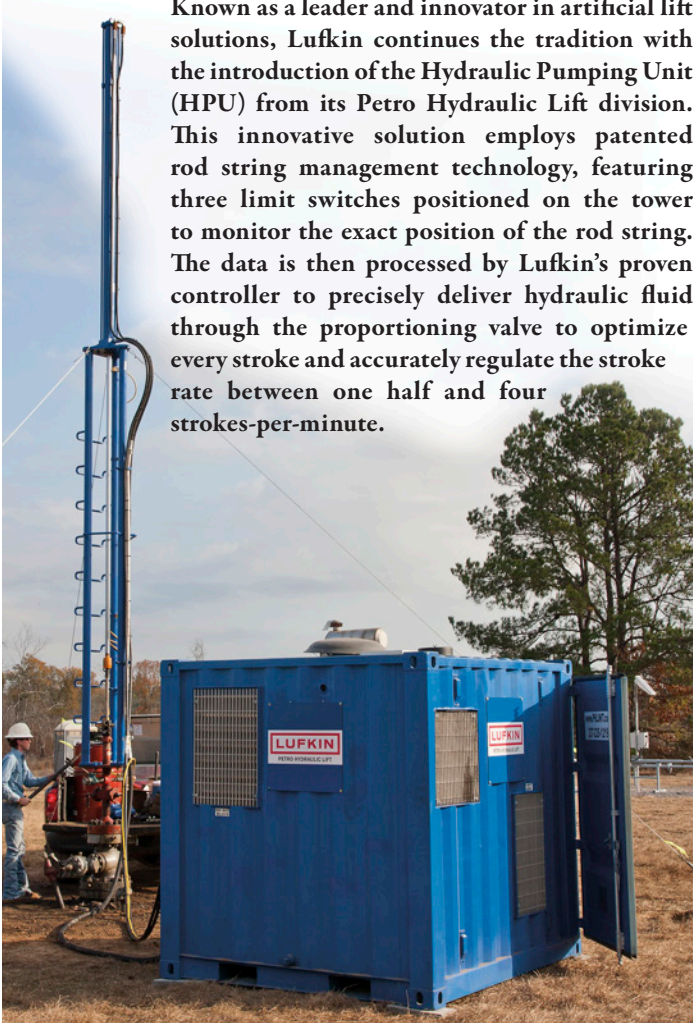


PETRO HYDRAULIC LIFT

Hydraulic Pumping Unit

Known as a leader and innovator in artificial lift solutions, Lufkin continues the tradition with the introduction of the Hydraulic Pumping Unit (HPU) from its Petro Hydraulic Lift division. This innovative solution employs patented rod string management technology, featuring three limit switches positioned on the tower to monitor the exact position of the rod string. The data is then processed by Lufkin's proven controller to precisely deliver hydraulic fluid through the proportioning valve to optimize every stroke and accurately regulate the stroke rate between one half and four strokes-per-minute.

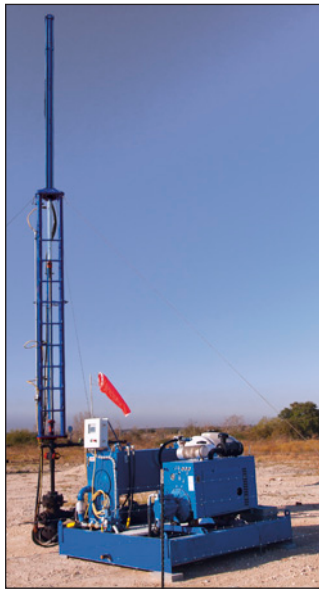


What is Hydraulic Rod Lift?

The Lufkin HPU uses a hydraulic piston to vertically lift the fluid from the well.

