

Solar Pod

Sustainable power supply



Harvest & store solar energy to minimise harmful emissions



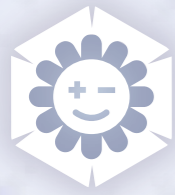
Modular, expandable power supply



Large extendable sliding solar panels



Diesel generator on stand-by just in case.



Solar Pod

Sustainable power supply

- ✓ Reduce CO² emissions
- ✓ Reduce Noise
- ✓ Reduce Fuel costs

Easily add a sustainable power supply to remote site locations.

The Solar Pod (patent pending) significantly reduces carbon emissions and fuel costs associated with power provision by harvesting solar energy to provide free power to your sites.

Complete with a backup generator, the built in Ecosmart system efficiently manages the power supply between solar PV, battery bank and generator.

Our Autosmart system ensures that all the end user needs to do is switch on and use.

There are 3 model options with various power outputs and storage capacity.

A responsive, modular power supply.

For large site set ups, multiple Solar Pods can be used. Modularise the site into segments which will optimise the performance of the Solar Pod.

Add more solar capacity to your setup by plugging in extra third-party solar panels (of correct voltage) directly to the Solar Pod.

An optional mains power input is also available. This will by-pass the generator and ensure only solar/batteries/mains are used. 100% zero noise operation. Maximise solar input to your existing site accommodation by swapping the site generator with a Solar Pod. Further energy savings can be made with Solar Lights.



Solar Pod


15
kVA

Solar Pod

30
kVA


Solar Pod

60
kVA



Plug & Play


Modular, expandable power supply




STAND BY

Integral backup diesel generator


LOW




Reduce local site noise levels



Large battery bank power storage



Large extendable sliding solar panels



Optional mains power generator override

Auto smart

Just add fuel. Fully automatic start/stop

Ecosmart technology

Intelligent, efficient power management

Case studies

The Solar Pod has been in use since October 2018 across sites in England & Scotland.

Here are 2 examples of how the Solar Pod performed in the usual imperfect weather of the UK.

Site location Donna Nook UK

DATE
1st June 2019 (17 weeks)

SITE USAGE
24 hours per day / 7 days a week


SITE SETUP
1x Solar Pod 30 powering 5x static units
OFFICE X2 CANTEEN DRYING ROOM TOILET BLOCK

The Solar Pod has been on site for 17 weeks, and the standby generator has only ran for 306 hours across these nine weeks. An average of 18 hours per week. Reading the telemetry data, we are able to show that frequently, the site is powered silently and emission free either by direct solar or energy stored in the batteries.



Ordinarily, the temporary accommodation on this site would be powered by a 50-60kva Diesel Generator, and would run for 168 hours a week.

	50-60kVA Diesel Generator	Solar Pod 30
TOTAL CONSUMPTION	2,643.3kWh	2,643.3kWh
TOTAL SOLAR GAIN	0	724kWh
FUEL USED	Fuel Projected 17,136 Litres	Fuel actual 1,737 Litres (actual)
GEN HOURS	168 (Per week)	18 (Per week) 12% running time out of possible 2,856 hours
TOTAL FUEL COST	@ 60p per ltr = £10,281	@ 60p per ltr = £1,042
TOTAL LOCAL CO ² PRODUCED	17136 x 2.758 = 47,261kg	1737 x 2.758 = 4,790kg



Solar Gain
724kW



Silent running hours
2,513 (88%)
Power from Solar / Batteries only

LOW CO²

Carbon saving*
42.5 Tonnes

Site location Osea Island UK

DATE
29th July to 26th August 2019

SITE USAGE
24 hours per day / 7 days a week


SITE SETUP
9x Solar Pod 30's powering 30x Snooze Pods

The 9 Solar Pods provide power to 30 Snooze Pods (60 bed modular hotel with full hotel room facilities) which would normally be connected to an 800kVA sized generator. Each Snooze Pod is being used 24/7 which the profile below shows. The solar gain and battery usage was so high, the generator has only activated 7% of its time, this is a huge diesel, noise and CO² emission saving, as below shows.




Ordinarily, the temporary accommodation on this site would be powered by a 800kva Diesel Generator, and would run for 168 hours a week.

