

# MMG45IF4 | 2.2 L | 45 kVA

## MOBILE DIESEL GENERATOR SET

EPA Emissions Certification: Tier 4 Final



### Standby Power Rating

44 kW, 55 kVA, 60 Hz

### Prime Power Rating

38 kW, 47 kVA, 60 Hz



\*Assembled in the USA using domestic and foreign parts

Image used for illustration purposes only

## Codes and Standards

Generac Mobile products are designed to the following standards:



CSA



NATM



TIER 4 FINAL EMISSIONS

## Power When and Where You Need It

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

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

**STANDARD FEATURES**

**ENGINE SYSTEM**

- Isuzu® 4LE2XAGV01
- 4 Cylinder
- Turbocharged & Aftercooled
- 134 in<sup>3</sup> (2.2 L) Displacement
- EPA Tier 4 Final Approved
- Power @ 1,800 rpm – hp (kW):
  - Prime: 57 (42.8)
  - Standby: 63.7 (47.5)
- Approved for use with Hydrotreated Vegetable Oil (HVO) fuels compliant with ASTM D975 or EN 15940
- Paper Element Air Filter
- Electronic Isochronous Governing
- Fixed Speed Fan
- One Spin-on Cartridge Oil Filter
- Oil Drain Extension
- Two Fuel Filters
- One 12 V, 720 CCA, Wet Cell Battery

**COOLING SYSTEM**

- Capable of Operating at 120 °F (49 °C) Ambient
- 50/50 Coolant (50% Ethylene Glycol)
- Coolant Drain Extension

**FUEL SYSTEM**

- Polyethylene Fuel Tank
- Fuel Tank Capacity – gal (L):
  - Total: 100 (379)
  - Usable: 90 (341)

- Runtime @ 75% Load: 36 hr
- 110% Containment - engine fluid (oil & coolant) and fuel
- Padlockable Fuel Cap

**CONTROL SYSTEM**

- Deep Sea Electronics® 7310 MKII Controller
- 3-Position Voltage Selection Switch
- 225 A Main Circuit Breaker (MCB), Manual, with Shunt Trip
- Individual Convenience Receptacle Circuit Breakers
- Emergency Stop Switch
- Battery Disconnect Switch, Padlockable
- 2-Wire Remote Start/Stop Contacts

**ALTERNATOR SYSTEM**

- 60 Hz Engine-Driven Alternator
- SUPERSTART Alternator
  - Brushless
  - 4 Pole
  - 2/3 Pitch
  - Class H Insulation
  - Corrosion Protection
- Marathon Electric® PM500 AVR
- Shunt Excitation System

**POWER DISTRIBUTION**

- Connection Lugs
- Convenience Receptacles
  - Two 120 V, 20 A, GFCI Duplex (NEMA 5-20R)

- Three 120/240 V, 50 A, 3 Pole, 4 Wire Twistlock (CS6369)

**ENCLOSURE**

- Aluminum, Sound Attenuated, Insulated and Baffled
- UV and Fade Resistant, High Temperature Cured, White Polyester Powder Paint
- Central Lifting Point
- Fully Lockable Enclosure
- Multi Lingual Operating and Safety Decals
- Document Holder with Owner's Manual - includes AC and DC wiring diagrams
- Control Panel Lights
- Interior Lights

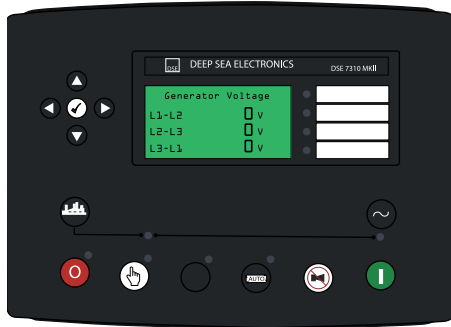
**TRAILER**

- Hydraulic Surge Brakes
- 2 in. (50.8 mm) Ball Hitch
- Single 6,000 lb. (2,722 kg) Axle
- 15 in. Tires, 6 Ply, Tubeless
- 2,000 lb. (907 kg) Tongue Jack with Footplate
- Safety Chains with Spring Loaded Safety Hooks
- Transportation Tie Downs
- Plug Adapter, Round 7 Blade (SAE J2863)
- DOT Approved Tail, Side, Brake, and Directional Lights

