

# BLUE STAR

## Power Systems

Diesel Product Line

208-600 Volt

VD600-03

60 Hz / 1800 RPM

600 kWe

Standby

### Ratings

|                        | 208V         | 240V          | 480V         | 600V         |
|------------------------|--------------|---------------|--------------|--------------|
| <b>Phase</b>           | 3            | 3             | 3            | 3            |
| <b>PF</b>              | 0.8          | 0.8           | 0.8          | 0.8          |
| <b>Hz</b>              | 60           | 60            | 60           | 60           |
| <b>Generator Model</b> | S6L1D-C      | S6L1D-C       | HCI534E      | HCI534F      |
| <b>Connection</b>      | 12 LEAD WYE  | 12 LEAD DELTA | 12 LEAD WYE  | 4 LEAD WYE   |
| <b>kWe</b>             | 600          | 600           | 600          | 600          |
| <b>AMPS</b>            | 2084         | 1806          | 903          | 723          |
| <b>Temp Rise</b>       | 125°C / 40°C | 125°C / 40°C  | 125°C / 40°C | 125°C / 40°C |

### Standard Equipment

#### Engine

- Radiator Cooled Unit Mounted (55°C)
- Radiator Duct Flange (OPU Only)
- Blower Fan & Fan Drive
- Starter & Alternator
- Oil Pump & Filter
- Oil Drain Extension w/Valve
- Governor - Electronic Isochronous
- 24V Battery System & Cables
- Air Cleaner (Dry Single Stage)
- Critical Grade Silencer Mounted
- Flexible Fuel Connector
- EPA Certified Tier 2

#### Generator

- Brushless Single Bearing
- Automatic Voltage Regulator
- ± 0.50% Voltage Regulation
- 4 Pole, Rotating Field
- 125°C Standby Temperature Rise
- 100% of Rated Load - One Step
- 5% Maximum Harmonic Content
- NEMA MG 1, IEEE and ANSI Standards Compliance for Temperature Rise

#### Additional

- Single Source Supplier
- UL 2200 & cUL Listed
- CSA Certified
- Seismic Certified to IBC 2021
- NFPA 110 / CSA C282 Compliant
- Microprocessor Based Digital Control Panel Mounted in NEMA 12 Enclosure
- Base - Structural Steel
- Main Line Circuit Breaker Mounted & Wired
- Battery Charger 24V 5 Amp
- Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- Vibration Isolation Mounts (Pad Type)
- 2 Year / 2000 Hour Standby Warranty
- Standard Colors - White / Gray

## Application Data

### Engine

|                       |  |                                      |                           |
|-----------------------|--|--------------------------------------|---------------------------|
| Manufacturer:         | Volvo Penta                                | Displacement - Cu. In. (lit):        | 984 (16.1)                |
| Model:                | TWD1644GE                                  | Bore - in. (cm) x Stroke - in. (cm): | 5.67 (14.4) x 6.50 (16.5) |
| Type:                 | 4-Cycle                                    | Compression Ratio:                   | 16.8:1                    |
| Aspiration:           | Turbo Charged, H <sub>2</sub> O to Air CAC | Rated RPM:                           | 1800                      |
| Cylinder Arrangement: | 6 Cylinder Inline                          | Max HP Stby (kW <sub>m</sub> ):      | 917 (674)                 |

### Exhaust System

|   | Standby     |
|---|-------------|
| Gas Temp. (Stack): °F (°C)  | 923 (495)   |
| Gas Volume at Stack Temp: CFM (m <sup>3</sup> /min)               | 4,044 (114) |
| Maximum Allowable Exhaust Restriction: in. H <sub>2</sub> O (kPa) | 40.2 (10.0) |

### Cooling System

|   |              |
|---|--------------|
| Ambient Capacity of Radiator: °F (°C)   | 131 (55.0)   |
| Maximum Allowable Static Pressure on Rad. Exhaust: in. H <sub>2</sub> O (kPa) | 0.50 (0.12)  |
| Water Pump Flow Rate: GPM (lit/min)   | 95.4 (361)   |
| Heat Rejection to Coolant: BTUM (kW)  | 13,990 (245) |
| Heat Rejection to CAC: BTUM (kW)  | 8,360 (146)  |
| Heat Radiated to Ambient: BTUM (kW)   | 12,050 (211) |

### Air Requirements

|  |  |
|--|--|
| Aspirating: CFM (m <sup>3</sup> /min)                                    | 1,649 (46.7)                                   |
| Air Flow Required for Rad. Cooled Unit: CFM (m <sup>3</sup> /min)        | 28,198 (798)                                   |
| Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m <sup>3</sup> /min) | Consult Factory For Remote Cooled Applications |

