

Dumarey Green Power

PowerSkid

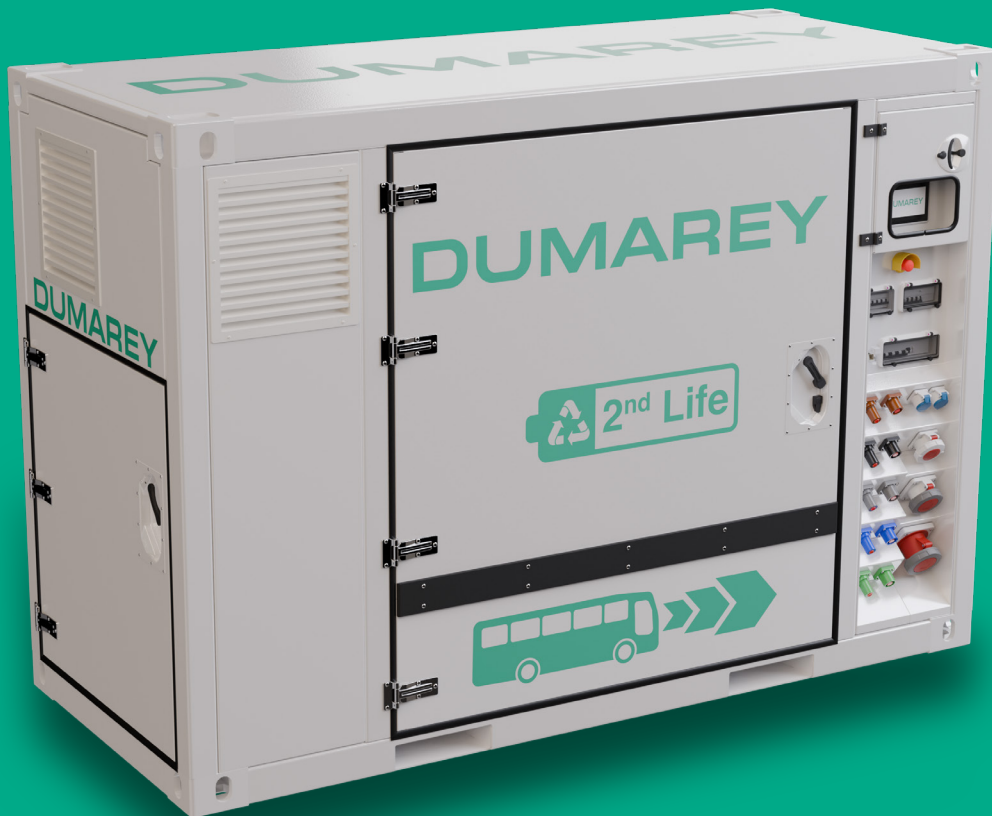
Brochure



**Energy stored, power delivered,
savings made**

Cut Power System Costs

The PowerSkid is a second-life battery energy storage system with a continuous power output of up to 160kW depending on configuration. It is specifically designed for mobile and off-grid applications, such as building sites, festivals, events, filming locations and off-grid electric vehicle charging stations. It is also ideal for grid support, renewable storage and energy trading.



Reduced embedded carbon



Reduced fuel consumption



Silent and zero emissions



Immediate power delivery



Improved voltage and frequency stability

Our clients benefit from emission and noise-free electric power on location, ensuring a cleaner and quieter environment. Additionally, they can schedule generator charging via our smart software, optimising energy use and reducing operational costs. The PowerSkid is available in a versatile stationary version, ideal for permanent grid installations, providing reliable and sustainable energy solutions for a variety of applications.

Each PowerSkid is fitted with second-life battery modules, repurposed from electric trucks and buses,

which significantly reduces the embedded CO₂ associated with the product. This innovative use of second-life batteries not only extends their lifespan but also contributes to substantial CO₂ emission reductions compared to new battery production. By incorporating these eco-friendly battery modules, the PowerSkid offers a greener alternative for power generation, making it the perfect choice for environmentally conscious users who prioritise sustainability without compromising on performance or reliability.

One Product, Numerous Applications



Construction

The PowerSkid can provide quiet clean power to construction sites, downsizing or completely eliminating the use of diesel generators.



Car Charging

The PowerSkid can be used to rapidly charge EVs where mains infrastructure is insufficient.



Green Energy

The PowerSkid can store energy from green sources during times of high or excess production. Energy can be used later to reduce grid imports.



Grid Support

The PowerSkid can be used as grid support and energy trading, to assist in levelling the national grid. This can provide an income to the user, even when the PowerSkid is not deployed on a site.