	800kVA Diesel Generator	9x Solar Pod 30
TOTAL CONSUMPTION	3,547kWh	3,547kWh
TOTAL SOLAR GAIN	0	1,929kWh
FUEL USED	Fuel Projected 48,357 Litres	Fuel actual 602 Litres
FUEL COST	@ 60p per ltr = £27,079	@ 60p per ltr = £930
GEN HOURS	100% running time	376 Total 7% running time out of possible 5,184 hours
TOTAL LOCAL CO ² PRODUCED	133,341kg	1,660kg




Solar Gain
1,929kW



Silent running hours
93%
Power from Solar / Batteries only

LOW CO²

Carbon saving*
132 Tonnes

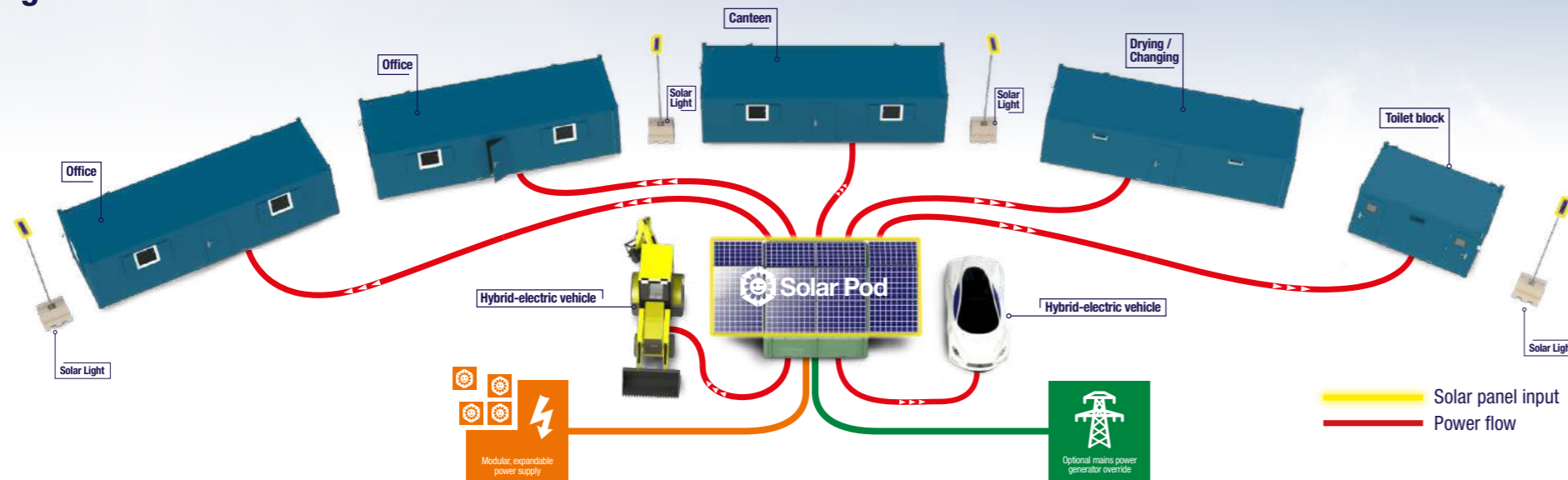


Equivalent to planting
5,890 Trees
to absorb this amount of CO₂ over a year.

