET
WITH THE ULTIMATE ENCLOSURE**

- Compact, double door, front and back design, provides viewing and programming convenience
- 100% stainless steel construction assures long-term, rust-proof durability and additional strength
- Chameleon effect of the natural brushed stainless steel finish provides an unobtrusive quality
- All stainless steel enclosures may be powder coated in many colors at an additional charge

METER SECTION

- UL listed, E.U.S.E.R.C. 309 approved commercial meter socket, 100 amp rated, with test block bypass provision
- Hinged viewing window provides convenient access for metering agency
- 100 amp load center
- 120v and 240v models available

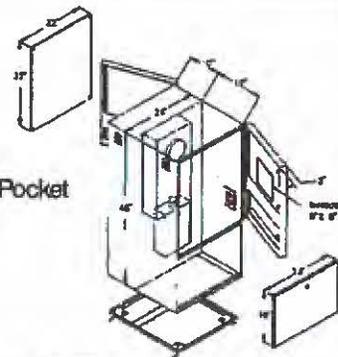
ENCLOSURE SECTION

- Removable, predrilled backboard provides for easy installation and an attractive finished product
- Large door-mounted storage area and literature storage pocket provides easy access to plans and scheduling information
- Filtered side louvers at bottom and top allow cross flow ventilation
- Mounting template and anchors included
- Ten year limited warranty

SB-24SS/240V**Metered Enclosure 240 Volt**

- 24" Wide, 48" High, 29" Deep
- 240 Volt Meter Socket
- Test Blocks
- 8 Position Load Center
- Double Door Design
- 12" Deep Storage on Back Side
- 100% Stainless Steel

- Weather & Vandal Resistant
- Three-Point Locking System
- Removable, Predrilled Backboard
- Large Door-Mounted Storage & Literature Pocket
- Louvered For Ventilation
- Mounting Template & Anchors
- UL Listed
- NEMA TYPE 3R Rated



Panel Wiring Diagram

Model DAX2 RO DS FL - LACEY

Quote# 090111DC1.2 SUBMITTAL

— = Factory Wire
 - - - = Field Wire

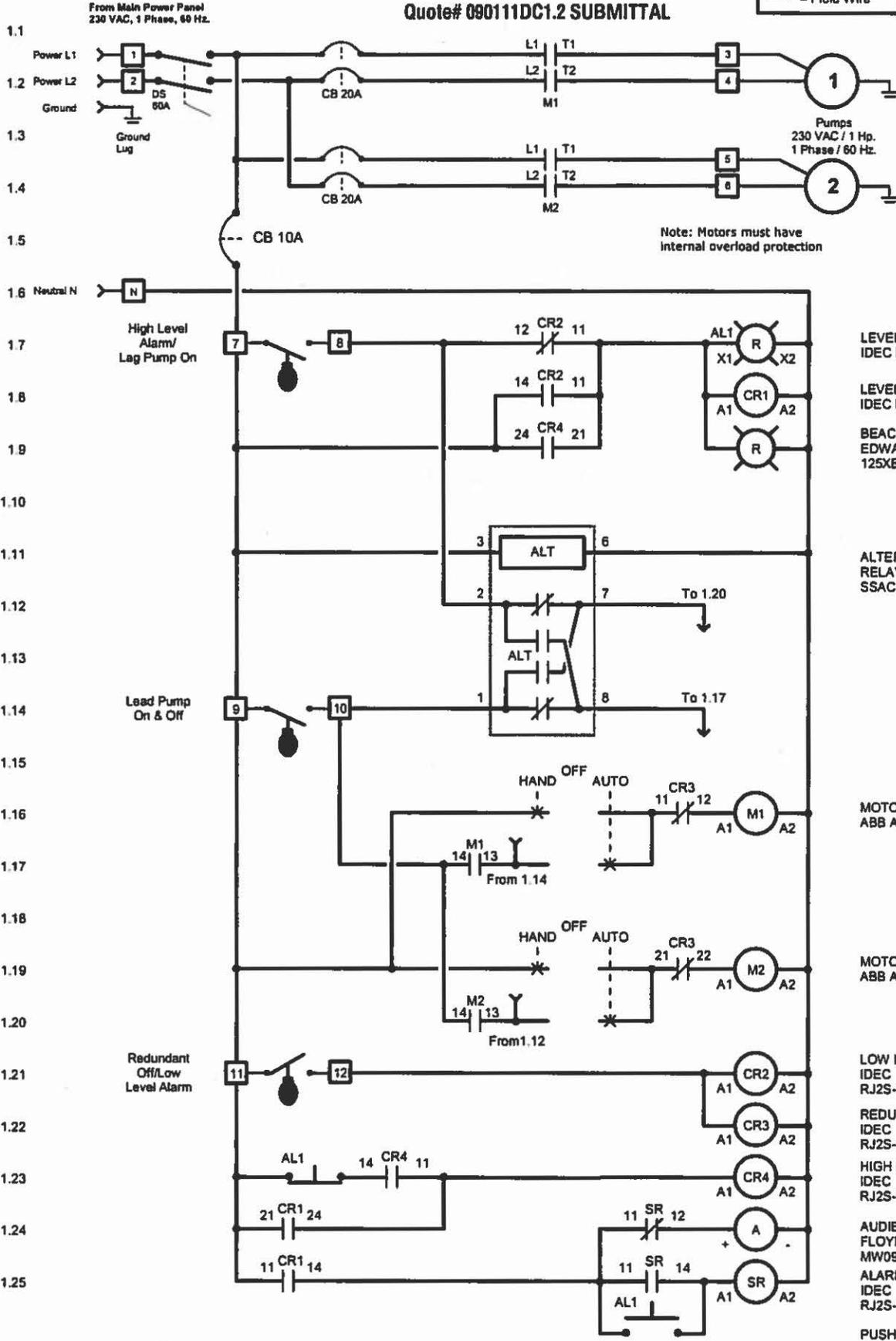


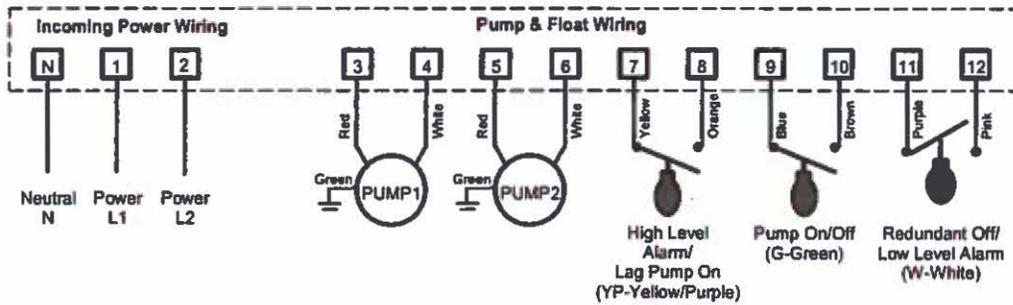
Oronco Systems[®]
 Incorporated

814 AIRWAY AVENUE
 SUTHERLIN, OREGON
 97479-9012

TELEPHONE:
 (541) 455-4443

FACSIMILE:
 (541) 455-2884





Motor Power
 Voltage 230VAC
 Max Amps 16
 Horsepower 2
 Hertz 60
 Phase 1
 Short Circuit Current Rating:
 5,000A rms symmetrical, 240V max
 Panel Wiring 12AWG
 Field Wiring (min) 12AWG

Controls 120VAC
 Voltage 5
 Max Amps 60
 Hertz 1
 Phase

Panel Model
 DAX2 RO DS FL - Lacey

Enclosure Rating
 NEMA Type 3R

Orenco Systems, Inc.

Simplex Operation

High Level Alarm- Lag Pump On/Off: This float activates the alarm light and audible alarm when lifted. The audible alarm may be silenced by pressing the PUSH TO SILENCE button. The alarm light will remain on until the float is lowered.

This float also turns on the Lag Pump. The pump will remain on until the Lag and Lead floats are lowered.

Lead Pump On/Off: This float turns on the Lead Pump when lifted. The pump will continue to run until the float is lowered.

Redundant Off/Low Level Alarm: This float activates the alarm light and audible alarm when lowered. The audible alarm may be silenced by pressing the PUSH TO SILENCE button. The alarm light will remain on until the float is raised. The pumps will not operate during low level alarm.

