Solar Pod

Renewable Power Solution

Easily add sustainable power to any site, anywhere.

AJC Power Solutions

Modular
Expandable power storage

Works in harmony with Battery Pod & Solar Smart

30 kVA
Hybrid energy supplied

STAGE V HVO
Biosmart
Diesel/HVO Generator

Solar Pod

Sustainable Power Supply

✓ Reduce CO^2 emissions
✓ Reduce Noise
✓ Reduce Fuel costs

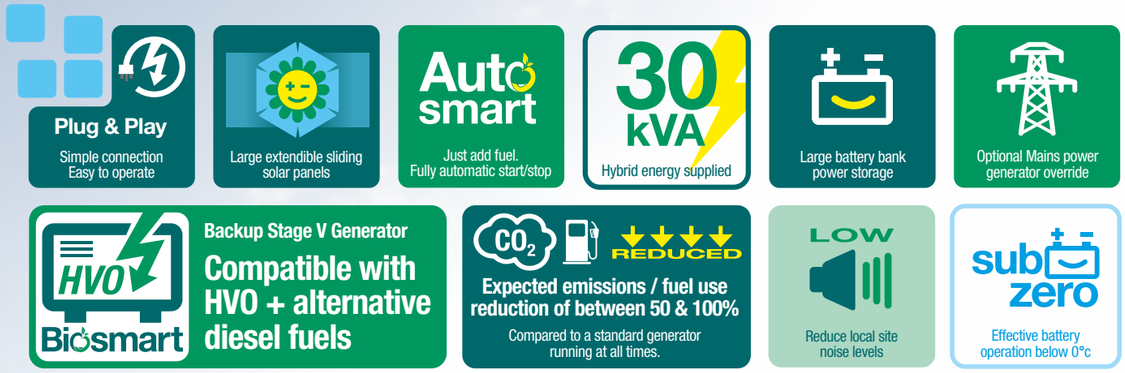
Renewable & reliable hybrid power supply perfectly packaged

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

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

The backup Stage V generator has increased particulate filtering, lower emissions and can run a variety of fuels including HVO.

This intelligent system ensures that all the end user needs to do is plug-in & switch on. All power needs are managed by the system without user interaction.



Hybrid Power solution. Solar, Battery and HVO driven generator all in one canopy. Designed to supply power to multiple single phase applications.

Add more solar capacity to your setup by plugging in Solar Smart panels to the Solar Pod.

Remove the need for the integral backup generator by plugging directly into the local power grid. The local power grid is then used as the backup power supply.

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 Smart Site products (Battery Pod & Solar Smart Panels).

AJC Power Solutions

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

Case studies

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

Site location
Essex UK

SUMMER & WINTER LONG TERM USE

TIME
1 Year

SITE USAGE
12 hours per day / 5 days a week

SITE SETUP
1x Solar Pod

2+1 WC OFFICE X 3 MEETING ROOM CANTEEN

The Solar Pod has been on site for 1 Year, and the standby generator has only ran for 1,202 hours across the year. An average of 23 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.

	50-60kVA Diesel Generator	1x Solar Pod 30
TOTAL CONSUMPTION	9,128 kWh	9,128 kWh
TOTAL SOLAR GAIN	0	1,701 kWh
POWER FROM BATTERIES	0	4,590 kWh
FUEL USED	Fuel Projected 13,836 Litres	Fuel actual 3,725 Litres
TOTAL FUEL COST	@ £1.70 per ltr = £23,521	@ £1.70 per ltr = £6,332
GEN HOURS	4,488 hours	1,202 hours
TOTAL LOCAL CO^2 PRODUCED	38,163 kg	10,273 kg

Solar Gain
1,701kW

Fuel saved
10,111 Litres
£17,188

Silent running hours
82%
Power from Solar / Batteries only

LOW CO^2
Carbon saving*
28 Tonnes

Equivalent to planting
1,394 Trees
to absorb this amount of CO2 over a year.

Site location
UK

SUMMER TIME HIGH SOLAR GAIN

TIME
144 days (Spring / Summer)

SITE USAGE
14 hours per day (average) / 7 days a week

SITE SETUP
1x Solar Pod

2+1 WC OFFICE X 3 MEETING ROOM CANTEEN

	50-60kVA Diesel Generator	1x Solar Pod 30
TOTAL CONSUMPTION	1,533 kWh	1,533 kWh
TOTAL SOLAR GAIN	0	1,331 kWh
POWER FROM BATTERIES	0	1,392 kWh
FUEL USED	Fuel Projected 7,105 Litres	Fuel actual 344 Litres
TOTAL FUEL COST	@ £1.70 per ltr = £12,078	@ £1.70 per ltr = £585
GEN HOURS	2,030 hours	111 hours
TOTAL LOCAL CO^2 PRODUCED	19,597 kg	948 kg

Solar Gain
1,331kW

Fuel saved
6,761 Litres
£11,493

Silent running hours
95%
Power from Solar / Batteries only

LOW CO^2
Carbon saving*
18.6 Tonnes

Equivalent to planting
932Trees
to absorb this amount of CO2 over a year.

