

# MDE2900 | (4) 16.1L | 2,900 kVA

## MOBILE DIESEL GENERATOR SET

EPA Emissions Certification: Tier 4 Final



### Standby Power Rating

2,254 kW, 2,818 kVA, 50 HZ

2,542 kW, 3,178 kVA, 60 Hz

### Prime Power Rating

2,078 kW, 2,598 kVA, 50 Hz

2,316 kW, 2,894 kVA, 60 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 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**

- (4) Volvo TWD1683GE
- 6 Cylinder
- Turbocharged & After-cooled
- 16.1L Displacement
- 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
- (4) Roof Mounted Silencers with Rain Caps

**COOLING SYSTEM**

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

**FUEL and DEF SYSTEM**

- (2) Double Wall Fuel Tank
  - Metal with Containment (fuel, DEF, engine oil)
- Fuel Tank Capacity 475.5 US gal (1,800 L)
  - 8 Hour Runtime @ 75% PRP
- Auxiliary Fuel Quick Connections w/3-Way Fuel Valve
- (4) 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**

- (4) Deep Sea DSE8610 Controllers
  - Operate Each 725 kVA Genset Individually
- (1) Deep Sea DSE8003 Paralleling Controller
  - Operate Both 1,450 kVA Gensets Together (2,900 kVA)
- Emergency Stop Switch
- Hour Meter
- Generac LINK Gateway
- Lockable Battery Disconnect
- (2) 24V, 5A Battery Charger

**ALTERNATOR SYSTEM**

- (4) 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

**POWER DISTRIBUTION**

- Copper Bar Connections
- Convenience Receptacles
  - (1) 120 V, 20 A, GFCI, Duplex Receptacles (NEMA 5-20R)
- Shore Power Connections
- Cam Locks - (5) Sets, Female (US color code)
- Grounding System: TN-S, TN-C, IT

**ENCLOSURE**

- (2) 20' High Cube Container
- Soundproofed & Weatherproofed
- ISO 4-Point Lifting Hooks
- Fully Lockable Enclosure
- Internal Enclosure Light
- Fork Pockets
- Roof Access Ladder
- Double Seal Gaskets
- CSC (Convention for Safe Container) Approved
- Ladder Straps Beneath Access Doors
- 4-Step Aluminum Ladder (mounted inside door)
- (2) Radiator Shipping Covers (mount on trailer tongue during use)
- Screened Bi-Fold Access Doors w/ Lockbar Latch

**TRAILER**

- 53 in. tri-axle trailer
- Air Ride Equipped
- Air Brakes
- Landing Gear Spreader Channel
- Storage Bracket (on tongue for radiator covers)
- US DOT approved

**WARRANTY**

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

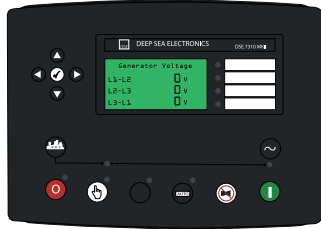
**COLD WEATHER**

- -13° F (-30° C) Minimum Operating Temperature

**COLD WEATHER KIT:**

- Air Grid Heater
- Alternator Anti-Condensation Heater
- Battery Blanket Heater
- Coolant Block Heater
- Heated Fuel Pre-Filter
- Heated Fuel Filters
- Oil Pan Heater
- Winter Blend Oil

**CONTROL SYSTEM**



**CONTROLLER AND DISPLAY**

- Controller: (2) Deep Sea® Mode DSE8610 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**

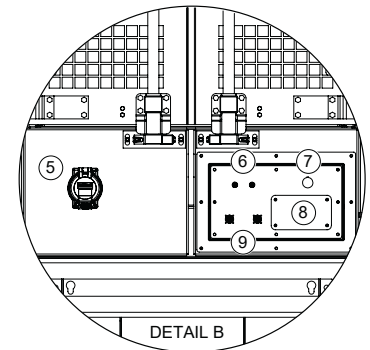
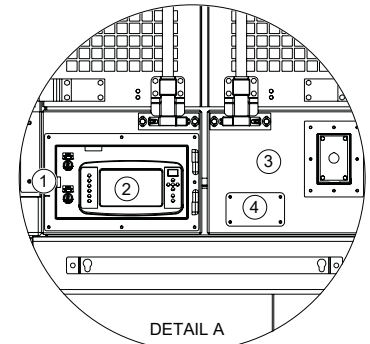
- Lockable Control Box Door
- Voltage Adjustment  $\pm 10\%$



**DEEP SEA® MODEL DSE8003**

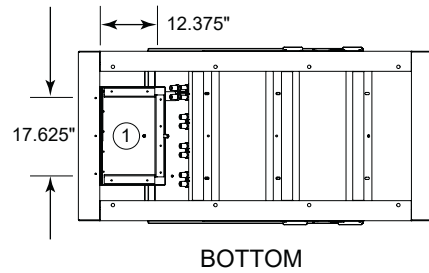
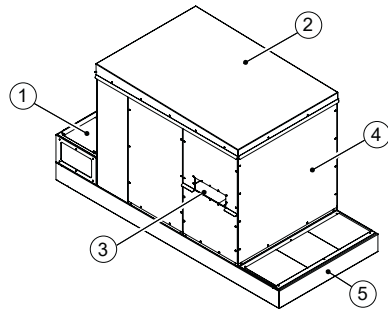
- Main Interface with Full Color 7 in. Graphical Display
- Operate Each 725 kVA Genset Individually

