

# BLUE STAR

## Power Systems Inc.

Diesel Product Line

208-600 Volt

VD350-02FT4

60 Hz / 1800 RPM

350 kWe / 350 kWe

Standby / Prime

### 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>	433CSL6220	433CSL6220	433CSL6220	433PSL6248
<b>Connection</b>	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
<b>Standby</b>				
<b>kWe</b>	350	350	350	350
<b>AMPS</b>	1216	1054	527	421
<b>Temp Rise</b>	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
<b>Prime</b>				
<b>kWe</b>	350	350	350	350
<b>AMPS</b>	1216	1054	527	421
<b>Temp Rise</b>	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

### Standard Equipment

- |   |  |   |
|---|--|---|
| <p><b>Engine</b></p> <ul style="list-style-type: none"> <li>▶ Radiator Cooled Unit Mounted (55°C)</li> <li>▶ Blower Fan &amp; Fan Drive</li> <li>▶ Starter &amp; Alternator</li> <li>▶ Oil Pump &amp; Filter</li> <li>▶ Oil Drain Extension w/Valve</li> <li>▶ Governor - Electronic Isochronous</li> <li>▶ 24V Battery System &amp; Cables</li> <li>▶ Air Cleaner (Dry Single Stage)</li> <li>▶ Flexible Fuel Connector</li> <li>▶ EPA Certified Tier 4 Final</li> </ul> <p><b>Listing Certifications</b></p> <ul style="list-style-type: none"> <li>▶ UL 2200 Listed</li> <li>▶ cUL Listed</li> <li>▶ CSA Certified</li> <li>▶ Seismic Certified to IBC 2012</li> </ul> | <p><b>Generator</b></p> <ul style="list-style-type: none"> <li>▶ Brushless Single Bearing</li> <li>▶ Automatic Voltage Regulator</li> <li>▶ ± 1% Voltage Regulation</li> <li>▶ 4 Pole, Rotating Field</li> <li>▶ 105°C Standby Temperature Rise</li> <li>▶ 105°C Prime Temperature Rise</li> <li>▶ 100% of Rated Load - One Step</li> <li>▶ 5% Maximum Harmonic Content</li> <li>▶ NEMA MG 1, IEEE and ANSI Standards Compliance for Temperature Rise</li> </ul> | <p><b>Additional</b></p> <ul style="list-style-type: none"> <li>▶ Microprocessor Based Digital Control</li> <li>▶ Interface Connection Box</li> <li>▶ Control Panel Mounted in NEMA 12 Enclosure</li> <li>▶ Base - Structural Steel</li> <li>▶ Main Line Circuit Breaker Mounted &amp; Wired</li> <li>▶ SCR Catalyst / Silencer Mounted</li> <li>▶ Battery Charger 24V 5 Amp</li> <li>▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves</li> <li>▶ Vibration Isolation Mounts</li> <li>▶ Radiator Duct Flange (OPU Only)</li> <li>▶ Single Source Supplier</li> <li>▶ 2YR / 2000HR Standby Warranty</li> <li>▶ 1YR / 1500HR Prime Warranty</li> <li>▶ Standard Colors - White / Tan / Gray</li> </ul> |
|---|--|---|

## Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	984 (16.1)
Model:	TAD1670VE	Bore - in. (cm) x Stroke - in. (cm):	5.67 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio:	17.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	551 (405)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	869 (465)	869 (465)
Gas Volume at Stack Temp: CFM (m³/min)	2,861 (81.0)	2,861 (81.0)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H <sub>2</sub> O (kPa)	16.0 (4.00)	16.0 (4.00)

Cooling System	Standby	Prime
Ambient Capacity of Radiator: °F (°C)	131 (55.0)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H <sub>2</sub> O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	108 (409)	108 (409)
Heat Rejection to Coolant: BTUM (kW)	9,668 (169)	9,668 (169)
Heat Rejection to CAC: BTUM (kW)	4,891 (85.6)	4,891 (85.6)
Heat Radiated to Ambient: BTUM (kW)	2,988 (52.3)	2,988 (52.3)

Air Requirements	Standby	Prime
Aspirating: CFM (m³/min)	1,155 (32.7)	1,155 (32.7)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	17,340 (491)	17,340 (491)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	Consult Factory For Remote Cooled Applications	

Fuel Consumption	Standby	Prime
At 100% of Power Rating: gal/hr (lit/hr)	25.5 (96.5)	23.1 (87.4)
At 75% of Power Rating: gal/hr (lit/hr)	19.3 (73.1)	17.7 (67.0)
At 50% of Power Rating: gal/hr (lit/hr)	13.2 (50.0)	12.3 (46.6)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%

Fluids Capacity	Standby	Prime
Total Oil System: gal (lit)	12.7 (48.1)	12.7 (48.1)
Engine Jacket Water Capacity: gal (lit)	8.70 (32.9)	8.70 (32.9)
System Coolant Capacity: gal (lit)	15.9 (60.2)	15.9 (60.2)
DEF Tank Capacity: gal (lit)	18.5 (70.0)	18.5 (70.0)

### Deration Factors

Rated Power is available up to 2,300 Ft (700m) at ambient temperatures to 122°F (50°C) standby and prime. Consult factory for site conditions above these parameters.

