

Hybrid Power Generator

The Powerplus is a Hybrid Power second-generation containerised hybrid power solution, incorporating a diesel generator and a high capacity bunded fuel tank. This latest generation builds on its predecessor by inclusion of an advanced programmable controller coupled with smart AC distribution, delivered through an intuitive touchscreen interface. The integrated hybrid power system is simple to operate and maintain, for both operator and end-user.

By integrating a Powerplus into your application, you will benefit from a significant reduction in fuel use and emissions, such as; CO₂, NO_x, SO₂ & PM. Allowing the optimised running of the generator, significantly extends plant life and reduces the maintenance requirement, all whilst maintaining a 24-hour continuous and reliable power supply.

The Powerplus has been specifically designed and constructed to minimise noise. Amongst its many features, it incorporates a custom designed two-stage silencer and air intake system. This allows the Powerplus to achieve market leading noise reduction, ideal for residential and other noise sensitive areas.

On site, the Powerplus provides a modest foot print, with air intake, filtration and exhaust points conveniently located on the main access doors and roof respectively. Fork pockets and standard ISO container corner twist lock fittings, make the Powerplus easy to manoeuvre.

The new control interface provides a user-friendly GUI whilst delivering an enhanced management and control system. Key features include; generator control, load management, optimised quiet hours and multiple scheduled runtimes. Socket level loading and energy consumption are monitored and recorded for enhanced analysis, not only via the local touchscreen but also remotely, using GLOW RFM web-based portal. User programmable logic loops allow advanced functions and reporting to be easily implemented by the user. All AC outlets can be easily configured and controlled locally through the new touchscreen interface and remotely, through GLOW RFM portal.

The Powerplus provides a complete innovative hybrid solution in a single product, making it even easier for users to access flexible hybrid power.

TYPICAL APPLICATIONS

- Construction and civil engineering projects
- Railway and highway maintenance
- Remote unattended sites
- Telecommunications
- Emergency response

SAFETY

- Overcurrent & RCD Protection
- Emergency Stop
- Lockable Service Doors
- Lockable Control Panel Door
- Secure Anti-Theft Container

INTERFACING & CONNECTIVITY

- GLOW RFM®
- web-based portal
- 7" Touchscreen Display
- Integrated 3G/4G router
- Integrated GPS

CONVENIENCE

- Reinforced Forklift Pockets
- ISO Container Corner
- Castings
- 950 Litre Fuel Tank

