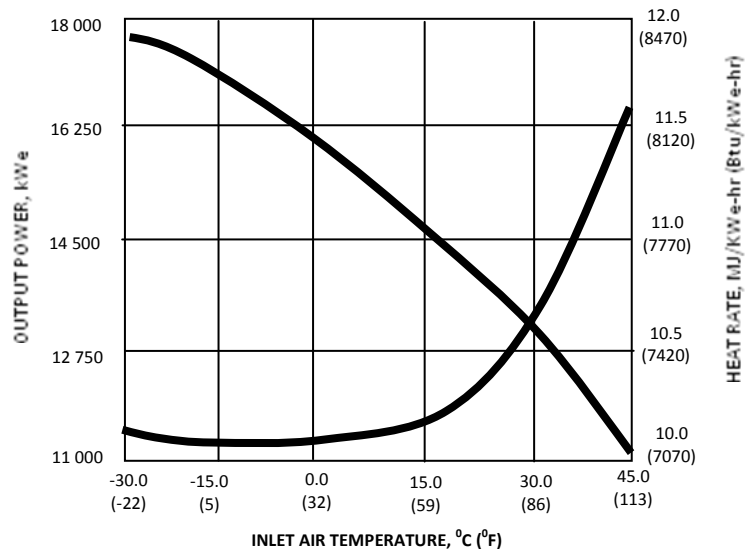




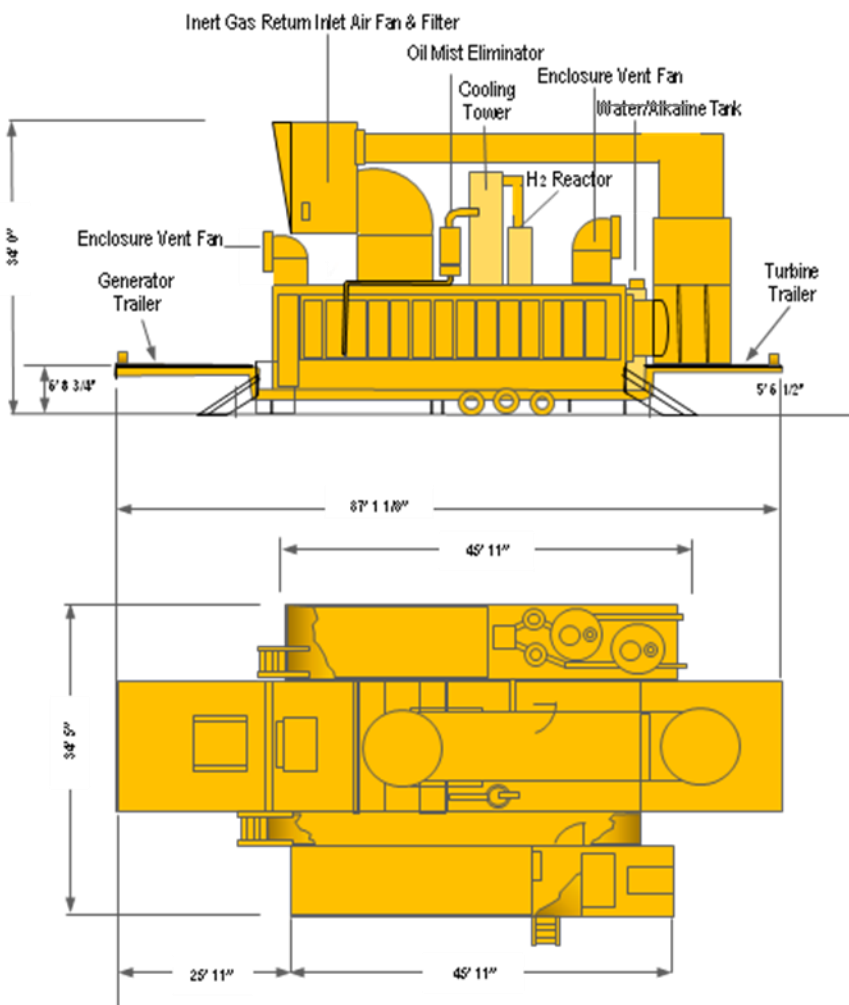
## NOMINAL GENERATOR SET PERFORMANCE

PEEKER ENERGY CORPORATION engineers an electricity power generator unit using a Titan 130 gas turbine built by Solar Turbines International (a Caterpillar Company) fueled by pure hydrogen gas generator “on demand” and “on-site”. The system is a closed loop arrangement using inert gases, such as Argon and Helium. The argon gas (over 92%) is heated by hydrogen/oxygen mix in a specially designed burner, while the helium (8%) acts as a coolant to the turbine blades. The Titan 130 turbine/generator set is designed to provide over 15 MW of power and may be mobile or fixed.

