



Keep your wells producing at peak performance for more streamlined, intelligent, and cost-effective operations

FusionPro intelligent production drive (IPD)

EMPOWER PRODUCTION WITH NEXT LEVEL INTELLIGENCE

The FusionPro™ intelligent production drive (IPD) is a new generation, smart, variable speed drive (VSD) and controller that digitally optimizes production in ESP systems and HPump™ systems, increasing uptime by up to 10%, while drastically reducing deferred production. Field visits can also be cut by up to 50% with remote connectivity through a connected network of digital production technologies.

Built for the toughest outdoor and electrical environments, the FusionPro IPD is the first in the industry to offer reliable universal permanent magnet motor (PMM) compatibility lowering power consumption and maintenance costs. Count on the FusionPro IPD to streamline your operations safely, reliably, and efficiently, no matter the conditions.

STREAMLINED

The FusionPro IPD digitally streamlines your production management through a fully remote VSD and controller for the ultimate in precise motor control – improving operations in conventional and unconventional wells where power, sand, and gas challenges exist.

Built-in software systems help to control gas interference, power issues, sand issues, and drawdown control, so you can do things like:

- Maximize flow rates with specialized ESP software to keep wells producing at peak levels
- Increase uptime and cut field visits in half with instant troubleshooting
- Monitor and control your ESP remotely, adjusting settings on-the-fly to keep operations smooth and avoid downtime
- Access real-time data logs and choke valve control to improve overall system responsiveness and uptime
- Minimize power disruptions during voltage surges or drops with extended Power Ride Through software, extending protection time up to 800 milliseconds – the widest range in the industry.

The FusionPro IPD optimizes production in both induction motors (IMs) and PMM ESPs interchangeably with the same drive. And, with one of the widest temperature ranges in the industry, its robust, outdoor-rated NEMA4 build endures extreme temperatures ranges from -40°C to 55°C, while the capability to run PMM ESPs at higher speeds eliminates the need for extra PMM kits or oversized downhole equipment.

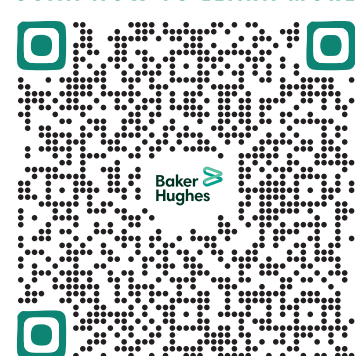
APPLICATIONS

- Conventional and unconventional wells
- ESP applications using induction motors (IM) or PMMs
- HPump surface pumping applications
- Onshore and offshore harsh environments
- Extreme temperature environments

BENEFITS

- Produce at peak rates with the lowest consumption of energy in the industry
- Optimize operations with advanced control features, robust hardware, and intelligent, remote troubleshooting to reduce field visits
- Universally operate with any ESP/PMM with no additional testing required
- Lower operating expenses through remote connectivity and PMM adoption
- Get secure, automated operations with digital, remote connectivity

SCAN NOW TO LEARN MORE



And, when you interface with the FusionPro Connect network, powered by the Leucipa™ solution, you can further optimize your wells through a secure connection to the drive's interface to operate and control the IPD remotely. This allows efficient optimization of well parameters and settings. Download data and update software from anywhere in the world, eliminating up to 50 percent of field visits to troubleshoot.

With the FusionPro Connect (optional) network, you can continuously collect and analyze ESP system and production data, allowing you to select the deployment of specialized Edge applications, artificial intelligence (AI), or machine learning algorithms designed for a wide spectrum of challenges. The connection is also universal to any digital platform for holistic field views while ensuring the highest level of cyber security in the industry.

SECURE REMOTE ACCESS

Experience safer, hassle-free operations with FusionPro IPD's remote and virtual capabilities, designed to eliminate traditional equipment challenges and risks.