Splice Box Wiring Diagram

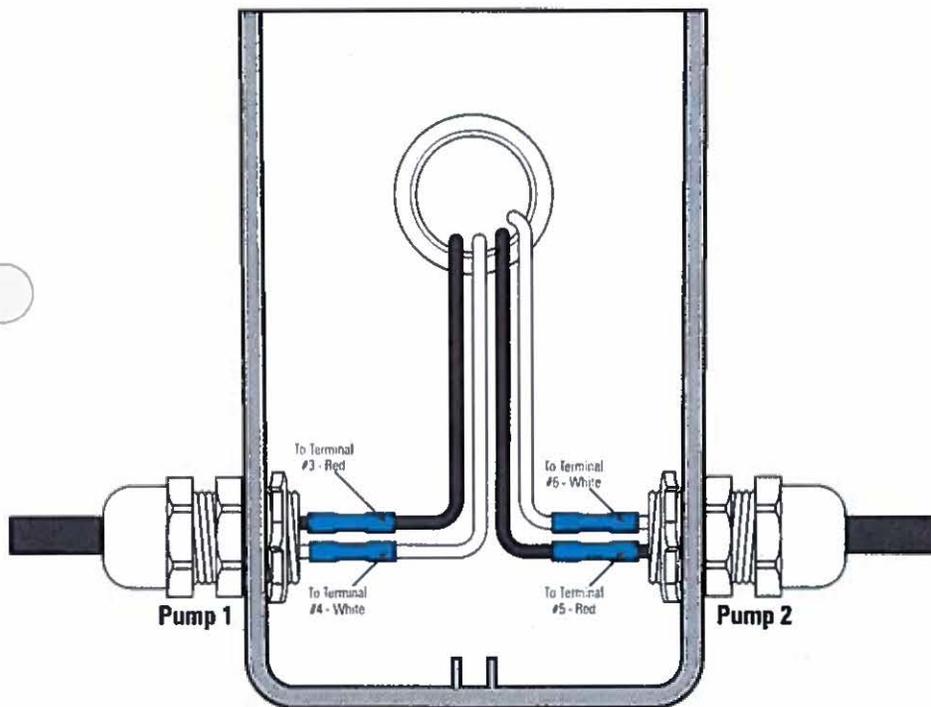


Oreco Systems*
Incorporated

814 AIRWAY AVENUE
SUTHERLIN, OREGON
97479-9012

TELEPHONE:
(541) 459-4449

FACSIMILE:
(541) 459-2884



Key

-  Black Wire
-  White Wire
-  Green Wire
-  Heat Shrink & Butt Connector *

* Refer to drawing EIN-SB-SB-1 for splicing instructions.

Note: Multi-function floats will have more than one marker

Attention: Failure to follow splicing instructions will void warranty

Control Panel Series

DAX R0 - Lacey

Float Function Color Code

(YP)GW

Splice Box Model

SBEX1-4

Drawing No.

EDW-SB-DAX-SUBM

EDW-SB-DAX-SUBM
Rev 1.2 ©10/14/11

Splice Box Wiring Diagram

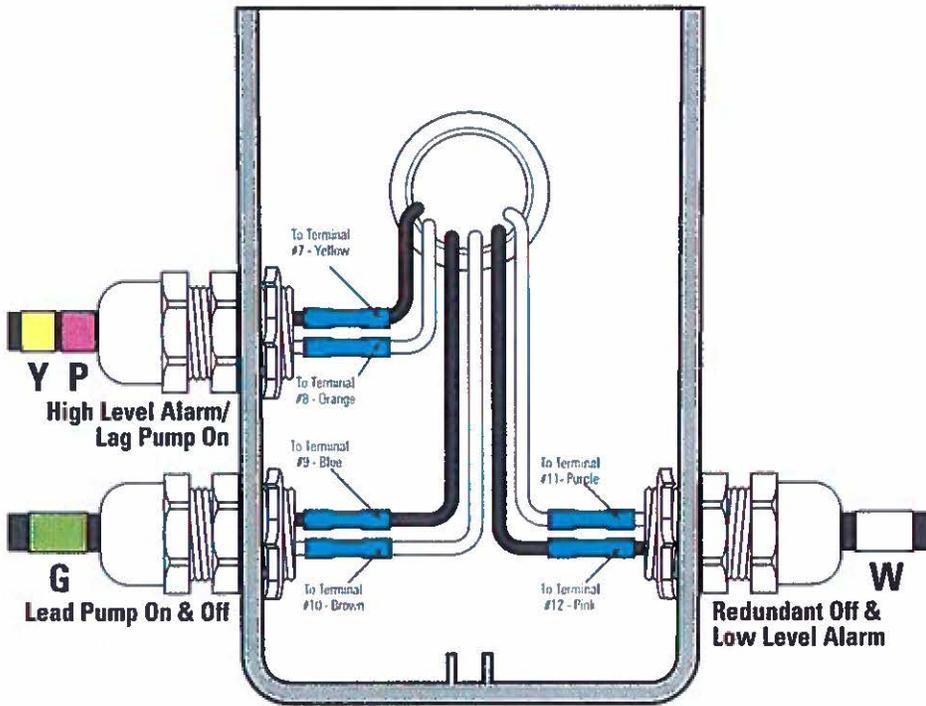


Oreco Systems
Incorporated

814 AIRWAY AVENUE
SUTHERLIN, OREGON
97478-9012

TELEPHONE:
(541) 459-4449

FACSIMILE:
(541) 459-2884



Key

-  Black Wire
-  White Wire
-  Green Wire
-  Heat Shrink & Butt Connector *

* Refer to drawing EIN-SB-SB-1 for splicing instructions.

Float Tag Colors

- Y** - Yellow
- P** - Purple
- G** - Green
- W** - White

Note: Multi-function floats will have more than one marker

Attention: Failure to follow splicing instructions will void warranty

Control Panel Series

DAX R0 - Lacey

Float Function Color Code

(YP)GW

Splice Box Model

SBEX1-4

Drawing No.

EDW-SB-DAX-SUBM

EDW-SB-DAX-SUBM
Rev 1.2 ©12/05/11

Access Risers

Applications

Orenco's Access Risers provide access to septic tank openings and can be cast into the tops of concrete tanks, bonded in place, or bolted down using a riser tank adaptor. They can also be used as valve enclosures.



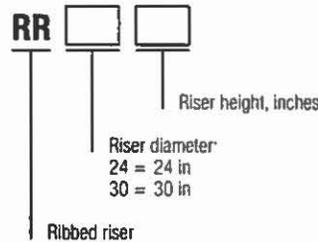
General

Orenco Access Risers are constructed of ribbed PVC pipe and are available in 24-in. and 30-in. diameters. The 24-in. ribbed risers are available in three-inch increments up to 14 ft in length. The 30-in. risers are available in one-inch increments up to 13 ft in length.

Standard Models

RR24XX, RR30XX

Nomenclature



Materials of Construction

Ribbed Risers:	PVC
Bolt catch (30" risers only)	PVC

Specifications

Model	RR24XX	RR30XX
I.D. (in.)	23.50	29.50
Wall Thickness - excluding ribs (in.)	0.20	0.20
O.D. - including ribs (in.)	25.63	31.00
Weight per foot (lb)	19	18

RLA Riser-to-Lid Adapters

Applications

Orenco® riser-to-lid adapters (RLAs) provide a secure, water-tight method of attaching an Orenco fiberglass lid to a 24-in. or 30-in. ribbed PVC access riser.

RLAs are especially useful when the top of the riser is uneven or has a damaged edge.

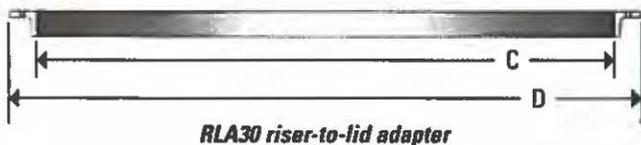
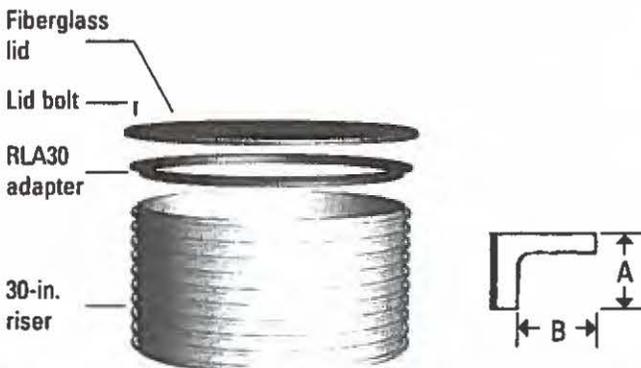
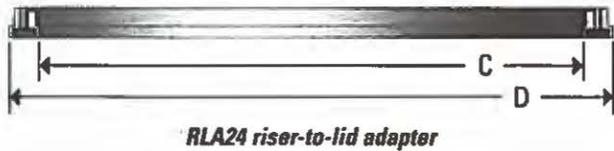
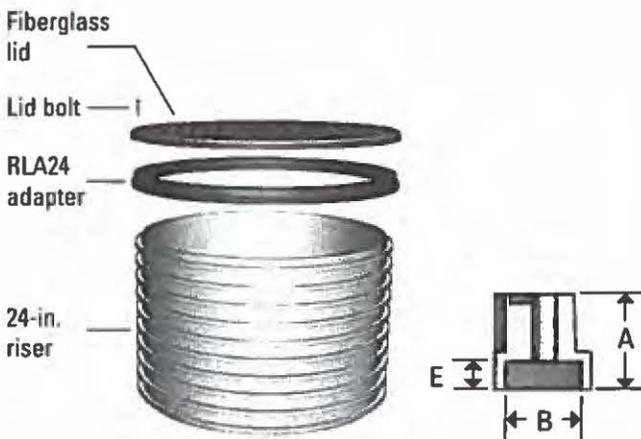
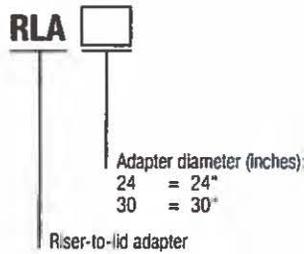
General

RLA adapters can be attached to 24-in. or 30-in. risers to simplify bolting a lid to the riser.

