

# BLUE STAR

## Power Systems Inc.

### Gaseous Product Line

208-600 Volt

GM40-02

60 Hz / 1800 RPM

40 kWe

Standby

### Ratings

|                 | 240V            | 208V         | 240V          | 480V         | 600V         |
|-----------------|-----------------|--------------|---------------|--------------|--------------|
| Phase           | 1               | 3            | 3             | 3            | 3            |
| PF              | 1               | 0.8          | 0.8           | 0.8          | 0.8          |
| Hz              | 60              | 60           | 60            | 60           | 60           |
| Generator Model | 361CSL1601      | 284PSL1742   | 284PSL1742    | 284PSL1742   | 284PSL5253   |
| Connection      | 12 LEAD ZIG-ZAG | 12 LEAD WYE  | 12 LEAD DELTA | 12 LEAD WYE  | 4 LEAD WYE   |
| kWe Nat (LP)    | 40 (40)         | 40 (40)      | 40 (40)       | 40 (40)      | 40 (40)      |
| AMPS Nat (LP)   | 167 (167)       | 139 (139)    | 120 (120)     | 60 (60)      | 48 (48)      |
| Temp Rise       | 130°C / 27°C    | 130°C / 27°C | 130°C / 27°C  | 130°C / 27°C | 130°C / 27°C |

### Standard Equipment

#### Engine

- ▶ Radiator Cooled Unit Mounted (50°C)
- ▶ Blower Fan & Fan Drive
- ▶ Starter & Alternator
- ▶ Oil Pump & Filter
- ▶ Oil Drain Extension w/Valve
- ▶ Governor - Electronic Isochronous
- ▶ 12V Battery System & Cables
- ▶ SAE Flywheel & Housing
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

#### Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ UL 2200 Certified
- ▶ cUL Certified
- ▶ Microprocessor Based Digital Control
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1000W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray



# Gaseous Product Line

40 kWe



## Application Data

### Engine

|                       |                |                                      |                        |
|-----------------------|----------------|--------------------------------------|------------------------|
| Manufacturer:         | General Motors | Displacement - Cu. In. (lit):        | 262 (4.30)             |
| Model:                | GM 4.3L EPA    | Bore - in. (cm) x Stroke - in. (cm): | 4.0 (10.2) x 3.6 (9.1) |
| Type:                 | 4-Cycle        | Compression Ratio:                   | 9.4 : 1                |
| Aspiration:           | Natural        | Rated RPM:                           | 1800                   |
| Cylinder Arrangement: | 6 Cylinder Vee | Max HP Stby (kWm):                   | 67 (50)                |

### Exhaust System

|                                                      |             |
|------------------------------------------------------|-------------|
| Gas Temp. (Stack): °F (°C)                           | 1,350 (732) |
| Gas Volume at Stack Temp: CFM (m³/min)               | 330 (9.3)   |
| Maximum Allowable Exhaust Restriction: in. H2O (kPa) | 40.8 (10.2) |

### Cooling System

|                                                                  |              |
|------------------------------------------------------------------|--------------|
| Ambient Capacity of Radiator: °F (°C)                            | 122 (50)     |
| Maximum Allowable Static Pressure on Rad. Exhaust: in. H2O (kPa) | 0.5 (0.12)   |
| Water Pump Flow Rate: Gpm (lit/min)                              | 36.6 (138.5) |
| Heat Rejection to Coolant: BTUM (kW)                             | 2,220 (38.9) |
| Heat Rejection to CAC: BTUM (kW)                                 | N/A          |
| Heat Radiated to Ambient: BTUM (kW)                              | 512 (8.96)   |

### Air Requirements

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Aspirating: CFM (m³/min)                                    | 136.5 (3.86)                                   |
| Air Flow Required for Rad. Cooled Unit: CFM (m³/min)        | 5,157 (146)                                    |
| Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min) | Consult Factory For Remote Cooled Applications |

