

# **P-grid**

**Shave peaks,  
power smarter.**



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energy needs.

Kurt van Dal - Owner / CEO



Introduction

## The power of energy solutions

At e-power®, we have a clear goal: to deliver power where and when it is needed. We would even go as far as to say that we develop the power solutions the world needs – solutions that combine efficiency, flexibility and sustainability. Driven by innovation. Based on the idea that where boundaries blur, new opportunities emerge.

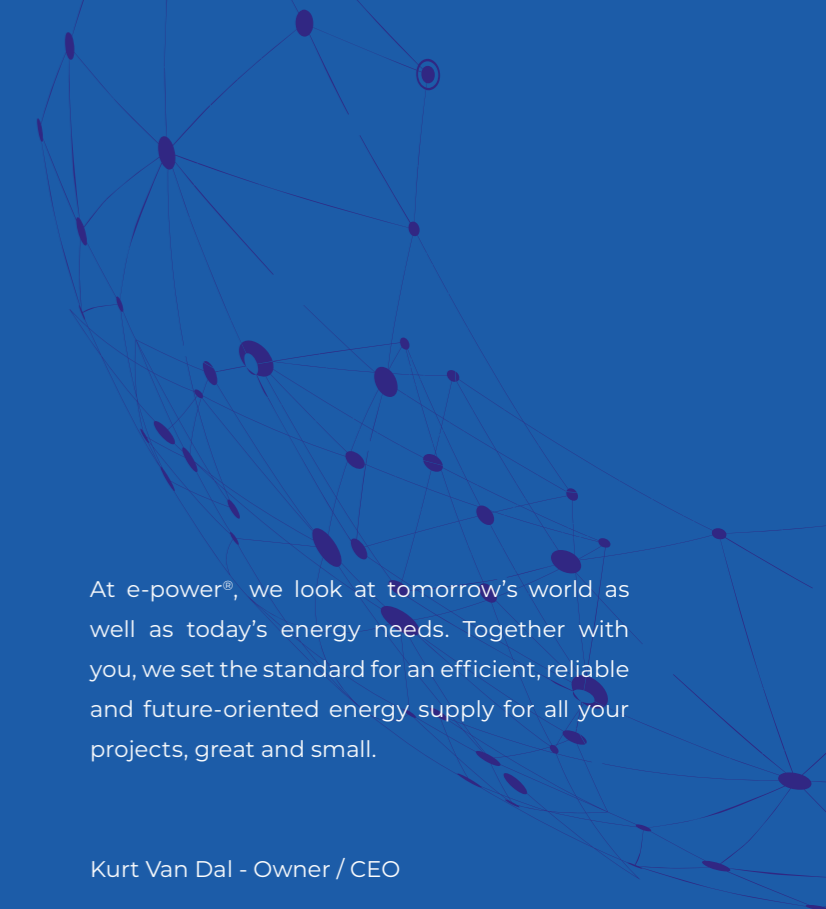
The P-grid is the embodiment of that vision. We look beyond conventional constraints: why not utilise unused generator space for batteries and inverters? This created a revolutionary hybrid system that helps companies manage peak demands and use energy in a smarter way.

With pioneering solutions such as the P-grid, we are building the energy system of the future. From 1 kVA to multiple megawatts, we are a one-stop shop that offers power solutions for the most challenging conditions. Ever since we were established, we have had one clear mission: customisation, in large volumes, without compromise.

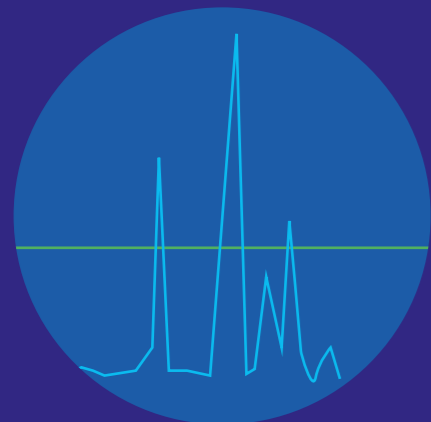
Thanks to both organic growth and strategic acquisitions, we have become an agile and innovative player in the global market. Our extra customer power? A constant striving for superior quality, from production to technical support and after-sales service.

At e-power®, we look at tomorrow’s world as well as today’s energy needs. Together with you, we set the standard for an efficient, reliable and future-oriented energy supply for all your projects, great and small.

