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ECOTUG

ECOTUG 90 / ECOTUG 180

Who We Are

AEME GSE is a global pioneer in aviation ground support equipment, supporting the green transformation of airports through practical and innovative energy solutions.

Backed by more than 20 years of expertise in power electronics technology, we offer a comprehensive portfolio that includes eGPUs, solid-state power units, energy management systems, and cable reels.

Our solutions have been widely deployed at major civil airports across the Asia-Pacific region and are now rapidly expanding into global markets.

20+ Years

Of expertise in power industry

7.3+ Million tons

Carbon Emissions Reduced

95,000 m²

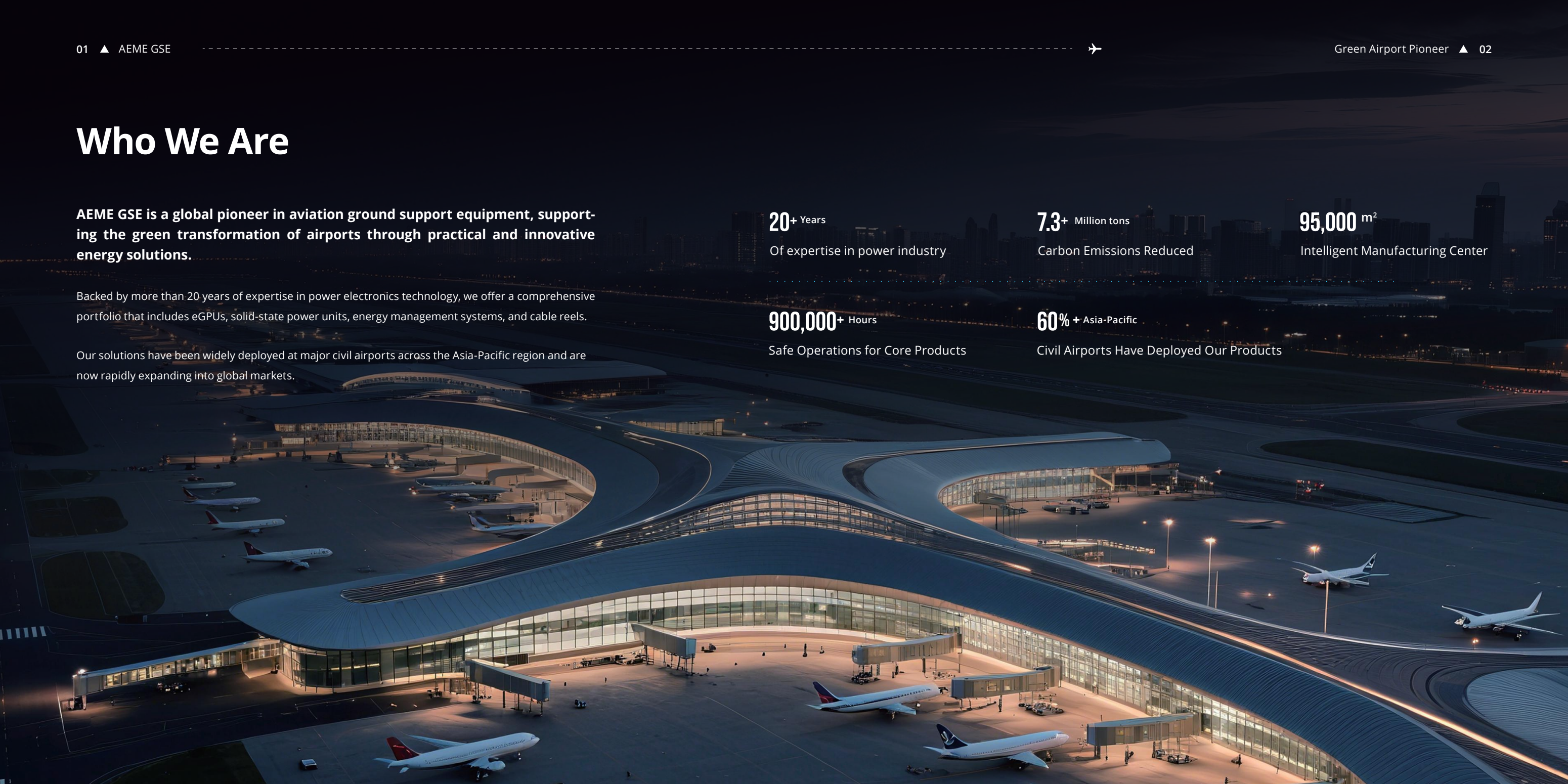
Intelligent Manufacturing Center

900,000+ Hours

Safe Operations for Core Products

60%+ Asia-Pacific

Civil Airports Have Deployed Our Products



ECOTUG

Enabling Low-Carbon Airport Operations



Designed for civil aviation airports, this solution provides a clean, stable, and efficient 400Hz power supply, providing a reliable alternative to traditional fuel-powered APUs.



It integrates a towable chassis and an energy storage battery system into a mobile unit, offering excellent mobility and compatibility with various types of aircraft stands.



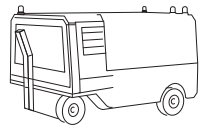
Supports dual output of 115V/400Hz and 28VDC to meet the power needs of a broad range of aircraft.



ECOTUG 90

AGSP-ASS-090H-M

400Hz/90kVA



ECOTUG 180

AGSP-ASS-180H-M

400Hz/180kVA



Product Highlights

Flexibility



Our product offers high flexibility, supporting mobile chassis setups to adapt to various application scenarios.

Safety



Equipped with a fire protection system, including both battery fire suppression and system-wide fire safety features.

Reliable Power Supply



Supports stable and high-quality power output.

Intelligent Diagnosis



Full-process operational diagnostics ensure easy maintenance.

Cloud Service



Integrated with a self-developed cloud platform for digital management, enhancing operation and maintenance efficiency.

Battery Details



Battery Management System

Real-time monitoring

- Cell voltage (accuracy \leq 5mV), charge current (accuracy \leq \pm 1% FSR), SOC (error \leq 5%), and state of health.

Three-level alarm

- Data anomaly: audible and visual alarm \rightarrow remote platform alert \rightarrow forced sleep mode. Data stored locally for over 10 years to support fault tracing and diagnostics.

Automatic Fire Suppression System

- The battery cabinet features automatic fire suppression. A composite detector is installed inside the battery pack to detect temperature, smoke, CO, and electrolyte vapors. Internal algorithm detects fault level and initiates fire suppression for pack-level protection. An external manual fire switch is provided for emergency manual operation, offering dual protection.

Environmental Adaptability Management

- Thermal management system (heating, cooling, thermal insulation) ensures stable performance from -20°C to 55°C , reducing temperature-related risks and extending battery life.

■ Structure on
■ the opposite side



Battery from CATL

- Powered by CATL's world-leading LFP batteries and advanced battery technologies.
- High energy density, high safety, and strong environmental adaptability.
- Warranty: up to 4,000 cycles / 8 years.

ECOTUG Solutions Mobile Power Support Solution

This solution utilizes a mobile power system to address challenges such as limited power distribution at remote stands. It also enables quick response in emergencies and unexpected situations.

