



MOBILE 400 Hz GROUND POWER UNIT FOR AIRCRAFT FROM 90 TO 180 KVA

APU OFF

GA

The GUINAULT Ground Power Unit ensures the supply of electrical power to both civil and military aircraft, of all types in the most extreme environments. Their ultra-sturdy design is fully protected against corrosion and is engineered to withstand harsh conditions in airport environments. The modular design enables the integration of numerous options within a universal standard. The logical commonality of elements assists in the functional understanding of the machine, and contributes to the quality of maintenance.

GENERATING VALUE

- Limit emissions of pollutants associated with the APU
- Greatly reduce the ground-level noise
- Generate new revenue for airports by offering airline companies a value-added service
- Achieve significant cost reductions in jet-fuel for airlines
- Greatly reduce the maintenance costs of the APU

ADVANTAGES

- Performance and efficiency under extreme conditions (- 40 / + 50°C)
- Sturdiness and reliability
- Maintenance access, modular construction
- Ease of use
- Versatility
- Low Total Cost of Ownership

Specifications

| | | GA90 | GA140 | GA180 |
|--------------------------------------|---|---|--|--|
| ENGINES AVAILABLE (STAGE 3A) | DEUTZ CUMMINS | TCD2013L04-2V QSB 4.5 | TCD2013L06-2V QSB 6.7 | TCD2013L06-4V QSL 9 |
| ENGINES AVAILABLE (STAGE 4/5) | DEUTZ CUMMINS | TCD 4.1 QSB 4.5 | TCD 6.1 QSB 6.7 | TCD 7.8 QSB 6.7 |
| 115/200 V - 400 Hz OUTPUT | Nominal power Overloads Number of outputs | 90 kVA 100 kVA - 10min 112 kVA - 5min 1 (2 as option) | 140 kVA 155 kVA - 10min 175 kVA - 5min 2 | 180 kVA 200 kVA - 10min 225 kVA - 5min 2 |
| 28 Vdc OUTPUT (option) | Continuous and peak current Number of outputs | 800 A permanent, 2 400 A peak (with limiting device at 1 275 A for ATR) 1 or 2 - Ability to simultaneously use 115 V / 400 Hz and 28 Vdc outputs | | |
| DIMENSIONS | Weight (Kg) | 2200 kg | 2500 kg | 2700 kg |
| AND WEIGHTS | L x W x H (mm) | 3300 x 1880 x 1790 3550 x 2000 x 1700 (GA140-180 Stage 4/5) | | |
| ENGINE | Type Fuel | Turbo Diesel - Liquid cooling Diesel EN590 | | |
| ALTERNATOR | Manufacturer Number of Poles Type Voltage Frequency Voltage Regulator Total Harmonics Distortion Transient performance | GUINAULT - manufactured in France 22 poles (28 poles for version at 1 714 rpm) Brushless - single bearing - self-excited - with integrated fan 115/200 V ±1% 400 Hz ± 0.5% GUINAULT RS525 electronic regulator < 3% MIL-STD-704F / EN2282 standards / SAE ARP 5015 compliant | | |

SAFETY FEATURES

Engine

- Low oil pressure
- High temperature
- Clogged Air filter
- Battery charge failure
- Overspeed

Generation 115 V/400 Hz

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

Generation 28 Vdc

- Over-voltage
- Under-voltage
- Overload

ASSEMBLY

- Polyester tip-over hooding with easy access for maintenance
- Hot dip galvanized frame provides excellent protection against corrosion
- 260 liters fuel tank (8 to 20 hours autonomy)
- Lateral side cable trays

- Batteries: 2 x 12 V - 125 Ah
- Braking when draw-bar is raised or lowered
- Tyres 600 x 9
- Leading front axle with ball bearings

OPTIONS

- 28 Vdc Output: Permanent 800 A, 2400 A peak (with limiting device at 1275 A for ATR)
- GPU mounted on a truck or Push-Back tractor
- Extreme cold kit for start-up at low temperatures (< -25°C) including engine preheating (50 / 60 Hz heater)
- Automatic oil refilling
- Double electrical insulation (4000 V)
- Anti-towing safety: a sensor detects the movement of the trailer and triggers an audible and visible alarm if all aircraft outlets are not correctly stored to prevent damage to the aircraft socket
- Operation at low engine speed = 1714 rpm: 28-pole GUINAULT alternator (instead of 22-pole standard for 2182 rpm)
- Automatic idling for further fuel savings
- Cable roller for easy cable handling
- 56 Vdc Output, 37 VAC, 115 V single phase for Russian aircraft
- Stage 3/4/5 engine