

MGG450 | G21.9 L | 450 kVA

MOBILE GASEOUS GENERATOR

EPA Certified: Mobile and Stationary Non-Emergency

GENERAC | **MOBILE**

Prime Rating

288 kW, 360 kVA, 50 Hz (NG)

360 kW, 450 kVA, 60 Hz (NG)

240 kW, 300 kVA, 50 Hz (LP)

300 kW, 375 kVA, 60 Hz (LP)

Continuous Rating

240 kW, 300 kVA, 50 Hz (NG)

300 kW, 375 kVA, 60 Hz (NG)

200 kW, 250 kVA, 50 Hz (LP)

250 kW, 312.5 kVA, 60 Hz (LP)



Picture shown may not reflect actual configuration.

Codes and Standards

Generac Mobile products are designed to the following standards:



NATM

Power When and Where You Need It

Generac Mobile generators are designed and engineered to power a variety of projects, in the most extreme environments. Gensets are configured to meet customer needs, including containment pan, cold weather packages, trailer options, and more.

Generac Mobile generators are manufactured to deliver reliable power, when and where you need it.

STANDARD FEATURES**ENGINE SYSTEM**

- Dual-Stage Air Cleaner
- Stainless Steel Flexible Exhaust Connection
- Factory Filled (Crankcase Only) Oil and Coolant
- In-Line Engine Block Heater
- Disposable Air Filter - Paper Element
- Air Filter Restriction Indicator
- Generac Engine
- 12 Cylinder
- Turbocharged and Aftercooled
- 1,336 in³ (21.9 L) Displacement
- Power @ 1,800 RPM -hp (kW)
 - Prime: 558 (416)
 - Continuous: 465 (347)
- Wrapped Exhaust Piping
- Engine Oil Replenishment System
- Oil Drain Extension
- Two 12V, 225 CCA, Group 8D Batteries
- Basic Starting Aids
 - Battery Heater
 - Battery Charger
 - 6 kW Coolant Heater
 - Oil Heater
- 10F Start/Run Ambient Air Temperature

COOLING SYSTEM

- Capable of Operating at 104 °F (40 °C) Ambient
- Exterior Coolant Drain
- Closed Coolant Recovery System
- UV/ozone Resistant Hoses
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

FUEL SYSTEM

- Automatic Changeover NG/LP
- Dual Fuel Shutoff Solenoid
- Fuel Line NPT Connection
- Dual-Stage Scrubber

IGNITION SYSTEM

- Cylinder-Specific Knock-Detection Sensors
- Automatic Spark Duration/Intensity Adjustment
- Automatic Ignition Timing Adjustment

CONTROL SYSTEM

- Paralleling
- Motortech All-In-One Digital Controller
- 600A Main Line Circuit Breaker (MLCB), Motorized
- Mobile Switching Center (MSC) Cable Connections
- Battery Disconnect
- Emergency Stop

GENERATOR

- Heavy Duty Vibration Isolation
- Fork Pockets
- Push/Pull Drag Skid Capable
- End-Mounted All-In-One Generator Control Panel
- Motorized Circuit Breaker for Parallel Running

ALTERNATOR SYSTEM

- Leroy Somer™ LSA 47.2 S4
 - Brushless
 - 4 Pole
 - 2/3 Pitch
 - Class H Insulation
- Digital AVR
- Skewed Stator
- Permanent Magnet Generator (PMG) Excitation
- Sealed Bearings
- Amortisseur Winding
- Full Load Capacity Alternator
- 60 Hz

POWER DISTRIBUTION

- Connection Lugs
- Convenience Receptacles
 - Two 120V, 20A, GFCI Duplex Receptacles (NEMS 5-20R)
- Lockable Lug Box with Safety Switch
 - Trips Main Breaker when Door is Opened
 - Disables Voltage Regulator

