

ENGINEERING GUIDEBOOK



POWERDAK
POWER PRODUCTS

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Disclaimer

The information and specifications found in this document are current as of its publication date (January 05, 2016). Information in this document is comprised of product specification sheets, submittal documents and warranty documents. Powerdak is not liable and makes no representations whatsoever about any information that is disseminated through any third party website or publication in relation to this document.

Information in this document is subject to change without notice due to product advancements and changes which may have occurred since the document's publication. The manufacturer reserves the right to make changes at any time, without notice, to color, materials, specifications and models. Information that is published in this document may contain references or cross references to Powerdak Power Products , services etc. that are not announced.

Product Line Overview

Offering a comprehensive portfolio of products to serve all major markets within the power generation industry allows for us to be a single source supplier. Our portfolio of products and expertise are expansive and continually growing. We strive for continuous improvement of our products; this is the basis for a culture in which quality and performance are consistently demanded and enhanced. Our products and turn-key solutions are complete, from full engineering design and support through completion of project.

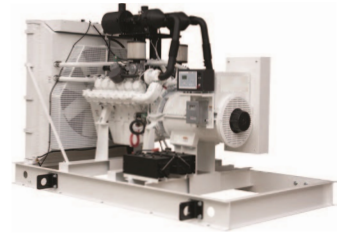
Diesel 30 - 2000 kWe

Powerdak Power Products offers diesel generator sets powered by a wide variety of engines to suit our customers' most unique requirements. Partnering with world-class leaders such as John Deere, Volvo, MTU and Mitsubishi, we offer diesel products in standby, prime, TPEM flex mobile, and Final Tier 4 to meet and exceed EPA standards and regulations. Available with a full line of enclosures, fuel tanks, and optional accessories.



Gaseous 25 - 425 kWe

Powerdak Power Products offers gaseous generator sets powered by leading global gaseous engine manufacturers, General Motors and Power Solutions International. From prime power to back-up emergency power, our experience in gas makes ease of a wide variety of applications in a multitude of environments. All products meet or exceed EPA standards and regulations. Available with a full line of enclosures and optional accessories.



Transfer Switches 30 - 4000 Amps

Powerdak Power Products offers Emerson Network Power ASCO Transfer Switches. From light commercial to the critical power needs of health care, financial, and data centers, ASCO Transfer Switches provide a perfect complement of quality and reliability to our products. ASCO communicative products allow for the monitoring and control of power in our generator sets.



Power Take Off 30 - 150 kWe

Powerdak Power Products Power Take Off product line has one of the most complete offerings available in the agriculture industry. Available in single phase and in three phase configurations. Our PTO units offer the ultimate in economy, portability, and flexibility.



Parts

Powerdak Power Products offers a full line of parts and accessories to meet the needs and maintenance of our unit long after the sale. We also sell products to service and maintain other manufacturers power systems and products.



Product Line Overview



Generator Products

Fuel	Application	kWe Range	Hz
LP Gas	Emergency & Prime Power Stationary	25 - 300	60
Natural Gas	Emergency & Prime Power Stationary	25 - 425	60
Diesel	Emergency & Prime Power Stationary	30 - 2000	60
Diesel	TPEM Mobile	30 - 500*	60
Diesel	Tier 4 Final	100 - 600*	60
PTO	Power Take-Off	30 - 150	60

All Ratings Configured in Standby. *Consult Individual Specification Sheet for Prime Rating*

Power Formulas

To Find	Known Values	Formula
kWe (3 Phase)	Volts, Amps, Power Factor	$\frac{V \times A \times 1.73 \times 0.8}{1000}$ or $kVA \times PF$
kVA (3 Phase)	Volts, Amps	$\frac{V \times A \times 1.73}{1000}$ or $\frac{kWe}{PF}$
Amps (3 Phase)	kWe, Volts, Power Factor (PF)	$\frac{kWe \times 1000}{V \times 1.73 \times PF}$
Amps (3 Phase)	kVA, Volts	$\frac{kVA \times 1000}{V \times 1.73}$
kWe (1 Phase)	Amps, Volts	$\frac{V \times A}{1000}$

Available Voltages

Standard	Optional
240 / 120 Volt - 1 phase, 12 wire (Zig Zag) (Double Delta)	480 / 240 Volt - 1 phase (High Zig Zag)
240 / 120 Volt - 3 phase (High Delta)	416 / 240 Volt - 3 phase (WYE)
600 / 347 Volt - 3 phase (WYE)	400 / 230 Volt - 3 phase (WYE)
208 / 120 Volt - 3 phase (PAR WYE)	2400 / 1386 Volt - 3 phase (WYE)
480 / 277 Volt - 3 phase (SER WYE)	3300 / 1905 Volt - 3 phase (WYE)
	4160 / 2400 Volt - 3 phase (WYE)
	380 / 220 Volt - 3 phase (WYE)
	440 / 254 Volt - 3 phase (WYE)

Automatic Transfer Switch Products

Type	Amp Range	Poles
ASCO 185 Series	100 - 400	2
ASCO 300G Series	30 - 3000	2, 3, 4
ASCO 4000 Series	30 - 4000	2, 3, 4
ASCO 7000 Series	70 - 4000	2, 3, 4

Available in both Non-Service & Service Entrance Rated.

Amperage Chart

kWe	kVA	3 Phase @ 0.8 PF				1 Phase @ 1.0 PF
		480V	240V	208V	600V	240V
25	31.25	38	75	87	30	105
30	37.5	45	90	104	36	125
40	50	60	120	139	48	167
50	62.5	75	150	173	60	209
60	75	90	180	208	72	250
80	100	120	241	278	96	333
100	125	150	301	347	120	417
125	156.25	188	376	434	150	625
150	187.5	226	451	520	180	834
200	250	301	601	694	241	959
250	312.5	376	752	867	301	1146
275	343.75	413	827	954	331	1250
300	375	451	902	1041	361	1459
350	437.5	526	1052	1214	421	1667
400	500	601	1203	1388	481	-
450	562.5	677	1353	1561	541	-
500	625	752	1504	1735	601	-
550	687.5	827	1654	1908	662	-
600	750	902	1804	2082	722	-
650	812.5	977	1955	2255	782	-
750	937.5	1128	2255	2602	902	-
800	1000	1203	2776	2406	963	-
1000	1250	1504	-	-	1203	-
1250	1562.5	1879	-	-	1504	-
1500	1875	2255	-	-	1804	-
1600	2000	2406	-	-	1925	-
1750	2187.5	2631	-	-	2105	-
2000	2500	3007	-	-	2406	-
2500	3125	3759	-	-	3007	-

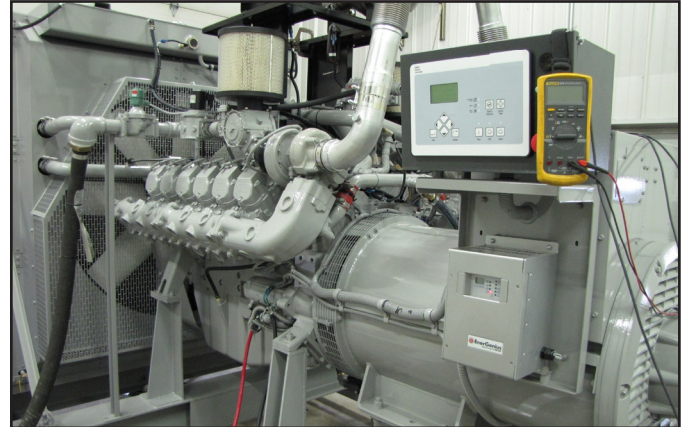
Subject to Change Without Notice.

