

# BLUE STAR

## Power Systems Inc.

Diesel Product Line

208-600 Volt

VD400-01

60 Hz / 1800 RPM

400 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> | S4L1D-G41    | S4L1D-G41     | S4L1D-F41    | S4L1S-F4     |
| <b>Connection</b>      | 12 LEAD WYE  | 12 LEAD DELTA | 12 LEAD WYE  | 4 LEAD WYE   |
| <b>kWe</b>             | 400          | 400           | 400          | 400          |
| <b>AMPS</b>            | 1390         | 1204          | 602          | 482          |
| <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 3

#### 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 - Formed Steel
- Main Line Circuit Breaker Mounted & Wired
- Battery Charger 24V 5 Amp
- Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- Vibration Isolation Mounts
- 2 Year / 2000 Hour Standby Warranty
- Standard Colors - White / Gray

### Application Data

#### Engine

|                       |                    |                                      |                           |
|-----------------------|--------------------|--------------------------------------|---------------------------|
| Manufacturer:         | Volvo Penta        | Displacement - Cu. In. (lit):        | 780 (12.8)                |
| Model:                | TAD1353GE          | Bore - in. (cm) x Stroke - in. (cm): | 5.16 (13.1) x 6.22 (15.8) |
| Type:                 | 4-Cycle            | Compression Ratio:                   | 18.1:1                    |
| Aspiration:           | Turbo Charged, CAC | Rated RPM:                           | 1800                      |
| Cylinder Arrangement: | 6 Cylinder Inline  | Max HP Stby (kWm):                   | 611 (449)                 |

#### Exhaust System

#### Standby

|   |              |
|---|--------------|
| Gas Temp. (Stack): °F (°C)  | 923 (495)    |
| Gas Volume at Stack Temp: CFM (m³/min)                            | 2,790 (79.0) |
| Maximum Allowable Exhaust Restriction: in. H <sub>2</sub> O (kPa) | 40.0 (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)   | 87.0 (329)   |
| Heat Rejection to Coolant: BTUM (kW)  | 10,123 (177) |
| Heat Rejection to CAC: BTUM (kW)  | 5,346 (94.0) |
| Heat Radiated to Ambient: BTUM (kW)   | 8,076 (141)  |

#### Air Requirements

|   |  |
|---|--|
| Aspirating: CFM (m³/min)                                    | 1,102 (31.2)                                   |
| Air Flow Required for Rad. Cooled Unit: CFM (m³/min)        | 24,175 (684)                                   |
| Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min) | Consult Factory For Remote Cooled Applications |

#### Fuel Consumption

|  |             |
|--|-------------|
| At 100% of Power Rating: gal/hr (lit/hr)                         | 27.3 (103)  |
| At 75% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr) | 21.8 (82.5) |
| At 50% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr) | 15.6 (59.1) |

#### Fluids Capacity

|   |             |
|---|-------------|
| Total Oil System: gal (lit)             | 9.50 (36.0) |
| Engine Jacket Water Capacity: gal (lit) | 5.28 (20.0) |
| System Coolant Capacity: gal (lit)      | 11.6 (44.0) |

Deration Factors: Rated Power is available up to 3,280 Ft (1,000 m) at ambient temperatures to 122°F (50°C). Consult factory for site conditions above these parameters.

## DCP7310 Control Panel

### Standard Features

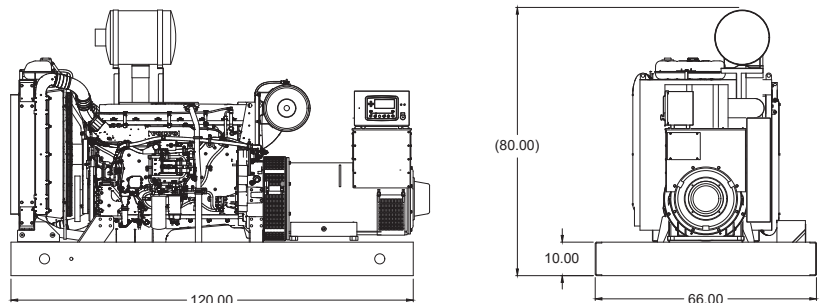
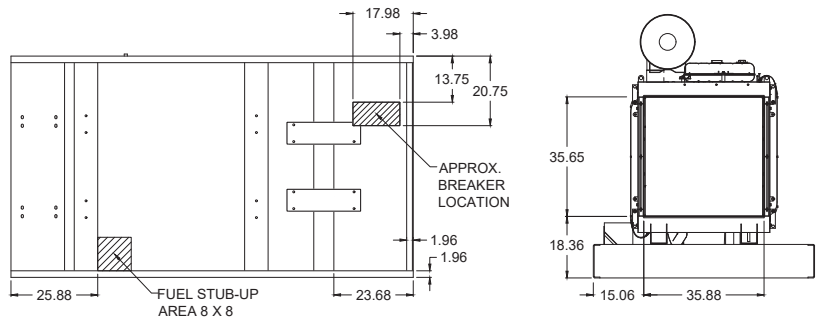
- Digital Metering
- Engine Parameters
- Generator Protection Functions
- Engine Protection
- CAN Bus (J1939) ECU Communications
- Windows-Based Software
- Multilingual Capability
- Remote Communications to DSE2548 Remote Annunciator
- 8 Programmable Contact Inputs
- 10 Contact Outputs
- RS485 Communicator 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

