

# **Eccsmart**®

3 years of development has led to the ultimate EasyCabin range. Designed for the highest possible power saving & harvesting performance, even in the unpredictable UK weather.



**Backup HVO Stage 5 Generator** 

**Backup Hydrogen Fuel Cell** 



Maximum Solar. Lithium Battery Bank. Intelligent, automatic systems. Efficient appliances. Same great Ecosmart comfort and usability. 100% of the power can be met from solar only.\*









**Backup HVO Stage 5 Generator** 

**Backup Hydrogen Fuel Cell** 



Maximum Solar. Lithium Battery Bank. Intelligent, automatic systems. Efficient appliances. Same great Ecosmart comfort and usability. 100% of the power can be met from solar only.\*

No compromise, sustainable, automatic power systems. The ultimate EasyCabin.

Extra large, high quality solar panels and lithium battery bank for maximum power harvesting and storage.



#### up only.

No fossil fuels

With HVO fuel used as a back



#### Zero fuel with solar panels

**Kettle & Microwave** 

On summer days up to 100% of the power demands can be met from the solar panels.\*



#### More peace and quiet

Less generator time. Less noise and vibration.



Lighting

#### **On-demand power & heat**

**Hot water** 

On any appliance in the cabin.



#### **Efficient power management**

The Ecosmart system controls power demands to make sure the generator is only used when absolutely necessary.



#### Remote telemetry

View data readouts on your device or laptop from any where in the world



#### Rain water harvesting

Re-use rain water for toilet flushing and hand washing.







**Heating systems** 



**Sockets** 



# Solar + Lithium Battery Bank

+ Stage 5 HVO Generator

= No fossil fuels (or low emission diesel)





# We have been working hard behind the scenes to develop new ways to save harmful emissions and get ready for the future.

We need to provide piece-of-mind to our customers who are moving towards new alternative fuels. Our Biosmart products are designed to run both HVO and regular diesel whilst maintaining a manufacturers warranty. The perfect solution whilst in the transition away from fossil fuels.

HVO (Hydrogenated Vegetable Oil) is becoming more popular and accessible to off-road machinery users. It offers an easy way to cut emissions and fossil fuel use, whilst running traditional generators.

Biosmart HVO fits neatly into our product line offering real flexibility with fuel availability. Biosmart working in combination with our solar powered systems, will lower emissions even further!

### HVO. Every drop powers lower harmful emissions

Due to changes in tax relief on red diesel that came into force in 2022, the drive towards green fuel alternatives is getting stronger.

There are many established UK wide suppliers and prices are falling.

HVO is virtually the same as mineral diesel, but with added green benefits.

#### **Fuel Benefits**

(\*varies depending on fuel brand/supplier)

- Up to 30% lower NOx\*
- O Up to 85% less particulates\*
- O Up to 90% less CO2\*
- O Meets EN 15940:2016
- Enhanced cold weather storage & performance, compared to mineral diesel
- Non toxic biodegradable
- O Low sulphur, FAME and fossil content\*



#### Solar + Lithium Battery Bank + Hydrogen Fuel Cell = No Local Emissions





# True ZERO local emissions, the future of site welfare.

#### The UK hydrogen economy is growing. Get ahead of the curve with your welfare fleet.

The Ecosmart ZERO, the world's first Hydrogen powered welfare unit. Launched in Feb 2019, the zero has 2 years' service in the UK, undergoing extensive trials, improvements and upgrades. The Ecosmart ZERO has the same welfare facilities as any Ecosmart unit, with ZERO local emissions.

Zero fuel potential with solar panels. On summer days up to 100% of the power demands can be met from the solar panels.

The Ecosmart ZERO is now used by hire fleet operators and their customers, all year round in UK weather. We have collected 2 years of power consumption data to show systems working in all kinds of site scenarios.

#### **MAJOR 2022 UPGRADE: The Ecosmart ZERO**

Now with a redesigned Hydrogen Fuel Cell Module to improve performance, power and operation. Intelligent Energy engaged AJC on what improvements they would like to see from their fuel cells that would bring additional benefits to the Ecosmart ZERO range.

Ecosmart ZERO 2022, is the next generation model.