Standard Models

RLA24, RLA30

Nomenclature



Materials of Construction

Adapter	ABS
O-ring	EPDM

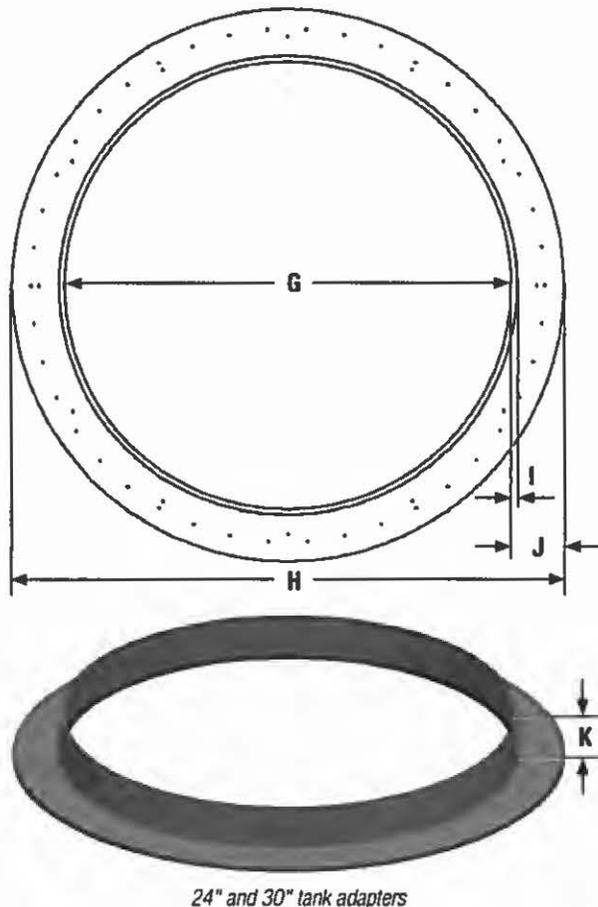
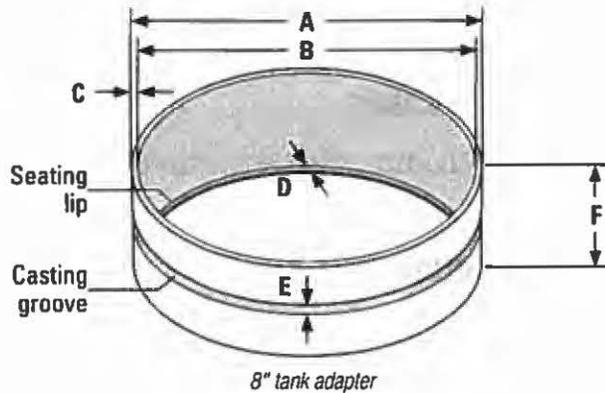
Specifications

Dimensions in inches (mm)	RLA24	RLA30
A – Adapter height	1¼ (32)	1¼ (32)
B – Socket or lip width	1 (25)	1 (25)
C – Inside diameter	22¾ (581)	28½ (724)
D – Outside diameter	25½ (648)	31 (787)
E – Socket depth	¾ (10)	N/A
Riser style	Perma-Loc™ Ultra-Rib™	Perma-Loc

PRTA Tank Adapters

Applications

PRTA tank adapters are used to provide a structural, water-tight method of installing an 8", 24", or 30" access riser over a tank opening.



General

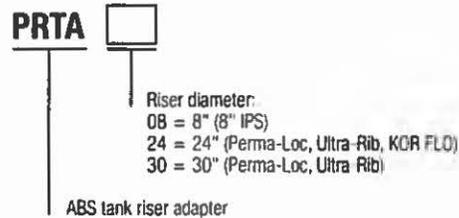
Orenco's PRTA tank adapters are molded plastic products and therefore have excellent part-quality and consistency. PRTA tank adapters are designed to be cast into a tank top, providing a way to affix inspection or access risers.

Orenco's 8" adapters provide a slip-fit for 8" IPS PVC inspection risers. Risers are placed in the inner sleeve and fixed into place with PVC cement. On 24" and 30" adapters, the O.D. of the vertical flange matches the I.D. of Orenco's ribbed risers, which provides a suitable joint to seal with ADH100 adhesive.

Standard Models

PRTA08, PRTA24, PRTA30

Nomenclature



Materials of Construction

Tank adapter (8")	Sand-coated PVC
Tank adapter (24" and 30")	ABS

Specifications

Dimensions (in.)	PRTA08	PRTA24	PRTA30
A	9 1/2	—	—
B	8 5/8	—	—
C	3/32	—	—
D (lip width)	1/8	—	—
E	1/2	—	—
F	4 5/8	—	—
G	—	23 1/2	29 1/2
H	—	27	35
I	—	3/4	3/4
J	—	1 3/4	2 1/2
K	—	3 1/4	3

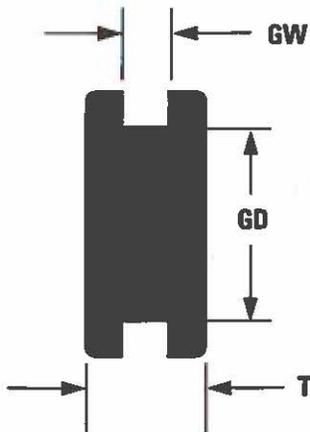
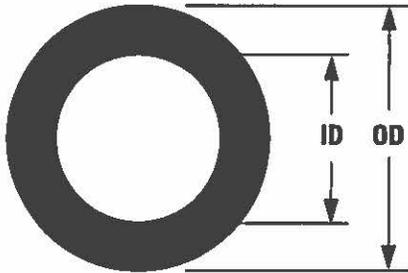
Pipe Grommets

Submittal
Data Sheet



Applications

Oreco Pipe Grommets are used to provide a seal to prevent the passage of liquids through pipe ports.



General

Oreco Pipe Grommets are constructed of corrosion-resistant rubber to provide long-lasting seals. Grommets conform to standard IPS sizes. Not all models conform exactly to the depiction shown.

Standard Models

G05L, G075L, G1L, G125L, G150L, G2L, G3L, G4L, G6L

Nomenclature

G	□	□	□	L
	↑ Indicates not installed			
	↑ Indicates grommet diameter:			
	05	=	1/2"	
	075	=	3/4"	
	1	=	1"	
	125	=	1-1/4"	
	150	=	1-1/2"	
	2	=	2"	
	3	=	3"	
	4	=	4"	
	6	=	6"	
	Grommet			

Specifications

Dimensions

Model	G05L	G075L	G1L	G125L	G150L	G2L	G3L	G4L	G6L
OD (inches)	1 1/4	1 1/2	1 7/8	2 1/8	2 1/2	3 7/8	5	6	8 1/8
ID (inches)	3/4	1	1 1/4	1 1/2	1 3/4	2 1/8	3 1/4	4 3/16	6 11/16
GD (inches)	1	1 1/4	1 5/8	1 3/4	2 1/8	2 11/16	3 13/16	4 15/16	7 5/8
GW (inches)	3/16	3/16	1/4	1/4	1/4	5/16	5/16	1/4	1/4
T (inches)	1/2	7/16	9/16	5/8	5/8	15/16	15/16	7/8	13/16
Holesaw Size (inches)	1	1 1/4	1 9/16	1 3/4	2 1/8	2 3/4	3 7/8	5	7

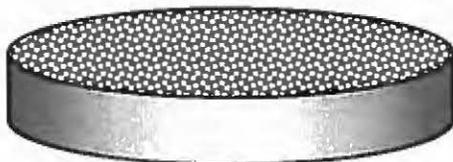
Material of Construction:

EPDM synthetic rubber in accordance with MIL-STD-417, 60 durometer.

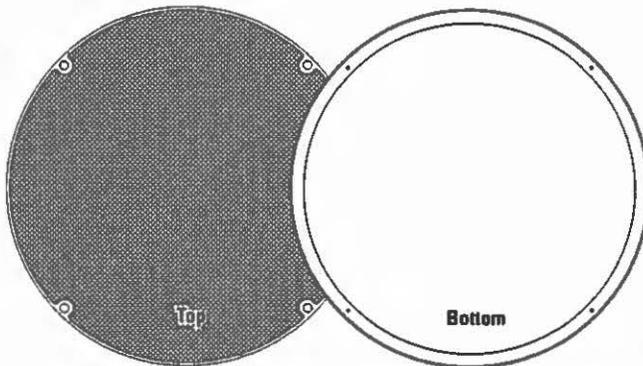
Fiberglass Access Lids

Applications

Orenco® Fiberglass Access Lids provide a secure covering for risers, pump basins, and access ports. Orenco Fiberglass Access Lids are capable of supporting a 2500-lb wheel load; however, they are not designed or recommended for vehicular traffic.



