

Power Distribution and Control Skids

APPLICATIONS

- Electric submersible pump and surface pumping installations

BENEFITS

- Fully integrated and self-contained electrical and instrumentation package
- Package designed for security of equipment and personnel

OPTIONAL FEATURES

- Fixed-speed or variable-speed surface power and control modules
- Arctic, desert, jungle, offshore, and onshore configurations
- Harmonic load and line filters
- Step-up or step-down transformer or both
- Phoenix downhole monitoring system integration
- Site communication equipment and integration
- Local or remote on-site package manufacturing

Power distribution and control skids are custom designed for land and offshore oil and gas facilities, including arctic, desert, and jungle environments. The modular packages are built as fully integrated systems, designed with security in mind for the personnel and the equipment. Standard packages are available as both variable-speed and fixed-speed surface power and control modules.

VARIABLE-SPEED DRIVE PACKAGES

Standard low-voltage variable speed drive (VSD) packages are available with three SpeedStar 2000 Plus* and SpeedStar SWD* (sine wave drive)

VSD ratings:

- 200–454 kVA at 480 V
- 518–815 kVA at 480 V
- 932–1,500 kVA at 480 V

Each package is equipped with a step-up transformer and a step-down transformer. Each package may also have a phase-shifting input transformer to complement the 12-pulse

VSD or an appropriate line filter to complement the VSD used. The VSD and the transformers, along with all other system components, are mounted together on a single skid base. Depending on the application, the package may incorporate an outdoor-rated enclosure that houses the VSDs, the line reactors, filters, and the associated controls and auxiliaries. The enclosure is completely sealed and climate controlled to maintain a constant temperature in a dust-free environment. Packaging options are available for Schlumberger VSDs and for VSDs from other manufacturers.

FIXED-SPEED DRIVE PACKAGES

Standard fixed-speed drive (FSD) packages are supplied with a FixStar* FSD switchboard that may incorporate a soft starter. The FSD package is available in five different voltage ratings: 5 kV, 3.9 kV, 3.3 kV, 1.5 kV, and 600 V. The 600-V switchboard has different current ratings of up to 270 A, while the other four FSDs have current ratings of up to 200 A.



A 518-kVA at 480 V VSD module for desert environments.



A 600-kVA at 480 V VSD module for desert environments.



A VSD skid module for the Africa Savanna.



A 518-kVA at 480 V VSD module for arctic environments.

Power Distribution and Control Skids

STRICT QUALITY CONTROL

Fit-for-purpose power distribution and control skids are engineered and designed at the Schlumberger Edmonton Product Center (EPC) in Alberta, Canada. Manufacturing and fabrication are conducted with a strict quality management system that ensures consistent quality products. All engineering and quality assurance testing is performed according to engineering specifications conducted under Schlumberger supervision. EPC, which is ISO 9001–2000 certified, provides the engineering services for commissioning, site testing, troubleshooting, and startup. EPC can also coordinate equipment package manufacturing locally or in a remote location to meet specific requirements.



An offshore 800-kVA at 480 V VSD module for the Gulf of Mexico.

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