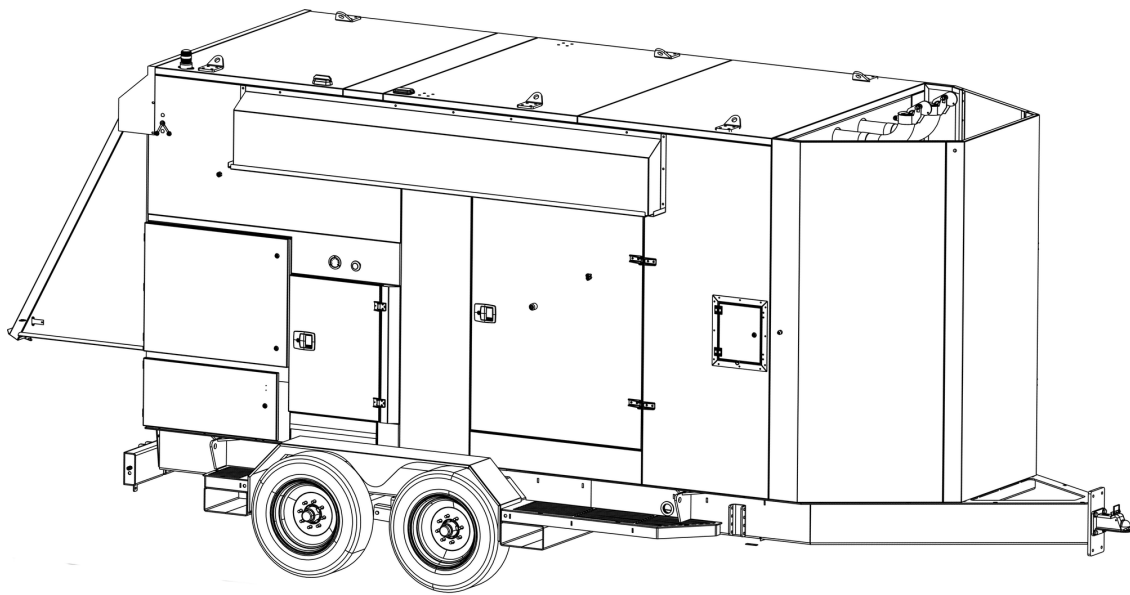




Mobile Generator Set

Specifications

Manual Version 1.0
Product Revisions 002, 003
February 2025

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Model Numbers Covered by this Manual (Mobile Generator Set)

The final two digits indicate the product's revision number.

A101001-03

A101002-02, A101002-03

A101003-02, A101003-03

A101005-02, A101005-03

A101006-02, A101006-03

A101007-02

A101009-02, A101009-03

A101010-02, A101010-03

A101011-02, A101011-03

A101012-02, A101011-03

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Version History

Manual Version Number	Description	Reviewed By/Date	Approved By/Date	Release Date
1.0	Product Revisions 002 & 003	Oji Farrier - 02/21/2025	Andrew Lipe - 02/24/2025	03/07/2025

Specifications

Generator Set Information

Electrical Specifications, 60Hz	
Switch Position 1 (480V High Wye)	
Voltage (V)	480/277
Prime Power Rating kWe (kVA) NG @ 60Hz	390 kWe (488 kVA)
Prime Power Rating kWe (kVA) LP @ 60Hz	315 kWe (394 kVA)
Power Factor	0.8
Rated Full Load Current, A	587
All Power Ratings Tested per ISO 8528-6 2005 at an elevation of 5,000 ft (1,524 m). Refer to derate table for performance at increased elevation.	
Due to breaker limitations, PRP (Prime Rated Power) ratings do not include a 10% overload capability.	

Electrical Specifications, 50Hz	
Switch Position 1 (400V High Wye)	
Voltage (V)	400/231
Prime Power Rating kWe (kVA) NG @ 50Hz	325 kWe (406 kVA)
Prime Power Rating kWe (kVA) LP @ 50Hz	254 kWe (318 kVA)
Power Factor	0.8
Rated Full Load Current, A	587
All Power Ratings Tested per ISO 8528-6 2005 at an elevation of 5,000 ft (1,524 m). Refer to derate table for performance at increased elevation.	
Due to breaker limitations, PRP (Prime Rated Power) ratings do not include a 10% overload capability.	

