We manufacture rotary lobe positive displacement pumps having an output range from 8 gpm to 2500 gpm with up to 175 PSI pressure capacity. They are compliant with API 676 standards. We have developed our own oil cooled Cartridge “Engineered Seal” design as provided for in API 682 revision 4. We have found these to be long lasting and trouble free. A broad range of coatings and seal materials are available to suit your application.

Our standard pump pressure casing is WCB Steel or Duplex Stainless Steel, which may be coated with whatever material is needed for your application.

We have our own certified welders and experienced mechanical engineers. Our engineers can perform all API tests in our test tank. We will do a quality job of compiling all submittals. The pumps are warranted for workmanship for 2 years. Should a pump you purchase from us require repair, we promise to ship the parts within 2 working days of order receipt or the parts are free.

In addition to providing the pump, we can also provide the motor, gear reducer, controls, and skid to your specification. We can also provide custom fabrications to suit individual applications. Since our start in 1978, we have packaged 1,000s of pump systems.

Our API pumps can also be utilized in applications where low Net Positive Suction Head Required (NPSHR) of 3’ (1m) or less is needed. In many oil and gas applications, it is necessary for the pump to be able to move materials in a tank that is not ventilated due to the explosive nature of gases. Our rotary lobe pumps have the necessary vacuum required to attain satisfactory pumping in this application.

However, our pumps can be utilized in many other applications because of the properties of rotary lobe pumps. Our engineers would welcome the opportunity to discuss your application and give you a quote.

### Important Properties of LobePro Rotary Lobe Pumps

- Low shear
- Measured Flow
- Self priming to 25’ wet
- Discharge pressure to 175 psi (12 bar)
- Capacities 0-2,656 GPM (0-604 m³/hr)
- Low pulsation
- Forward and reverse pumping operation
- Long lifespan
- Pump NPSHR is 3’ (1 m) or less
- Easy access to wet end for “in place” wear part replacement
- Space-saving, compact design
- Excellent for abrasives, solids & viscous fluids
- Low maintenance
- Run dry ability
Advantage vs Commonly Used Alternatives

LobePro Pumps vs. Progressive Cavity (Screw) Pumps

LobePro pumps do the same jobs as well or better than progressive cavity (screw) pumps up to 150 psi of pressure and have the following advantages:

- Require approximately 1/3 their physical space
- Because they are 1/3 the size:
  - Parts are typically 1/3 the cost
  - Maintenance labor time is 1/3 or less
  - Lifetime ownership cost is 1/3
- Ability to run dry for a period of time

- Maintenance in place. LobePro lobes, seals and wear plates can be replaced without removing attached piping or pump.
- No ragging. The PC Pump’s screwing motion causes the pump to clog or rag. LobePro pumps very seldom clog.

LobePro Pumps vs. Centrifugal Pumps

LobePro pumps have the following advantages over centrifugal pumps:

- Able to pump high viscosity fluids
- Constant flow at different pressures or constant pressure at different flows
- Low fluid shear/low emulsion
- Easily pumps air/liquid mixtures
- Handles abrasives better because of low RPM’s which greatly reduces wear.

- Self-priming to 25'
- Centrifugal pumps tend to pump the lighter fluid away and leave the heavy material. Hence they are not suitable for fluids containing 3% or more solids. LobePro’s pump away all the fluids including solids and abrasives.

LobePro Pumps vs. External Gear Pumps

Gear Pumps have one shaft and two gears. The driven gear pushes the other gear. Abrasive materials rapidly wear the gears where they contact and as a result gear pumps are only suitable for pumping clean lubricating liquids. Rotary lobes pumps have two shafts driven by timing gears. The lobes do not touch each other or, after a short break in period, the housing segment. This enables rotary lobe pumps to handle hard solids up to 1/8” (3mm) and soft solids up to 2.5” (63 mm).