Power Systems Training & Advanced Power Systems Training

Powerdak Power Products offers Power Systems Training and Advanced Power Systems Training. These comprehensive factory courses include training on basic sales and overall knowledge of Powerdak Power Products products. Additional training items covered are Installation, maintenance, troubleshooting techniques, and general industry regulation and product updates.

These courses are designed for anyone involved in the onsite power generation industry. The goal of these courses is to provide Powerdak Power Products distributors and customers a more competitive sales and service advantage. By increasing product and service knowledge you will have an edge over your competition. In addition to our distributors we also encourage Engineering firms, spec writers, facility managers, and those new to the industry to attend these informative training courses.

Powerdak Power Products can upon request offer customized training solutions to meet your unique needs. If you require custom training please contact our training department at + 1 605 341 6160.



Training, Parts and Services

POWERDAK

POWER PRODUCTS

Our ability to support your parts needs goes much further than providing parts to service and maintain a Powerdak Power generator set. Our complete line stretches across many industries in both the agriculture and industrial marketplace. We can also provide you parts for most brands of generator set manufacturers in the field. From electrical components to filter replacements, we have you covered. Offering a comprehensive portfolio of products ensures we can cover all the markets you serve. Below is a sampling of some of our genuine OEM replacement part offerings.

Engines

John Deere
PSI Engines
General Motors
Mitsubishi
Cummins
MTU
Detroit Diesel (Parts)
Hercules (Parts)

Generators

Marathon
Stamford Newage
Kato Engineering
Leroy Somer
Coliseum Electric

Transfer Switches

ASCO
RONK
Zenith

Filters

Vortox
Donaldson
Baldwin

Battery Chargers

Interactor
Charles Industries
Minnetech
SENS
Guest

Fans

Breeza Fans USA
Multi-Wing Crowley

Heaters

Hotstart
Zerostart

Electrical Components

Kato Cable
Tyco Electronics
Square D: Breakers
GE: Breakers

Intake and Exhaust

Phillips Temro
Cowl
EM Silencers
Mission Rubber
Vent Products
Engineered Flex

Miscellaneous

Custom-made Control Panel
Drop-over Enclosures
ASCO: Valves
Basler: Controllers
Caldyn: Seismic Mounts
Durst: Gearboxes
Parker Fittings
Zierke Built Fuel Tanks
Diesel Radiator
DynaGen
CAB Fuel Tanks

Contact us at + 1 605 341 6160 or email: dave@genproenergy.com



Prototype Test Certification (PTC)



Powerdak Power Products has been producing high-quality engine generator sets for over 10 years. We understand the importance of reliable cost-effective products, and have developed industry-leading test procedures to ensure we exceed this criteria. Our PTC testing program confirms that our customers will receive products of the highest quality. Before a design goes into production, it is subjected to exhaustive prototype testing to evaluate every aspect of construction and performance. Our standard ensures that Powerdak Power Products gen sets operate properly and provide years of reliable service.



Prototype Test Procedures

Rated Load (NFPA 110)

Powerdak Power Products certifies that all engine generator set models will produce the name-plate rated load in all conditions within the design tolerance of the gen set.

Extended Run Testing

Powerdak Power Products certifies that all new gen set models have undergone transient response analysis per ISO 8528-5. Engine/alternator must have the ability to accept application of the full load in a single step and recover fully to the rated voltage and frequency.

Maximum Motor Starting

Motor starting or instantaneous voltage dip curves are developed with an inductive load bank at 0.3 power factor. Individual loads are applied to the alternator and voltage dip is determined from a high-speed graph recorder. The load is incrementally increased until the voltage dip exceeds 35%

Endurance Test

The unit is tested to meet or exceed endurance requirements of MIL-STD-705C. At the end of endurance testing, key components are inspected and evaluated to ensure that any wear is within acceptable levels.

Mechanical Soundness

The unit must be structurally sound and not have any resonant vibration in either rotating components or structural parts.

Engine Cooling System

Powerdak Power Products certifies that all gen set models will cool sufficiently within the ambient design conditions per each model. Verification of the engine cooling system is performed by operating the gen set with a sound attenuated enclosure at full rated load in a 110°F ambient.

Anticipatory Alarms & Shutdowns

Powerdak Power Products certifies that the pre-alarms and alarms function appropriately to protect the engine generator set from any unforeseen unnecessary failures.

Torsional Analysis

Powerdak Power Products certifies that all engine generator set models have undergone torsional stress analysis. While torsional vibration calculations are performed with the participation of both the engine manufacturer and alternator manufacturer, all new products undergo prototype fatigue testing to confirm compatibility. A spectrum analysis was conducted over the speed range of 1750 to 1850 RPM.

Vibrational Analysis (ISO 8528-9)

Powerdak Power Products certifies that all new engine gen set models have undergone vibration analysis to ensure that each engine generator coupling is balanced and that there is no destructive resonant vibration.

Test Codes & Standards

Powerdak Power Products engine generator sets are compliant with many different codes and standards. Powerdak Power Products philosophy and performance are regularly reviewed to ensure continuity with these codes and standards: UL 2200, CSA, EPA, NFPA 99—Health Care Facilities, NFPA 70—National Electrical Code, NFPA 110—Standard for Emergency and Standby Power Systems, Department of Labor and Industry, ISO 8528-5—Generating Sets, and ISO 8528-9 Measurement and Evaluation of Mechanical Vibrations. In addition: ISO 8528-10 Measurement of airborne noise by the enveloping surface method, IEEE 115--Test Procedures for Synchronous Machines. NEMA MG 1--Motors and Generators, MIL-STD-705C

MIL-STD-705C Methods

Method	Description
--------	-------------

301.1c	Insulation Resistance Test*
302.1b	High Potential Test*
401.1b	Winding Resistance Test
503.1c	Start and Stop Test
505.2b	Over Speed Protective Device Test
507.1d	Phase Sequence Test (Rotation)
508.1d	Phase Balance Test (Voltage)
510.1d	Voltage Adjust Range Test (as applicable)

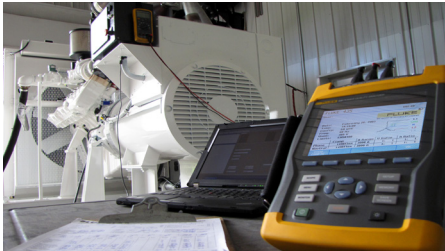
Method	Description
--------	-------------

511.1d	Regulator Range Test
511.2c	Frequency Adjustment Range Test (as applicable)
513.2a	Indicating Instrument Test (Electrical)
515.1b	Low Oil Pressure Protective Device Test
515.2b	Over Temperature Protective Device Test
640.1d	Maximum Power Test

*Performed by Alternator OEM

Factory Load Test

Powerdak Power Products factory testing is performed with the same extreme diligence and attention to detail that is given to the prototype testing process. Every engine generator set receives a complete factory load test that certifies and ensures that the set will function in accordance to every specific application. Test metering will have an accuracy of 1.3% or better. This metering equipment is calibrated annually, and is directly traceable to the National Institution of Standards & Technology (NIST). All test procedures are conducted in accordance with MIL-STD-705C where applicable.