With remote access, you can:

- Seamlessly connect to the drive's interface to operate and control the IPD remotely
- Update software and settings instantly to keep your system up-to-date and finely tuned from anywhere in the world
- Access real-time operational data to monitor downhole pressure, motor temperature, flow rates, power, voltage, and amperage for proactive adjustments
- Troubleshoot from anywhere, anytime to quickly address issues and restore production, minimizing downtime.

Reducing the need for physical site visits by up to one-third, the FusionPro IPD minimizes downtime, enhances safety, reduces HSE risks, and significantly reduces carbon footprint.

COST-EFFECTIVE

The FusionPro IPD transforms operational efficiency, boosting production flow and adapting to shifts in your well's production profile for maximum uptime. With smart-analytics, custom software, and remote operations,

the FusionPro IPD increases uptime by up to 10%, while cutting deferred production costs, so you can:

- Lower OPEX: Save on power, field personnel, and equipment repair costs
- Optimize CAPEX: Eliminate the need for Programmable Logic Controllers (PLCs) and extra hardware and software, including automated choke valves and chemical injection devices for further savings. Universal compatibility with PMMs also offers added savings.
- Reduce power constraints: When used with a PMM, the FusionPro IPD can cut power consumption costs by up to 20% compared to conventional setups, while easily integrating with your power grid and load.

Cost savings can also be realized through its rugged and fuseless design which extends the life of electronic components by reducing operating temperature, electrical surges impact and downtime. FusionPro also boasts the highest frequency range in the market, which means additional savings with a smaller pump.

FUTURE-READY

When you interface with FusionPro Connect, an edge network of digital production technologies powered by the Leucipa™ solution, you can further optimize your wells through a seamless autonomous connection to the drive's interface to operate and control the IPD remotely. This allows efficient optimization of well parameters and settings.

FusionPro technology is designed to provide long-term support to previous generations of Baker Hughes controllers—optimizing operating expenses without replacing legacy systems. Baker Hughes supports every VSD application, anywhere in the world, with our full engineering and field-service support.



FusionPro IPD software:

Gas control

- Breaks gas locked in pumps
- Prevents gas slugs during starts with HZ to PID on-the-fly
- Maintains wells operating at peak production with gas interference control
- Reduces gas interference with current control
- Adjusts wellhead pressure automatically with choke valve control

Power monitoring and control

- Offers reliable controls for any PMM
- Provides power ride through at up to 800 milliseconds
- Delivers real time output power consumption metering
- Automatically balances motor current
- Protects underload and overload with motor voltage optimization

Startup, pump, and reservoir control

- Detects and starts during back spin
- Breaks free stuck pumps
- Provides multi-ramp acceleration
- Ensures reliable operation with upthrust and downthrust protection and virtual flowrate

Easy to use

- User friendly interface
- Remote access from anywhere with FusionPro Connect control
- Smart device access through wifi
- Secure user management
- Over-the-air software updates
- Live trends
- VSD simulator
- Fuseless design

Integrated automation

- EDGE integration
- Extensive downhole sensor compatibility
- Custom logic development interface
- Comprehensive IO modules integration
- Startup sequence and BEP operation for effective HPump control

FUSIONPRO INTELLIGENT PRODUCTION DRIVE

Specifications	
Controller	FusionPro
KVA@480V	130-520KVA
Input Voltage	3800/480V +5%,-15%
Input frequency	50-60Hz ± 2Hz
Input Pulses	6 and 12 Pulse -130-520KVA 24 Pulse 325 to 520KVA
Output	ESP (6-step) SWF (sine wave filter)
Output frequency	0-140Hz ESP 0-200Hz SWF
Enclosure Rating	NEMA 4/4X
Temperature rating	-40°C to 55°C With heater 0 to 55°C
Induction Motor	ESP/Surface Motor
Permanent Magnet Motor	Universal ESP PMM Vector control
Power Ride Through time	Up to 800 milliseconds
Input Protection	Molded -Case Circuit Breakers
Surge Protection	Strikesorb®