Emergency Support



Capable of responding quickly to emergencies

Versatile Applications

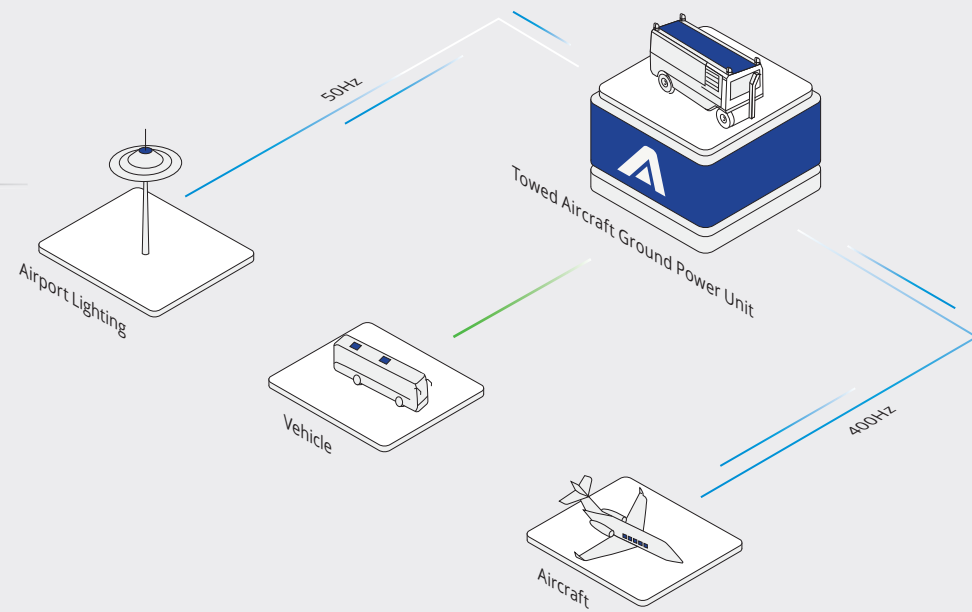


Flexible and mobile, green and low-carbon, suitable for multiple scenarios

Key Products



ECOTUG



AC

DC

ECOTUG Solutions 400Hz Power Supply Solution

Our 400Hz Power Supply Solution supports global carbon neutrality efforts by enabling APU shutdown during aircraft ground parking.

