

## INTRODUCTION

Founded in 1972 in Lebanon, Sakr Power Group is a group of companies specialized in Power Generation, with a scope of services covering the design manufacturing, sales and rental of Power Generating Sets and the implementation of Turnkey Power Projects. Being ISO 9001 certified, our innovative products, services and solutions are designed and built to meet international quality standards and specifications. Our customers, partners and employees can rely on us for meeting their requirements in a timely manner and ensuring their comfort and peace of mind at all times.

Sakr Power Group represents many of the world's leading brand names in power generation: Mitsubishi, MBH, Cummins<sup>®</sup>, Lister Petter, etc... Our companies are among the most reputed solution providers in their segments, with presence across the Middle East, Africa, Europe and Russia and plans to expand further worldwide in the near future.

Delivering fast and efficient service is one of our top priorities. We provide maintenance contracts based on customers' needs as well as a predictive service to ensure minimum downtime and to minimize the cost of repairs. The warranty we offer goes up to 2yrs/2000hrs of operation.

Our branches offer 24/7\* service, provided by an expert team of engineers and technicians who take pride in ensuring that our customers receive the service and back-up support that they expect.

\*In case of emergency, depending on the location and type of repair.

## **DESIGN** EXCEEDING CUSTOMERS' EXPECTATIONS

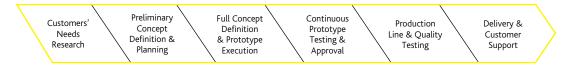
Our engineering department consists of a fully dedicated team of mechanical and electrical engineers with advanced expertise in developing complete product solutions, using the latest software and hardware to guarantee the reliability of our products in the most difficult applications.

Committing to international safety standards, our design department ensures that we not only meet the exact demands of our customers, but we also exceed them through our fully developed & certified products.

#### **NPI Process**

- Research is conducted on customers' developing needs and preferences for new trends, and an analysis is conducted on how best we can cater to those needs.
- A preliminary concept is defined for the purpose of planning for the new product introduction project.
- A full concept is defined after the preliminary concept approval, and a product prototype is implemented.
- The prototype is continuously tested until it reaches the final required operational standards.
- After the prototype is tested and approved, a final product is developed in the production line.
- Quality testing is performed on the final product to determine whether it meets the established quality standards.
- The final product is delivered to the customer, and support/ maintenance is provided upon need.

#### New Product Introduction Process





## PRODUCTION A COMMITMENT TO EXCELLENCE

Our current HALAT production facility is located in Lebanon with a total of 60,000 sqm, including manufacturing space of 20,000 sqm.

Our production is supervised by a highly specialized team, and our facilities are equipped with state-of-the-art computerized machinery programmed to deliver the high quality components needed for all our power generation and distribution systems. Another production facility to support our worldwide market is located in Nigeria on an acquired land area of 65,000 sqm, of which 20,000 sqm are dedicated to manufacturing.

In-house manufacture of components such as base frames, enclosures, panels, fuel tanks and switchgears ensures we have total control over quality and delivery.

The use of the latest powder painting equipment guarantees as well that the finished product is something that both we and our clients can be proud of.



## QUALITY CONTROL DURABILITY AND RELIABILITY OF PRODUCTS AND SERVICES

Sakr Power Group is committed to continuous quality improvements, delivering the best possible standards of products and services.

In order to provide our clients with unquestionably reliable products, all our product processes are ISO 9001-2008 certified and meet the highest quality and safety criteria essential to power generation. This also guarantees on-time delivery of products and services to our clients.

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All our generating sets comply with ISO 3046 and ISO 8528 standards.

### **Testing Facilities**

Our facilities are designed in a flexible and efficient manner for testing a wide range of products. All our prototypes are subject to intensive testing under different parameters to ensure their reliability before they reach the customer.



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## QUALITY SERVICE FROM EXPERIENCED TECHNICIANS

Our mission is to satisfy our customers by providing professional, pro-active and timely service throughout our product range.



Our expert team of engineers and skilled technicians ensures rapid and trouble-free on-site maintenance. Our packages include installation and commissioning of the generating sets, offering our clients the most reliable and timely service.

To ensure customers obtain the maximum benefit from our products, our qualified personnel provide training programs for our clients. Our premises are equipped with up-to-date technology to improve the training environment.

#### Spare parts

In order to provide adequate assistance to our customers, we have set up a stock of spare parts in Lebanon and in all our branches to serve all markets. We stock an extensive quantity of consumables and maintenance parts, thus ensuring reliable and efficient performance to our clients at all times.

