

Let's power your business

Pon Energy Rental

Sustainable Rental Solutions



pon
ENERGY RENTAL

CAT[®]

Battery

Our batteries can be used in both onshore and offshore solutions, and on-grid and off-grid solutions, as they can convert both frequency and voltage. They can be used standalone or in a hybrid configuration together with a generator, solar or wind application. They are ideal for microgrid applications.

They are also suitable for peak shaving, as they can charge at night when grid demand is low and use the stored electricity when power demand is high.

The units are equipped with DEIF ASC-4 battery controllers, a customized PLC and large HMI touchscreens for easy operation of the units.

Use them to power your construction site, event, excavator, or to power your industrial process.



Model		BQ-S 400
Nominal energy	kWh	442
Available	kWh	350
Voltage/Hertz	V/Hz	208 - 690, 50/60
Sound level @ 1m distance (low-high)	dBA	63 - 80
Dimensions [LxWxH]	mm	3163 x 2438 x 2896
Weight	kg	8500
IP class	-	56



ENERGY

STORAGE



Mobile fast charger

Our new mobile charging stations are specifically designed to optimize charging solutions in the industrial sector. Our mobile EV chargers are a groundbreaking solution that combines mobility, fast charging and intelligent features, making them an essential asset for any industrial facility with a total power output of 360kW.

Designed to meet the needs of industrial environments, our mobile charging stations are equipped with durable and robust industrial-grade components. Whether in production facilities, warehouses, distribution centers or construction sites, our chargers ensure seamless integration into your operational setup and provide a hassle-free charging experience.

We know how important time efficiency is in industrial operations, which is why our mobile EV chargers are equipped with advanced technology for fast charging. With this charging station, you can charge 2 devices simultaneously for a more efficient workday.

Don't let an outdated charging infrastructure stand in the way of sustainable development- harness the energy of our mobile fast chargers and take your industry into an environmentally friendly future.



Model		CQ-XS 360
Connection	-	380-440VAC, 50/60Hz, 3P+N+PE
Output connection - CCS2	-	1x360kW or 2x180kW
Output voltage	-	150 - 1000 Vdc
Cable length CCS2	m	5
Cooling concept	-	Air cooled
Ambient conditions	°C	-25 to +45
Dimensions [LxWxH]	mm	2200 x 1600 x 2260 mm
IP degree	-	IP 56
Weight	kg	<1000

Road tow fast charger

Our innovative trailer-mounted fast charger is designed to provide efficient, convenient and reliable charging solutions for your fleet, wherever it needs a boost.

With our trailer-mounted fast charger, mobility and versatility are key features. This mobile charging unit can be easily transported to any location, so your EVs or machines never run out of power, even in remote areas or during construction projects. No need to worry about the availability of charging infrastructure- it can be charged at any charging station around the country.

The embedded battery supports multiple charging standards, including fast charging, so your vehicles or machines charge at the highest possible speed. Experience reduced downtime and maximize your fleet’s productivity with fast replenishment of power when you need it.



Model		CQ-S RT
Nominal energy	kWh	229
Available energy	kWh	200
Connection - CEE	VAC/Hz/A	400/50/125
Connection - AC	-	AC-Type 2
Connection - DC	-	CCS - Type 2
Cable length	m	6
IP class	-	54
Weight	kg	3000

Stage V generators

Our Stage V generators are well soundproofed, and extra low-noise models are available for sensitive environments. Equipped with a built-in AdBlue tank in addition to a built-in diesel tank, the Stage V series offers excellent performance and lower emissions.

They come in several different capacities, from 115 kVA up to 550 kVA. The machines can either be used stand-alone, or synchronized if a larger total capacity is needed. Since they are equipped with remote monitoring, you can see the actual load at all times and whether more fuel is needed. They can either be in a back-up solution where they automatically start when needed, or as the main source.



Model		XQP115		XQP200		XQP310		XQP550	
Frequency	Hz	50 60		50 60		50 60		50 60	
Voltage range	V	400 480		400 480		400 480		400 480	
Power capacity	kVA	115 120		200 225		310 310		550 588	
Power capacity	kW	92 96		160 180		248 248		440 470	
Dimensions [LxWxH]	mm	2970 x 1150 x 2076		4085 x 1420 x 2350		4085 x 1514 x 2277		5420 x 2040 x 2434	
Capacity diesel tank	L	518		822		667		1125	
Capacity AdBlue tank	L	28		32		65.6		92	
Running time	hr	25.4 224.7		25 20		13.3 11.8		12.8 11.4	
Weight (without fuel)	kg	2077		3651		4103		6740	
Sound level @7m distance	dBA	64.9		64.6		65.4		70.4	

Fuel tanks 1000/3000 AdBlue

Our external diesel tanks with AdBlue have robust constructions that guarantee durability and long-lasting performance. The tanks are made from solid materials and are highly resistant to corrosion, so the fuel remains safe and free from contamination. The robust design also makes them suitable for outdoor use.

