

# 90 and 120 kVA Diesel Engine Driven GPU Deutz BF6M1013EC Electronic Diesel



Model 90D400SLN



## TRILECTRON:

Trilectron offers the best combination of superior design, performance, proven reliability, and value to meet the critical needs of the airline industry with our series of modern ground power units. Integrating the best in technology, customer influenced design and Trilectron's years of engineering expertise, our Ground Power Units can be trusted to meet your aircraft's needs for quality 400Hz power.

## DESIGNED FOR DURABILITY:

Low profile, combined with standard 5th wheel (turntable) steering, provides superior visibility and maneuverability in congested ramp areas, while the durable bumper system protects the unit from damage caused by other GSE.

## POWER FOR PEAK PERFORMANCE:

The Trilectron Deutz diesel powered GPU features the BF6M1013EC, electronically controlled diesel engine, combined with a *Hobart designed and manufactured generator*, to maximize GPU performance while maintaining the traditional Trilectron reputation for reliability.

## TIER 2 EMISSION CERTIFIED:

Trilectron teamed with Deutz to specify the most technically advanced engine designed to meet both current and future Emission standards.

## PERFORMANCE FEATURES:

- Fully Emission Certified Engine
- Noise "Isonorized" design
- Large stainless steel fuel tank and low fuel warning are **standard**
- Delayed stop (for turbo protection) and emergency shutdown are **standard**
- Hobart-designed and manufactured generator offers long life and reliability
- Deutz fuel/water separator is **standard**
- Numbered, color-coded wiring remains traceable for the life of the unit
- 5th wheel (turntable) steering features maintenance-free nylon bushings
- Choice of drum type braking systems: tow bar activated or hand brake activated
- Easy to open clam-shell style canopy provides easy access to engine, generator, and control components

| Model      | kVA (kW) | Outputs | Engine     | HP  | Length        | Width        | Height       | Weight              |
|------------|----------|---------|------------|-----|---------------|--------------|--------------|---------------------|
| 90D400SLN  | 90 (72)  | 1 or 2  | BF6M1013EC | 218 | 145" (368 cm) | 77" (196 cm) | 62" (155 cm) | 5,800 lb (2,631 kg) |
| 120D400SLN | 120 (96) | 2       | BF6M1013EC | 218 | 145" (368 cm) | 77" (196 cm) | 62" (155 cm) | 5,800 lb (2,631 kg) |

# Trilectron's 90 and 120 kVA Deutz Diesel Engine Driven Ground Power Unit Specifications

## Engine

- Deutz BF6M1013EC electronic diesel engine operating at 2000 RPM (218 HP)
- Electronically controlled, turbocharged 4-stroke, inline 6 cylinder
- Full application approval by Deutz Corporation
- 12 VDC battery system
- Low oil pressure shutdown
- High coolant temperature shutdown
- Intake air restriction indication
- Deutz air intake heater

## Environmental

- Operation Temperature:
  - 25° F to +125° F
  - 31° C to + 52° C
- Relative humidity 0-100% noncondensing

## Performance

- Rating: 90 and 120 kVA, 3 phase, 4 wire, 115/200 volt Wye, continuous
- Meets or exceeds MIL-STD-704E Electrical Power Quality Requirements

## Overload

- 125% rated load for 5 minutes, 150% for 10 seconds
- Individual outputs: 324 amps, 5 minutes

## Voltage

- Transient voltage recovery time: to within MIL-STD-704F limits (no load to rated load)
- Within +/- 20% deviation upon application/removal of 100% load rating
- Modulation: does not exceed 0.5% of steady state voltage
- Phase voltage displacement with balanced load: 120+/-1.5°
- Phase voltage balance (with unbalanced load) does not exceed 4% with 1/3 rated

current on any single phase with other two phases disconnected

- Crest factor: 1.404 +/- 0.07
- Individual Harmonic Distortion: < 2% of the fundamental (RMS) voltage
- Total Harmonic Distortion: <3% of the fundamental (RMS) voltage

## Frequency

- Regulation: +/- 1% steady rate
- Transient recovery: to within +/- 5Hz in <2 seconds per ARP 5015A
- Modulation: <0.25% (1Hz)

## Regulation

- Voltage Regulation: ±1% no load to full load
- Voltage adjust: ±15 volts
- IHD (individual harmonic content): <2%
- Line Drop Compensation: Automatic up to 5%

## Protection

- Meets MIL-STD-704F
- Overvoltage: instantaneous disconnect of load at 180 volts L-N, with inverse time delay down to 126 volts in 2 seconds
- Undervoltage: disconnects output below 100 volts L-N in 7 seconds
- Overfrequency: disconnects output above 420Hz in 5 seconds
- Underfrequency: disconnects output below 370Hz in 7 seconds

## Finish

- Anti-corrosive Polyester powder provides excellent weather resistance, flexibility and adhesion, plus a strong resistance to chemical agents such as glycol and skydrol
- Standard colors are high gloss white over black frame and chassis
- Custom colors require a paint chip or swatch for accurate color match

## Displays/Instrumentation

### Engine

- Meters: coolant temperature, voltmeter, hour meter, oil pressure, fuel level
- Indicator Lights: engine circuit on, engine stop delay action, panel lights, fault summary (test/reset button)
- Fault Code Display Indication: air cleaner restriction, high coolant temperature, low oil pressure, low fuel warning, etc.
- Buttons: Engine start, engine stop, panel lights

### 400 Hz, AC Generator

- Meters: frequency, ammeter, voltmeter
- Indicator Lights: contactors on, fault summary (test/reset button), EF interlock mode
- Fault Code Display Indication: overfrequency, underfrequency, overload, overvoltage, undervoltage, etc.
- Buttons: meter select, output contactors control, test/reset

### 28 VDC (Available Option)

- Meters: ammeter, voltmeter
- Indicator Lights: contactors on, fault summary (test/reset button)
- Fault Code Display Indication: overvoltage, overload, over temperature, etc.
- Buttons: output contactors control, test/reset, current limiting

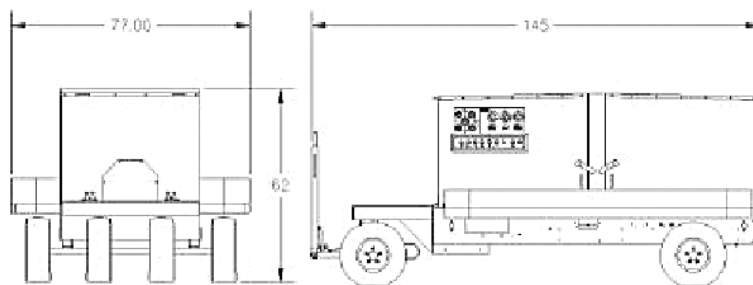
## Trailer

- Tire Size: 20.5 x 8.00 - 10
- Ground clearance: 9" (.23m)
- Brakes: Tow bar activated, drum type

## Available Options:

- Block heater kit, (120V/60Hz or 240V/50Hz)
- Internal Transformer-Rectifier for 28.5VDC
- Automatic towbar height stop
- Pintle or pin hitch
- Spot light
- Clearance lights
- Stationary, fixed, or truck mounted
- Special paint scheme
- Indicator beacons (low fuel, operating)
- Hand activated brakes
- Battery blanket (120V)
- Low fuel warning/shutdown

*Specifications subject to change without notice.*



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