### Fuel Consumption

|  |             |
|--|-------------|
| At 100% of Power Rating: gal/hr (lit/hr) | 39.2 (148)  |
| At 75% of Power Rating: gal/hr (lit/hr)  | 30.4 (115)  |
| At 50% of Power Rating: gal/hr (lit/hr)  | 21.0 (79.3) |

### Fluids Capacity

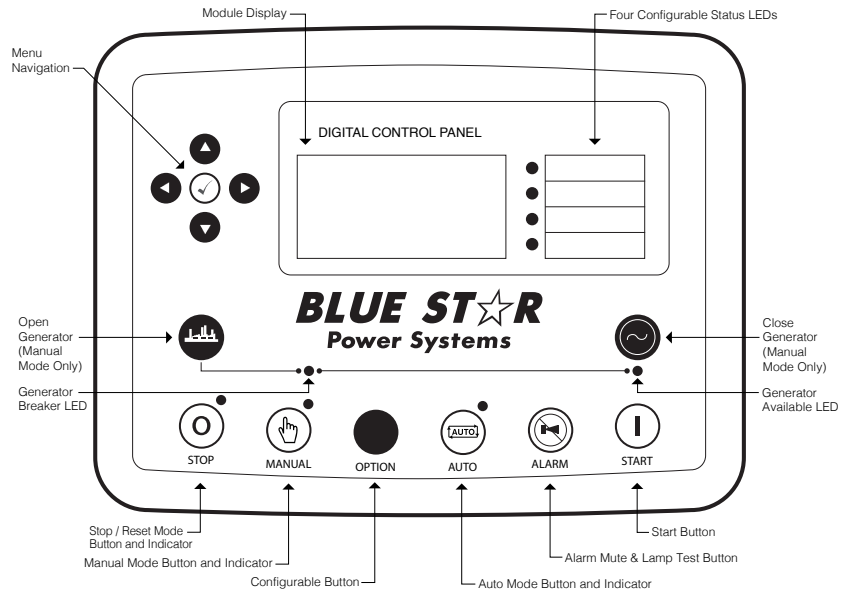
|   |             |
|---|-------------|
| Total Oil System: gal (lit)             | 12.7 (48.0) |
| Engine Jacket Water Capacity: gal (lit) | 6.60 (25.0) |
| System Coolant Capacity: gal (lit)      | 39.9 (151)  |

Deration Factors: Rated Power is available up to 4,920 Ft (1,500 m) at ambient temperatures to 122°F (50°C). Consult factory for site conditions above these parameters.

## DCP7310 Control Panel

### Standard Features

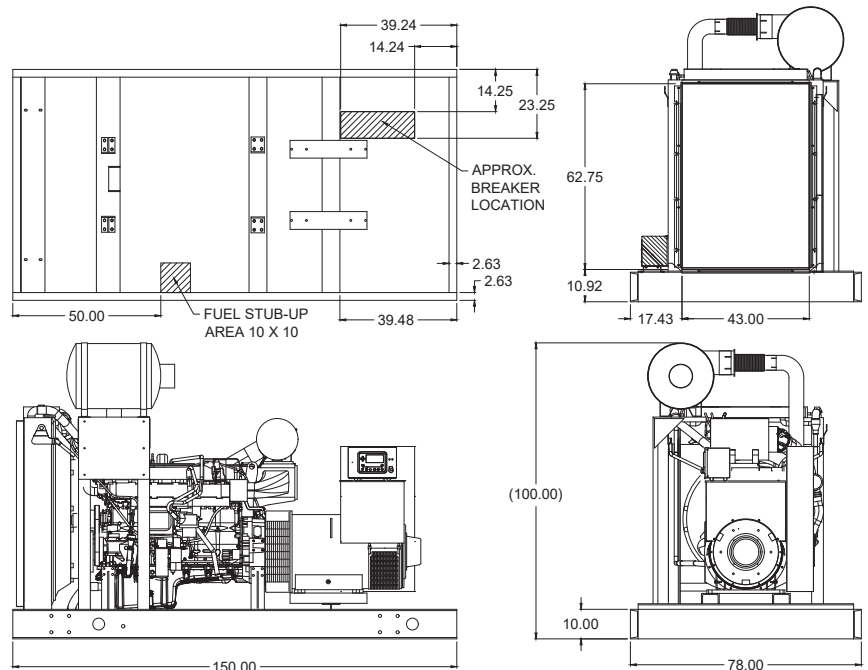
- Digital Metering
- Engine Parameters
- Generator Protection Functions
- Engine Protection
- CAN Bus (J1939) ECU Communications
- Windows-Based Software
- Multilingual Capability
- Remote Communications to DSE2548 Remote Annunciator
- 8 Programmable Contact Inputs
- 10 Contact Outputs
- RS485 Communicator Interface
- cULus Listed, CE Approved
- Event Recording
- IP 65 rating (with supplied gasket) offers increased resistance to water ingress
- NFPA 110 Level 1 Compatible



