Alleviating the effects of abrasion

Sand-Pro™ Pump
Innovative design, unbeatable performance, unmatched value.

OUR STORY IS FOUNDED ON A SIMPLE TRUTH: LIFE REQUIRES ENERGY.

We’re focused on unlocking energy with highly engineered products and technologies used to drill for and produce oil and gas efficiently and safely around the world. Our products include a full range of equipment essential to efficient functioning throughout the lifecycle of the wellsite—from drilling to completion to production.

WHO WE ARE

Apergy's artificial lift division is a team of industry-leading companies that utilize their collective resources to help oil and gas producers optimize revenues, profitability, safety, and environmental compliance through high-quality production, completion, gathering and control systems.
The patented Sand-Pro™ Pump utilizes a unique method of separating produced sand from the pressure sealing, leading edge of the sprayed-metal plunger. By keeping these hard sand particles separated from the plunger/barrel interface, the surface of the plunger and barrel can seal the pressure longer and thus improve downhole run times.

The Sand-Pro™ Pump uses two plungers connected in tandem to separate the upper stage, sand-handling plunger from the lower-stage, pressure-sealing plunger. The upper, soft-packed plunger has no pressure across it to force sand into seal interface which will wear out its soft packing. This extends the wear life of the upper plunger. The lower, metal sprayed plunger has no sand at its leading edge to wear it out, due to the upper plunger handling the sand. This makes the Sand-Pro™ the best of both worlds for each plungers function. The Sand-Pro Pump is available in abrasive and corrosive-resistant materials and coatings.
How a typical downhole pump works

Typical downhole pumps create an uneven pressure distribution during operation, which causes sand or other abrasive particulates to accumulate near the top of the plunger. This uneven pressure and lack of a method for the removal of particulates cause a buildup at the pump’s leading edge. As time goes on, this particulate buildup becomes subject to hydrostatic pressure, causing friction and abrasion that degrade seal surfaces.

Sand and other abrasive particulates are one of the leading causes in pump downtimes and inefficiencies. When trapped by the pump plunger, these particulates can grind away at equipment. This causes abrasion that’s followed by corrosion, and ultimately, the need for intervention, replacement and a decrease in well production and profit.

The Sand-Pro Pump’s innovative double-plunger design is specifically engineered to prevent sand and other abrasive particulates from becoming trapped within the pump system. This prevents the pump from becoming compromised by abrasive materials, extending equipment lifespan and enhancing long-term, measurable efficiency.

The Sand-Pro Pump’s unique design provides financial benefits over competing and less application-specific equipment. It’s longer pump lifespan and reduction in the need for well interventions reduce the costs associated with your operation, helping you maximize operational revenue.

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Our Solution</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand and other abrasive particulates are one of the leading causes in pump downtimes and inefficiencies. When trapped by the pump plunger, these particulates can grind away at equipment. This causes abrasion that’s followed by corrosion, and ultimately, the need for intervention, replacement and a decrease in well production and profit.</td>
<td>The Sand-Pro Pump’s innovative double-plunger design is specifically engineered to prevent sand and other abrasive particulates from becoming trapped within the pump system. This prevents the pump from becoming compromised by abrasive materials, extending equipment lifespan and enhancing long-term, measurable efficiency.</td>
<td>The Sand-Pro Pump’s unique design provides financial benefits over competing and less application-specific equipment. It’s longer pump lifespan and reduction in the need for well interventions reduce the costs associated with your operation, helping you maximize operational revenue.</td>
</tr>
</tbody>
</table>
How the Sand-Pro™ Pump works

The Sand-Pro™ actively combats particulate build up during its normal operation. Small holes above and below the upper plunger allow for the pressure to equalize around the upper plunger during operation. This alleviates the impact of particulates as they pass through the pump. These holes also allow for a small amount of fluid to act as lubrication through the area where the two main pump components overlap and help prevent particulate from becoming trapped. The tube shield further protects the cavity above the lower-stage plunger from particulate accumulation.