**WARRANTY**

- 2 year Limited or 2,000 Hours
  - Unlimited Hours Covered in First Year

**CONTROL SYSTEM**



010643

**CONTROLLER AND DISPLAY**

- Controller: Deep Sea Electronics Model 7310 MKII
- 4 Line Back Lit LCD Text Display
- -40 to 158 °F (-40 to 70 °C) Operating Temperature Range
- Multiple Language Options
- Configurable Timers and Alarms
- Configurable Start/Stop Timers
- Configurable Maintenance Alarms
- Heated Display

**PUSH BUTTONS FOR EASY OPERATION**

- Manual or Auto Start
- Engine Start
- Engine Stop/Reset
- User Friendly Setup and Button Layout
- Five Key Menu Navigation
- Hours Counter
- Multiple Parameters are Monitored and Displayed Simultaneously for Full Visibility
- View Controller Parameters (Configuration, Firmware Version, Connections)

**LCD ALARM INDICATION**

- Generator Diagnostic Display
  - System kVA Output Display
  - Line Output and Frequency Display
- Alarm Types: Warning, Shutdown, Electrical Trip, Engine
- Alarm List – Warnings/Shutdowns; 250 Event History Log – Date/Time Stamped
  - Fuel Level: Warning – 15%; Shutdown – 5%
  - Overspeed Protection: Shutdown – 110%
  - Engine Diagnostic Warnings Communicated Through J1939 CANbus
  - Battery Voltage: Over – 15 VDC; Under – 11 VDC

- Generator Over Voltage: Warning – 110%; Electrical Trip – 115%
- Generator Under Voltage: Warning – 90%; Shutdown – 85%
- Generator Over Frequency: Warning – 105%; Electrical Trip – 110%
- Generator Under Frequency: Warning – 95%; Electrical Trip – 90%
- Auto Schedule
- Status

**ELECTRICAL CONTROLS**

- Lockable Control Box Door with Diagnostics Window
- Lockable Lug Box with Safety Switch
  - Trips Main Breaker When Door is Opened
  - Disables Voltage Regulator
- Output Ground Connection Lug Inside Lug Box
- Voltage Adjustment ±10%

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### CONFIGURABLE OPTIONS\*

#### ENGINE SYSTEM

- Positive Air Shutdown (PAS), Electronic
- One 12 V, 720 CCA AGM Optima Battery
- Alternate Load Device (ALD)
- Oil Evacuation System - requires customer-sourced, specialized equipment to use for oil change

#### COLD WEATHER

- Engine Block Heater
- Two Fuel Filter Heaters
- Crankcase Ventilation (CCV) System Heater
- 10 A Battery Charger
- 60/40 Coolant (60% Ethylene Glycol)

#### FUEL SYSTEM

- Steel Fuel Tank, Extended Runtime
- Fuel Tank Capacity—gal (L)
  - Total: 160 (606)
  - Usable: 144 (545)
- Runtime @ 75% Load: 57.5 hr

- Auxiliary Fuel Tank Connection
  - 3-Way Fuel Valve

#### CONTROL SYSTEM

- 4-Position Voltage Selection Switch
- Telemetry
- Lojack Equipment Recovery System

#### ALTERNATOR SYSTEM

- VFLEX (600 V) Alternator
- Marathon Electric DVR2400 DVR
- Permanent Magnet Generator (PMG) Excitation System

