

# Defence Energy Systems

By Fischer Panda



FischerPanda

# Pioneers In Innovation, Service, And Quality

**Fischer Panda – your source for leading energy solutions and seamlessly integrated energy management.**

With top-tier generators and advanced energy consulting, we deliver tailor-made solutions that exceed the highest standards of quality, performance and energy efficiency. Benefit from nearly fifty years of industry expertise by choosing Fischer Panda. Our products are the preferred choice for customers looking for outstanding innovation, service and quality.

Our unwavering commitment is reflected in the use of high-quality materials and stringent control procedures. Enjoy unparalleled customer service through our extensive global network of dealers and service partners. Committed to sustainability, we offer environmentally friendly solutions that surpass the highest emission standards.

Contact our team to find the ideal solution for your application combining innovation, service and quality.



## A Comprehensive Portfolio For Every Mission

### Power Systems For Integrated Vehicle Operations



Providing power for armoured command and control vehicles has become of increasing importance for staying mobile on rough terrain and operating where light vehicles are vulnerable. DC power for battery systems provides vital communication links for troops and their commanders.

### Power Systems For Air Defence Applications



Radar and weapon control, air defence and satellite communication systems require a dedicated supply of continuous, clean power so that their sensitive electronics can operate without disruption. Fischer Panda manufactures generators for these special systems which operate with 400 Hz.

### Power Systems For C3 Applications



C3 networks rely on sophisticated and powerful electronics to connect forward units with higher-level networks over wider areas. Our generators provide reliable power for these tasks enabling commanders to successfully deploy and operate radio and satellite relays.

### Power For General Purpose Applications



Fischer Panda generators are suited for a wide range of applications operating from container based, mobile and semi-static locations that are not connected to a local grid or an on-site power utility. They supply continuous power for lighting, air-conditioning, heating, air-filtering circulation and shelter pressurising systems.

## Fischer Panda AC Generators

The AC generators feature a very effective cooling system ensuring that temperatures inside the sound insulation capsule remain within an acceptable range even in tropical conditions.

The asynchronous generators are suited for applications requiring continuous power and high starting capabilities with a very stable voltage supply. These compact generators operate at a regulated speed of 3000 rpm (50 Hz) or 3600 rpm (60 Hz).

They are driven by modern diesel engines that meet the latest emission standards (EU Stage V and EPA Tier-4). They can operate with a wide range of fuel types including F 34, F 54, standard automotive diesel fuel, kerosene, JP 8, JP 5 and JET A.

Fischer Panda offers various options for connecting generators in parallel or to a land power connection for load sharing and load switching capabilities.

AC generators are available in a wide range of voltages:  
50 Hz ~ 230 V / 400 V and 60 Hz ~ 120V / 2 x120V-240 V / 230 V

### Water-cooled AC Generators 400 Hz

Radar / weapon control centres, air defence systems and satellite communication systems require a dedicated supply of continuous, clean power so that sensitive electronics can operate without disruption. Fischer Panda manufactures generators for these types of systems which operate with 400 Hz.

240V / 416V / 400 Hz

120V / 208V / 400 Hz



## Fischer Panda DC Generators

AGT (Advanced Generator Technology) generators are driven by diesel engines and deliver high-performance battery charging for onboard systems. Equipment can be operated independently of the vehicle's engine or any external energy source. Batteries are recharged automatically in a very short time ensuring uninterrupted operation and full combat readiness.

If there is no room for a sound insulation capsule, the generator may be installed in a dedicated compartment within the hull. Due to its modular design, the generator's major components can be distributed throughout the vehicle wherever space is available.

When used together with a combi-inverter, AC consumers can be supplied via the battery bank for short periods (depending on capacity). The generator keeps the battery bank charged. Most load profiles can be supported by running the generator 2-3 times a day for 30-minute-periods. AGT-DC generators are available in a wide range of voltages.



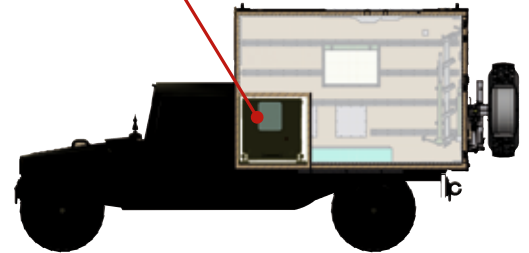
# Fischer Panda SST Generator Versions

SST “Super Silent Tunnel” generators are designed for mobile shelters and vehicles with a generator “tunnel”. Major components are fitted together on a frame with slides. Fuel is usually supplied via hose connections to the vehicle’s main fuel tank.



Example: SST generator mounted in a Humvee tunnel. The generators can be connected to the vehicle fuel tank.

- Super-silent and compact design
- Suitable for shelter tunnels
- Mounted on telescopic slides

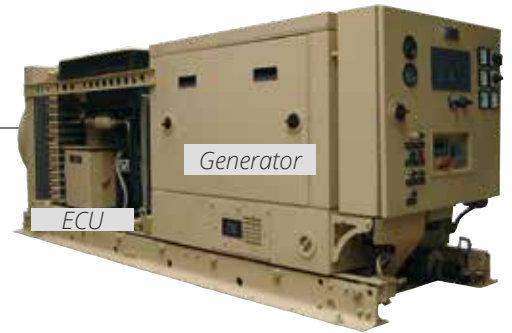


# Fischer Panda Power/ECUs

## Panda SST Combo

The compact SST Combo combines generator and ECU into a single unit. This ensures a controlled environment and power within the shelter.

