Growing seasons are short, and failed water pumps can mean lost crops. You need a pumping solution that is rugged and reliable. You need a Pioneer Pump. Whether it’s irrigation, manure slurry, aquaculture, or crop harvesting, the centrifugal water pumps from Pioneer are built in the USA and designed to perform in the most demanding agricultural applications.
IRRIGATION PUMPS

From irrigating pastures to watering acres of farmland to meet crop requirements, these heavy-duty, high-efficiency water pumps with large impeller eye areas provide extreme performance and some of the lowest net positive suction head requirements in the industry.

APPLICATIONS
- Water Management
- Frost Protection
- Lift Station
- High Pressure/Pivot

SEALING OPTIONS
- Packing Seal
- Mechanical Seal

CLOSE-COUPLED PUMP KITS
- Replace worn wet-ends with readily available kits
- Available for all models
- Reduce downtime with cost-effective replacement kits

CONSTRUCTION
- Heavy-duty ductile iron body construction and stainless steel impellers ensure a long pump life; over-sized shafts and bearings provide increased pump life and reduced overall cost of ownership

<table>
<thead>
<tr>
<th>Part</th>
<th>Standard Construction</th>
<th>Optional Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft</td>
<td>17-4 PH Stainless Steel</td>
<td>-</td>
</tr>
<tr>
<td>Impeller</td>
<td>CA6NM Stainless Steel</td>
<td>CD4MCu Stainless Steel</td>
</tr>
<tr>
<td>Volute</td>
<td>Ductile Iron ASTM A536 65–45-12</td>
<td>CD4MCu Stainless Steel</td>
</tr>
<tr>
<td>Wear Ring</td>
<td>ASTM A48 Class 40 Gray Iron</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Suction Cover</td>
<td>Ductile Iron ASTM A536 65–45-12</td>
<td>CD4MCu Stainless Steel</td>
</tr>
<tr>
<td>Brac-Plate</td>
<td>Ductile Iron ASTM A536 65–45-12</td>
<td>CD4MCu Stainless Steel</td>
</tr>
</tbody>
</table>
MANURE PUMPS

With just two short seasons for moving manure slurry to the field, reliable and rugged pumps are a key part of a successful system. Proudly built in the USA, Pioneer’s end-suction centrifugal pumps are designed to perform in the most demanding applications.

FEATURES
- Open impellers clog less and pass larger solids
- Stainless steel impellers standard
- Available in abrasion-resistant materials
- Sand or straw bedding
- Faster transfer and lower operation costs

APPLICATIONS
- Dairy Pond Management
- Dragline Manure Application
- Booster Pump Stations
- Swine Manure Application

CONSTRUCTION
- Offered in a variety of metallurgies and four levels of Brinell hardness on many models; pumpage varies from region to region and job to job; please contact sales for assistance in selecting the right material for your applications

<table>
<thead>
<tr>
<th>Part</th>
<th>Standard Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft</td>
<td>17-4 PH Stainless Steel</td>
</tr>
<tr>
<td>Impeller</td>
<td>CA6NM Stainless Steel</td>
</tr>
<tr>
<td>Volute</td>
<td>Ductile Iron ASTM A536 65-45-12</td>
</tr>
<tr>
<td>Wear Ring</td>
<td>ASTM A-48 Class 40 Gray Iron</td>
</tr>
<tr>
<td>Suction Cover</td>
<td>Ductile Iron ASTM A536 65-45-12</td>
</tr>
<tr>
<td>Brac-Plate</td>
<td>Ductile Iron ASTM A536 65-45-12</td>
</tr>
</tbody>
</table>

COMPARISON TABLE

<table>
<thead>
<tr>
<th>Type</th>
<th>Ductile Iron</th>
<th>CD4MCu Stainless Steel</th>
<th>Heat, Treated (Hardened)</th>
<th>Chrome Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>High strength, impact resistance, weld-repairable</td>
<td>Corrosion and pitting resistance</td>
<td>Moderate abrasion resistance, high strength</td>
<td>High abrasion resistance</td>
</tr>
<tr>
<td>Recommended For</td>
<td>General purpose, high pressure, low temperature</td>
<td>Caustic or high-chloride pumpage, seawater</td>
<td>Abrasive pumpage</td>
<td>Very abrasive/corrosive pumpage</td>
</tr>
<tr>
<td>Brinell Hardness</td>
<td>160 min</td>
<td>200 min</td>
<td>400 min</td>
<td>600 min</td>
</tr>
<tr>
<td>Models</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>86520, 12522, 5030534</td>
</tr>
<tr>
<td>Relative Cost</td>
<td>$</td>
<td>$55</td>
<td>$5</td>
<td>$55</td>
</tr>
</tbody>
</table>

MANURE PUMPS

- Open impellers clog less and pass larger solids
- Stainless steel impellers standard
- Available in abrasion-resistant materials
- Sand or straw bedding
- Faster transfer and lower operation costs

APPLICATIONS
- Dairy Pond Management
- Dragline Manure Application
- Booster Pump Stations
- Swine Manure Application

CONSTRUCTION
- Offered in a variety of metallurgies and four levels of Brinell hardness on many models; pumpage varies from region to region and job to job; please contact sales for assistance in selecting the right material for your applications