NOTE: Carbon emission statistics are from Department for Business, Energy & Industrial Strategy. https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023

Technical Static & Mobile

Solar Pod

Sustainability

- Full hybrid technology for silent and emission free energy
- Automatic back up generator start/stop technology for economical fuel usage
- Lower fuel consumption
- Ultra-low CO2 emissions
- Stage V backup generator HVO & alternative fuel compatible
- ZERO Fuel Potential on low energy demand sites. Up to 100% of power demands can be met by solar & batteries alone.
- Powerful AJC SubZero heated lithium (LiFePO4) battery bank
- Wide temperature operating range ensures smooth winter running
- Extendable solar panel wings with 3.7kW potential input

Facilities

- Water proof IP67 CEE sockets
- 1x Single Phase 125 A output
- 5x Single Phase 32 A outputs
- 1x Single Phase 16 A output
- Local mains grid connection / generator override input socket
- Large fuel tank
- Remote diagnostics from your phone or laptop. Local WiFi & 4G mobile data connection
- Soft start timer function to prevent over loads on start-up
- External fuel tank connection

Security / Safety

- Sealed locking access doors all round
- Fully galvanised robust exterior with high impact resistance
- Temperature monitoring
- Wing braces to prevent damage in high winds
- RCBO protected inputs & output sockets

Optional / Extras

- Optional integral auto-cooling system, for use in hot climates
- Optional dust & sand protection on all external ventilation
- Optional paint colour
- Custom livery
- Spare tyre on-board

FUEL ACTIVE®

Burn only clean fuel. Reduce fuel consumption, CO2 emissions and preserve machine uptime.

FuelActive is a unique method of delivering 92% cleaner fuel to the engine by drawing fuel from just below the surface of the fuel tank. Standard diesel generators draw fuel from the bottom of the fuel tank where water, sediment, diesel bug and other contaminants settle.

FuelActive ensures that only clean fuel enters the fuel lines eliminating the costly effects of fuel contamination. Not only that, because the engine is burning only clean fuel, the thermal efficiency of the engine reduces fuel consumption whilst maintaining factory-level emissions standards through its life cycle.

Battery Storage Capacity

30 kWh or **50 kWh**

subzero

LiFe Po4 Lithium Long Life Cycle Batteries

6 x 100Ah
(5kWh per cell)

5 x 200Ah
(10kWh per cell)

Trailer

- AL-KO fully galvanised double axle chassis & running gear
- Fully braked, with balanced weight distribution for stable towing
- 4 corner steadies, fully adjustable
- Integral road lights and number plate holder

Specifications

Solar Pod

STORAGE	**Battery Capacity**	**30 kWh** or	**50 kWh upgrade**
	Charge Time (hours approx)	3	4.5
	Number of Batteries	6 x 100Ah (5kWh per cell)	5 x 200Ah (10kWh per cell)
	Potential Service life (years)	10 years (1 cycle per day @ 25°C)	
	Type	Lithium (LiFePO4) AJC SubZero	
OUTPUT POWER	**Max Potential Output**	Generator Power 17.5 kW Renewable Power 12 kW Total Power 29.5 kW	
	AC Output Voltage	50Hz, 230V	
	Output Connections	5 x 32A single phase IP67 CEE Socket outlets, RCBO protected 1 x 125A single phase IP67 CEE Socket outlet, RCBO protected.	
	Additional output connections	16A	
INPUT POWER	**Solar panels (on board)**	3.7 kWp (9x 415 W panels)	
	Power Bypass	Automatic	
	Generator backup power	19.4 kVA Continuous 21.4 kVA Standby	
	Generator Standard (EU) 2016/1628	STAGE V (EU) 2016/1628	
	Fuel Types	Standard Diesel: EN590:96 BS 2869 - A1 or A2 Alternative fuels from ONLY recognised/ authorised suppliers: Bio Diesel B5 EN14212 / HVO EN15940 / GTL EN15940 / BTL EN15940	
	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. NOTE: Using alternative fuels can reduce generator power rating by 4-8%	
		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	
	Fuel tank capacity	120L + Fuel Expansion Connections	
	Grid Connection	63Amp input	

