



# Penn Valley Pump Company Inc.

## Double Disc™ Pumps

The Ultimate in  
Sludge Pumps™



Positive Displacement  
Pumps for the Municipal,  
Industrial, Chemical &  
Food Industries



Double Disc™

4" Simplex Double Disc™ Unit



# Penn Valley Pump Company Inc.

## WHO WE ARE

Penn Valley Pump Company, Inc. has been developing, manufacturing and marketing the Double Disc™ pump for the municipal, industrial and chemical industries since 1980. Through continuous research and development we have created a range of positive displacement solids handling pumps that provide unmatched durability, reliability and performance compared with other positive displacement pump styles.

With over 4000 units installed and operating in the United States alone, the Double Disc™ pump is considered by many to be the premier product for feeding and transferring tough to handle sludges and slurries. We have achieved this level of acceptability by utilizing our extensive experience in the hydraulic and mechanical aspects of pumping installations to properly apply our equipment where it is best suited.

When you purchase a Double Disc™ pump you buy our long-term commitment. We choose a unit specifically for your task, selected by engineers with over 45 years combined experience in designing, engineering, manufacturing and applying this exciting technology. Contact us today and let Penn Valley show you how the Double Disc™ range of pumps can meet your pumping needs.

## INTRODUCTION

The Double Disc™ pump combines the performance features of a positive displacement pump and the principle of "Induced Flow" to provide superior versatility in fluids handling. Based on a "Free Diaphragm" technology, the pump utilizes a unique principle of operation where the discs perform the duties of both diaphragm and valve, providing a double acting, non-clogging, pumping action. Through an arrangement of connecting rods and a camshaft, a reciprocating action of the discs is created, forming a large cavity between the discs. This cavity is filled and exhausted in a continuous flow. The large valve-like discs mean that solids and rags can be handled without loss of pumping action. The valve-like discs have large seating areas that provide for low internal velocities, extending the pump wear life on abrasive sludges and slurries. The fluid chamber is sealed with flexible trunnions which eliminates packings, mechanical seals, and requires no flushing water or other forms of lubrication. The large diameter discs are proven to handle large solids, rags, plastics, etc., that would cause other pumps to fail.

## Here's How It Works:

### Suction Cycle (Fig. 1)

The suction disc (right) is lifted from its seat creating a vacuum. The cavity between the discs is filled during the reciprocating motion of the suction disc. The discharge disc (left) is seated.

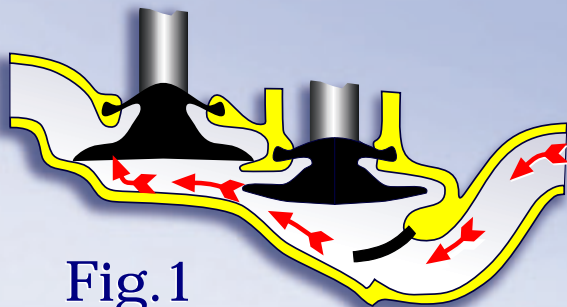


Fig. 1

### Discharge Cycle (Fig. 2)

The reciprocating action then causes the suction disc (right) to seat and create a seal in the flow path and a downward motion of the discharge disc (left) forces the discharge.

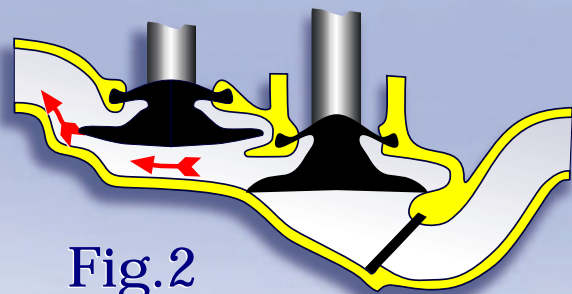
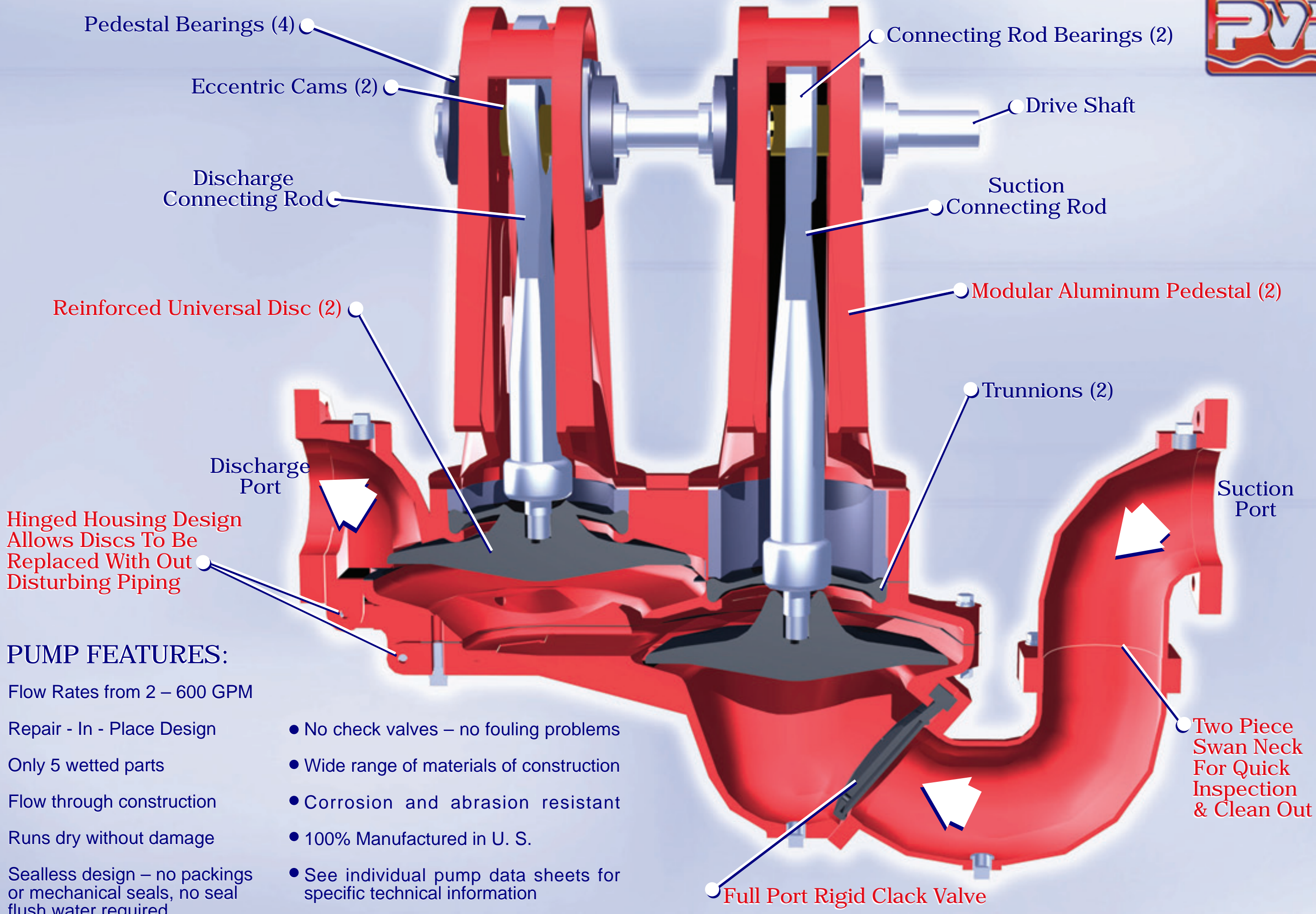


