

# GPU-412

## GROUND POWER UNIT 120 KVA



### ELECTRONIC CONTROL with DIGITAL DISPLAY

The **GPU-412** Ground Power Unit features a compact design with full-size performance which allows for easier handling and better mobility near aircraft. It features a brushless, high efficiency generator running at an optimized 1846 RPM providing improved fuel efficiency and reduced sound level while ensuring rapid transient response and exceptional frequency regulation.

Powder-coated aluminum and fiberglass panels surrounding a rugged galvanized steel chassis provide the longest lasting finish. Mobility is enhanced by a rubber torsion axle, tight radius 5<sup>th</sup> wheel steering, simple direct-acting brakes, and a safe no-drop towbar. The unit can meet U.S. and EURO latest emission standards. Other engines are available for all emissions-regulated locations.

### GENERATOR SPECIFICATIONS

400 Hz 115/200 volts, +/- 15% adjustable, 3 phase, 4 wire wye-connected, grounded neutral, revolving field, brushless, self-cooling, single bearing, directly connected to the engine.

### GENERATOR CONTROLS

Digital generator control module (GCM) features voltage regulation, fault protection, and an operating parameter display. The GCM monitors 400 Hz output when 400 Hz is in use and 28.5 VDC output when optional 28.5 VDC is in use. 400 Hz and 28.5 VDC line drop compensation and DC current limiting are built in. Voltage, current, power, and frequency are digitally displayed on a backlit LCD. Faults are displayed and latched:

- **Over frequency:** 420 Hz in 5 seconds
- **Under frequency:** 380 Hz in 7 seconds
- **Over voltage:** 130 volts in 2 seconds
- **Under voltage:** 100 volts in 7 seconds
- **Overload:** 125% for 5 minutes @ 0.8 PF

### ENGINE SPECIFICATIONS

- 24 volt starting motor
- Heavy-duty spark arrestor / silencer
- Full-flow oil and fuel filters
- Dry-type air cleaner
- (2) 12-volt batteries
- Pusher type fan
- Low coolant shutdown

### ENGINE CONTROLS

Electronic engine governors provide precise frequency regulation and fast transient response. Engine protection such as low oil pressure and high coolant temperature are programmed into the ECM. An engine diagnostic connector is provided for communicating with the engine. Engine operating parameters are displayed via SAE J1939 CANBUS:

- **Engine speed, voltage, and hours**
- **Oil pressure and coolant temperature**
- **Real time % load**
- **Active and stored service codes**
- **Various languages, US and Metric units**

Fuel level is displayed as a %. Low fuel warning and shut down, automatic warm up and cool down cycles, and emergency stop are all standard features.

### ELECTRICAL CHARACTERISTICS

- **Continuous rating:** 120 kVA @ 1.0 PF
- **Overload rating:** 125% for 5 minutes @ 0.8 PF
- **Meets MIL-STD-704F**
- **Voltage regulation:** +/- 1% over full load range
- **Voltage transient:** +/- 13.8% no load to full load
- **Voltage transient recovery time:** +/- 1% of nominal voltage within 100 milliseconds
- **Voltage modulation:** 0.5% at steady state.
- **Phase balance:** <1% at balanced 3-phase load. <4% at 1/3 load on 1 phase and no-load on 2 phases
- **Harmonic content:** THD <2%. Any 1 phase harmonic <1.5% at 0.8 PF linear load
- **Crest factor:** 1.414 +/- 0.07
- **Frequency regulation:** +/-0.1% over full load range
- **Frequency transient:** +/- 2.5% no-load to full load
- **Frequency transient recovery time:** +/- 0.5% of nominal frequency within 1.5 seconds
- **Line drop compensation:** Increases up to 10 VAC L-N to compensate for aircraft cable voltage drop
- **400 Hz data logging** – downloadable via USB stick



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GROUND SUPPORT EQUIPMENT

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### CHASSIS CHARACTERISTICS

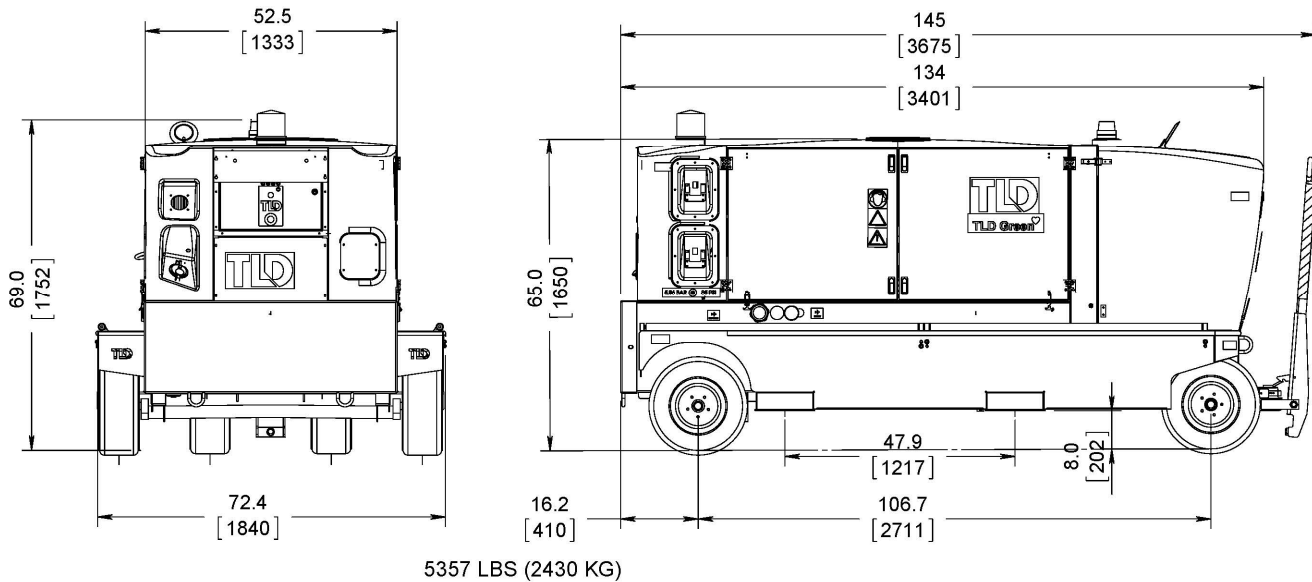
- Extreme low noise: 78 dbA @ 7 meters
- Easy access to all components
- Side mounted cable trays with integral rollers
- Fuel tank – 77 gallons for over 8 hrs of run time
- 5<sup>th</sup> wheel steering with no-drop towbar brake
- Forklift pockets and tie down rings
- Cable plug holders
- Low load ramp down / shut down
- Externally-mounted, lockable, battery switch

### OPTIONAL EQUIPMENT

- Cable plug stowage / towbar brake interlock
- Transformer rectifier: 28.5 VDC with current limiting, 800 amps continuous, 2500 amps peak. Can be field installed.
- Beacon: Amber or red, flashing or rotating
- Low fuel warning and shutdown beacons
- Engine block heater
- Fuel filter/water separator with heater

Our GPUs are available in several engine configurations.  
Each version meets at least your latest local emissions regulation

MODEL	KVA	P.F.	KW	RATED AMPS
GPU-412	120	1.0	120	346



LOCAL SUPPORT, TOTAL COMMITMENT

Revised 5JAN2015 CY



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