Factory Acceptance Testing Procedures

- ▶ Insulation Resistance Test (301.1c)*
- ▶ High Potential Test (302.1b)*
- ▶ Alternator Over Speed
- ▶ Complete Engine Inspection
- ▶ Generator Inspection
 - Winding Resistance Test (401.1b)
 - Exciter Field Stator
 - Main Field Stator
- ▶ Mounting & Coupling Inspection
- ▶ Engine Fuel System Inspection
- ▶ Engine Lube Oil System Inspection
- ▶ Engine Cooling System Inspection
- ▶ DC Charging System Inspection
- ▶ Main Output Circuit Breaker Inspection
- ▶ Anticipatory Alarms and Shutdowns Test (505.2b, 515.1b, 515.2b)
- ▶ Optional Equipment Inspection (513.2a)
- ▶ Load Test (640.1d)
 - Regulator Range Test (511.1d)
 - No Load
 - MAX Load @ 1.0 P.F. (640.2d)
 - MAX Load @ 0.8 P.F.
 - Block Loads @ 0-25%, 0-50%, 0-75%, 0-100% of rated load tests (640.2d)
- ▶ 1.0 Power Factor Max Load
- ▶ 1.0 Power Factor Max Block Load Pickup
- ▶ Full Name Plate Rated Load.
- ▶ Standard Readings Taken Every 5 Minutes.

* Performed By Alternator OEM

Standard Reading Recorded During Load Test Inspection

Run Time	AC Frequency
AC Voltage	Exciter Field Voltage
AC Amperage	Exciter Field Current
kVA	Lube Oil Pressure
kWe	Engine Coolant Temp.
Power Factor	Ambient Temp.

Factory Load Test Summary

All engine generator sets are visually inspected prior to testing. This includes a complete visual/mechanical inspection to ensure that all fasteners and electrical connections are secure, that all rotating components are free of obstruction/interference and are properly guarded.

Once the unit is started, the AC voltage and frequency are set to rated values. The unit is operated at no load while all of the safety shutdowns and warnings are verified and tested. The unit is then restarted and run at 25%, 50% and 100% of rated load and power factor until the engine temperature has stabilized for at least ten minutes. During the rated and maximum load pickup portion of the test, the voltage regulator gain, stability and under frequency compensation adjustments are set for optimal performance. All test procedures are performed in accordance with MIL-STD-705C where applicable.

Throughout these test procedures the AC parameters, engine oil pressure, engine temperature, exhaust temperature, timing and air/fuel ratio (gaseous units) are monitored and recorded. The unit and all installed accessory equipment are continually examined for oil and coolant leaks, excessive vibration and foreign noises.

Once all test procedures are performed and recorded, the unit is allowed a cool down period prior to being shut down. The unit is once again inspected for leaks, loose fasteners and connections prior to leaving the test facility.

The unit receives another complete final inspection process prior to packaging and shipment.

Note: All units are tested after the painting process is complete to prevent unforeseen difficulties resulting from the painting process being performed after testing.

Witnessed Factory Load Test

Standard witnessed factory load testing must be scheduled and approved at least four weeks prior to the engine generator sets scheduled shipping date. Any requests for witnessed factory load testing after this four week period may incur additional charges.

Witnessed Extended Run Factory Load Test

Witnessed extended run factory load testing must be scheduled and approved at the time of order placement. Any requests for witnessed extended run factory load testing after this time could be denied and would if approved incur additional cost.

All units are built and tested to cUL, CSA and NFPA 110 standards.



June 24, 2014



RE: Powerdak Power Products Factory Testing Procedures

Having witnessed factory load testing within their facility, my observations indicate that Powerdak Power Products conducts generator sets testing at a conventional standard of care for the industry. Further, Powerdak Power Products factory testing procedures meet or exceed industry standards.

Visual inspections are performed before and after generator load testing. General alarms and pre-alarms are tested to ensure they meet NFPA 110 Standards. Block load testing is executed; the generator output is monitored and recorded to confirm the generator can deliver the electrical load per its listing. A summary of their Factory Load Test program is also attached for reference.

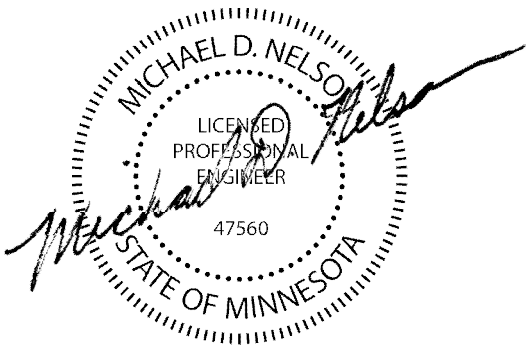
In conclusion, based on the factory load testing that I have observed at their facility, I do not have concerns about the testing procedures implemented by Powerdak Power Products.

Respectfully Submitted,

Michael D. Nelson, PE
Electrical Engineer
Professional License #47560

MDN/saw

Attachment: Factory Load Test Program Sheet



115 East Hickory Street, Suite 300 + Mankato, MN 56001

info@is-grp.com + www.is-grp.com

P: 507.387.6651

I+S GROUP

Standard Factory Load Test



CUSTOMER:		JOB:	
UNIT MODEL:	TESTED BY:	DATE:	

VISUAL INSPECTION CHECK LIST:

MTG & CPLG <input type="checkbox"/>	EXH SYSTEM <input type="checkbox"/>	cULus (UL 2200) Required <input type="checkbox"/>
FUEL SYSTEM <input type="checkbox"/>	DRAIN PLUGS <input type="checkbox"/>	Hipot Tested <input type="checkbox"/>
LUBE SYSTEM <input type="checkbox"/>	12VDC <input type="checkbox"/> 24VDC <input type="checkbox"/>	Over Current Set _____ Amps <input type="checkbox"/>
COOLING SYSTEM <input type="checkbox"/>	PANEL S/N:	Generator UL Listed <input type="checkbox"/>

ENGINE:	ENGINE CONTROL:	GENERATOR:
MODEL:	HWT <input type="checkbox"/> LOP <input type="checkbox"/>	MODEL: LEADS:
S/N:	BATT.VOLTS: Off _____ Run _____	S/N:
FUEL:	O'CRANK: CYCLIC <input type="checkbox"/> 45 SEC <input type="checkbox"/>	REGULATOR:
GOV MODEL:	O'SPEED: 71 CPS <input type="checkbox"/> OTHER _____	TEMP RATING: RISE: _____ AMB _____

RATED:

KW	KVA	P.F.	RPM	PHASE	WIRE	HZ	VOLTS	AMPS

	ACV	ACI	KVA	KW	P.F.	HZ	EFV	EFI	RUN TIME	OIL PSI	COOLANT Temp° F	AMBIENT Temp° F
NO LOAD		N/A	N/A	N/A	N/A							
LOW		N/A	N/A	N/A	N/A							
HIGH		N/A	N/A	N/A	N/A							
SET		N/A	N/A	N/A	N/A							
25% LOAD												
50% LOAD												
75% LOAD												
100% LOAD												
MAX AT 1.0 PF												
MAX AT .8 PF												
NO LOAD												
MAX PICKUP												
END OF TEST												

REMARKS:

PHASE BALANCE: RATED LOAD

ACCESSORIES: CHECK WHEN TESTED

PH 1-2 2-3 3-1 FINAL VISUAL INSPECTION <input type="checkbox"/> TESTED BY: _____	PH	VOLTS		AMPS		REMOTE START	<input type="checkbox"/>	REMOTE ALARM PANEL	<input type="checkbox"/>
	1-2	1-N	L1	GROUND STUD	<input type="checkbox"/>	EMERGENCY STOP SW	<input type="checkbox"/>		
	2-3	2-N	L2	WATER HEATER	<input type="checkbox"/>	TAP CHANGING SWITCH	<input type="checkbox"/>		
	3-1	3-N	L3	BATTERY CHARGER	<input type="checkbox"/>	RECEPTACLES	<input type="checkbox"/>		
				PRE-ALARMS	<input type="checkbox"/>	RUN/IDLE SWITCH	<input type="checkbox"/>		
				LOW FUEL LEVEL	<input type="checkbox"/>	PANEL DISCONNECT SW.	<input type="checkbox"/>		
				FUEL LEAK SW TEST	<input type="checkbox"/>	FAN BLADES	<input type="checkbox"/>		
					<input type="checkbox"/>		<input type="checkbox"/>		
				BREAKER LINES LABELED	<input type="checkbox"/>	GND LABEL IN BKR ENCL	<input type="checkbox"/>		
					<input type="checkbox"/>		<input type="checkbox"/>		

SUBMITTAL DOCUMENTS

DGC-2020 Gen-Set Controller



Powerdak Power Products Digital Gen-Set Controller (DGC-2020) is a highly advanced integrated gen-set control system. The DGC-2020 is perfectly focused, combining rugged construction and microprocessor technology to offer a product that will hold up to almost any environment and flexible enough to meet your application's needs. This device provides gen-set control, transfer switch control, metering, protection and programmable logic in a simple, easy to use, reliable, rugged, and cost effective package.