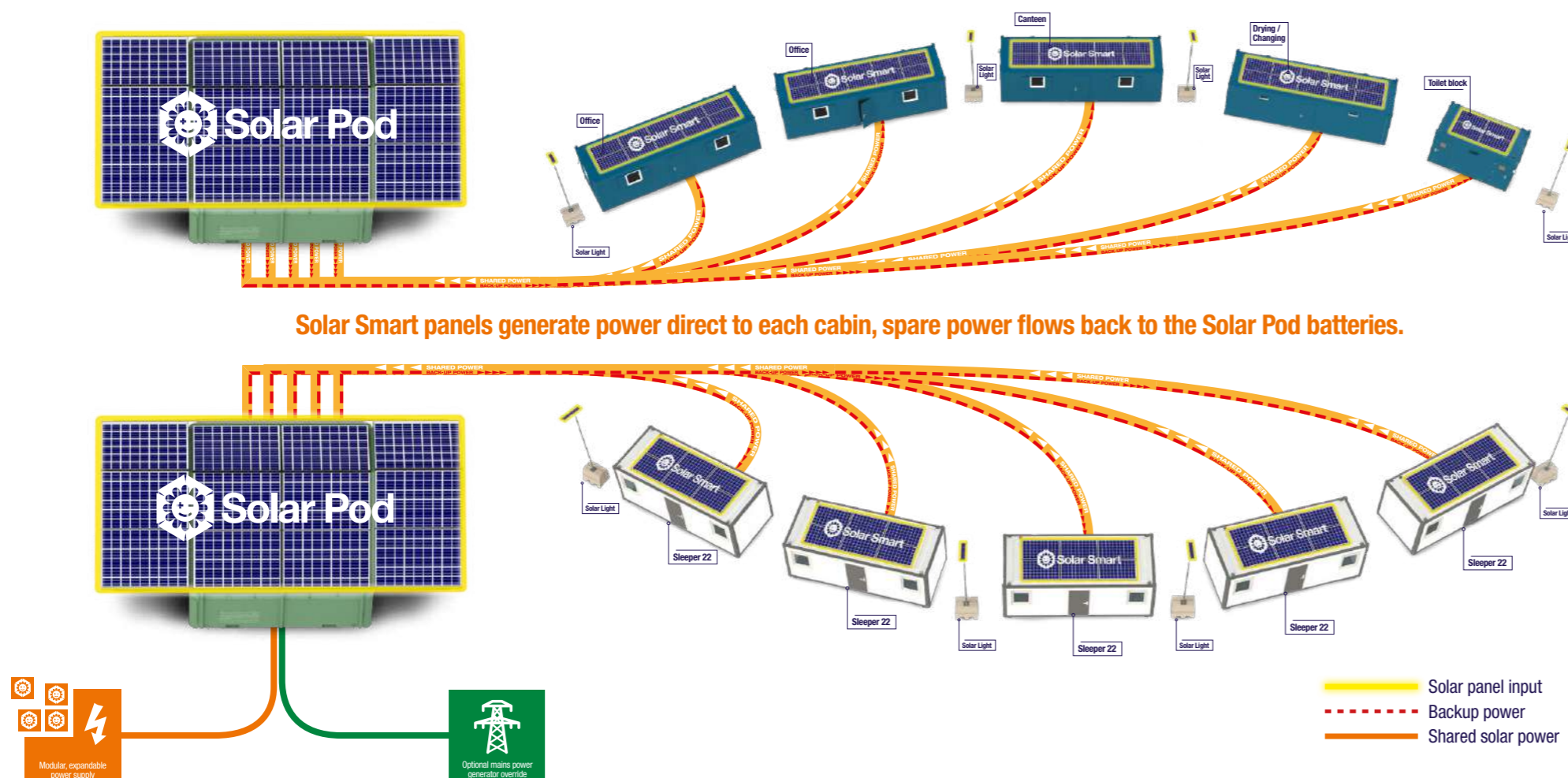
Connection examples



Single Solar Pod + standard cabins



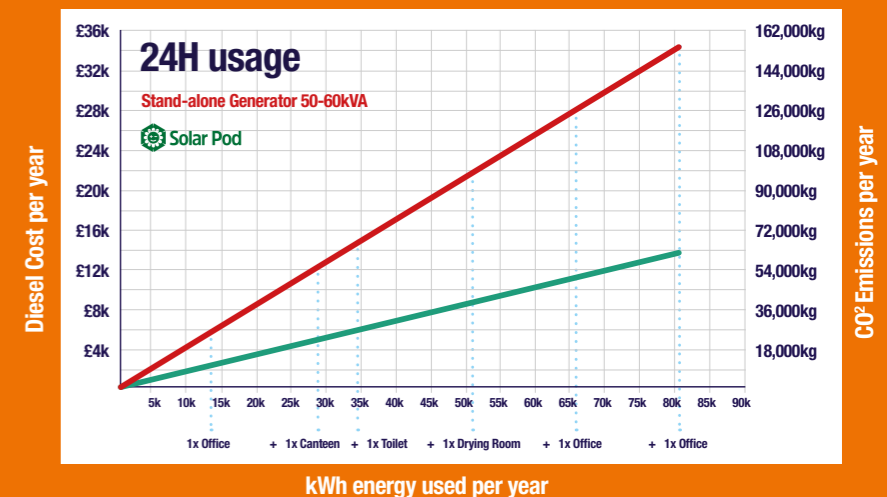
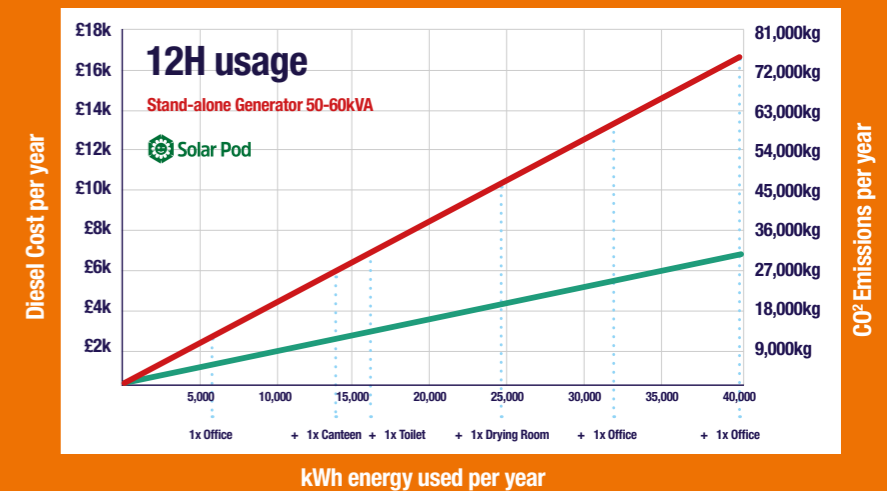
Multiple Solar Pods + Solar Smart additional solar panels



Energy usage example

SOLAR POD 30 MODEL

Compared to a stand-alone on-site generator power supply (50-60kVA).

