

# AC – DC Packaged Generating Sets

ULTRA QUIET 4kW – 60kW FOR SPECIALISED VEHICLE MARKET



In vehicle set with enclosure removed

Antares have joined forces with Fischer Panda UK to provide a wide range of AC & DC generating sets from 4kW – 60kW for the specialised vehicle market.

From the outset, these units have been designed to suit applications where the engine operates for extended periods and the acoustic silencing is critical to on-board personnel or the outside environment.

Weight and size have been kept to the absolute minimum using water cooled alternators and close fitting acoustic pods. Innovative control features provide high voltage stability and high starting current giving a performance that belies its compact size. The link with Fischer Panda UK enables us to offer on-site installation and servicing, plus full DC and AC engineering application support for the professional user —all from one source.

## Where should these engines be used?

Designing an engine is always a compromise between features and price. So selection of the right engine depends on what you want it to do. No engine offers all things to all people!

The following comments are designed to help you to decide if our engines are right for your particular vehicle.

**Is the vehicle petrol or diesel?** - Our engines are all diesel and can use a common fuel supply shared with the vehicle. If you do not want mixed fuels and have a diesel chassis then these engines are right for you.

**Is the engine required to be permanently integrated in to the vehicle?** A key question. Some applications require the engine to be removed from the vehicle and hand carried for use elsewhere. This favours the lighter petrol/ LPG engines which have the fuel, exhaust and cooling mounted on a single frame. Our engines are more appropriate as the on-board power source for extended use.

**Is the vehicle to be staffed, or used in close proximity to people?** If so, you need to address the noise attenuation issues. The Fischer Panda engines are designed for very quiet operation, typically around 55dB at 7m. 5dB less than normal conversation! This is achieved from outset by its fundamental design. Unlike conventional installations, which have to silence the cooling air, the heat is removed from the set completely via the water and dissipated in a roof mounted or side mounted thermostatically controlled fan radiator.

To achieve this, Panda have built a unique water cooled alternator directly coupled to a water cooled engine. The exhaust exits via an integral water cooled silencer. The complete engine is then encased in a close fitting acoustic pod.

For specific information refer to the leaflet "Electrical power for vehicles" which gives details on the available configurations. The following comments are for guidance only.

Antares TDC  
Knaves Beech Business Centre  
Davies Way  
Loudwater  
HIGH WYCOMBE  
HP10 9QR UK

www.antares.co.uk  
email: info@antares.co.uk  
tel: +44 (0)1628 535440  
fax: +44 (0)1628 535441

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## Field support

Through our partnership with Fischer Panda we can provide trained technicians. They can install the generators, provide service training, and specialist support directly throughout the UK. The Fischer Panda service network is also available world-wide.

Applications engineers from Antares and Fischer Panda are also on hand to help design installations, identify problems, and organise support.

## Servicing

The generators require inspection and a simple service every 100hrs running time. Planned regular maintenance make these generators very reliable and therefore very cost effective to operate.

## Cost of ownership

When comparing alternative generators, many specifiers look at the purchase price only. This can be a false economy. Where a generator is to be operated as part of a daily or weekly routine and not just for stand-by power, the longevity of the engine and maintenance become more significant in the cost of ownership calculation, far outweighing the original purchase price.

It is also important to note that the "packaged" set is far less expensive to install. It only needs services to be connected and does not require expensive additional acoustic housing which adds cost, weight and space to the vehicle.

## Installation

This simply requires the following actions:

- **Mounting the generator on the**

- **anti-vibration mounts.**
- **Connecting a flow and return to the vehicle fuel tank**
- **Mounting the radiator on the roof or elsewhere and coupling the flow and return cooling runs.**
- **Connecting the AC electrical system.**
- **Running the exhaust (no external silencer is required).**
- **Connecting the DC starter supply**
- **Commissioning the set.**

## Control

The engines have a patented Voltage Control System (VCS) which controls the generator voltage and speed to +/- 3% tolerance up to 80% of maximum output load.

A further enhancement is the ASB booster which increases motor starting current available by up to 300%.

## Type of package

The engines are packaged in a variety of ways to suit the application. Please refer to our applications engineers for guidance. The two most common configurations are the PVMV-N designed to be used in a protected environment and the PVK-U which is designed for under-floor external use. Both require an external radiator on the roof or elsewhere on the vehicle. The PVK-UK is an external set and has an integrated radiator.

## AC/DC output

The generating sets are available in 110V, 230V or 400V output depending on size and configuration.

110/230V and 230/400V power sharing is available on certain generators.

Some applications require high amounts of DC current. The

Panda AGT-DC Sets can provide up to 10kW @ 24V and 6kW @ 12V.

## Pedigree

The Fischer Panda generators have created a quiet revolution in the UK auxiliary genset market.

By designing reliable sets suitable for integration, these sets have been the preferred choice in the outside broadcast industry, hospitality vehicles, mobile medical facilities, and military.

Partnership with Antares will extend this level of sophistication to UK specifiers in the fire, ambulance and police, and other specialised applications where a full technical design service is required.

**Please call us to discuss your application and issues raised in this leaflet.**

We believe that reviewing auxiliary electrical power system design at an early stage can offer considerable cost benefits and ensures meeting the operational needs of the completed vehicle in service.



**Under-floor mounted set – PVK-U**



**External soundproof enclosure**



**Internal soundproof enclosure**