



Typical Pump Configuration

## Pioneer Prime

# PP86S20L71

## Performance

### Pioneer Prime series - vacuum assisted, end suction centrifugal pump

Bare shaft, frame mounted, fully automatic dry priming, vacuum assisted, run dry, heavy duty solids handling pump

|                      |  |
|----------------------|--|
| Size                 | 8" x 6"<br>200 x 150 mm                          |
| Flow, Max            | 4,875 USgpm<br>1120 m <sup>3</sup> /h<br>310 l/s |
| Head, Max            | 625 feet<br>190 meters                           |
| Flow at BEP          | 3,250 USgpm<br>750 m <sup>3</sup> /h<br>210 l/s  |
| Efficiency at BEP    | 72%  |
| Solids Handling, Max | 3.0"<br>76 mm                                    |
| Operating Speed, Max | 2000 rpm   |
| Suction Connection   | 8" (200 mm)<br>150 ANSI Flanges                  |
| Delivery Connection  | 6" (150 mm)<br>150 ANSI Flanges                  |
| Bearing Lubrication  | Oil STD<br>Grease optional                       |
| Fasteners            | Imperial   |

## Applications

|              |                  |
|--------------|------------------|
| Construction | Mining           |
| Waste Water  | Environmental    |
| Industrial   | Power Generation |

### High flow, solids handling, heavy duty pump

The PP86S20 is a high head pump designed to be cast in hard materials, as needed for the mine dewatering industry. It is a double volute design with minimal radial loading. With an 82% efficiency at BEP, the PP86S20 provides excellent performance, particularly for a pump running at these speeds, making it ideal pump for deep pit dewatering and water transfer.

## UltraPrime™ Priming System

|                        |   |
|------------------------|---|
| Priming System         | Mechanically Driven Diaphragm Style Vacuum Pump   |
| Air Removal Capability | 50 CFM  |
| Priming Chamber        | Single chamber with positive sealing air separation PosiValve™ with stainless steel float ball & linkage. |
| Discharge Check Valve  | Swing Style - ductile iron with Buna-n Disc   |

## Other Specifications

|                   |  |
|-------------------|--|
| Mechanical Seal   | Single seal w/ tungsten carbide vs. silicon carbide seal faces, Viton® elastomers, 300 series stainless steel hardware and spring, designed for indefinite dry running |
| Pump End Bearing  | Double row ball  |
| Drive End Bearing | Double row angular contact   |
| Shaft             | 17-4 PH Stainless Steel  |

## Construction Materials Options

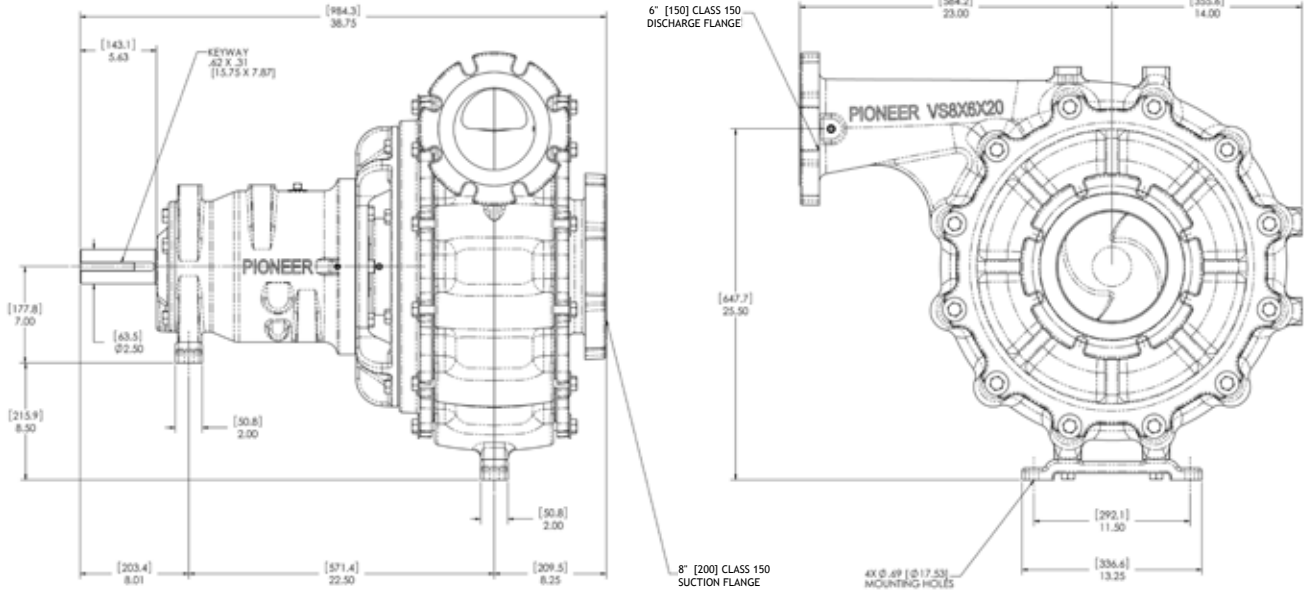
|               | Standard Construction           | Optional Constructions |                 |
|---------------|---------------------------------|------------------------|-----------------|
| Impeller      | CA6NM SS                        | CD4MCu                 | Hardened Metals |
| Volute        | Ductile Iron ASTM A536 65-45-12 | CD4MCu                 | Available       |
| Wear Ring     | ASTM A48 Class 40 Gray Iron     | 316 SS                 | Available       |
| Suction Cover | Ductile Iron ASTM A536 65-45-12 | CD4MCu                 | Available       |
| Bracket       | Ductile Iron ASTM A536 65-45-12 | CD4MCu                 | Available       |
| Backplate     | Ductile Iron ASTM A536 65-45-12 | CD4MCu                 | Available       |