#### We provide

- Service hotline
- Competent first point of contact personnel
- Fast response time
- Qualified service support personnel
- Quick on-site service
- Available spare parts
- Express spare part delivery service
- Maintenance contracts
- Oil sampling for trend analysis





PRODUCT LINE INTERNATIONALLY RENOWNED SUPPLIERS

Sakr Power Generation offers standard and customized diesel-powered generator sets suitable for standby/emergency power, prime power or continuous applications.



### Diesel Generating Sets

We strive to satisfy all your power needs while ensuring:

- Customized solutions where needed
- Trustworthy performance
- Reliability and Durability
- High efficiency
- Consistent delivery terms
- After-sales services

Our diesel-powered generating sets are available in sizes ranging from:

- 7 to 3125 kVA High Speed
- 1900 to 5300 kVA Medium Speed

Our generating sets are manufactured to run on either 50 or 60 Hz frequency, thus meeting the demands of different markets. They are powered by renowned international diesel engine brands such as: Lister Petter, Cummins<sup>®</sup>, Mitsubishi, MBH and GE.





## **ENCLOSURES**

HIGH STANDARDS OF RELIABILITY AND DURABILITY.

Our soundproof solutions, canopies and containers are designed to meet noise requirement levels of a minimum of 80 dBA at 1 meter and a maximum of 65 dBA at 1 meter.

We also offer customized canopies and containers solutions to meet the requirements of our different customers.

Our enclosures are characterized by:

- Modular design
- Robust construction
- High quality painting
- Convenient handling for transportation
- Easy accessibility
- Safety & security highlight
- Superior sound attenuation





## POWER PLANT SOLUTIONS FROM 5 TO 100 MW

Sakr Power Projects is a strategic Company within Sakr Power Group, totally focused on Engineering & Construction of Power Plants. We execute Power Generation Projects from the supply of a single unit to complex multifunctional power plants. Our Projects could vary from a simple equipment supply to a complete turnkey delivery on EPC basis, in addition to Operation and Maintenance services, based on the customer's requirements. Our product portfolio consists of Power Plants operating on Diesel (LFO), Gas, Heavy Fuel Oil (HFO), Dual Fuel (LFO/GAS), and Bio Fuel.



#### Vision

To be recognized in MEAG as one of the main Power Plants Contractors offering Turnkey Projects, BOT, BOO & Rental.

#### Mission

To provide high quality & efficient Power Plant Solution meeting Customers' requirements and expectations while challenging the market with reciprocating Engines for any type of Fuel and Application.

### Sakr Power Projects Strategy is to offer high business value solutions to its clients

This is achieved based on our capabilities, our application expertise, and a wide range of solutions for typical end-users or customized for special applications and uses.





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## Some of our References:

Country	Project Name	Client Name	Year	Capacity	Fuel
Iraq	Hurriah Plant Phase 1 (PP1)	MOE	2008	62MW	HFO
Algeria	Amimer Energie Groupes Electrogenes	GE Transportation	2008	22.4MW	Diesel
Iraq	Al Ramad Power Station	Al Bareh	2008	12MW	Diesel
Nigeria	Nestle gas power plant	Negris	2008	3MW	Gas
South Africa	Debeers- Venetia mine	Sheltam Grindrod	2008	11.2MW	Diesel
South Africa	Nestle 7.5MW	Lubri-Tech Marketing	2008	7.5MW	Diesel
Sudan	Atbarah - Shamal Cement	MGI	2008	6MW	Diesel
lvory Coast	Moulin Moderne de Cote d'Ivoire	MMCI	2009	4MW	Diesel
Nigeria	Palm Spring Estate	Artee Industries	2009	2MW	Diesel
Nigeria	Alaoji, Egbema, Gbarain, Omoku Power Plants	Rockson Engineering	2009	22.4MW	Diesel
UAE	Banyan Tree - Rakeen	AAA contracting	2009	8MW	Diesel
Kurdistan	Sulaimaniah Power Plant - Black Start	MGI *	2010	5.3MW	Diesel
Kurdistan	Dhook Power Plant - Black Start	MGI *	2010	5.3MW	Diesel
Iraq	Quds Power Plant - Black Start/Emergency Diesel	Hyundai E&C	2011	5.2MW	Diesel
Iraq	Hilla Power Plant - Black Start/Emergency Diesel	IFC **	2011	4MW	Diesel
Iraq	Karbala Power Plant - Black Start/Emergency Diesel	IFC **	2011	4MW	Diesel
Iraq	Hurriah Plant Phase 2 (PP2)	MOE	2012	22MW	HFO
Iraq	Akaz Power Plant - Black Start/Emergency Diesel	Lanco	2012	6.9MW	Diesel
Iraq	Khairat Power Plant - Black Start	Calik Enerji	2012	4MW	Diesel
Iraq	Nainawa Power Plant - Black Start	Calik Enerji	2012	4MW	Diesel
Nigeria	Leoplast Gas LP1	Leoplast	2012	2.6MW	Gas
Iraq	Shat Al Basra 10XGT 9E Open Cycle Power Plant	Metka	2012	13.3MW	Diesel
Iraq	Najybia Power Plant- Black Start/Emergency Diesel	Enka Teknik	2013	5.5MW	Diesel
Kurdistan	Erbil CCPP - Emergency Diesel	Enka	2013	2.6MW	Diesel
Iraq	Fao Depot - Black Start Diesel	Penspen International	2013	5.6MW	Diesel
Iraq	Diwaniya - Black Start/Emergency Diesel	El Sewedy Electric	2013	5.6MW	Diesel
Kurdistan	Sulaimaniyah CCPP - Emergency Diesel	Enka	2014	2.6MW	Diesel
Kurdistan	Dhook CCPP - Emergency Diesel	Enka	2014	2.6MW	Diesel
		*MGI(Mass Global Investment) **IFC (International Free Co.)			