# Trialled, Tested, Proven. Hydrogen + Solar Welfare.

Extensively tested and proven to work effectively in all seasons. Used by hire fleet operators and their customers, UK wide. Next generation fuel cell & updated systems. More power, quicker startups, more features, more efficiency. Add the Wind turbine upgrade for reduced charge times.

# Scale up your eco-potential to ZERO emissions. Solar + alternative power sources.

We have a large collection of power consumption case studies and data.

Available on request.



**Eccsmart** 

'Air'

**Hybrid Power** 

HVO Generator / Battery

Heating

Diesel & battery

**Water Pump** 

**LED Lighting** 

**Hydraulics** 

**Kettle** 

**Battery** 

start

Charging

Push button

**Microwave** 

**Fully Automatic** just add fuel and

**Improve** charge times

> Extra solar input charges batteries faster.

#### Close to **Zero Emissions**

XL solar & batteries with responsive systems. Close to ZERO local emissions.

#### Zero **Emissions**

True ZERO local emissions. XL solar & batteries with responsive systems.

#### No Fuel **No Emissions**

True ZERO local emissions. XXL solar & swappable batteries with responsive systems.

#### **Eccsmart**

#### **Hybrid Power**

HVO Generator / Battery





**Pump** 

LED

Lighting

**Hvdraulics** 

Heating Fan heater

**Kettle Microwave** 

**Battery** Charging Push button



**Instant Hot Water** 4 minutes warm up

4 hours hot water on demand

**Instant Hot Water** 4 minutes warm up

4 hours hot water on demand

# **Autosmart**

#### **Automatic** Self charging hybrid

HVO Generator / Battery



**Battery** 

Charging



'Air'

Kettle **Microwave Automatic** 

Heating Diesel & battery

**Water Pump LED Lighting Hydraulics** 

**Instant Hot Water** 4 minutes warm up

4 hours hot water on demand



#### **Solar Panels**

HVO Generator / Battery / Solar









Generator time reduced

**Upgrade from: Eccsmart** 

**Eccsmart** 'Air'

**Autosmart** 



#### **Automatic** Self charging hybrid

Lithium Battery Bank / XL Solar / HVO Generator Backup





**ZERO** fuel on summer days

All systems run from battery bank

**Heating option** Diesel or Electric



Generator for battery charging or power surges



**Instant Hot Water** 4 minutes warm up

4 hours hot water on demand

#### **Eccsmart** ZERO

#### **Automatic** Self charging hybrid

Lithium Battery Bank / XL Solar / Hydrogen Fuel Cell Backup



**ZERO** fuel on summer days

All systems run from battery bank



Hydrogen Fuel Cell for battery charging or power surges



**Instant Hot Water** 4 minutes warm up

4 hours hot water on demand



#### **Automatic** 100% Electric

XXL Lithium Battery Bank XXL Solar / Swappable battery cells



Swap battery cells with your site service routine





**Instant Hot Water** 4 minutes warm up

4 hours hot water on demand

Choose Layout

12

**4**6

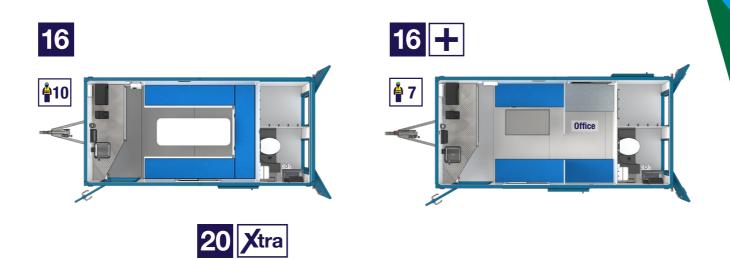
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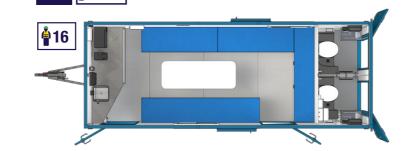
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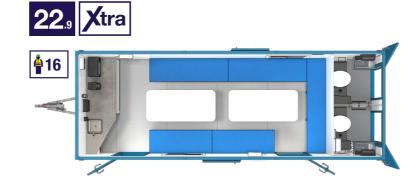
# Multiple layouts Multiple sizes Ultimate choice