Highlights

- ▶ UL Recognized, CSA & CE approved
- ▶ Remote communication options
- ▶ Microprocessor based
- ▶ Rugged encapsulated construction
- ▶ Complete system metering



Standard Features

- ▶ Generator Metering
- ▶ Engine Metering
- ▶ Gen-set Control
- ▶ Engine Protection:
 - Oil Pressure
 - Engine Temperature
 - Overspeed
 - Overcrank
- ▶ BESTCOMS Plus:
 - Programming and Setup Software
 - Intuitive and Powerful
 - Remote Control and Monitoring
 - Programmable Logic
 - USB Communications
- ▶ SAE J1939 Engine ECU Communications (Where Applicable)
- ▶ Extremely Rugged, Fully Encapsulated Design
- ▶ 16 Programmable Inputs
- ▶ 7 Contact Outputs: (3) 30ADC and (4) Programmable 2ADC Rated Contacts
- ▶ Wide Ambient Temperature Range
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ HALT (Highly Accelerated Life Test) Tested
- ▶ IP54 Front Panel Rating with Integrated Gasket
- ▶ NFPA110 Level One Compliant
- ▶ Real Time Clock with Battery Backup and Event Log
- ▶ Emergency Stop Pushbutton
- ▶ Current Sensing: 5A CT inputs
- ▶ Generator Frequency: 50/60 Hz
- ▶ LCD Display Heater to -40°F
- ▶ Event Recording (up to 99 occurrences)

Standard Gen-Set Monitoring

- ▶ Generator parameters: voltage, current, frequency, real power (Watts), apparent power (VA), and power factor
- ▶ Engine parameters: oil pressure, coolant temperature, RPM, battery voltage, fuel level, engine runtime, and various J1939 supported parameters where applicable

Standard Engine Control Functions

Cranking Control

- ▶ Cyclic or Continuous (Fully Programmable)

Successful Start Counter

- ▶ Counts and Records Successful Engine Starts

Timers

- ▶ Engine Cooldown Timer (Specify)
- ▶ Engine Maintenance Interval Timer (Specify)
- ▶ Pre-Alarm Time Delays for Weak/Low Battery Voltage
- ▶ Alarm Time Delay for Overspeed

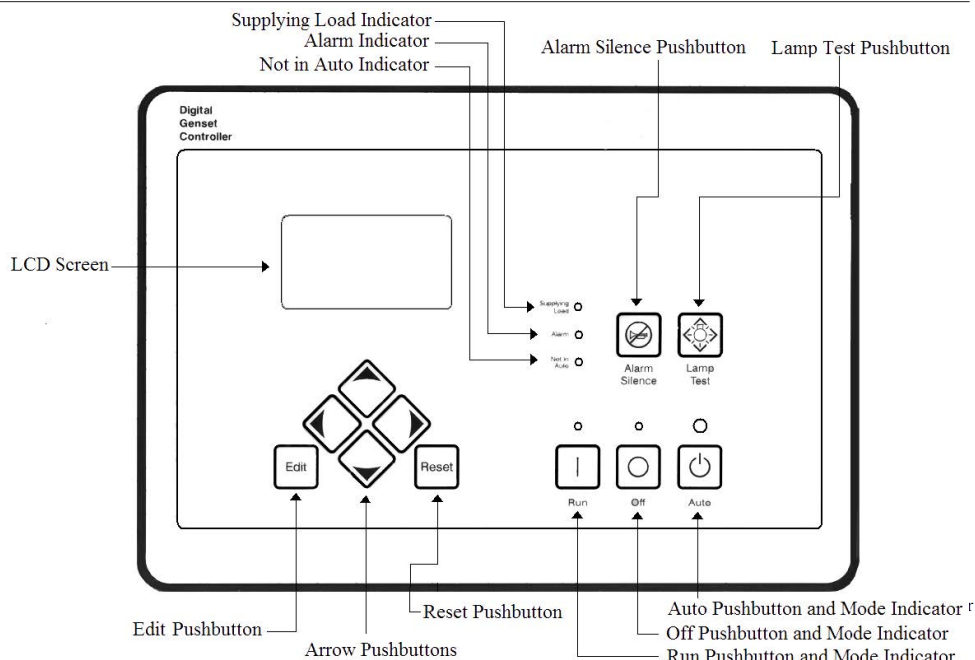
- ▶ Alarm Time Delay for Sender Failure
- ▶ Arming Time Delays After Crank Disconnect:
 - Low Oil Pressure
 - High Coolant Temperature
 - Pre-Crank Delay
- ▶ Continuous/Cyclic Cranking Timing Sequence

DGC-2020 Gen-Set Controller



Front Panel LED Indicators:

- ▶ **Run: Green** – Indicates controller is in the RUN mode
- ▶ **Off: Red** – Indicates controller is in the OFF mode
- ▶ **Auto: Green** – Indicates unit is in the AUTO mode
- ▶ **Not in Auto: Red** – Indicates DGC-2020 is not in AUTO mode
- ▶ **Supplying Load: Green** – Indicates system is supplying current to a connected load
- ▶ **Alarm: Red** – Indicates an alarm situation by continuous illumination
A pre-alarm will flash



Standard Engine Protection Functions

Pre-Alarms (Warnings)

- ▶ Low Oil Pressure
- ▶ High Coolant Temperature
- ▶ Low Coolant Temperature
- ▶ Battery Overcharge (High Voltage)
- ▶ Weak Battery (Low Voltage)

- ▶ Battery Charger Failure
- ▶ Engine Sender Unit Failure
- ▶ Engine kWe Overload
- ▶ Maintenance Interval Timer
- ▶ Low Fuel Level
- ▶ Fuel Leak Detect

Alarms (Shutdowns)

- ▶ Low Oil Pressure
- ▶ High Coolant Temperature
- ▶ Overspeed
- ▶ Overcrank
- ▶ Fuel Sender Failure

▶ All alarms and pre-alarms can be configured via the BESTCOMSPlus PC software or the front panel.

