

Off Grid Battery energy storage solutions

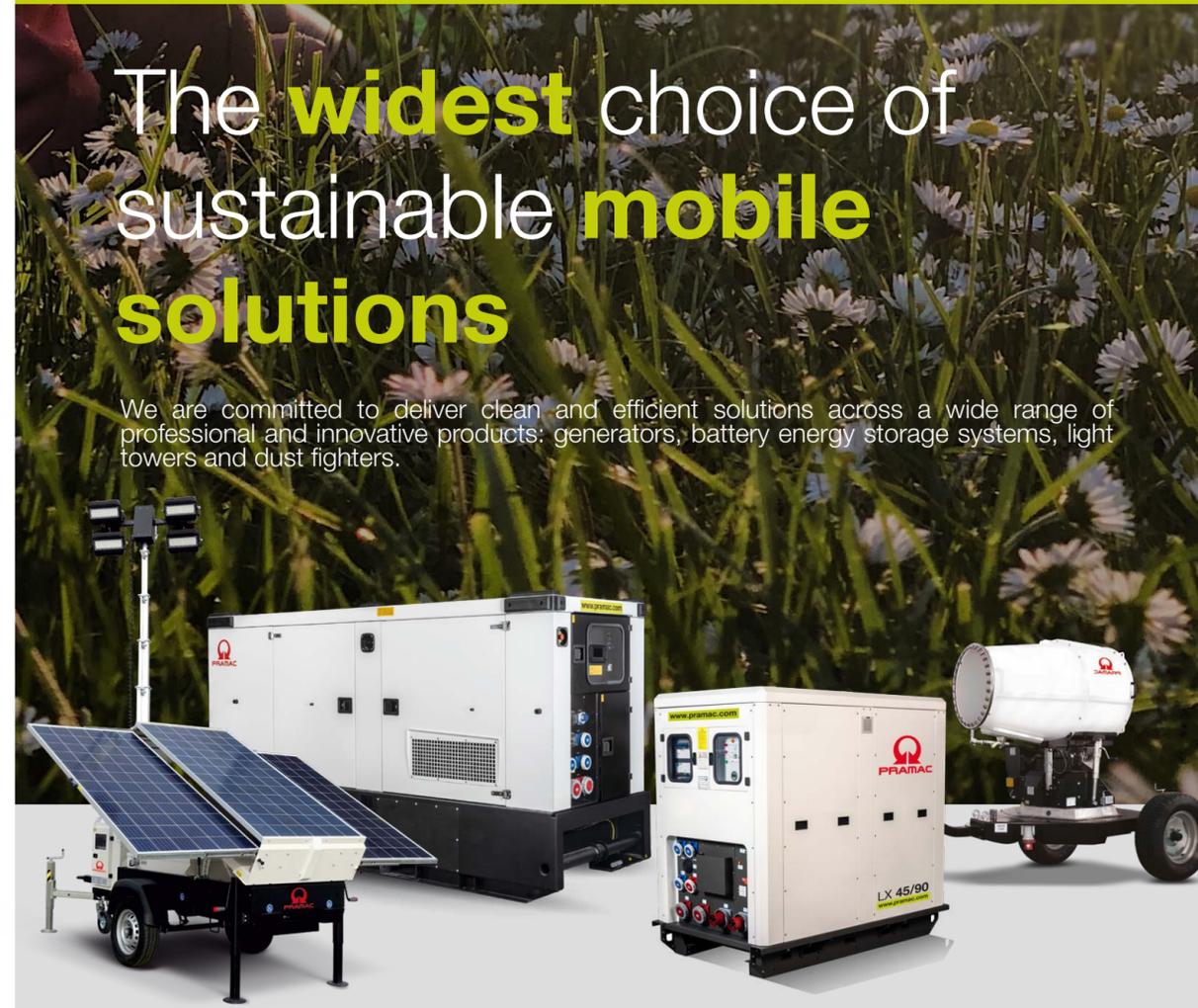
Today's energy grid is facing an unprecedented set of **challenges**: a need to **transition** away from fossil fuels towards renewable energy sources, spiking demand due to the **increased electrification** of electric vehicles, homes and consequently **infrastructure instability**.

With its broad suite of products, Pramac can support this energy transition, offering a dedicated range of battery energy storage solutions to reduce fuel consumption and CO2 emissions.

HOW IT WORKS

The Off Grid range is a battery energy storage system that allows the **storage of energy from multiple sources**: generator, solar or the grid. **Energy can be redistributed**, at a later time, to a site that needs power. When one of our battery energy storage systems is deployed onto the site it is possible **to have a clean, green solution** that can power the site during those periods of low energy demand, such as overnight or during the weekend. This allows customers to utilise **reliable, green, clean energy** in almost any application.

Key benefits



The **widest** choice of sustainable **mobile solutions**

We are committed to deliver clean and efficient solutions across a wide range of professional and innovative products: generators, battery energy storage systems, light towers and dust fighters.