Pumping

The PowerSkid is known for its use in industrial pumping, such as concrete, water, waste, and dewatering. These applications are highly dynamic and too can benefit from a reduction in emissions.



Film & TV

Film and TV require silent, reliable, green power on location. This can be achieved with ease using the PowerSkid, which can provide enough energy to power a whole set.



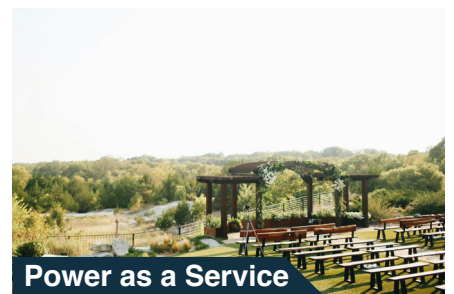
Welfare Units

The PowerSkid is ideal for powering welfare cabins and other temporary buildings. Generator time can be drastically cut using a hybrid solution, providing silent, emission-free power through the night.



Events & Festivals

Events have increasing focus on cutting emissions. The PowerSkid can charge from a small mains supply overnight, providing significant low-emission power during the day.



Power as a Service

The PowerSkid can be used as part of a PaaS offering. End users rent full batteries which are remotely monitored and replaced when necessary. This model helps customers who have no mains power and cannot accept generators.

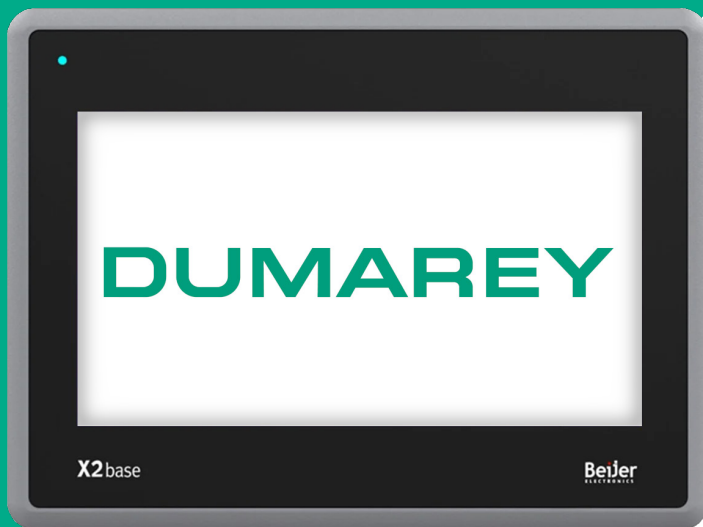
Features

- Second life battery energy storage system
- Multiple power options
 - 100 kW continuous with peaks up to 170kW
 - 130kW continuous with peaks up to 200kW
 - 160kW continuous with peaks up to 240kW
- Enables generator downsizing with subsequent fuel and CO₂ savings
- 400A Powerlock source and drain
- 125A + 63A + 32A 3ph outputs
- 2 x 16A 1ph outputs
- 16A 1ph storage connection
- DC link connections
- Charge from generator or mains. Island mode operation*
- Touchscreen controls with wizard setup
- Remote control and telematics platform
- Fork pockets and 4-point lift
- In-built fire suppression system with external hose connections
- UKCA & CE approvals



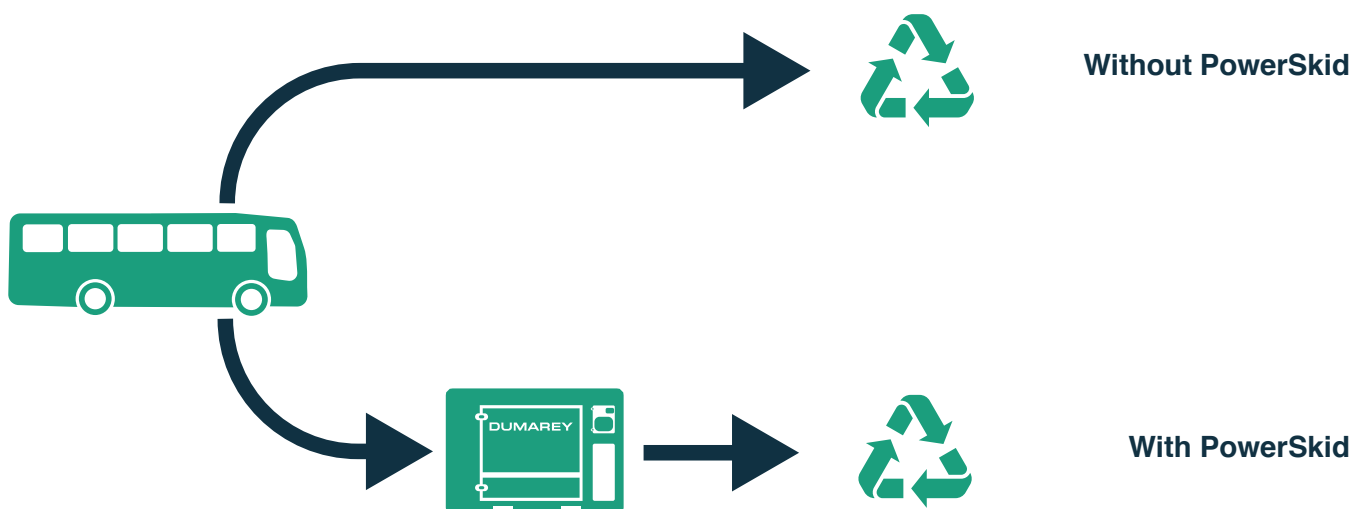
* Island mode - Charge and use with no infeed. Ideal for remote work and events