Optional Features

- ▶ Generator Protection
 - 27(2), 32, 40Q, 51(2), 59(2), 81O, 81U
- ▶ Enhanced Generator Protection - 51 and 47
- ▶ Selection of Integrating Reset or Instantaneous Reset Characteristics for Overcurrent Protection
- ▶ Remote Communication to RDP-110 / NFPA-110 Compliant Remote Annunciator
- ▶ Additional (8) Programmable 2ADC Contacts
- ▶ Remote Dial-out and Dial-in Capability with Modem

- ▶ Modbus Communications with RS-485
- ▶ Expandable I/O Capability via J1939 CANBUS
- ▶ Automatic Transfer Switch Control
- ▶ Remote Emergency Stop
- ▶ Multilingual Capability
- ▶ High Fuel Level Pre-Alarm
- ▶ Critical Low Fuel Level Alarm
- ▶ Analog Meters

Generator Protection

- | | | | | |
|---------------------|------------------------|------------------------|----------------------------|------------------------------|
| ▶ Undervoltage (27) | ▶ Underfrequency (81U) | ▶ Overcurrent (51) | ▶ Reverse Power (32) | ▶ Phase Imbalance (47) |
| ▶ Overvoltage (59) | ▶ Overfrequency (81O) | ▶ Phase Imbalance (57) | ▶ Loss of Excitation (400) | ▶ Generator Overcurrent (51) |

All generator protection features are programmable as alarms or pre-alarms.

DGC-2020 Gen-Set Controller



Contact Outputs

For those applications where more output contacts are needed, the DGC-2020 can be adapted to include 8 additional 2ADC rated dry contact outputs. These are real contacts and not the solid-state type that require additional external circuitry to properly operate. These contacts are fully programmable via the easy-to-use BESTCOMSPlus PC software and can be assigned to numerous user-defined functions.

DC Voltage Panel Mounted Modem

The DGC-2020 can provide long distance communication by adding a modem. When a modem is used, the user can access the DGC-2020 from virtually anywhere via a dedicated telephone line. The user can monitor and control the gen-set as if standing right in front of it. The DGC-2020 can also dial out for pre-programmed circumstances to alert the user of selected situations.

RS-485 Communication

When the RS-485 option is selected, the user can send and receive information from the DGC-2020 via the RS-485 communications port and Modbus protocol. This feature allows the DGC-2020 to be fully integrated into the building management system. Please see the instruction manual for the Modbus register list.

Enhanced Generator Protection

In addition to the standard generator protection (27, 59, 81O, 81U) the DGC-2020 can be equipped with a more sophisticated generator protection system. This option provides an overcurrent element (51) with 17 selectable time current characteristic curves and a voltage phase balance protection function.

Transfer Switch Control (Mains Failure)

The DGC-2020 monitors utility (mains) and determines if it is providing power that is suitable for the loads. If the utility supply goes outside of predetermined levels, the generator is started and the utility is disconnected from the load and the generator is connected. When the utility returns to acceptable levels for a sufficient time, the generator is disconnected and the utility is reconnected to the load. It also includes appropriate adjustable timers or time delays for establishing stable utility operation.

Contact Expansion Module (CEM)

The CEM add-on module increases the contact input and contact output capability adding 10 contact inputs and 24 form C contact outputs. This module communicates to the DGC-2020 via SAE J1939 CANBUS and allows the user to program the functionality of these inputs and outputs in the BESTCOMS programmable logic program. The user can add labels for the inputs and outputs that appear on BESTCOMS front panel, and in the programmable logic. All the functionality can be assigned to these inputs and outputs as if they were an integrated part of the DGC-2020. The CEM-2020 module has all of the environmental ratings, like the DGC-2020, including a model for UL Class1 Div2 applications (consult price list for part number). The output ratings of the form C contacts are: (12 contacts) 10A @ 30VDC and (12 contacts) 2A @ 30VDC. The 2A rated contacts are gold flash contacts for low current circuits. The CEM-2020 terminals accept a maximum wire size of 12 AWG while the chassis ground requires 12 AWG wire. The CEM-2020 provides the user with the flexibility to use the same model DGC-2020 gen-set controller for simple applications or more complicated applications that require contact functionality or duplication of contacts for remote annunciation. Flexibility is one of the benefits of the DGC-2020, and this add-on module enhances that benefit even further.

ModBus TCP/RTU (NetBiter RTU-TCP Gateway)

NetBiter® RTU-TCP Gateway connects the fully enhanced DGC-2020 with Ethernet and mobile networks. The gateway acts as a transparent bridge translating DGC-2020 Modbus registers allowing control systems, such as PLCs, SCADA, etc. to communicate over Ethernet. One gateway is required per generator allowing multiple generator sets to be accessed and monitored simultaneously. Note: This option does not interface with BESTCOMSPlus software. Features include: connectivity between serial Modbus devices and the Modbus TCP; RS-232, RS-485 and RS-422 connectivity; Ethernet and mobile network connectivity; 10/100 Mbit/s Ethernet; web-based configuration; DIN rail mounting; and network and serial status indicators.

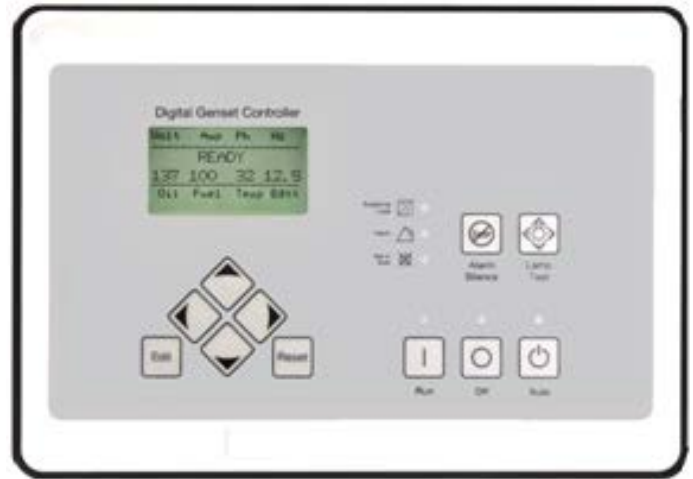
Load Share Module 2020 (LSM-2020)

The LSM is an easy to connect and use add-on module for the DGC-2020 to allow the DGC-2020 to control the kW load sharing of multiple generator sets. The LSM-2020 is remotely mounted and communicates to the DGC-2020 via J1939 CANbus communications.

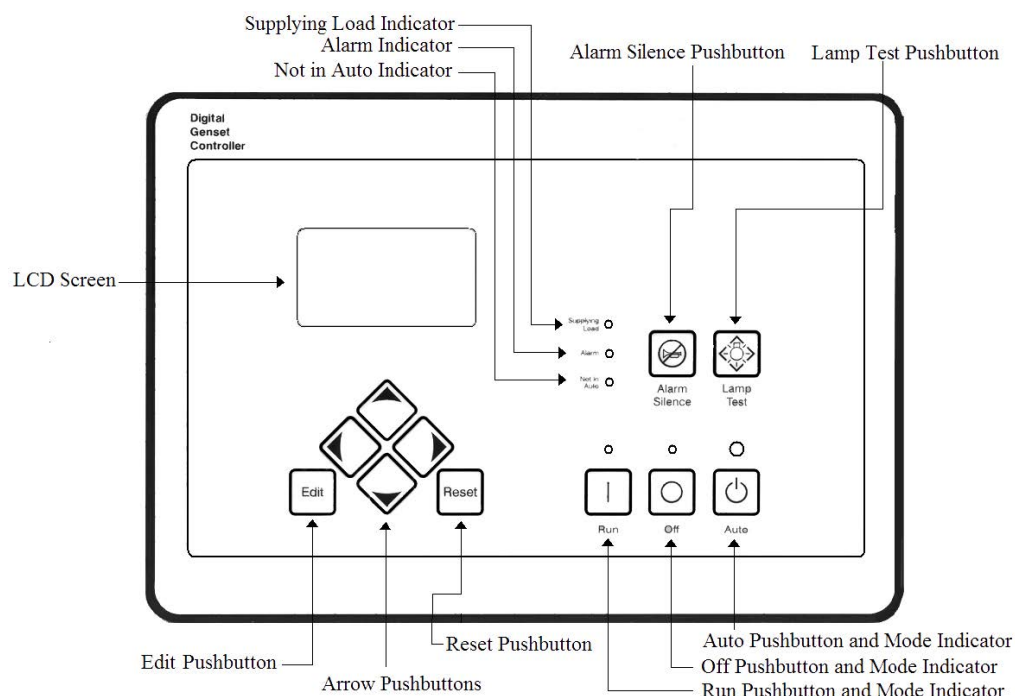
Non-Proprietary Software



The Powerdak Power Products Digital Gen-Set Controller (DGC-2020) is an advanced genset control system with extensive functionality and flexibility. It's a total system solution for your emergency, stand-alone, and paralleled generator set applications. Comprehensive control, metering, and protection capabilities maximize flexibility and make it the optimal choice for a broad range of applications. The environmentally-rugged, encapsulated design has a proven track record of reliable, trouble-free operation.