Flexible Installation



Enables flexible deployment in various scenarios

High Reliability



Supports stable and high-quality power output

High Efficiency



Improved system efficiency

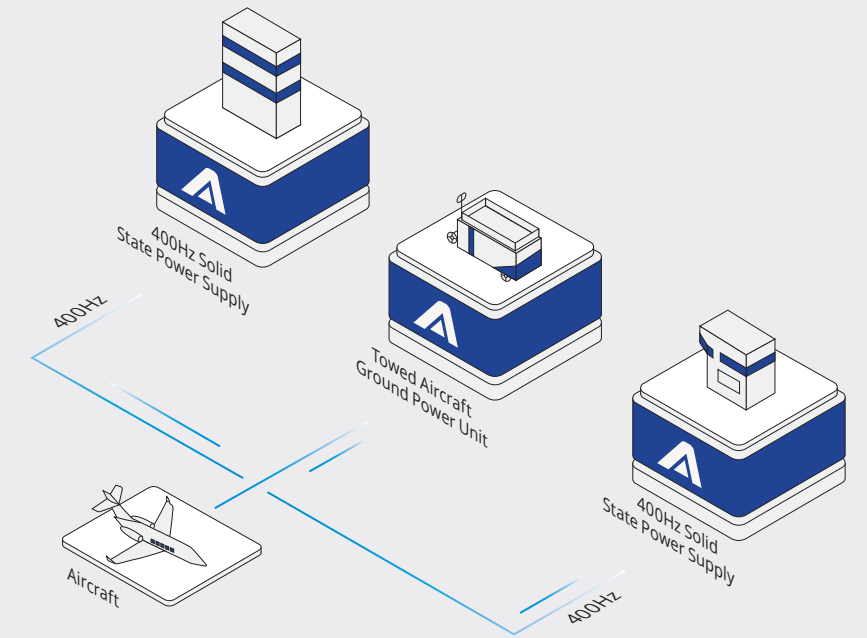
Key Products



ECOTUG



S-Power



AC

Minimizing Airport Emissions and Costs

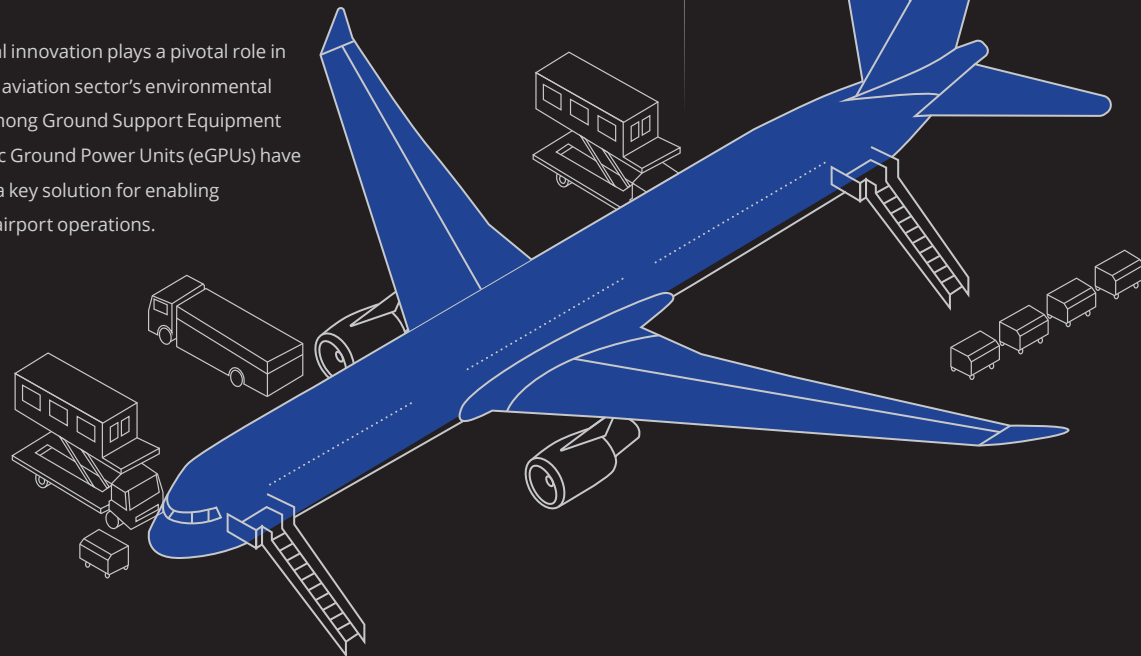
- Growing Need for Decarbonization
- Rising Costs of Airport Infrastructure Upgrades
- Sustainable Innovation Paves the Way to Lower Emissions



As global temperatures continue to rise, the aviation sector — a vital pillar of the global economy — faces mounting pressure to accelerate decarbonization.



