

# PVA-Series 4-inch (100-mm) Submersible Effluent 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 4-inch (100 mm) Submersible Effluent Pumps are designed to be used in a variety of Orenco pumping packages, typically with a Biotube® ProPak™ or Biotube® ProSTEP™ pumping package. PVA pumps are only available for sale in a limited number of Orenco pumping packages.



Orenco® PVA100511, PVA300511, and PVA500511 pumps

## Features

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 U.S. and Canadian safety standards for effluent pumps.

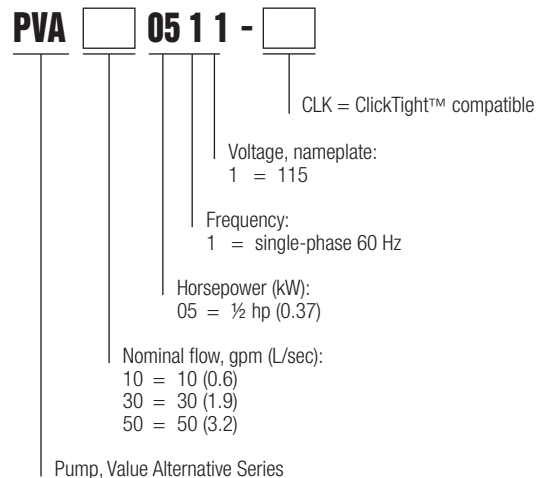
To specify this pump for your installation, require the following:

- Run-dry capability
- 1/8-inch (3-mm) bypass orifice for motor cooling and to prevent air binding
- Composite Franklin Electric motor
- Built-in thermal overload protection
- 16 AWG, 3-conductor Type SOOW 600-V motor cable (suitable for Class I, Division 1 and Division 2 applications)
- 18-month warranty from date of manufacture on liquid end against defects in materials or workmanship

## Standard Models

- PVA100511, PVA300511, PVA500511

## Product Code Diagram



## Specifications

Pump Model	Design gpm (L/sec)	Horsepower (kW)	Phase	Nameplate voltage	Actual voltage	Design flow amps	Max amps	Discharge size and material <sup>1</sup>	Length in. (mm)	Min. liquid level in. (mm)	Weight lb (kg)	Rated cycles per day
PVA100511 <sup>4</sup>	10 (0.6)	0.5 (0.37)	1	115	120	12.4	12.5	1¼-in. GFP <sup>2</sup>	22.0 (559)	16 (406)	23 (10.4)	300
PVA300511 <sup>4</sup>	30 (1.9)	0.5 (0.37)	1	115	120	11.9	12.1	1¼-in. GFP <sup>2</sup>	20.5 (521)	20 (508)	21 (9.5)	300
PVA500511 <sup>4</sup>	50 (3.2)	0.5 (0.37)	1	115	120	12.1	12.2	2-in. SS <sup>3</sup>	19.5 (495)	24 (610)	24 (10.9)	300

<sup>1</sup> 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.

<sup>2</sup> GFP = Glass-filled polypropylene

<sup>3</sup> SS = Stainless steel

<sup>4</sup> ClickTight™ compatible

## Materials of Construction

Discharge	Glass-filled polypropylene (PVA100511 and PVA300511), stainless steel (PVA500511)
Diffusers	Glass-filled PPO (Noryl GFN3)
Discharge bearing	Engineered thermoplastic (PEEK)
Impellers	Celcon® acetacopolymer (PVA100511), Noryl GFN3 (PVA300511 and PVA500511)
Intake screen	Polyethylene
Suction connection	Glass-filled polypropylene (PVA100511), stainless steel (PVA300511 and PVA500511)
Drive shaft	7/16-inch hexagonal stainless steel, 300 series
Coupling	Sintered stainless steel, 300 series
Shell	Stainless steel, 300 series
Cable	10-ft (3.1-m) 16/3 Type SOOW 600-V motor cable (not compatible with Franklin Electric Super Stainless motors)
Motor	Franklin Electric composite motor. Shell 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. Built-in thermal overload protection; trips at 203-221° F (95-105° C).

## 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. The graphs on the following page 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