#### POWER DISTRIBUTION

- Camlocks—one set, female (US or Canada color code)
- Buck Transformer

#### ENCLOSURE

- Fire Extinguisher

#### TRAILER

- Skid Mount (Non-Trailer)
- Electric Brakes
- Tandem Axle
- 2 in (50.8 mm) BULLDOG® Hitch
- 2-5/16 in (58.7 mm) BULLDOG Hitch
- 3 in (76.2 mm) Pintle Ring Hitch
- Rear Stabilizer Jacks
- Toolbox: Black Polymer or Aluminum, 49×15×18.5 in (125×38×47 cm)
- Spare Tire

### RATING DEFINITIONS

*Standby:* Applicable to varying emergency load for the duration of a utility power outage.

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

\*Consult factory for availability.



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### APPLICATION AND ENGINEERING DATA

#### ENGINE SPECIFICATIONS

##### General

|                                    |                            |
|------------------------------------|----------------------------|
| Make (Model)                       | Isuzu (4LE2XAGV01)         |
| EPA Emissions Compliance           | Tier 4 Final               |
| After Treatment System             | DOC                        |
| Cylinders – Qty                    | 4                          |
| Type                               | In-Line                    |
| Displacement – in <sup>3</sup> (L) | 134 (2.2)                  |
| Bore – in (mm)                     | 3.35 (85)                  |
| Stroke – in (mm)                   | 3.78 (96)                  |
| Compression Ratio                  | 17.6:1                     |
| Intake Air Method                  | Turbocharged & Aftercooled |

##### Engine Governing

|                                     |            |
|-------------------------------------|------------|
| Governor                            | Electronic |
| Frequency Regulation (Steady State) | ±2%        |

##### Lubrication System

|                             |                              |
|-----------------------------|------------------------------|
| Oil Pump Type               | Gear Driven                  |
| Oil Filter Type             | Spin-On Cartridge, Full Flow |
| Crankcase Capacity – qt (L) | 12 (11.4)                    |

##### Cooling System

|                                  |                  |
|----------------------------------|------------------|
| Cooling System Type              | Radiator and CAC |
| Water Pump Type                  | Belt Driven      |
| Fan Type                         | Pusher           |
| Fan Speed – rpm                  | 2,016            |
| Fan Diameter – in (cm)           | 19.0 (48.3)      |
| Cooling System Capacity – qt (L) | 18 (17)          |

##### Fuel System

|                                    |  |
|------------------------------------|--|
| Fuel Type                          | Ultra Low Sulfur Diesel                    |
| Fuel Specifications                | EN 590 / ASTM D975                         |
| Fuel Filtering – μ                 | 5  |
| Fuel Inject Pump – Make (Model)    | Denso (HP3)                                |
| Fuel Pump Type                     | Engine Gear Driven                         |
| Injector Type                      | Electronic                                 |
| Engine Type                        | Direct Injection High Pressure Common Rail |
| Fuel Supply Line Diameter– in (mm) | 0.375 (9.5)                                |
| Fuel Return Line Diameter– in (mm) | 0.375 (9.5)                                |

##### Engine Electrical System

|                                      |              |
|--------------------------------------|--------------|
| System Voltage – VDC                 | 12           |
| Battery Charger Alternator – VDC (A) | 12 (50)      |
| Battery Size – CCA                   | 720          |
| Battery Quantity                     | 1            |
| Ground Polarity                      | Negative (-) |

#### SUPERSTART ALTERNATOR SPECIFICATIONS

|                               |                                |
|-------------------------------|--------------------------------|
| Make (Model)                  | Marathon Electric (285PSL1700) |
| Poles – Qty                   | 4                              |
| Field Type                    | Rotating                       |
| Insulation Class - Rotor      | Class H                        |
| Insulation Class - Stator     | Class H                        |
| Total Harmonic Distortion     | <5%                            |
| Telephone Interference Factor | <50                            |

|                                    |                      |
|------------------------------------|----------------------|
| Standard Excitation                | Shunt                |
| Bearings                           | Single Bearing       |
| Coupling                           | Direct Flexible Disc |
| Prototype Short Circuit Test       | Yes                  |
| Voltage Regulator Type             | AVR                  |
| Number of Sensed Phases            | Single               |
| Regulation Accuracy (Steady State) | ±0.5%                |