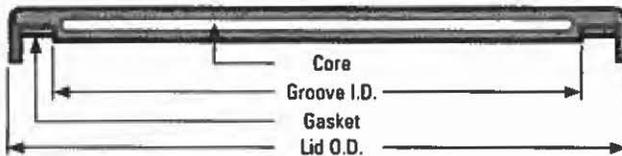
8" riser cap



Top

Bottom

Cutaway view



24" and 30" riser lids

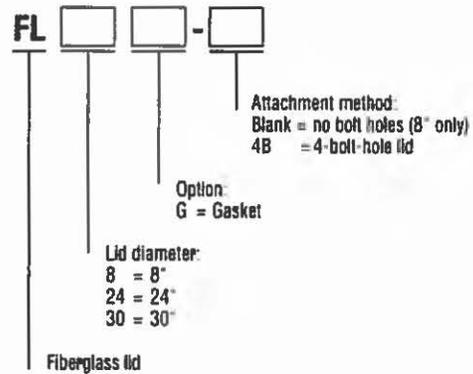
General

Orenco Fiberglass Access Lids are molded using fiberglass reinforced polyester resin encapsulating a wood core for added durability and longevity. The finish is green or brown and the top surface is textured to provide a nonskid surface. Gasketed lids (8" and 30" only) include a polyurethane gasket. 24" and 30" lids come with four 5/16-inch stainless steel flathead socket cap screws and a hex key wrench.

Standard Models

FL8G, FL24-4B, FL30G-4B

Nomenclature



Materials of Construction

Lid	Fiberglass
Core	Wood (24" and 30" only)
Gasket	Polyurethane (8" and 30" only)

Specifications

Model	FL8G	FL24-4B	FL30G-4B
Lid O.D. (in.)	8.88	26.25	32.60
Groove I.D. (in.)	8.63	22.75	28.75
Avg. thickness (in.)	0.19	0.75	1.00
Weight (lb)	N/A	12.50	21.50
Gasket type	polyurethane	N/A	polyurethane

Service Connections



Applications

Orenco® Service Connections are used to isolate pressure mainlines from individual service laterals, by combining a ball valve and check valve into one component. Service connections also help simplify inspection and maintenance procedures.

General

Orenco's Service Connections are constructed of Schedule 80 PVC. All models built for the City of Lacey, WA include a 1-in. diameter inlet elbow and a 1 1/4-in. diameter outlet elbow.

Standard Models

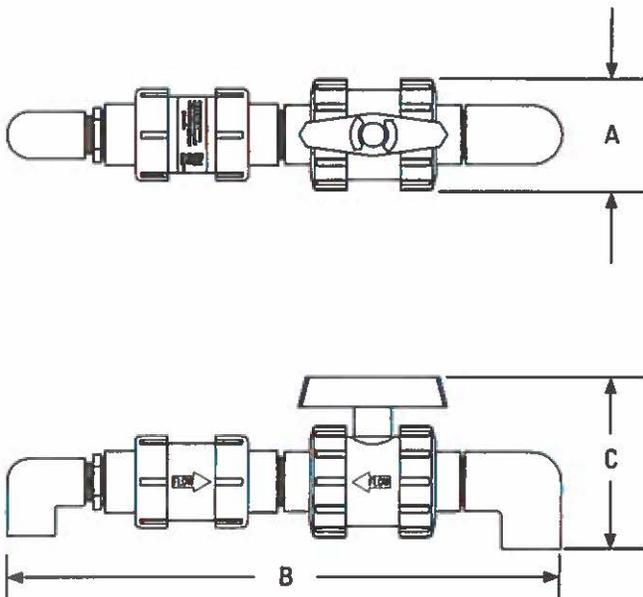
SC125-LACEY

Nomenclature

SC 125 - LACEY

Discharge diameter:
125 = 1 1/4 in.

Service connection



Materials of Construction

Pipe	Schedule 80 PVC
Fittings	Schedule 80 PVC
Check valve (KBI)	Schedule 80 PVC
Ball valve (KBI)	Schedule 80 PVC

Specifications

A - Width (in.)	3.75
B - Overall length (in.)	18.63
C - Height (in.)	5.75
Inlet diameter (IPS nom.)	1 in.
Outlet diameter (IPS nom.)	1.25 in.

Certificate Number: Sample

C E R T I F I C A T E O F O R I G I N

CITY OF LACEY ENGINEERED WASTEWATER COLLECTION SYSTEM

SINGLE FAMILY RESIDENCE using 1500 or 1700 gallon tank
TWO FAMILY RESIDENCE (DUPLEX) using 3000 gallon Concrete Tank

The following Collection System On-Lot Package is certified to have been manufactured by Orenco Systems[®], Inc., Sutherlin, Oregon. The On-Lot Package equipment listed below is covered by an extended factory warranty under the terms and conditions of Orenco Systems' Certificated Products Limited Warranty in effect at the time of sale.

On-Lot Package Code: PSA10-S1DS-LACEY-WA

- Adhesive:.....(3) ADH100
- Splice Box:.....(1) SBEX1-4, (3) SBHSY, (5) SBHSB
- Biotube[®] Pump Vault:.....(1) PVU57-1819-L
- Float Assembly:.....(1) MFAG-Y,G-27V-LACEY
- Discharge Assembly:.....(1) HV100BFCPR-80, (1) HVX100PR-80
- Check Valve:.....(1) PPSC-10
- Effluent Pump:.....(1) PF100511
- Control Panel:.....(1) S1DS-LACEY
- Homeowner's Manual:.....(1) PMHOMEMANUAL
- Installation Manual:.....(1) PMPSPPIINST
- Certificate of Origin:.....(1) NCF-CO-LACEY-1

Additional Orenco Equipment Required for a Complete Installation:

- PVC Access Risers & Accessories:.....(1) RR30XX+SX, (1)RLA30, (1) G1, (1) RR24XX, (1) RLA,24
- Riser Adapters (Cast into Tank).....(1) PRTA24, (1) PRTA30, (1) PRTA08
- Fiberglass Access Lids:.....(1) FL30G-4B, (1) FL24-4B-RLA, (1) FL8G
- Service Connection Valve Assembly.....(1) SC125-LACEY

For Customer Use:	
Site address:	_____
Lot number:	_____
Development:	_____
Installer:	_____ Install Date: _____
Vendor:	_____
City Inspector:	_____

NCF-CO-LACEY-1
Rev. 3, 12/11
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Incorporated

*Changing the Way the
World Does Wastewater[®]*

1-800-348-9843
www.orenco.com

814 Airway Avenue
Sutherlin, OR 97479

ADH100 Adhesive

Submittal
Data Sheet



Applications

ADH100 is used to bond PVC risers to Oreco grade rings and PRTA series tank adapters.

General

ADH100 is a single component opaque adhesive formulated to bond PVC risers to Oreco grade rings and PRTA series tank adapters. Upon curing, the seal created is both water and chemical resistant.

Standard Model

ADH100



Specifications

Gel time is approximately 10 minutes; ultimate bond strength occurs after 24 - 72 hours at 70° - 85° F. Cure time is increased greatly with a decrease in temperature; not recommended for use in temperatures below 32° F.

Expected shelf life is approximately 5 years when stored at temperatures between 45° - 85° F.

External Splice Box

Applications

The Orenco® External Splice Box attaches outside the access riser of an underground tank. It is engineered specifically for water and wastewater treatment systems and is especially suited for use in locations prone to high groundwater and other wet conditions. Its separate conduit hubs, large volume, and optional dividers make it useful for maintaining isolation of high and low voltage wires where needed. It has four cord grips which accommodate power cords for floats and pumps of 0.170 - 0.470 inches (4.3 - 11.9 mm) in diameter. Unused cord grips can be plugged watertight with the supplied cord grip plugs. Each External Splice Box is provided with a hole-cutting template to simplify installation on the riser.

General

To specify the Orenco External Splice Box for your installation, require the following:

- Watertight for prolonged submergence per UL listing (Type 6P)
- Attachment external to access riser to allow inspection with no need to open the riser lid
- Volume of 100 in.³ (1639 cm³) for easy wiring access and to accommodate multiple wiring configurations
- Bottom entry, so conduit or direct-bury cable always remains below minimum burial depth
- Molded of UL (f1) rated plastic, resistant to cold and UV exposure, suitable for external applications
- Optional divider plates available for isolating high and low voltage wires from separate conduits or direct-bury cable

Standard Models

SBEX1-4, SBEX1-4-P

Nomenclature

SBEX1-4 -

Blank = no divider plates
P = divider plates

External splice box



The External Splice Box is molded of a UL (f1) rated PVC alloy. It has a UL Type 6P listing for prolonged submergence.



