

Ultra-clean electricity and useful thermal energy from a rugged and efficient gas turbine.

250 kW Continuous Onsite Electrical Power with Integrated Heat Recovery

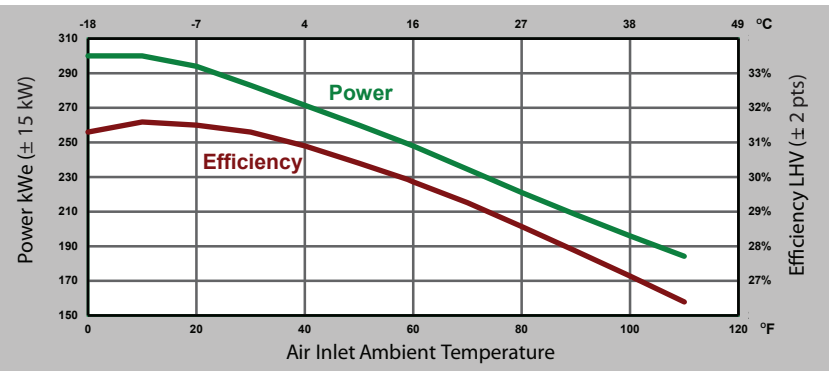
KEY FEATURES

- High system efficiency
- Synchronous generator ideal for off-grid oil & gas applications
- Grid-parallel, Grid isolated, or Dual-mode operation
- Low emissions exceed stringent environmental standards
- Integrated, variable-output, waste-heat recovery unit available
- Over two million hours of fleet operating experience

ELECTRICAL PERFORMANCE*

CHARACTERISTIC	SPECIFICATION
Electrical efficiency (± 2 pts)	30% LHV without gas booster
Electrical power** (±15 kW)	250 kW nominal

ELECTRICAL OUTPUT GRAPH SHOWS CHANGE IN POWER AND EFFICIENCY WITH TEMPERATURE

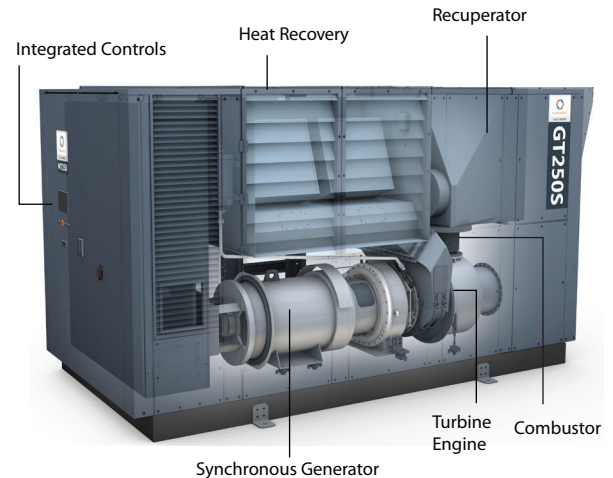


Note: kWe is electrical output at terminals corrected for parasitics, but not including gas booster power

Nominal heat rate (HHV)	12,645 Btu/kWh (13.3 MJ/kWh) without gas booster
	13,080 Btu/kWh (13.8 MJ/kWh) with gas booster
Nominal heat rate (LHV)	11,380 Btu/kWh (12.0 MJ/kWh) without gas booster
	11,770 Btu/kWh (12.4 MJ/kWh) with gas booster
Voltage	480 VAC/400 VAC
Frequency	60 Hz/50 Hz
Type of service	3 phase, wye, 4 wire
Grid-isolated regulation (steady state)	± 0.50% nominal voltage
	± 0.30 Hz nominal frequency
Transient handling (linear loads) (recovery within 5 seconds)	± 10% nominal voltage max
	± 5 Hz frequency max

* At ISO Conditions (59°F [15°C] @ sea level, 60% RH) unless otherwise noted, pipeline natural gas only.

** Elevation derate of approximately 8.80 kW per 1000 ft (305 m)



CARB CERTIFICATION

- The GT250S is the first microturbine to be certified to the California Air Resource Board's 2007 emissions standards

RUGGED GAS TURBINE

- Back-to-back rotating components
- Proven oil-lubricated bearings
- High H₂S tolerance up to 6500 ppmv

SYNCHRONOUS GENERATOR

- Same technology utilities use to power the grid
- High load starting capability up to 100 hp DOL

