General Specifications

**Taurus™ 70 Gas Turbine**
- Industrial, Two Shaft
- Axial Compressor
  - 14 Stage
  - Variable Inlet Guide Vanes
  - Pressure Ratio: 16.2:1
  - Inlet Airflow: 26.8 kg/sec (59.1 lb/sec)
  - Axially Split Case
- Combustion Chamber
  - Single Annular Type
  - Conventional or Lean-Premixed, Dry, Low Emission (SoLoNOx™)
  - 12 Fuel Injectors
  - Torch Ignitor System
- Gas Producer Turbine
  - 2 Stage, Reaction
  - Max. Speed: 15,200 rpm
- Power Turbine
  - 2 Stage, Reaction
  - Max. Speed: 11,600 rpm
- Bearings
  - Journal and Thrust: Tilt Pad
- Coatings
  - Compressor Stators and Drums: Inorganic Aluminum
  - Turbine Nozzles and Blades: Precious Metal Diffusion Aluminide
- Vibration Transducer Type
  - Proximity Probes
  - Velocity Transducer

Key Package Features

- Driver Skid with Drip Pans
- 316L Stainless Steel Piping ≤102mm (4”)
- Compression-Type Tube Fittings
- Digital Display Panel
- Electrical System Options
  - NEC Class I, Group D, Div. 1 or 2
  - CENELEC Zone 1 or 2
- Turbotronic™ Microprocessor Control System
  - Offskid or Onskid
  - Video Display Unit
  - Temperature and Vibration Monitoring
  - Historical Displays
- Control System Options
  - Auxiliary Control Interface or Auxiliary Control Console (with onskid controls)
  - Remote Control and Display
  - 120-VDC Control Battery/Charger
  - Supervisory Communications Interface
  - Turbine Performance Map
  - Printer/Logger
  - Field Programming
  - Process Controls
  - Compressor Performance Map
  - Compressor Anti-Surge Control
- CE/ATEX Zone 2 Certification
- Start Systems
  - Pneumatic
  - Direct Drive AC
- Fuel System: Natural Gas
- Integrated Lube Oil System
  - Turbine-Driven Accessories
  - Oil Tank Vent Separator
  - Oil Tank Vent Flame Trap
- Lube Oil System Options
  - Oil Cooler
  - Oil Heater
- Compressor Cleaning System Options
  - On-Crank
  - On-Crank/On-Line
  - Certified Cleaning Tank
- Gearbox (if applicable)
  - Speed Increaser or Reducer
- Air Inlet and Exhaust System Options
- Enclosure and Associated Options
- Factory Testing of Turbine and Package
- Documentation
  - Mechanical and Electrical Drawings
  - Quality Control Data Book
  - Inspection and Test Plan
  - Test Reports
  - Operation and Maintenance Instruction Manual

Oil & Gas Applications

**TAURUS 70**
**Gas Turbine Mechanical-Drive Package**

*Solar Turbines*
*A Caterpillar Company*
## Performance

**Output Power**
- 8290 kW (11,110 hp)

**Heat Rate**
- 10 170 kJ/kW-hr (7190 Btu/hp-hr)

**Exhaust Flow**
- 96 500 kg/hr (212,740 lb/hr)

**Exhaust Temp.**
- 500°C (935°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/m³ (940 Btu/scf)
- Optimum power turbine speed
- AC-driven accessories
- Engine efficiency: 35.4%

## Available Power

<table>
<thead>
<tr>
<th>INLET AIR TEMPERATURE, °C (°F)</th>
<th>OUTPUT POWER, kW (hp)</th>
<th>HEAT RATE, MJ/kW-hr (Btu/hp-hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-30.0 (-22)</td>
<td>10,000 (13,410)</td>
<td>11.5 (8130)</td>
</tr>
<tr>
<td>-15.0 (5)</td>
<td>8,875 (11,900)</td>
<td>11.0 (7780)</td>
</tr>
<tr>
<td>0.0 (32)</td>
<td>7,750 (10,390)</td>
<td>10.5 (7420)</td>
</tr>
<tr>
<td>15.0 (59)</td>
<td>6,625 (8720)</td>
<td>10.0 (7070)</td>
</tr>
<tr>
<td>30.0 (86)</td>
<td>5,500 (7380)</td>
<td>9.5 (6710)</td>
</tr>
<tr>
<td>45.0 (113)</td>
<td>4,100 (5540)</td>
<td>9.0 (6390)</td>
</tr>
</tbody>
</table>

## Package Dimensions *

- **Length**: 7.7 m (25’ 3”)
- **Width**: 2.6 m (8’ 8”)
- **Height**: 3.3 m (10’ 9”)
- **Typical Weight**: 24 495 kg (54,000 lb)

*Driver package only, dry weight, unenclosed height

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DS70MD-1118E0

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