

# MDE1450 | (2) 16.1L | 1,450 kVA

## MOBILE DIESEL GENERATOR SET

EPA Emissions Certification: Tier 4 Final

### Standby Power Rating

1,271 kW, 1,589 kVA, 60 Hz

1,127 kW, 1,409 kVA, 50 Hz

### Prime Power Rating

1,158 kW, 1,447 kVA, 60 Hz

1,039 kW, 1,299 kVA, 50 Hz



Picture shown may not reflect actual configuration.

## Codes and Standards

Generac Mobile products are designed to the following standards:



TIER 4 FINAL EMISSIONS

## Power When You 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 choice of containment, 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**

- (2) Volvo TWD1683GE
- 6 Cylinder
- Turbocharged & After-cooled
- 16.1L Displacement
- 1,500/1,800 rpm
- Two Fuel Filters
- (4) 975 CCA, Optima Yellow Top Batteries
- Tier 4 Final/ EU Stage 5 Certified

**EXHAUST SYSTEM**

- SCR & DOC
- No DPF
- Exhaust Insulation
- (2) Roof Mounted Silencers with Rain Caps

**COOLING SYSTEM**

- Capable of Operating at 122° F (50° C) Ambient (at Prime)
- (4) Electric Cooling Fans
- Remote Radiators
- Hot Air Room Separation
- 50/50 Coolant (50% Ethylene Glycol)
- Radiator Coolant Capacity: 103 US gal (390 L)

**FUEL and DEF SYSTEM**

- Double Wall Fuel Tank
  - Metal with 110% Containment
  - Contains all Fuel, DEF, Engine Fluids
- Fuel Tank Capacity 475.5 US gal (1800 L)
  - 8 Hour Runtime @ 75% PRP
- Auxiliary Fuel Quick Connections w/6-Way Fuel Valve

**FUEL and DEF SYSTEM (CONT)**

- (2) DEF Tanks
  - 42.2 US gal (160 L) each
  - 84.4 US gal (320 L) total
  - 21 Hour Autonomy @ 75% PRP
- Auxiliary DEF Quick Connections
- Lockable Fuel and DEF Fills

**CONTROL SYSTEM**

- (2) Deep Sea DSE8610 Controllers
  - Operate Each 725 kVA Genset Individually
- (1) Deep Sea DSE8003 Paralleling Controller
  - Operate Both 725 kVA Gensets Together (1,450 kVA)
- (2) 1,000 A 4-pole motorized Circuit Breakers
- Parallel up to 16 MDE1450 Twin Gen Units
- 50/60 Hz Dual Frequency Switch
- Emergency Stop Switch
- Hour Meter
- Lockable Battery Disconnect
- 5A Battery Charger
- Generac LINK

**ALTERNATOR SYSTEM**

- (2) 50/60 Hz Engine-Driven Alternators
- Mecc Alte ECO40 3L4 C Alternator
  - Brushless
  - 4 Pole
  - Class H Insulation
- Mecc Alte DER 1 Automatic Voltage Regulator
- Permanent Magnet Generator (PMG) Excitation

**POWER DISTRIBUTION**

- Connection Lugs
- Copper Bar Connections
- Convenience Receptacles
  - Two 120 V, 20 A, GFCI, Duplex Receptacles (NEMA 5-20R)
  - Three 120/240 V, 50 A, 3 Pole, 4 Wire Twistlock Receptacles (CS6369)

**POWER DISTRIBUTION (CONT)**

- Grounding System: TN-S, TN-C, IT
- Convenience Receptacles
  - (1) 120V, 20A, GFCI Duplex Receptacle
- Cam Locks - (5) Sets, Female (US color code)

**COLD WEATHER**

- -13° F (-25° C) Minimum Operating Temperature
- Coolant Block Heater
- Air Grid Heater
- Oil Pan Heater
- Winter Blend Oil
- Battery Blanket Heater
- Alternator Anti-Condensation Heater