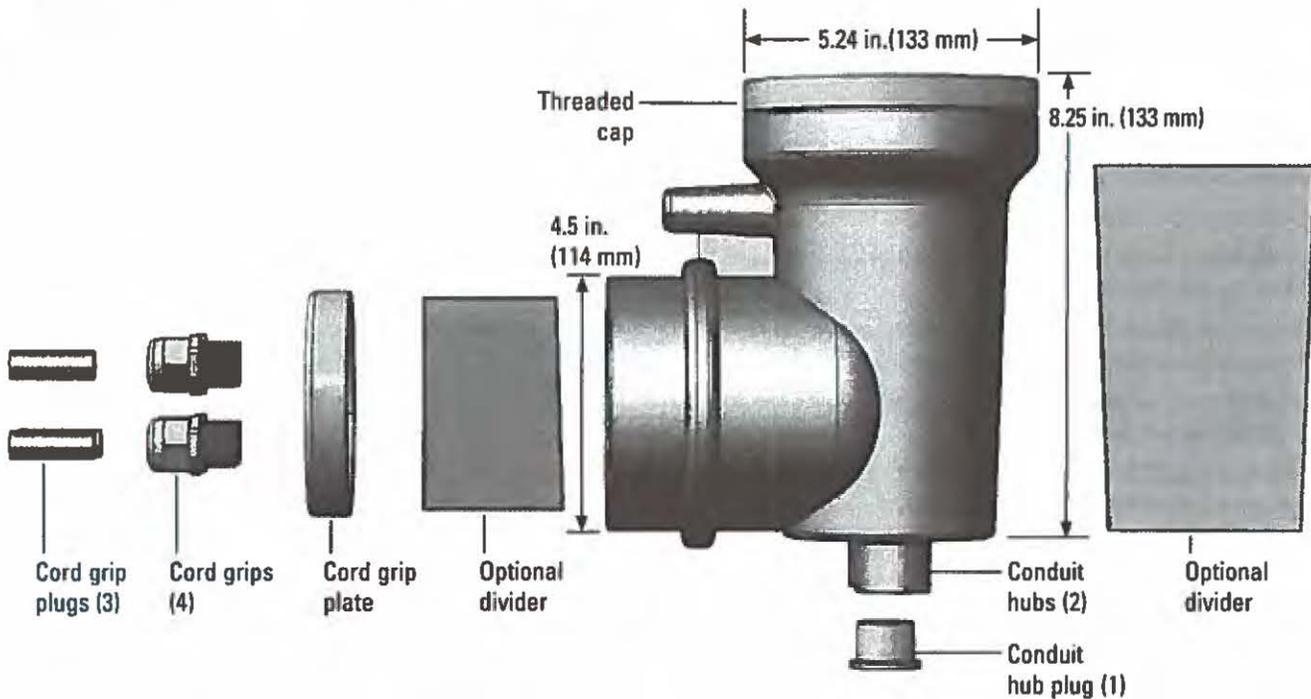
External Splice Box (continued)

Physical Specifications

Volume	100 in. ³ (1639 cm ³)
Cord grips	4 per SBEX
Cord grip plugs	3 per SBEX
Cord diameters accommodated	0.170- 0.470 in. (4.3 - 11.9 mm)
Conduit hubs	2
Conduit hub plug	1
Conduit sizes accommodated	¾ in. 1 in. (with coupling) ½ in. (with fitting or bell end)
Diameter of hole into riser	5 in. (127 mm) (hole-cutting template included)

Materials of Construction

Splice box	PVC alloy
Cord grips	Nylon
Cord grip plugs	EPDM rubber
O-rings	Buna rubber
Conduit hub plug	PVC per ASTM D-1784

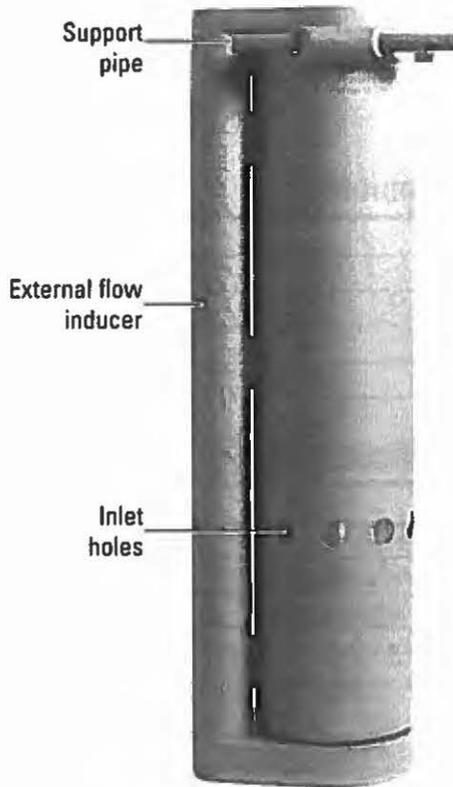


Universal Biotube[®] Pump Vaults

For use with Oreco 4-in. Submersible Effluent Pumps

Applications

Oreco Biotube[®] Pump Vaults are used to filter effluent that is pumped from septic tanks or separate dosing tanks in STEP systems and onsite wastewater treatment systems. They remove two-thirds of suspended solids, on average. Pump vaults house a Biotube effluent filter and one or two Oreco high-head effluent pumps and can be used in single-compartment septic tanks with flows up to 40 gpm. When flows are greater than 40 gpm, a double-compartment septic tank or separate dosing tank is recommended.



Side view

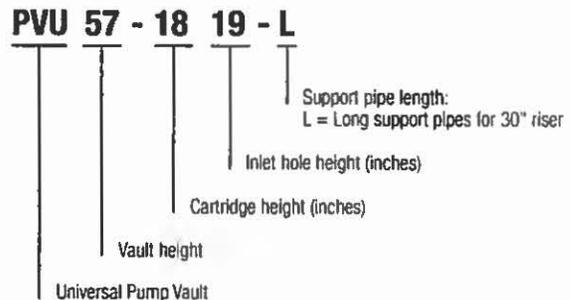
General

The Oreco Biotube Pump Vault includes a molded polyethylene housing with an internal filter cartridge constructed of polypropylene and PVC. Schedule 80 PVC support pipes are included to suspend the vault in a tank opening. The filter cartridge can be removed without pulling the pump or the vault. Effluent enters through inlet holes around the perimeter of the Biotube vault and flows through the Biotubes to the external flow inducer. The external flow inducer accommodates one or two pumps. Oreco Biotube Pump Vaults are covered by U.S. patents #4,439,323 and 5,492,635.

Standard Models

PVU57-1819-L

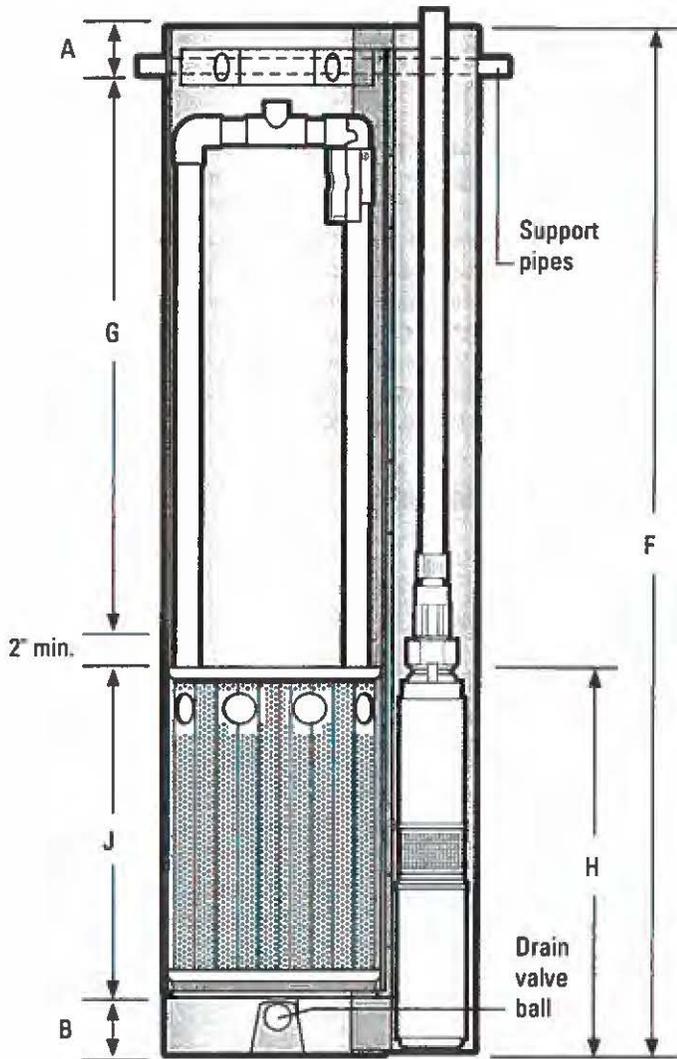
Nomenclature



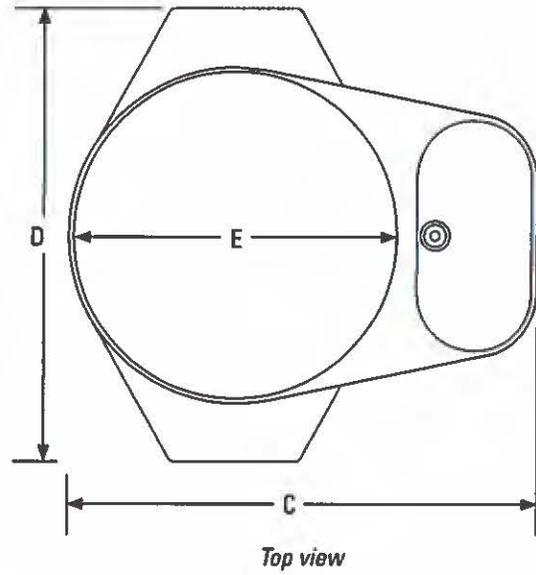
Materials of Construction

Support pipe:	Schedule 80 PVC
Biotube [®] vault:	Polyethylene
Biotube cartridge:	Polypropylene/PVC
Float stem:	Schedule 40 PVC
Drain valve ball:	Polypropylene