More importantly, the DGC-2020 controller does not contain proprietary software. This means easy and open access to your power system. The majority of our competitors require you to rely on their proprietary software for the life of your unit and use only their service network to access your power system. Powerdak Power Products allows our distributors and end users in an emergency situation to perform maintenance, trouble shooting, and adjustment of the settings to their power systems. Additionally, after the warranty period ends, the end user is able to use any service provider they choose to service their unit. Free updates for your Control Panel software can be downloaded anytime from our website.



DGC-2020HD Gen-Set Controller



The DGC-2020HD Digital Gen-Set Controller is a rugged, reliable, all-in-one gen-set control and load share system. It is designed to be a complete and adaptive controller that is well suited for mains fail, paralleled units, and systems with multiple buses. The DGC-2020HD has all of the necessary features for complete gen-set control, protection, and metering with an extensive, but easy-to-use programmable logic system.



Standard Features

- ▶ Three-phase generator metering
- ▶ Up to two buses with three-phase voltage metering
- ▶ Three dedicated generator CTs with up to four auxiliary CTs
- ▶ Engine metering and gen-set control
- ▶ Standard generator protection includes 27, 59, 81O/U, 32, and 40Q
- ▶ Enhanced generator protection includes 46, 47, 51, 78, and 81ROCOF in addition to the standard generator protection elements
- ▶ Enhanced Plus Differential option includes neutral (87N) and generator phase (87G) differentials with the enhanced sensing option
- ▶ Resistive sender inputs for oil pressure and coolant temperature (analog senders are optional)
- ▶ Dual CAN bus ports: One for SAE J1939 engine ECUs and one for expansion modules
- ▶ Dual Ethernet ports (fiber Ethernet is optional)
- ▶ Load sharing of kW and kvars over Ethernet
- ▶ Soft loading/unloading with zero-power transfer capability
- ▶ Two analog inputs standard and up to four with analog sender option
- ▶ Governor and AVR bias outputs with the ability to be programmed as standard analog outputs
- ▶ Sixteen programmable contact inputs, 12 programmable contact outputs, three pre-programmed outputs (Prestart, Start, Run)
- ▶ Three programmable LEDs for customized annunciation
- ▶ Color touch screen LCD
- ▶ Connects to up to four AEM-2020 Analog Expansion Modules and four CEM-2020 Contact Expansion Modules
- ▶ Peak Shave and Import/Export power control modes maximize system efficiency during peak hours
- ▶ Load anticipation function improves speed recovery during large load application and rejection
- ▶ Various system breaker configurations provide the DGC-2020HD with the flexibility to control systems in a wide range of applications
- ▶ Automatic load shedding functionality ensures that a system will remain up, even if it's at a reduced capacity

Specifications

Power Supply

Nominal:	12 or 24 Vdc
Range:	6 to 32 Vdc
Power Consumption:	
Sleep Mode:	12.7 W
Normal Operation:	18.1 W
Maximum Operation:	25 W
Battery Ride Through:	Starting at 10 Vdc, withstands cranking ride through down to 0 Vdc for 50 ms

Current Sensing

	5 Aac Units	1 Aac Units
Continuous Rating:	0.1 to 7.5 Aac	0.02 to 1.5 Aac
One-Second Rating:	50 Aac	10 Aac
Burden:	1 VA	
Metering Range:	0 to 5,000 Aac	
Metering Accuracy:	±1% of rated	

Voltage Sensing

Range:	12 to 576 Vac, L-L
Frequency:	50/60 Hz
Frequency Range:	10 to 90 Hz
One-Second Rating:	720 Vac
Burden:	1 VA
Metering Range:	0 to 576 Vac
Metering Accuracy:	±1% of rated

Engine Speed Sensing

Magnetic Pickup:	
Voltage Range:	6 to 70 Vpp
Frequency Range:	32 to 10,000 Hz
Generator Voltage Range:	12 to 576 Vac

Resistive Senders

Fuel Level:	0 to 250 Ω
Coolant Temp Sensing:	10 to 2,750 Ω
Oil Pressure Sensing:	0 to 250 Ω

Inputs and Outputs

Analog Input Ratings:	4 to 20 mA, ± 10 Vdc
AVR Bias Output:	4 to 20 mA, ± 10 Vdc
Governor Bias Output:	4 to 20 mA, ± 10 Vdc, or PWM
Load Share Line:	0 to 10 Vdc
Contact Output Ratings:	
Start, Run, Prestart Relays:	30 Adc at 28 Vdc, 3 A pilot duty
Programmable (12):	2 Adc at 28 Vdc, 1.2 A pilot duty

Frequency

Metering Range:	10 to 90 Hz
Metering Accuracy:	±0.25%

Environmental

Operating Temp*:	-40°C to 70°C (-40°F to 158°F)
Storage Temp:	-40°C to 85°C (-40°F to 185°F)
Humidity:	IEC 68-2-78
Salt Spray:	IEC 60068
Ingress Protection:	IEC IP56 for the front panel
Shock:	15 G in three perpendicular planes Tested eight hours in three perpendicular planes, 3 to 25 Hz at 1.6 mm (.063") peak amplitude 25 to 2,000 Hz at 5 G
Vibration:	

* The default screen maintains operation over the entire operating temperature range. The color touch screen maintains operation from -20°C to 70°C (-4°F to 158°F).

Agency/Certifications

UL approved (evaluated to UL6200), ground fault protection circuit compliant with UL1053,

CSA approved, NFPA compliant,

CE compliant (LVD and EMC),

EAC certified, American Bureau of Shipping (ABS) recognized

Remote Annunciator



The RDP-110 is a powerful remote display to match Powerdak Power Products DGC-2020 control panel. It may be powered from the engine starting batteries at 12 or 24VDC or an AC source at 120VAC. The RDP-110 uses RS-485 communications between itself and the DGC to reduce the number of wires required to activate all the alarms to four. The RS-485 communications can be used on remote displays up to 4000 feet away from the DGC. The RDP-110 has 18 LEDs to indicate Alarms, Pre-Alarms and operating conditions of the emergency standby generator system. It has an audible alarm horn rated at 80db (from a distance of two feet). The RDP-110 also comes complete with a conduit box for easy installation. The RDP-110 is available in two mounting configurations: surface and semi-flush mount.



Standard Features

- ▶ Annunciation of 16 alarms and pre-alarms as detected by the DGC
- ▶ Annunciation of 2 status indicators
- ▶ Audible alarm horn
- ▶ Lamp Test and Alarm Silence switches
- ▶ Power supply inputs for 12, 24VDC or 120VAC (at the RDP-110 location)
- ▶ RS-485 communications
- ▶ Two mounting configurations
- ▶ Conduit box included
- ▶ Designed for use in harsh environments
- ▶ UL recognized & CSA certified

Specifications

Power Input

- ▶ DC Voltage: 8-32VDC (2W max.)
- ▶ AC Voltage: 84-144VAC (5VA max.)