#### VFLEX ALTERNATOR SPECIFICATIONS

|                               |                                 |
|-------------------------------|---------------------------------|
| Make (Model)                  | Marathon Electric (284PSL28109) |
| Poles – Qty                   | 4                               |
| Field Type                    | Rotating                        |
| Insulation Class – Rotor      | Class H                         |
| Insulation Class – Stator     | Class H                         |
| Total Harmonic Distortion     | <5%                             |
| Telephone Interference Factor | <50                             |

|                                    |                      |
|------------------------------------|----------------------|
| Standard Excitation                | Shunt                |
| Bearings                           | Single Bearing       |
| Coupling                           | Direct Flexible Disc |
| Prototype Short Circuit Test       | Yes                  |
| Voltage Regulator Type             | AVR                  |
| Quantity of Sensed Phases          | Single               |
| Regulation Accuracy (Steady State) | ±0.5%                |

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### OPERATING DATA

#### POWER RATINGS

|                                       | SUPERSTART Alternator  |                      | VFLEX Alternator       |                      |
|---------------------------------------|------------------------|----------------------|------------------------|----------------------|
|                                       | Standby:<br>kW/kVA (A) | Prime:<br>kW/kVA (A) | Standby:<br>kW/kVA (A) | Prime:<br>kW/kVA (A) |
| 1-Phase, 120/240 VAC @ 1.0pf—zig zag* | 33/33 (138)            | 33/33 (138)          | 17/17 (71)             | 17/17 (71)           |
| 3-Phase, 208/120 VAC @ 0.8pf—low wye  | 44/55 (153)            | 38/47 (130)          | 38/48 (131)            | 32/40 (111)          |
| 3-Phase, 240/120 VAC @ 0.8pf—delta**  | 44/55 (132)            | 38/47 (114)          | 38/48 (114)            | 32/40 (96)           |
| 3-Phase, 480/277 VAC @ 0.8pf—high wye | 44/55 (66)             | 38/47 (57)           | 48/59 (72)             | 37/46 (56)           |
| 3-Phase, 600/346 VAC @ 0.8pf—high wye | N/A                    | N/A                  | 46/60 (52)             | 40/50 (48)           |

\*Alternator limited.

\*\*Power ratings achieved through use of optional 4-position voltage selection switch.

#### FUEL CONSUMPTION RATES

| Prime Load     | Fuel: gph (L/hr) |
|----------------|------------------|
| 50%            | 1.7 (6.4)        |
| 75%            | 2.5 (9.4)        |
| 100%           | 3.3 (12.5)       |
| 110% (Standby) | 3.8 (14.4)       |

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

Please consult a Generac Mobile Products Authorized Service Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, ISO8665, SAE J1228, SAE J1995, and DIN6271 standards.