PATENTED RECUPERATOR

- Critical to high system efficiency
- Compact rugged design

PATENTED COMBUSTOR

- Dry low NO_x
- Meets stringent environmental regulations

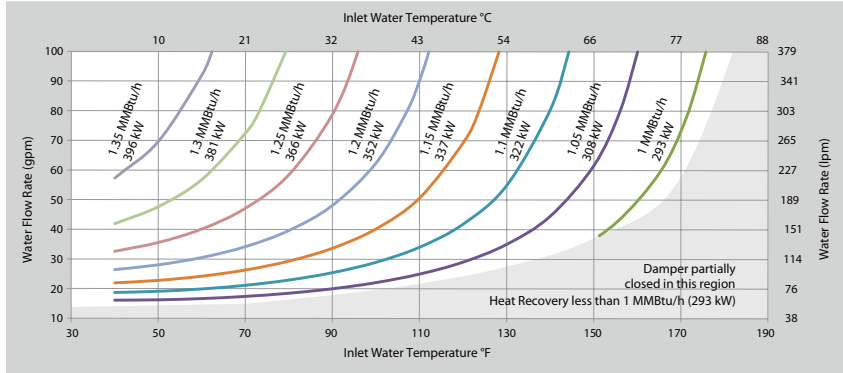
SOPHISTICATED CONTROLS

- Closed transition dual-mode functionality
- Remote monitoring capability

COMBINED HEAT AND POWER

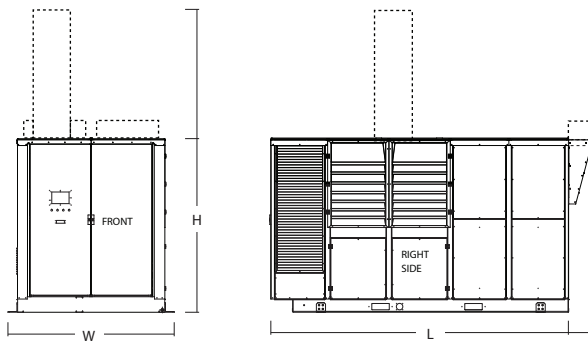
- Controllable output level
- Integral heat recovery unit contained within turbine enclosure
- No ducting

HEAT OUTPUT RECOVERABLE TO WATER



Note: Heat Recovery Unit (HRU) at ISO conditions, damper fully open, ± 15%

PHYSICAL SPECIFICATIONS



Weatherproof Outdoor Enclosure

DIMENSIONS		WIDTH	LENGTH	HEIGHT	WEIGHT Est.
Indoor Unit	(in)	77.2	167.6	91.9	14,500 lb
	(cm)	196.0	425.8	229.9	6,577 kg
Outdoor Unit	(in)	77.2	167.6	158.1	14,500 lb
	(cm)	196.0	425.8	401.6	6,577 kg

MINIMUM CLEARANCE REQUIREMENTS

CHARACTERISTIC	SPECIFICATION
Vertical clearance	102 in (259 cm)
- Indoor Unit	No overhead obstruction
- Outdoor Unit	
Horizontal front, rear and left side	48 in (122 cm)
Horizontal right side	72 in (183 cm)

GENERATOR BRAKING RESISTOR

CHARACTERISTIC	SPECIFICATION
Dimensions (LxWxH)	37x63x30 (94x160x76 cm)
Weight	485 lb (220 kg)



Generator Braking Resistor

SOUND LEVELS

CHARACTERISTIC	SPECIFICATION
Standard	80 dB(A) @ 1m
Low sound option	77 dB(A) @ 1m

CONTACT INFORMATION

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HEAT RECOVERY*

CHARACTERISTIC	SPECIFICATION
Recuperator exhaust temp. w/o HRU	493°F (256°C)
Engine air flow	4.7 lb/s (2.13 kg/s)
Max water flow	3700 scfm (5950 Nm ³ /h)
Max inlet water pressure	100 gpm (379 lpm)
Max inlet water temp.	125 psig (862 kPa)
	185°F (85°C)

* at ISO Conditions (59°F [15°C] @ sea level, 60% RH) unless otherwise noted.

FUEL REQUIREMENTS

CHARACTERISTIC	SPECIFICATION
Inlet pressure	
-with gas booster	4" (100 mm) WC to 1 psig (6.9 kPa)
-without gas booster	80 to 140 psig (551 to 965 kPa)

Min temperature*	33°F (1°C)
Max temp.	
-with gas booster	115°F (46°C)
-without gas booster	175°F (79°C)

250SW Model**	325 to 600 WI Btu/ft ³
low caloric value gas, level 1	12.1 to 22.3 WI MJ/m ³

250ST Model**	500 to 970 WI Btu/ft ³
low caloric value gas, level 2	18.6 to 36.1 WI MJ/m ³

250SM Model**	800 to 1900 WI Btu/ft ³
medium / high caloric value gas	29.8 to 70.7 WI MJ/m ³

* Or 18°F dewpoint suppression, whichever is greater
** Wobbe Index. Lower heating value (LHV), dry basis, at 14.7 psi (101 kPa) and 59°F (15°C)

EMISSIONS AT 100% LOAD*

CHARACTERISTIC	SPECIFICATION
NOx	<5 ppmv @ 15% O ₂
CO	<5 ppmv @ 15% O ₂
VOC	<5 ppmv @ 15% O ₂

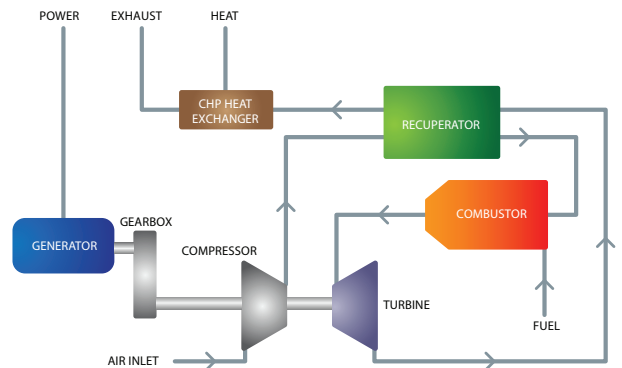
* Pipeline natural gas only at ISO conditions

AMBIENT TEMPERATURE LIMIT

CHARACTERISTIC	SPECIFICATION
Standard	-10° to 115°F (-23° to 46°C)
Cold Weather Option*	-20° to 115°F (-29° to 46°C)

* Some configurations may require additional cold-weather options

GT250S GAS TURBINE CYCLE



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