## Weights / Dimensions / Sound Data

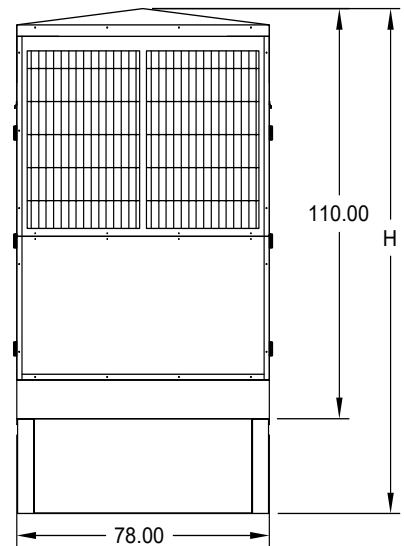
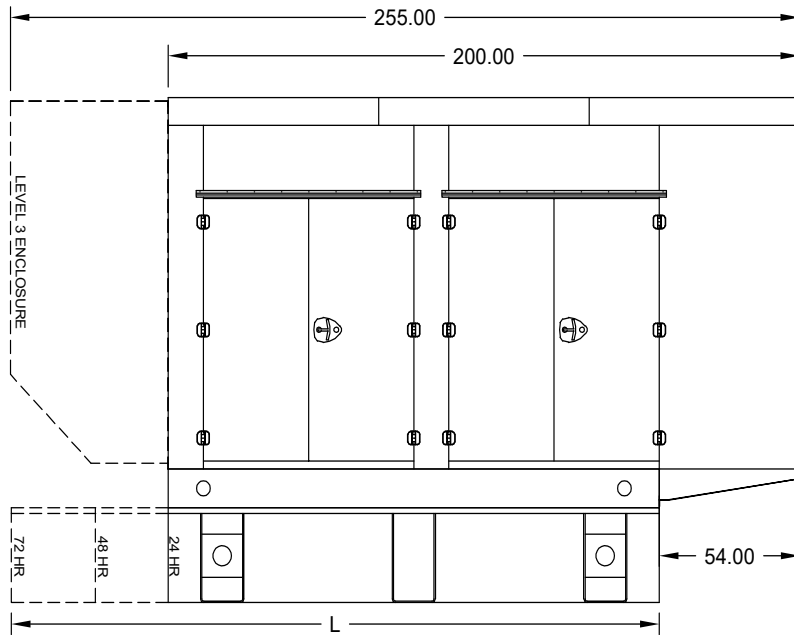
|                | L x W x H         | Weight lbs |
|----------------|-------------------|------------|
| <b>OPU</b>     | 150 x 78 x 100 in | 10,775     |
| <b>Level 1</b> | 200 x 78 x 110 in | 12,600     |
| <b>Level 2</b> | 200 x 78 x 110 in | 12,700     |
| <b>Level 3</b> | 255 x 78 x 110 in | 13,200     |

Please allow 6-12 inches for height of exhaust stack.



|                | No Load | Full Load |
|----------------|---------|-----------|
| <b>OPU</b>     | 92 dBA  | 94 dBA    |
| <b>Level 1</b> | 87 dBA  | 90 dBA    |
| <b>Level 2</b> | 82 dBA  | 84 dBA    |
| <b>Level 3</b> | 74 dBA  | 76 dBA    |

## Enclosures & Fuel Tanks



- All enclosure models are 200 MPH wind rating certified in accordance with IBC2021 and ASCE/SEI 7-16 standards.
- Level 2 & 3 enclosures include sound attenuation foam
- Level 3 enclosure includes frontal sound & exhaust hood.
- Enclosure height does not include exhaust stack.

|          | 24 Hour<br>1000 Gallon | 48 Hour<br>2000 Gallon | 72 Hour<br>3000 Gallon |
|----------|------------------------|------------------------|------------------------|
| <b>L</b> | 150.00                 | 228.00                 | 336.00                 |
| <b>H</b> | 140.00                 | 146.00                 | 146.00                 |

### Notes

- All specification sheet dimensions are represented in inches.
- All drawings based on standard 480 volt standby generator. Lengths may vary with other voltages. All drawings and dimensions subject to change without notice.
- All enclosures and fuel tanks are based on the standard unit configuration. Any requested deviation can change dimensions.
- Sound data is measured at 23 feet (7 meters) in accordance with ISO 8528-10.
- All materials and specifications subject to change without notice.

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