

Trailer Mounted Direct Drive Turbine Generator Unit

High-performance mobile power generation solution designed for harsh oilfield and hypermobile environments



Key Specifications

Performance

- Total Power Output: 3.4MW ISO Conditions
- Prime Mover: SPG4-R Gas Turbine

Physical Characteristics

- Length: 53' 0"
- Width: 8' 6"
- Height: 13' 6"
- Weight: 90,000 lbs. (approximate)

Turbine Engine Details

SPG4-R

- Compressor: 7 Axial + 1 Radial stage
- Turbine Stages:
 - Gas Producer: 2 stages
 - Power Turbine: 2 stages

Performance Characteristics

- Fuel Flow: 2,028 lb/hr
- Heat Rate: 11,967 Btu/kWh
- Exhaust Flow: 28.3 lbm/sec
- Exhaust Temperature: 1,110°F
- Thermal Efficiency: 29.0%
- Pressure Ratio: 8.8:1

Generator Details

- Manufacturer: ABB or equivalent
- Output: 4,021 kW(e)
- Voltage: 13.8 kV (additional voltages available)
- Frequency: 60 Hz
- Power Factor: 0.8
- Speed: 1,800 RPM

Switchgear Type:

- 13.8 kV Medium Voltage Air Insulated
- Circuit Breaker: 1200A Fixed Mounted
- Protection Systems:
 - Beckwith 3425 Generator Protection Relay
 - Basler BE-3-25
 - EasyGen Protections - Backup
- Comprehensive current and voltage monitoring
- High impedance grounding system
- Load-sharing: Woodward Governor EasyGen

Environmental & Operational Specifications

- Operating Temperature: 0°C to 49°C (32°F to 120°F)
- Fuel: Natural Gas

- Heat Input: 41 MMBtu/hr
- Turbine EPA Designation: Reconstructed Engine (40 CFR Part 60 Subparts GG, KKKK)
- 800-1250 Btu/SCF or 29.82-46.59 MJ/m³
- Generator Configuration: 3-phase, 4-wire wye
- Grounding Method: Neutral grounded through resistor
- Capable of sustaining an 80% load dump without compromising operational stability

Trailer Features

- Heavy-duty fabricated steel drop deck
- Gooseneck deck height: 52" king pin
- Four 25,000 lb axles with air ride suspension
- Air brakes with ABS
- DOT-compliant lighting

Optional Configurations

- Cold weather package (operation to 0°F)
- Heated air inlet louvers
- Remote generator display

Compliance

- Designed for onshore operation
- Meets transportation and safety standards