

HPump surface pumping systems in upstream oil and gas applications

Reduce downtime, maintenance requirements, and costs

The **HPump™ surface pumping system** from Baker Hughes delivers reliable, efficient transfer of surface fluids in the upstream oil and gas sector. This modular pumping system increases uptime, decreases maintenance needs, and lowers both OPEX and overall costs compared to positive displacement and split case pumps.

The HPump system uses adapted **CENTrilift™ electrical submersible pumping (ESP)** technology to deliver leak-free fluid transfer. The multistage centrifugal pump is combined with a horizontal thrust chamber (HTC) and an industrial foot-mounted electrical motor to provide a rugged, skid-mounted system. Baker Hughes HPump systems are easy to build and deploy—reducing lead time—and components can be easily changed out as needed to improve uptime. Common upstream applications include water injection and disposal, CO₂ injection, and jet pump power fluid operations. With global fulfillment and maintenance capabilities, HPump systems provide a cost-effective solution regardless of location. These systems are durable, simple, and easy to maintain. After thousands of installations worldwide, customers routinely report up to

65% reductions in life cycle costs. HPump systems deliver dependable performance with minimal maintenance in multiple environments.

The proven multistage pump is rated up to 6,250 psig with a flow range from 250 to 130,000 BFPD. And the rugged HTC design can handle broad temperature variations in harsh environments. HPump components can handle solids and abrasives with abrasion-resistant materials and technology. Stages can be coated with optional materials, or designed with various metallurgies, to deliver optimal performance and fight buildup in the toughest applications.

Used with the HPump surface pumping system, the Baker Hughes **Electrospeed™ Advantage variable speed drive** provides precise control to enable performance across a wide operating range. This level of control extends system life and further reduces life cycle costs. To further enhance efficiency, Baker Hughes offers support for automation and key functions.

A common application for surface pumps in the upstream oil and gas sector is with secondary recovery using produced water injection, also called water flooding. In water flooding

Applications

- Enhanced oil recovery (CO₂ and water injection)
- Water disposal
- Frac water recycling
- Water transfer
- Crude oil transfer

Benefits

- Reliable, low-maintenance components
- Broad operating range
- Low-vibration design
- Cartridge seal design
- Adapts to changing fluid conditions
- Reduces field replacement time by 50% or more
- Abrasion-resistant technology and corrosion-resistant carbon materials
- Environmentally friendly design
- Can be painted to blend in with surroundings

operations, produced water is injected into a reservoir to reestablish sufficient production pressure. This process can increase production and enhance overall reservoir recovery.

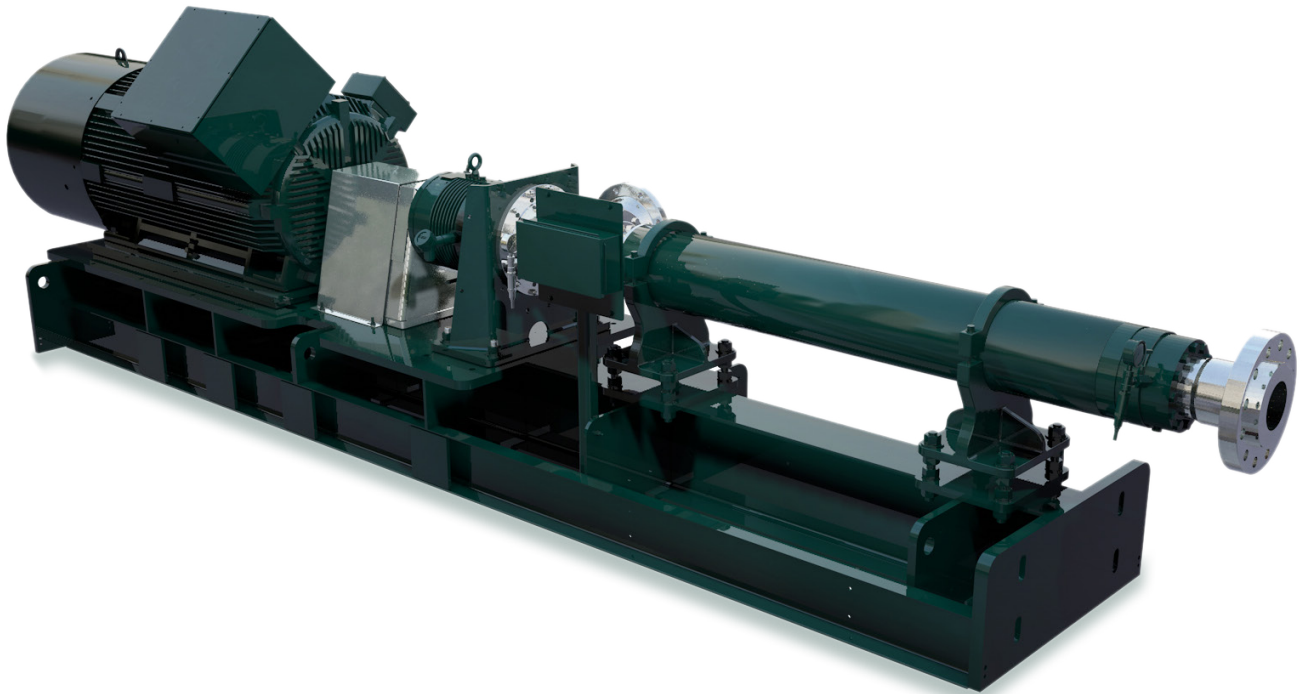
The fluid used in water flooding is typically sourced from many different wells, and can contain mixtures of oil, gas, water, and contaminants such as H₂S and abrasive particles. This water can be highly corrosive and abrasive, and can also cause scale buildup. The

HPump system is rugged enough to deliver reliable performance in water flooding operations, regardless of water condition.

Varying pressure requirements and flow rates are typical in water flooding. This dynamic environment can place a great deal of stress on surface pumps. But HPump systems are designed to handle a wide range of pressures, temperatures, flow rates, and fluid types, effectively reducing OPEX,

increasing production, and helping you adapt to changing well conditions.

Contact a Baker Hughes representative today to find out how our HPump systems can help you significantly reduce downtime, cut costs, lower maintenance expenses, and even improve production in your upstream oil and gas operations.



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