

# BLUE STAR

## Power Systems Inc.

### Diesel Product Line

208-600 Volt

VD400-01

60 Hz / 1800 RPM

400 kWe / 360 kWe

Standby / Prime

### Ratings

	240V	208V	240V	480V	600V
<b>Phase</b>	1	3	3	3	3
<b>PF</b>	1.0	0.8	0.8	0.8	0.8
<b>Hz</b>	60	60	60	60	60
<b>Generator Model</b>	573RSL4035	433CSL6220	433CSL6220	433CSL6220	433PSL6248
<b>Connection</b>	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
<b>Standby</b>					
<b>kWe</b>	400	400	400	400	400
<b>AMPS</b>	1667	1390	1204	602	482
<b>Temp Rise</b>	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
<b>Prime [Only Available For Mobile Applications]</b>					
<b>kWe</b>	360	360	360	360	360
<b>AMPS</b>	1500	1251	1084	542	434
<b>Temp Rise</b>	105°C / 40°C	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 (50°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>▶ SAE Flywheel Housing</li> <li>▶ Air Cleaner (Dry Single Stage)</li> <li>▶ Flexible Fuel Connectors</li> <li>▶ EPA Certified - Tier 3</li> </ul> | <p><b>Generator</b></p> <ul style="list-style-type: none"> <li>▶ Brushless Single Bearing</li> <li>▶ Automatic Voltage Regulator</li> <li>▶ ± 1.0% Voltage Regulation</li> <li>▶ 4 Pole, Rotating Field</li> <li>▶ 130°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>▶ Base - Structural Steel</li> <li>▶ Main Line Circuit Breaker Mounted &amp; Wired</li> <li>▶ Critical Grade Silencer Mounted</li> <li>▶ Battery Charger 24V 5 Amp</li> <li>▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves</li> <li>▶ Vibration Isolation Mounts (Pad Type)</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> |
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## Application Data

Engine			
Manufacturer:	Volvo	Displacement - Cu. In. (lit):	780 (12.8)
Model:	TAD1353GE	Bore - in. (cm) x Stroke - in. (cm):	5.2 (13.1) x 6.2 (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	Prime
Gas Temp. (Stack): °F (°C)	923 (495)	905 (485)
Gas Volume at Stack Temp: CFM (m³/min)	2,790 (79.0)	2,613 (74.0)
Maximum Allowable Exhaust Restriction: in. H <sub>2</sub> O (kPa)	40.0 (10.0)	40.0 (10.0)

Cooling System	Standby	Prime
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H <sub>2</sub> O (kPa)	0.5 (0.12)	0.5 (0.12)
Water Pump Flow Rate: Gpm (lit/min)	87.0 (329)	87.0 (329)
Heat Rejection to Coolant: BTUM (kW)	10,123 (177)	9383 (164)
Heat Rejection to CAC: BTUM (kW)	5,346 (94.0)	5,289 (93.0)
Heat Radiated to Ambient: BTUM (kW)	3,415 (59.8)	3,202 (56.0)

Air Requirements	Standby	Prime
Aspirating: CFM (m³/min)	1,102 (31.2)	1,038 (29.4)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	24,175 (684)	24,175 (684)
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)	27.9 (105.6)	25.6 (96.9)
At 75% of Power Rating: gal/hr (lit/hr)	21.9 (82.9)	20.1 (76.1)
At 50% of Power Rating: gal/hr (lit/hr)	15.0 (56.8)	14.0 (53.0)

Fluids Capacity	Standby	Prime
Total Oil System: gal (lit)	9.5 (36.0)	9.5 (36.0)
Engine Jacket Water Capacity: gal (lit)	5.28 (20.0)	5.28 (20.0)
System Coolant Capacity: gal (lit)	11.6 (44.0)	11.6 (44.0)