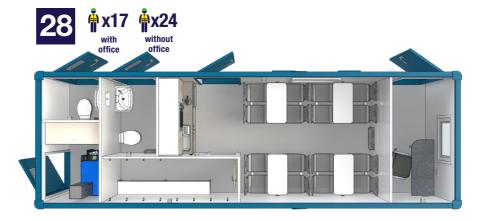
# **Mobile Hydraulic Trailer**





















Office space





#### **Eccsmart**



**HVO Generator** (No fossil fuels, low emissions)

(Zero Local Emissions)

#### Sustainability

- O Large solar array, uses whole of the available roof space
- O Large, powerful lithium battery banks power storage
- O Zero fuel with solar panels
  On summer days up
  to 100% of the power
  demands can be met from
  the solar panels only.
- O Fully insulated walls and roof system with no cold bridging
- O Rain water harvesting system provides water to toilets (optional)
- O LED lighting & hot water without the need for the generator or fuel cell
- O Low noise pollution
- O Low fuel consumption
- O Low or ZERO CO2 emissions
- O No need for fossil fuels
- O Automatic generator or fuel cell, stop/start technology for economical fuel usage
- All electrical systems and appliances available without the generator or fuel cell operating

#### Movability

- O Lightweight easy to towO Soft cushioning Hydraulic
- O Balanced loading, with generator or fuel cell in the front, for better towing
- O Accessible wheels. Ability in the event of a puncture to change at the side of the road with ease
- O Road lights and number plate holder built in, No need for a tailboard to be fitted
- O Accidental collision can occur, however our corners are designed to absorb impact and are easily maintained

#### **Facilities**

- O Easy to use canteen facilities; hot water boiler microwave & fridge
- O Comfortable seating area
- O Lots of storage space
- O Warm water washing facilities
- O Recirculating toilet
- O Forearm wash basin in toilet
- O All interior and exterior surfaces are tough, durable and wipe clean
- O Spacious drying room with hanging clothes facility
- O Drying room with heater or dehumidifier (Optional)
- O (Optional) Dual toilets with pedal flush

#### **Remote Monitoring**

# Power generation and flow at your finger tips 24/7. Access via WiFi or 4G connection.

- O Fuel level monitoring and low level fuel alerts
- O Battery power and monitoring displays
- O Diagnostics and troubleshooting
- O Event logging
- O Fuel Cell & Generator controls, ON/OFF, load management
- O Solar & Battery information
- O UPGRADE to AJC Connect for an extra level of remote control and monitoring



Remote telemetry: Dashboar

#### Security / Safety

- O Dual heavy duty locking system per door
- O Robust galvanised exterior with high impact resistance
- O Unique hydraulic system for setup in under 45 seconds
- O Carbon monoxide detectors
- O Hydrogen Gas detectors (ZERO only)

#### **Battery Bank Cells**

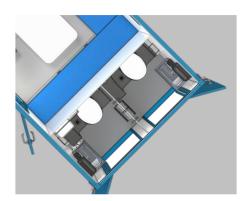












#### **Options**

- O Rain water harvesting systems
- O Fresh flush ceramic toilet
- O Dual toilets
- O Combined Air conditioning / heating
- O Diesel blown air heating system (Solar MAX ONLY)
- O Full electric heating
- O Wind turbine increases battery charging speed
- O Tilted solar panels to increase solar gain in winter months
- O Pin boards
- O Extra storage / shelving
- O External signage / branding
- O Chapter 8 livery & reflective kit

#### Wind turbine upgrade:

Adjustable tower mounted to the chassis frame. Increase battery charging speed. > Greater than 99% system efficiency.



#### **Heating Options:**

We have 3 different heating systems to choose from.



Combined Air Conditioning/heating



Full electric heating outlets



AIR diesel heating system (SolarMAX Only)



# AJC Connect

Monitor & control your fleet assets from anywhere.

*UPGRADE* 



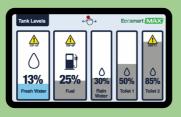
**AJC Connect** is a centralised asset management dashboard for organised oversight. Benefit from real-time tracking, ensuring continuous monitoring of the location and status of each system component. Achieve cost savings through efficient monitoring of maintenance, servicing, and resource allocation. Enhance security with GPS tracking and physical unit sensors.

Furthermore, delve into historical data analysis, recording, storing, and analysing critical metrics such as voltage and current. Develop a proactive preventative maintenance strategy informed by the rich historical data at your disposal. Elevate your asset management experience with our all-encompassing solution tailored for efficiency and security across the board.