# Mechanical Dimensions



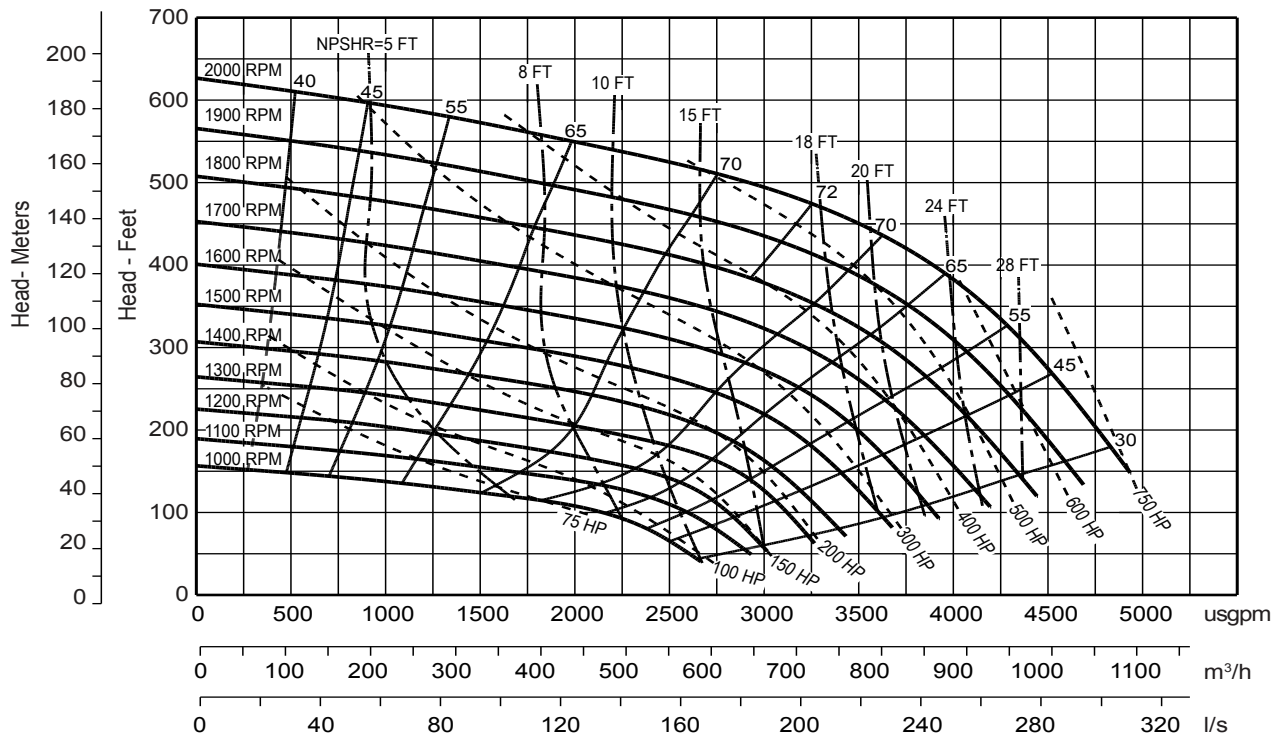
Typical Pump Configuration

## PP86S20



# Performance Curve

|                |                   |                 |                   |                |
|----------------|-------------------|-----------------|-------------------|----------------|
| Model: PP86S20 | Impeller Dia: 20" | Speed: Variable | Solids Size: 3.0" | Curve #12181HQ |
|----------------|-------------------|-----------------|-------------------|----------------|



Note: Losses from priming system not shown