



HPump variable speed drives

Optimizes system performance and production operations

Since its introduction in 1986, the **Electrospeed™ 3 variable speed drive (VSD)**, from Baker Hughes, a GE company (BHGE), has consistently set new performance standards. Innovations incorporated in the fifth generation Electrospeed 3 VSD provide a step change in pumping system control and reliability as well as the most dependable surface control systems in the industry.

The Electrospeed 3 includes several innovative software additions that protect the **HPump™ system** from power system interruptions; allow operators optimum start ups in hard start conditions such as heavy oil applications; and a programmable setpoint to allow gradual ramp up of production.

The graphic control system (GCS) provides a user friendly interface to program and launch software features. Plus, the GCS interface records, logs, and communicates data from the drive and any monitoring system to a laptop, SCADA, or satellite system. These state-of-the-art VSD capabilities provide operators the highest

level of HPump system control to optimize well and field performance.

The GCS Electrospeed 3 is available in both a NEMA 1 enclosure for controlled environments and a weatherproof NEMA 4 enclosure for outdoor installations and is certified in the US, Canada, and Europe.

With more than 50 years of engineering expertise in advanced applications, BHGE is the only HPump system provider that designs and manufactures its own line of variable speed drives specifically engineered for the harsh environments and challenging applications in the oil and gas industry. For seamless integration of the entire HPump production system, BHGE is your single point of contact.

The introduction of Electrospeed 3 variable speed drive technology, improved reliability, and reduced downtime in a field in Latin America. The customer began to change out the existing drives to Electrospeed VSDs while at the same time adding Electrospeed technology to additional applications. Over the course of almost two

Applications

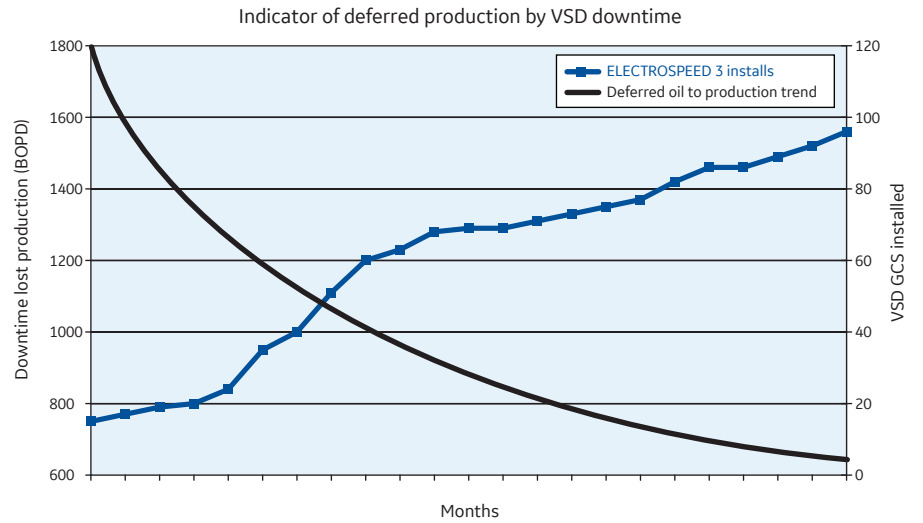
- Harsh environments
- Hard start conditions such as heavy oil

Benefits

- Deliver great starting characteristics in harsh downhole environments through MaxStart™ software
- Protect the HPump system from power system interruptions
- Allow gradual ramp up of production through a programmable setpoint
- Record, log, and communicate data from the drive and any monitoring system to a laptop, SCADA, or satellite system
- Increase pumping system run life by preventing over torque conditions on the equipment

years the number of Electrospeed drives in the field climbed from less than 20 to almost 100. With oil production of around 45,000 BOPD from applications with drives, deferred oil production due to downtime was reduced from 1,800 BOPD to 630 BOPD during this same time period. At \$50 USD per barrel, Electrospeed technology added over \$61,000 USD daily revenue and approximately \$22 million USD annually.

Contact your BHGE representative today or visit bhge.com/hpump to find out how variable speed drives from BHGE can help improve your HPump system's run life with patented software.



BHGE is the only company worldwide that manufactures variable speed drives specifically for ESP and HPump applications.

Specifications and comparison

Standard features	Electrospeed 3 SP	Electrospeed 3 XP
Anti-glare display	•	•
6 pulse	•	
12 pulse double switch	•	
24 pulse IEEE compliant GridSync™		•
115v. Aux	•	•
Run light and shutdown light	•	•
Data card	•	•
Heater (CE)	•	•
Manufactured options		
Chart ammeter	•	•
CE option	•	•
IP 20 shielding	•	•
FPWM™		•
Field installed options		
I/O modules	1-3	1-3
VSD system control upgrades		
Power ride through module	•	•
Programmable logic controller	•	•
WellLink™	•	•

bhge.com

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