

ekabel®

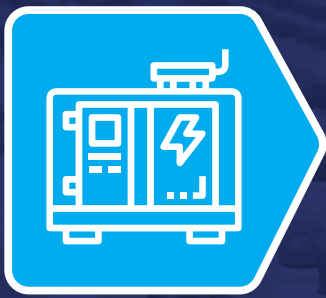
# Oil & Gas Solutions





# Oil & Gas Solutions

Reliable energy for  
demanding applications



# GENSETS

E'kabel's generator sets cover all fuel technologies required in the market, between 10 to 3000kVA, single-phase or three-phase connection and voltage range as required by the customer

## 1 Custom-Made Standby Generators

- ✓ Diesel, bio-diesel, natural gas or LPG.
- ✓ Well-known and reliable Tier 1 engines
- ✓ Ratings up to 3000kW Prime standalone (up to 32 units in parallel).
- ✓ Single or Three phases output, with voltages up to 13800V.
- ✓ EPA Tier 4 final • DNV 2.7-1 & C5-M offshore coating • Fire suppression system (SIL certified upon request).

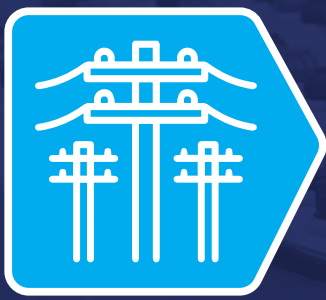
## 2 Mobile Generators

- ✓ Fully integrated units ready to be deployed.
- ✓ Ratings up to 450kW.
- ✓ Parallel/Load Share-Ready.
- ✓ Variable pitch fan to auto adjust for cooling and heating needs.
- ✓ 1500-hour service Interval option available.
- ✓ Engine protection (knock sensing on each cylinder) for gaseous solution.

## 3 Hybrid-Diesel-PV-ESS Solutions

- ✓ NEMA 4X Enclosures.





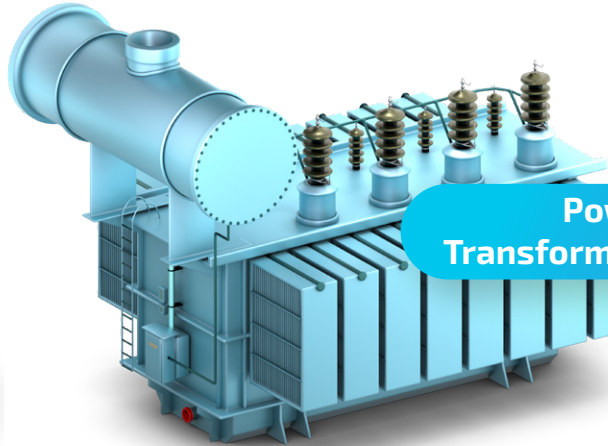
# TRANSFORMERS

**Cast Resin Dry Transformers**



Cast resin transformers have a nominal power of up to 15MVA and 36kV, being durable and safe equipment characterized by their flexibility and cost-saving benefit.

**Power Transformers**

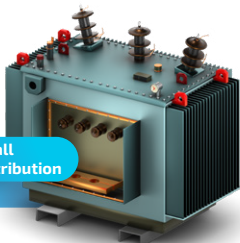


Power Transformers have a nominal power of up to 750MVA and 500kV and comply with the highest technical specifications as well as national and international standards as IEC, IEEE/ANSI, NEMA, BS & AS.

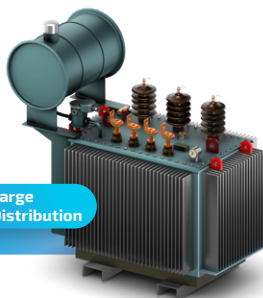
## Oil Distribution Transformers

The oil-filled transformer is a voltage transformation device that uses an oil cooling technique to minimize transformer temperature. It is placed in a welded steel oil tank filled with insulating oil. Ekabel's transformers are built up to 15MVA and 36kV. We offer Small, Large, and Medium distribution as well as special transformers.

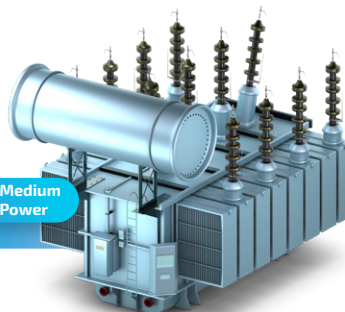
**Small Distribution**



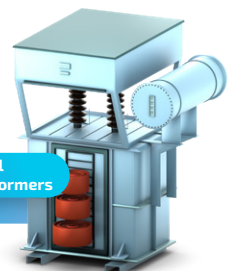
**Large Distribution**

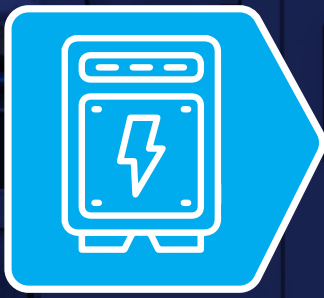


**Medium Power**



**Special Transformers**





# UPS

Oil and Gas facilities demand state-of-art energy storage to backup their critical process. Therefore, Ekabel recommends its battery series built considering a rugged design, high temperature tolerance, top quality and long lifespan features.