CONTROL	victron energy  **System Controls (All models)**	**Remote telemetry connection via local WiFi or 4G internet connection.** **Controlled by App. (Android or Apple)** • 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. • Troubleshooting assistants & diagnostics. • User friendly graphical performance & event logs. • Enhanced environmental control. • Remote communication, monitoring & control.
	Soft start timer (Patent Number GB2582008)	24/7 manually operated timer with soft start functionality to prevent overloading
	Generator telemetry (optional)	• Monitoring. • Enhanced system management. • Generator control. • Troubleshooting assistants & diagnostics. • Event logs. • Remote communication, monitoring & control.
ENVIRONMENT	**Operating Temperature Range (°C)**	-20°C to +45°C Humidity (non-condensing): max 95%
	Solar panels - Max physical load	Wind: 4000 Pa, 408 kg/m² front & back Snow: 6000 Pa, 611 kg/m² front
	Solar panels - Impact Resistance	25 mm diameter hail at 23 m/s
MECHANICAL	**Static Model Dimensions (mm)**	Length – 2880mm Width closed – 2225mm Width open - 5215mm Height - 2240mm
	Mobile Model Dimensions (mm)	Total Length Inc. Draw Bar – 4250mm Box Length – 2880mm Width closed – 2250mm Width open – 5215mm Height – 2570mm
	Static Model Weight (kg)	2200kg
	Mobile Model Weight (kg)	2200kg
	Static Model Lift Points	Forklift pockets / bottom lift + lifting guides
	Mobile Model Lift Points	OPTIONAL