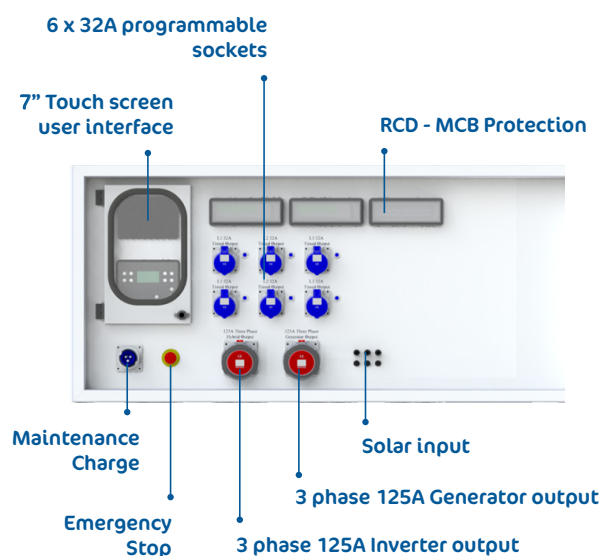
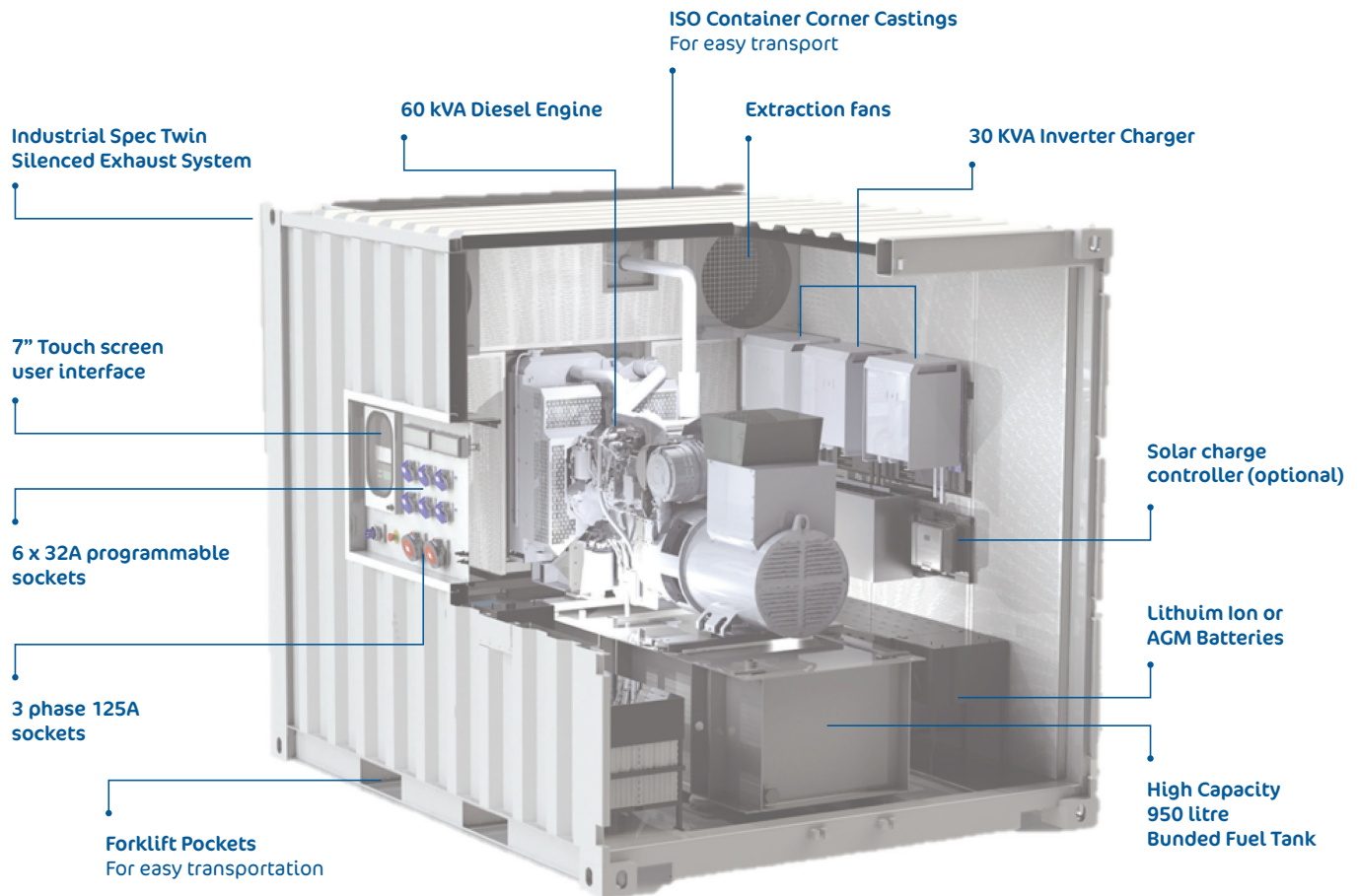
QUALITY

- Premium Quality
- Components
- Rental Specification IP55
- ISO Container Format
- IP65 Control Panel