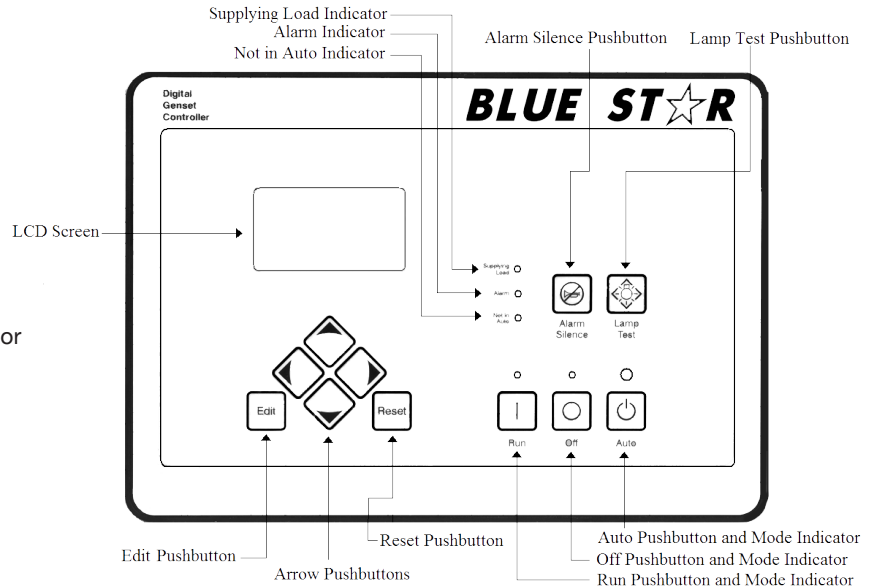
Deration Factors

Rated Power is available up to 4920 ft (1500 m) at ambient temperatures to 122°F (50°C). Consult factory for site conditions above these parameters.

## DGC-2020 Control Panel

### Standard Features

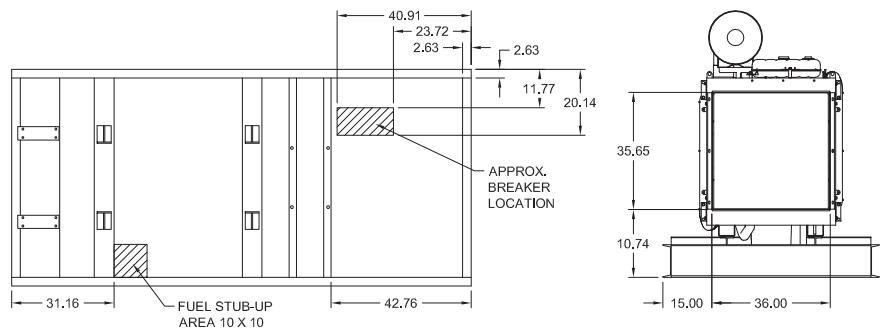
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications - RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 11 Contact Outputs
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



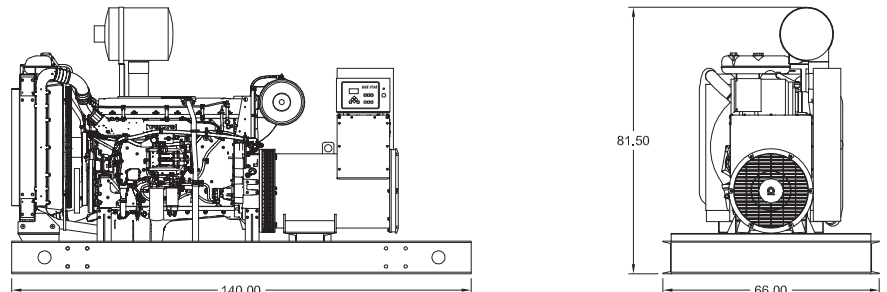
## Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
<b>OPU</b>	140 x 66 x 82 in	8,550
<b>Level 1</b>	140 x 66 x 105 in	9375
<b>Level 2</b>	140 x 66 x 123 in	10,025
<b>Level 3</b>	195 x 66 x 112 in	10,675

Height measured from bottom of base to exhaust stack.



