



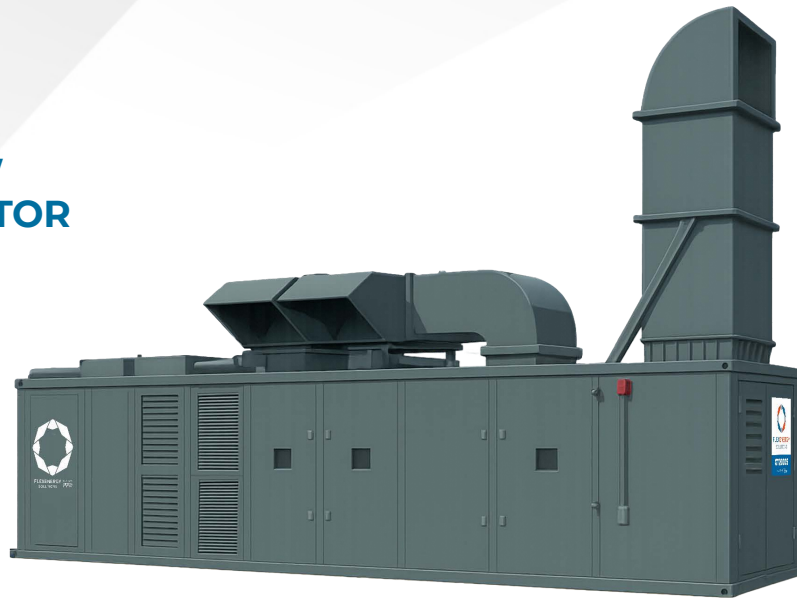
FLEXENERGY
SOLUTIONS

FLEX TURBINE® GT2000S *powered by*

SIEMENS
energy

HIGH EFFICIENCY 2MW GAS TURBINE GENERATOR

**1,800+ kW
CONTINUOUS
ELECTRICAL POWER*
WITH OPTIONAL
INTEGRATED HEAT
RECOVERY**



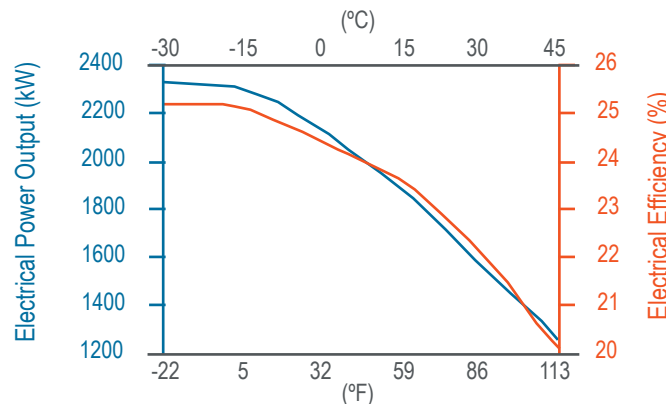
KEY FEATURES

- Speed reduction gearbox
 - Epicyclic with journal bearings
 - Available in 50Hz and 60Hz version (1500/1800 rpm)
 - Equipped with thermocouples on main bearings
- Turbine Rotor Bearings
 - Cold side of the engine
 - Thrust (tilting pad) and journal
- Compressor wheel
 - Centrifugal single stage
- Turbine wheel
 - Radial inflow single stage
- Combustors
 - Dry Low Emission

ELECTRICAL PERFORMANCE

CHARACTERISTIC	SPECIFICATION
Electrical efficiency	23.4%
Electrical power	1,877 kW

*ISO Conditions on high pressure natural gas



Rugged Gas Turbine

- Wide Acceptable gas range; ~800 Btu/scf to ~2300 Btu/scf (~29.7 MJ/Sm³ to 86.2 MJ/Sm³)
- H₂S tolerance up to 1.5% by weight
- Can burn up to 5% hydrogen (100% expected by 2025)

Control System

- Woodward Flex 500 PLC-Based Turbine Control Panel (TCP)
- MCC, main circuit breaker, communication link to ICCS/DCS optional

Complete Turbine Package

- On board control system
- Air intake filtration
- Exhaust with silencer
- Fuel system
- Ventilation system
- CO₂ fire suppression system

Combined Heat and Power with HRSG or Absorption Chiller

- High Efficiency CHP: Up to 85%
- Steam output 14,500 lbs/hr at 145 psig (6.6 metric t/h at 10 barg)
- Chiller output 1800 TR (6.3 MW)