With a separate AdBlue tank, it's easy to access and keep fuel and AdBlue separate, ensuring fuel efficiency and compliance with emissions regulations. They are ADR-approved and can be easily moved by both forklift and crane when needed.

Security is as important to us as functionality, which is why our external diesel tank with AdBlue is equipped with a reliable locking system that prevents unauthorized access.

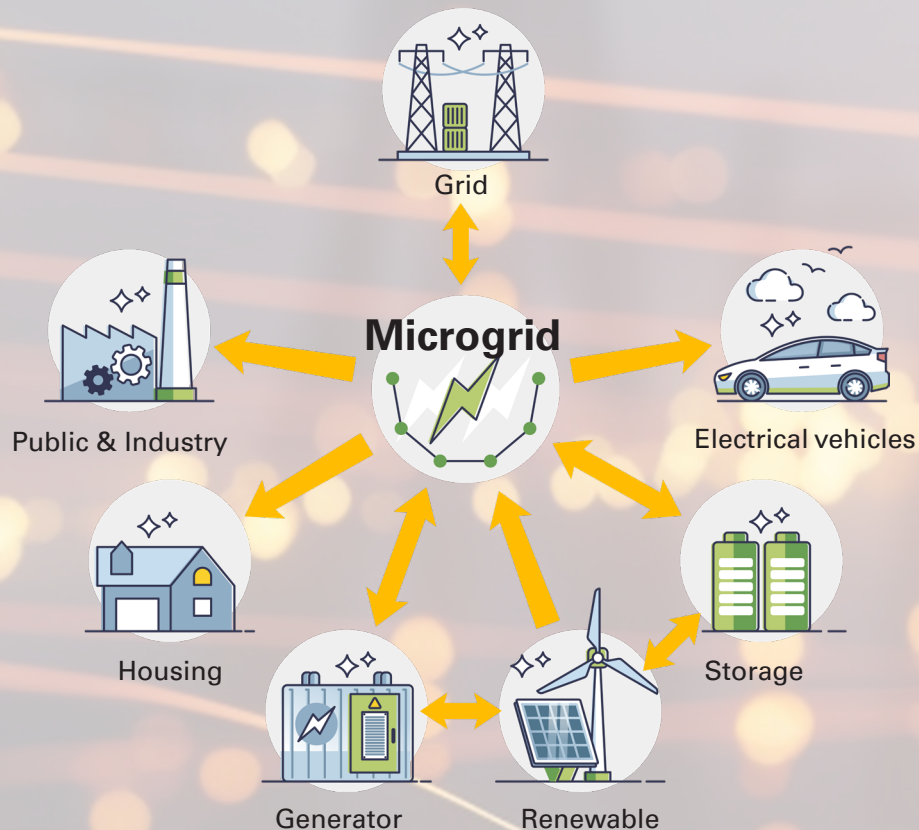
In addition, our remote diesel tanks with AdBlue have a user-friendly monitoring system that provides real-time information on fuel levels.



Model		AB1000	AB3000
Capacity (diesel)	L	1000	3000
Capacity (AdBlue)	L	200	360
Lockable	-	Yes	Yes
Dimensions [LxWxH]	mm	3214x1730x1550	2350 x 1540 x 1270
Weight (empty)	kg	970	1022
Connection refueling	-	Hose & pump included	3"
AdBlue connection (fueling)	-	Hose & pump included	3"

Microgrid

A microgrid is a local, delimited transmission grid that can be disconnected from the overlying grid when needed or desired, and continue to be operated with locally produced or stored energy.



A microgrid is defined by three key characteristics:

1. A microgrid is local

This distinguishes microgrids from large centralized grids. Centralized grids push electricity from power plants over long distances via transmission and distribution lines. Delivering power over long distances is inefficient because some of the electricity, up to 8 to 15 percent, is lost during transportation.

2. A microgrid is independent

A microgrid can be disconnected from the main grid and operate independently, acting as an "island". This means that those connected to the microgrid can be supplied with electricity even in the event of a power outage in the main grid.

3. A microgrid is intelligent

The intelligence of a microgrid comes from the microgrid controller, which is the central brain of the system and controls the generators, batteries and nearby building energy systems. The controller orchestrates multiple resources to meet the energy targets established by the microgrid's customers. Such goals can be; lowest cost, cleanest energy, greatest electrical reliability or something else.

