



Case Study 801 Fuel Cell Power Module

Ecosmart Zero Welfare Cabin

Developed by AJC, the Ecosmart Zero is a zero emission, hydrogen fuel cell powered, site welfare cabin.

It is the first viable welfare alternative for companies that are looking to reduce their carbon footprint and improve the environment for communities in the vicinity of its operation.

AJC has anticipated legislative demands on construction companies to reduce their CO₂ emissions and the

development of the Ecosmart is a clear move that the industry needs alternatives to those powered by diesel.

Intelligent Energy's 801 Fuel Cell Module (FCM) was selected by AJC to power the cabin and it is capable of providing all the power it needs. FCMs offers quiet operation, minimal maintenance (simply an air filter inspection or change), and zero emission at point of use (the only output is water vapour) and are reliable.

"We have been asked by many of our customers to develop site welfare solutions that produce zero emissions at point of use. We believe that the Ecosmart Zero range of welfare cabins offer an opportunity for companies looking to reduce their carbon footprint and emissions.

"The Intelligent Energy FCMs have been straightforward to integrate and, importantly for us, there is no operating difference for the end user. It will just be quieter and cleaner."

Lisa Gillet, Sales Director at AJC Trailers

In addition, the Ecomart Zero's zero emission credentials are strengthened as the power demands can also be met by solar on sunny days.

Hydrogen fuel cells are the ideal choice and a viable alternative to polluting diesel, to provide power in urban areas. Fuel cells have the potential to provide solutions to the UK's most critical energy challenges -enabling growth while improving quality of life and minimising environmental impacts.

AJC EasyCabin Ecosmart ZERO

- 16ft Mobile Welfare Unit
- Canteen and toilet facilities for up to 10 people
- Power = Hydrogen Fuel Cell and Solar array
- AL-KO Electric hydraulic axles and fully galvanised chassis

Constructed from unique patented (2448660) high strength composite panels. Galvanised steel exterior, seamless GRP interior and high density foam insulation, provides rust free and washable surfaces.

Unit specification

Canteen

- Table and bench seating
- Running hot water
- Electric 230v heating
- Microwave / kettle
- Durable stainless steel worktop
- Stainless steel sink
- PIR activated 12 volt LED lighting
- Fresh, waste and drinking water containers
- Soap dispenser
- Towel dispenser
- Cup dispenser
- USB Charging sockets

Toilets

- Coat hooks
- PIR activated 12 volt LED light
- Heating outlet
- Re-circulating flush tank toilet 80 litre capacity
- Sink to wash up to forearm
- Running hot water
- Soap dispenser
- Towel dispenser
- Toilet roll holder
- PIR activated LED light

Features of the FCM-801 technology used in the EasyCabin Ecosmart ZERO

- Lower life-cycle costs than standby diesel generators; with minimal service requirements
- Zero harmful system emissions at point of use
- Quiet operation
- Lightweight and compact design for manual handling
- Small footprint
- Regulated output designed for hybridisation with a 24V or 48V battery array
- Proven and reliable fuel cell system technology
- Utilises Intelligent Energy's Air Cooled AC64 fuel cell technology with robust metal fuel cell construction
- Assured power availability
- Modular, scalable system
- Simple balance-of-plant

Applications for FCM 801

- Non road mobile machinery
- Telecommunications
- Disaster recovery
- Portable power generation
- Backup power
- Emergency power
- Off-grid power
- Microgrids
- Auxiliary power units
- Material handling equipment
- Outdoor events



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