Fuel Consumption (HHV, BTU/hr)	
Fuel Consumption @ 60Hz	
NG Heat Rate @ 100% PRP	4,742,067 BTU/hr
NG Heat Rate @ 75%	3,724,507 BTU/hr
NG Heat Rate @ 50%	2,740,103 BTU/hr
LP Heat Rate @ 100%	3,841,674 BTU/hr
LP Heat Rate @ 75%	3,053,714 BTU/hr
LP Heat Rate @ 50%	2,306,604 BTU/hr
Fuel Consumption @ 50Hz	
NG Heat Rate @100%	4,120,696 BTU/hr
NG Heat Rate @ 75%	3,243,370 BTU/hr
NG Heat Rate @ 50%	2,379,328 BTU/hr
LP Heat Rate @ 100%	3,263,958 BTU/hr
LP Heat Rate @ 75%	2,595,586 BTU/hr
LP Heat Rate @ 50%	1,940,173 BTU/hr
Tested per ISO 8528-5	
FUEL SPECIFICATION: Gas properties for fuel consumption data: NG: Density = 0.737 kg/m ³ , HHV = 1041 Btu/scf (39 MJ/m ³); Propane: Density = 1.845 kg/m ³ , HHV = 2538 Btu/scf (95 MJ/m ³); LPG (60-40): Density = 2.060 kg/m ³ , HHV = 2817 Btu/scf (105 MJ/m ³)	

Noise Ratings	
@ 0% PRP	
Average dB @ 1m	88.1
Average dB @ 7m	76.7
@ 100% PRP	
Average dB @ 1m	90.4
Average dB @ 7m	79.8
Tested per ISO 11200	

Control System	
Controller Type	Deep Sea Electronics 8610MKII Generator Set Controller
Remote Start/Stop	Remote Start Capable Through Dry Contact or Modbus
Synchronizing & Load Sharing	Automatic w/sync check (ANSI 25)
Telemetry & Remote Monitoring	4G and SATCOM Remote Monitoring
Voltage Regulator	Digital, Deep Sea Electronics A109

Engine Information

Engine (Universal)	
Engine Manufacturer	Mesa Solutions/ Hyundai Doosan Infracore
Engine Controller Type	Woodward PG+
Engine Oil Capacity	10.65 gal (40 L)
Coolant Operating Temp.	The thermostat cracking at 71 °C, full open at 85 °C
Engine Coolant Capacity	14 gal (53 L)
Radiator Coolant Capacity	21 gal (80 L)
Total Coolant Capacity	51 gal (193 L)
Fuel Quality Limits	700-1,800 BTU Natural gas, 2,500 BTU for propane
Bore	128 in (5.04 mm)
Direction of Rotation	Counter-Clockwise At Flywheel

60Hz Engine Specs	
Combustion Air Required	1,547 kg/hr
Engine Prime Power Rating NG	392 kW
Engine Prime Power Rating LP, electrical	317 kW
Coolant flow rate (60Hz)	151 GPM (572 L/min)
Coolant Heat Rejection Rate	TBD
Max fan speed	1,720 rpm
Max fan power	46.49 HP (36.47 kW)
Exhaust gas temp, max	1,202 °F (650 °C)
Exhaust heat rejection rate	22,373 BTU/min
Exhaust gas mass flow	1,642 kg/hr
Max backpressure	15 kPa

Oil System	
Lube Oil Specifications	SAE 15W-40 Low Ash Gas Engine Oil (.25 - .5% by wt), API CD/CF or Higher
Engine Oil Capacity	10.65 gal (40 L)
Daytank Oil Capacity	26 gal (98 L)
Total Oil Capacity	36.65 gal (139 L)

Exhaust System	
Exhaust Stack - Single/ Dual	Dual
Exhaust Stack Height	120 in (305 cm)
Exhaust Stack Diameter	4 in (10.2 c)

Cooling System	
Coolant Specifications	Havoline Universal Antifreeze/Coolant - Premixed 50/50
Standard Operating Temperature	185 °F (85 °C)
Engine Coolant Capacity	14 gal (53 L)
Radiator Coolant Capacity	39 gal (148 L)
Coolant Flow Rate (60Hz)	165 gal (625 L/min)
Coolant Heat Rejection Rate (60Hz)	25,653 BTU/min (27,065 kJ/min)
Cooling Fan Air Flow (60Hz)	30,000 cfm (850 m3/min)
Max Fan Speed (60Hz)	1,720 RPM
Max Fan Power (60Hz)	33 hp (25 Kw)

Emissions Control	
AFR Controller	Yes, w/No Customer Interface
NSCR Catalyst	Yes
Emissions Certification	EPA Certification

Fuel System	
Fuel Type(s)	Natural Gas, Propane (HD5)
Fuel Quality Limits	750 - 2,500 BTU
Fuel Water Content	Saturated fuel is acceptable. Water condensation in the fuel lines or engine is not acceptable
Fuel Supply Connection(s)	2" NPT Female for NG, #6 SAE Male for LP
Min Fuel Supply Pressure	8 psi (55 kPa)
Max Fuel Supply Pressure	100 psi (690 kPa)
Natural Gas Engine Fuel Pressure	18 inWC (4.5 kPa)
Liquid Propane Engine Fuel Pressure	18 inWC (4.5 kPa)

Battery	
Voltage	12 V
Group Size	31
Cold Cranking Amps	950 A
Required Quantity	2
Connection	Series (24V)