Kurt Van Dal - Owner / CEO



## The P-grid: the innovative capacity of e-power®



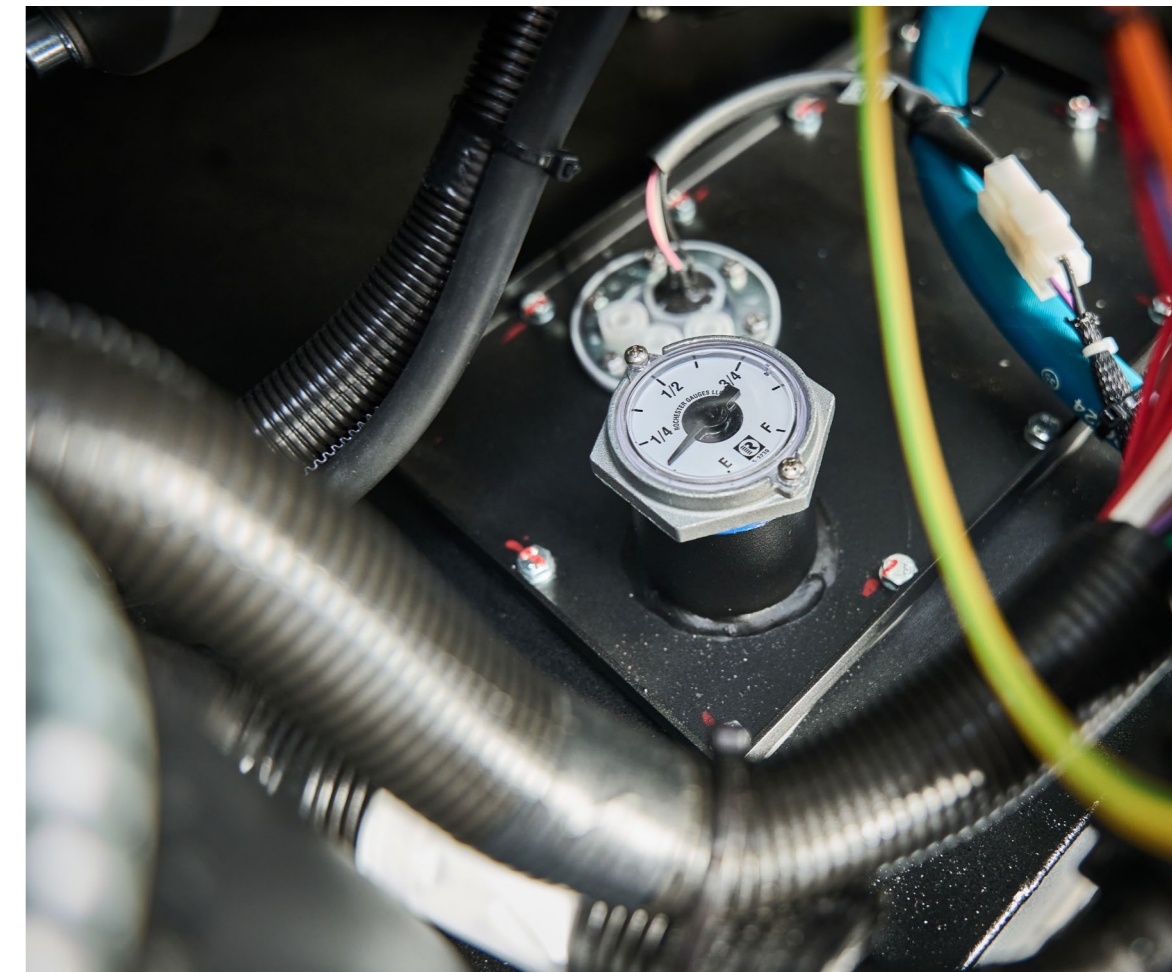
Whether you are on a construction site, in an industrial environment or at a remote location, your energy needs to be available, but also reliable, efficient and, where possible, sustainable. Particularly during peak demand periods. And yet all too often, we still see oversized generators installed to handle peak power periods but running 24/7, guzzling fuel. The P-grid works completely differently. This hybrid generator dramatically reduces costs, operates more efficiently and spares the environment at the same time.

### Save costs through peak shaving

The P-grid is a 2-in-1 hybrid solution that combines a **Stage V diesel generator with a battery pack** in a single compact unit. Unlike a conventional generator, the P-grid stores energy in a battery. During periods of peak demand, the system activates by supplying energy from the battery. This shaves the peak. Thanks to its hybrid concept, the P-grid can be **'always on'** without any excessive costs or noise.