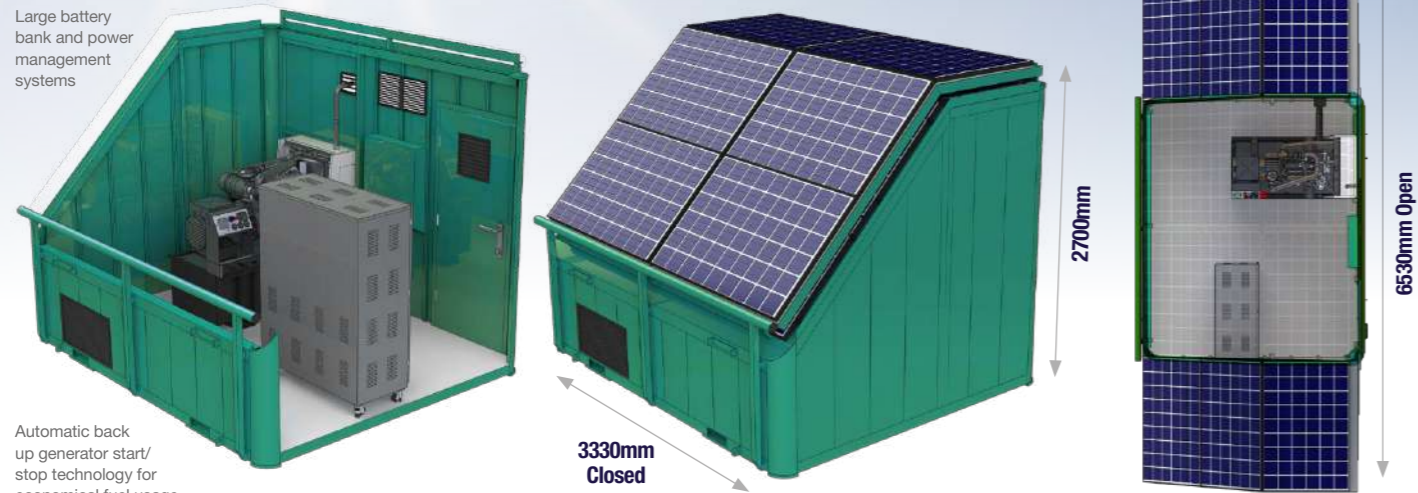


ANNUAL RUNNING COST SAVING Up to **£ 20,578**

ANNUAL EMISSIONS SAVING Up to **103** Tons of CO₂

Technical

Large battery bank and power management systems



Automatic back up generator start/stop technology for economical fuel usage

Facilities

- Plug and play sockets: Multiple 32amp sockets, 1x 125 amp socket
- Large fuel tank
- Dial in diagnostics from your phone or laptop

Moveability

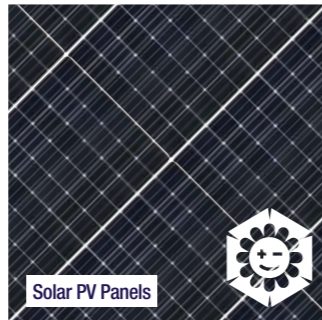
- Forklift pockets
- Bottom lifting
- Length: 6530mm Open, 3330mm Closed
- Width 2745mm
- Height 2700mm

Sustainability

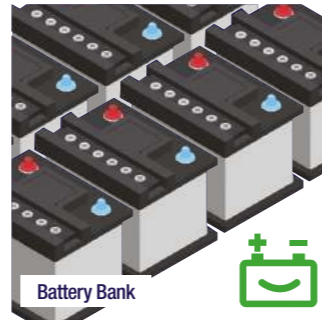
- Solar hybrid technology for sustainable free energy
- Automatic back up generator start/stop technology for economical fuel usage
- Lower fuel consumption
- Low CO2 emissions
- Super silent generator

Security / Safety

- Heavy duty locking system per door
- Robust exterior with high impact resistance