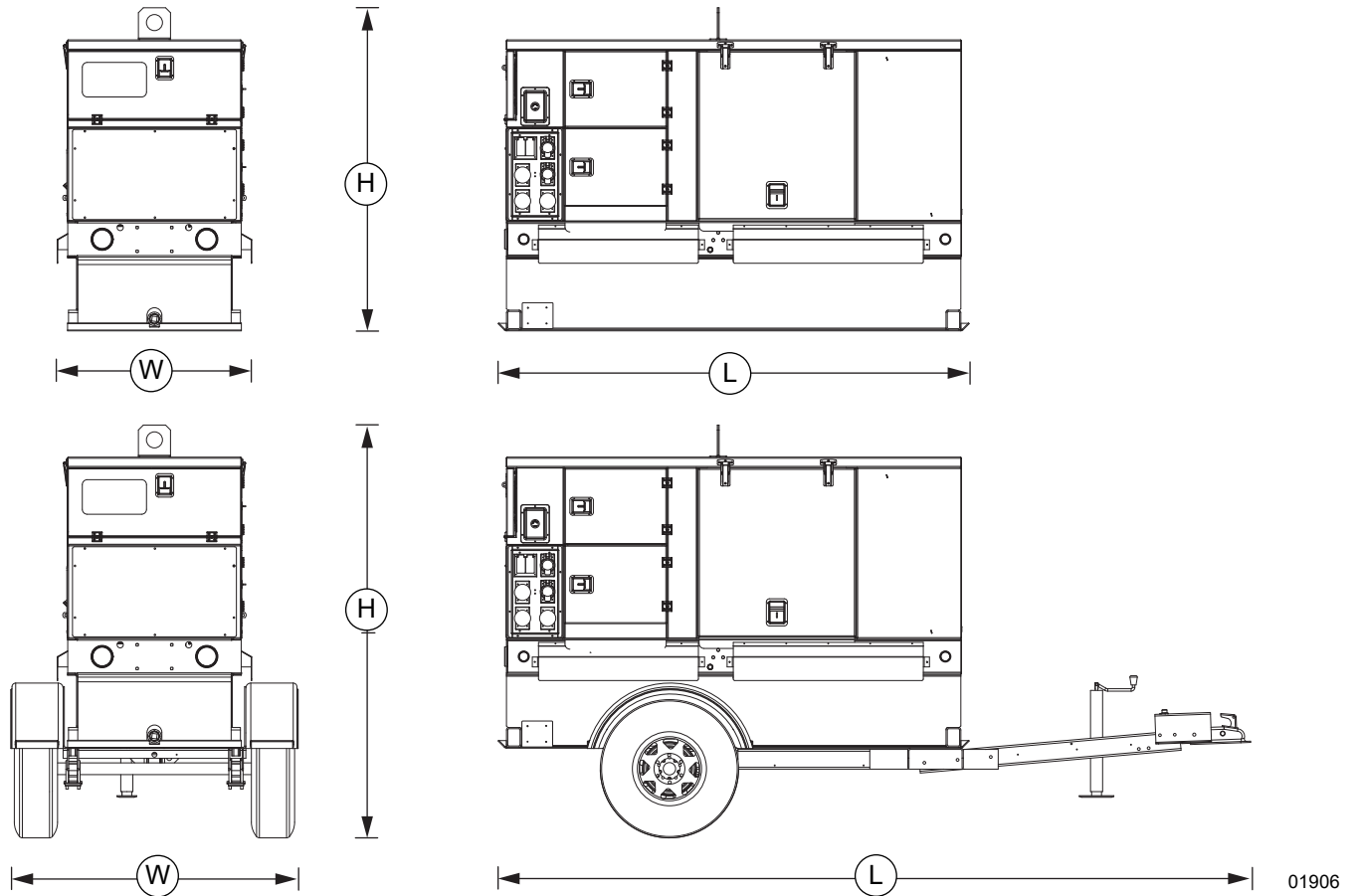
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### DIMENSIONS AND WEIGHTS\*



|         | Runtime: hr* | Usable Fuel Capacity: gal (L) | Dimensions – L×W×H: in (m)     | Weight: lb (kg)                                |
|---------|--------------|-------------------------------|--------------------------------|--|
| Skid    | 36           | 90 (341)                      | 95 (2.41)×39 (0.99)×65 (1.65)  | Dry: 2,843 (1,290)<br>Operating: 3,580 (1,624) |
| Trailer | 36           | 90 (341)                      | 152 (3.81)×58 (1.45)×83 (2.11) | Dry: 3,363 (1,525)<br>Operating: 4,100 (1,860) |

\*Runtime based on 75% prime rated power.

### SOUND RATING

- 66 dB(A) @ 23 ft (7 m) @ Prime Power

\* 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.