Fig. 2





**PUMP FEATURES:**

- Flow Rates from 2 – 600 GPM
- Repair - In - Place Design
- Only 5 wetted parts
- Flow through construction
- Runs dry without damage
- Sealless design – no packings or mechanical seals, no seal flush water required
- No check valves – no fouling problems
- Wide range of materials of construction
- Corrosion and abrasion resistant
- 100% Manufactured in U. S.
- See individual pump data sheets for specific technical information



# Double Disc™



## MAINTENANCE & OPERATING COSTS

The Double Disc™ pump does not rely on close tolerances within the pumping chamber to generate flow. This design advantage eliminates the wear and high maintenance costs associated with other positive displacement pump designs. With no mechanical seals or packing glands and sealed for life bearings the pump requires no routine maintenance.

When parts replacement is required, our patented repair-in-place “RIP” housing design allows the inexpensive wetted parts to be replaced without dismantling the piping. The integral hinged housing design provides easy access for housing removal leading to decreased labor costs and minimal downtime.



Town of Caernarvon, PA WWTP

## SALES & SERVICE

Penn Valley Pump Company, Inc. has an extensive distributor and manufacturer's representative force located throughout the United States and Canada. Each one is factory qualified to provide excellent service and support.

In addition to this localized service we offer a variety of customer oriented programs to ensure your satisfaction with our product:

- Trial purchase program
- Demonstration program
- Re-build/Exchange program
- Portable and Trailer mounted units
- All spare parts available for same day shipment
- Custom configurations to fit existing installations



## Municipal Applications

1. Thickened Sludge
2. Scum Transfer
3. Sampling Pumpsets
4. Primary Sludge
5. Belt Filter Press Feed
6. Portable Cleanup Pumpsets
7. Centrifuge Feed
8. Waste Activated Sludge
9. Thickener Feed and Transfer
10. Lime Slurry and Sludge
11. Lagoon Cleanup
12. Septage Transfer

Represented By:



City of Warminster, PA WWTP

## Industrial Applications

1. Passified Chemical Sludge
2. Lime Slurry
3. Waste Oil Sludge
4. Fiberboard Filter
5. Raw Latex
6. Clay Slurries
7. Chicken Process Waste Materials
8. Paper Pulp Transfer
9. Explosive Jelly (shear sensitive)
10. Paint Transfer
11. Food Waste Slurries
12. Polymer Transfer (shear sensitive)
13. Holding Tank transfer
14. Coal Slurry
15. Hog Fat
16. Chemical Filler Materials
17. Chocolate Waste Product Transfer
18. Portable Trash/ Cleanup Pumpsets
19. Ship Bilge Transfer
20. Sludge Recovery (tanker mounted units)
21. Metal Slurry Transfer
22. Ferric Chloride
23. Vacuum Filter Feed Pump
24. Mobile Dewatering Feed Pump (belt filter press)
25. Sampling Pump Sets
26. Sealing Compound Pumps
27. Lagoon Cleaning Pumping Equipment



# Penn Valley Pump Company Inc.

998 Easton Road, Warrington, PA 18976

[www.pennvalleypump.com](http://www.pennvalleypump.com)

e-mail: [info@pennvalleypump.com](mailto:info@pennvalleypump.com)

215/343-8750 Fax 215/343-8753