Technological innovation plays a pivotal role in reducing the aviation sector's environmental footprint. Among Ground Support Equipment (GSE), electric Ground Power Units (eGPUs) have emerged as a key solution for enabling sustainable airport operations.



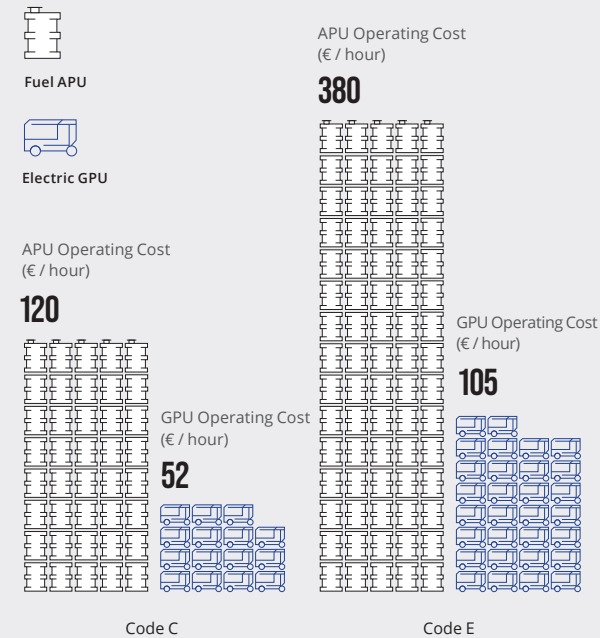
The APU contributes to an aircraft's carbon emissions on the apron, up to

50%

Saving Operating Costs

Costs for APU & GPU Power Consumption

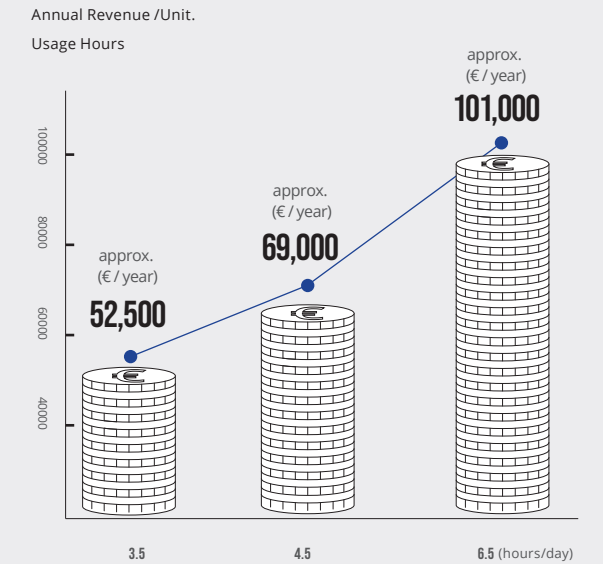
The following data are estimated examples based on the usage of related products, calculated according to fuel and electricity costs in different countries.