Solar PV Panels



Battery Bank



Cabin security - Deadlocks all round



Rounded corners & low level lifting



External power outputs



Link up socket

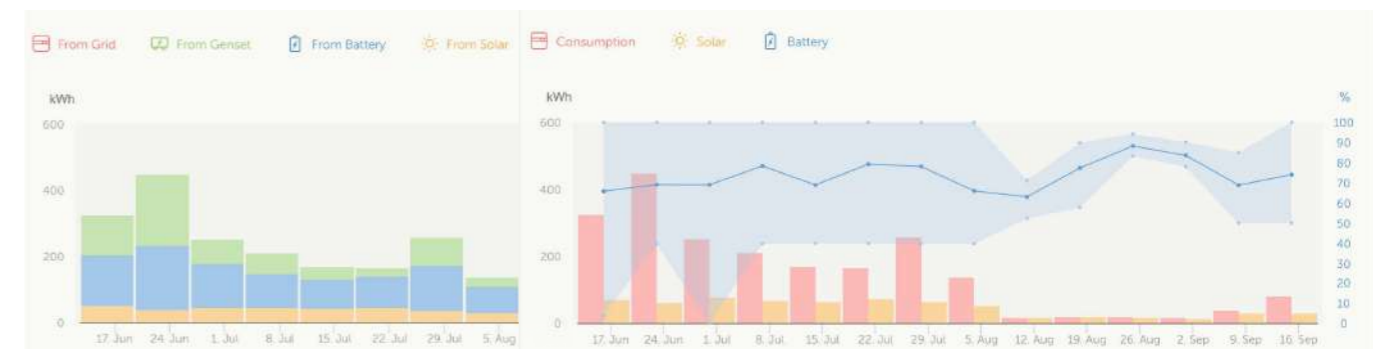


Extendable solar panel wings



Remote telemetry: Dashboard

		Solar Pod 15	Solar Pod 30	Solar Pod 60	
OUTPUT POWER	Prime Rating @ 25°C	63Amp / 15kVA / 12kW	100Amp / 30kVA / 24kW	200Amp / 60kVA / 48kW	
	AC Output Voltage	50Hz, 230V			
	Output Connections	3 x 32A single phase IP67 CEE Socket outlets, RCBO protected	5 x 32A single phase IP67 CEE Socket outlets, RCBO protected OR 1 x 125A single phase IP67 CEE Socket outlet, RCBO protected.	10 x 32A single phase IP67 CEE Socket outlets, RCBO protected	
	Additional output connections	16A			
INPUT POWER	Solar panels (on board)	5kVA / 4kW			
	Solar panels (plug & play)	Additional up to 8.75kVA / 7kW (running at 45 to 65 volts)			
	Generator backup power	12kVA / 9.6kW	25kVA / 19.8kW	35kVA / 28kW	
	Fuel Consumption	Fuel is only used when the generator is active. Generator is constantly in AUTO and only activates when required; battery charging and/or high load spikes.			
		100% load: 3.7 Litres per hour 75% load: 2.9 Litres per hour 50% load: 1.8 Litres per hour 25% load: 0.9 Litres per hour	100% load: 6.2 Litres per hour 75% load: 5.0 Litres per hour 50% load: 3.1 Litres per hour 25% load: 1.6 Litres per hour	100% load: 7.8 Litres per hour 75% load: 6.1 Litres per hour 50% load: 4.2 Litres per hour 25% load: 2.5 Litres per hour	
	Fuel tank capacity	400L			
	Grid Connection (optional)	20kW	20kW	40kW	
	STORAGE	Type	AGM (Absorbent Glass Matt)		
		Capacity @ 25°C	10kW	20.5kW	41kW
		Charge Time (hours approx)	2	3	4
Service life (years)		> 5	> 5	> 5	
CONTROL	System Controls (All models)	Remote telemetry connection via local WiFi or 4G internet connection. <ul style="list-style-type: none"> • Low fuel level alarm & monitoring. • Generator control; load management, optimised quiet hours and scheduled runs. • Enhanced system management. • Ability for users to program custom logic sequences. • System commissioning/decommissioning assistants. Controlled by App. (Android or Apple) <ul style="list-style-type: none"> • Troubleshooting assistants & diagnostics. • User friendly graphical performance & event logs. • Enhanced environmental control. • Remote communication, monitoring & control. 			
	Soft start timer	24/7 manually operated timer with soft start functionality to prevent overloading			
	Generator telemetry (optional)	<ul style="list-style-type: none"> • Monitoring. • Enhanced system management. 	<ul style="list-style-type: none"> • Generator control. • Troubleshooting assistants & diagnostics. 	<ul style="list-style-type: none"> • Event logs. • Remote communication, monitoring & control. 	
MECHANICAL	Operating Temperature Range (°C)	-20°C to +55°C Humidity (non-condensing): max 95%			
	Solar panels - Max physical load	Wind: 4000 Pa, 408 kg/m ² front & back Snow: 6000 Pa, 611 kg/m ² front			
	Solar panels - Impact Resistance	25 mm diameter hail at 23 m/s			
Dimensions (mm)	Closed - H 2700 x L 3330 x W 2745		Open - H 2700 x L 6530 x W 2745		
Weight (kg)	3800kg	4050kg	4650kg		
Lift Points	Forklift pockets & bottom lift				



Remote telemetry: Example data



An award winning product



Award winning welfare  Designed & built in the UK



VISIT
easycabin.co.uk

CALL
01582 486663

EMAIL
info@easycabin.co.uk

FOOTNOTES

- I. Annual solar input based on usage hours per day, 130 days in winter mode and 130 days in summer mode. Each day is a typical usage day. 60p per litre red diesel.
- II. CO2 per Litre of fuel / DEFRA 2019 figures. Red Diesel = 2.758
- III. Solar panels achieve maximum output in direct sunlight, but they work in normal daylight and cloudy weather too. The amount of power a 48v solar panel or charging kit generates in cloudy weather will be lower compared to direct sunlight. Also the positioning of the cabin will affect the solar charging of the batteries i.e. under trees, etc. Solar assessment is based at Luton, Bedfordshire, UK.
- IV. This assessment is guidance ONLY. As part of our on-going commitment to improvement we reserve the right to alter specifications, designs or figures, without prior notice. All dimensions and weights are approximate.