### DGC-2020 Control Panel

#### Standard Features

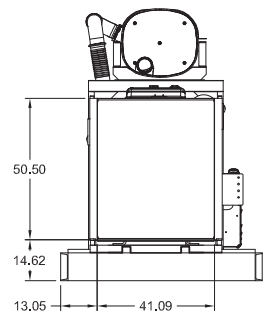
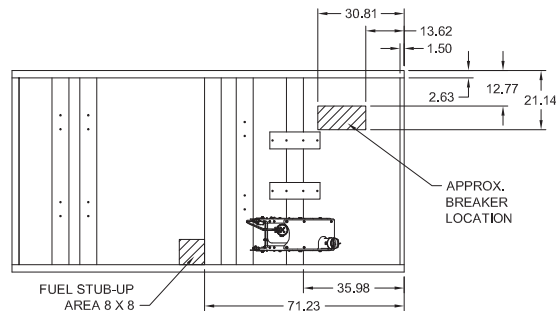
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



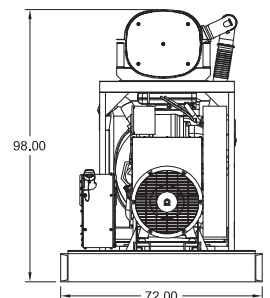
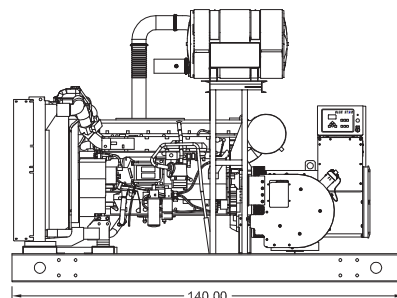
### Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
<b>OPU</b>	140 x 72 x 98 in	9,550
<b>Level 1</b>	180 x 72 x 103 in	11,150
<b>Level 2</b>	180 x 72 x 103 in	11,225
<b>Level 3</b>	225 x 72 x 103 in	11,675

Height measured from bottom of base to exhaust stack.



	No Load	Full Load
<b>OPU</b>	85 dBA	87 dBA
<b>Level 1</b>	81 dBA	83 dBA
<b>Level 2</b>	77 dBA	79 dBA
<b>Level 3</b>	71 dBA	73 dBA



Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice. Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

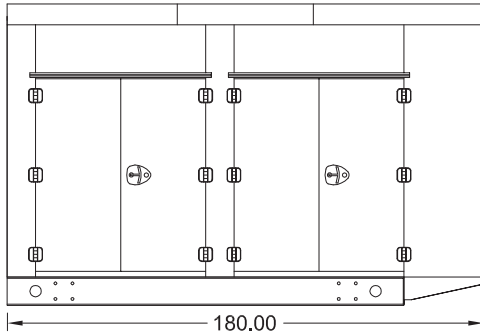
# Diesel Product Line

350 kWe / 350 kWe

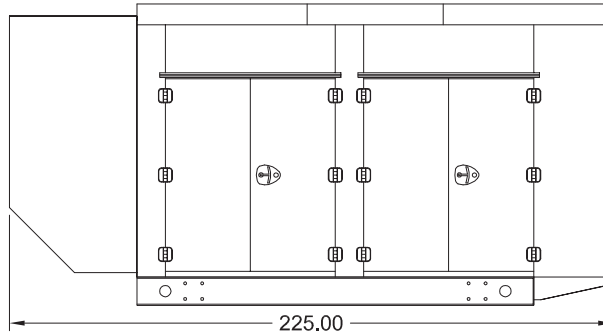


## Enclosures

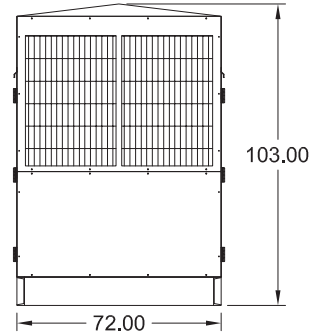
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

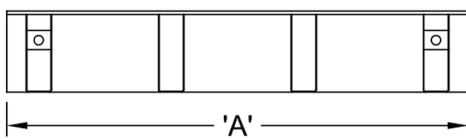
Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

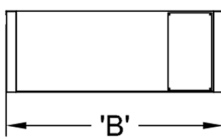
\*Enclosure height does not include exhaust stack.

## Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 710 Gallon	48 Hour 1420 Gallon	72 Hour 2130 Gallon
<b>A</b>	140.00	180.00	250.00
<b>B</b>	72.00	72.00	72.00
<b>C</b>	24.00	36.00	36.00

All specification sheet dimensions are represented in inches.

All enclosures and fuel tanks are based on the standard standby unit configuration. Any deviation can change dimensions.

Materials and specifications subject to change without notice.



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