



## Ground Power Unit 90KVA



90KVA Ground Power Unit (GPU) is a reliable Mobile Power Source for the aircraft startup and its maintenance activities. It employs Marathon Alternator and Cummins engine. The system can be customized as trolley mounted or a vehicle mounted. The system employs various safeties and protections to be used with the military aircraft. The GPU has been developed on Aerospace and military standards and has undergone a rigorous qualification program.

- Vibration isolation and lifting hooks for Engine, Alternator and TRU.
- MIL-STD-704E Compliant Alternator
- Separate cabin for Transformer Rectifier Unit(TRU).
- 360 degrees adjustable spotlights.
- SAE-3 Coupling between engine and alternator.
- 56VDC for Chinese aircraft, auto changeover to 28VDC.
- Connectors' stowage in sockets.
- Metallic soundproof to suppress noise
- Rugged and Maintenance friendly features.

## Safeties & Protections

- Over and under protections for the load (both AC & DC) and the frequencies.
- Auto cutoff on low oil pressure, temperature of coolant and the engine.
- Intake air restriction indication and alarm
- Engine auto shut down in 30 sec of idle running when stopped.
- Cable stowage unit with connectors' stowing socket and safety for inadvertent vehicle movement.
- RPM Limiter safety.
- Battery isolator switch with removable key.
- Minimum coolant temperature set to go from Idle to Run mode. (By pass possible)
- Push Type emergency stop switch.
- A safety interlock preventing vehicle start until GPU power is shut down.

Specifications	
<b>Voltage</b>	3 phase 115/200 V
<b>Frequency</b>	400 Hz
<b>Rated load capacity</b>	260 Amps
<b>Power factor</b>	0.8
<b>Voltage regulation</b>	<0.5% for balanced load up to 30% unbalanced load
<b>Voltage recovery</b>	$\Delta U < 8\%$ and rec. time <10 ms at 100% load change
<b>Phase angle symmetry</b>	$120^\circ \pm 1^\circ$ for balanced load, $120^\circ \pm 2^\circ$ for 30% unbalanced load
<b>DC Voltage</b>	28 and 56 VDC
<b>Load capacity</b>	28 VDC, 800Amps
	1200 Amps for 30 sec
	1800 Amps for 10 sec
	2100 Amps for 5 sec
	2400 Amps for 2 Sec
<b>AC power cable</b>	115/200 VAC, MS25487 Conn
<b>56/28 VDC power cable</b>	56/28 VDC (800 Amp Cont and 2400 Amp peak), Chinese Circular Connector
<b>Power Cables' length</b>	33 feet each
<b>Engine</b>	Cummins 6BTA5.9
<b>Alternator</b>	Marathon USA
<b>Weight</b>	2,700 kg
<b>Fuel tank capacity</b>	06 to 08 hrs operation at full load
<b>Accessories</b>	Dry chemical fire extinguisher. Tool kit

## Gauges & Instruments

### Generator Engine Section

- Engine battery charging ammeter
- Electronic Oil pressure gauge
- Electronic Temperature gauge
- Digital Hour meter (will operate only when GPU engine will be in operation)
- Electronic RPM Meter
- Control panel illumination light with switch
- Start/Stop switch with ignition key
- Fuel tank gauge, Electric direct reading with low fuel light indicator

### AC Supply Fault Indications

- Under/Over voltage
- Under/Over frequency
- Overload

### AC Section

- Voltmeter
- Ammeter
- Frequency meter
- AC supply OFF/RESET push button
- AC supply "ON" push button
- Interlock Bypass switch
- Voltage Phase Selection Switch

### DC Section

- Digital Colored
- Touch Screen Interface adjustments and displays
- Output ON/OFF Switches
- Manual adjustment knobs for Starting Current Limits and Voltage Adjustment
- 56VDC for Chinese origin changeover to 28VDC