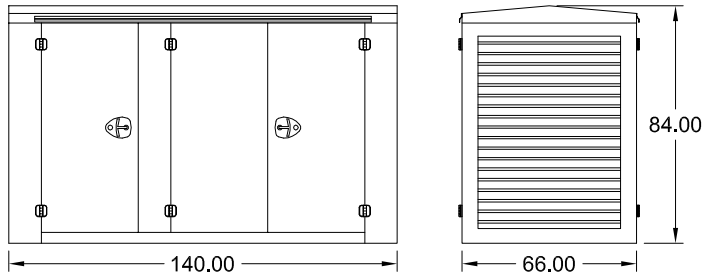
	No Load	Full Load
<b>OPU</b>	85 dBA	88 dBA
<b>Level 1</b>	83 dBA	87 dBA
<b>Level 2</b>	81 dBA	85 dBA
<b>Level 3</b>	71 dBA	73 dBA



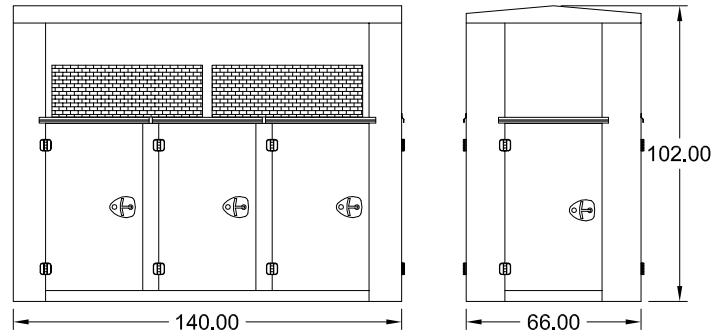
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice. Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

## Optional Enclosures and Fuel Tanks

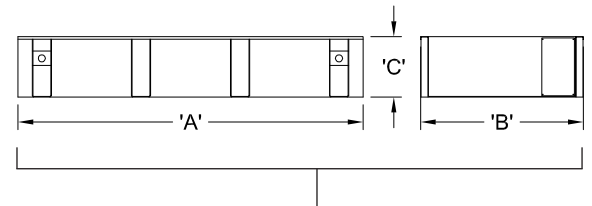
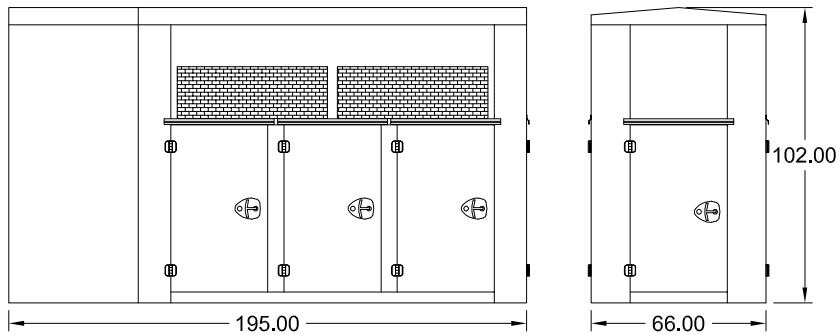
**Level 1 Enclosure (WPE)**



**Level 2 Enclosure (WPF)**



**Level 3 Enclosure (SAE)**



\*Level 1 enclosures are 100 MPH Wind Rated as standard (up to 150 MPH available).

\*\*Level 2 & 3 enclosures are 150 MPH Wind Rated as standard.

\*\*\*Enclosure height does not include unit base or exhaust stack.

### Double Wall UL 142 Listed Fuel Tanks

	24 Hour (875 Gallon)			48 Hour (1750 Gallon)			72 Hour (2625 Gallon)		
	A	B	C	A	B	C	A	B	C
<b>OPU</b>	140.00	66.00	34.00	235.00	66.00	36.00	330.00	66.00	36.00
<b>Level 1</b>	140.00	66.00	34.00	235.00	66.00	36.00	330.00	66.00	36.00
<b>Level 2</b>	140.00	66.00	34.00	235.00	66.00	36.00	330.00	66.00	36.00
<b>Level 3</b>	195.00	66.00	22.00	191.00	66.00	32.00	330.00	66.00	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.

\*\*\*Level 1 enclosure not UL listed.

Materials and specifications subject to change without notice.

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**Blue Star Power Systems, Inc.**

52146 Ember Rd, Lake Crystal, MN 56055

Phone + 1 507 726 2508

www.bluestarps.com