### Longer life span with less maintenance

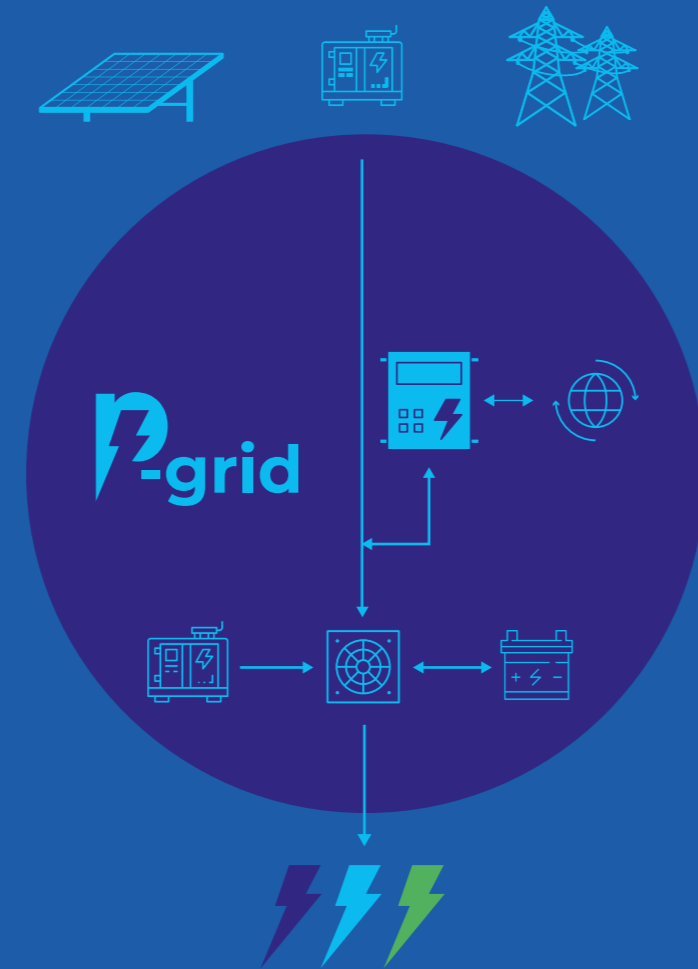
Because the P-grid regulates itself automatically, no manual operation is needed and energy loss is minimal. This means that the P-grid's internal generator does not have to run continuously. It therefore consumes much less fuel and avoids underloading, which is detrimental to a stage V engine as it causes soot to build, increases the need for maintenance and shortens the machine's lifespan.





## Compact hybrid solution

With its compact 2-in-1 construction, the P-grid is quick to deploy without any complicated installations or peripherals. This saves time and resources, and increases on-site reliability and flexibility. The P-grid is designed to respond to any operational demand or situation in an optimal way.



## Savings that count

Thanks to the P-grid's efficient operation, less fuel and maintenance is needed to handle peak demands, which reduces the operational costs. Moreover, the P-grid **doesn't need Ad-Blue** to meet the emission standards like other stage V diesel generators. All this results in a **lightning-fast payback period** from just one to three years, depending on the operational deployment.



## By comparison

A traditional 250kVA generator running 24/7 consumes 2000 litres of diesel per week for a low load (approx. 120 kWh/day) and requires maintenance every 20 days. For the same load and peak power on the P-grid, the internal 40kVA generator runs only 6 hours a day, consumes 252 litres of diesel per week and requires maintenance every 83 days. **A fuel saving of almost 90% and up to 6 times less carbon emissions!\***

\*Detailed data available at [e-powerinternational.com](http://e-powerinternational.com)

## Tailored to your energy needs

We look at your specific energy needs and provide the best solution accordingly. From rental companies to (tower) crane companies, industrial companies, telecommunications, healthcare, emergency services, NGOs, agriculture and local authorities. The P-grid is the energy solution for which **continuity** counts, especially **during peak demand periods and in emergency power situations.**



## P-grid technical sheet

### Inverter

- ⚡ AC IN: 400V (16A/ 32A/ 63A)
- ⚡ Genset - Grid - Solar (dynamic loadcontrol)
- ⚡ DC 400V technology
- ⚡ AC OUT: 160 kVA
- ⚡ 3-phase industrial inverters
- ⚡ Pure sine wave

