DATA SHEET

HALLIBURTON

TRUESYNC 400 SERIES

TrueSync™ a hybrid permanent magnet motor (PMM) is power redefined

Efficiency and innovation for ESP sustainability

FEATURES

- Permanent magnets provide greater torque compared to an induction motor
- Full synchronous speed
- Greater power density
- Reduced heat generation
- Hybrid design provides transient torque dampening

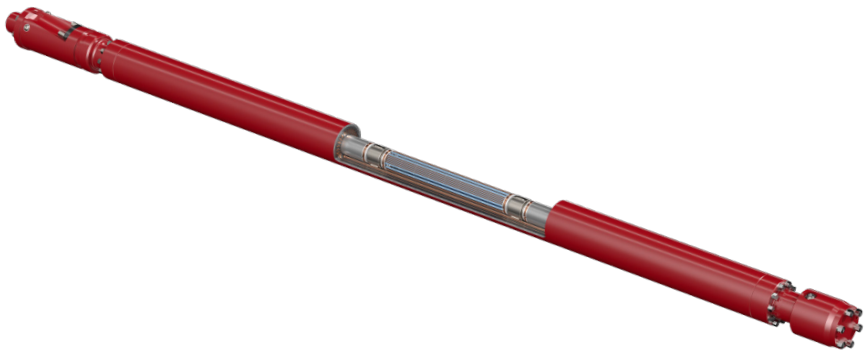
BENEFITS

- Total efficiency gain of ~20% compared to induction motors resulting in up to 20% energy savings and lower operating costs
- Optimal system efficiency at wider operating range
- Improved durability due to transient load dampening by rotor bar elements
- Slim outer diameter allows operation in smaller casing sizes for increased drawdown and production
- Shorter motor has fewer issues with harsher doglegs and can be set deeper in the wellbore
- Increased runlife due to lower operating temperature
- Reduces greenhouse gas emissions by up to 70 metric tons of CO_2 e per well per year*

Overview

As companies work to lower the carbon intensity of their operations, Summit ESP®— A Halliburton Service is at the forefront of innovative solutions to support those efforts. One such advancement is TrueSync™ a hybrid PMM that not only achieves up to 20% energy savings compared to conventional induction motors but also can reduce carbon emissions by as much as 70 metric tons of CO_2e per well per year*.

Traditional PMMs have well-established efficiency benefits relative to induction motors but have challenges related to startup and control under extreme dynamic load conditions. The TrueSync hybrid PMM is a full synchronous motor that addresses these issues with rotor bar elements to mitigate the life-limiting impact of transient torque. The result is a harmonious blend of efficiency, enhanced stability and extended operational life, making TrueSync hybrid PMM a powerful choice for sustainable energy solutions.



SUMMIT ESP

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Exclusive R&D and manufacturing innovations

R&D

- Conceived and designed in the United Kingdom, with state-of-the-art electromagnetic analysis software
- TrueSync™ hybrid PMM has undergone rigorous testing and verification in Tulsa, Oklahoma, where the R&D headquarters of Summit ESP® - A Halliburton Service is located
- Field tested in the Permian Basin of West Texas, U.S.A.
- Comprehensive performance testing performed with key variables measured and recorded to ensure optimal and precise sizing for every design
- Load scenario testing includes full load start-up to simulate stuck pump and transient load testing to model gas slugging

Manufacturing

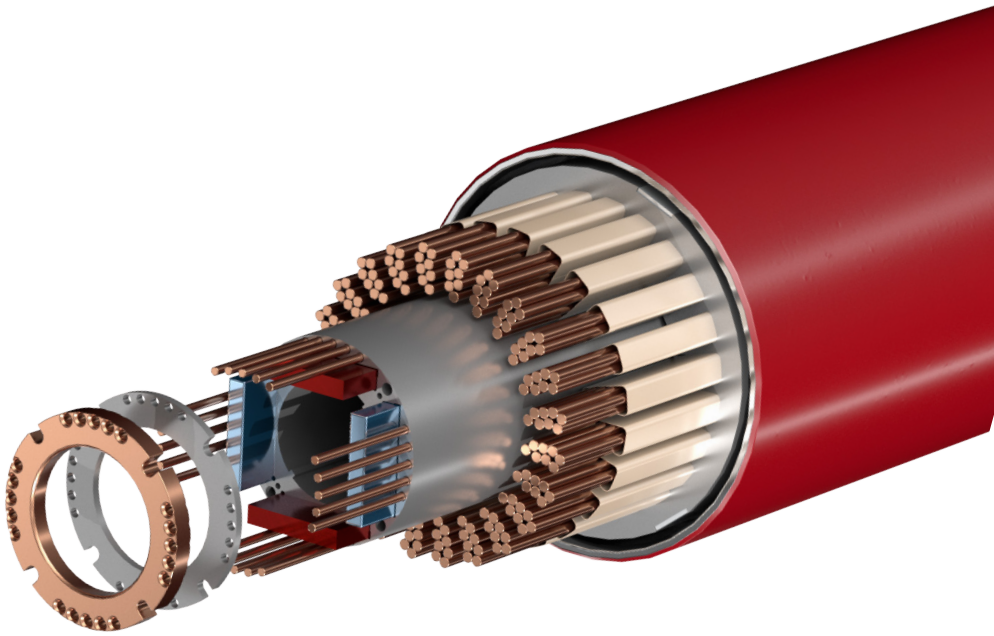
- Multi-million dollar investment in a newly expanded 20,000 square-foot manufacturing facility with specialized tooling, benches, and testing capabilities
- TrueSync hybrid PMM is manufactured and assembled in the U.S.A. to ensure top-tier quality
- TrueSync hybrid PMM is manufactured in a controlled environment preventing foreign object debris from entering critical components during assembly or maintenance ensuring product integrity, safety, and reliability

~20%

Reduction in energy input costs

~70 metric tons

Carbon emission reductions per well per year*



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Enhanced optimization

SpyGlass™ pump sizing software allows for a precision tailored ESP system while our Intelevate™ digital platform uses data science to optimize efficiency and sustainability.

Safety focus

Our rigorous safety protocols include comprehensive training for field service technicians to ensure they are fully equipped with the knowledge and skills required for each unique well's service requirements.

Technical specifications

DESCRIPTION	VALUE/RANGE (UNITS)
Motor configuration	Single tandem
Maximum motor housing diameter	4 in. (101.6 mm)
Motor nameplate speed	3,600 rpm
Motor power generated at the shaft at rated speed	360 hp 268 (kW)
Minimum and maximum operating speed	1,800 - 4,500 (rpm)
Motor rated voltage at rated power at rated speed	5 kV standard
Length	294 in. (7.5 m)
Voltage	3,400 volts
Amp	60 amps

**Based on ~360 hp hybrid PMM vs. IM, 365-day runlife, 0.352 kg of CO2 /kWh*

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

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