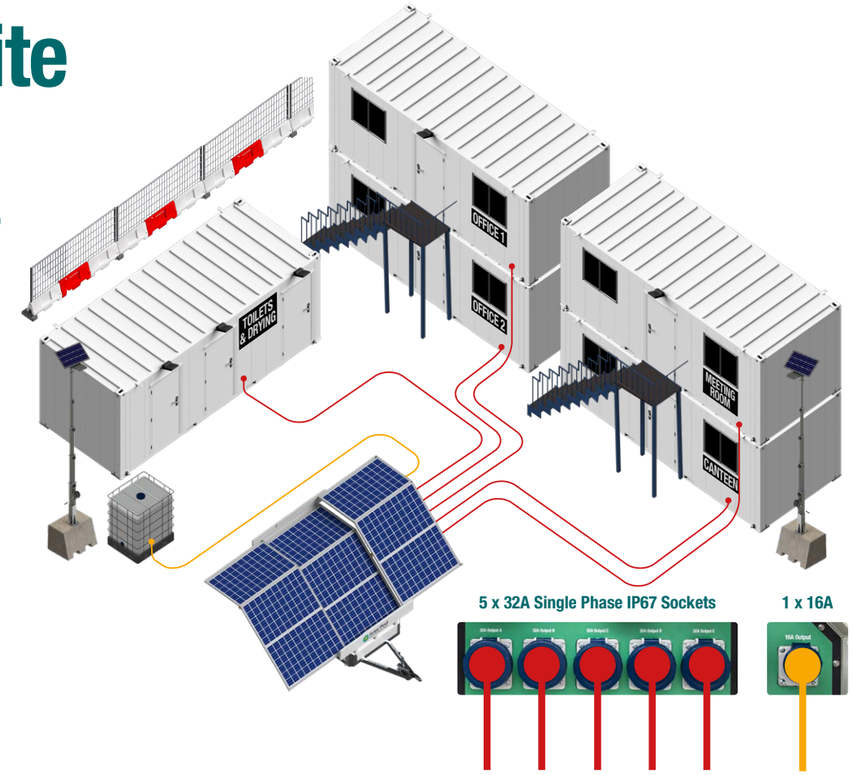
Typical site

5x Site Cabins
1x Water Bowser
+ Solar Pod

Typical Fuel / CO^2 Reduction +50%

Compared to a traditional 50kVA Generator

No traditional generator



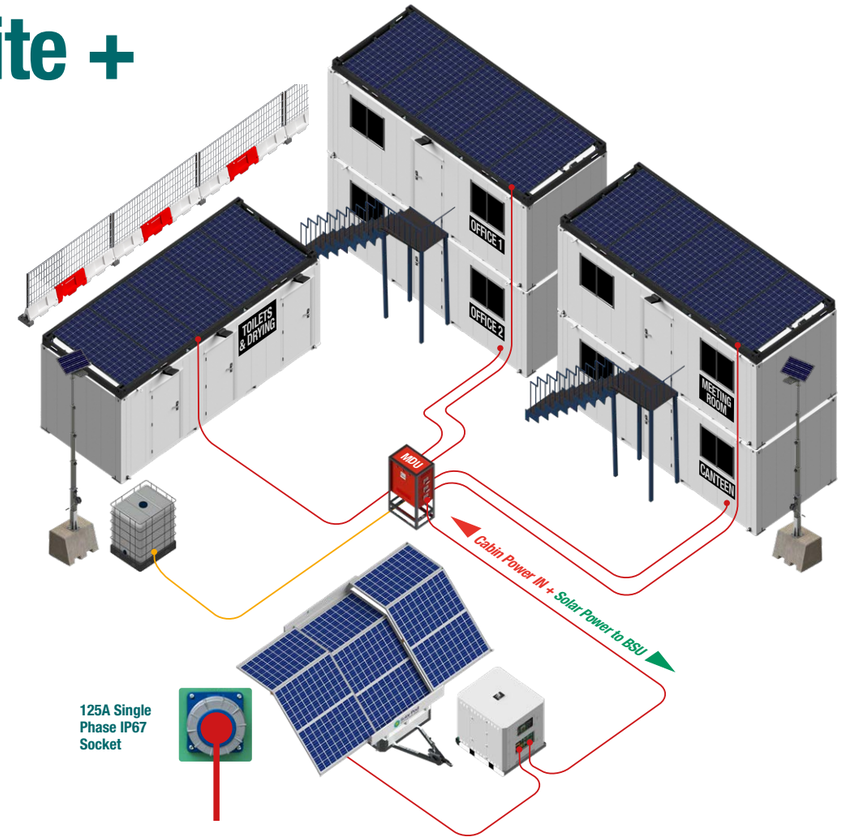
Typical site +

5x Site Cabins
1x Water Bowser
+ Solar Pod
+ Battery Pod
+ x3 Solar Smart

Typical Fuel / CO^2 Reduction +70%

Compared to a traditional 50kVA Generator

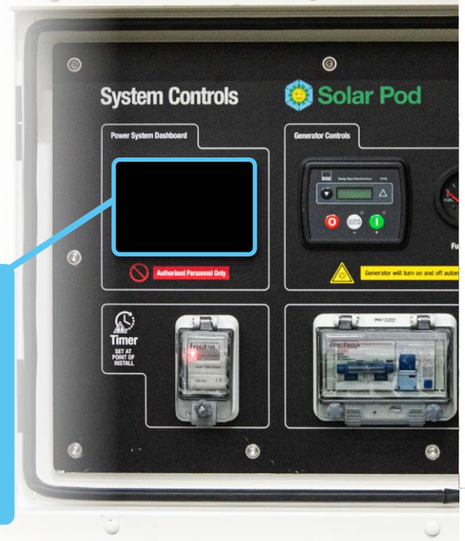
No traditional generator



NOTE: This is not a wiring diagram. For power flow illustration purposes only. Site setu-ps may vary.

On-unit Control Dashboard

On every Solar Pod is a local control dashboard integrated with **Victron Connect.** Simple user controls and data readout for each input, output, generator status, fuel, battery & solar levels.



Static Unit

360° Service After care & Support

User Manual & Service Guide

A comprehensive owners guide. Every part of the Battery Pod is covered, from End user guides to individual parts servicing, troubleshooting and maintenance.

Technical advice & training

We have a dedicated team of engineers UK wide. Ready to respond with remote phone support or at your location.

We offer full training courses in all aspects of maintenance and operation.

Solar Smart Site

Connect Battery Pods with Solar Smart Panels & Solar Pods to save more energy. Power large and small sites. Scale up or down with your project needs.

Solar Pod + Battery Pod + Solar Smart +

OR

Mains Grid or any auto-start generator

All together / Any combination / Multiples of each

360° Service

We have dedicated support teams to help you with every part of your journey with us.

We are more than just a manufacturer. Your success is the key to our success.

- Sales Support
- Marketing Support
- Delivery / Handover
- Product Training
- Service Support
- Technical Support
- Parts / Upgrades

AJC Power Solutions

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DESIGNED & BUILT IN THE UK

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FOOTNOTES

Annual solar input based on usage hours per day, 80 days in winter mode and 180 days in summer mode. Each day is a typical usage day. £1.70p per litre diesel.

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.

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.

Carbon emission statistics are from https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023