

# BLUE STAR

## Power Systems Inc.

Diesel Product Line

208-600 Volt

PD20-01IT4

60 Hz / 1800 RPM

20 kWe

Standby

### 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>	283PSL1706	282PSL1705	282PSL1705	282PSL1705	283PSL5250
<b>Connection</b>	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
<b>kWe</b>	20	20	20	20	20
<b>AMPS</b>	83	69	60	30	24
<b>Temp Rise</b>	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°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 - Mechanical 3%</li> <li>▶ 12V Battery System &amp; Cables</li> <li>▶ Air Cleaner (Dry Single Stage)</li> <li>▶ Flexible Fuel Connector</li> <li>▶ EPA Certified Tier IT4</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 2018</li> <li>▶ NFPA110 Compliant</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>▶ 130°C Standby 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>▶ Single Source Supplier</li> <li>▶ Microprocessor Based Digital Control</li> <li>▶ Interface Connection Box</li> <li>▶ Control Panel Mounted in NEMA 12 Enclosure</li> <li>▶ Base - Formed Steel</li> <li>▶ Main Line Circuit Breaker Mounted &amp; Wired</li> <li>▶ Critical Grade Silencer Mounted</li> <li>▶ Battery Charger 12V 6 Amp</li> <li>▶ Jacket Water Heater -20°F 1000W 120V w/Isolation Valves</li> <li>▶ Vibration Isolation Mounts</li> <li>▶ Radiator Duct Flange (OPU Only)</li> <li>▶ 2YR / 2000HR Standby Warranty</li> <li>▶ Standard Colors - White / Gray</li> </ul> |
|---|--|--|

## Application Data

Engine			
Manufacturer:	Perkins	Displacement - Cu. In. (lit):	135 (2.22)
Model:	404D-22G	Bore - in. (cm) x Stroke - in. (cm):	3.31 (8.40) x 3.94 (10.0)
Type:	4-Cycle	Compression Ratio:	23.3:1
Aspiration:	Natural	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	32.6 (24.3)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	950 (510)
Gas Volume at Stack Temp: CFM (m³/min)	168 (4.76)
Maximum Allowable Exhaust Restriction: in. H <sub>2</sub> O (kPa)	40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
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)	15.5 (58.7)
Heat Rejection to Coolant: BTUM (kW)	1,269 (22.2)
Heat Radiated to Ambient: BTUM (kW)	379 (6.62)

Air Requirements	
Aspirating: CFM (m³/min)	61.5 (1.74)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	1,654 (46.8)
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)	1.82 (6.90)
At 75% of Power Rating: gal/hr (lit/hr)	1.27 (4.80)
At 50% of Power Rating: gal/hr (lit/hr)	0.92 (3.50)

Fluids Capacity	
Total Oil System: gal (lit)	2.80 (10.6)
Engine Jacket Water Capacity: gal (lit)	0.95 (3.60)
System Coolant Capacity: gal (lit)	1.85 (7.00)

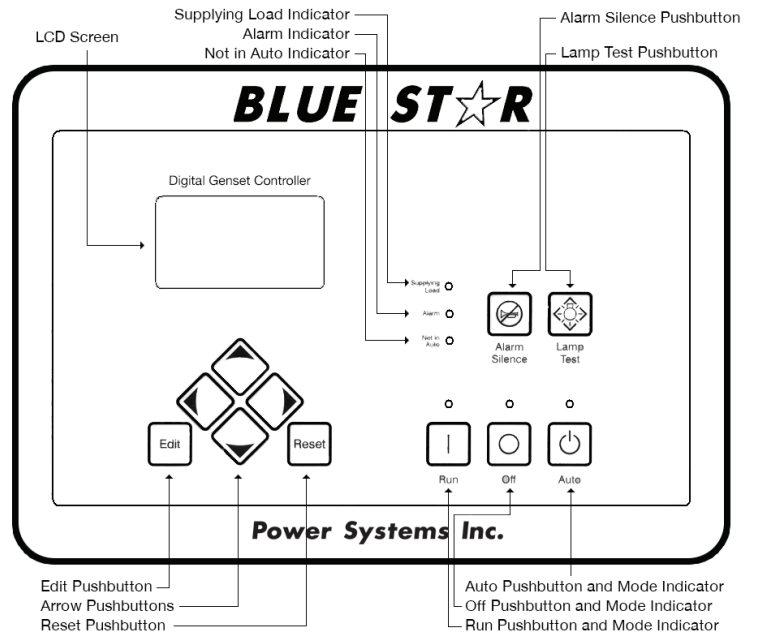
### Deration Factors

Rated Power Available up to 1000ft (305m) at ambient temperatures to 104°F (40°C).  
Consult factory for site conditions above these parameters.