**ENCLOSURE**

- 20 ft High Cube Container
- Soundproofed & Weatherproofed
- ISO 4-Point Lifting Hooks
- Fully Lockable Enclosure
- Internal Enclosure Light
- Fork Pockets
- Roof Access Ladder
- CSC (Convention for Safe Container) Approved

**WARRANTY**

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

**CONFIGURABLE OPTIONS\*****TRAILER**

- Chassis
  - Tandem Axle
  - Gooseneck Platform
  - 377 in (L) x 96 in (W) x 155 in (H)
  - 9.57 m (L) x 2.43 (W) x 3.93 m (H)

**CONTROL SYSTEM**



**CONTROLLER AND DISPLAY**

- Controller: (2) Deep Sea® Mode IDSE8610 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

**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 – 30 VDC; Under – 18 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
- Voltage Adjustment ±10%

**DEEP SEA® MODEL DSE8003**



- Main Interface with Full Color 7 in. Graphical Display
- Paralleling Controller for Both Gensets in MDE1450 TwinGen

**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)                      | Volvo TWD1683GE            |
| EPA Emissions Compliance          | Tier 4 Final               |
| Cylinders – Qty                   | 6                          |
| Type                              | Inline                     |
| Displacement: in <sup>3</sup> (L) | 983.8 (16.1)               |
| Bore: in (mm)                     | 5.7 (144)                  |
| Stroke: in (mm)                   | 6.5 (165)                  |
| Compression Ratio                 | 16:8:1                     |
| Intake Air Method                 | Turbocharged & Aftercooled |

##### Engine Governing

|          |            |
|----------|------------|
| Governor | Electronic |
|----------|------------|

##### Lubrication System

|                             |                              |
|-----------------------------|------------------------------|
| Oil Pump                    | Gear Drive (by Transmission) |
| Oil Filter Type             | 40 Micron                    |
| Engine Oil Capacity: qt (L) | 50 (48)                      |

##### Cooling System

|                                      |                              |
|--------------------------------------|------------------------------|
| Cooling System Type                  | Water Cooled                 |
| Water Pump Type                      | Centrifugal Pump             |
| Belt                                 | 1.85/1                       |
| Fan Type                             | Electric w/ Inverter         |
| Fan Speed: rpm                       | Variable: min 150 - max 1250 |
| Fan Diameter: in (mm)                | 45 (1143)                    |
| Cooling System Capacity – US gal (L) | Total 2 Engines 103 (390)    |

##### Fuel System

|  |                         |
|--|-------------------------|
| Fuel Type                                | Ultra Low Sulfur Diesel |
| Fuel Specifications                      | ASTM D975 D1 & D2       |
| Fuel Filtering                           | 5 micron                |
| Double Fuel Pre-filter w/Water Separator | 10 micron + 30 micron   |
| Injector Type                            | Unit Injector - Delphi  |

##### Engine Electrical System

|                     |              |
|---------------------|--------------|
| System Voltage: VDC | 24V          |
| Battery – CCA       | 975          |
| Battery – V (Qty)   | 12V (4)      |
| Ground Polarity     | Negative (-) |

#### STANDARD ALTERNATOR SPECIFICATIONS

|                                     |                       |
|-------------------------------------|-----------------------|
| Make (Model)                        | Mecc Alte ECO40 3L4 C |
| Poles – Qty                         | 4                     |
| Field Type                          | Revolving             |
| Insulation Class – Rotor            | Class H               |
| Insulation Class – Stator           | Class H               |
| Total Harmonic Distortion (THD)     | <3.5%                 |
| Telephone Interference Factor (TIF) | <40                   |

|                                    |             |
|------------------------------------|-------------|
| Standard Excitation                | DER1        |
| Bearings                           | 1           |
| Coupling                           | 14          |
| Prototype Short Circuit Test       | Yes         |
| Voltage Regulator Type             | Digital AVR |
| Quantity of Sensed Phases          | 3           |
| Regulation Accuracy (Steady State) | 0.50%       |

