We are a leader in the design, manufacture and supply of progressing cavity pump and artificial lift solutions worldwide. Our complete line of direct driveheads are specifically designed for use with progressing cavity pumping systems to meet your most demanding production needs.

The M-105 Permanent Magnetic Motor (PMM) is a part of the PMM series of direct drives, which offer the highest level of energy efficiency. The M-105 PMM is designed for high horsepower applications. Our dedication to safety is front and center in the PMM with an integrated failsafe resistive brake, a single rotating external part, and no overhung motor mass for a safe install. The PMM drive is a friend to the environment as it requires less energy to operate and is extremely quiet.

**Features And Benefits:**
- Safety provided by:
  - Integrated failsafe electronic resistive brake
  - Elimination of rotating parts, such as belts and sheaves
  - Perfectly balance lifting with no overhung motor mass
- Highly efficient motor that reduces electrical energy consumption and greenhouse gas emissions
- Delivers exceptionally high starting torque and rated torque efficiently over entire operating RPM
- Quiet operation – 68 dB at 10 feet (3 m)
- Provides a fully optimized system when paired with the Guardian II VFD

**Options:**
- 77,000 Ca90 lbf Thrust Bearing
- Rope style stuffing box
- Retrofit stuffing box
- Jam Pack stuffing box
- Leak Free integral stuffing box
- Alternate torque and speed windings
- Certified for use with alternate VFD’s from ABB, Yaskawa, and Unico

**Accessories:**
- Polished Rod ejection clamp
- Booth guard
- Shipping/support stand
Driving to the Bottom Line

Electrical energy savings can be considerable and drive to bottom line affordability when considering the installation of a PMM. With observed reductions in energy consumption from 10-20%, an indication of potential annual savings under different scenarios is presented in the following table. The assumptions are for a 100 hp equivalent top drive with an 85% load factor, with the all in cost of power at 12 cents/kWh.

<table>
<thead>
<tr>
<th>Initial Base Power Consumed (kWh)</th>
<th>M-105 PMM Electrical Energy Reduction</th>
<th>Power Reduction</th>
<th>Power Price</th>
<th>Power Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>555,000</td>
<td>10%</td>
<td>55,500</td>
<td>$0.12</td>
<td>$6,660</td>
</tr>
<tr>
<td>555,000</td>
<td>15%</td>
<td>83,250</td>
<td>$0.12</td>
<td>$9,990</td>
</tr>
<tr>
<td>555,000</td>
<td>20%</td>
<td>111,000</td>
<td>$0.12</td>
<td>$13,320</td>
</tr>
</tbody>
</table>

Total annual energy savings in specific applications will be dependent upon overall power consumption and the cost of power in a particular region.