Technical Specification

PowerPlus Hybrid Power Generator



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Technical Specification

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		PP-60-30-55-AGM	PP-60-30-50-LFP
POWER	AC Output Voltage	50Hz, 400V L-L, 230V L-N, fully adjustable.	
	Output Connections	6 x 32A single phase CEE Form smart distribution programmable outlets, RCBO protected. 1 x 125A three phase CEE Form hybrid outlet, variable RCD & MCB protected. 1 x 125A three phase CEE Form generator outlet, variable RCD & MCB protected. Custom distribution options available upon request.	
	Maintenance charge input connection	1 x 16A single phase CEE Form, MCB protected.	
	Passthrough	100A	
	Engine	Perkins 1104D-44TG2	
GENSET	Alternator	Mecc Alte ECO 32-2/4, other manufacturers/models available upon request.	
	Prime Power (kVA)	60	
	Engine Speed (rpm)	1500	
	Fuel Tank Capacity (L)	950	
	Fuel Tank Type	Double Skinned (Bunded) with 110% Bund Capacity	
STORAGE	Usable Battery Capacity @ 25°C (kWh)	55 ¹	50
	Charge Time (hours) ^{3,6}	5	3
	Battery Management System	String monitoring	Active cell balance
	Expected Cycle Life ^{4,6}	1,000	5,000
CONTROL	ControlCentre	7" touch screen IP65 display, providing a user-friendly GUI whilst delivering an enhanced management & control system. Key features: <ul style="list-style-type: none"> • Generator control; load management, optimised quiet hours and scheduled runs. • Enhanced system management. • Ability for users to program custom logic sequences. • Enhanced battery string/cell level management. • System commissioning/decommissioning assistants. • Troubleshooting assistants & diagnostics. • User friendly graphical performance & event logs. • Enhanced environmental control. • Remote communication, monitoring & control. 	
	Transfer Relay Time (ms)	<20	
ENVIRONMENTAL	Water/Ingress Protection Rating	IP55 (IP65 Control Panel)	
	Operating Temperature Range (°C) ⁵	-20 to +45	
	Sound Level (dBA)	Acoustic Pressure: @ 1m (Genset mode): 65; (Hybrid mode): 0	
MECHANICAL	Dimensions W x D x H (mm)	2440 x 3000 x 2600	
	Weight (kg)	5,700 / 6,495 (full tank)	4,500 / 5,295 (full tank)
	Lift Points	ISO container corner castings, Forklift pockets	

1. Capacity is based on the C20 rate and will vary depending on rate of discharge (see Fig. 1 & Fig. 2)
2. Charge time dependent on available power of external source
3. See Fig. 3
4. Storage capacity may be affected by charging or discharging at less than 0°C (see Fig. 4)
5. Storage total cycle life may be affected by charging or discharging in excess of 25°C (see Fig. 5)

Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards and guidelines. This document is not intended to form the basis of a contract. We have a policy of continuous product improvement and reserves the right to change specifications without notice.

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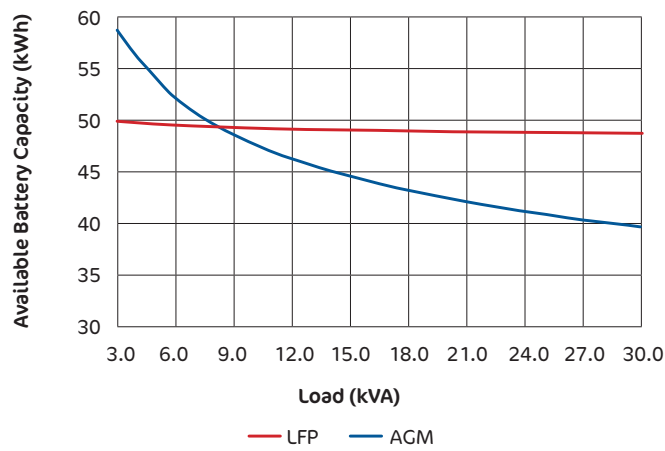