Universal Biotube® Pump Vaults (continued)



Side view cutaway



Top view

Dimensions

A	3.0 in.
B	4.0 in.
C	17.3 in.
D	16.6 in.
E	12.0 in.

Specifications

Model	PVU57-1819-L
Vault height (F)	57 in.
Lowest float setting point (G)	29 in.
Inlet hole height (H)*	19 in.
Biotube® cartridge height (J)	18 in.
Biotube mesh opening	0.125 in.
Filter flow area	4.4 ft ²
Filter surface area	14.5 ft ²
Maximum flow rate	140 gpm

* May vary depending on the configuration of the tank.

Float Switch Assemblies



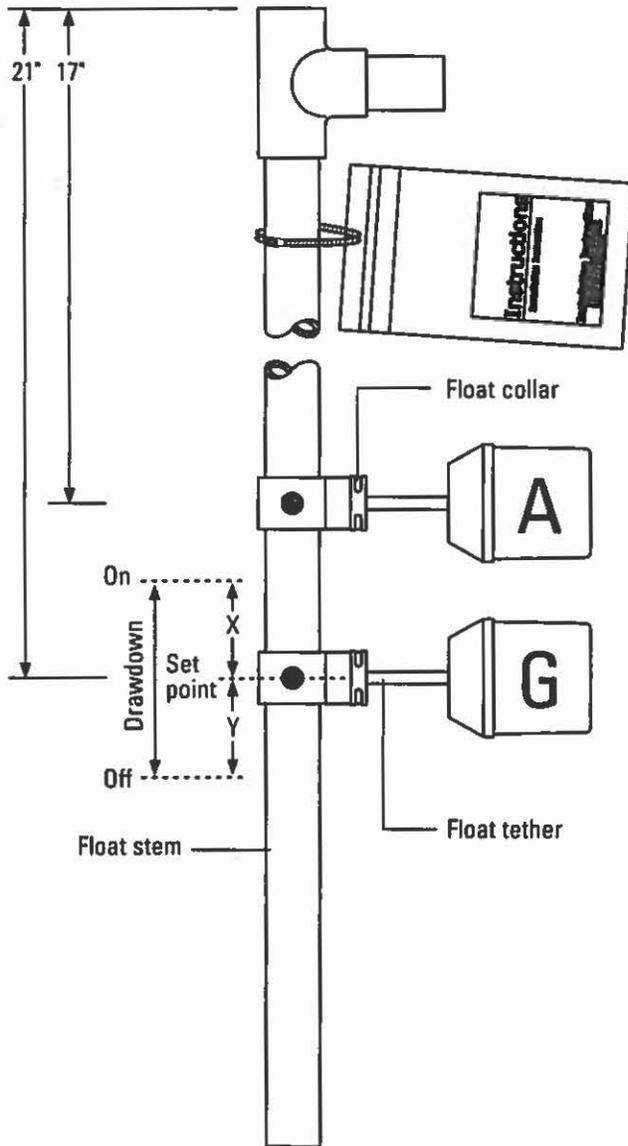
Applications

Float switches are used to signal liquid level positions for alarm and pump control applications. Drenco float switch assemblies can be mounted in pump vaults, effluent screens, pump basins, and risers.

General

All models listed are UL listed and CSA certified for use in water or sewage.

Floats are typically ordered in assemblies that include one or more floats mounted on a 1" PVC float stem. ABS float collars are used to provide secure mounting that is easily adjustable.



Standard Models

MFAB-YG27V-LACEY

Nomenclature

MF AG - YG 27 V - LACEY

Application:
V = Pump vault (Lacey, WA float settings)

Stem length:
27 = 27 in.

Color code:
Y = Yellow
G = Green

Float switch models:
A = Signal-rated mercury float switch, normally open
G = Motor-rated mercury float switch, normally open

Mechanical or mercury float switch assembly

Materials of Construction

Float housing	Impact-resistant, noncorrosive PVC plastic for use in liquids up to 140° F
Float cord	Flexible 2-conductor (UL, CSA) SJOW; water-resistant (CPE); neoprene coating
Float collar	ABS

The "On" and "Off" positions describe normally open floats.

Float Switch Assemblies (continued)

Signal- and Motor-Rated Float Switch Matrix

Float	State ¹	Type ²	IR ³	Volts	Amps	hp	Tether	X	Y	Drawdown ⁴
Signal-rated mercury floats^a (for control switch applications)										
A Model ^a	Normally open	Mercury	Yes	n/a	n/a	n/a	2.00 in.	n/a	n/a	n/a
Motor-rated floats (for pump switch applications)										
G Model	Normally open	Mercury	No	120 V	15A	¾ hp	2.00 in.	1.50 in.	3.00 in.	4.50 in.
				240 V	15A	2 hp	3.00 in.	1.75 in.	3.00 in.	4.75 in.
							4.00 in.	2.00 in.	3.50 in.	5.50 in.

a. Suitable for use with VCOM and MVP

Notes

¹ State: normally open or normally closed

The default state of a float — normally open or normally closed — refers to the contact positions in the float when the float is resting (down). Float switches have an internal contact. The terms “normally open” (N/O) and “normally closed” (N/C) refer to the state of the float switch contact in the down position. A normally open float switch has an open contact (off) in the down position and a normally closed float switch has a closed contact (on) in the down position. Different panel functions require different types of float switches. Most applications require float switches that are normally open. One notable exception is the redundant off and low-level alarm function that requires a normally closed float switch, except with MVP and VCOM panels.

² Type

Floats have mechanical or mercury contactor types. The important distinction between these is that mercury floats are not rated for potable water.

³ IR (intrinsically safe relay)

Approved for use with intrinsically safe, Class I, Division 1 applications, where reliable float switch operation with very low current is required.

⁴ Drawdown

Drawdown (in inches) refers to the difference in liquid level between a float switch’s activation and deactivation points. Drawdown can be altered by adjusting the tether length of the float switch cord. When selecting float switches, keep in mind that any float switch that can directly start and stop a pump (one that has no motor contactor in the control panel) should have a drawdown capability, to avoid rapid cycling of the pump.

Discharge Assemblies

Applications

Orenco Discharge Assemblies are used to convey effluent from a pump to the exterior of a riser or pump basin. They come in high-head configuration, for use with submersible turbine pumps. An external flex extension is recommended for installations where tank settling may occur to avoid line breakage during settling. Discharge assemblies for use in 1500-gallon STEP tanks include a ¼" flow control orifice.

General

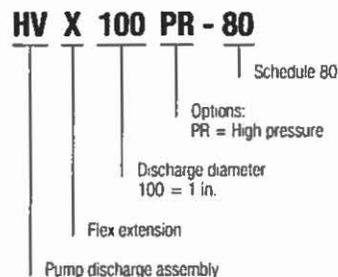
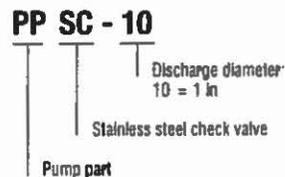
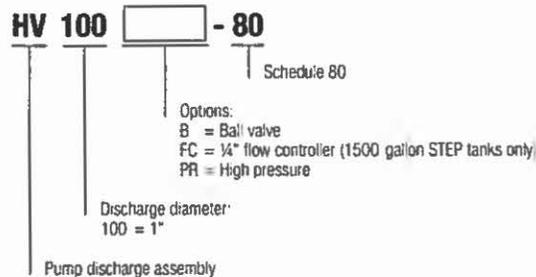
Orenco Discharge Assemblies are corrosion-resistant and adjustable for a proper fit. Discharge assemblies are composed of PVC valves and flexible hose that simplify installation and maintenance. The flexible hose damps vibrations from the pump and allows for easy installation. All parts are either solvent welded or threaded and sealed with Teflon® paste.

Teflon® is a registered trademark of DuPont.