**CONTROL PANEL DETAILS**

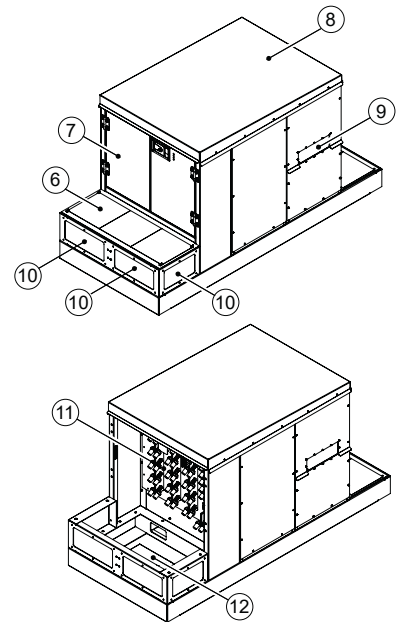


1. Power Management Switches
2. DSE8003 Genset Controller
3. E-Stop Switch (Curbside)
4. Tank Drain Access Panel (Curbside)
5. 50A Twist Style Shore Power Plug
6. Remote Start Connection
7. E-Stop Switch (Roadside)
8. Tank Drain Access Panel (Roadside)
9. Communication Plugs

SWITCHGEAR CABINET



- ① Bottom Load Cable Access
- ② Removable Roof
- ③ Cable Access - Rear
- ④ Removable Rear Cover
- ⑤ Cabinet Mounting Skid
- ⑥ Removable Floor Cover
- ⑦ Bi-fold Access Door
- ⑧ 2300kW 480V (60Hz) Cabinet
- ⑨ Cable Access - Front
- ⑩ Removable Access Panels
- ⑪ Cam-lock Connectors
- ⑫ Hinged Floor Cover



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 |
| Frequency Regulation (Steady State) | + -0.5%    |

##### 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 (1,143)                             |
| Cooling System Capacity – US gal (L) | Total 2 Engines 103 (390) x 2 Per Unit |

##### 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)     |
|------|--|-----------------------|-----------------------|
| 50Hz | 3-phase, 400 / 230 VAC @ 0.8 pf high wye | 2,254 / 2,818 (3,824) | 2,078 / 2,598 (3,824) |
| 60Hz | 3-phase, 480 / 277 VAC @ 0.8 pf high wye | 2,542 / 3,178 (3,824) | 2,316 / 2,894 (3,824) |

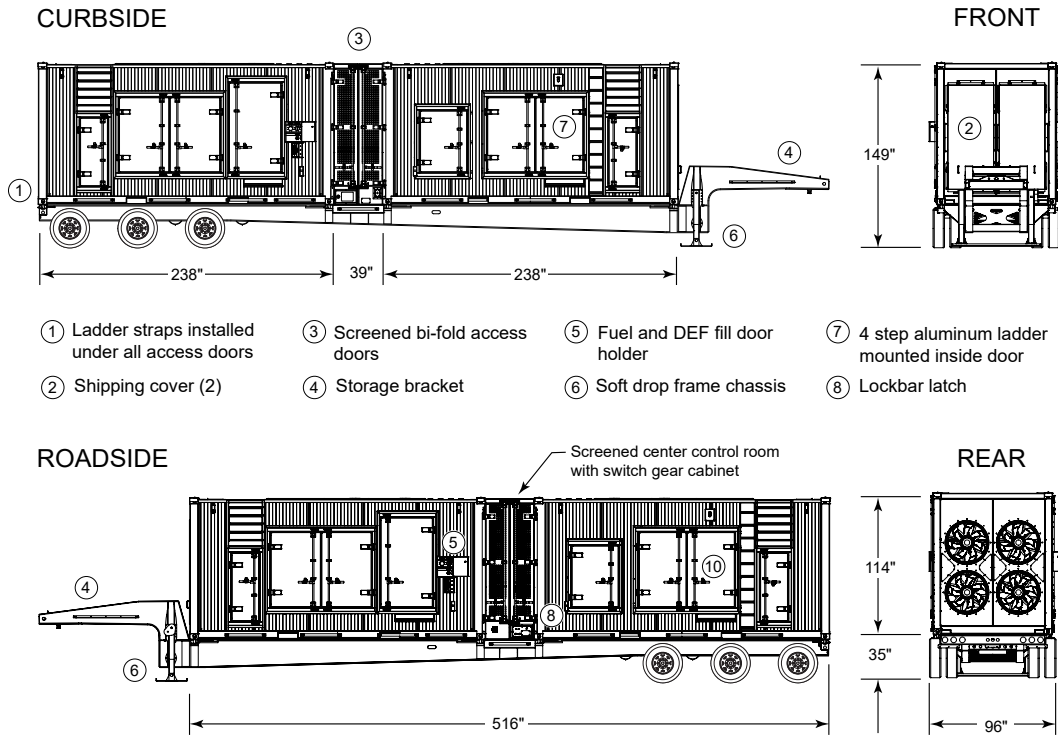
#### FUEL CONSUMPTION RATES

| Load           | 60 Hz               |                    |
|----------------|---------------------|--------------------|
|                | Fuel: US gph (L/hr) | DEF: US gph (L/hr) |
| 100% (Standby) | 76.6 (290)          | 5.3 (20.3)         |
| 75%            | 58.4 (221)          | 4 (15.5)           |

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**DIMENSIONS AND WEIGHTS\***



|         | Runtime: hr* | Usable Fuel Capacity: US gal (L) | Weight: lb (kg)                       | Weight: lb (kg)                  |
|---------|--------------|----------------------------------|---------------------------------------|----------------------------------|
| Trailer | 8            | 475.5 (1,800)                    | 636 (16,154) x 96 (2438) x 149 (3785) | Dry: 85,000<br>Operating: 91,752 |

\*Runtime based on 75% of prime rated power

**SOUND RATING**

- 73 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.