## DGC-2020 Control Panel

### Standard Features

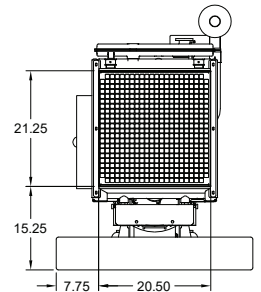
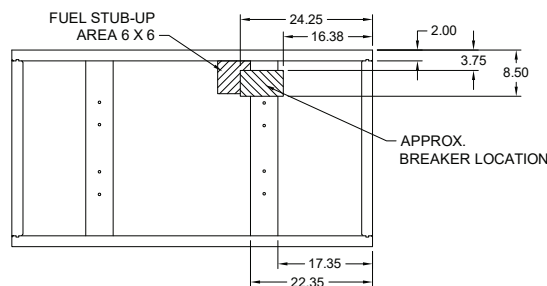
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus (J1939) ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ 15 Contact Outputs
- ▶ RS485 Communicator Interface
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



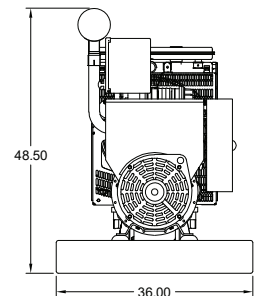
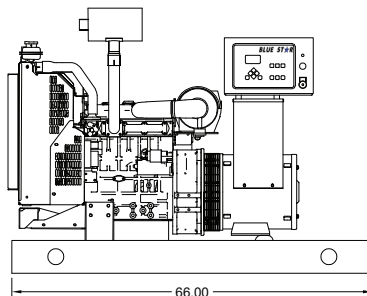
## Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
<b>OPU</b>	66 x 36 x 48.5 in	1,200
<b>Level 1</b>	80 x 36 x 54 in	1,525
<b>Level 2</b>	80 x 36 x 54 in	1,575
<b>Level 3</b>	104 x 36 x 48 in	1,650

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

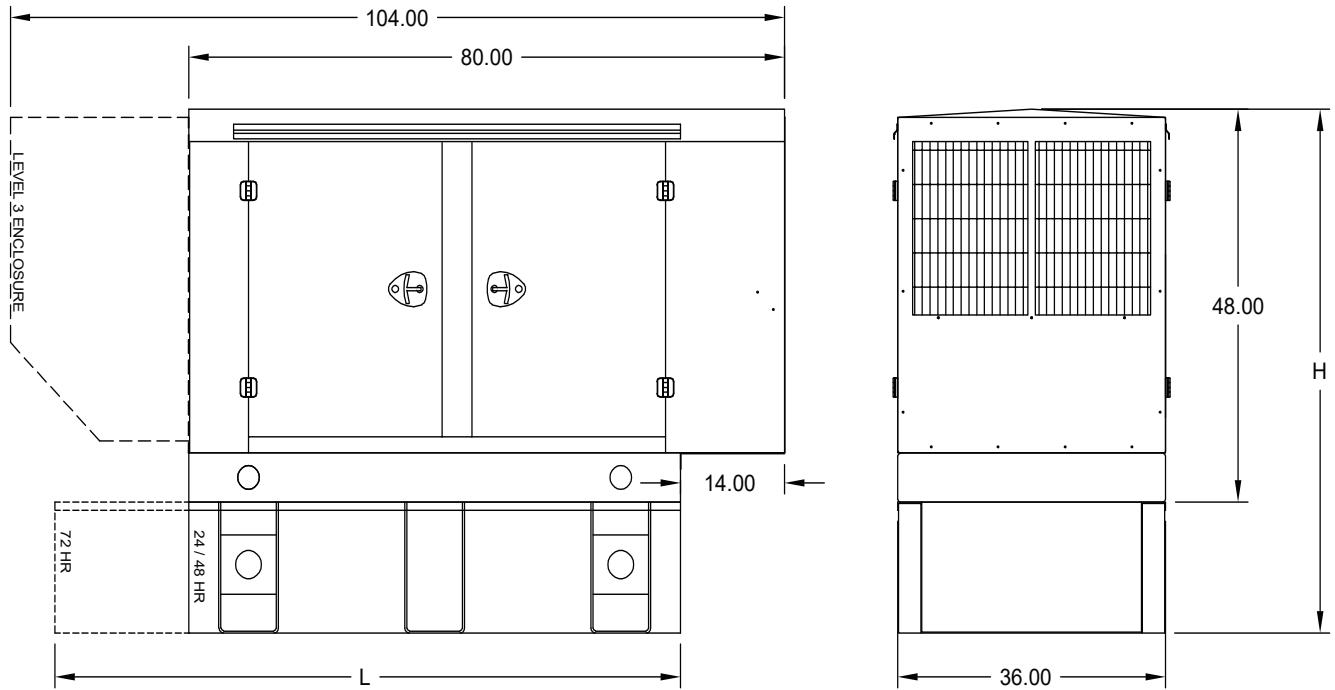


	No Load	Full Load
<b>OPU</b>	70 dBA	72 dBA
<b>Level 1</b>	64 dBA	66 dBA
<b>Level 2</b>	60 dBA	63 dBA
<b>Level 3</b>	58 dBA	60 dBA



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.

## Enclosures & Fuel Tanks



All enclosure models are 200 MPH wind rating certified in accordance with IBC2018 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 120 Gallon	48 Hour 240 Gallon	72 Hour 360 Gallon
<b>L</b>	66.00	66.00	84.00
<b>H</b>	64.00	78.00	80.00

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.

American Owned



American Made

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