Standard Models

HV100BPR80, HV100BFCPR-80, HVX100PR-80, PPSC-10

Nomenclatures



Materials of Construction

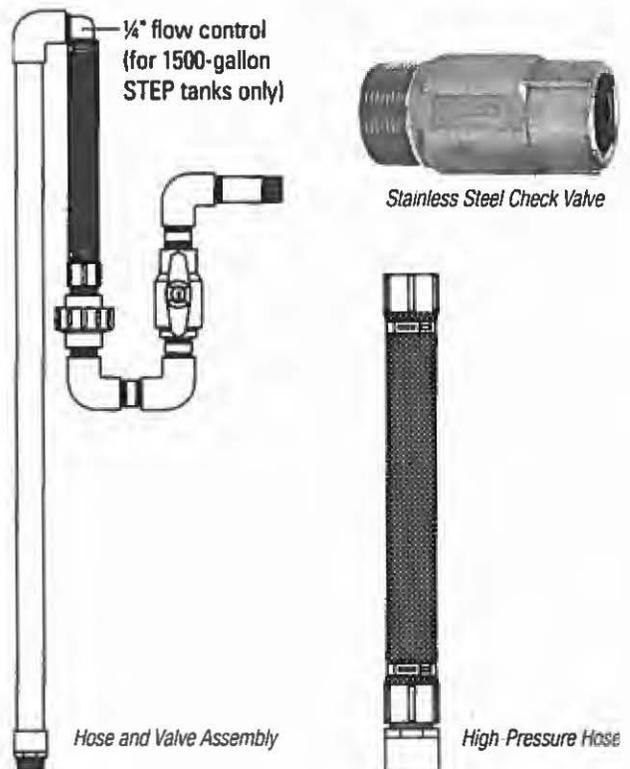
Component	Material
Ball valve	Schedule 40 PVC
Flowmatic check valve	Stainless steel
Pipe and fittings	Schedule 80 PVC
Flexible hose	PVC
External flex hose	PVC
Flow control disc	Schedule 80 PVC
Gate valve	Schedule 80 PVC
Unions	Schedule 80 PVC
High-pressure flex hose	Special elastomer compound

Component Working Pressure Ratings

Valves	150 psi (10 bar) at 73° F (23° C)
Unions	150 psi (10 bar) at 73° F (23° C)

High-Pressure Hose Specifications

Thickness and working pressures at 73° F (23° C)		
Size (Nominal)	Wall thickness	Working pressure
1.00 in.	0.235 in.	250 psi



PF Series 4" Submersible Effluent Pump



Applications

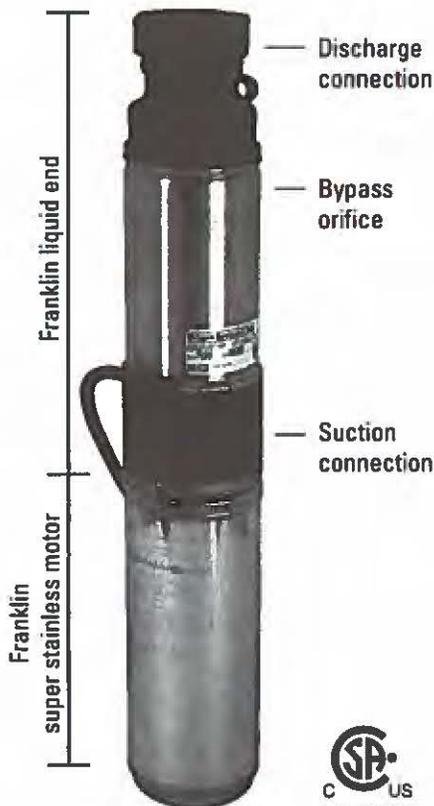
Orenco® 4" Submersible Effluent Pumps are designed to transport screened effluent (with low TSS counts) from septic tanks or separate dosing tanks. All our pumps are constructed of lightweight, corrosion-resistant stainless steel and engineered plastics; all are field-serviceable and repairable with common tools; and all standard 60-Hz PF Series models are CSA certified to the U.S. and Canadian safety standards for effluent pumps, meeting UL requirements.

High-Head Effluent Pumps from Orenco® are used in a variety of applications, including pressurized drainfields, packed bed filters, mounds, aerobic units, effluent irrigation, effluent sewers, wetlands, lagoons, and more. These pumps are designed to be used with a Biotube® pump vault.

Features/Specifications

Orenco 4" Submersible Effluent Pump has the following features:

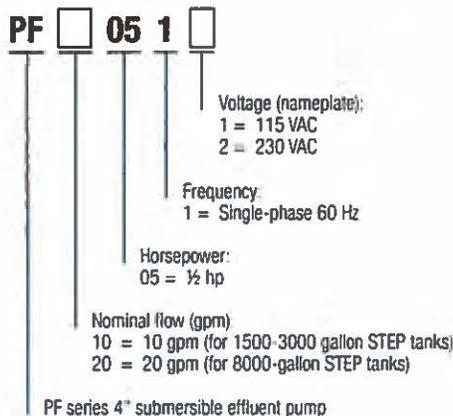
- Minimum 24-hour run-dry capability with no deterioration in pump life or performance
- 1/8" bypass orifice (patent pending) to ensure flow recirculation for motor cooling and to prevent air bind
- Liquid end repair kits available for better long-term cost of ownership
- TRI-SEAL™ floating impeller design
- Super stainless Franklin Electric motor, rated for continuous use and frequent cycling
- Type S00W 600-V motor cable (suitable for Class 1, Division 1 and Division 2 applications)
- Five-year warranty on pump or retrofit liquid end from date of manufacture against defects in materials or workmanship



Standard Model

PF100511, PF20512

Nomenclature



PF Series High-Head Effluent Pumps

Specifications

60 Hz		Design gpm (in.)	Horsepower	Phase	Nameplate voltage	Actual voltage	Design flow amps	Max amps	Impellers	Discharge size ¹	Length (in.)	Min. liquid level, ² (in.)	Weight, ³ (lb)	Rated cycles/day
Model														
PF100511		10	0.50	1	115	120	12.7	12.7	6	1 ¼ in.	23.0	16	26	300
PF200512		20	0.50	1	230	240	6.4	6.5	4	1 ¼ in.	22.5	18	26	300

¹ The 1 ¼-in. NPT discharge is 2 ¾-in. octagonal across flats; Discharge is female NPT threaded, U.S. nominal size, to accommodate Orenco® discharge hose and valve assemblies.

² Minimum liquid level is for single pumps when installed in an Orenco Biotube® Pump Vault or Universal Flow Inducer. In other applications, minimum liquid level should be top of pump. Consult Orenco for more information.

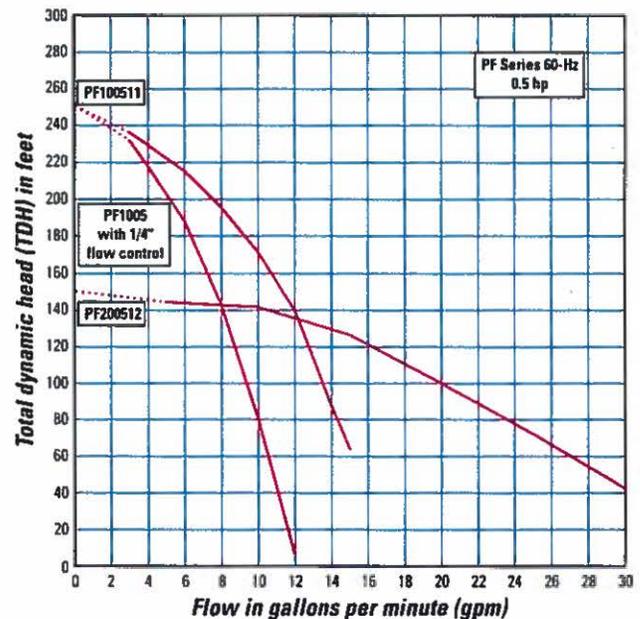
³ Weight includes carton and 10-ft cord.

Materials of Construction

Discharge:	Glass-filled polypropylene
Discharge bearing:	Engineered thermoplastic (PEEK)
Diffusers:	Glass-filled PPO (Noryl GFN3)
Impellers:	Celcon® acetal copolymer on 10-, 20- and 30-gpm models; 50-gpm impellers are Noryl GFN3
Intake screen:	Polypropylene
Suction connection:	Stainless steel
Drive shaft:	7/16 inch hexagonal stainless steel, 300 series
Coupling:	Sintered stainless steel, 300 series
Shell:	Stainless steel, 300 series
Motor:	Franklin motor exterior constructed of stainless steel. Motor filled with deionized water and propylene glycol for constant lubrication. Hermetically sealed motor housing ensures moisture-free windings. All thrust absorbed by Kingsbury-type thrust bearing. Rated for continuous duty. Protected against thermal overload and equipped with surge arrestors for added security.

