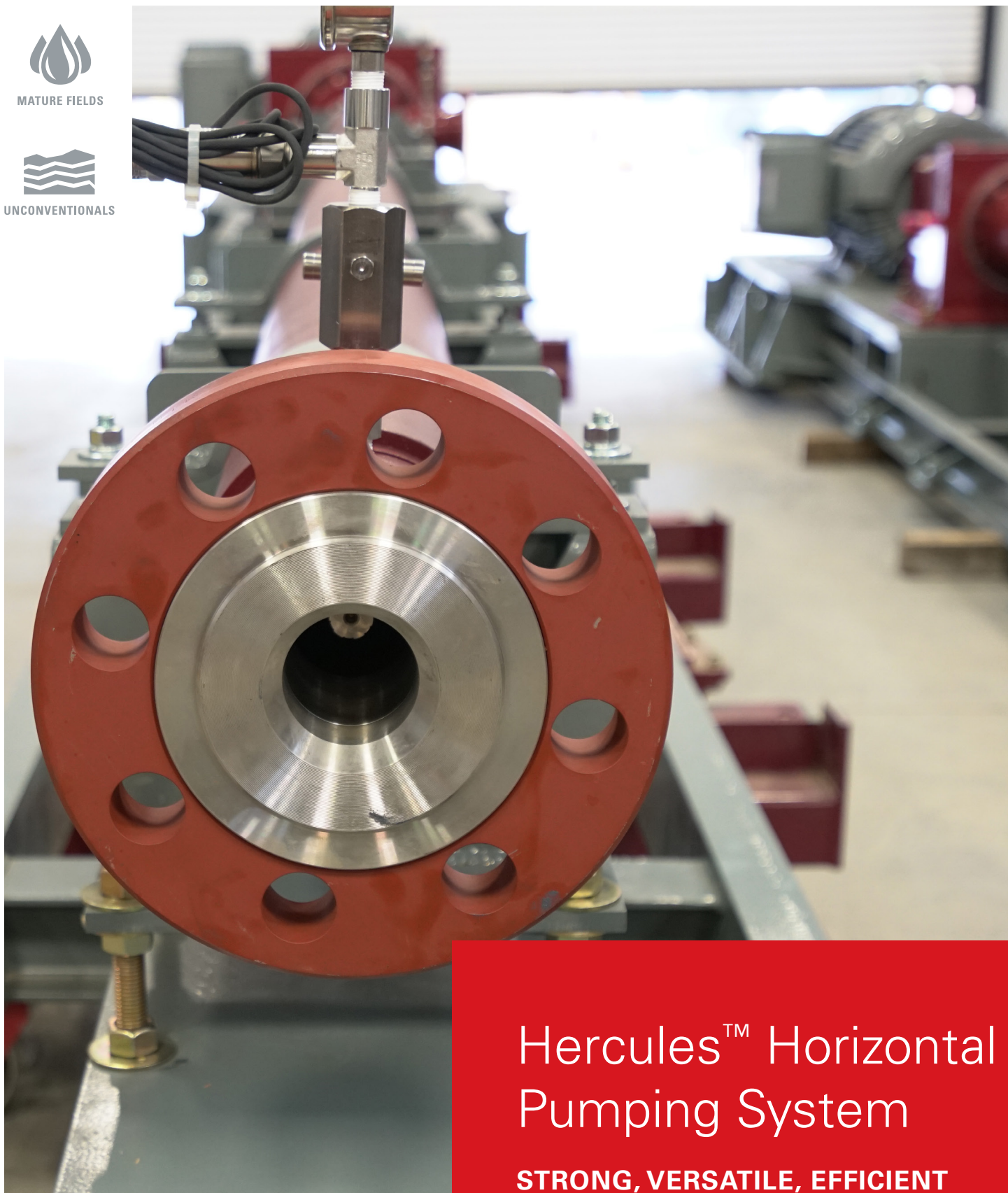




MATURE FIELDS



UNCONVENTIONALS



HAL T22140

Hercules™ Horizontal Pumping System

STRONG, VERSATILE, EFFICIENT

SUMMIT
ESP

A HALLIBURTON SERVICE

Hercules™ Horizontal Pumping System

VERSATILE HORIZONTAL SURFACE PUMPING SYSTEM FOR CONVENTIONAL OR UNCONVENTIONAL PLAYS

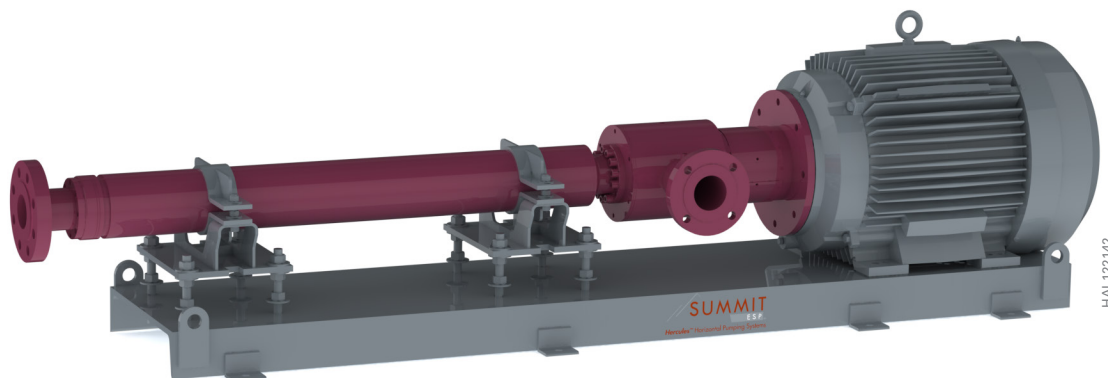
Summit ESP® – A Halliburton Service offers a horizontal surface pumping system as an efficient alternative to positive-displacement, split-case, and other surface pumping options. The system design is based on proven electric submersible pumps (ESPs) already in use in thousands of downhole applications. The multistage centrifugal pump is mounted securely on a modular skid, powered by a two-pole motor, and protected by a robust thrust chamber.

Applications

- » Produced salt water disposal (SWD) and injection
- » Crude oil transfer/boosting
- » Liquid CO₂ boosting/injection
- » Lean amine pumping (gas treating)
- » NGL/light hydrocarbon, crude oil pipeline booster
- » Cavern storage/salt dome leaching
- » Boiler/steam-generator-fed pumps
- » Jet pump – power fluid pumps
- » Lease automatic custody transfer (LACT) booster
- » Mine dewatering

