

BLUE STAR Power Systems

Diesel Product Line

208-600 Volt

PD100-01

60 Hz / 1800 RPM

100 kWe

Standby

Ratings

| | 240V | 208V | 240V | 480V | 600V |
|------------------------|--------------|--------------|---------------|--------------|--------------|
| Phase | 1 | 3 | 3 | 3 | 3 |
| PF | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 |
| Hz | 60 | 60 | 60 | 60 | 60 |
| Generator Model | UCI274F | UCI274D | UCI274D | UCI274C | UCI274D |
| Connection | 12 LEAD DD | 12 LEAD WYE | 12 LEAD DELTA | 12 LEAD WYE | 4 LEAD WYE |
| kWe | 100 | 100 | 100 | 100 | 100 |
| AMPS | 417 | 347 | 301 | 151 | 120 |
| Temp Rise | 125°C / 40°C | 125°C / 40°C | 125°C / 40°C | 125°C / 40°C | 125°C / 40°C |

Standard Equipment

Engine

- Radiator Cooled Unit Mounted (50°C)
- Radiator Duct Flange (OPU Only)
- Blower Fan & Fan Drive
- Starter & Alternator
- Oil Pump & Filter
- Oil Drain Extension w/Valve
- Governor - Electronic Isochronous
- 12V Battery System & Cables
- Air Cleaner (Dry Single Stage)
- Critical Grade Silencer Mounted
- Flexible Fuel Connector
- EPA Certified Tier 3

Generator

- Brushless Single Bearing
- Automatic Voltage Regulator
- ± 1% Voltage Regulation
- 4 Pole, Rotating Field
- 125°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

- Single Source Supplier
- UL 2200 & cUL Listed
- CSA Certified
- Seismic Certified to IBC 2021
- NFPA 110 / CSA C282 Compliant
- Microprocessor Based Digital Control Panel Mounted in NEMA 12 Enclosure
- Base - Formed Steel
- Main Line Circuit Breaker Mounted & Wired
- Battery Charger 12V 6 Amp
- Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- Vibration Isolation Mounts
- 2 Year / 2000 Hour Standby Warranty
- Standard Colors - White / Gray

Application Data

Engine

| | | | |
|-----------------------|--------------------|--------------------------------------|---------------------------|
| Manufacturer: | Perkins | Displacement - Cu. In. (lit): | 269 (4.40) |
| Model: | 1104D-E44TAG2 | Bore - in. (cm) x Stroke - in. (cm): | 4.13 (10.5) x 5.00 (12.7) |
| Type: | 4-Cycle | Compression Ratio: | 16.7:1 |
| Aspiration: | Turbo Charged, CAC | Rated RPM: | 1800 |
| Cylinder Arrangement: | 4 Cylinder Inline | Max HP Stby (kWm): | 161 (120) |

Exhaust System

Standby

| | |
|---|-------------|
| Gas Temp. (Stack): °F (°C) | 1,218 (659) |
| Gas Volume at Stack Temp: CFM (m³/min) | 714 (20.2) |
| Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa) | 60.0 (15.0) |

Cooling System

| | |
|---|--------------|
| Ambient Capacity of Radiator: °F (°C) | 122 (50.0) |
| Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa) | 0.50 (0.12) |
| Water Pump Flow Rate: GPM (lit/min) | 44.9 (170) |
| Heat Rejection to Coolant: BTUM (kW) | 3,137 (54.9) |
| Heat Rejection to CAC: BTUM (kW) | 1,034 (18.1) |
| Heat Radiated to Ambient: BTUM (kW) | 2,076 (36.3) |

Air Requirements

| | |
|---|--|
| Aspirating: CFM (m³/min) | 312 (8.82) |
| Air Flow Required for Rad. Cooled Unit: CFM (m³/min) | 7,703 (218) |
| 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) | 7.64 (28.9) |
| At 75% of Power Rating: gal/hr (lit/hr) | 6.24 (23.6) |
| At 50% of Power Rating: gal/hr (lit/hr) | 4.59 (17.4) |

Fluids Capacity

| | |
|---|-------------|
| Total Oil System: gal (lit) | 2.22 (8.40) |
| Engine Jacket Water Capacity: gal (lit) | 1.85 (7.00) |
| System Coolant Capacity: gal (lit) | 4.49 (17.0) |

Deration Factors: Rated Power is available up to 3281ft (1000m) at ambient temperatures to 122°F (50°C). Consult factory for site conditions above these parameters.

DCP7310 Control Panel

Standard Features

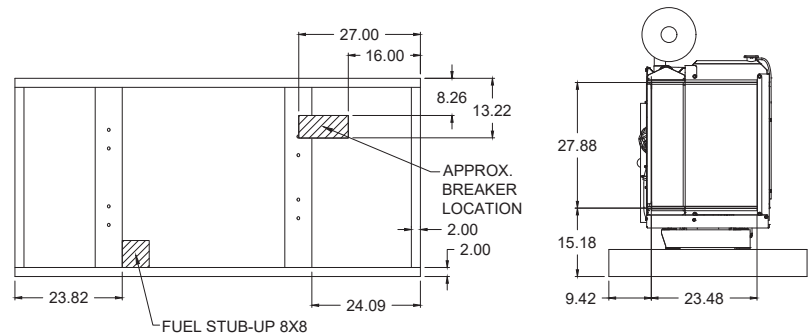
- Digital Metering
- Engine Parameters
- Generator Protection Functions
- Engine Protection
- CAN Bus (J1939) ECU Communications
- Windows-Based Software
- Multilingual Capability
- Remote Communications to DSE2548 Remote Annunciator
- 8 Programmable Contact Inputs
- 10 Contact Outputs
- RS485 Communicator Interface
- cULus Listed, CE Approved
- Event Recording
- IP 65 rating (with supplied gasket) offers increased resistance to water ingress
- NFPA 110 Level 1 Compatible



