

# BLUE STAR

## Power Systems Inc.

### Diesel Product Line

208-480 Volt

VD100-02FT4MP

60 Hz / 1800 RPM

100 kWe / 100 kWe

Standby / Prime

### Ratings

	240V	208V	240V	480V	Multi-Voltage
<b>Phase</b>	1	3	3	3	3 / 1
<b>PF</b>	1.0	0.8	0.8	0.8	0.8 / 1.0
<b>Hz</b>	60	60	60	60	60
<b>Generator Model</b>	431CSL6202	431CSL6202	431CSL6202	431CSL6202	431CSL6202
<b>Connection</b>	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	12 LEAD CONFIGURABLE
<b>Standby</b>					
<b>kWe</b>	100	100	100	100	100
<b>AMPS</b>	417	347	301	151	417/347/301/151
<b>Temp Rise</b>	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
<b>Prime</b>					
<b>kWe</b>	100	100	100	100	100
<b>AMPS</b>	417	347	301	151	417/347/301/151
<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

#### Engine

- ▶ Radiator Cooled Unit Mounted (55°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 4 Final

#### Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 105°C Standby Temperature Rise
- ▶ 105°C Prime 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
- ▶ Microprocessor Based Digital Control
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Level 3 Enclosure
- ▶ Trailer with Integrated 250 Gallon Fuel Tank
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Slencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Color - White

# Diesel Product Line

100 kWe / 100 kWe



## Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 291 (4.76)
Model:	TAD571VE	Bore - in. (cm) x Stroke - in. (cm): 4.33 (11.0) x 5.31 (13.5)
Type:	4-Cycle	Compression Ratio: 17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm): 175 (131)
Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	716 (380)	716 (380)
Gas Volume at Stack Temp: CFM (m³/min)	689 (19.5)	689 (19.5)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	24.0 (6.00)	24.0 (6.00)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	131 (55.0)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	117 (444)	117 (444)
Heat Rejection to Coolant: BTUM (kW)	4,356 (77.0)	4,356 (77.0)
Heat Rejection to CAC: BTUM (kW)	1,348 (23.7)	1,348 (23.7)
Heat Radiated to Ambient: BTUM (kW)	1,281 (22.4)	1,281 (22.4)
Air Requirements		
Aspirating: CFM (m³/min)	332 (9.40)	332 (9.40)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	10,954 (310)	10,954 (310)
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)	7.50 (28.4)	7.50 (28.4)
At 75% of Power Rating: gal/hr (lit/hr)	6.36 (24.1)	6.36 (24.1)
At 50% of Power Rating: gal/hr (lit/hr)	4.57 (17.3)	4.57 (17.3)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%
Fluids Capacity		
Total Oil System: gal (lit)	4.23 (16.0)	4.23 (16.0)
Engine Jacket Water Capacity: gal (lit)	3.40 (13.0)	3.40 (13.0)
System Coolant Capacity: gal (lit)	10.2 (38.6)	10.2 (38.6)
DEF Tank Capacity: gal (lit)	18.5 (70.0)	18.5 (70.0)

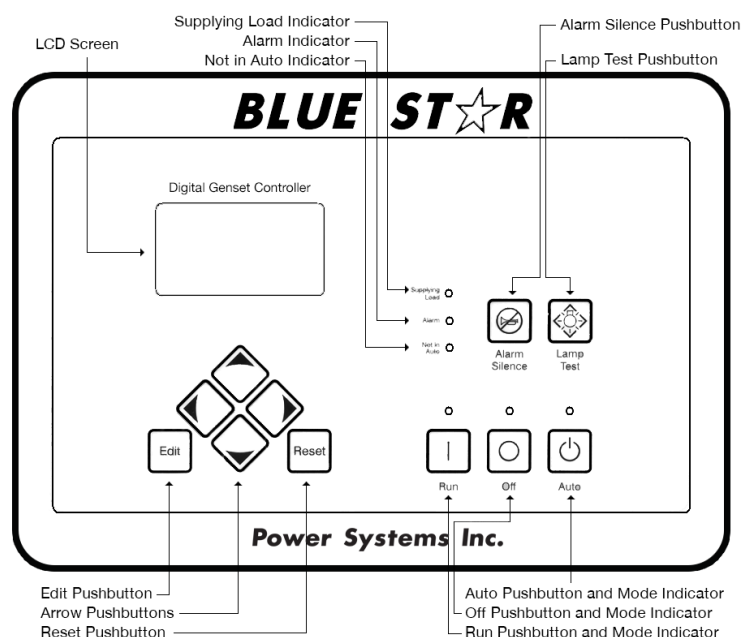
### Deration Factors

Rated Power is available up to 4,921 Ft (1500m) 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



