

Ultra-clean electricity and useful thermal energy from a rugged and efficient gas turbine. Now with increased power and efficiency

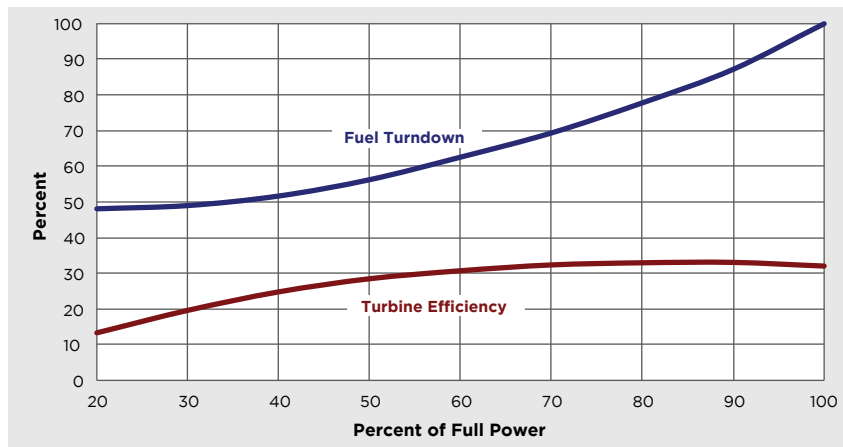
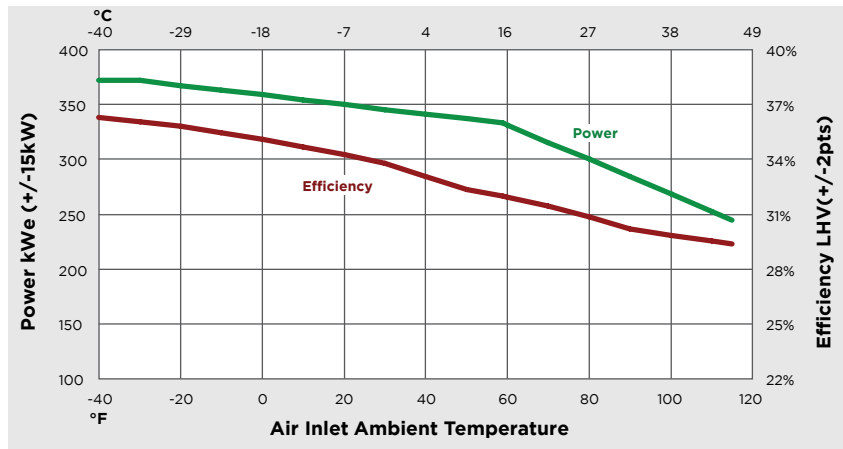
333 kW Continuous Onsite Electrical Power with Integrated Heat Recovery

KEY FEATURES

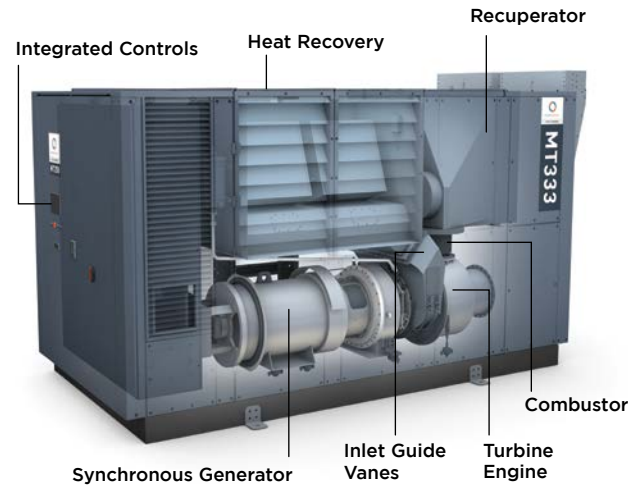
- New updated unit derived from MT250 with over one million hours of fleet operating experience
- New compressor increases power and efficiency
- New inlet guide vanes increase efficiency at part-load conditions, ideal for off-grid load following
- Synchronous generator ideal for off-grid oil and gas applications
- Grid-parallel, grid-isolated or dual-mode
- Low emissions meet stringent environmental standards
- Integrated, variable-output waste-heat recovery unit available

ELECTRICAL PERFORMANCE*

CHARACTERISTIC	SPECIFICATION
Electrical efficiency (±2%)	32% LHV without gas booster
Electrical power** (±15%)	333 kW nominal



* at ISO Conditions (59°F [15°C] @ sea level, 60% RH) unless otherwise noted, pipeline natural gas only. Data shown without gas booster.
 ** elevation derate of approximately 8.80 kW per 1,000 ft (305 m)



Nominal Heat Rate (HHV)	11,732 Btu/kWh (12,377 kJ/kWh) w/o gas booster
	12,170 Btu/kWh (12,839 kJ/kWh) w/gas booster*
Nominal Heat Rate (LHV)	10,665 Btu/kWh (11,252 kJ/kWh) w/o gas booster
	11,064 Btu/kWh (11,673 kJ/kWh) w/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 sec)	±0.10% nominal voltage max ±5 Hz frequency max

* 400 VAC/50Hz configuration to be available in Q4 2013.