ENCLOSURE

- Fully Lockable – Including Doors
- Stainless Steel Hinges, Door Latches, and Exterior Hardware
- Exterior Emergency Stop Switch
- Central Lifting Point
- Multi-Lingual Operating and Safety Decals
- Document Holder with Owner's Manual – Includes AC and DC Wiring Diagrams
- Integrated Single Point Lift Structure; Fork Pockets in Frame
- 4-point Standard Lifting
- Push-Pull-Drag Points at all Four Corners

WARRANTY

- 1 Year / Unlimited hours

CONFIGURABLE OPTIONS**FREQUENCY**

- 50 Hz

TRAILER (Includes Below)

- Three 8000 lb (3175 kg) axle(s)
- Electric Brakes
- 3 in (76.2 mm) Lunette Ring Hitch
- Transportation Tie Downs
- Safety Chains with Spring Loaded Safety Hooks
- Top Wind Jack with Footplate – 12,000 lb (5443 kg)
- Tires: ST235/80R16
- Max Tire Pressure – 80 psi (551 kPa)
- DOT Approved Tail, Side, Brake, and Directional Lights; Recessed Rear Lights
- Illuminated License Plate Holder
- Rear Stabilizer Jacks Illuminated License Plate Holder

TRAILER (Includes Below) (Continued)

- NATM Compliant
- Plug Adapter, Flat 4 to Round 7 Spade
- (2) Spare Tires

COLD WEATHER PACKAGE (Includes Below)

- Heater Fuel Conditioning System Enclosure
- Variable Pitch Fan (VPF)
- Upgraded Block Heater (300W)
- Heat Wrapped Fuel System Components and Insulated Flexible Fuel Line
- - 31 °F (- 35 °C) Start/Run Ambient Air Temperature

SYSTEM CONTROLS

MOTORTECH DIGITAL ALL-IN ONE CONTROL PANEL



CONTROLLER AND DISPLAY

- Push Buttons for Easy Operation
- Manual or Auto Start
- Engine Start
- Engine Stop/Reset
- Alarm Mute
- Circuit Breaker Operation
- History
- Manual or Auto Pushbutton Start
- Backlit, 320×240 Pixel Resolution Color Display
- Automatic Synchronizing and Power Control
- Voltage and PF Control (AVR)
- Baseload, Import/Export, TempByPower
- PLC Programmable Functions
- Operator Screens: Home, Engine, Generator, Voltage Adjust
- Engine Diagnostic Information:
 - Oil Pressure
 - Coolant Temperature
 - Battery
 - After-Treatment Inlet/Outlet Temperature
- Generator Diagnostic Information:
 - System kW Output Display
 - Line Output and Frequency Display
- Alarm Types: Warning, Shutdown, Electrical Trip, Engine

- Alarm List – Warnings and Shutdowns; Event History Log with Date and Time Stamp
 - Low Fuel Pressure
 - Engine Overspeed
 - Low Oil Pressure
 - High Coolant Temperature
 - Coolant Level
 - Battery Over/Under Voltage
 - Generator Over/Under Voltage
 - Generator Over/Under Frequency
 - Systems Protections
 - Emergency Stop
- Inputs/Outputs
- Hour Meter
- Auto-Schedule
- View Controller Configuration, Firmware Version, and Connections

PROGRAM FUNCTIONS

- 2x RS232/RS485 Interface Modbus® Protocol
- Support; Analog/GSM/ISDN/CDMA Modem Communication Support
- Event-Based History (Up to 1000 Records) with Customer-Selectable List of Stored Values; RTC; Statistical Values
- USB 2.0 Slave Interface

FULL SYSTEM STATUS DISPLAY

- Generator Measurement: u, i, hz, kw, kvar, kva, pf, kwh, kvahr
- Fuel Selection
- Bus
- Synchronization
- Statistics
- Power Management
- Analog Inputs
- Knock Detection
- Ignition Voltage
- Ignition Information
- Main Measurement: u, i, hz, kw, kvar, pf
- Engine Coolant Temperature and Protection
- Coolant Level
- Engine Oil Pressure and Protection

