

APPLICATIONS

Heavy, Medium and Light oil wells

- Very slow rod fall (bridle separation)
- Slow stroke to prevent solids buildup
- Fast upstroke to increase production rates

Thermal / SAGD

- Long stroke length for maximum pump compression (gas/steam)
- Large production range (10x flow range)

High GOR Wells

- Long stroke length improving gas compression
- Slow upstroke minimizes gas breakout into pump
- Fast down stroke to increase production rates

Highly Deviated Wells

- Long stroke reduces rod tubing wear
- Rod speed control prevents buckling and impulse loads on the rod string
- Delays at top and bottom allow for maximizing downhole stroke length
- Reduced Peak rod velocity reduces sliding wear

Multi-Well Pads

- Smaller footprint allows tight spacing

Well Testing and Intermittent Production

- No ground prep, fast installation
- Low cost setup and dismantle

Transitional Production

- High decline wells
- High production capability with large HPUs, reducing long term rod pumping CAPEX.

KEY BENEFITS & FEATURES

Long Stroke Advantage

The HPU system's stroke with lengths of up to 336 in [8.53 m] reduces cyclic stress, minimizes rod stretch impact, improves gas compression ratios, and enhances overall system efficiency. Several different cylinder diameters and lengths provide design flexibility to suit any production requirements.



Zero Produced Fluid Leakage

The fully enclosed cylinder prevents leaks which causes downtime related to environmental exposure, equipment maintenance, and repairs. This design further protects against spillage with a fully contained skid design standard to the HPU product.

Two Wells Operated by One Power Unit

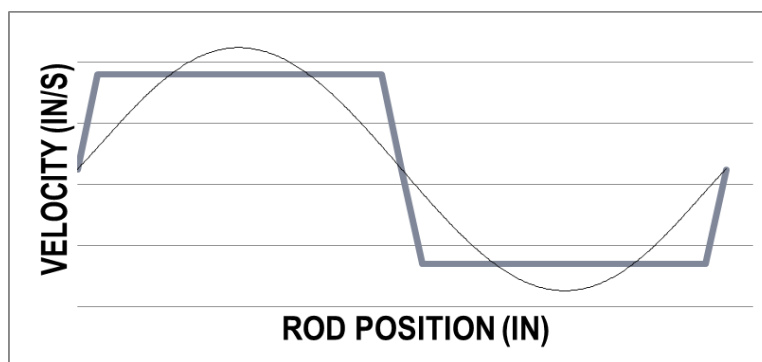
The HPU power unit is capable of operating two cylinders at the same time, enclosed jacks only. This option reduces capital cost compared to purchasing two complete systems.

HYDRAULIC PUMPING UNITS

KEY BENEFITS & FEATURES CONT'D

Rod String Control = Production

- Independent up and down stroke speed
- Adjustable acceleration and delays
- Slow stroke speed vs. intermittent run
- Stroke length
- Remote controls
- Lower peak rod velocity = Less rod stretch
- Same stroke speed as a beam pumping unit = More production
- Extended time at peak velocity



Increased Efficiency

The newly designed system reduces input energy demand by 10% with the re-engineered open loop circuit design.

Easy Installation & Maintenance

The HPU system's quick and easy installation significantly reduces the time required from days to hours and does not require any special site preparation. All setting adjustments are viewable and can be changed either on site or remotely¹.

Remote Access

Important real time well data can be remotely viewed and accessed anytime and anywhere. Operators can quickly respond to changing well conditions and optimization opportunities

Temperature Control

New temperature control features ensure unit stays running in any environment maximizing production without lost time due to temperature related shutdowns.

Remote Locations

Easier to move equipment to remote areas.



HYDRAULIC PUMPING UNITS

TECHNICAL SPECIFICATIONS

HPU HOLLOW JACKS

| Pump Jack | 144 | 192 |
|---------------------|--------------------|----------------------|
| Lift Capacity (Max) | 30,000 lbs. | 40,000 lbs. |
| Lift Speed | 1-6 SPM | 1-6.5 SPM |
| Weight | 1600 lbs. | 2200 lbs. |
| Dimensions | 214" x 49" x 30.5" | 252" x 50.5" x 30.5" |

HPU ENCLOSED JACKS

| Pump Jack | 240 | 336 |
|---------------------|----------------------|----------------------|
| Lift Capacity (Max) | 30,000 – 40,000 lbs. | 30,000 – 50,000 lbs. |
| Lift Speed | 1-6 SPM | 1-3.5 SPM |
| Weight | 800 lbs. | 1000 lbs. |
| Dimensions | 275.125" X 12.75" | 371.125" X 12.75" |

HPU POWER UNITS

| Power Unit Specifications | Low Flow Lite (LFL) | Low Flow (LF) | High Flow (HF) | Coming Soon |
|----------------------------|--------------------------|-------------------|------------------|-----------------------|
| Weight (dry) | 5500 lbs. | 5500 lbs. | 7000 lbs. | 8500 lbs. |
| Dimensions | 151" X 45" X 104" | 151" X 45" X 104" | 88" X 108" X 79" | 100" X 120" X 84" |
| Main Pump | 140cc, 66 GPM | 145cc, 68 GPM | 280cc, 130 GPM | 280cc, 130 GPM |
| Cooling Pump | 63cc, 30 GPM | 63cc, 30 GPM | 63cc, 30 GPM | 63cc, 30 GPM |
| Electric Prime Mover | 50 OR 75HP | 100HP | 150 HP | ✖ |
| Gas Prime Mover - NG & LPG | 5.7L EPA OR 6.2L NON-EPA | 6.2L NON-EPA | ✖ | 9.0L TA EPA & NON-EPA |
| Reservoir | 100 GAL | 100 GAL | 200 GAL | 200 GAL |
| Pump Off Control | ✓ | ✓ | ✓ | ✓ |
| Surface and Downhole Cards | ✓ | ✓ | ✓ | ✓ |
| Hollow Jacks | ✓ | ✓ | ✓ | ✓ |
| H30-144 | 0.5-3.5 | 0.5-4.0 | ✖ | ✖ |
| H40-192 | 0.5-3.0 | 0.5-3.5 | 0.5-5.5 | 0.5-6.0 |
| Enclosed Jacks | ✖ | ✓ | ✓ | ✓ |
| E30-240 | ✖ | 0.5-3.7 | 0.5-4.5 | 0.5-6.0 |
| E30-336 | ✖ | ✖ | 0.5-4.0 | 0.5-4.5 |
| E40-240 | ✖ | 0.5-3.0 | 0.5-4.5 | 0.5-5.5 |
| E40-336 | ✖ | NA | 0.5-3.5 | 0.5-4.0 |
| E50-336 | ✖ | NA | 0.5-3.0 | 0.5-3.5 |