- Suitable for shelter tunnels
- Mounted on telescopic slides
- Integrated ECU

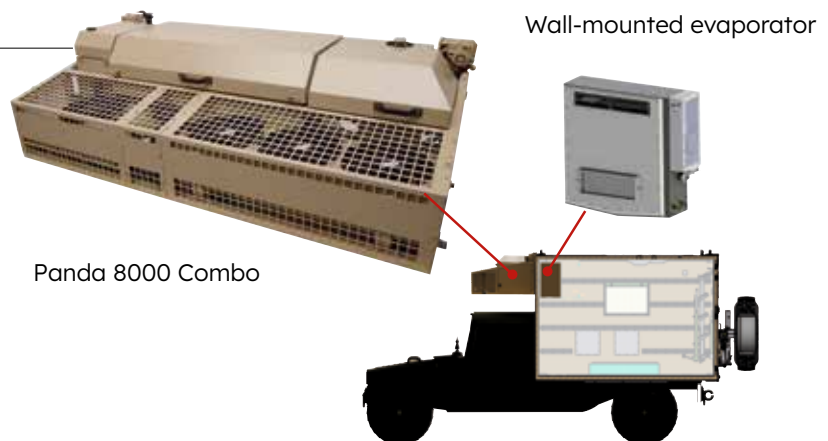


Fischer Panda generator with integrated ECU

## Panda 8000 Combo

The Panda 8000 Combo is an externally mounted generator for shelters with a split-system ECU. The evaporator is mounted within the shelter. The generator also supplies electrical power.

- Combined ECU and power system
- 6 kW electric / 6 kW cooling
- Redundant operation
- Intelligent energy management
- Innovative compressor technology
- Integrated safety features



Panda 8000 Combo

## Fischer Panda ECU 8000

The ECU 8000 is specially designed to provide a controlled environment for applications operating in harsh conditions.

- ECU split-system
- 8 kW cooling performance
- 5 kW heating performance





## Designed And Built For Extreme Conditions

Fischer Panda offers customised units tailored to customer specifications. The generators are subject to an intensive testing regime to ensure that quality standards are met.

- Operating in sub-zero temperatures
- Vibration-free operation
- Intensive quality and testing regime
- Liquid cooling for engine and alternator
- Encapsulated system – no contamination
- Compact, rugged design
- Optional configurations
- Operate with a wide range of fuel types
- -40° C to + 60 °C constant operation
- Meet emission regulations
- Low thermal signature
- Meet EMC/EMI milspecs or defence standards
- 3000 metres standard military operating altitude (AMSL)
- Tailor-made to design requirements
- Very high reliability
- Easy to operate and maintain
- Rain and humidity testing
- Fischer Panda offers installation and operator training

## MIL-STD Requirements

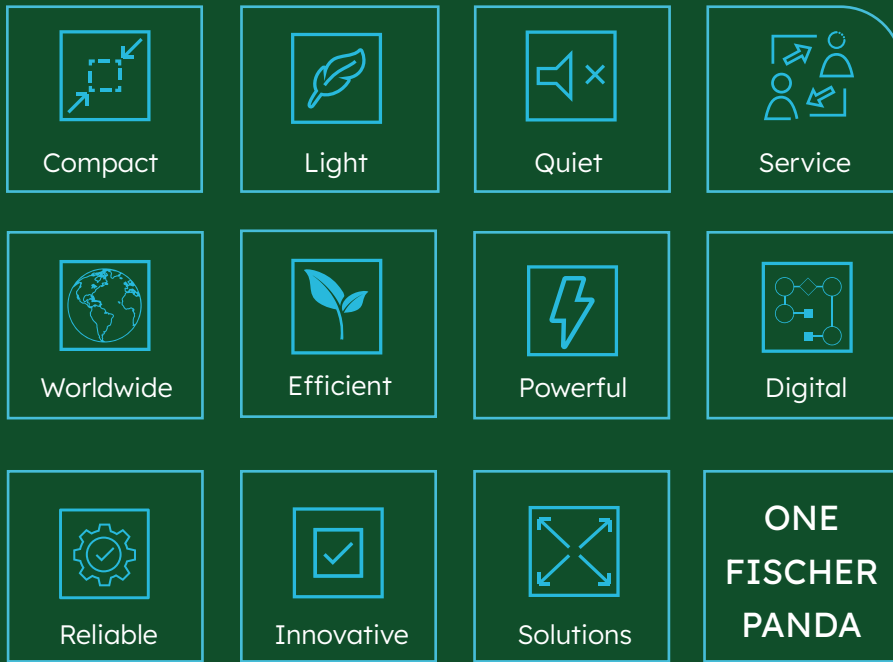
Fischer Panda is experienced with designing and constructing generators to meet a wide range of MIL-STD requirements especially EMI levels and IR signatures, exhaust emissions and operating sound levels.

### MIL-STD-810G:

501.5, Prcd. I, II, High Temperature  
502.5, Prcd. I, II, Low Temperature  
503.5, Prcd. I, D, Temperature Shock  
505.5, Prcd. I, Solar Radiation  
506.5, Prcd. II, Rain  
507.5, Prcd. II, Humidity (95% rel. hum.)  
510.5, Prcd. I, II, Sand and Dust  
514.6, Prcd. I, Vibration

### MIL-STD-416F:

RE102, Radiated Emissions, Cat. Navy Mobile & Army  
CE102, Conducted Emissions, Basic Curve  
CS101, CS114, CS115, CS116, Conducted Susceptibility  
RS103, Radiated Susceptibility



**FischerPanda**

**Fischer Panda GmbH**  
 Otto-Hahn-Str. 40  
 33104 Paderborn, Germany

Tel.: +49 5254 9202-0  
 info@fischerpanda.de  
 defence.fischerpanda.de



defence.fischerpanda.de