Sakr Power Rental is one of the active players in the power generation rental scene in the region. We offer turnkey rental solutions through an extensive range of Diesel powered generator sets with power output from 50 to 2000 kVA.

Led by a highly skilled team of technicians, application engineers and project managers, Sakr power rental meets your energy needs from:

- Assessment
- Design
- Execution
- Operation and maintenance with 24 hours supervision
- Diesel Generating sets with output from 50 to 2000 KVA
- Set-ups with minor customization to multi-set megawatt installations



## **COMPLETE PRODUCT LINE**

Our wide range of pre-integrated, sound-attenuated, skid mounted and containerized Rental systems include:

- Generators
- Load Banks
- Automatic transfer switches
- Switchgear equipment
- Fuel tanks
- Transformers
- Distribution panels
- Power cables

## WORLWIDE PRESENCE

Dubai (Headquarters in Jebel Ali free zone), Iraq, Lebanon, KSA, Qatar, Nigeria, Egypt and Sudan.





## REFERENCES

- West Qorna 2, Iraq 44 MW Temporary Power, 12- month Project, 2013, 2014
- West Qorna 2, Iraq 66MVA Load Bank Rental for Gas Turbine Commissioning two Months Project, 2014
- Les Jeux de La Francophonie- 2009- Lebanon
- Byblos Festival- 2010, 2011 and 2013 Lebanon
- Shakira- 2011- Lebanon
- MTV Murex D'Or- 2010, 2011 and 2012- Lebanon
- Development & Investment Company, Abu Dhabi, U.A.E.
- Wadi al Dawather Saudi Electric Company, West, Wadi, KSA
- Holcim Chekka- Lebanon
- Water Utility (Beirut, Mount Lebanon) Lebanon
- American University of Beirut AUB 2013
- Beiteddine Festival: 2012, 2013
- Batroun International Festival- 2010, 2011, 2012 and 2013- Lebanon
- Bismayah New City Project 2012 Iraq

In addition to the above references, we are able to provide energy supply for TV productions, industrial facilities, hotels, governmental and touristic venues. Sakr Power Rental also provides round the clock operation and maintenance for above projects.



# OTHER PRODUCTS

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#### LV Panel Boards

Sakr Power Group provides the highest quality of LV Panel Boards covering a wide range of applications up to 6300 Amps in 3 or 4 pole systems according to international standards ISO 9001, BS, IEC, NEMA, etc.

#### We provide:

- Automatic and/or manual transfer switches 3- or 4-pole
- · Synchronizing panels with or without Grid
- Double change-over switches
- Totalizing & Distribution panels



#### **4V Switchgears**

Sakr Power Group assembles a wide range of Medium Voltage Switchgears, up to a rated voltage of 24 kV, and rated current up to 1250 Amps.

Air insulated bus bars with air load break switches or SF6 circuit breakers (fixed or withdrawable) are available.



#### **Ground Power Units – GPUs**

Sakr Power Group Ground Power Units (GPU) provide on ground electrical aircraft power. They are used to supply a parked aircraft with electric power at 400 Hz.



# SUPPLY PARTNERS

Diesel	Authorized Distributor can also be powered by Cummins® engine
HFO	Authorized Distributor
Vegetable Oil	Authorized Distributor
Alternator	ALTERNATORS
Controller	-power in control Authorized Distributor

Cummins® is a registered trademark or trademark of Cummins Inc and/or its related companies

\* Distributorship of GE Transportation engines in Lebanon and Iraq

\*\*\* In Lebanon

Disclaimer: Sakr Power Group reserves the right to modify its product line or any of its specifications without prior notice.

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