

MEG 285NM Technical data



Frequency	Hz	60
Continuous Electric Output @ 1.0pf	kWe	285
Mechanical Power	bhp	260
Max Permissible Oil Consumption	lb/hr	0.265

Engine Information		
Manufacturer	MAN	
Model number	E 3262 E 302	
Fuel type	Natural Gas	
Aspiration	Rich	
Cylinders	V12	
Min Methane Number	80	
RPM	1800	

Generator Information	
Manufacturer	Stamford
Model Number	HCI434E
Class - Temp Rise	Cont. F - 105°F Rise
Voltage	480
Phase	3
Ingress protection	IP23
Insulation class	H

Energy Balance			100%	75%	50%
Electrical Power Output @ 1.0PF	(+/-3%)	kW	285	214	143
Electric Efficiency (LHV)	(+/-5%)	%	36.90%	34.80%	30.72%
Thermal Efficiency (LHV)	(+/-8%)	%	55.00%	57.37%	60.61%
Combined Efficiency (LHV)	(+/-8%)	%	91.90%	92.17%	91.33%
Fuel Consumption (LHV)	(+ 5%)	BTU/hr	2,635,595	2,095,934	1,582,921
Heat Rate (LHV)		BTU/kWe-Hr	9,248	9,806	11,108
Total Heat Output	(+/-10%)	BTU/hr	1,449,644	1,202,420	959,416
Heat from water jacket	(+/-8%)	BTU/hr	634,705	725,342	624,717
Heat from exhaust (cooled to 248°F)	(+/-8%)	BTU/hr	814,939	477,078	334,699
Heat from Intercooler	(+/-8%)	BTU/hr	0	0	0
Radiated Output	(+/-25%)	BTU/hr	53,481	33,107	25,467
Cooling (absorption chiller single effect)	(+/-8%)	TONS	96.6	80.2	64.0
Steam Output @ 15 PSIG	(+/-8%)	Lb/hr	510	389	276
Exhaust temperature	(+/-20%)	DEG F	1,182	1,148	1,100
Combustion Mass Airflow	(+/-5%)	Lb/hr	2,087	1,661	1,253
Exhaust Mass flow (wet)	(+/-10%)	Lb/hr	2,209	1,758	1,326
Exhaust Volume Flow (cooled to 248°F)	(+/-5%)	ACFM	673	535	404

Secondary Hot water system		
Hot water loop flow rate	149	GPM
Hot water loop temperatures (in/out)	170/190	DEG F
Hot water loop pressure loss	3	PSID
Flange connection size	3	in
Glycol content	0	%

Electrical Details	
Alternator	Synchronous
Inverter option	Available
CHP main breaker size	600AF/600AT
Current per phase @ 1.0Pf	328.8A
Alternator efficiency @ 1.0Pf	95.8%
Current per phase @ 0.8Pf	404.2A
Alternator efficiency @ 0.8Pf	94.2%

Exhaust details		
Max Allowable backpressure	in H2O	16
Flange Type	ANSI B16.5 Class 150	
Flange Size	in	6

Package Emissions		
NO _x	g/BHP-hr	1.0
CO	g/BHP-hr	2.0
NMHC	g/BHP-hr	0.7

Fuel Gas Details		
Min/Max Supply pressure	in H2O/PSIG	18/5
Flange Type	ANSI B16.5 Class 150	
Lower Calorific Value	BTU/ft ³	905
Flange Size	in	2

Noise	
Sound power level @ 3ft	65 dBA
Sound pressure level @ 3ft	75 dBA

*For octave band frequency please contact Martin Energy Group

Ventilation details		
Air flow requirements	ACFM	6836
Connection size	in	32.75

Package overall dimensions		
Length	in	185
Width	in	65
Height	in	105

Notes

Energy balance data is stated at ISO 3046-1 conditions.

Values for part load are estimates only.

Noise data stated at free-field conditions.

All information detailed is for guidance only and is subject to change without notice due to our commitment to continuous improvement

Revision 0
Issue date mm/dd/year

MEG 285NM Module data

285 kWe

Cogeneration Module

MAN® SI Engine

Stamford Synchronous Generator

Martin Energy Group designs, develops and manufactures cogeneration modules unmatched in reliability and cost-effectiveness.

BENEFITS

MAN Engine

- proven reliable and durable for long life
- worldwide product support
- multiple fuel options including natural gas, biogas and LPG

Stamford Generator

- single-bearing, PMG excited, DVR controlled

Compliance

- meets or exceeds industry standards including UL, Rule 21, IEEE and SCAQMD

Utility Interconnection

- integrated, fault protection switchgear for simplified interconnection
- stored energy breaker for quick transition

Comap™ Control System

- Internet based remote system monitoring
- onboard data capture, storage, and communication capable of 24/7 narrowband and wireless connection
- trend analysis to anticipate wear
- early alerts to system problems to minimize downtime

Exhaust Emissions

- 3-way CAT system with A/F Ratio Control
- complies with SCAQMD Rule 1110.2 Integrated Design
- primary containment protects the environment from fluid leaks
- removable door and roof panels for maximum serviceability
- rain-tight construction provides protection from weather
- sound attenuated cabinet and air ducts for noise reduction
- integrated battery charger for reliable operation and island mode operation

EQUIPMENT

In addition to the standard module features and equipment (see module configuration document), the following equipment is specific to this module only:

Engine

- E3262 E302 manufactured by MAN
- 90o V-12 cylinder, 4-stroke cycle, naturally aspirated
- 132 mm bore x 157 mm stroke
- TBD compression ratio

Generator

- Stamford model HCI 434E
- PMG brushless excitation

Air Intake System

- outside combustion air ducted to a standard MAN two-stage air cleaner
- inlet temperature up to 110°F (43°C) before derate

Complete System Heat Recovery

- stainless steel, brazed plate engine jacket water loop isolation heat exchanger
- stainless steel, water jacketed, exhaust heat exchanger

