

Package Features

- Offshore Marine Duty or Onshore Duty in High-Specification Applications
- NEC Class 1, Division 2 or CENELEC/ATEX Zone 2 Area Classification
- Axial or Space Saving Radial Exhaust Configuration
- Standard Onshore Configuration Available (Axial Exhaust Only)

General Specifications

Titan™ 130 Gas Turbine

- Industrial, Single-Shaft, Simple-Cycle
- Compressor:
 - 14-Stage, Axial
 - Variable Inlet Guide Vanes, 5 Stators
 - Pressure Ratio: 17.1:1
 - Inlet Airflow:
49.8 kg/sec (109.7 lb/sec)
 - Vertically Split Case
- Combustion Chamber:
 - Single, Annular-Type
 - Conventional: 21 Fuel Injectors or SoLoNOx™ Lean-Premixed, Dry, Low Emission: 14 Fuel Injectors
 - Torch Igniter System
- Power Turbine
 - 3-Stage, Axial-Flow
 - Max. Speed: 11,220 rpm
- Bearings:
 - 3 Tilt-Pad Radial Bearings
 - 1 Tilt-Pad Thrust Bearing
- Coatings
 - Compressor: Inorganic Aluminum
 - Turbine Blades and Nozzles: Precious Metal Diffusion Aluminide

Reduction Drive

- Epicyclic Type
 - 1500 rpm (50 Hz) or 1800 rpm (60 Hz)
 - Accessory Power Take-Off

Generator

- Salient Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous, with Permanent Magnet Generator Exciter
- Available Construction Types:
 - Open Drip Proof
 - Totally Enclosed Air-to-Air Cooled *
 - Totally Enclosed Water-to-Air Cooled *
- Sleeve Bearings

- NEMA Class F Insulation
- Class B Temperature Rise
- Voltages: 6600 to 13,800 VAC
- Frequency: 50 or 60 Hz

Package

- Mechanical Construction
 - Steel Base Frame with Drip Pans
 - 316L Stainless Steel Piping ≤4" dia.
 - Compression-Type Tube Fittings
 - Suitable for 3-Point Mounting *
 - FPSO Modifications (Option) *
- Electrical System
 - NEC, Class 1, Group D, Div 2
 - CENELEC/ATEX Zone 2 *
 - Cable Tray Wiring
 - 120VDC Battery/Charger System
- Direct-Drive AC Start System
- Fuel Systems
 - Conventional Combustion or Dry Low Emission (SoLoNOx)
- Fuel Types
 - Natural Gas or Dual (Gas/Distillate)
- Integrated Lube Oil System
 - Turbine-Driven Main Pump
 - AC Motor-Driven Pre/Post Pump
 - DC (120V) Motor-Driven Backup Pump
 - Oil Cooler and Oil Heater (Options)
 - Tank Vent Separator and Flame Trap
 - Lube Oil Filter
- On-Crank or On-Crank/On-Line Turbine Compressor Cleaning System (Options) *
 - Portable Cleaning Tank (Option)
- Air Inlet and Exhaust System
 - Carbon Steel
 - Stainless Steel *
 - Marine-Type Filters *

- Enclosure (Driver Only or Complete)
 - Fire Detection and Suppression
- Factory Testing of Turbine and Package
- Documentation
 - Electrical Drawings
 - Mechanical Drawings
 - Quality Control Data Book
 - Inspection and Test Plan
 - Test Reports
 - Operation and Maintenance Manuals
- Digital Onskid Display Panel
- **Turbotronic™ Control System**
- Onskid Control System (Optional Offskid System)
 - 24 VDC Control Power (120VDC Input)
 - Serial Link Supervisory Interface
 - Field Programmable
- Vibration Monitoring
 - Turbine Bearings and Shaft
 - Gearbox
 - Generator Bearings
- Temperature Monitoring
 - Turbine Combustion Process
 - Turbine Bearings and Lube Oil
 - Generator Bearings and Windings
- Generator Control
 - Selectable Control Modes
 - Solid-State Voltage Regulation
 - Automatic Synchronization
 - Metering Panel with Manual Synchronization (Option)
 - KW Control (Option)
- TT4000 Display and Monitoring System
 - Multiple Operator Display Screens
 - Data Collection and Playback
 - Turbine Performance Map (Option)
 - Printer/Logger (Option)
 - Predictive Emissions Monitoring (Option)