### Genset

- ⚡ 38 kVA
- ⚡ Stage V
- ⚡ 324L diesel tank

### Battery

- ⚡ 50 kWh usable capacity
- ⚡ Technology: AGM LeadCarbon
- ⚡ 2C peak discharge
- ⚡ 0,3C charge
- ⚡ No thermal runaway
- ⚡ Temperature range: -20°C to 50°C

### The P-grid

- ⚡ Dimensions (LxWxH): 233,0 x212,5x 215,5 cm
- ⚡ No break UPS
- ⚡ Weight: 4.984 kg
- ⚡ Remote accessible



	Max average	Max kWh/day	Battery only (max. 15s)	Battery + internal generator (max. 15s)
Stand alone	20 kWh	480 kWh	180 kVA	200 kVA
16A external connection	30 kWh	720 kWh	200 kVA	220 kVA
32A external connection	40 kWh	960 kWh	220 kVA	240 kVA
63A external connection	60 kWh	1440 kWh	240 kVA	240 kVA

## On-grid or off-grid

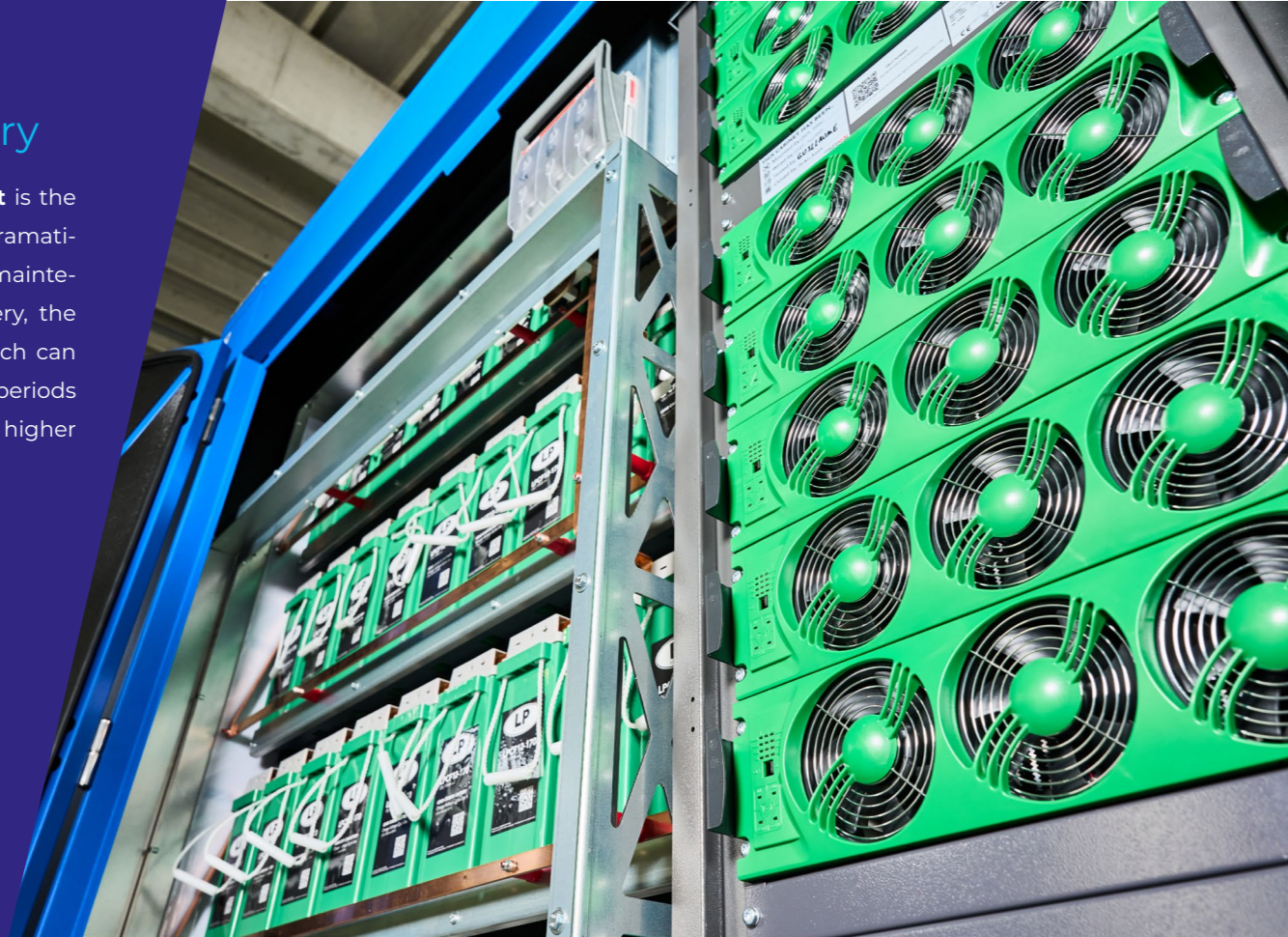
The P-grid is designed to provide **reliable power** anywhere. In on-grid situations, the P-grid uses the most optimal power source based on capacity to charge the battery or supply the necessary power: the generator, battery pack or grid power. In off-grid situations, the P-grid operates an **autonomous energy management system** to ensure power at all times. The P-grid acts as a **microgrid**, which can be expanded to include other forms of energy – such as solar power – to include other renewable applications.