- Gear pumps do not run well in reverse. Rotary lobes pumps can run in either direction equally well making them suitable for loading and unloading fluids or backwashing with the same pump.
- Gear pumps cannot run dry. Rotary lobe pumps can for a period of time.

LobePro Pumps vs. Sliding Vane Pumps

- Sliding vane pumps rely on vanes that slide in and out as the shaft turns within an elliptical casing. LobePro uses a simple arrangement of timing gears to rotate lobes that do not touch each other.
- Vane pumps require very clean fluid otherwise contaminates may cause the vanes to stop sliding resulting in possible pump failure. LobePro can handle hard solids to 1/8” (3mm) and soft solids up to 2.5” (63 mm).
- Large strainers must be placed at the inlet to prevent contaminates from clogging the sliding vanes. Failure to maintain these strainers results in pump failure.
- LobePro pumps can operate in forward or reverse. This permits the pump to be used for loading and unloading applications. Sliding Vane pumps have very limited capacity to operate in reverse.
- Vane pumps rely on vanes that slide and requires the pumped fluid to lubricate and remove heat, therefore, they cannot run dry. LobePro uses a non-contact design that greatly increases its run-dry capability.

Special Metals and Elastomers Applications

Chlorides, Hydroxides, H2S

Our C-series pumps for chemical and corrosive applications have either 316 stainless steel or duplex stainless steel wetted parts. This series of pumps can handle many high chemical or corrosive applications.

For especially corrosive or high chloride applications we also carry our D-series line of pumps. The wetted parts on this series of pumps is constructed of CD3mN duplex, its equivalent, or better. This series is a good choice when pumping fluids containing chlorides, hydroxides, or H2S.

The D-series pumps are commonly used in the oil and gas industry. More information can be found under “Corrosive Engineering” on our website at www.LobePro.com.

Additionally, our D-series line of duplex pumps can best handle applications that are both abrasive and corrosive. LobePro’s duplex wet end parts have a higher Brinell hardness and twice the yield strength of 316 stainless steel resulting in better performance in harsh conditions. LobePro stocks CD3mN and 2205 duplex stainless in all pump sizes and offers super-duplex and Nitronic stainless steels for certain pump models.

Even more material combinations including Hastelloy, austenitic, and martensitic stainless steels are available with an approximate four-month lead time.

For more information on corrosives engineering and further details on duplex steel vs 316 stainless steel properties please visit www.lobepro.com/eng-data-corrosive-engineering.php.
**LOBEPRO ROTARY PUMPS**

Affordable, rebuildable seals for easy replacement. No pressure bottle needed.

LARS rebuildable design offers the best of cartridge seal and a component seal in ONE while reducing repair costs 50 to 80%.

Helical four or six wing lobes provide smooth low shear flow. Lobes available in many materials.

Adjustable housing segments and reversible wear plates are customized for abrasive, corrosive, and general applications.

"Heart of Steel" - Steel lobe core for increase rubber bonding ability

Self Priming to 25’

Reversible operation.

Mechanical seals cooled by oil. No flush water required.

Shutdown protection available for contaminants and over pressure conditions

Wear plates are reversible for double the wear.

Slow running. Non-contacting lobes permit dry running and pumping of abrasives.

In Place wear part replacement at 1/3 the cost and time for equivalent screw (PC) pump.

