



72kW Ground Power Unit (GPU)

Part No. GPU72-28/200

NSN. 6115017076538



The Ground Power Modernization Program

The Ground Power Modernization (GPM) Program produces the 72kW ground power unit (GPU) for the Agile Combat Support (ACS) Directorate of the United States Air Force (USAF), designed to provide stand-alone external ground power to all aircraft in the USAF inventory. The ground power unit supports the ACS Directorate and is manufactured with the mission of sustaining and protecting air and space forces across a full range of military operations.

Program Overview and Development History

In November 2022, PD Power Systems was an awardee by the USAF for a 10-year, IDIQ contract for 72-kilowatt ground power units. The contract provides for development, testing, and production of the ground power units, along with associated data deliverables, including test reports, provisioning, technical manuals, and field support. PD Power Systems developed a 72kW ground Power Unit that powers the USAF's entire aircraft fleet, meeting all program thresholds and objectives.

PD Power Systems has been delivering and supporting first-class power products for decades. Our vast experience with MIL-STD product development, testing, and verification, along with a multitude of industry and organizational certifications.

Our experience with Ground Power Equipment stems from the design and production of ground power units in support of a USAF contract for the Boeing F-15SA program. PD Power Systems continues to provide hardware, production, and logistics support to this ongoing program that began in 2013.

The 72kW GPU is another addition to PD Power Systems' family of products with innovative design and end-to-end provisioning for complete support throughout the life cycle of the product. The ground power unit is a stand-alone, trailer-mounted, self-contained unit capable of providing external ground power to all mission-critical USAF aircraft.



Modular Design Features

- Engine, generator and related components
- Power Control Module (PCM)
- Operator Interface Terminal (OIT)
- Solar powered battery charger
- Running gear and chassis
- JP-8 primary, DF1, 2, JP5, and Jet A
- Power Quality Type II Utility (Class 2A) MIL-STD-1332B
- EMC radiated emission and susceptibility per MIL-STD-461F
- Sound attenuation 82dBA @ 7 meters
- Operating temperature range: -40°F to 130°F

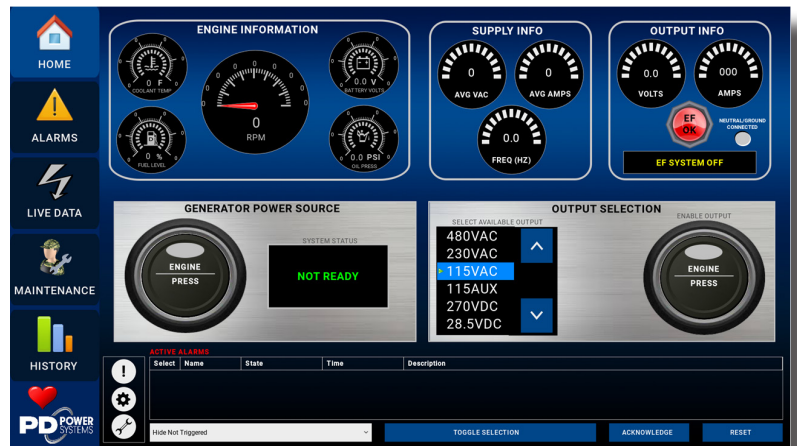
Available Power Input/Output

- Input options:
 - Diesel Powered/480V 50/60Hz Utility Input
- Output options:
 - 3-phase, 72kW/90kVA, 115/200VAC at 400 Hz
 - 3-phase, 72kW/90kVA, 230/400VAC at 400 Hz
 - 17.1kW, 28.5VDC
 - 72kW, 270VDC
 - Single-phase, 4.8kW/6kVA, 120VAC at 60 Hz



High Reliability

- Mean time between failure; demonstrated TBD hours vs. 500-hour requirement at 80% one-sided confidence limit
- Extensive reliability testing: TBD cumulative hours



Controls

- Designed and tested for military applications
- High-quality High definition color 15" 1920 X 1080 touch screen display
 - Readable in sunlight
 - Ergonomic buttons and switches designed for operation with MOPP gear and arctic mittens
- Comprehensive diagnostics set
 - Fault and warning indications easily visible on the touchscreen
- Fully integrated digital generator controls
 - 480V, 3-phase, 60Hz
- Fully integrated digital 400Hz inverters
 - 72kW: 115VAC, 3-phase, 400Hz
 - 72kW: 230VAC, 3-phase, 400Hz
- Fully integrated digital DC converters
 - 72kW: 270VDC
 - 20kW: 28.5VDC
- Integrated generator circuit-breaker control
- Ruggedized design to survive in extreme environments
 - Supports wide temperature range
 - Resistant to salt-fog, rain, ice, sand, dust and fungus
 - Built-in cable storage
- Deep cycle AGC starting batteries
 - Solar starting battery container

Full Cycle Support and Logistics

Providing comprehensive logistics life cycle planning and execution in ILS, training, technical manuals, technical data packages, warranty management, maintenance and CLS.

Worldwide Service and Support

PD Power Systems provides support for military products around the world:

- Support at various existing and future locations of the U.S. military around the globe.
- Commissioning, training, and maintenance support services globally.
- Parts inventory at critical locations and around the world.
- Support for engineering and technical data for all products and services.

Highly Technical, Experienced Workforce with Deep Subject Matter Expertise

PD Power Systems is a full systems integrator, designer, and manufacturer of power generation and distribution equipment.

We offer full-service solutions to government and industry with agile approaches using lean technology.

Our superior leadership, hardware developers, integrators, and on-site engineers provide concept-to-delivery products across engineering, production, system integration, testing, and Integrated Logistics Support (ILS).



Contact Us

PD Power Systems

6225 Brandon Ave
Suite 460
Springfield, VA 22150
Phone: 1-866-460-7377
Web: www.pdpowersystems.com
Email: info@pdpowersystems.com
Sales: sales@pdpowersystems.com



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