Benefits

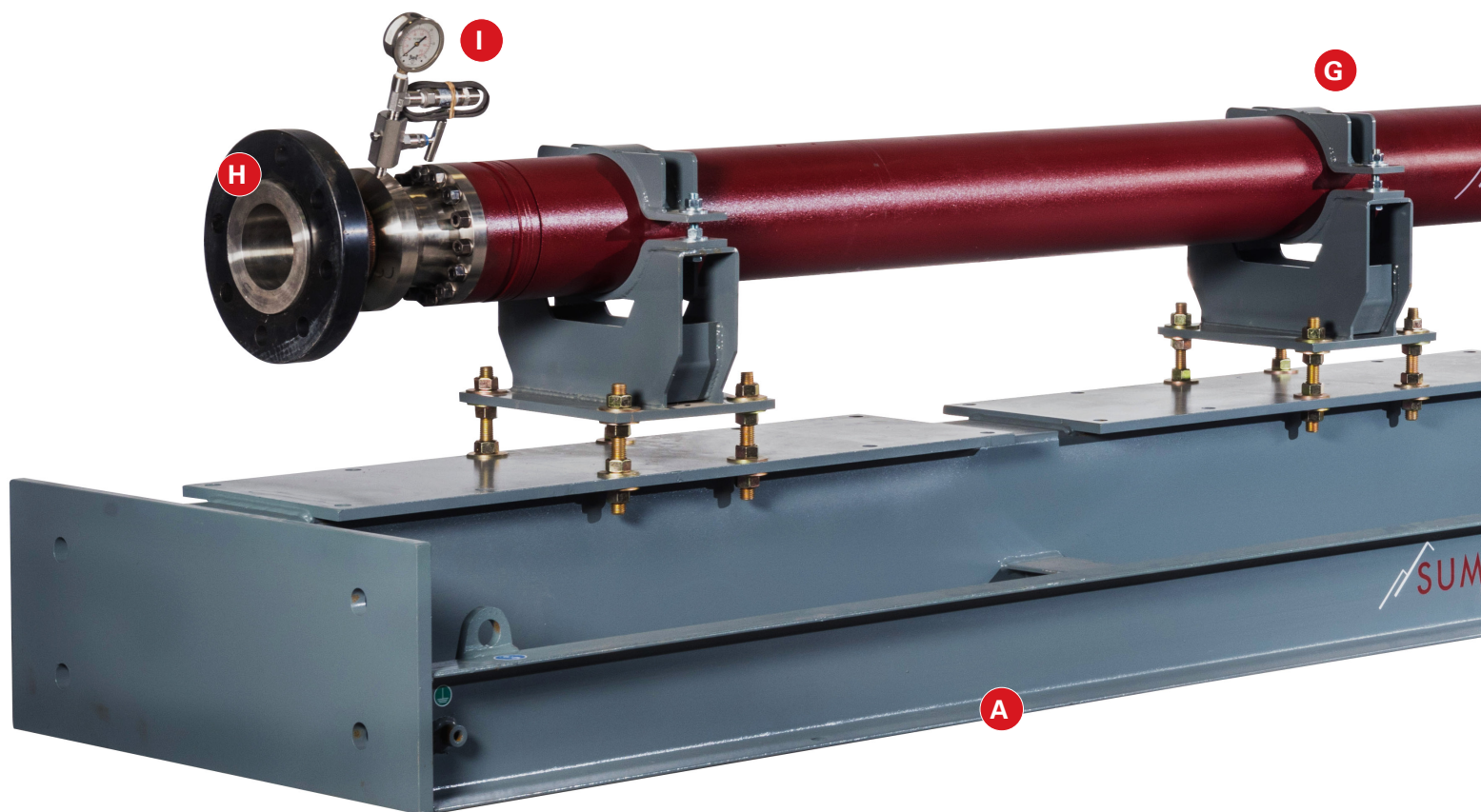
- » Lower initial operating and maintenance costs
- » Modular design with short lead times on new and replacement equipment
- » Flexible designs from 800 BPD to 50,000 BPD (23 USgpm to 1,500 USgpm)
- » Back pull-out thrust chamber
- » A single low-pressure mechanical seal
- » Minimal noise and vibration; pulse-free flow
- » Health, safety, and environment (HSE) friendly



Summit Close-Coupled (SCC) Surface Pump

For applications of 20 hp to 200 hp, the SCC surface pump uses the motor bearings to absorb pump thrust and is ideal for smaller water injection, amine, crude oil transfer, or LACT applications.