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<table>
<thead>
<tr>
<th>Principle Reasons to Use LobePro</th>
<th>Oil Sumps Containing Abrasives</th>
<th>Fuel Transfer</th>
<th>Vapor-Liquid Separator</th>
<th>Produced Water Filtration</th>
<th>Decanting Centrifuge</th>
<th>Belt Press</th>
<th>Induced Gas Floatation Froth</th>
<th>Desand Slop</th>
<th>Non-Vented Tanks</th>
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</thead>
<tbody>
<tr>
<td>Reversible (can Load, Unload, Backwash)</td>
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<td>Strong Vacuum/Self Priming to 25 ft. (3 ft. NPSHR)</td>
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<td>Handles Air and Fluid Without Damaging Cavitation</td>
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<td>Low Shear</td>
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<td>Ability to Pump Thick, Viscous Fluids</td>
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<td>Steady, Measured, Flow at Constant Pressure</td>
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<td>Can Run Dry</td>
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<td>Handles Abrasives Well</td>
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<td>ATEX Zone 2 Category 3 Rating</td>
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<tr>
<td>Service</td>
<td>Non-Corrosive Sludge &amp; Slurries</td>
<td>Chemical/Corrosive</td>
<td>Oil, Gas, Chemical and Corrosive</td>
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<td><strong>Elastomer</strong></td>
<td>NBR, FKM, HNBR &amp; EPDM Available*</td>
<td>FKM, NBR, HNBR &amp; EPDM Available*</td>
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<td><strong>Lobe Profile</strong></td>
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<td><strong>Core</strong></td>
<td>NBR over Steel</td>
<td>FKM over Steel</td>
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<tr>
<td><strong>Seal Holders</strong></td>
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<td>2205 Duplex Stainless Steel</td>
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**Sealing:**
- **O-rings:** FKM or Engineer Recommendation
- **Lip seals:** FKM or Engineer Recommendation
- **Seal Cooling Chamber:** ASTM 48 Grey Iron coated with PTFE / Ceramic Teflon etched on face
- **Shaft:**
  - **Medium Untouched:** AISI 4140 Steel
  - **Casting:** ASTM A48 Grey Iron rust primed
  - **Flange:**
    - **Material:** Stainless Steel Type 316
    - **Seal Cooling Chamber:** ASTM 48 Grey Iron coated with PTFE / Ceramic Teflon etched on face

**Welding:**
- Operators qualified under ASME BPVC Section IX
- Operators qualified under ASME BPVC Section IX
- Operators qualified under ASME BPVC Section IX

**Bolts-Strain Bolt**
- **Medium untouched:** Alloy Steel Socket Head DIN 912/ISO 4762
  - **Bolts:** 316SS Socket Head DIN 912/ISO 4762, A2-A4
  - **Exposed to Media:** Hex Head Steel ASTM F 568/ISO 888/I
  - **Timing Gears:** AGMA Class 9 Coarse-Pitch type designed in accordance with AGMA 6010 with 1.5 min. service factor. K5 ft. C3 Internal clearance per ABMA7

**Bearings**
- **Medium untouched:** AGMA Class 9 Coarse-Pitch type designed in accordance with AGMA 6010 with 1.5 min. service factor. K5 ft. C3 Internal clearance per ABMA7

**Shaft Keyways**
- **Medium untouched:** AGMA Class 9 Coarse-Pitch type designed in accordance with AGMA 6010 with 1.5 min. service factor. K5 ft. C3 Internal clearance per ABMA7

**Draining and Venting**
- **Medium untouched:** AGMA Class 9 Coarse-Pitch type designed in accordance with AGMA 6010 with 1.5 min. service factor. K5 ft. C3 Internal clearance per ABMA7

**Flammable/ Hazardous Service**
- **Medium untouched:** AGMA Class 9 Coarse-Pitch type designed in accordance with AGMA 6010 with 1.5 min. service factor. K5 ft. C3 Internal clearance per ABMA7

**Hydrostatic Test**
- Operates without leaking at 150% of MACP when hydro tested

**Run Test**
- Tested to determine if the pump operates without excessive vibration or seal leaks throughout operating range.

**Performance Test**
- Tested a duty point to confirm pump curve.

**Sound Test**
- Shall be under 85 db’s at a distance of 3 ft. (1 meter).

**Material Certification**
- Materials Certifications provided standard

**Seal Pressure Test**
- Air Pressure at 2 psi per API 682

**NOTE:** Above is a summary of the principal features of the LobePro API 676 compliant pump. There are many other provisions of API 676 which apply to the pump. Our API series pumps comply with all of these provisions.