UP STROKE: Hydraulic Lift

DOWN STROKE: Controlled descent using rod string weight

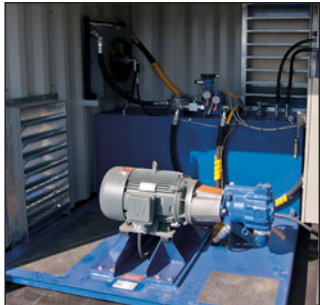


With a minimal footprint, rapid installation and few moving parts, the HPU provides a cost-effective solution for dewatering low volume oil and natural gas wells. We design these units with flexibility in mind and offer natural gas, diesel and electric prime movers to meet your unique requirements. These units deliver a stroke length up to 144 inches and achieve 28,500 lbs peak polish rod load. Power units are available as skids or enclosures for environments where noise and security are a concern.

Designed for Flexibility

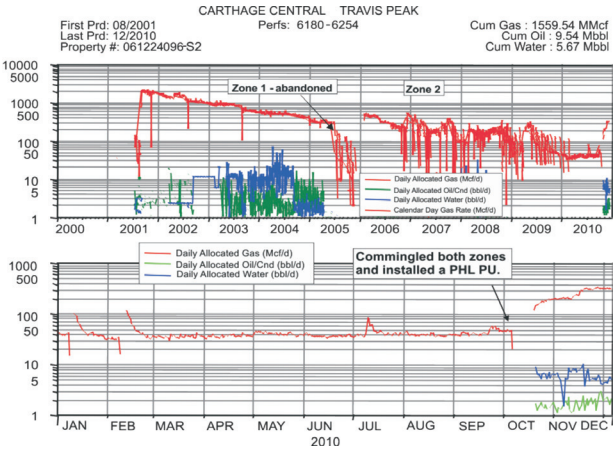


Natural Gas or Diesel Engine



Electric Motor

Producing Impressive Results



System Performance

- HPU installations have increased production by as much as 300%
- Proven track record in gas well deliquification
- The pump rate matches a well's natural feed in rate
- Provides more efficient operation of the downhole rod pump
- Optimizes well production

Hydraulic Pumping Unit



Rapid Installation



Minimal Rod Preparation



Set Power Unit in Place



Attach Tower



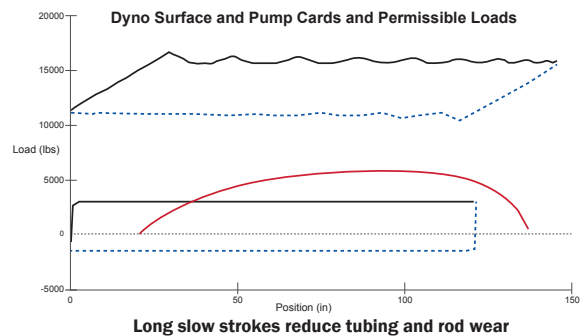
Connect Power Unit to Tower



Attach and Adjust Limit Switches

Rod String Management Technology

The patented Lufkin rod string management technology extends the life of your rod string by slowing the descent as it approaches the bottom of the stroke to allow the rod's elasticity to adjust naturally into the up stroke to minimize rod reversal effects.



Upper Limit Switch

Magnetic sensor recognizes the top of the stroke when actuator reaches it. Hydraulic lift stops to allow controlled descent using rod string weight.

Deceleration Limit Switch

Magnetic sensor alerts control to slow rod descent to minimize stress on rod string at bottom of stroke.

Actuator

Magnetic sensors measure the position of the actuator throughout the entire length of each stroke.

Lower Limit Switch

Magnetic sensor alerts control to begin hydraulic lift for next up stroke.

Features & Benefits

- Quick setup & takedown - approximately 3 hours
- Reduced rod wear
- Change lift speeds instantaneously
- Controlled deceleration with Modular Descent Manager (MDM)
- Ability to safely & quickly tag bottom
- Fewer moving parts
- Minimal pinch points
- Minimal human and animal hazards
- Minimal site prep work
- Small footprint

Specifications

- **Stroke length:** 96 inches to 144 inches
- **Strokes per minute:** 1/2 to 4 spm
- **Maximum lift:** 28,500 lbs peak polish rod load

Under Development

- 300 inch long stroke
- 30,000+ lbs peak polish rod load

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