

HORIZONTAL PUMPING SYSTEMS

Horizontal pumping system retrofit and upgrade capabilities

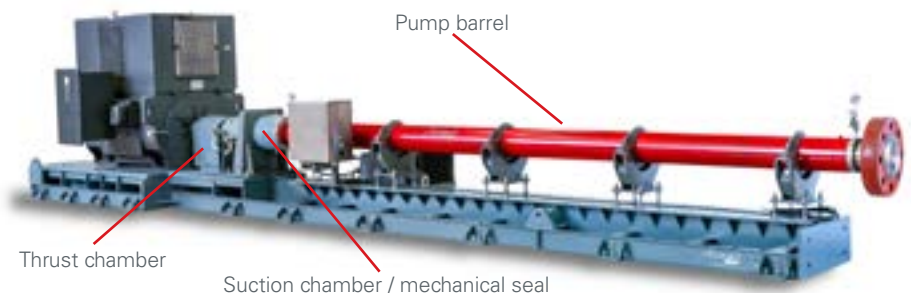
Targeted upgrades to extend system life and improve reliability

FEATURES

- Erosion Buster® technology provides abrasion resistance for diffusers and pump housings
- Octolock® pumping system nesting diffusers improve hydraulic stability
- DuraHard® protective coatings reduce erosion
- Retrofit options up to 50,000 lb thrust and 3,000 hp
- Configurable suction chamber and seal designs
- Custom drop-in retrofit kits engineered to match competitor and third-party HPS designs

BENEFITS

- Extend run life
- Reduce downtime
- Preserve existing infrastructure
- Improve reliability
- Lower total cost of ownership



Critical HPS elements that can be replaced or upgraded without replacing the entire system

Overview

Operating conditions change, but surface pumping infrastructure often remains in place. Summit ESP®, a Halliburton service offers drop-in retrofit and upgrade kits for all manufacturers' horizontal pumping system (HPS). These kits modernize critical components to increase reliability, extend equipment life, and reduce downtime without the cost and disruption of full system replacement.

Halliburton retrofit capability focuses on three critical HPS components: the pump barrel, thrust chamber, and suction chamber/mechanical seal. Each component can be retrofitted independently or combined as part of a broader upgrade strategy.

While most Halliburton components can be adapted for different platforms, the suction chamber and seal interface often require application-specific configuration. Halliburton's engineered retrofit approach addresses this constraint with tailored suction chamber and mechanical seal solutions for seamless integration with competitor HPS layouts.

Why Halliburton HPS retrofits

Halliburton designs the Hercules™ HPS for staged upgrades with high-load thrust chambers, modular skid, back-pull-out design, single low-pressure mechanical seal, quick seal replacement, and a maintenance-free balanced spacer coupling. These platform features adapt to current installations as operating conditions evolve and enable targeted retrofits with minimal downtime.

HPS retrofit kits accommodate numerous surface pumping applications such as produced water disposal and injection, crude oil transfer and boosting, CO₂ injection, amine pumping, pipeline boosting, salt dome leaching, boiler feed, LACT boosting, mine dewatering, and geothermal. Retrofit options include pump barrel designs that incorporate Erosion Buster® and Octolock® pumping system diffuser technologies to reduce erosion and improve hydraulic stability. Multiple thrust chamber retrofit configurations are available for applications up to 50,000 lb thrust and 3,000 hp. Additional options include DuraHard® protective coatings to address corrosion, scaling, and abrasion, as well as configurable suction chamber and seal designs to meet specific site requirements.

Halliburton HPS retrofits for existing installations

Halliburton offers custom, drop-in retrofit solutions engineered to integrate with legacy, in-service horizontal pumping systems, regardless of original manufacturer. These retrofit kits match footprints, hydraulic envelopes, and operating constraints so operators can upgrade critical components, improve reliability, and standardize maintenance without replacing the entire unit. Customers capture the performance and durability benefits of Halliburton HPS technology while preserving installed infrastructure and minimizing operational disruption.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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