Alternator Information

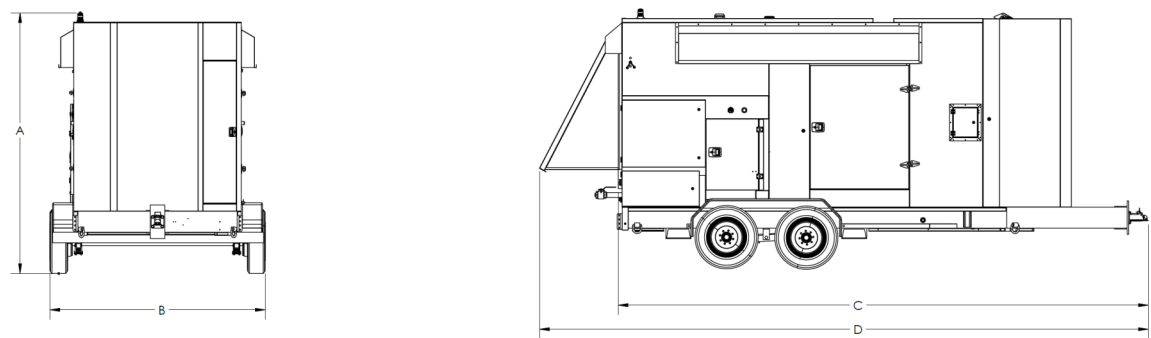
Alternator (General)	
Alternator Manufacturer	WEG
Alternator Model	AG10-280MN70AI
Alternator Phase	3 -phase
Insulation Class	H
Stator Winding	2/3 Pitch
Temp. Rise / Ambient	125/40 °C
Alternator Style	Single Bearing, Weatherproof, IP23
Excitation Type	Auxiliary Winding, Permanent Magnet
Coupling System	Close Coupled, Flex Plate
Overspeed Capability	2,250 RPM
PF at rated kW	0.8 pf
Alternator Real Power Rating	456 kW _e
Alternator Apparent Power Rating	570 kVA

Termination Information

Camlock			
	L1/L2/L3	N	G
Ampacity	400 A	400 A	400 A
Quantity	3	3	3
Polarity	Female		

Mechanical Lug			
	L1/L2/L3	N	G
Connections	4	4	4
Conductor Range	2AWG-600MCM	2AWG-600MCM	2AWG-600MCM
Tightening Torque	375 in-lb (42 Nm)		

Dimensions and Weights



Dim "A"	Dim "B"	Dim "C"	Dim "D"
124 in (315 cm)	103 in (262 cm)	260 in (660 cm)	291 in (739 cm)

Maximum Shipping Weights	
Revision 002 Units: 15,128 lb (6,862 kg)	
Revision 003 Units: 16,269 lb (7,380 kg)	

Derates

Turbocharged Gas Generator Engine						
TEMP. (°C) ALTITUDE (M)	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C
0	1.00	1.00	1.00	1.00	1.00	0.98
100	1.00	1.00	1.00	1.00	1.00	0.98
200	1.00	1.00	1.00	1.00	1.00	0.98
300	1.00	1.00	1.00	1.00	1.00	0.98
400	1.00	1.00	1.00	1.00	1.00	0.98
500	1.00	1.00	1.00	1.00	1.00	0.98
600	1.00	1.00	1.00	1.00	1.00	0.98
700	1.00	1.00	1.00	1.00	1.00	0.98
800	1.00	1.00	1.00	1.00	1.00	0.98
900	1.00	1.00	1.00	1.00	1.00	0.98
1,000	0.99	0.99	0.99	0.99	0.99	0.97
1,100	0.98	0.98	0.98	0.98	0.98	0.96
1,200	0.97	0.97	0.97	0.97	0.97	0.95
1,300	0.96	0.96	0.96	0.96	0.96	0.94
1,400	0.95	0.95	0.95	0.95	0.95	0.93
1,500	0.94	0.94	0.94	0.94	0.94	0.92
1,600	0.93	0.93	0.93	0.93	0.93	0.91
1,700	0.92	0.92	0.92	0.92	0.92	0.90
1,800	0.91	0.91	0.91	0.91	0.91	0.89
1,900	0.90	0.90	0.90	0.90	0.90	0.88
2,000	0.89	0.89	0.89	0.89	0.89	0.87
2,100	0.88	0.88	0.88	0.88	0.88	0.86
2,200	0.87	0.87	0.87	0.87	0.87	0.85
2,300	0.86	0.86	0.86	0.86	0.86	0.84
2,400	0.85	0.85	0.85	0.85	0.85	0.83
2,500	0.84	0.84	0.84	0.84	0.84	0.82
2,600	0.83	0.83	0.83	0.83	0.83	0.81
2,700	0.82	0.82	0.82	0.82	0.82	0.80
2,800	0.81	0.81	0.81	0.81	0.81	0.79
2,900	0.80	0.80	0.80	0.80	0.80	0.78
3,000	0.79	0.79	0.79	0.79	0.79	0.77

Customer Support

For customer support, contact Mesa Natural Gas Solutions.

Mesa Natural Gas Solutions, LLC
6392 Byrd Drive
Loveland, CO 80538

Toll free: 844-247-MESA (6372)
www.mesangs.com