* Sp frame pumps feature a one piece ProForm pump casing which incorporates Housing Segment, Flange Ring, Barrier Plate and Integral Suction and Discharge Flange Fittings in one piece.
Simple and Easy to Repair Parts in Place

In Place wear part replacement at 1/3 the cost and time for equivalent screw (PC) pump.

Wear parts ship quickly

Wear parts shipped within 2 working days of order receipt or the parts are Free!
This guarantee applies for 5 years after the purchase of a LobePro pump.

“I love this LobePro Pump. It takes three guys three days to build a Moyno. It took three hours to rebuild the LobePro - and I did it myself. I can’t wait until we replace the other Moynos with LobePro.”
---Paul, Lead Mechanic

### Pump Models

_The flows shown below is the theoretical capacity prior to slip caused by pressure._

<table>
<thead>
<tr>
<th>Model Speed</th>
<th>Maximum Capacity</th>
<th>Maximum Flow Per 100 Rev.</th>
<th>Maximum Continuous Pressure</th>
<th>Rated RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>S8</td>
<td>72 gpm (16 m³/hr)</td>
<td>8 gal. (30 m³x10³)</td>
<td>175 psi (12.1 bar)</td>
<td>0-900</td>
</tr>
<tr>
<td>S16</td>
<td>144 gpm (32 m³/hr)</td>
<td>16 gal. (60 m³x10³)</td>
<td>100 psi (6.9 bar)</td>
<td>0-900</td>
</tr>
<tr>
<td>M34</td>
<td>204 gpm (46 m³/hr)</td>
<td>34 gal. (130 m³x10³)</td>
<td>145 psi (10 bar)</td>
<td>0-600</td>
</tr>
<tr>
<td>M50</td>
<td>300 gpm (68 m³/hr)</td>
<td>50 gal. (190 m³x10³)</td>
<td>125 psi (8.6 bar)</td>
<td>0-600</td>
</tr>
<tr>
<td>M68</td>
<td>408 gpm (92 m³/hr)</td>
<td>68 gal. (260 m³x10³)</td>
<td>100 psi (6.9 bar)</td>
<td>0-600</td>
</tr>
<tr>
<td>M100</td>
<td>600 gpm (136 m³/hr)</td>
<td>100 gal. (380 m³x10³)</td>
<td>50 psi (3.5 bar)</td>
<td>0-600</td>
</tr>
<tr>
<td>L133</td>
<td>665 gpm (151 m³/hr)</td>
<td>133 gal. (503 m³x10³)</td>
<td>125 psi (8.6 bar)</td>
<td>0-500</td>
</tr>
<tr>
<td>L133h</td>
<td>665 gpm (151 m³/hr)</td>
<td>133 gal. (503 m³x10³)</td>
<td>175 psi (12.1 bar)</td>
<td>0-500</td>
</tr>
<tr>
<td>L266</td>
<td>1,330 gpm (302 m³/hr)</td>
<td>266 gal. (1007 m³x10³)</td>
<td>75 psi (5.2 bar)</td>
<td>0-500</td>
</tr>
<tr>
<td>L266h</td>
<td>1,330 gpm (302 m³/hr)</td>
<td>266 gal. (1007 m³x10³)</td>
<td>150 psi (10.3 bar)</td>
<td>0-500</td>
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<tr>
<td>L399</td>
<td>1.995 gpm (453 m³/hr)</td>
<td>399 gal. (1510 m³x10³)</td>
<td>40 psi (2.8 bar)</td>
<td>0-500</td>
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<tr>
<td>L399h</td>
<td>1.995 gpm (453 m³/hr)</td>
<td>399 gal. (1510 m³x10³)</td>
<td>85 psi (5.9 bar)</td>
<td>0-500</td>
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<tr>
<td>L531h</td>
<td>2.655 gpm (603 m³/hr)</td>
<td>531 gal. (2010 m³x10³)</td>
<td>70 psi (4.8 bar)</td>
<td>0-500</td>
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