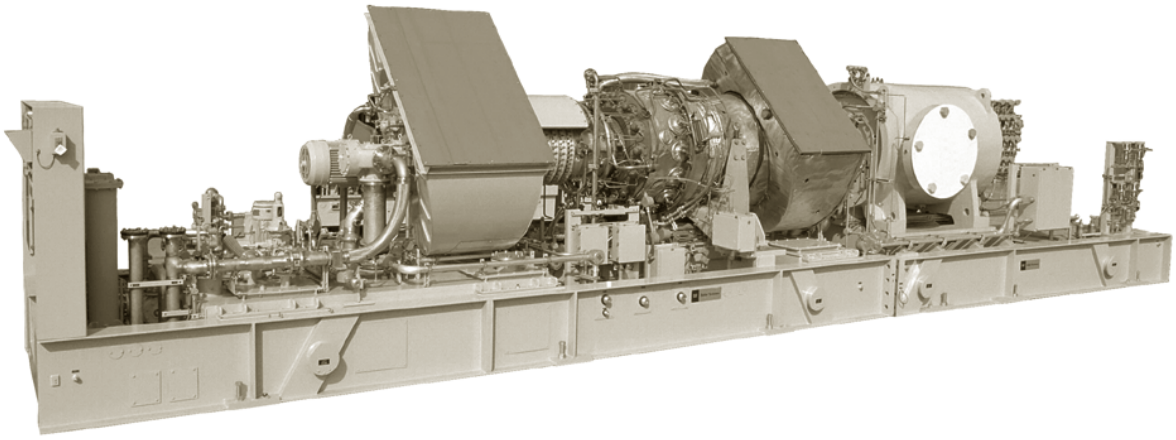
Solar® Turbines

A Caterpillar Company

TITAN 130

Gas Turbine Compressor Set

Oil & Gas Applications



General Specifications

***Titan*™ 130 Gas Turbine**

- Industrial, Two-Shaft
- Axial Compressor
  - 14-Stage
  - Variable Inlet Guide Vanes and Stators
  - Pressure Ratio: 16:1
  - Inlet Airflow: 47.4 kg/sec (105.2 lb/sec)
  - Vertically Split Case
- Combustion Chamber
  - Annular-Type, Conventional or Lean-Premixed, Dry, Low Emission (*SoLoNOx*™)
  - 21 Fuel Injectors (Conventional)
  - 14 Fuel Injectors (*SoLoNOx*)
  - Torch Ignitor System
- Gas Generator Turbine
  - 2-Stage, Reaction
  - Max. Speed: 11,220 rpm
  - Thrust Bearing, Active: Tilting-Pad
  - Thrust Bearing, Inactive: Fixed Tapered Land
- Power Turbine
  - 2-Stage, Reaction
  - Max. Speed: 8855 rpm
  - Full Tilting-Pad Thrust Bearing
- Journal Bearings
  - Tilting-Pad
- Coatings
  - Compressor: Inorganic Aluminum
  - Turbine and Nozzle Blades: Precious Metal Diffusion Aluminide
- Vibration Transducer Type
  - Proximity Probes

Key Package Features

- Driver Skid with Drip Pans
- Driven Equipment Skid
  - Multi-Stage Compressor Options, Single-Body or Tandem Compressor Configurations
  - Pipeline Compressor Options
  - Compressor Auxiliary Systems
- Compressors
- 316L Stainless Steel Piping ≤4" dia.
- Compression-Type Tube Fittings
- Electrical System Options
  - NEC, Class I, Group D, Div 1, or Div 2
  - ATEX, Zone 2
  - CENELEC, Zone 1
- *Turbotronic*™ Microprocessor Control System
  - Onskid Control System (Div 2 or ATEX, Zone 2)
  - Freestanding Control Console
  - Color Video Display
  - Vibration Monitoring
- Control Options
  - 120-VDC Accessory Battery/ Charger System
  - Gas Turbine and Package Temperature Monitoring
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Compressor Performance Map
  - Historical Displays
  - Printer/Logger
  - Remote Monitoring and Diagnostics Option
  - Process Controls
  - Compressor Anti-Surge Control
  - Field Programming
  - Predictive Emissions Monitoring
- Start Systems
  - Pneumatic
  - Direct-Drive AC
- Natural Gas Fuel System
- Integrated Lube Oil System
  - Turbine-Driven Accessories
  - AC Motor-Driven Accessories
- Oil System Options
  - Oil Cooler
  - Oil Heater
  - Tank Vent Separator
  - Flame Trap
- Package Skid Design
  - Accommodates *Mars*® and *Titan* Turbines
  - Optional Modifications for Floating Production Applications
  - Drop-In Lube Oil Tank
  - Modularized System Design
- Axial Compressor Cleaning Systems
  - On-Crank
  - On-Crank/On-Line
  - Portable Cleaning Tank
- Gearbox (if applicable)
  - Speed Increaser
  - Speed Decreaser
- Air Inlet and Exhaust System Options (Carbon or Stainless Steel)
- Enclosure and Associated Options
- Factory Testing of Turbine and Package
- Documentation
  - Drawings
  - Quality Control Data Book
  - Inspection and Test Plan
  - Test Reports
  - Operation and Maintenance Manuals