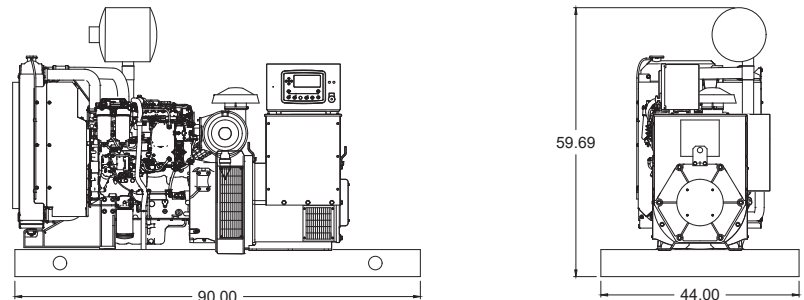
Weights / Dimensions / Sound Data

| | L x W x H | Weight lbs |
|----------------|------------------|------------|
| OPU | 90 x 44 x 60 in | 2,500 |
| Level 1 | 102 x 44 x 74 in | 3,125 |
| Level 2 | 102 x 44 x 74 in | 3,175 |
| Level 3 | 132 x 44 x 66 in | 3,325 |

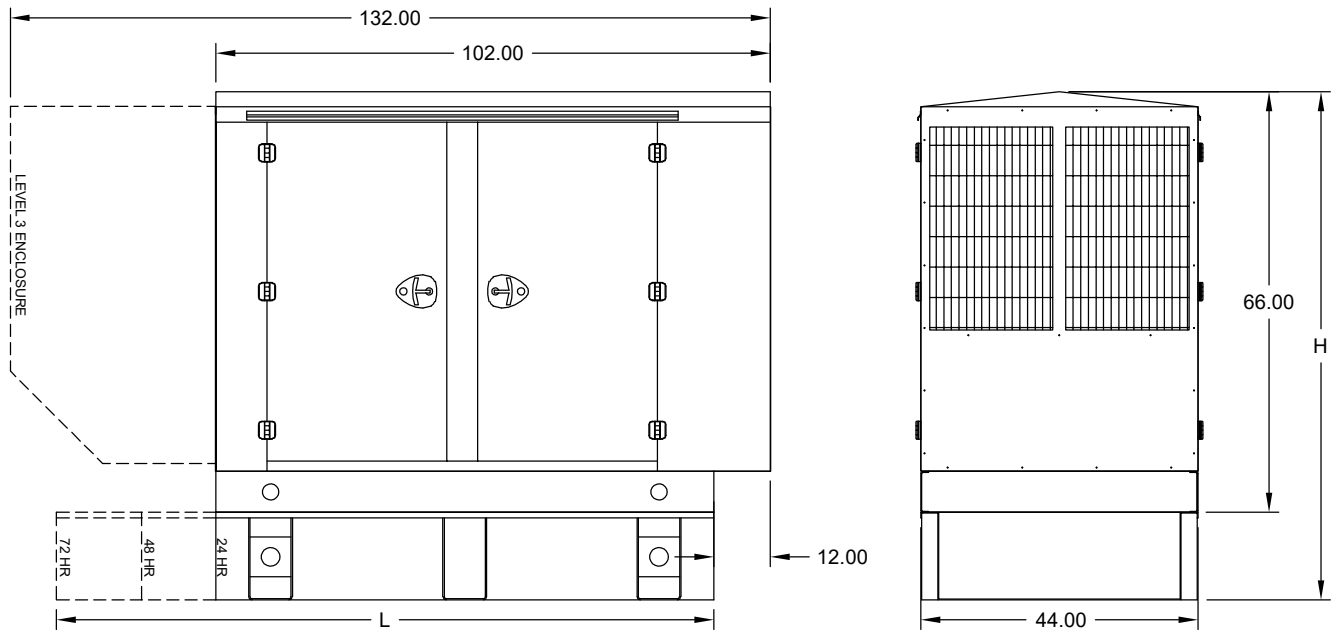
Please allow 6-12 inches for height of exhaust stack.



| | No Load | Full Load |
|----------------|---------|-----------|
| OPU | 78 dBA | 82 dBA |
| Level 1 | 75 dBA | 78 dBA |
| Level 2 | 72 dBA | 74 dBA |
| Level 3 | 66 dBA | 68 dBA |



Enclosures & Fuel Tanks



- All enclosure models are 200 MPH wind rating certified in accordance with IBC2021 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 250 Gallon | 48 Hour 500 Gallon | 72 Hour 750 Gallon |
|----------|-----------------------|-----------------------|-----------------------|
| L | 90.00 | 120.00 | 174.00 |
| H | 94.00 | 102.00 | 102.00 |

Notes

- All specification sheet dimensions are represented in inches.
- All drawings based on standard 480 volt standby generator. Lengths may vary with other voltages. All drawings and dimensions subject to change without notice.
- All enclosures and fuel tanks are based on the standard unit configuration. Any requested deviation can change dimensions.
- Sound data is measured at 23 feet (7 meters) in accordance with ISO 8528-10.
- All materials and specifications subject to change without notice.

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