Control Panel



- 7" display complete with a custom interface to provide intuitive and robust operation
- Wizard based set-up for intuitive configuration
- Power, voltage and frequency data for energy storage system
- Battery parameters: State of charge (%), temperature etc
- Event log management and diagnostics
- Alarms and alerts
- Integrated start/stop based on schedule timing
- Communications: Cloud based telemetry tool using on board 3G/4G router

Battery Life Cycle



The PowerSkid utilises second-life batteries, repurposing batteries from electric trucks and busses. This innovative approach extends battery lifespan, supporting generators and grid connections while significantly reducing CO₂ emissions and saving users on both fuel and costs.

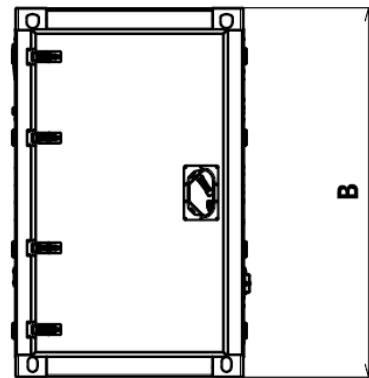
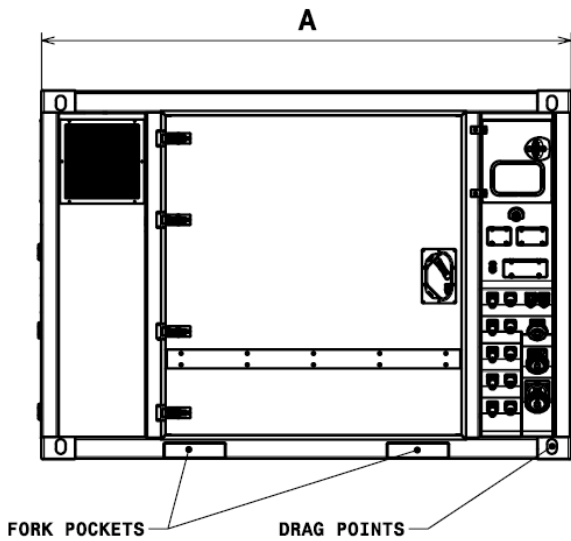
When charging from a diesel generator, the PowerSkid allows the engine to work at its point of maximum efficiency. When charging from mains power, the system can be set to charge overnight making use of lower emission electricity.

EV battery production is a major contributor to CO₂ emissions, often accounting for almost 50% of an electric vehicle's lifetime emissions. Incorporating second-life batteries, the PowerSkid dramatically reduces waste and environmental impact, making it the ideal choice for climate-conscious users seeking sustainable and efficient power solutions.

Dimensions & Weight



PowerSkid	
A	2800mm
B	1950mm
C	1200mm
Mass	4,500kg



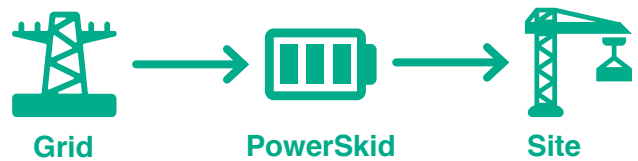
Applications

On Grid

PowerSkid can connect to grid connection and boost it when needed for site peaks.

Before PowerSkid - Grid is insufficient to power site peaks so generator is used.

After PowerSkid - PowerSkid charges when site load is low, then adds power to the grid peaks when needed.



Off-Grid

PowerSkid can form an island grid when no mains connection is available. System can be implemented with generator in a hybrid system.