Common misconceptions and what's **not** a microgrid

Some people use the term microgrid when describing a simple distributed energy system, such as rooftop solar panels. Another important difference is that microgrids will keep electricity flowing when the main grid fails, a solar panel alone does not.

Back-up generators are not a microgrid either, and should only be used in emergencies. A microgrid operates around the clock, all year round and both manages and delivers energy to its customers.

Many people think that microgrids are a relatively new solution, but they have been around for decades. The reason most people are not familiar with the term is that until recently it has largely been used only by colleges and the military.

Nor is a smart grid a microgrid. Smart grid is the term used to describe the intelligent power grid of the future, and new technologies such as smart meters (AMS), controllable loads and communication equipment such as 5G. The main difference that means that a microgrid is not included here is that it is geographically limited.

How you can use our batteries and Stage 5 generators in a microgrid

Batteries:

Our batteries are optimal for use in a microgrid as they have a large capacity and can be used alone or in combination with multiple batteries, solar cells, wind power, generators or the central grid. By allowing other power sources to provide the normal demand, batteries can be charged and used only during high demand or low power production from wind turbines or solar cells.

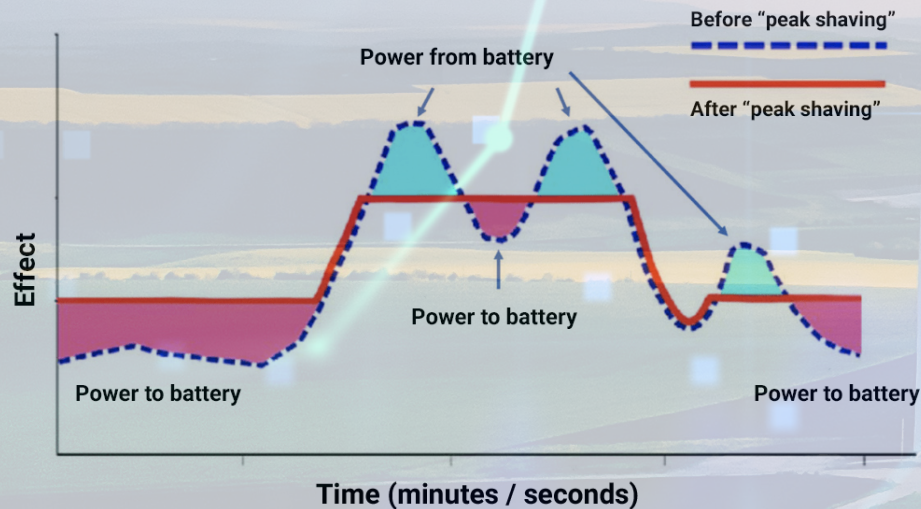
Stage 5 generators:

Our Stage 5 generators can be used in a microgrid setup, and to reduce emissions, it can be set up so that the generators only start when demand is high, with solar cells, wind power and batteries providing the normal demand. Stage 5 is the latest standard for emissions, and these generators use AdBlue in addition to diesel or HVO.

Peak shaving

What is peak shaving?

The term peak shaving originally comes from the commercial and industrial sector. There are high energy demands in production at certain times, such as when systems start up in the morning. Peak shaving is about balancing out these load peaks and achieving as even an energy demand as possible throughout the day. On the one hand, this should save costs and on the other hand, relieve the public power grid.



Peak shaving vs. load shifting

Peak shaving is also referred to as peak load shaving: When demand for electricity is very high, attempts are made to reduce it by either turning off individual power consumers or drawing power from another source- for example, from your own solar PV system or a battery.

Load shifting has the same goal as peak shaving at peak load: power consumption that is as even as possible throughout the day. However, no alternative power sources are used in load shifting- instead, it tries to spread the power demand throughout the day. For example, you can turn on devices in the household with high power demand in the morning when no one is home and power consumption is correspondingly low. Smart energy management in a PV system typically combines peak load shaving and load shifting.

What does peak shaving mean in terms of energy storage?

A battery is ideal for peak shaving because it can easily compensate for peak loads in the building's or production's electricity demand with self-generated solar energy or electricity from the grid. This saves the cost of the more expensive grid electricity and relieves the grid at the same time.

At times of high electricity production - such as in the afternoon - electricity demand is usually low because people are not at home. The demand for electricity is higher in the evening when you are cooking and the television, dishwasher and other appliances are running. You can compensate for this increased electricity demand with solar energy from your electricity storage: How to optimize your own consumption with sustainable electricity.