FEATURES



A. Heavy-Duty Skid

- » Modular skid, designed using extensive finite element analysis (FEA)
- » Hoist mounting points to simplify installation

B. Motor

- » Power units available from 20 hp to 2,000 hp (15 kW to 1,500 kW)
- » Electric motor options include TEFC, WPII, TEAAC, with area classification Class I Div II; other options available
- » Diesel, natural gas engine, steam or gas turbine

C. Balanced Spacer Coupling

- » Maintenance free and helps reduce vibration
- » Facilitates quick mechanical seal replacement without breaking pump or piping connections

D. Thrust Chamber

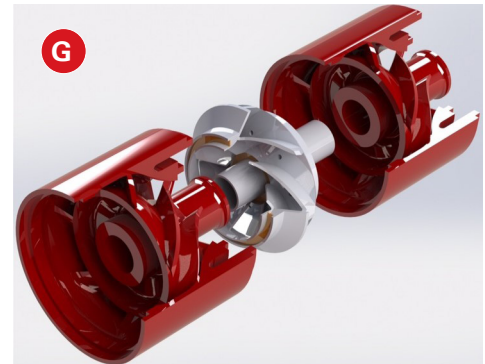
- » Designed for increased reliability, seal support, and access
- » Back pull-out for quick seal changeout
- » Seal failure will not contaminate thrust chamber
- » Minimal routine maintenance required

E. Mechanical Seal

- » Single seal assembly, exposed only to intake pressure
- » Available in component or various cartridge seal designs
- » API 682 and all applicable API flush and quench plans to meet customer and application requirements



Whether your application is upstream (using produced water injection, CO₂ injection, or crude oil transfer) or midstream/downstream (using natural gas liquids or amine for gas sweetening), we have the right solution for your needs.



F. Intake Flange

- » 316SS ANSI raised face flange is standard; other materials and types are available up to 3,000 psi (207 bar)
- » Intake can be rotated in 90° increments to accommodate suction pipework

G. Pump

- » Flow range of pumps covers 800 BPD to 50,000 BPD (23 USgpm to 1,500 USgpm)
- » Discharge pressures up to 5,500 psi (380 bar)
- » Mixed-flow stage design for reduced abrasive wear, optimal efficiency, and head per stage
- » Ni-Resist iron is standard stage material; other materials available upon request
- » Tungsten carbide or GRAPHALLOY® bearings are available for wear resistance or low-lubricity fluids, respectively
- » Tiger Shark® pump option to reduce pump thrust

H. Discharge Flange

- » Lap-joint type, comprising 316SS wetted parts and CS flange, compatible with ANSI standards
- » Available in raised face or RTJ classes up to 5,500 psi (380 bar)

I. Instrumentation

- » Standard offering is intake and discharge pressure transmitter and vibration switch
- » Skid-mounted junction box is available to provide single-point wiring
- » Available in standard and explosion-proof enclosures, and customizable to suit customer or application requirements



HAL122144

Monitoring and Control Systems

Summit ESP – A Halliburton Service offers 24/7 remote well/site monitoring that is staffed by petroleum engineers. This site monitoring allows the customer to avoid nuisance trips to the site by remotely starting and stopping the unit and adjusting setup points such as intake pressure, discharge pressure, and speed of the unit. Monitoring integrated with Summit ESP's proprietary web-based sizing, equipment, and field service tracking gives customers a 360° picture of their systems, backed by the best monitoring staff and service in the industry to optimize production and minimize downtime.



HAL122143

ACS®-15 Variable-Speed Drives

The Summit ESP Adaptive Control System® (ACS®-15) variable-speed drives (VSDs) offer a variety of features that make them the best choice for your applications. They offer reliability, accuracy, flexibility, equipment protection, and plug-and-play capabilities that ensure user-friendly operation and a long run life. They are recognized as the easiest VSDs on the market to both set up and operate with a touchscreen color display. What's more, their configuration capability provides the capacity for industry-leading flexibility in input/output (I/O), options, and setup.

Standard Features

- » Motor speed, current limit, overload/underload settings
- » Status beacon
- » Auto restarts (time delay)
- » Remote starts/stops
- » Proportional integral derivative (PID) control
- » Analog and digital inputs
- » RS-232/485 communications, SCADA ready

Optional Features

- » Pulse width modulation (PWM) sinewave filter
- » 24/7 remote monitoring
- » Active front end

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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