Small holes above and below the upper plunger allow for the pressure to equalize around the upper plunger during operation.

SEAMLESS FIT
Industry-standard components allow the Sand-Pro to fit into nearly any well and make for a simple installation process.

CUSTOM BUILT
Each Sand-Pro Pump is built to meet the specific needs of the well in which it will be installed, enhancing product lifespan and efficiency.

LESS MAINTENANCE
The Sand-Pro Pump’s focus on durability reduces the need for pump interventions and the associated downtime.

CLIENT SATISFACTION
Almost 100% of Sand-Pro customers re-order the product when the equipment reaches the end of its lifespan or for their other wells.

EFFICIENCY FOCUSED
The Sand-Pro was engineered specifically to stand up against the abrasive properties of sand and other potentially seal-compromising particulate.

LONGEVITY
In 70% of past installations, the Sand-Pro has lasted significantly longer than the product it replaced.
Apergy’s Rod Lift Solutions unites Alberta Oil Tool, Harbison-Fischer, Norris, and UPCO. These four are some of the industry’s most iconic brands. Our brands are deeply committed to delivering leading-edge technologies with superior quality, world-class manufacturing and unsurpassed support. Each brand brings results in optimized production rates and life-cycle costs for oil-and-gas producers around the globe.

Improving well performance is a day-to-day concern for oilfield operators, with no time for downtime. We improve long-term productivity and profitability by offering some of the most durable Rod Lift components in our industry.

Our Apergy Rod lift brands have served the oil-and-gas production industry for many decades. Each brand builds a reservoir of knowledge and expertise, enabling them to meet the unique operational needs of every well. We’re constantly striving to develop new products that can carry on that legacy of innovation.

Our highly trained Technical Services team consists of subject matter experts that provide reliable guidance from the drawing board to final product installation. Our Sales team also stands ready to assist you throughout the entire life of the product.
Partner with the best team in the business

- Decades of experience recommending and servicing lift systems to accommodate changing well conditions
- Unrivaled expertise in the downhole arena
- The best performing, highest quality, and safest products designed, engineered, and manufactured in-house
- Experienced and responsive field support staff with extensive local knowledge
- The highest commitment to the protection and safety of our employees, our customers, and the environment
- Comprehensive customer training and product support

Harbison-Fischer products and services are available in the following North American locations:

**Administrative & Manufacturing**
Crowley, TX. 817.297.2211

**California**
*Bakersfield* 661.387.0166
Shafter 661.399.0628
*Taft* 661.765.7792

**Illinois**
Grayville 618.375.3841

**Kansas**
El Dorado 316.321.5940
Great Bend 620.793.5091

**Louisiana**
Bossier City 318.742.2942

**Michigan**
*Mt. Pleasant* 989.773.1032

**Mississippi**
Ellisville 601.428.7919
Natchez 601.442.7961

**New Mexico**
Farmington 505.327.1398
Hobbs 575.393.9618

**North Dakota**
*Dickinson* 701.483.0422
*Tioga* 701.664.4300
Williston 701.774.0276

**Ohio**
Zanesville 740.453.5991

**Oklahoma**
Oklahoma City 405.677.3393
Ratliff City 580.856.4058

**Texas**
Abilene 325.673.8274
*Browfield* 806.637.7142
*Bryan* 979.788.1227
*Garden City* 432.354.2093
Graham 940.549.4544
*Freer* 361.394.6040
Kilgore 903.984.8695
Odessa 432.337.3592
Perryton 806.435.6569
*Pleasanton* 830.224.6400
Wichita Falls 940.766.4259

**Wyoming**
*Casper* 307.472.7518
*Gillette* 307.686.4050

---

**Global Markets**
hfi_intl_sales@apergy.com
https://www.apergyals.com/global-markets/

* Indicates HF Pump Repair Shop locations