Just as peak shaving can be used in private homes, the same principle can be applied commercially by using a battery that is charged at night when electricity is cheap and used during the day when production is running and demand is high. The battery is then used either as a primary power source or as a supplement to avoid sky-high electricity bills and power peaks.

What are the benefits of peak shaving?

1. Reduced electricity costs

If you can use solar power or stored grid power from your storage system during times of high demand, you'll use less expensive grid power - and save money immediately.

2. More sustainable energy supply

If you use your self-generated solar energy to limit peak loads in your electricity consumption, you not only save costs, you also reduce the use of fossil fuels and provide your household or business with sustainable electricity.

3. Reduced network utilization

Peak shaving not only benefits your own household or business, but also the general public. With targeted peak shaving, you help reduce the utilization of the public power grid and make the grids safer and more reliable.

Load sharing

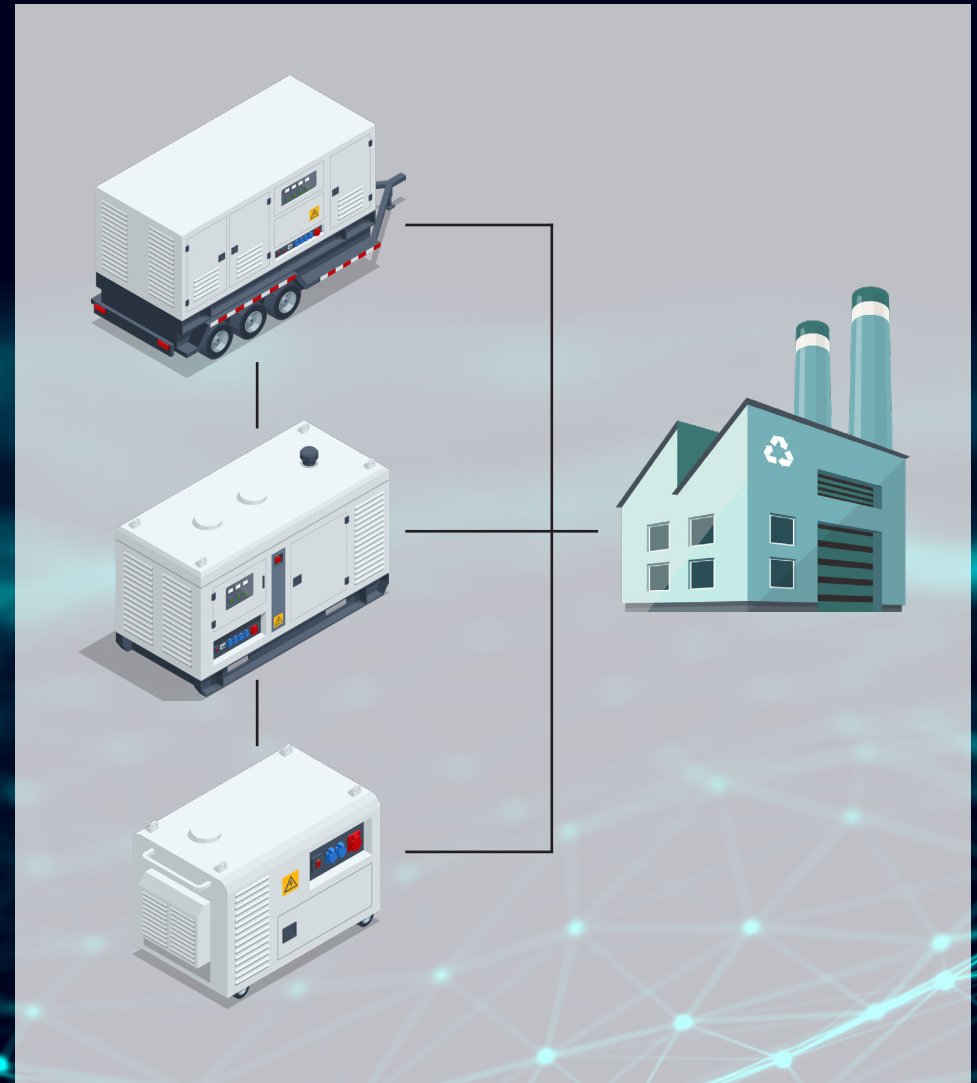
What is load sharing?

In simple terms, load sharing is the process by which a plant operates multiple generators simultaneously. Technically, load sharing is the proportional distribution of active and reactive power between sets of generators. Parallel operation and load sharing are closely related. A system with generator sets cannot achieve parallel operation without load sharing of the generators.