KEY LOAD SHARE FEATURES

- Up to 32 Additional Gensets
- Digital Inter-Genset Communication via Can Bus
- Non-MMG450 Controller Communication via Analog Bridge
- Sequential Set Start
- Manual Voltage/Frequency Adjustment
- Generator Load Demand
- Automatic Hour Run Balancing
- Dead Bus Sensing
- Bus Failure Detection
- Direct Governor and AVR Control
- Volts and Frequency Matching
- kW and kVAr Load Sharing

INTEGRATED FIXED AND CONFIGURABLE PROTECTIONS

- 3-Phase Integrated Generator Protections (U + f)
- IDMT Over-Current and Short-Current Protections
- Overload Protection
- Reverse Power Protection
- Earth Fault Protection
- 3-Phase Integrated Mains Protections (U + f)
- Vector Shift Protection
- All Binary/Analog Inputs Free Configurable for Various Protections
- Phase Rotation and Phase Sequence Protection

RATING DEFINITIONS

Prime: Applies to supplying power to a varying load in lieu of utility for an unlimited amount of running time.

Continuous: The maximum power the generator is capable of delivering continuously while supplying a constant electrical load when operated.

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make (Model)	Generac
Cylinders: Configuration-QTY	V 12
Displacement - in ³ (L)	1336 (21.9)
Bore - in (mm)	5.03 (128)
Stroke - in (mm)	5.59 (142)
Compression Ratio	10.0:1
Intake Air Method	Turbocharged/ Aftercooled

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Twin Full Flow
Crankcase Capacity: qt (L)	32.7 (31)
Oil Consumption: qt/24h (L/24h)	0.86 (0.91)
Oil Makeup Reservoir: qt (L)	120 (113)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Water Pump Type	Belt driven
Fan Type	Pusher
Fan Diameter: in (mm)	45 (1143)
Coolant System Capacity: qt (L)	134 (127)

Fuel System

Fuel Type	Natural Gas/Wellhead Gas/LP
Operating Fuel Pressure - psig	5-50 (Commercial Quality / Scrubber By-pass) 40-300 (Unscrubbed Wellhead / Pressure Into Scrubber)

Engine Electrical System

System Voltage: VDC	24
Battery Charger Alternator	Standard
Battery: CCA	1450
Battery: Voltage (Qty)	12 (2)
Ground Polarity	Negative (-)

ALTERNATOR SPECIFICATIONS

Make (Model)	LSA 47.2 S4
Poles: Qty	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion (THD)	<5%
Telephone Interference Factor (TIF)	<50
Standard Excitation	LSA Alternator with PMG

Bearings	Single
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital AVR
Quantity of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.5%

OPERATING DATA

POWER RATINGS

	Prime: kW/kVA (A)		Continuous: kW/kVA (A)	
	Natural Gas	Liquid Propane	Natural Gas	Liquid Propane
3-phase, 440 / 231 V AC @ PF=0.8 50Hz	360kVA / 288kW Amps: 472	300kVA / 240kW Amps: 394	300kVA / 240kW Amps: 394	250kVA / 200kW Amps: 328
3-phase, 400 / 220 V AC @ PF=0.8 50Hz	360kVA / 288kW Amps: 520	300kVA / 240kW Amps: 433	300kVA / 240kW Amps: 433	250kVA / 200kW Amps: 361
3-phase, 480 / 277 V AC @ PF=0.8 60Hz	450kVA / 360kW Amps: 541	375kVA / 300kW Amps: 451	375kVA / 300kW Amps: 451	312.5kVA / 250kW Amps: 376
3-phase, 440 / 254 V AC @ PF=0.8 60Hz	450kVA / 360kW Amps: 684	375kVA / 300kW Amps: 570	375kVA / 300kW Amps: 570	312.5kVA / 250kW Amps: 475

