

### Package Features

- Offshore Marine Duty or Onshore Duty in High-Spec 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

#### Taurus™ 70 Gas Turbine

- Industrial, Single Shaft, Simple Cycle
- Axial Compressor
  - 14 Stage
  - Variable Inlet Guide Vanes and Stators
  - Pressure Ratio: 17.6:1
  - Inlet Airflow: 26.2 kg/sec (57.7 lb/sec)
  - Vertically Split Case
- Combustion Chamber
  - Single, Annular-Type
  - Conventional or Lean-Premixed, Dry, Low Emission (SoLoNOx™)
  - 12 Fuel Injectors
  - Torch Ignitor System
- Turbine
  - 3-Stage, Axial-Flow
  - Max. Speed: 15,200 rpm
- Bearings
  - Journal and Thrust: Tilt Pad
- Coatings
  - Compressor: Inorganic Aluminum
  - Turbine Blades and Nozzles: Precious Metal Diffusion Aluminide
- Vibration Transducer Type
  - Proximity Probes
  - Accelerometer

#### Reduction Drive

- Epicyclic Type
- 1500 rpm, 50 Hz
- 1800 rpm, 60 Hz
- Accessory Power Take-Off
- Clockwise Rotation

#### Generator

- Type: Salient Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous, with Brushless Exciter

- Available Construction Types
  - Open Drip Proof
  - Totally Enclosed Air-to-Air Cooled\*
  - Totally Enclosed Water-to-Air Cooled\*
- Sleeve Bearings
- Voltage Regulation
  - Solid-State Regulation with Permanent Magnet Generator
- Insulation/Rise Options
  - NEMA Class F with F Rise
  - NEMA Class F with B Rise
- Voltages: 3300 to 13,800 Volts
- Frequency: 50 or 60 Hz

#### Package

- Mechanical Construction
  - Steel Base Frame with Drip Pans
  - 316L Stainless Steel Piping
  - 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 (Onskid Controls Only)
- Analog Display Panel (Offskid Controls Only)

#### 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)

### Performance

Output Power	7965 kW <sub>e</sub>
Heat Rate	10 505 kJ/kW <sub>e</sub> -hr (9955 Btu/kW <sub>e</sub> -hr)
Exhaust Flow	96 775 kg/hr (213,350 lb/hr)
Exhaust Temp.	510°C (945°F)

Nominal Rating – ISO  
At 15°C (59°F), sea level

No inlet/exhaust losses

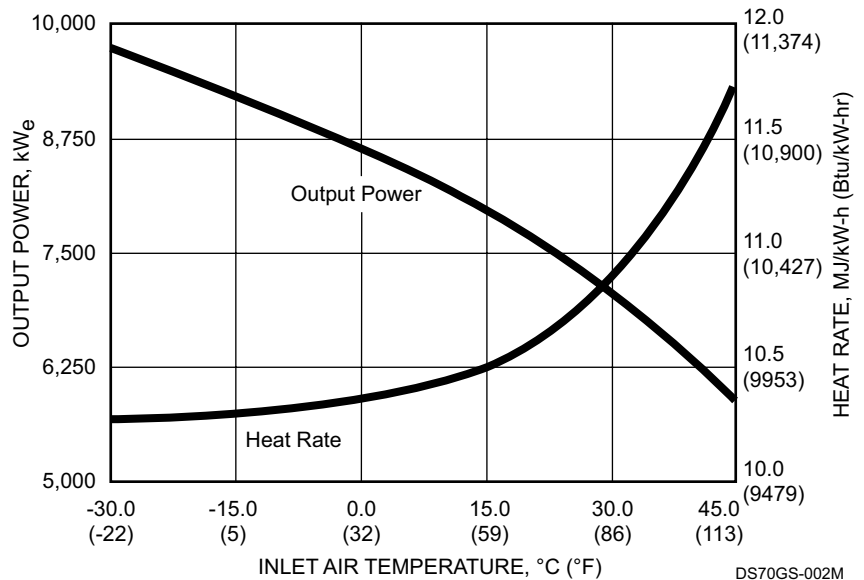
Relative humidity 60%

Natural gas fuel with  
LHV = 35 MJ/nm<sup>3</sup> (940 Btu/scf)

No accessory losses

Engine efficiency: 34%  
(Measured at generator terminals)

### Available Power\*

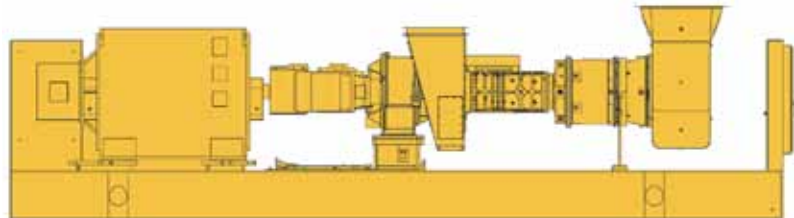


\* SoLoNOx

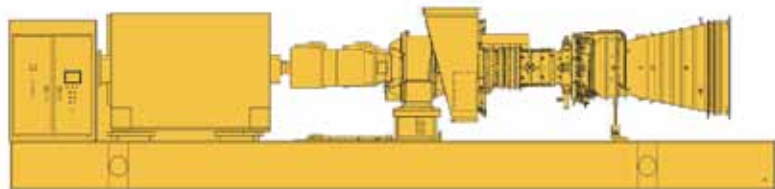
### Package Dimensions

Length:	11.9 m (39' 0")
Width:	2.9 m (9' 7")
Height:	3.7 m (12' 1")
Typical Weight:	62 935 kg (138,775 lb)

### Radial Exhaust



### Axial Exhaust



DS70GS-003MS