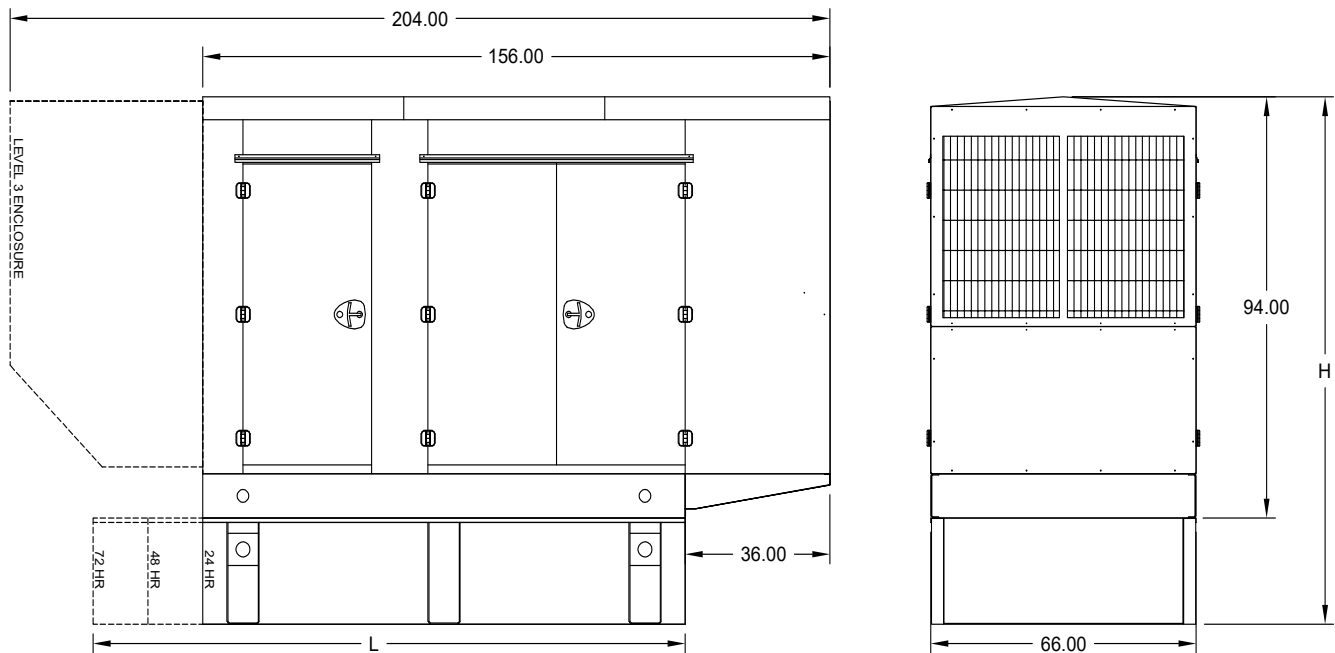
|                | L x W x H        | Weight lbs |
|----------------|------------------|------------|
| <b>OPU</b>     | 120 x 66 x 80 in | 8,350      |
| <b>Level 1</b> | 156 x 66 x 94 in | 9,600      |
| <b>Level 2</b> | 156 x 66 x 94 in | 9,675      |
| <b>Level 3</b> | 204 x 66 x 94 in | 9,975      |

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



|                | No Load | Full Load |
|----------------|---------|-----------|
| <b>OPU</b>     | 88 dBA  | 91 dBA    |
| <b>Level 1</b> | 84 dBA  | 86 dBA    |
| <b>Level 2</b> | 79 dBA  | 81 dBA    |
| <b>Level 3</b> | 70 dBA  | 73 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>710 Gallon | 48 Hour<br>1420 Gallon | 72 Hour<br>2130 Gallon |
|----------|-----------------------|------------------------|------------------------|
| <b>L</b> | 120.00                | 192.00                 | 276.00                 |
| <b>H</b> | 126.00                | 130.00                 | 130.00                 |

### 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.

American Owned



American Made

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