### Fuel Consumption

|                                         | Natural Gas | LP          |
|-----------------------------------------|-------------|-------------|
| At 100% of Power Rating: ft³/hr (m³/hr) | 553 (15.7)  | 23.7 (6.71) |
| At 75% of Power Rating: ft³/hr (m³/hr)  | 446 (12.6)  | 198 (5.62)  |
| At 50% of Power Rating: ft³/hr (m³/hr)  | 342 (9.69)  | 152 (4.30)  |
| Fuel Inlet Size: NPT                    | 1.0"        | 1.0"        |

### Fluids Capacity

|                                         |            |
|-----------------------------------------|------------|
| Total Oil System: gal (lit)             | 1.3 (4.90) |
| Engine Jacket Water Capacity: gal (lit) | 1.9 (7.30) |
| System Coolant Capacity: gal (lit)      | 5.7 (21.6) |

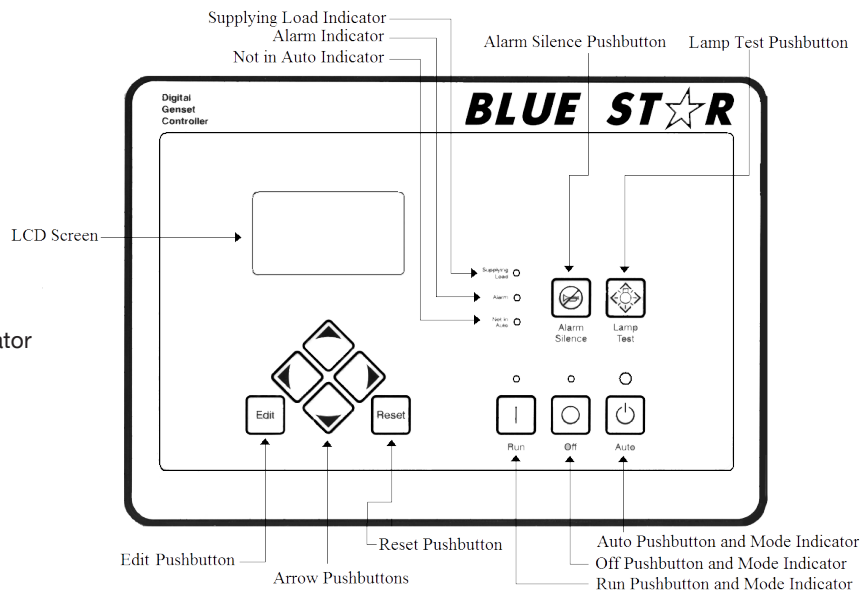
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1000ft Over 328ft

## DGC-2020 Control Panel

### Standard Features

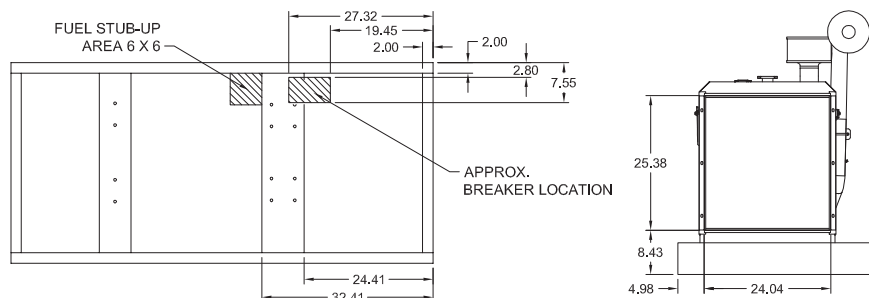
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



