



Double Disc Pump Comparison and FAQs

***A Guide For Consulting Engineers,
Operators and Pump Distributors***

***Compare Wastecorp Sludge Pro® Double Disc Pump
Vs. Penn Valley® Pump***

Information published in this booklet is for comparison purposes only. Wastecorp has no affiliation with Penn Valley Pump Co. All company and brand names are the property of their respective owners. Wastecorp is the manufacturer of Sludge Pro Double Disc Pumps. Sludge Pro is a registered trademark of Wastecorp Pumps Inc. Wastecorp and Globes/logo is a registered trademark of Wastecorp Pumps Inc.

Get double disc pump info at <http://www.wastecorp.com/disc-pumps.html>

Rev. 03/17 DSO

Copyright © Wastecorp Pumps Inc. 2017

	Sludge Pro Double Disc Pump	Penn Valley Pump
Maintenance	<ul style="list-style-type: none"> • Built-in lifting jack allows for simple replacement of pump components • Easy access to suction and discharge wet section • No need to crawl under pump. Wastecorp views crawling below a pump as dangerous 	<ul style="list-style-type: none"> • Suction elbow piping must be removed to service pump internals • Likely that operator will have to crawl under pump to perform maintenance • Staged assembly required • Cast iron components to be dropped below pump causing operator to get under the pump to do repairs which can be potentially hazardous and dirty repair
Technology	<ul style="list-style-type: none"> • Ball valve technology is proven within the wastewater community with an 80 year track record • The Sludge Pro is available with either a clack or a ball valve design • Wastecorp's entrance pathway is identical to its discharge, eliminating any risk of this type of blockage • Discs are ductile iron and have a lifetime warranty • Discs do not contact the pump body • A velocity channel built into the pump body directs any sharp objects far away from the trunnions • Access to critical components is simple and easy • Click here to view comparison video 	<ul style="list-style-type: none"> • Uses three internal check valves which produce the reciprocating action • Penn Valley only offers a clack design • If solids get stuck under clack valve, pump needs to be disassembled • This design has a progressively reducing contour so the solids have a large pathway as it enters the pump but narrows considerably causing a likelihood of blockage • Diaphragm/disc acts as the check valve directly compressing on the pump body casing which may impair the proper sealing and thus performance of the pump. • Sharp objects may also impale itself into the diaphragm/disc which can further effect pump performance
Discs	<ul style="list-style-type: none"> • Wastecorp discs have a lifetime warranty against wear • Disc also incorporates molded metal stabilizing insert 	<ul style="list-style-type: none"> • Discs are a wear item and need to be replaced as the elastomer deteriorates
Trunnion	<ul style="list-style-type: none"> • Wastecorp trunnions are available in several materials that are designed for various sewage pumping applications and chemical fluid handling applications 	<ul style="list-style-type: none"> • PVP Trunnions are captive diaphragms as per PVP documented video
Drive Arrangement	<ul style="list-style-type: none"> • Wastecorp uses SEW Eurodrive and Siemens gear boxes/motors. SEW and Siemens rank among the highest in the industry as rated by users 	<ul style="list-style-type: none"> • V-Belts and Pulleys can slip and require adjustment
Pump Drive	<ul style="list-style-type: none"> • Wastecorp uses heavy duty cast iron and ductile iron that has been treated for corrosion resistance. Coupling includes a rubber dampener for smooth reciprocating action • Longer stroke length operating below 110 RPM for increased component life • All components use common parts and are universally interchangeable • Shaft uses heavy duty key 	<ul style="list-style-type: none"> • Aluminum pedestal and bronze eccentric has less strength • Cast iron and ductile iron use lighter duty pinned shaft • Short stroke requires higher rpm (~ 500 RPM) that may cause faster wear of components • Connecting rods are not interchangeable
Pump Action	<ul style="list-style-type: none"> • Pumps use air chambers to reduce pulsation 	<ul style="list-style-type: none"> • Positive displacement pump use air chambers to reduce pulsation
Base Frame	<ul style="list-style-type: none"> • Pump frame is low to the ground and can be bolted directly to concrete floor without elevated concrete. Optional SS 304 base frame/ feet and cover available 	<ul style="list-style-type: none"> • Design requires pump to be mounted on tall frame so that pump can be accessed and repaired from below the pump
Pump Configuration	<ul style="list-style-type: none"> • Units can be provided as single disc, double disc, triple disc and quad disc depending on flow requirement 	<ul style="list-style-type: none"> • All units use two diaphragm / discs
Installation	<ul style="list-style-type: none"> • Commonly installed in WWTP's and industrial facilities. Contact factory for updated sample customers 	<ul style="list-style-type: none"> • Commonly installed in WWTP's and industrial facilities

