# Orenco® PVA-Series Pumps

## Applications

Orenco's Submersible Effluent Pumps are used to transport screened effluent (with low TSS counts) from septic tanks or separate dosing tanks.

Orenco's PVA-Series 4in (100mm) Submersible Effluent Pumps are designed to be used in a variety of Orenco pumping packages, typically with an Orenco Biotube® ProPak™ Pump Package. PVA-Series pumps are only available for sale in a limited number of Orenco pumping packages.

Orenco PVA100511, PVA300511, and PVA500511 pumps

## General

PVA-Series pumps are constructed of lightweight, corrosion-resistant stainless steel and engineered plastics. The liquid end is cleanable in the field with common tools. These pumps meet UL requirements and are CSA certified to US and Canadian safety standards for effluent pumps.
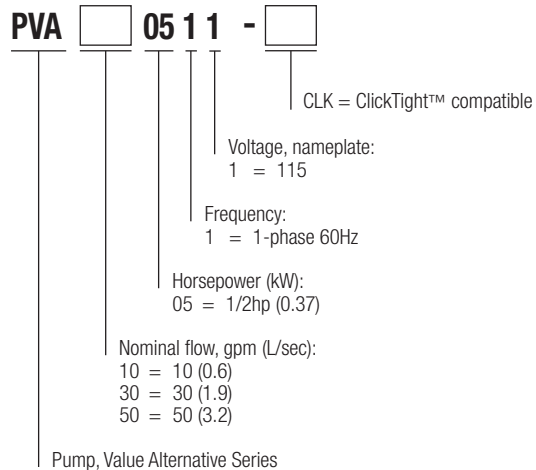
To specify this pump for your installation, require the following:

- Run-dry capability
- 1/8in (3mm) bypass orifice for motor cooling and to prevent air binding
- 1/8in (3mm) mesh intake screen to limit solids
- Composite Franklin Electric motors are rated for continuous use, hermetically sealed motor housing for moisture-free windings, and Kingsbury-type thrust bearing for thrust absorption
- Thermal overload protection trips at 203-221˚F (95-105˚C)
- 16AWG, 3-conductor Type SOOW 600V motor cable (suitable for Class I, Division 1 and Division 2 applications)
- Five year warranty from date of manufacture on liquid end against defects in materials or workmanship

### Standard Models

PVA100511, PVA300511, PVA500511

### Product Code Diagram

PVA ☐ 05 1 1 - ☐

CLK = ClickTight™ compatible

Voltage, nameplate:
1 = 115

Frequency:
1 = 1-phase 60Hz

Horsepower (kW):
05 = 1/2hp (0.37)

Nominal flow, gpm (L/sec):
10 = 10 (0.6)
30 = 30 (1.9)
50 = 50 (3.2)

Pump, Value Alternative Series

CSA
C US
LR80980
LR2053896

Powered by
**Franklin Electric**

![Orenco Water logo]

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*All product and performance assertions are based on proper design, installation, operation, and maintenance according to Orenco's current published documentation.*

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## Specifications

| Pump Model | Design gpm (L/sec) | Horsepower (kW) | Phase | Nameplate voltage | Actual voltage | Design flow amps | Max amps | Discharge size and material[1] | Length in (mm) | Min. liquid level in (mm) | Weight lb (kg) | Rated cycles per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PVA100511[4] | 10 (0.6) | 0.50 (0.37) | 1 | 115 | 120 | 12.4 | 12.5 | 1¼in GFP[2] | 22.0 (559) | 16 (406) | 23 (10.4) | 300 |
| PVA300511[4] | 30 (1.9) | 0.50 (0.37) | 1 | 115 | 120 | 11.9 | 12.1 | 1¼in GFP[2] | 20.5 (521) | 20 (508) | 21 (9.5) | 300 |
| PVA500511[4] | 50 (3.2) | 0.50 (0.37) | 1 | 115 | 120 | 12.1 | 12.2 | 2in SS[3] | 19.5 (495) | 24 (610) | 24 (10.9) | 300 |

1. Discharge is receptacle style NPT threaded, US nominal size, to accommodate Orenco discharge hose and valve assemblies. Consult your Orenco distributor about fittings to connect discharge assemblies to metric-sized piping.

2. GFP = Glass-filled polypropylene

3. SS = Stainless steel

4. ClickTight™ compatible

## Materials of Construction

| | |
|---|---|
| Discharge | Glass-filled polypropylene (PVA100511 and PVA300511), stainless steel (PVA500511) |
| Diffusers | Glass-filled PPO (SABIC's NORYL™ GFN3 resin) |
| Discharge bearing | Engineered thermoplastic (PEEK) |
| Impellers | Celanese's Celcon® acetal copolymer (PVA100511), Noryl GFN3 (PVA300511 and PVA500511) |
| Intake screen | Polyethylene |
| Suction connection | Glass-filled polypropylene (PVA100511), stainless steel (PVA300511 and PVA500511) |
| Drive shaft | 7/16in hexagonal stainless steel, 300 series |
| Coupling | Sintered stainless steel, 300 series |
| Shell | Stainless steel, 300 series |
| Cable | 10ft (3.1m) 16/3 Type SOOW 600V motor cable (not compatible with Franklin Electric Super Stainless motors) |
| Motor | Franklin Electric composite motor filled with deionized water and propylene glycol for constant lubrication. Stainless steel shell. |

## Using a Pump Curve

A pump curve helps you determine the best pump for your system. Pump curves show the relationship between flow (gpm or L/sec) 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. These graphs use solid lines to show the optimal pump operation range. Dashed lines indicate flow rates outside of the optimal range for each pump. For the most accurate pump specifications, use Orenco's PumpSelect™ software.

## Pump Curves