## Applications

- ✓ Oil and Gas (Petrochemicals, Offshore, FPSO, Onshore, LNG plants, Pipelines etc.).
- ✓ Energy and Electricity (Power Generation, Transmission, Distribution).
- ✓ Water (Desalination, Treatment, Pipeline).
- ✓ Instrumentation and Process Control (Chemical, Mining, Steel, Pulp and Paper).
- ✓ All high-end industrial applications.

## Features

- ✓ Continuous operation at room temperatures up to 40°C (55°C upon request).
- ✓ Self-performed battery test.
- ✓ Designed to withstand harsh environmental conditions (up to IP54).
- ✓ Complying to the most stringent industrial classification (IEC 62040-3, UL1778, CSA).
- ✓ Compatible with RS232/RS485, Profibus, TCP/IP interface.
- ✓ Market leading electrical features.



# BATT CHARGERS



## Features

- ✓ Design life up to 30 years.
- ✓ Rugged technology.
- ✓ Capacities starting at 15A up to 2000A.
- ✓ Enclosures up to IP54.
- ✓ Output voltage from 12Vdc up to 240Vdc
- ✓ 12 programmable alarms / indications.
- ✓ Compatible with Modbus RS232/RS485, Modbus TCP/IP interface.



# BATTERIES

Oil and Gas facilities demand state-of-art energy storage to backup their critical process. Therefore, Ekabel recommends its battery series built considering a robust design, high temperature tolerance, flame retardant, top quality and long lifespan features.



## Nickel Cadmium

### Main features:

- ✓ Reliable at rooms with temperatures up to 45°C.
- ✓ Capacities up to 1690Ah in a single cell.
- ✓ High cycling capabilities (up to 7500 cycles).
- ✓ Flame arresting vent.
- ✓ Lifespan 20 years plus.
- ✓ At the end of its life period, we support its recycling process.

## OPzV

### Main features:

- ✓ Capacities up to 3000Ah in a single cell.
- ✓ High cycling capabilities (up to 7500 cycles).
- ✓ Flame retardant. container UL 94 V0.
- ✓ Lifespan 20 years.

## Litium

### Main features:

- ✓ Energy Storage to MWh range.
- ✓ Higher energy density among all technologies.
- ✓ High cycling capacity.
- ✓ Reliable in rooms with temperatures above 30°C.



# Innovation Technologies EKAFIABLE

## WHAT IS IT?

It is a fire resistant cable (CIC) that thanks to its Insulation ceramic technology maintains the integrity of vital circuits in high fire risk environments.

## HOW DOES IT WORK?

In contact with fire, the cable is transformed into ceramic, thereby protecting the safety of personnel and assets.

## BENEFITS

- ✓ High performance in fire conditions.
- ✓ Maintains connection of instruments, motor operated valves (MOV).
- ✓ Specially designed for the oil industry.



## Our Ekafiabile solution

This cable is suitable for use in applications where the integrity of the circuit is vital for the safety of personnel and assets. This cable offers high performance capabilities in fire conditions, along with the benefits and features associated with designs under NEC type TC-ER (exposed tray cable).

SERIE ZS - Ekafiabile



SERIE ZF - Ekafiabile



SERIE ZP - Ekafiabile



SERIE ZH-X - Ekafiabile



### TESTING FOR ELECTRICAL CABLES IN FIRE CONDITIONS - INTEGRITY OF THE CIRCUIT

	IEC 60331 750°C / 1380° F. 90 min.	IEC 60331 1093°C / 2000° F. 90 min.	Modified 3rd party test 1093°C / 2000° F. 3Hrs.	UL 1709 1093°C / 2000° F. 60 min.
Ekafiabile	✓			
Ekafiabile TC	✓		✓	
Ekafiabile MC	✓		✓	
Ekafiabile HP (UL1709)	✓		✓	✓





# Innovation Technologies **FOST**

## **FIBER OPTIC SENSING TECHNOLOGY**

Optical fiber is widely known for its telecommunications applications, but there are other uses. The light beam of the fiber optic is very sensitive and can be altered by molecules stimulated by external changes (such as temperature, vibration and sounds). Once the wavelength of the light is affected our technology can analyze and pinpoint the signal deviation to translate it into a precise alert indicator, even over large distances.



### **Leak detection**

Temperature changes together with acoustic anomalies can detect small leaks in a pipeline.



### **Third party interference**

Accidental or intentional third-party activities can be detected, for example, by digging near the pipeline.



### **Monitoring of the heat trace**

Changes in temperature can be detected as a result of a leak of gas or liquid, such as the escape of sulfur in a pipeline or LNG Tanks.



# GLOBAL PRESENCE





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