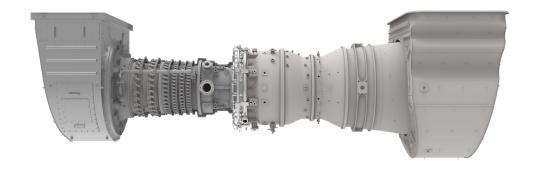
A Caterpillar Company

### 34 MW Gas Turbine Generator Set for Power Generation

Powering the Future Through Sustainable, Innovative Energy Solutions



As the global energy sector transitions towards a less carbon intensive future, Solar Turbines introduces the Titan™ 350 – a world class, highly efficient gas turbine designed for the power generation market in the 34 MW size range. This product has robust design features based on the proven experience of the Titan product line and is well suited for flexible power or continuous duty.

#### **TITAN 350 GAS TURBINE**

- Industrial, Two-Shaft
- 14 Stage Axial Compressor
  - Variable Inlet Guide Vanes
  - Split Case Design
- Annular Combustion Chamber
  - SoLoNOx™ and Conventional
  - Torch Igniter System
- Generator Turbine
- Power Turbine
- Radial Journal Bearings

### **MAIN REDUCTION DRIVE**

- Parallel Shaft Type
  - 1800 rpm or 1500 rpm

#### **GENERATOR**

- Salient Pole, 3 Phase, 6 Wire, Wye Connected
  - Synchronous
  - Permanent Magnet Generator Exciter
- Sleeve Bearings
- Oil Jacking System
- NEMA Class F Insulation
- Class B Temperature Rise
- Voltages: 11,000 to 13,800 VAC
- Frequency: 50 or 60 Hz

#### **PACKAGE**

- Mechanical Construction
  - Steel Base Frame
  - 316L Stainless Steel Piping
- Electrical Certification
  - NEC, CSA Class 1, Group D, Div 2
  - CENELEX/ATEX Zone 2
  - 120 VDC Battery/Charger System
- Direct-Drive AC Start System
- Fuel Systems
  - Natural Gas or Diesel
  - Dual (Natural Gas and Diesel)
  - 20% Hydrogen in DLE
- Integrated Lube Oil and Cooling Systems
- Turbine Compressor Cleaning System
- Air Inlet and Exhaust Systems
- Enclosure
  - Stainless or Carbon Steel
- Turbotronic<sup>™</sup> Control System
  - Onskid Control System
  - Field Programmable
  - Generator Control
  - InSight Platform™ Equipment Health Management
- Documentation
  - 0&M Manuals
  - Electrical and Mechanical Drawings

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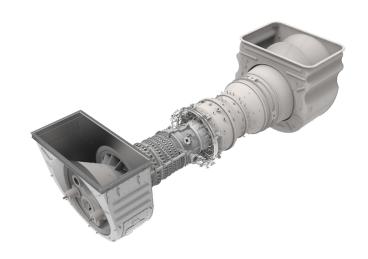
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### **Typical Performance**

| Output Power                    | 34 000 kWe                          |
|---------------------------------|-------------------------------------|
| Heat Rate                       | 9130 kJ/kWe-hr<br>(8655 Btu/kWe-hr) |
| Exhaust Flow                    | 386 265 kg/hr<br>(851,570 lb/hr)    |
| Exhaust Temp.                   | 450°C<br>(840°F)                    |
| Steam (Unfired)                 | 51.1 tonnes/hr<br>(112,760 lbs/hr)  |
| Steam (Fired)<br>870°C (1600°F) | 137.3 tonnes/hr<br>(302,785 lbs/hr) |

Nominal rating per ISO at 15°C (59°F), sea level No inlet/exhaust losses Relative humidity 60% Natural gas fuel with LHV = 31.5 to 43.3 MJ/Nm³ (800 to 1100 Btu/scf) Optimum power turbine speed



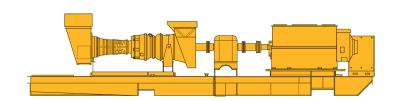
No accessory losses Engine efficiency: 39.3% (measured at generator terminals) Ratings above are typical new equipment ratings. Please contact Solar Turbines sales to obtain project specific data.

# **Typical Package Dimensions**

Length: 21.9 m (72') Width: 4 m (13')

Package Weight, Approx: 184,160 kg (406,000 lb)

Dry weight, unenclosed, typical CACA generator, does not include ancillary equipment



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