Note: Estimated figures. Actual costs may vary depending on airport and airline-specific pricing policies.

Cumulative Revenue

The following data is based on the actual operation of GPUs used by AEME partners.



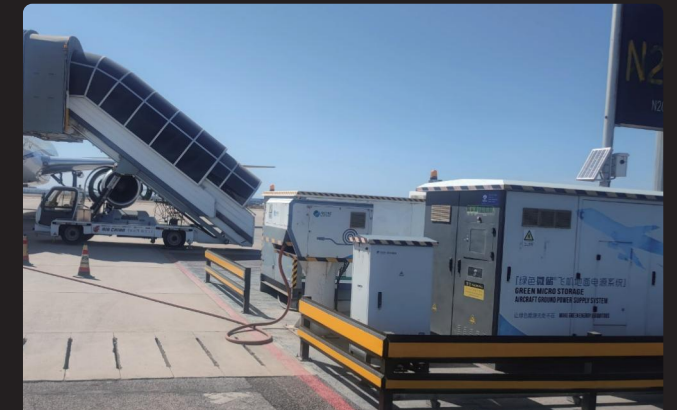
Note: The calculation is based on standard charging rates for mobile GPUs and may be adjusted based on the standards of different countries.

Product	ECOTUG 90	ECOTUG 180
Product Model	AGSP-ASS-090H-M	AGSP-ASS-180H-M
Battery		
Battery type	LFP	
Battery capacity	210kWh	281kWh
Charging inlet	CCS2	
Maximum charging	690V	700V
Charging power	92kW	150kW
Maximum charge current	150A	250A
400Hz Output		
Rated capacity	90kVA	180kVA
Rated voltage	3×115/200Vac	
Rated frequency	400Hz	
Overload		
125%	Lasts 600s	
150%	Lasts 60s	
200%	Lasts 30s	
300%	Lasts 10s	
400%	Lasts 1s	
Protect		
Level of protection	IP55	
Output over/under voltage protection	Available	
Overload protection	Available	
Internal over-temperature protection	Available	
Output short circuit protection	Available	
Output N line disconnection protection	Available	
Output N-line voltage monitoring	Available	
Input over/under voltage protection	Available	
Efficiency		
Efficiency	95.2%	
Environment		
Operating temperature	-20°C-55°C	
Relative humidity	10%-100% (no condensation)	
Noise level	<65dB	
Altitude	≤2000m	
Structure		
Dimensions	3000mmx1750mmx1750mm	4500mmx1790mmx1750mm
Weight	3050kg	4120kg

*Note: The above specifications are obtained under specific test conditions. Actual performance may vary depending on operating environment. Specifications are subject to change without prior notice.



Hainan Airlines



Beijing Capital International Airport



Shenzhen Bao'an International Airport



Capital Airlines



Sanya Phoenix International Airport



Larnaca, Cyprus



Incheon, South Korea



Sichuan Tianfu International Airport



Chengdu Shuangliu International Airport



China Eastern Airlines



Hohhot Shengle International Airport



Hangzhou International Airport



Lijiang International Airport



Hangzhou International Airport



Chengdu Shuangliu International Airport



Dalian International Airport

Why AEME GSE

Technical Innovation



Leveraging advanced technology, AEME leads in green energy storage R&D. Our innovative aircraft ground power supply, ultra-silent modular PCS, and all-in-one systems are widely recognized by the market.

Customer Support



We provide one-stop solutions with proven capabilities in R&D, manufacturing, quality control, and delivery, offering complete support from design to installation and commissioning.

Quality Control



AEME adheres to "quality-first" philosophy. Our team ensures every product meets the highest industry standards.

Delivery Capability



Customer-centric and execution-driven, AEME offers standardized project delivery and O&M systems, ensuring high quality and efficiency from start to finish.