## Available Power



## Typical Dimensions



### Output Power (for natural gas – Solar Data):

ISO: 15<sup>0</sup>C (59<sup>0</sup>F), sea level      15,000 kWe

Heat Rate      10 230 kJ/kWe-hr  
(9,695 Btu/kWe-hr)

Exhaust Flow (Air)      179 250 Kg/hr  
(395,180 lb/hr)

Exhaust Temp (natural gas)      495<sup>0</sup>C  
(925<sup>0</sup>F)

Higher Temp with Hydrogen/Oxygen burning

### GENERAL DIMENSIONS (INSTALLATION):

Length: 100 ft (30.48 m)

Width: 54.5 ft (16.6 m)

Height: 40 ft (12.2 m)

### DRY WEIGHT (turbine only), Kg (lb):

73 668 (162,409)

## FOR MORE INFORMATION

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## General Specifications

### Gas Turbine

- Titan™ 130 Industrial, Single-Shaft
- Axial Compressor
- 14 Stages
- Variable Geometry
- Vertically Split Case
- Compression Ratio: 16:1
- Speed: 11,197/11,170 rpm (50/60 Hz)
- Annular Combustion Chamber
- Hydrogen/Oxygen mix, no emission
- 14 fuel injectors (different configuration may vary)
- Proximity Probe Vibration Transducers
- Turbine
- 3 Stage, Axial Flow
- Argon/He Inert Gas Mix intake, Closed Loop
- Speed: 11,197/11,170 rpm (50/60 Hz)

### Main Reduction Drive

- Epicyclic
- 1500 or 1800 rpm (50 or 60 Hz)
- Acceleration Vibration Transducer

### Generator

- Continuous Duty Rating
- Silent Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous with Brushless Exciter
- Open Drip-Proof Construction
- Sleeve Bearings
- Velocity Vibration Transducers
- Permanent Magnet generator
- NEMA Class F Insulation with F Rise

### Hydrogen Gas Fuel Generator

- On Site Static Gas Generator
- Water Tank
- Catalyst and alkaline tank with dosimeter
- Pressure gage and temperature monitoring system
- Hydrogen Generator reactor tank (2 per system)
- Cooling tower with water trap and recirculation
- Brim recovery system

### Package

- Steel Base Frame with Pans
- Direct-Drive AC Start System
- Hydrogen Gas and Oxygen Gas generation systems on site, with separators
- Hydrogen Turbo burner (under license from Berkeley's Labs)
- ControlLogix Controller
- Standard Display with Discrete Event Log, Strip Chart, Historical Trend, Maintenance Screen
- Gas Turbine and Generator Control
- Vibration and Temperature Monitoring
- CGCM (Combination Generator Control Module) with Load Share, Auto Synchronization, Voltage Control, Reactive Power Control, kW Control
- Integrated Lube Oil System
- Turbine Driven Lube Pump
- Pre/Post Lube Pump
- Back-up Lube Pump
- Air/Oil Cooler
- Integrated Lube Oil Tank
- Lube Oil Tank Heater
- Oil Mist Eliminator
- Simplex Lube Oil Filter
- Documentation
- Drawings
- Quality Control Data Book
- Inspection and Test Plan
- Test Reports
- Operation and Maintenance Manuals
- Factory Testing of Turbine and Package

## Optional Equipment

- Generator Options:
  - Standard Voltages: 11,000 V (50 Hz); 12,470, 13,200 or 13,800 V (60 Hz)
- Fuel Systems
  - Liquid
  - Dual (Gas/Liquid)
  - Alternate Fuels (such as naphtha, propane, low BTU gas)
- Lube Oil System
  - Water/Oil Lube Oil Cooler
  - Duplex Lube Oil Filters
  - Vent Flame Trap
- Control System
  - Auxiliary and Remote Display/Control Terminal
  - Heat Recovery Application Interface
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Printer/Logger
  - Field Programming Terminal
  - Unfired Waste Heat Recovery System Control (Stand Alone Panel), Import/Export, kW/KVAR Control (Stand Alone Panel)
- Accessory Equipment
  - 120 VDC Battery/Charger System
  - Turbine Cleaning System: On-Crank and On-Line
- Weatherproof Acoustic Enclosure
- Ancillary Equipment
  - Inlet and Exhaust Silencers (Closed Loop)
  - Self Cleaning or Prefilter/Barrier Air Inlet Filter
  - Inlet Evaporative Cooler
  - Inlet Chiller Coils
  - Optional Reactor Hydrogen Generator Tank
  - Brim automatic Dosimeter

## INTERNATIONAL OFFICES:

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