



DECIMATE DISRUPTION WITH VORTEX SERIES



Eliminate Disruptive Downtime With Pioneer Pump® Vortex Series™

Using a recessed impeller with fewer internal parts to maintain, vortex technology passes through punishing solids to diminish clogs and lower the cost of ownership compared to chopper and macerating systems. That means more uptime, less financial risk, and maximized value.

pioneerpump.com



Franklin Electric

VORTEX



SERIES

Pioneer Pump® Vortex Series™ Pumps eliminate costly and disruptive downtime by passing through the most challenging solids using a recessed impeller. These pumps are ideally suited for waste handling, sludges, industrial effluent, chemical processing, and other applications where fluid conditioning, macerating, or mix-prevention are unnecessary. This is accomplished using vortex technology, which saves time and money in the most punishing applications by eliminating internal wetted parts, like wear plates and chopper blades that would otherwise have to be monitored, adjusted, and replaced. Heavy-duty cast iron casing construction, an oversized stainless steel shaft, and a leak-proof run dry mechanical seal ensure maximum reliability and uptime. A comprehensive range of electric and diesel packaging options are offered for fixed and portable installations and can be fitted with the industry-leading Pioneer Prime vac-assist system for suction lift applications. Vortex Series Pumps are available in 4x4, 6x6, and 8x8 sizes and cover flow rates up to 3,600 gpm and heads up to 150 feet. The Vortex Series is pioneering the way to reducing disruptive downtime and maximizing value.

FEATURES

HEAVY DUTY

Impeller and casing are cast in ductile iron and shaft is corrosion-resistant 17-4 for maximum reliability.

DISCHARGE CHECK VALVE

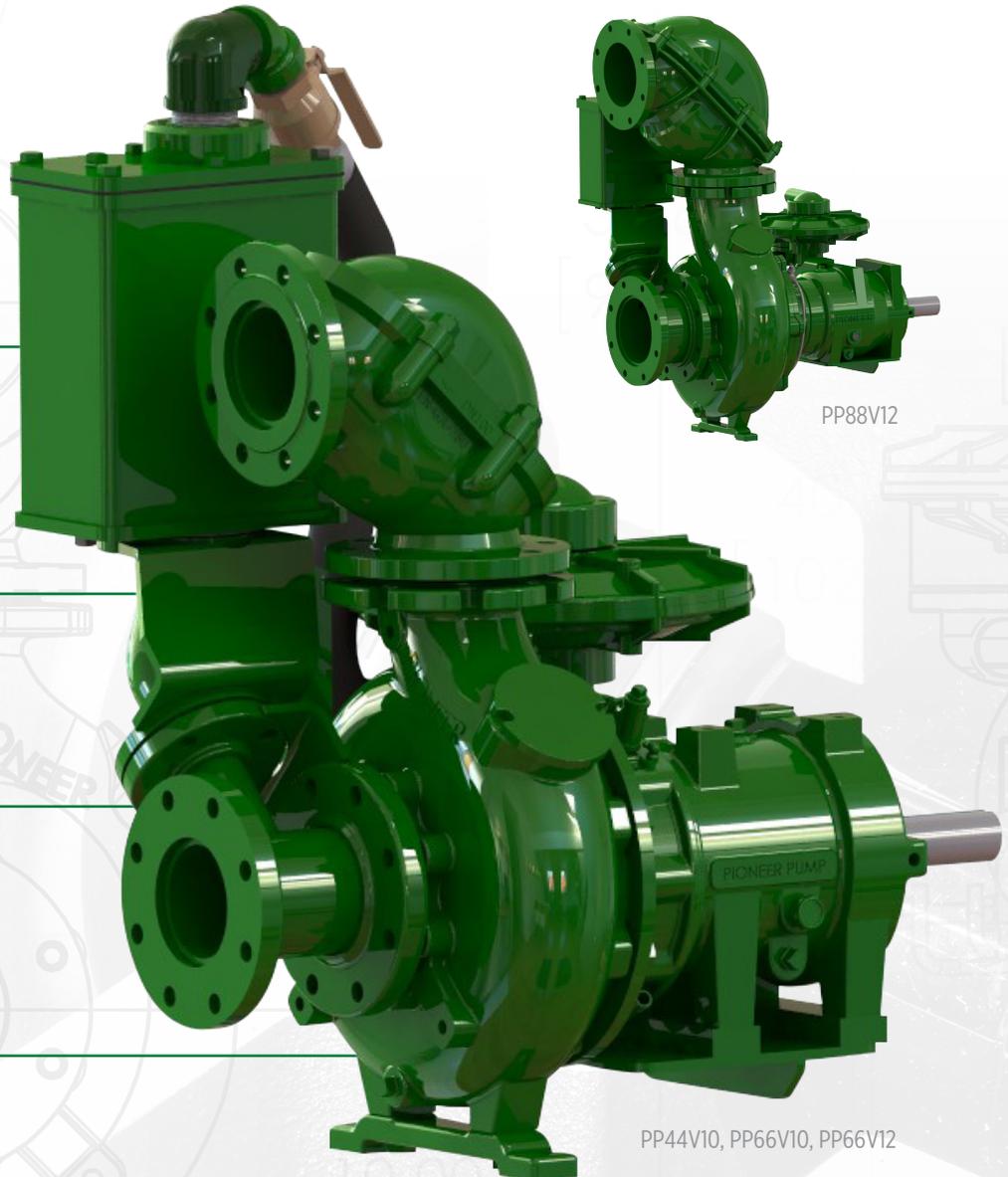
Elbow ball valve style with cast iron body avoids clogs from passed-through solids.

