**Pump Description**

The Liberty LL2 PC Pump is an ideal low-flow Progressive Cavity Pump for polymer transfer, chemical feed and sampling/dosing applications. The Liberty LL2 Series low-flow design (260 gpm/100 revolutions) is a standard flanged pump manufactured with cast iron or 316 stainless steel casings and designed in 1, 2, and 3 stages for 60, 120, and 180 psi discharge pressures.

The pump unit's modular design with simple pinned joint drive assembly makes it an ideal cost-effective choice for all of your low-flow applications. Rotors are typically hardened tool steel or 316 stainless steel with a hard chrome plating specification. All other wetted parts are either carbon steel or 316 stainless steel. Stators are available in many elastomer materials such as buna, natural rubber, epdm, and viton.

The standard seal design is a set of gland packing with a Lantern Ring and flush connections; Mechanical seal options are readily available. The Liberty unit is a low-cost, maintenance free, dependable drop-in replacement low-flow progressive cavity pump.

The Liberty LL2 Progressive Cavity Pump parts are direct aftermarket replacements that work with the Moyno™ L2 Series, Tarby™ TL2 Series and Continental™ CL2 Series.*

Contact a Liberty Process representative today for more information about the LL2 Series.

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**Features**

- Modular Design
- Maintenance Free
- Easy Assembly/Disassembly
- Simple Pin Joint Design
- NPT Discharge Connections
- Low Shear
- Non-Pulsating

**Materials**

**Rotor:** Tool Steel & Stainless Steel, Chrome-Plated

**Stator:** Buna, Rubber, Viton™, EPDM

**Motor:** 1/10, 1/8, 1/6, 1/4, 1/3, 1/2, and 3/4 hp

**Inlet:** 1”

**Outlet:** 3/4”

**Bases:** Steel and Stainless Steel

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**Curves**

1-Stage 1LL2

2-Stage 2LL2

3-Stage 3LL2

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**Drawings**

1-Stage 1LL2

2-Stage 2LL2

3-Stage 3LL2
progressive cavity pump performance curves

<table>
<thead>
<tr>
<th>RPM</th>
<th>200</th>
<th>400</th>
<th>600</th>
<th>800</th>
<th>1000</th>
<th>1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPSH REQ'D</td>
<td>.5</td>
<td>.9</td>
<td>1.3</td>
<td>1.7</td>
<td>2.1</td>
<td>2.5</td>
</tr>
<tr>
<td>MIN. HP</td>
<td>1/10</td>
<td>1/8</td>
<td>1/6</td>
<td>1/4</td>
<td>1/4</td>
<td>1/3</td>
</tr>
</tbody>
</table>

Data Based on water @70°F

1 Stage Pump

70 Durometer
55 Durometer
LIBERTY SERIES - 2LL2
Progressive Cavity Pump
Performance Curves

<table>
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<tr>
<th>RPM</th>
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<td>1/3</td>
<td>1/2</td>
</tr>
</tbody>
</table>

2 Stage Pump

70 Durometer — — — 55 Durometer

Data Based on water @70°F

CAPACITY (GPM)

Differential Pressure (PSI)

HORSEPOWER

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2525 Clearbrook Drive Arlington Heights, IL 60005
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The document contains a table showing the performance curves for the Liberty Series 3LL2 Progressive Cavity Pump. The table lists the required NPSH (Net Positive Suction Head) and minimum horsepower (HP) at different RPM (Revolutions Per Minute) values. The data is based on water at 70°F and is provided for 70 and 55 Durometer materials.

The diagram illustrates the capacity (GPM) vs. differential pressure (PSI) at various RPM (200, 400, 600, 800, 1000, 1200) for the 3-stage pump. The graph shows the capacity and horsepower at different pressure levels, indicating the pump's performance across a range of conditions.

For example, at 1200 RPM, the required NPSH is 2.1 PSI, and the minimum horsepower needed is 1/2 HP. The data is applicable for both 70 and 55 Durometer materials.
LIBERTY SERIES - 1LL2
Progressive Cavity Pump
Dimensional Drawings

MIN. REQUIRED TO DISASSEMBLE PUMP

6.5"  7.56"  17.25"

DISCHARGE 1.00"

1.00"

SUCTION

0.62"  5.88"

3.25"

0.37" Dia.

1.56"  1.56"

4.00"

4.50"  8.50"

ALL DIMN: Inches

Net weight

= lbs.

1 Stage Pump
3 Stage Pump

MIN. REQUIRED TO DISASSEMBLE PUMP

ALL DIMN: Inches

6.50"

12.00"

8.12"

14.69"

24.37"

1.56" 1.56"

SUCTION 1.00"

0.62"

5.88"

3.25"

0.37" Dia.

1.56" 1.56"

4.00"

1.00" 0.75"

0.37" Dia.