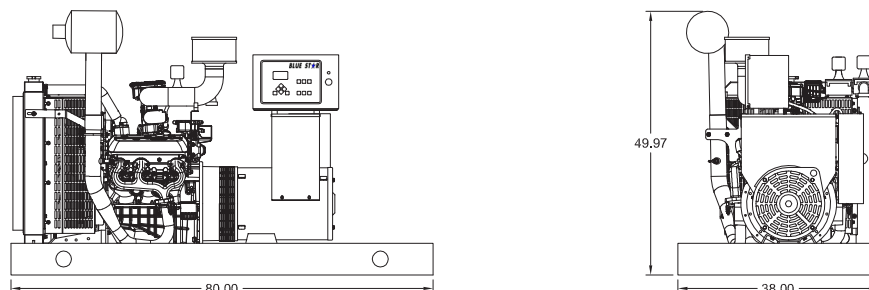
## Weights / Dimensions / Sound Data

|                | L x W x H        | Weight lbs |
|----------------|------------------|------------|
| <b>OPU</b>     | 80 x 38 x 46 in  | 1300       |
| <b>Level 1</b> | 80 x 38 x 60 in  | 1650       |
| <b>Level 2</b> | 80 x 38 x 76 in  | 1800       |
| <b>Level 3</b> | 110 x 38 x 68 in | 2000       |

Height measured from bottom of base to exhaust stack.



|                | No Load | Full Load |
|----------------|---------|-----------|
| <b>OPU</b>     | 77 dBA  | 78 dBA    |
| <b>Level 1</b> | 76 dBA  | 77 dBA    |
| <b>Level 2</b> | 71 dBA  | 74 dBA    |
| <b>Level 3</b> | 69 dBA  | 71 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.

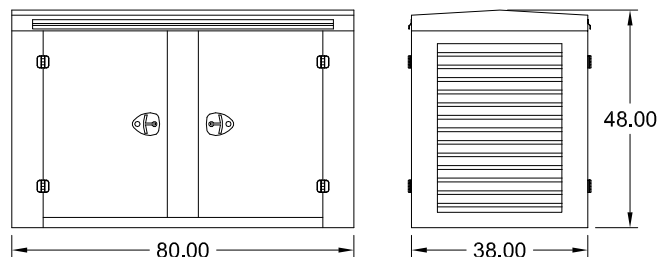
# Gaseous Product Line

40 kWe

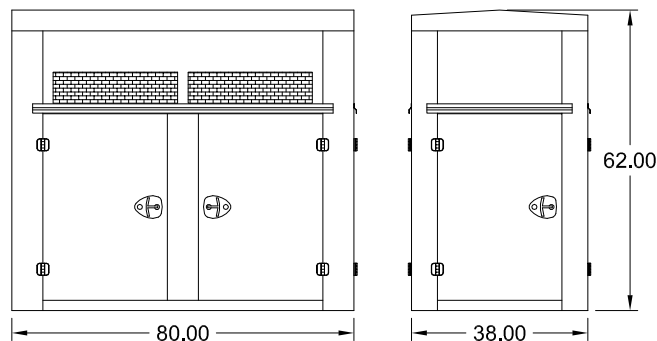
**BLUE STAR**  
Power Systems Inc.

## Optional Enclosures

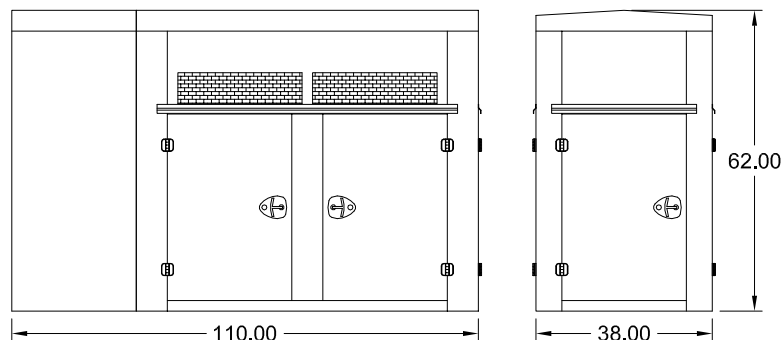
### Level 1 Enclosure (WPE)



### 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.

\*All specification sheet dimensions are represented in inches.

\*\*All enclosures 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.

Distributed By:



**Blue Star Power Systems, Inc.**

52146 Ember Rd, Lake Crystal, MN 56055

Phone + 1 507 726 2508

[www.bluestarps.com](http://www.bluestarps.com)