Using a Pump Curve

A *pump curve* helps you determine the best pump for your system. Pump curves show the relationship between flow (gpm) and pressure (total dynamic head, or TDH), providing a graphical representation of a pump's optimal performance range. Pumps perform best at their *nominal flow rate* — the value, measured in gpm, expressed by the first two numerals in an Orenco pump nomenclature. At low flow rates, TDH varies from pump to pump, so it is represented as a dashed line in the pump curves. For most accurate pump specification, use Orenco's PumpSelect™ software.



Simplex Control Panels – Lacey, WA

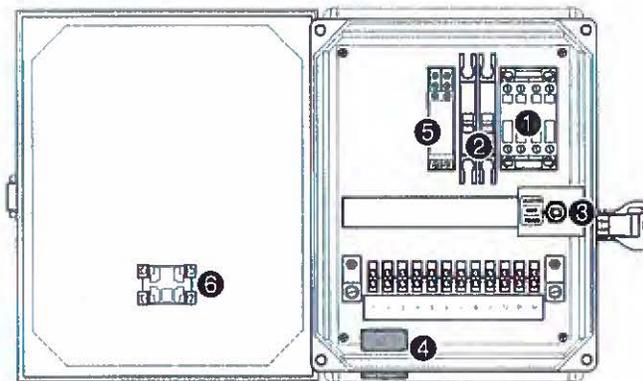


Applications

Orenco Simplex Control Panels are used to control effluent pumps, alarms, and other equipment as specified in pressure sewers and onsite septic systems.

General

Orenco Simplex Control Panels are specifically engineered for pressure sewer (STEP) systems, onsite septic treatment systems, and pump control into conventional gravity systems. Standard features include circuit breakers, an automatic/manual/off toggle switch, automatic motor control operation, and an audible/visible high water level alarm with auto reset.



Standard Models

S1DS-LACEY

Nomenclature

S1 DS - LACEY

Option:
DS = Disconnect switch
Simplex panel, 120 VAC

Materials of Construction

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

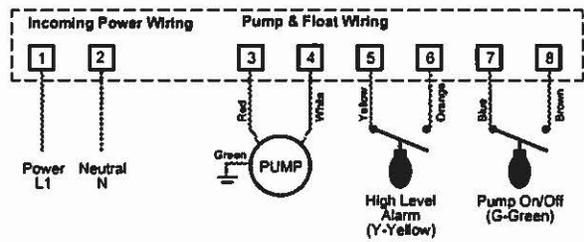
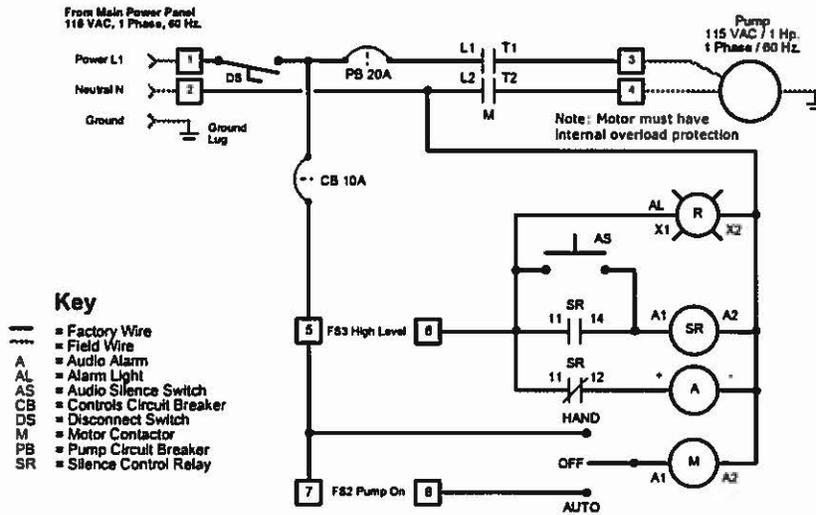
Dimensions

Height (in.)	11.5
Width (in.)	9.5
Depth (in.)	5.4

Specifications

Panel ratings	120 V, 3/4 hp, 14 A, single phase, 60 Hz
1. Motor-start contactor	16 FLA, 1 hp, 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., warble-tone sound, UL Type 4X
5. Audio alarm silence relay	120 V, automatic reset, DIN rail mount
6. Visual alarm	7/8-in. diameter red lens, "Push-to-silence," 120 V LED, UL Type 4X
7. Disconnect switch (not shown)	Single-pole, single 1-1 throw, 20 A

Panel Wiring Diagram Model S1 DS Lacey



Motor Power
 Voltage 120VAC
 Max Amps 16
 Horsepower 1
 Hertz 60
 Phase 1
 Short Circuit Current Rating:
 5,000A rms symmetrical, 240V max

Controls
 Voltage 120VAC
 Max Amps 5
 Hertz 60
 Phase 1

Simplex Operation

High Level Alarm: This float activates the alarm light and audible alarm when lifted. The audible alarm may be silenced by pressing the PUSH TO SILENCE button. The alarm light will remain on until the float is lowered.

Pump On/Off: This float turns on the pump when lifted. The pump will continue to run until the float is lowered.

Panel Model
 S1 DS Lacey

Enclosure Rating
 UL Type 4X

Orenco Systems, Inc.

EDW-WD-S-131
 Rev 7.1 © 6/95

Splice Box Wiring Diagram



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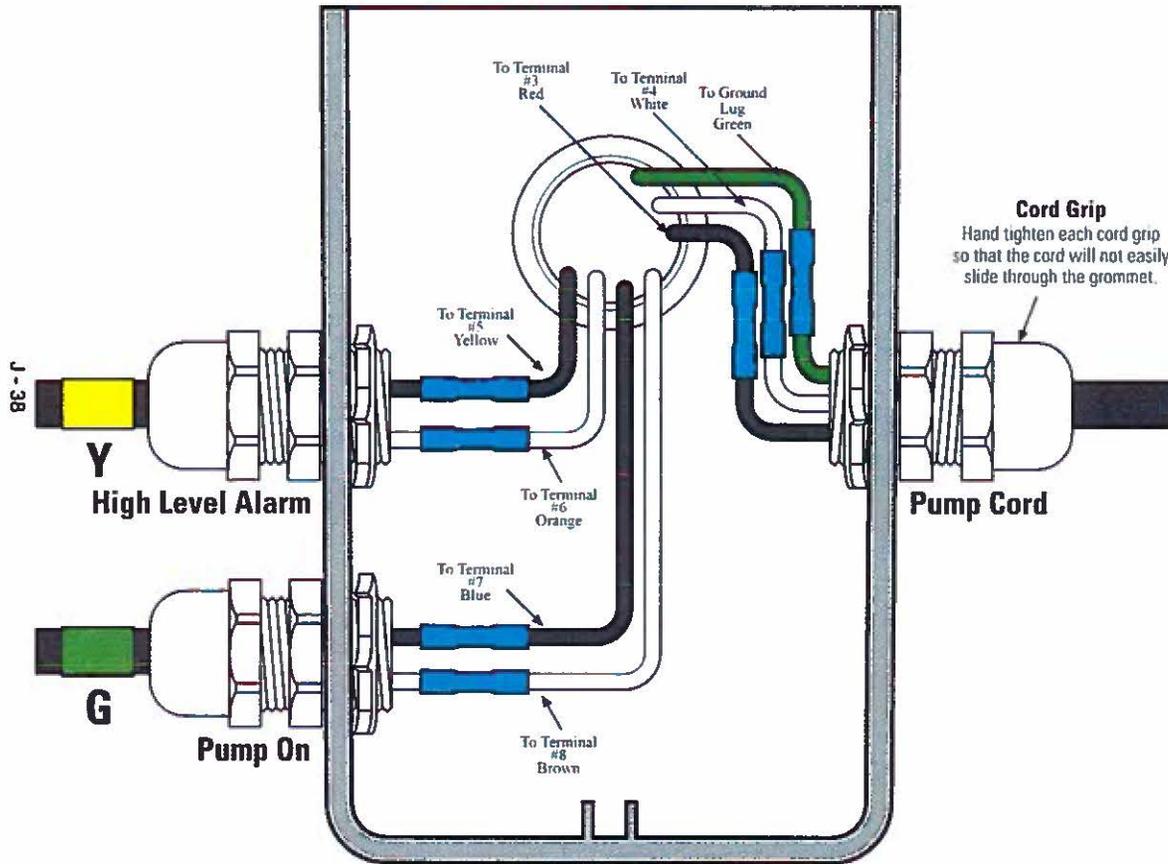
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Key

-  Black Wire
-  White Wire
-  Green Wire
-  Heat Shrink & Butt Connector *

* Refer to drawing EIN-SB-SB-1
for splicing instructions.

Float Tag Colors

- Y** - Yellow
- G** - Green

Note: Multi-function floats will
have more than one marker

Attention: Failure to follow splicing
instructions will void warranty

Control Panel Series

Lacey Simplex

Float Function Color Code

YG

Splice Box Model

SBEX1-4

Drawing No.

EDW-SB-S-8

EDW-SB-S-8
Rev 2.2 ©12/06/11