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Performance

Output Power	15 290 kW (20,500 hp)
Heat Rate	9940 kJ/kW-hr (7025 Btu/hp-hr)
Exhaust Flow	180 050 kg/hr (396,940 lb/hr)
Exhaust Temp.	505°C (940°F)

Nominal rating – per ISO
At 15°C (59°F), at sea level

No inlet/exhaust losses

Relative humidity 60%

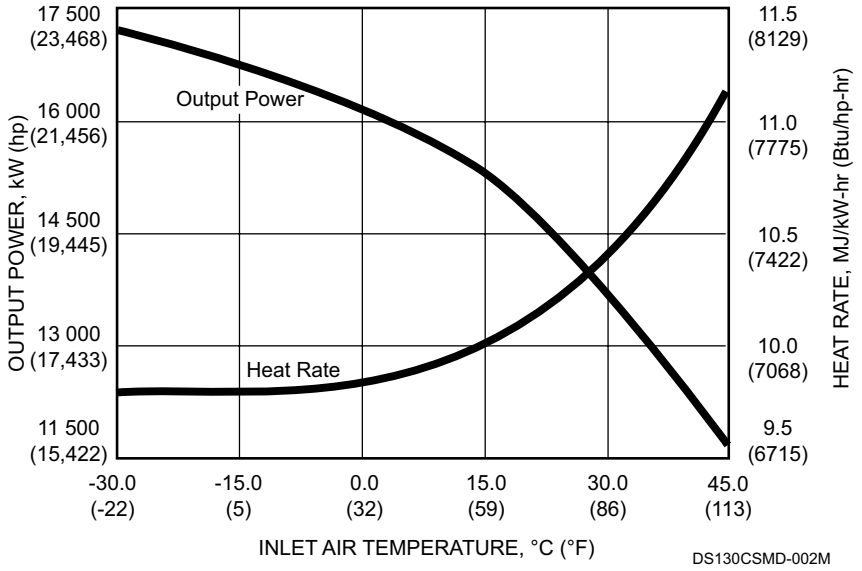
Natural gas fuel with
LHV = 35 MJ/nm³ (940 Btu/scf)

Optimum power turbine speed

AC-driven accessories

Engine efficiency: 36.2%

Available Power



DS130CSMD-002M

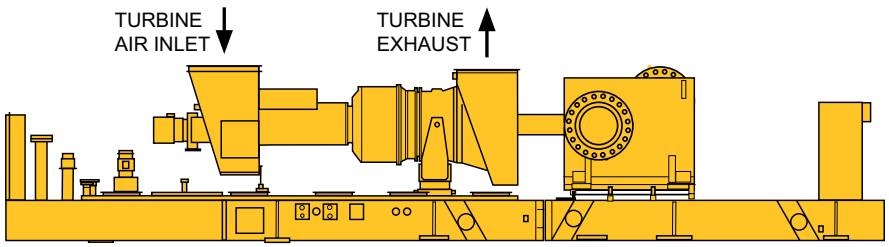
Package Dimensions*

Length: 9.8 m (32' 0")

Width: 3.1 m (10' 2")

Height: 3.2 m (10' 4")

Typical Weight: 38 555 kg (85,000 lb)



DS130CS-003M

**Driver package only*

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DS130CS/1109/EO

FOR MORE INFORMATION

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