* Not available on Standard Onshore Configuration

Performance

Output Power	16 450 kW _e
Heat Rate	10 130 kJ/kW _e -hr (9605 Btu/kW _e -hr)
Exhaust Flow	197 030 kg/hr (434,380 lb/hr)
Exhaust Temp.	490°C (915°F)

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

No inlet/exhaust losses

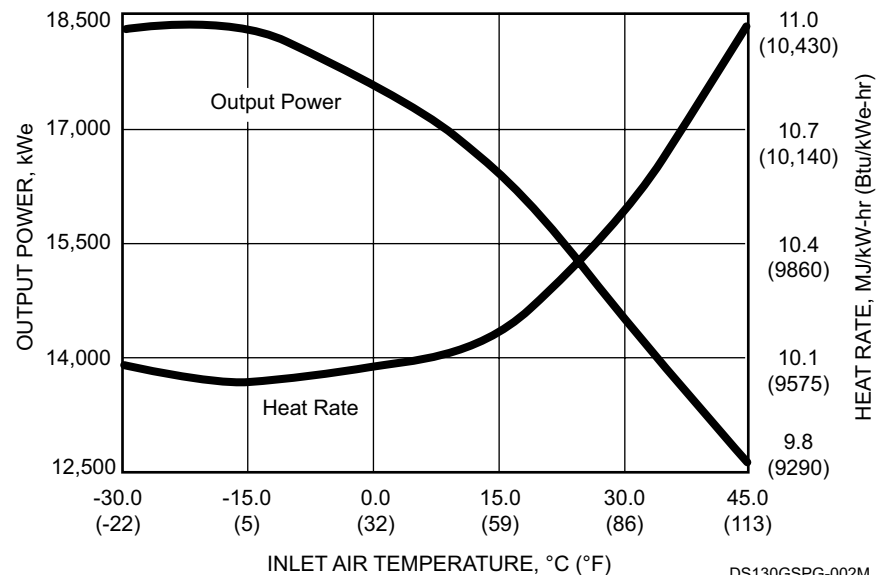
Relative humidity 60%

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

No accessory losses

Engine efficiency: 35.5%
(measured at generator terminals)

Available Power*

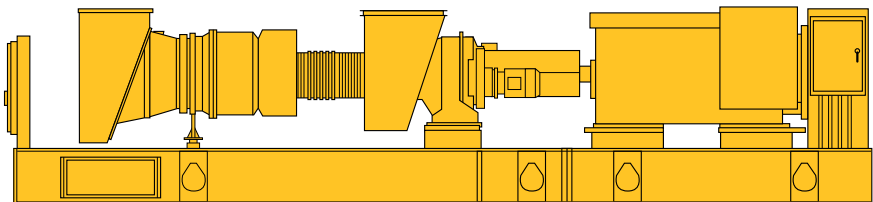


Package Dimensions*

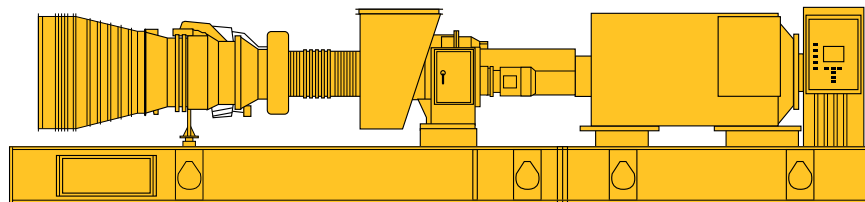
Length: 14.0 m (46' 0")
Width: 3.2 m (10' 11")
Height: 3.3 m (10' 9")
Typical Weight: 83 955 kg (185,085 lb)

*Dry weight, unenclosed height

Radial Exhaust



Axial Exhaust



DS130GS-AR-003C