RUGGED GAS TURBINE

- Back-to-back rotating components
- Proven oil-lubricated bearings
- High H₂S tolerance up to 6,500 ppmv

SYNCHRONOUS GENERATOR

- Same technology utilities use to power the grid
- High load starting capability 125 hp DOL (typical)

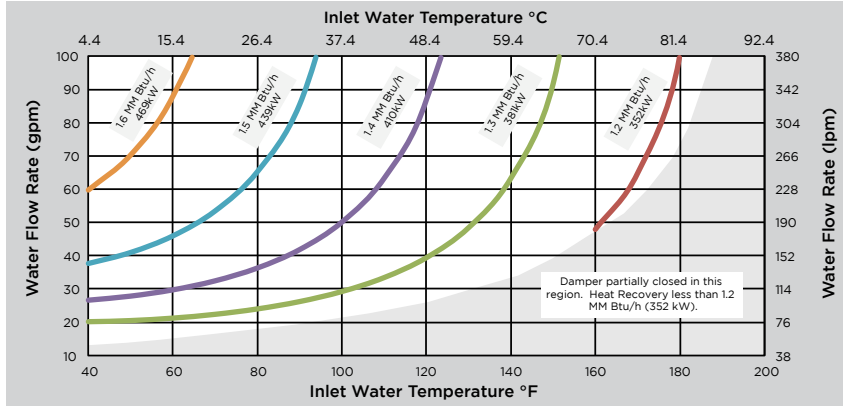
PATENTED RECUPERATOR

- Critical to high system efficiency
- Proprietary compact design

COMBINED HEAT AND POWER

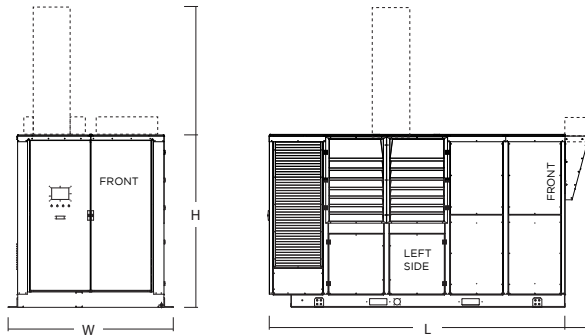
- Controllable output level
- Integral heat recovery unit enclosed within turbine package
- No ducting required
- Suitable for potable applications

HEAT OUTPUT RECOVERABLE TO WATER



Note - Btu/hour from Heat Recovery Unit (HRU) at ISO conditions, damper fully open, ±15%

PHYSICAL SPECIFICATIONS



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	401.5	6,577 kg

MINIMUM CLEARANCE REQUIREMENTS

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

GENERATOR BRAKING RESISTOR

CHARACTERISTIC	SPECIFICATION
Dimensions (LxWxH)	37x39x30 in (94x99x76 cm)
Weight	240 lb (109 kg)

GENERATOR BRAKING RESISTOR

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



Weatherproof Outdoor Enclosure



Generator Braking Resistor

CONTACT INFORMATION

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HEAT RECOVERY*

CHARACTERISTIC	SPECIFICATION
Recuperator exhaust temp w/o HRU	512°F (267°C)
Engine air flow	5.3 lb/s (2.41 kg/s)
Max water flow	100 gpm (22.7 m ³ /hr)
Max inlet water pressure	125 psig (862 kPa)
Max inlet water temp	194°F (90°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	90 to 140 psig (620 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)

333SW Model***	325 to 600 WI Btu/scf
low caloric value gas, level 1	12,100 to 22,340 WI kJ/m ³

333ST Model***	500 to 970 WI Btu/scf
low caloric value gas, level 2	18,600 to 36,100 WI kJ/m ³

333SM Model***	800 to 1,440 WI Btu/scf
medium caloric value gas	29,800 to 53,600 WI kJ/m ³

333SH Model***	1,380 to 1,900 WI Btu/scf
high caloric value gas	51,400 to 70,700 WI kJ/m ³

* For full power, fuel LHV must be greater than 1050 Btu/ft³

** Or 18°F dewpoint suppression, whichever is greater

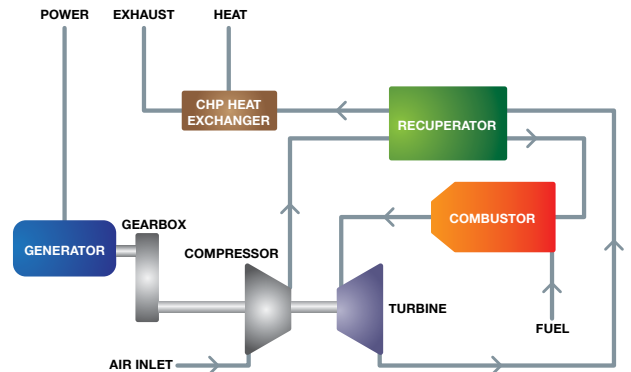
*** Wobbe Index. Lower heating value (LHV), dry basis, at 14.7 psi (101 kPa) and 59°F (15°C)

EMISSIONS AT 100% LOAD*

CHARACTERISTIC	SPECIFICATION
NOx	<9 ppmv
CO	<10 ppmv
VOC	<9 ppmv

* Pipeline quality natural gas only
Emissions characteristics under development

MT333 GAS TURBINE CYCLE



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