Who is Wastecorp?

Wastecorp Pumps is an ISO 9001 and ISO 14001 certified pump manufacturer. Wastecorp manufactures the Sludge Pro double disc pump. The company specializes in sewage pump and wastewater pump manufacturing. This includes multiple products for municipal/industrial applications. Wastecorp has manufactured pumps since 1993 in the United States and Canada and we represent thousands of installations worldwide. Information about Sludge Pro Double Disc Pumps can be found at <http://www.wastecorp.com/disc-pumps.html>

What is a Penn Valley Pump (PVP)?

The Penn Valley pump is a diaphragm pump. PVP has fully acknowledged this in their patent # US 7,559,753 B2. The patent references George Burrage's (a family member of PVP President) patent application # [GB 2013287A](#) as the basis of construction for the PVP pump. Nowhere in GB 2013287A does it reference a disc at all. This legal document fully acknowledges the fact that the Penn Valley pump technology is a diaphragm pump. PVP also references the use of diaphragms in all of their trademark registrations.

What is The Difference Between Penn Valley (PVP) and Sludge Pro Pumps?

Sludge Pro double disc pumps are available with either a clack valve or a ball valve configuration. The operator selects one or the other. As of 2017, Penn Valley only offers a clack valve. The Sludge Pro double disc pump is the only manufacturer that includes either a manual or hydraulic jack to raise the upper body of the pump to perform maintenance while standing. In most cases, the Penn Valley operator must crawl below heavy castings to perform maintenance. Penn Valley pumps also use a short stroke length, requiring the pump to run at much higher rpm speeds. PVP acknowledges that this can reduce the operating life of the pump. This is particularly true in grit / sand or abrasive sludge's. In these situations, PVP recommends supplying hardened housings so the check valve does not wear out the casting when seating. When this happens, the entire pump body may require replacement or refurbishment. A primary problem with the PVP design is that debris can collect under the check valve which can prevent the valve from sealing and cause "dewatering". If this happens, PVP acknowledges that the pump needs to be "flushed with water to clear any debris". Since there is no access cover to the pump internals, the operator must usually disassemble the pump to access lodged debris. PVP also acknowledges that in some types of Sludge pumping applications with over 6% solids - may cause pump cavitation.

Are Parts for Sludge Pro Double Disc Pumps Available Within 24 hours?

Yes. Wastecorp can send parts for your double disc pump for delivery within 24 hours in most areas of the United States and Canada. In select areas, Sludge Pro parts are stocked in the State/Province or county that the pump are located in.

Are Double Disc Pumps Maintenance Free?

While double disc pumps require no regular maintenance, all mechanical equipment requires some maintenance in their life. Double disc pumps are no different. Periodic replacement of the trunnion, disc and other components may be required.

Is The Sludge Pro Double Disc Pump Design Patented?

Yes. Wastecorp's double disc pump design is patented.

Is "Double Disc Pump" a Trademark?

No. The United States Patent and Trademark office on multiple occasions has denied Penn Valley Pump Company's application to trademark the term double disc pump and ruled that double disc pump is a generic term in the marketplace (term of art) used in the pump industry.

Is There an Online Video Showing The Differences Between Penn Valley and Sludge Pro? Yes. visit: https://www.youtube.com/watch?v=kDyt6_u1sKc