

# Solar-Powered Smiles: Clean Energy Solutions for Mobile Dental Clinics

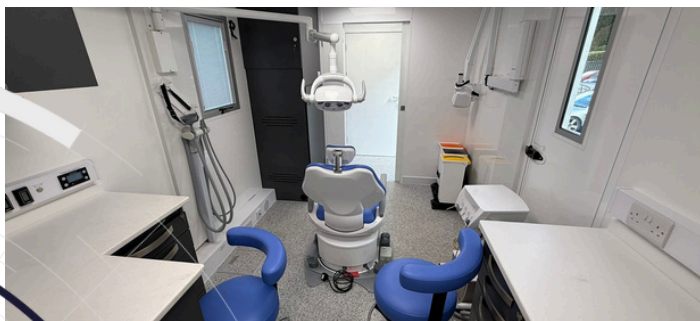
How sustainable power systems are transforming oral health care delivery in underserved communities.

Access to oral healthcare remains a significant barrier for many individuals living in socio-economically vulnerable situations. Community Dental Services (CDS) decided to take a proactive approach by bringing mobile clinics directly to those struggling to access consistent, preventative dental care. The social enterprise selected the specialist vehicle bodybuilder, Torton Bodies Ltd to design and build two mobile dental units, to deliver a high-quality oral healthcare treatments in state of the art facilities customer built to CDS specification.



The units are equipped with all the necessary dental equipment: from dental chairs, suction pump, air compressor, as well as a decontamination room with a washer disinfectant and steriliser, to sanitise the equipment before and after examinations. When the CDS teams are not commissioned to provide community services, they collaborate with various corporate companies who offer dental care as an additional benefit to their employees - proceedings of which are reinvested back into patient care.

Explore more about Community Dental Services  
[www.communitydentalservices.co.uk/mobile-clinics](http://www.communitydentalservices.co.uk/mobile-clinics)



## Products used

Solar panels  
Mastervolt Mass Combi Ultra  
Inverter/Charger  
Mastervolt MLI Ultra Li-Ion batteries  
Fischer Panda 8000i PVK-UK



Operating in city centres and community hubs, the CDS decided to invest in high-quality sustainably powered vehicles to minimise their carbon emissions in these areas. Torton Bodies and Fischer Panda UK | Power Solutions collaborated to design the optimal mobile clinic setup which can support the honourable cause.

The setup of such multifaceted vehicles includes dental equipment as well as air conditioning, and interior lightning - all requiring a lot of energy to operate efficiently and reliably. With a power requirement of 3.2kW for average usage and 3.6kW at 90% efficiency, a bespoke power configuration system was designed.

From rooftop solar panels the power is harvested and stored in two Mastervolt MLI Ultra Li-Ion batteries. With the help of a build-in inverter it is transformed into 230V AC loads, which can sustain the power-hungry dental equipment.



FischerPanda  
UK

POWER  
SOLUTIONS

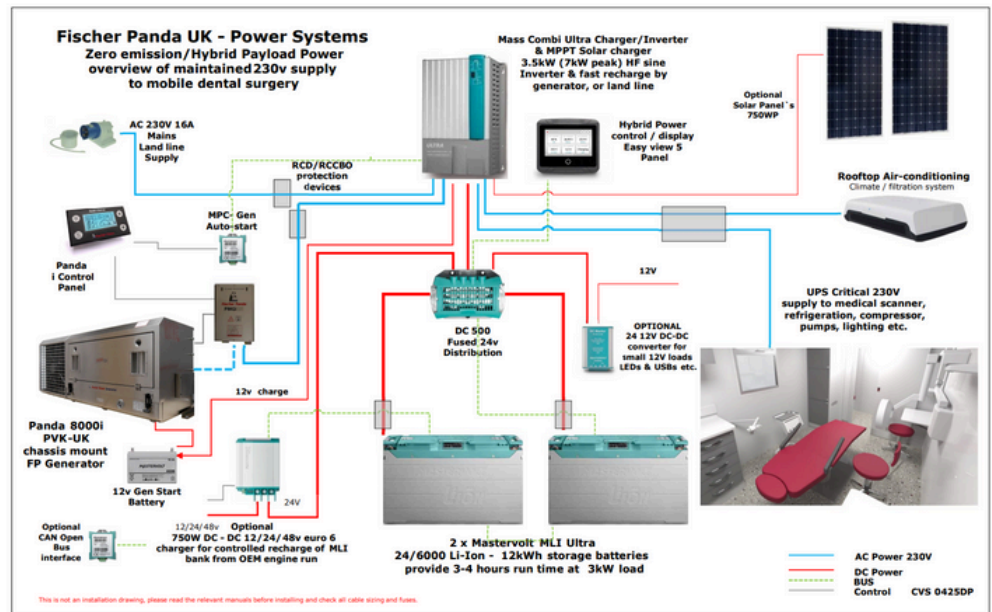


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The goal was to provide a powerful enough hybrid system, for continuous and reliable support, which is silent, eco-friendly and green. In case that is insufficient power and the batteries run low, the Fischer Panda 8000i PVK-UK generator serves as a charger and backup. Fischer Panda generators have a reputation to be the quietest and cleanest in the market and have proven to be the most reliable solution for the dental clinic.

This 7.5 tonne single surgery dental clinic is, however, not a first collaboration for Torton Bodies and Fischer Panda UK | Power Solutions. The two companies form a long-standing relationship build on trust and shared commitment to go above and beyond for their customers and tailor bespoke solutions for their requirements. The transparency between the partners makes the whole process a lot smoother and faster for their customers and both companies.

Torton Bodies is a specialist body builder creating bespoke systems and projects. Invested in understanding what the customer needs and the way the vehicle is being used, Torton Bodies prepares the ultimate tailored solution for any bespoke mobile unit: from exhibition display vehicles, clinics, operating theatres to libraries, and many other.



“We are proud of the relationship we have built over the years with Fischer Panda UK | Power Solutions. Both companies strive for customer excellence and really try to understand the customer’s requirements regardless of the complexity of the project.

No one size fits all, and each small change can mean a bigger system adaptation – meaning one must remain adaptable and communicate very efficiently throughout the process, which is a breeze with the team at Fischer Panda UK.”

**James Andrews, Managing Director at Torton Bodies**



Providing complete system solutions for the marine, vehicle and defence sectors.  
Fischer Panda generators and propulsion | Mastervolt power electronics | CZone digital switching | Clayton Power all-in-one-power system | EFOY fuel cell system | Integrel engine power | Parker and Wananchi watermakers | Autoclima, Eberspächer and Dometic climate control