#### **On-unit Control Dashboard**

Optional on any unit is a local control dashboard integrated with **AJC Connect.** Simple user controls and data readout for each appliance and system.





#### Level 1

#### Energy Usage Analytics:

Detailed insights into the power consumption of each unit

#### **Environmental Condition Monitoring:**

Track temperature, humidity, and other environmental factors to ensure optimal conditions within the units.

#### Remote Control Capabilities:

Ability to adjust some settings and systems remotely.

#### Level 2

#### Advanced Management and Integration

(Includes All Level 1 +)

#### Comprehensive Asset Management:

Detailed tracking of each unit's performance, maintenance schedules, and overall health.

#### **Integration with Existing Systems:**

Seamless compatibility with the unit's current operational systems for a unified approach.

#### **Predictive Maintenance:**

Utilise data trends to predict and schedule maintenance, reducing the likelihood of downtime.

#### Level 3

# Full Optimisation and Automation (Includes All Levels 1&2 +)

#### **Advanced Optimisation:**

Utilise external data trends to perform energy optimisation and automated adjustments. Automated Scheduling: Schedule maintenance, energy adjustments, and other tasks automatically, based on realtime and historical data.

#### **Customised Reporting and Insights:**

Tailored reports providing deep insights into unit usage, efficiency, and operational trends.



# **After care & Support**

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

# Technical advice & training

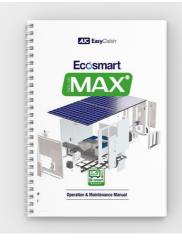
We have a dedicated team of engineers UK wide. Ready to respond with remote phone support or at your location.

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



# User Manual & Service Guide

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





#### **Ecosmart 16** Fuel Efficiency Comparison

To illustrate the fuel & emissions saving potential of our welfare units see below data for a 16FT welfare unit.

A full, individual data presentation for each combination of size / layout / system is available on request.

16 1 Year energy use*	Gen Run Hours	Litres Used	Diesel Cost £	Diesel CO <sup>2</sup> e KG	HVO CO <sup>2</sup> e KG	Litres Fuel Reduced by %	Fuel Cost Savings £
Non-hybrid 6kVA Welfare Unit	2600	2600	£ 4,420	7083	708		
Ecosmart	976	879	£ 1,494	2394	239	66.2%	£ 2,926
Ecosmart Solar	859	773	£ 1,315	2107	211	70.2%	£ 3,105
Ecosmart 'Air' Diesel Heating	843	783	£ 1,330	2132	213	69.9%	£ 3,090
Ecosmart 'Air' Biesel Diesel Solar	667	624	£ 1,061	1701	170	76.0%	£ 3,359
Autosmart	761	725	£ 1,232	1974	197	72.1%	£ 3,188
Autosmart @ Solar	592	573	£ 974	1561	156	77.9%	£ 3,446
Ecosmart MAX	168	151	£ 257	413	41	94.1%	£ 4,163
Ecosmart MAX 'Air' Diesel Heating	93	107	£ 183	293	29	95.8%	£ 4,237
	Fuel Cell Run Hours	Bottles H2 used	H2 Cost £	Local CO2e KG			
Ecosmart ZERO	505	72	£ 4,327	Zero			- £ 93

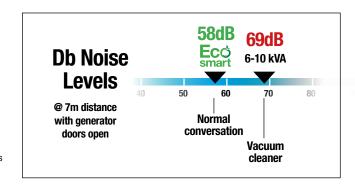
Based on 10 hours per day for 260 days, 80 days in winter mode and 180 days in summer mode. Each day is a typical usage day. 6 Persons accommodated.

£1.70p per litre Diesel / HVO £ 60 per H2 Bottle

Solar panels achieve maximum output in direct sunlight, but they work in normal daylight and cloudy weather too. The amount of power a 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.

This assessment doesn't take in consideration the usage of the hydraulics  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

This assessment is guidance only



Award winning welfare Mesigned & built in the UK













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info@easycabin.co.uk

DESIGNED & BUILT IN THE UK

EasyCabin Head Office & Factory, Unit 10, Cosgrove Way, Luton, Beds, LU1 1XL

FOOTNOTES

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.

A full energy presentation is available on request.

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