Communications Port

- ▶ RS-485 interface with DGC

Isolation

- ▶ 1800VDC for one minute between chassis ground and AC voltage input. 700VDC for one minute between any of the following groups:
 - Chassis ground
 - Battery and RS-485 terminals
 - AC voltage inputs

Operating Range

- ▶ Up to 4000 ft. from the DGC
- ▶ Recommended Wire - Belden 9463

RFI (Radio Frequency Interference)

- ▶ Type tested using a 5W handheld transceiver operating at random frequencies centered around 144MHz and 440MHz with the antenna located within six inches of the device in both vertical and horizontal planes

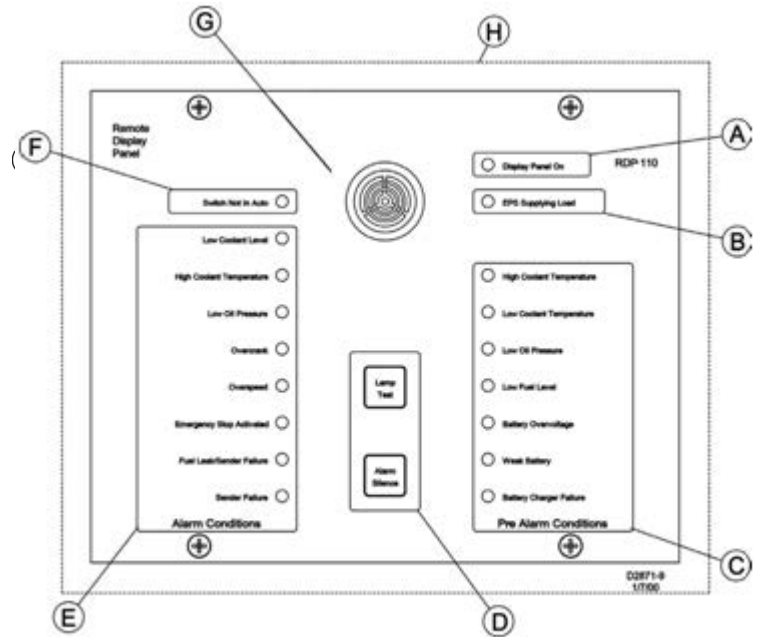
Environmental and Physical

- ▶ Operating temperature: -40°F to +158°F
- ▶ Storage temperature: -40°F to +185°F
- ▶ Salt Fog: Qualified to ASTM 117B-1989
- ▶ Vibration: The device withstands 2g in each of three mutually perpendicular planes, swept over the range of 10 - 500Hz for a total of six sweeps, 15 minutes each sweep, without structural damage or degradation of performance
- ▶ Shock: 15g
- ▶ Weight: 6.5 pounds (3 kilograms)

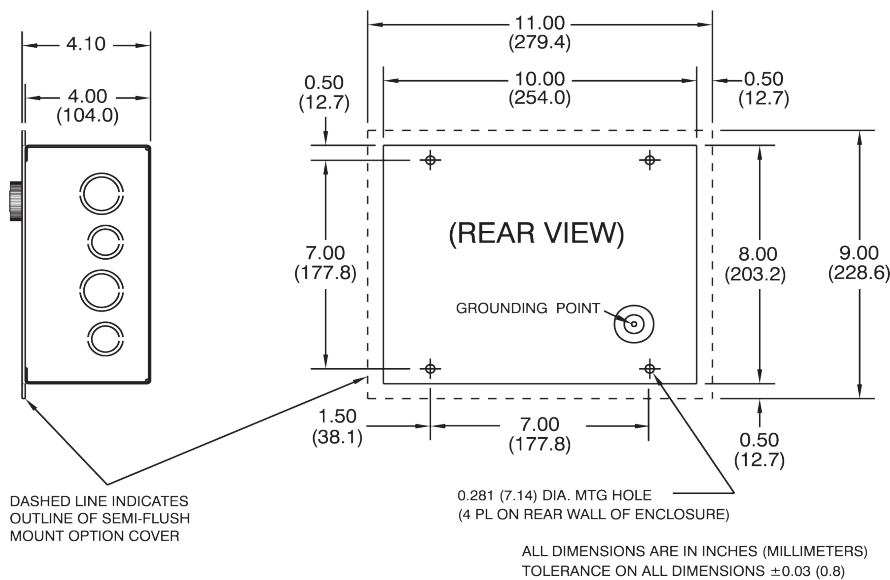
Remote Annunciator

Front Panel LED Indicators

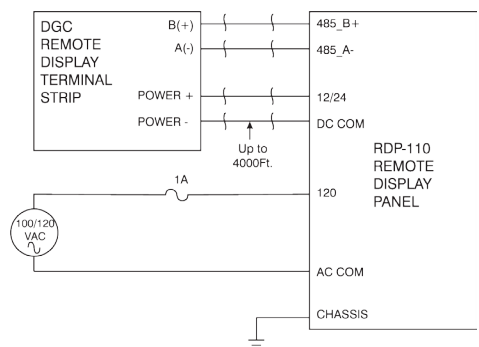
- (A) Green LED illuminates when power is applied to the RDP-110
- (B) Green LED Turns ON when the generator is supplying more than two percent of rated current
- (C) Pre-Alarm Conditions (Yellow LEDs)
- (D) Pushbuttons
 - ▶ Lamp Test Pushbutton exercises the audible alarm and tests all LEDs
 - ▶ Alarm Silence Pushbutton silences the audible alarm
- (E) Alarm Conditions (Red LEDs)
- (F) Red LED illuminates when the DGC is not in AUTO
- (G) Audible alarm annunciates when DGC is not in AUTO and when alarms and pre-alarms occur
- (H) Dashboard line indicates the front panel outside edges when semi-flush mounted



Outline Diagram: Rear and Side Views



Wiring Diagram



Please consult electrical drawings for verification.

Industrial Generators



Powerdak Power Products utilizes the highest quality generators available. Our industrial generators provide consistent performance, quality design, and great durability required for long life and versatility. Generators used by Powerdak Power Products are UL and CSA Listed (unless specified otherwise), which guarantees that each one meets the rigorous demands of industrial power generation and will provide safe and effective service for the life of the generator. Powerdak Power Products generators range from 20 kWe through 2000 kWe.



Standard Features

► Enhanced Ventilation

Created by a high-efficiency fan that optimizes internal airflow patterns, maximizes heat transfer, and minimizes hot spot differentials for extended winding life.

► Fully Guarded

For operator safety and generator protection. No rotating or electrically energized parts are exposed. All openings are covered by louvers or screens.

► Large Conduit Box

Provides ample space for easy connections and allows load line access from all sides, top, or bottom.

► Design Specs and Agency Approvals

All Powerdak Power Products generators are UL and CSA Listed (unless specified otherwise) and meet NEMA MG1-22, BS5000, CSA C22.2, IEC 34-1 and VDE 0530 requirements.

► Class H Insulation System

Utilizes an unsaturated polyester varnish for optimal insulation life and superior moisture protection.

► Optimized Windings

Provide low reactances and exceptional motor starting capability. The stator windings utilize a 2/3 pitch to minimize harmonic distortion and facilitate parallel operation.

► Permanent Magnet Generator (optional)

Ensures 300% short circuit current during fault conditions and provides the regulator with input power isolated from load distortion.

► Shielded Heavy-Duty Bearing

Resists contamination and gives a minimum B-10 life of 40,000 hours.