Distributed by

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ENERGY STORAGE

BATTERY STORAGE UNITS



SX PLUS Series

KEY FEATURES:

- Li-Ion and AGM battery
- Automatic generator start/stop
- Low noise and emissions
- Plug and play
- Maintenance free
- Stackable (up to 2 units)



TECHNICAL DATA	SX PLUS 5/25	SX PLUS 10/25 LI
Output power (Continuous)	5 kVA	10 kVA
Output power peak (5s)	10 kW	20 kW
Voltage	230 V	230 V
Frequency	50 Hz	50 Hz
Phases	1	1
Battery Energy Storage Solutions	AGM	Li-Ion LMN
Battery Nominal capacity (sizes)	25 kWh	25 kWh
Usable energy AC side (@80% DoD)	20 kWh	20 kWh
Length x Width x Height (mm)	1096x1066x1185	1096x1066x1185
Weight max (kg)	850	560
Protection rating (IP)	44	44
Operating temperature range (°C)	-20/+45	-10/+45

MX Series

KEY FEATURES:

- Deep cycle automotive NMC battery (Li-Ion models)
- Advanced EMS with touch screen control
- GSM Remote monitoring
- Full system DC isolator with pre-charge
- Auto Full system bypass
- Single to three phase conversion
- Solar PV charge controller MPPT (optional)
- EV Charge point (optional)
- Custom input / output sockets



TECHNICAL DATA	MX 10/40	MX 15/37 LI	MX 20/37 LI	MX 30/50 LI	MX 30/75 LI
Output power (Continuous)	10 kVA	15 kVA	20 kVA	30 kVA	30 kVA
Output power peak (5s)	15 kW	30 kW	40 kW	60 kW	60 kW
Voltage	230 V	400/230 V	230 V	400/230 V	400/230 V
Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Phases	1	3	1	3	3
Battery Energy Storage Solutions	Gel lead acid OPzV-S	Li-Ion NMC	Li-Ion NMC	Li-Ion NMC	Li-Ion NMC
Battery design life to 80% DoD	2000 cycles	3000 cycles	3000 cycles	3000 cycles	3000 cycles
Battery Nominal capacity (sized)	40 kWh	37.5 kWh	37.5 kWh	50 kWh	75 kWh
Usable energy AC side (@80% DoD)	32 kWh	30 kWh	30 kWh	40 kWh	60 kWh
Length x Width x Height (mm)	1600x1020x1708	1600x1020x1708	1600x1020x1708	1600x1020x1708	1600x1020x1708
Weight max (kg)	1930	850	850	980	1150
Protection rating (IP)	34	34	34	34	34
Operating temperature range (°C)	-20/+45	-10/+45	-10/+45	-10/+45	-10/+45

LX Series

KEY FEATURES:

- Deep cycle automotive NMC battery (Li-Ion models)
- Advanced EMS with touch screen control
- GSM Remote monitoring
- Full system DC isolator with pre-charge
- Auto Full system bypass
- Single to three phase conversion
- Solar PV charge controller MPPT (optional)
- EV Charge point (optional)
- Custom input / output sockets



TECHNICAL DATA	LX 20/60	LX 30/60	LX 45/75 LI	LX 45/90	LX 45/125 LI	LX 60/125 LI
Output power (Continuous)	20 kVA	30 kVA	45 kVA	45 kVA	45 kVA	60 kVA
Output power peak (5s)	40 kW	60 kW	90 kW	90 kW	90 kW	120 kW
Voltage	230 V	400/230 V	400/230 V	400/230 V	400/230 V	400/230 V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Phases	1	3	3	3	3	3
Battery Energy Storage Solutions	Gel lead acid OPzV-S	Gel lead acid OPzV-S	Li-Ion NMC	Gel lead acid OPzV-S	Li-Ion NMC	Li-Ion NMC
Battery design life to 80% DoD	2000 cycles	2000 cycles	3000 cycles	2000 cycles	3000 cycles	3000 cycles
Battery Nominal capacity (sizes)	60 kWh	60 kWh	75 kWh	90 kWh	125 kWh	125 kWh
Usable energy AC side (@80% DoD)	48 kWh	48 kWh	60 kWh	72 kWh	100 kWh	100 kWh
Length x Width x Height (mm)	2012x1183x2012	2012x1183x2012	2012x1183x2012	2012x1183x2012	2012x1183x2012	2243x1183x2012
Weight max (kg)	2994	3039	1630	3995	1970	2024
Protection rating (IP)	34	34	34	34	34	34
Operating temperature range (°C)	-20/+45	-20/+45	-10/+45	-20/+45	-10/+45	-10/+45

Battery technology

Off Grid models are available with lead acid and lithium ion batteries:

- lead acid is a proven technology that is tried, tested and cost less.
- lithium ion is a modern and premium technology.

	LEAD ACID BATTERIES	LITHIUM ION BATTERIES
COST	Cost effective solution. Immediately available in large quantities	With higher initial costs at first glance appear to be less cost effective but due to a greater lifecycle, their lifetime value could equalise, if batteries are appropriately cared
CAPACITY & WEIGHT	Energy density of 50+Wh/l	Energy density of 125+Wh/l. These batteries can pack more energy into a smaller place. This units weighing in at half of their equivalent lead acid unit
LIFESPAN*	Expectation to last for 2000-3000 cycles	Expectation to last for over 3000 cycles, as used as directed
CHARGING TIME **	Generally have a lower rate of charge	Generally able to accept a higher rate of charge
HOT & COLD ENVIRONMENTS	Accept a charge at low temperature	Perform better at higher temperatures and cannot be charged below freezing point

*A lifespan of a battery in "cycles" if you discharge a battery and then recharge it then this is one cycle
 **Charging time may change depending on the size of the batteries and on the amount of energy used to charge

The series of the Off Grid range can be used into two configurations:

Stand alone solution

Ideal way to meet needs of low noise environments like night operations, remote telecom applications, or to resolve low load challenges

Hybrid solution

This technology is compatible with any diesel genset. In any demanding application like events and construction sites, where low loads or peaks can be a problem for the generator, the hybrid solution is ideal to improve the overall performances of the site



How it works 24h on site with a generator

Hybrid power systems manage the operation of diesel generators: when power demand is low the generator turns off, when the battery runs low or power demand increases the generator is turned on. The result is less running hours, more efficient consumption of fuel, less emissions, less maintenance.