PRIMING SYSTEM

Heavy-duty chamber with no-blow-by PosiValve™ and stainless steel float ball linkage; capable of 50 CFM air removal.

VORTEX IMPELLER

Recessed impeller passes challenging solids by avoiding direct contact.



PP88V12

PP44V10, PP66V10, PP66V12

SPECIFICATIONS

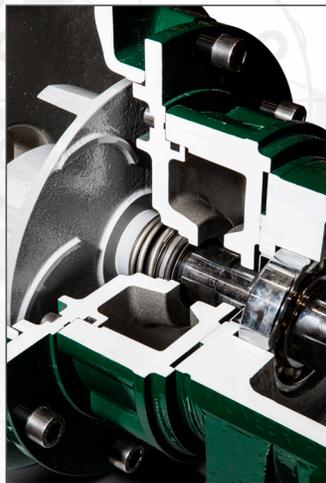
Part	Description
Mechanical Seal	Single type seal w/ tungsten carbide vs. silicon carbide seal faces, FKM elastomers, 300 series stainless steel hardware and spring (run dry option available)
Pump End Bearing	Single Row Ball
Drive End Bearing	Single Row Ball
Bearing Lubrication	Oil STD (grease optional)
Fasteners	Imperial
O-rings	FKM
Shaft	17-4 PH Stainless Steel
SAE	SAE engine-mount bracket options available

MATERIALS OF CONSTRUCTION

Material	Standard Construction	CD4MCu Duplex Stainless
Impeller	Ductile Iron 65-45-12	ASTM A744 CD4MCu
Shaft	17-4 PH Stainless Steel	ASTM A744 CD4MCu
Volute	Ductile Iron 65-45-12	ASTM A744 CD4MCu
Backplate	Ductile Iron 65-45-12	ASTM A744 CD4MCu

APPLICATIONS

Waste Handling	Industrial Effluent
Sludges	Chemical Processing



PERFORMANCE

PP44V10

Size	4" x 4" (100 x 100 mm)
Flow, Max	1450 gpm 329 m ³ /hr 91 l/s
Head, Max	150 feet (46 meters)
Flow at BEP	600 gpm 136 m ³ /hr 38 l/s
Efficiency at BEP	48%
Operating Speed, Max	2000 rpm
Suction Connection	4" (100 mm) 150 ANSI Flanges
Delivery Connection	4" (100 mm) 150 ANSI Flanges

PP66V10

Size	6" x 6" (150 x 150 mm)
Flow, Max	1600 gpm 363 m ³ /hr 100 l/s
Head, Max	94 feet (29 meters)
Flow at BEP	850 gpm 193 m ³ /hr 54 l/s
Efficiency at BEP	45%
Operating Speed, Max	2000 rpm
Suction Connection	6" (150 mm) 150 ANSI Flanges
Delivery Connection	6" (150 mm) 150 ANSI Flanges

PP66V12

Size	6" x 6" (150 x 150 mm)
Flow, Max	2300 gpm 522 m ³ /hr 145 l/s
Head, Max	130 feet (40 meters)
Flow at BEP	900 gpm 204 m ³ /hr 57 l/s
Efficiency at BEP	49%
Operating Speed, Max	2000 rpm
Suction Connection	6" (150 mm) 150 ANSI Flanges
Delivery Connection	6" (150 mm) 150 ANSI Flanges

PP88V12

Size	8" x 8" (200 x 200 mm)
Flow, Max	3600 gpm 818 m ³ /hr 227 l/s
Head, Max	130 feet (40 meters)
Flow at BEP	1750 gpm 397 m ³ /hr 110 l/s
Efficiency at BEP	44%
Operating Speed, Max	2200 rpm
Suction Connection	8" (200 mm) 50 ANSI Flanges
Delivery Connection	8" (200 mm) 150 ANSI Flanges

VORTEX SERIES

PACKAGES

A comprehensive range of electric and diesel packaging options are offered for fixed and portable installations and can be fitted with the industry-leading Pioneer Prime vac-assist system for suction lift applications.

ELECTRIC PACKAGE

Vortex Series Pumps can be packaged with an electric motor for both fixed and portable applications. Configurations available for fixed installations include: base, coupling, and guard, side-by-side belt-driven, and overhead belt-driven. For portable applications, both drag skid and trailer options are available. Electric packages include a Franklin Electric variable frequency drive to adjust speed for multi duty-point operation. Electric-driven Vortex Pumps are the smart solution for raw sewage, industrial effluents, tailings and cuttings, and other applications where the pumpage is tough and uptime is key.



DIESEL PACKAGE

Any Vortex Series Pump can be packaged with a diesel engine on the Pioneer GL Series platform. Ideal for portable applications, the GL Series is a superior build or the toughest environments. Fully Tier 4 ready, the Pioneer Pump brand excels in the diesel-driven pump market. A Vortex Series diesel-driven pump is the newest, simplest way to prevent ragging and clogging in sewer bypass, wastewater, and effluent applications.