<table>
<thead>
<tr>
<th>Part</th>
<th>Standard Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft</td>
<td>17-4 PH Stainless Steel</td>
</tr>
<tr>
<td>Impeller</td>
<td>CA6NM Stainless Steel</td>
</tr>
<tr>
<td>Volute</td>
<td>Ductile Iron ASTM A536 65-45-12</td>
</tr>
<tr>
<td>Wear Ring</td>
<td>ASTM A-48 Class 40 Gray Iron</td>
</tr>
<tr>
<td>Suction Cover</td>
<td>Ductile Iron ASTM A536 65-45-12</td>
</tr>
<tr>
<td>Brac-Plate</td>
<td>Ductile Iron ASTM A536 65-45-12</td>
</tr>
</tbody>
</table>

COMPARISON TABLE

<table>
<thead>
<tr>
<th>Type</th>
<th>Ductile Iron</th>
<th>CD4MCu Stainless Steel</th>
<th>Heat, Treated (Hardened)</th>
<th>Chrome Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>High strength, impact resistance, weld-repairable</td>
<td>Corrosion and pitting resistance</td>
<td>Moderate abrasion resistance, high strength</td>
<td>High abrasion resistance</td>
</tr>
<tr>
<td>Recommended For</td>
<td>General purpose, high pressure, low temperature</td>
<td>Caustic or high-chloride pumpage, seawater</td>
<td>Abrasive pumpage</td>
<td>Very abrasive/corrosive pumpage</td>
</tr>
<tr>
<td>Brinell Hardness</td>
<td>160 min</td>
<td>200 min</td>
<td>400 min</td>
<td>600 min</td>
</tr>
<tr>
<td>Models</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>86520, 12522, 5030534</td>
</tr>
<tr>
<td>Relative Cost</td>
<td>$</td>
<td>$55</td>
<td>$5</td>
<td>$55</td>
</tr>
</tbody>
</table>
THE PIONEER PUMP ADVANTAGE

PATENTED PIONEER PRIME

Timing belt driven vacuum pump removes air from the suction line while the patented Posi-Valve™ prevents liquid entry into the vacuum pump.
- Quick initial priming
- Overcomes minor suction-side leaks
- Continuous, unattended reprime under auto stop/start conditions

HEAVY-DUTY COMPONENTS

All Pioneer standard centrifugal models are designed to stand up under the most demanding environments. Over-sized shafts and bearings, optimal materials, and advanced designs combine to create products that deliver performance in the field.

Vacuum Pump
Belt driven from pump shaft

Optional Run-Dry System
Oil-lubricated mechanical seal allows the pump to run completely dry without damage; standard on all Pioneer Prime models

Heavy-Duty Modular Bearing Housing
Designed to run at high speeds without risk of shaft or bearing failure

Stainless steel air separation valve allows for quick priming with no product carryover

Priming Chamber

Hydraulic design maximizes lift capability

Non-contacting, labyrinth-type bearing frame seals with protectors at drive and pump ends

Pioneer exclusive hybrid cassette seals simultaneously prevent leakage and eliminate shaft wear

Vacuum Pump

HEAVY-DUTY COMPONENTS
CONFIGURED FOR YOUR APPLICATIONS

Once the pump is chosen, select the mounting configuration best suited to your application. Close-coupled, frame mounted, or engine mounted with right- or left-hand rotation is available for most pumps.
PERFORMANCE THROUGH INNOVATION

Providing better flow, higher head, greater efficiency, and unparalleled service designed to meet your unique challenges, Pioneer’s centrifugal pumps are the highest performing pumps on the market. At Pioneer Pump, we don’t just design, we deliver.

PRODUCT PERFORMANCE RANGE
- Size: 1.5” to 30” (40 to 760 mm)
- Flow: 20–44,000 usgpm (4–10,000 m³/hr; 2-3000 l/s)
- Size: 700 feet (210 meters)

EXTREME PERFORMANCE
Low NPSHr, heavy-duty, high-efficiency water pumps with large impeller eye areas provide extreme performance and some of the lowest net positive suction head requirements in the industry.

SUPERIOR MATERIALS
Stainless steel impellers stand up to the abrasive and corrosive effects of manure slurry. Ductile iron construction ensures long pump life.

RUN-DRY CAPABILITY
Standard indefinite run-dry tungsten vs. silicon carbide mechanical seal with large oil reservoir is ideal for applications such as linear irrigation.

THE ENGINEERING LEADERSHIP OF PIONEER PUMP
Pioneer Pump was founded on the idea that pumps should be better. Thanks to an engineering leadership, all Pioneer pumps are built using an innovative impeller design that is now the industry’s best. It moves more pumpage, more efficiently, size-for-size. By offering extreme performance while using less energy, Pioneer pumps provide the best lifetime value in an environmentally- and budget-conscious world. The large eye area and low NPSHr provide better suction lift and vapor handling, while the enclosed design handles solids more efficiently for improved performance, less maintenance, and longer life compared to traditional impellers.

FEATURES
- Oversized shafts and bearings for exceptional reliability in demanding conditions
- Standard mechanical seal construction includes tungsten carbide vs. silicon carbide seal faces, FKM elastomers, and stainless steel hardware
- Patented Posi-Valve™ stainless steel positive sealing priming valve
- Run-dry capability
- Low NPSHr impeller designs for exceptional suction lifts
- 17-4 PH stainless steel shafts for corrosion resistance