Parallel operation is a way to increase electricity production by adapting the electrical characteristics of multiple generator sets. Many businesses rely on parallel generator sets to increase capacity and meet high energy production requirements.

When the load isn't shared between the generators in the network, you risk overloading a generator or creating an unstable energy flow. This instability can damage the generator sets or the power grid.

By synchronizing the generators, they deliver a greater total capacity while working together to limit engine performance inefficiencies and monitor daily power demand. This results in reduced fuel consumption and emissions.



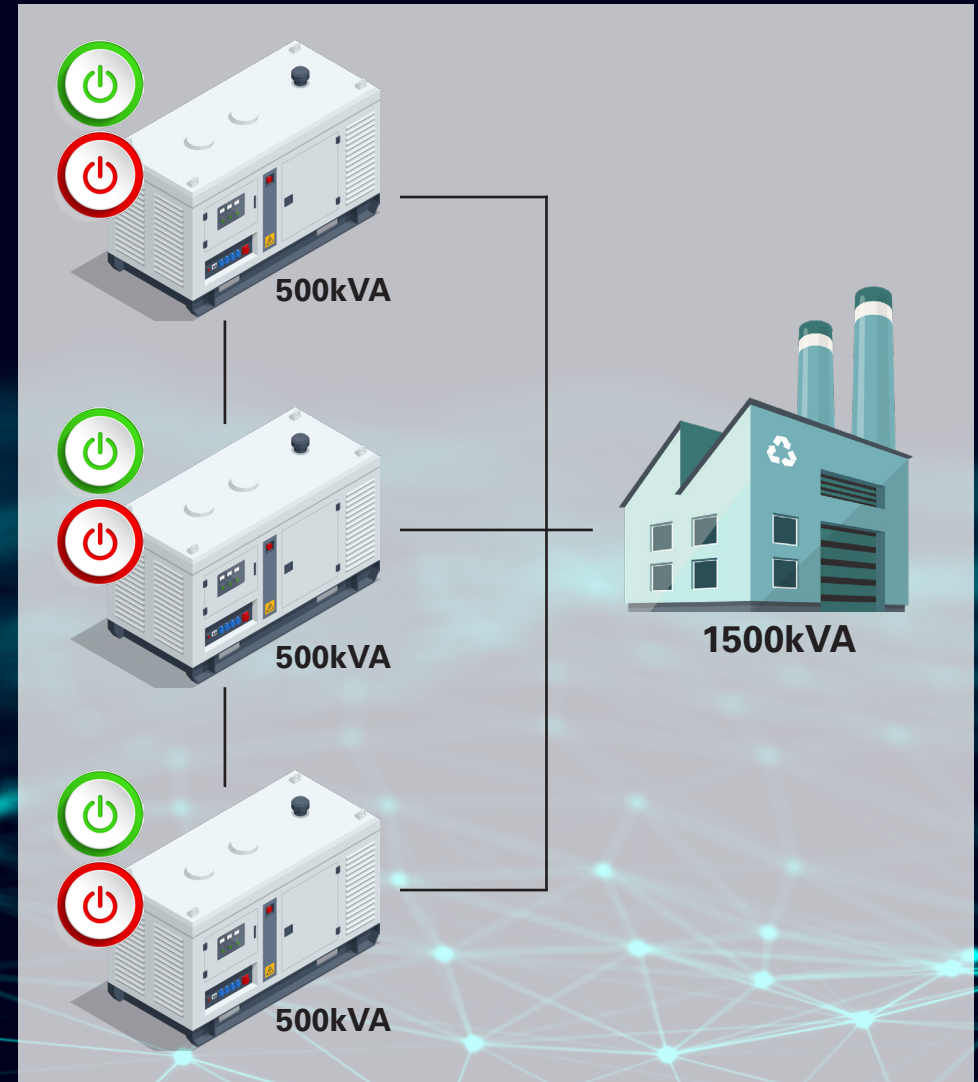
Load on demand

What is Load on demand?

Load on demand is a type of load sharing, where you choose to distribute the total power demand over several smaller units instead of one large generator. This way of distributing power is beneficial if you have a varying power demand, with some high peaks and periods of low demand.

When you distribute the total demand between several generators, these can be switched on and off as demand changes, so you don't need to run a 1500kVA generator if the demand is only 400kVA. With this solution, you cover both the power peaks but you don't need to have engines with too much capacity running when demand is lower. This results in a lower price and lower emissions.

Load on demand is the technical solution that starts and stops the generators and ensures that they communicate with each other.



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