- **Electrical & Instrumentation Packages**
- **Power Distribution / Power House**
- **E-House**
- **Drillers Cabin**
- **Drilling Instrumentation**
- **Drilling Control**
- **Simulator**
In collaboration with our partners, Jelec is capable of supplying complete packages for your rigs including:

- Low Voltage Switchgear
- Drilling Drives (VFD)
- Distribution Transformer
- Motor Control Centers
- Power Management
- Drilling Control for:
  - Drawworks
  - Top Drive
  - Mud Pumps
- Drilling Instrumentation
- Drillers cabin

Additional systems for:

**Land Rig**
- Power House & LER
- Fire & Gas Detection
- Telecommunication
- CCTV

**Jack-ups, Tender Rigs and Drilling Barges**
- Vessel management System (VMS) / Alarm Management System (AMS)
- Tank Gauging / Preload System
- Fire & Gas Detection
- Emergency Stop
- Telephone and PAGAs
- CCTV
- Bulk Monitoring
- Liquid Mud Monitoring
- Ballast Control

Jelec designers and engineers can deliver a complete set of drawings including Single Line Diagrams, Connections Diagrams, and Installation drawings.

Choosing Jelec for an Electrical, Control and Instrumentation package give our clients the opportunity to select the manufacturers of their choice for the drilling equipment, pipe handling and other specific equipment related to the drilling activities.
Jelec offers standard and custom design Power Control Equipment that fits any type of Jackup and Land rig. Jelec Power Control Room is fitted with a Power Management System. The combination of our Drilling Control System and Driller’s Cabin virtually eliminate problems associated with multi-source product Integration.

Engine-Generator Control System
Jelec Engine-Generator Control is a full digital microprocessor based controller. It includes generator system control, monitoring and protection.

DC Drives (SCR)
Jelec Power Control System uses Digital DC Drive.

AC Drives (VFD)
Jelec Power Control System uses AC Drives that are designed and manufactured to internationally recognized standards. The AC Drives are available in air-cooled and liquid-cooled models.

Motor Control Centers (MCC)
Jelec can incorporate any of the leading manufacturers of MCCs into our power control designs.

Power Management Systems
Based on digital diesel generator set control system, PLC technology, industrial network technology and HMI, Jelec Power management System optimizes the control of the generators, fuel efficiency and monitor all the Power Control room Parameters.

Power Control House
Jelec custom designs and manufactures industry standard Power Control House that will fit virtually any rig model.
E-House/LER

For E-House (Electrical House) and LER (Local Equipment Rooms) Jelec provides:

- Structural, Electrical & Instrumentation Engineering and Design
- Building Fabrication
- Supply, installation and connection of mains power distribution, lighting, emergency power, HVAC, fire & gas detection, telephone and PAGA, CCTV, Automation Panel, etc.,
- Pre-delivery testing
- Classification Society approval
Jelec Driller’s Control Cabin is custom made and is designed to optimize the available drill floor space. 3D modeling of the drill floor enables ideal positioning of the control chair, enhancing Safety and operational efficiency.

- Ergonomic Design
- Multi-Function Joystick Technology
- Redundant HMI screens for rig operations and instrumentation
Drilling Instrumentation

A fully customizable Drilling Instrumentation

Jelec Drilling Instrumentation Display (DID) is an innovative drilling instrumentation system that is fully customizable and can be adapted to your specific needs. Customization includes analog or digital readouts, colors, scales, gauges sizes and custom screens to accommodate your preferences for a more efficient, systematic and reliable monitoring of key drilling parameters.

All data are stored locally with an efficient data access and trending capabilities, including export functions.
Drilling Control

This advanced Drilling Control System combines management, monitoring, and control of all drilling equipment, with fiber optic provided via interconnected interface panels strategically located throughout the rig. All functions are managed via the Digital Drilling Control’s driller workstation chair and console, which include your choice of the latest touchscreen interface Terminals and joystick control.

The integration of Jelec PLC Software and well site data gathering system allows the driller full operational control and local diagnostic capability from the driller’s control chair. The state-of-the-art software package is designed to optimize efficiency and safety while enhancing equipment life.
Jelec BOP Control Panel (BCP) is designed around a PLC and touch screen that allows remote control of the BOP from the different locations via serial cable or wireless communication. The BOP Control Panel can also be integrated with other control systems. The System Configuration Screen allows users to set HI/LO Alarms, Stack Configuration (each level of the BOP stack is fully configurable between Drilling Spool, Rams, Rams with Booster, and Choke and Kill Valves), Motor Run Alarm and Travel Timer. The System Configuration and Programming comply to API 16D and all recommended practices.

Jelec Choke / Manifold Control System (CMC) can be a stand alone or part of an entire integrated drilling rig control system. The system is designed to operate any number of valves from the driller’s console. The system will display the exact position of the valves, stand pipe & mud pump and casing pressure as well as the mud pump strokes with totalizer.
The transition from a traditional drawworks hand-brake to the Drilling Cyber Chair or purchasing a new Drilling Control system introduce new functionalities that a driller must adapt to. For each installation, Jelec can provide customized training with our Simulator.

The Simulator will use the same Drilling Cyber Chair and Instrumentation that the rig will use. The rig floor will be rendered in a 3D model including all of your drilling equipment and tools. Now you can learn everything you need about your new system and practice drilling operations from the safety of our Simulator.