Voltage

400 V – 13.8 kV

Frequency

60 Hz / 50 Hz

Compressor Pressure Ratio

7:1

Air Inlet Mass Flow

20.4 lb/sec (9.26 kg/s)

Available Exhaust Heat

17.8 MMBtu/hr (5,221 kW)

Exhaust Gas Temperature

1112° F (600° C)

Coupling

Flexible dry coupling with integrated shear pin for overload protection

Starter System

Hydraulic starter with electric motor and high-pressure pump

Lubrication Oil System

- Turbine Driven
- Oil cooler and filtration included

Synchronous Generator

- 4 pole, 480 or 400 V standard
- Available up to 13 kV

AMBIENT TEMPERATURE LIMIT

CHARACTERISTIC	SPECIFICATION
Standard	4° F to 113° F (-20° C to 45° C)
Extreme Temperature Conditions*	— Option 1: Below -4° F (-20° C) — Option 2: Above 113° F (45° C)

*Includes control system cabinet.

EMISSIONS - ISO CONDITIONS

ppm @ 15% O ₂ Dry Exhaust	Natural Gas Fuel		
Load	100%	70%	<70%
NOx	≤10	50	50
CO	≤10	50*/600	1500

* May use compressor bleed to achieve this level of CO emission

ISO Condition

LHV:	935 Btu/scf (35.0 MJSm ³) (Natural Gas Fuel)
Altitude:	sea level
Ambient Temperature:	59° F (15° C)
Barometric Pressure:	14.696 psi (1.012 bar)
Relative Humidity:	60%

PACKAGED UNIT PHYSICAL SPECIFICATIONS

DIMENSION	WIDTH	LENGTH	HEIGHT	WEIGHT
Metric	2.44 m	12.19 m	6.05 m	26,500 kg
Imperial	8 ft - 0 in	40 ft - 0 in	19 ft - 10 in	58,400 lbs

SOUND LEVELS

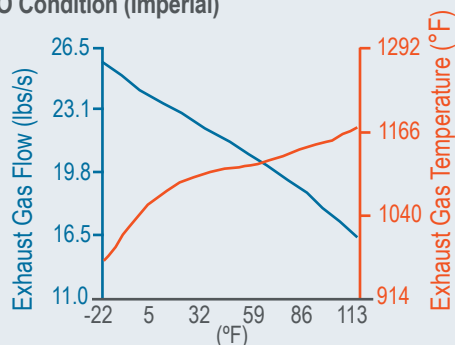
CHARACTERISTIC	SPECIFICATION
Standard	85 dB(A) @ 1 m

APPLICABILITY

- Wide range of applications already proven through existing installed base both on- and off-shore.
- Transforms associated flare and waste gases and tank vapors from oil and gas operations into a continuous source of clean electric power.
- Converts biogases from landfills, wastewater treatment plants, and digesters into useful power and heat for use on site.
- Eliminates need for diesel transport, simultaneously cuts added emissions from typical diesel- or gas-powered reciprocating engine turbines.

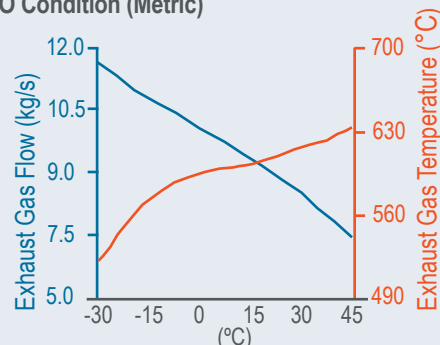
PERFORMANCE - EXHAUST

ISO Condition (Imperial)



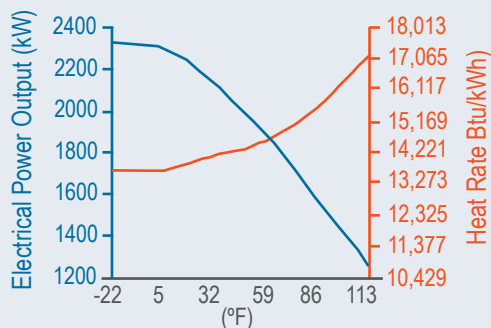
PERFORMANCE - EXHAUST

ISO Condition (Metric)



PERFORMANCE - HEAT RATE

ISO Condition (Imperial)



PERFORMANCE - HEAT RATE

ISO Condition (Metric)