FUEL CONSUMPTION RATES*

Load	50 Hz				60 Hz			
	Natural Gas: ft³/hr (m³/hr)		Propane: ft³/hr (m³/hr)		Natural Gas: ft³/hr (m³/hr)		Propane: ft³/hr (m³/hr)	
	PRP	COP	PRP	COP	PRP	COP	PRP	COP
100%	2891 (81.9)	2479 (70.2)	1200 (34.0)	1036 (29.3)	3681 (104.2)	3156 (89.4)	1528 (43.3)	1319 (37.3)
75%	2256 (63.9)	1950 (55.2)	947 (26.8)	825 (23.3)	2894 (81.9)	2501 (70.8)	1214 (34.4)	1058 (29.9)
50%	1623 (46.0)	1421 (40.2)	694 (19.6)	613 (17.4)	2107 (59.7)	1845 (52.2)	901 (25.5)	796 (22.5)
25%	992 (28.1)	894 (25.3)	441 (12.5)	402 (11.4)	1320 (37.4)	1189 (33.7)	587 (16.6)	535 (15.1)

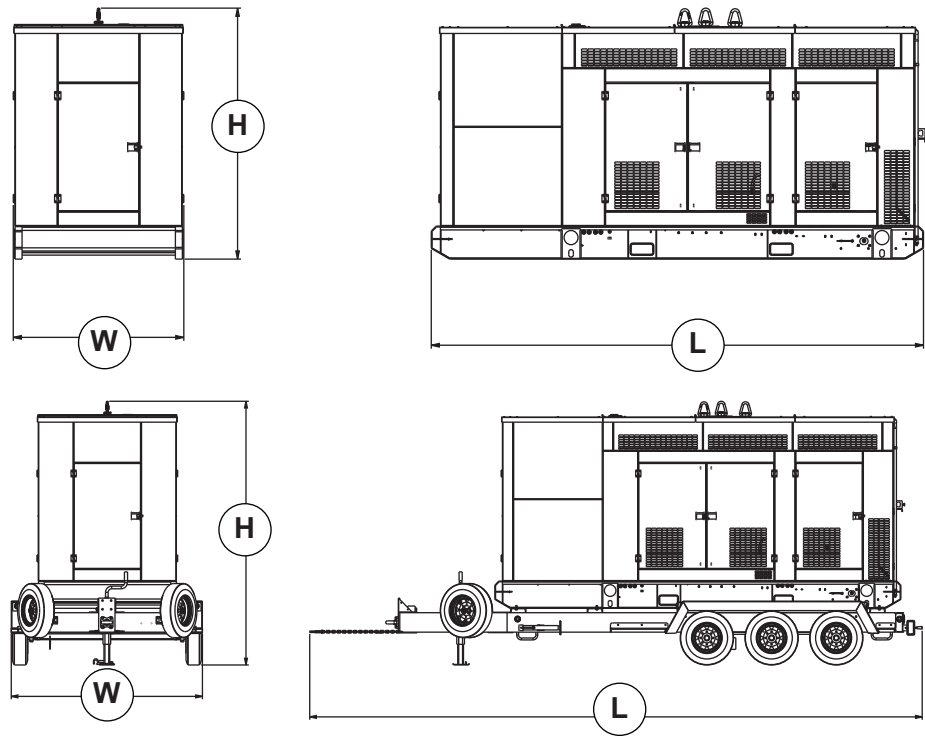
COOLING

		50 Hz	60 Hz
Air Flow (Radiator and Alternator)	scfm (m³/min)	559 (15.8)	711 (20.1)
Coolant System Capacity	US gal (l)	23 (87)	23 (87)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

Please consult a Generac Mobile Authorized Service Dealer for additional details. All performance ratings in accordance with BS5514, SAE J1228, SAE J1995, and DIN6271 standards.

DIMENSIONS AND WEIGHTS*



STANDARD ENCLOSURE

Skid Mounted	
Operating Weight - lb (kg)	12,110 (5,493 kg)
L x W x H - in (m)	204 x 72 x 101 (5.18 x 1.83 x 2.57)
Trailer Mounted	
Operating Weight - lb (kg)	15,281 (6,931)
L x W x H - in (m)	253 x 102 x 131 (6.43 x 2.59 x 3.33)
Noise Level at COP	84 dB(A) @ 23 ft (7m)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC MOBILE DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Mobile Authorized Service Dealer for detailed installation drawings.