## Safer and twice as powerful: the lead carbon battery

Central to this innovative **2-in-1 concept** is the battery – a real **powerhouse** – which dramatically reduces emissions and fuel and maintenance costs. Instead of a lithium battery, the P-grid uses a **lead carbon battery**, which can handle twice as many peak demand periods and is safer because it remains stable at higher temperatures.



## Remote monitoring and service

The integrated monitoring tool registers the energy consumption in real time, detects any problems and sends automatic maintenance notifications. **Remote access** allows technicians to resolve any malfunctions quickly with **less downtime** as a result. Our targeted training gives you the knowledge and tools you need to keep your P-grid up and running. This is how to get the most out of your P-grid.

## Need more power? No problem.

Thanks to the P-grid's modular design, you can easily link several units together. Two P-grids in a parallel arrangement together deliver 320 kVA (160 kVA x 2), while five linked units achieve an impressive total power of 800 kVA. This **plug-and-play** solution requires no complicated installation. The outputs of the P-grids are simply linked, and a communication cable automatically synchronises all settings with no user intervention required.



# Support and service for peace of mind

- **Always a solution** – Your questions and problems are followed up quickly and efficiently with our ticket system. Our Service Support Engineers focus on a quick and effective solution and always keep you informed of their progress.
- **Remote monitoring & intervention** – We use the **monitoring tool** to monitor and read your P-grid remotely. Thanks to an integrated SIM card, we can check the status of the generator, battery and inverters in real time. Together, we can activate an external connection in no time with **remote access**.

At e-power®, service doesn't stop after the sale. After a detailed preliminary process, in which we examine what energy solution best suits your needs, we guarantee comprehensive support after installation to keep your P-grid in top condition.

- **Smart alert function** – Your P-grid acts as an intelligent alert system. Thanks to the valuable data the system collects, we can detect and resolve potential failures before they even occur.
- **Rental model? Combined assistance** – Renting a P-grid from a rental company? Then they are your first point of contact. They have received the necessary training and can usually help you immediately, possibly in consultation with our team. Either way, your problem will always get the attention it deserves.

- **Tailor-made training** – To get the most out of your P-grid, we offer comprehensive **Explorer, Navigator and Pioneer** training packages. From basic operator training to in-depth configuration knowledge – we will ensure that your team can optimally operate, maintain and adjust the P-grid to meet your specific project needs.

When you start using the P-grid for the first time, you can rely on our comprehensive initial guidance. Choosing e-power® is choosing **reliable power, minimum downtime and maximum support**.

## About e-power®

### Experience, customisation and innovation in power solutions

The story of e-power® began in 1990 in Nieuwerkerken, near Sint-Truiden, Belgium. What started then under the name Europower as a modest project of two brothers, Luc and Yves Heylands, grew into the largest manufacturer of small power and welder generators in the Benelux: e-power®.

Driven by innovation, customisation and decades of expertise, e-power® develops sustainable energy solutions for key sectors such as construction and industry, healthcare and emergency services, NGOs, agriculture, events, local authorities and rental companies.

The latest innovation, the P-grid, is a pioneering hybrid electric generator with a unique all-in-one design for peak shaving. This advanced system ensures significant fuel savings and lower emissions without compromising on power or flexibility.

With a strong team of more than 120 employees and a solid B2B network, e-power® offers the highest quality and service. Thanks to advanced production facilities in Belgium and a powerful R&D team, e-power® guarantees reliability for all types of energy demand and customisation even for large volumes, unlike the competition.







**e-power**<sup>®</sup>  
the power of energy solutions

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