Technical Specification

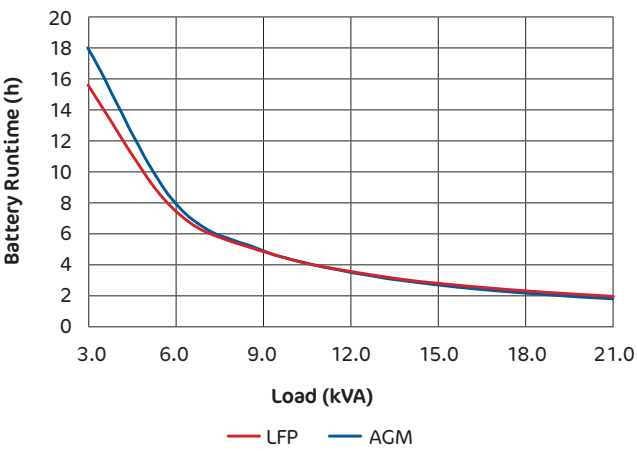
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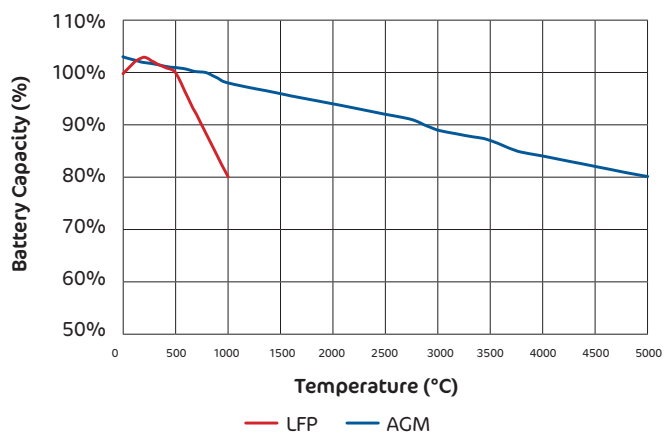
Available Storage vs Load (Fig. 1)



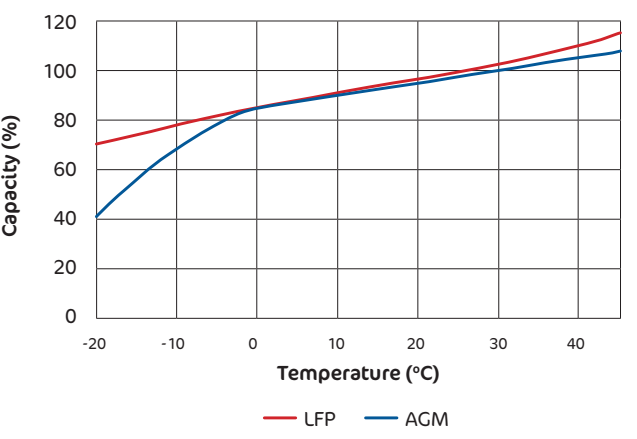
Runtime vs Load (Fig. 2)



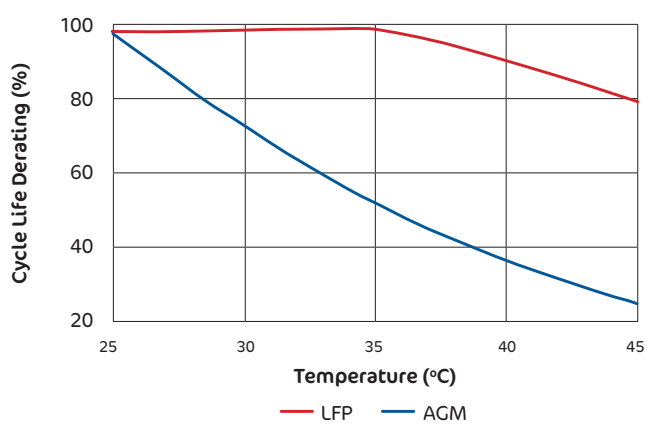
Storage Capacity vs Cycle Life (Fig.3)



Storage Capacity vs Temperature (Fig. 4)



Cycle vs Temperature (Fig. 5)



AGM 55			LFP 50	
Power	Available Storage	Time	Available Storage	Time
30kVA	40	1.3	49	1.6
27kVA	40	1.5	49	1.8
24kVA	41	1.7	49	2.0
21kVA	42	2.0	49	2.3
18kVA	43	2.4	49	2.7
15kVA	45	3.0	49	3.3
12kVA	46	3.9	49	4.1
9kVA	49	5.4	49	5.5
6kVA	52	8.7	50	8.3
3kVA	59	19.5	50	16.6