

### General Specifications

#### Saturn® 20 Gas Turbine

- Industrial, Two-Shaft
- Axial Compressor
  - 8-Stage
  - Pressure Ratio: 6.7:1
  - Inlet Airflow: 6.4 kg/sec (14.2 lb/sec)
- Combustion Chamber
  - Annular-Type
  - 12 Fuel Injectors
  - Torch Ignitor System
- Gas Producer Turbine
  - 2-Stage, Reaction
  - Max. Speed: 15,000 rpm
- Power Turbine
  - 1-Stage, Reaction
  - Max. Speed: 22,300 rpm
- Bearings
  - Journal: Multi-Ramp Sleeve
  - Thrust: Fixed Tapered Land
- Coatings
  - Compressor: Inorganic Aluminum
  - Turbine and Nozzle Blades: Precious Metal Diffusion Aluminide
- Velocity Vibration Transducer

### Key Package Features

- Driver Skid with Drip Pans
- 316L Stainless Steel Piping  $\leq 4$ " dia
- Compression-Type Tube Fittings
- Gauge Panel
  - Fluid Gauges
- Electrical System Options
  - NEC, Class I, Group D, Div 1
  - CENELEC, Zone 1
- *Turbotronic*™ Microprocessor Control System
  - Freestanding Control Console
  - Color Video Display
- Control Options
  - 24-VDC Control Battery/Charger System
  - Vibration Monitoring
  - Turbine and Package Temperature Monitoring
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Compressor Performance Map
  - Historical Displays
  - Printer/Logger
  - Predictive Emissions Monitoring
  - Process Controls
  - Compressor Anti-Surge Control
  - Field Programming
- Start Systems
  - Pneumatic
  - Direct-Drive AC
- Fuel Systems
  - Natural Gas
  - Liquid
  - Dual (Gas/Liquid)
  - Alternate Fuels
- Integrated Lube Oil System
  - Turbine-Driven Accessories
- Oil System Options
  - Oil Cooler
  - Oil Heater
  - Tank Vent Separator
  - Flame Trap
- Axial Compressor Cleaning Systems
  - On-Crank
  - On-Crank/On-Line
  - Cleaning Tank
- Gearbox (if applicable)
  - Speed Increaser
  - Speed Decreaser
- Air Inlet and Exhaust System Options
- 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

### Performance

Output Power	1185 kW (1590 hp)
Heat Rate	14 670 kJ/kW-hr (10,370 Btu/hp-hr)
Exhaust Flow	23 410 kg/hr (51,615 lb/hr)
Exhaust Temp.	520°C (970°F)

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

No inlet/exhaust losses

Relative humidity 60%

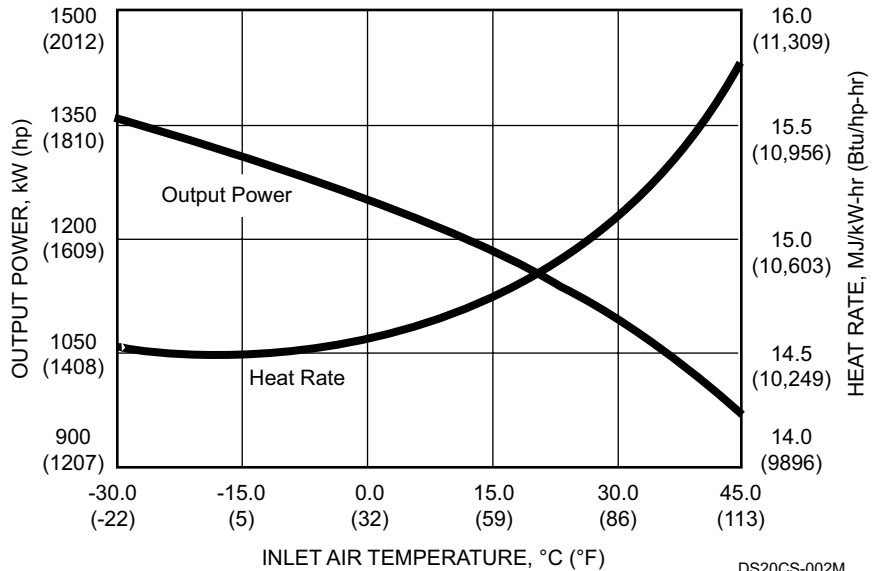
Natural gas fuel with  
LHV = 35 MJ/nm<sup>3</sup> (940 Btu/scf)

Optimum power turbine speed

AC-driven accessories

Engine efficiency: 24.5%

### Available Power



DS20CS-002M

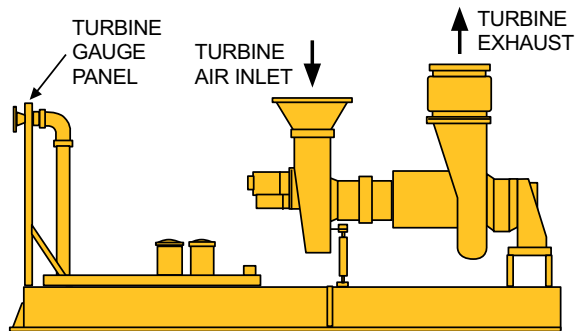
### Package Dimensions

Length: 4.7 m (15' 4")

Width: 1.9 m (6' 1")

Height: 2.0 m (6' 8")

Typical Weight: 6805 kg (15,000 lb)



DS20MD-003M