## Convenience Panel

- ▶ 2-50A 125/250VAC 3P4W Twist Lock Non-Nema CS6369
- ▶ 1-30A 125/250VAC 3P4W Twist Lock Nema L14-30R
- ▶ 2-20A 120VAC Duplex GFCI Nema 5-20R
- ▶ Thumb Screw Terminals for 2-Wire Remote Start
- ▶ 15A 120VAC Male Receptacle for Jacket Water Heater and Battery Charger Shore Power Connection
- ▶ 5-400A Rated Female Cam Style Locking Receptacles for Load Connection

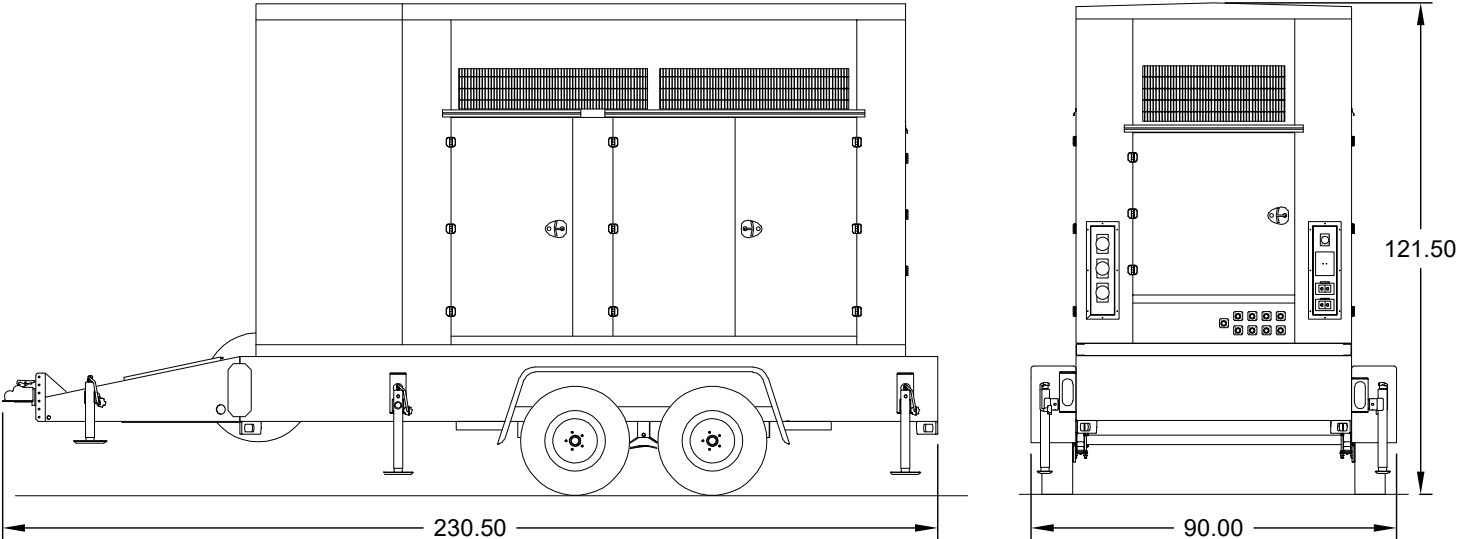
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.  
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

# Diesel Product Line

100 kWe / 100 kWe



## Dimensions



	No Load	Full Load
Sound Data	65 dBA	67 dBA

Approximate Ship Weight: 9,900 lbs.  
Approximate Wet Weight: 11,700 lbs.  
Weights based on standard trailer package. Additional options may increase weight.  
Sound data measured at 23 feet (7 meters) in accordance with ISO 8528-10.

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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