### OPERATING DATA

#### POWER RATINGS

|      |  | Standby: kW/kVA (A) | Prime: kW/kVA (A) |
|------|--|---------------------|-------------------|
| 60Hz | 3-phase, 480 / 277 VAC @ 0.8 pf high wye | 1,271 / 1,589       | 1,158 / 1,447     |
| 50Hz | 3-phase, 400 / 230 VAC @ 0.8 pf high wye | 1,127 / 1,409       | 1,039 / 1,299     |

#### FUEL CONSUMPTION RATES

| Load           | 60 Hz               |                    | 50 Hz               |                    |
|----------------|---------------------|--------------------|---------------------|--------------------|
|                | Fuel: US gph (L/hr) | DEF: US gph (L/hr) | Fuel: US gph (L/hr) | DEF: US gph (L/hr) |
| 100% (Standby) | 76.6 (290)          | 5.3 (20.3)         | 68.7 (260)          | 4.8 (18.2)         |
| 75%            | 58.4 (221)          | 4 (15.5)           | 52.1 (197)          | 3.6 (13.8)         |

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.

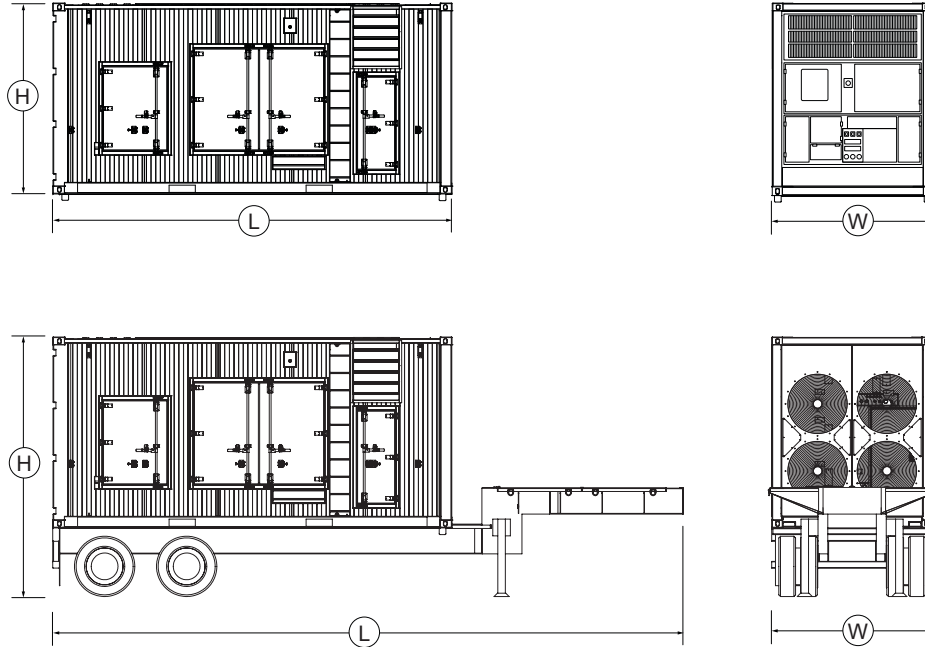
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### DIMENSIONS AND WEIGHTS\*



|         | Runtime: hr* | Usable Fuel Capacity: US gal (L) | Dimensions – L×W×H: in (m)   | Weight: lb (kg)                                    |
|---------|--------------|----------------------------------|------------------------------|--|
| Skid    | 8            | 475.5 (1,800)                    | 238 (6.0)×96 (2.4)×114 (2.9) | Dry: 37,700 (17,100)<br>Operating: 41,076 (18,631) |
| Trailer | 8            | 475.5 (1,800)                    | 377 (9.6)×99 (2.5)×155 (3.9) | Dry: PENDING<br>Operating: PENDING                 |

\*Runtime based on 75% of prime rated power

### SOUND RATING

- 71 dB (A) @ 23 ft (7 m) & 75% PRP

\* 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.