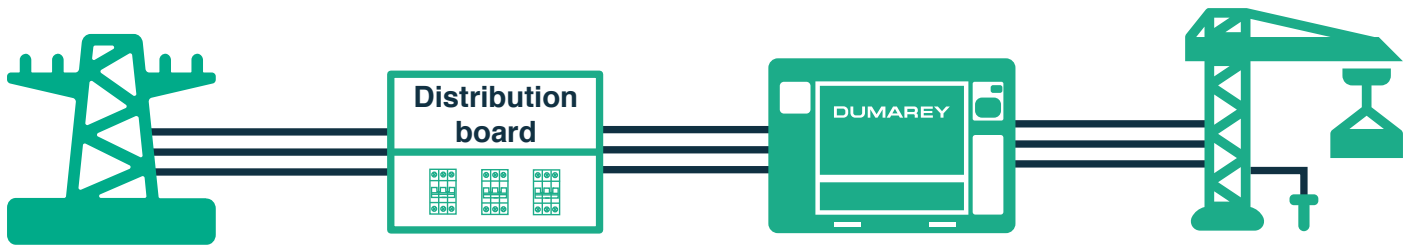
Before PowerSkid - Generator runs 24/7 to power site, even when on very low loads.

After PowerSkid - Generator is now controlled by the powerskid and runs less than 1/3 of the time.

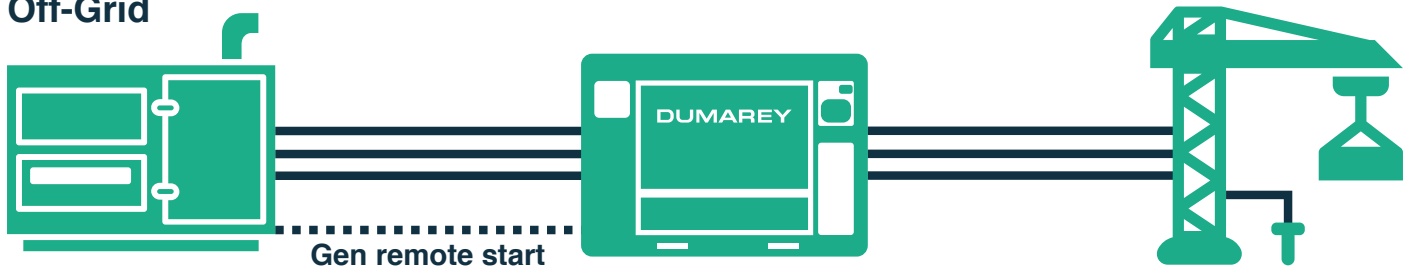


Configurations

On Grid



Off-Grid



The PowerSkid is incredibly easy to set up for both on-grid and off-grid applications, with installation taking less than 10 minutes in each case. It features numerous standard size sockets for everyday use and robust 3-phase passthrough connectors for high-power applications. In off-grid scenarios, the PowerSkid includes remote generator start/stop capabilities, ensuring the generator runs only when necessary, saving you time and guaranteeing a reliable power supply when needed, without the hassle of manual activation.

Specifications

Parameter	Value	Comment
Rated Power	100 kW / 130 kW / 160 kW	Continuous (at 25°C)
Overload Power	140 kW / 170 kW / 200kW	Maximum 5 minutes every 30 minutes (at 25°C)
Peak Power	170 kW / 200 kW / 240 kW	Maximum 10 seconds every 60 minutes (at 25°C)
Rated Battery Capacity (BOL)	240 kWh	At DC-side
Usable Battery Capacity (BOL)	215 kWh	At AC-side
Minimum Capacity (EOL)	164 kWh	
Nominal Grid Voltage	400/415 VAC	UAC nom
Nominal Grid Voltage Range	±10 % of UAC nom	
Frequency	50 Hz	±5 Hz
Grid Configuration (On-Grid)	3 ~ 400Vac (phase to phase) + Neutral + PE	TN Grid
Grid Configuration (Off-Grid)	3 ~ 400Vac (phase to phase) + Neutral & PE coupled	TN-S Grid
Max. Short Circuit Level	24 kA	
Ambient Temperature	-10°C to +40°C	

About us

Originally designed for the high intensity life of motorsport, Dumarey Green Power's products have demonstrated their performance under demanding conditions in various applications in off-highway, power generation, commercial vehicles and passenger cars.

Dumarey Green Power is located next to the Silverstone Circuit in the United Kingdom as well as in Duiven in the Netherlands. We are part of the Dumarey Group, a family owned Tier 1 manufacturer and integrator of driveline and powertrain solutions.



DUMAREY

info-flybrid@dumarey.com

+44 (0) 1327 856861

www.dumareyflybrid.com

Copyright Dumarey Green Power 2024. All rights reserved

PWRSKD-BR-V3 10/24