► Automatic Voltage Regulator

Provides accurate 1% regulation, under-speed protection, stability adjustment to optimize transient performance, and EMI filtering to commercial standards. Fully encapsulated for rugged durability in virtually any environment.

SE350 Voltage Regulator



VOLTAGE ADJUSTMENT

The screwdriver adjustable potentiometer adjusts the generator output voltage. Adjustment clockwise increases the generator output voltage.

When using a remote voltage adjust rheostat, remove the jumper wire across terminals 6 and 7 and install a 2000 ohm 1/2 watt (minimum) rheostat. This will give $\pm 10\%$ voltage variation from the nominal. (For $\pm 5\%$ voltage variation use a 1000 ohm 1/2 watt rheostat).

STABILITY ADJUSTMENT

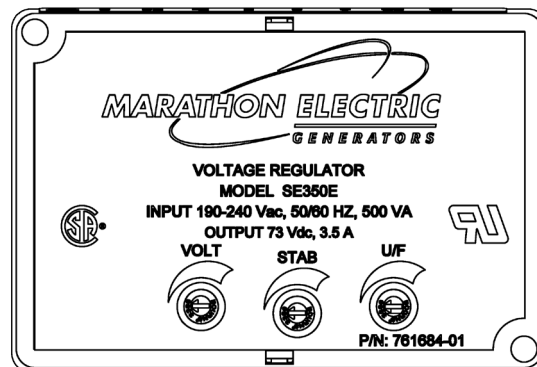
System stability is the ability of the generator to respond to load transients. Decreasing the stability makes the generator less sluggish and faster to respond to load transients. If the stability of the regulator is decreased too much, the generator will tend to hunt under steady state conditions.

The screwdriver adjustable potentiometer adjusts the system stability. Adjustment clockwise increases the stability. Increasing the stability increases the response time of the regulator. Conversely, decreasing the stability decreases the response time of the regulator.

V/HZ ROLL-OFF FREQUENCY ADJUSTMENT

The roll off point is the frequency where the generator voltage starts to decrease. This reduces the Kilowatt load to the engine, which allows the engine to recover in speed under heavy load transient conditions.

Use jumper to select 50 HZ or 60 Hz mode. The screwdriver adjustable potentiometer sets the roll-off frequency from 54-61 Hz in the 60 Hz setting or from 45-51 Hz in the 50 Hz setting. The SE350 has the roll-off point preset to 58 Hz in the 60 Hz mode and 48 Hz in the 50 Hz mode. To change the roll-off point, adjust engine speed to the desired rated speed. (50 or 60 Hz). Set the voltage to the desired setting at rated speed. Adjust engine speed to the desired roll-off point. Turn the potentiometer counterclockwise until the voltage starts to drop off. Then adjust the potentiometer clockwise until the voltage returns to rated voltage. Re-adjust engine speed to rated speed.



SPECIFICATION	SE350 REGULATOR
Sensing & Power Input	190-240 Vac
Burden	500 VA
Output Power- Continuous	73 Vdc at 3.5 Adc (255w)
Output Power - Forcing(240 Vac Input Power)	105 Vdc at 5 Adc (525w)
Regulation	1 .0%
Remote Voltage Adjustment Range	$\pm 10\%$ with 2000 ohm rheostat $\pm 5\%$ with 1000 ohm rheostat
Frequency Compensation	Adjustable
Roll Off Frequency	54-61 Hz for 60 Hz 45-51 Hz for 50 Hz
Weight	6.5 oz.
Operating Temperature	- 40°C to + 60°C
Storage Temperature	- 65°C to + 85°C
Power Dissipation	8 watts maximum
Size	3.94" L X 2.66" W X 2.20: H
Voltage Buildup	Internal provisions for automatic voltage build up from generator residual voltage as low as 10 Vac.
EMI Suppression	Internal Electromagnetic Interference Filter (EMI Filter)

DVR2000E+

Digital Voltage Regulator

POWERDAK
POWER PRODUCTS

Advanced Features

- ▶ **CAN Bus Communication** - Allows for the integration of the DVR2000E+ as a node on a CAN Network for the purpose of controlling or monitoring regulator performance
- ▶ **True RMS Single and Three Phase Voltage Sensing** - Connect in the sensing mode required per the application. Sense 100 to 600 Volts $\pm 10\%$ at 50 or 60 Hz
- ▶ **True Three Phase Power Monitoring** - Additional CT inputs monitor current on all three phases if required
- ▶ **Generator Soft Start** - Controlled increase to rated voltage limits overshoot during voltage build-up in AVR regulation modes if required
- ▶ **Frame Specific PID Selection** - Regulator tuned to specific frame size and gain settings
- ▶ **Four Digit HMI Display** - Clearly displayed whether changing settings or monitoring regulator status
- ▶ **Expandable Platform** - Features include shunt power capability and RTD monitoring through expansion modules



Specifications

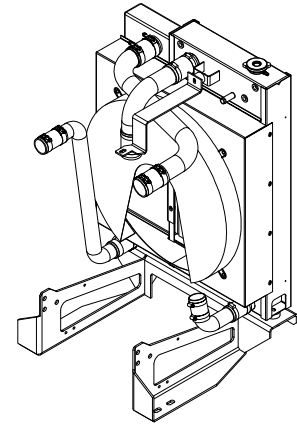
- ▶ **Voltage Regulation** – 0.25% over the entire load range at rated power factor and constant generator frequency
- ▶ **Output Power** – 75VDC, 3.0ADC continuous rating and 150VDC, 7.5ADC forcing capability for one minute
- ▶ **Exciter Field DC Resistance** – 18 to 25 Ω range
- ▶ **Voltage Adjustment** – Minimum of $\pm 10\%$ of nominal voltage range. Remote adjustment can be made from up to 150 feet from voltage regulator
- ▶ **Input Power** – 180 to 240VAC, 250 to 300 Hz PMG power supply
- ▶ **Operating Temperature** – From -40°C to +70°C (-40°F to +158°F)
- ▶ **Storage Temperature** – From -40°C to +85°C (-40°F to +185°F)
- ▶ **Ingress Protection** – IP52 (front side mounted in conduit box); IP10 (rear side with protective cover)
- ▶ **Shock** – 20g in 3 perpendicular planes
- ▶ **Vibration** – 1 G at 5 to 26 Hz; 0.050" double amplitude (27 to 52 Hz); 7g at 53 to 500 Hz
- ▶ **Weight** – 3 lb. (1361g)
- ▶ **Humidity Testing** – Per MIL-STD-705B, Method 711-D
- ▶ **Salt Fog Testing** – Per MIL-STD- 810E
- ▶ **CAN Protocol** – SAE J1939
- ▶ **Regulator Sensing** – 100 to 600VAC, 50/60 Hz, 1-phase/3-phase
- ▶ **EMI Compatibility**
 - Immunity** - Meets EN 61000-6-2: 2005 Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments
 - Emission** - Meets EN 61000-6-4: 2007 Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments
- ▶ **EMI Compatibility Tests**
 - Immunity** - Electrostatic Discharge (ESD): IEC 61000-4-2 | Radiated RF: IEC 61000-4-3 | Electrical Fast Transient (EFT) / Burst: IEC 61000-4-4
 - Conducted RF: IEC 61000-4-6 | Power Frequency and Magnetic Field: IEC 61000-4-8
 - Emission** - Radiated RF: EN 61000-6-4: 2007, 30 MHz to 1000 MHz

This regulator meets MIL-STD-461C, Part 9 for radiated and conducted emissions and radiated susceptibility when mounted in the generator conduit box.

Radiators



Powerdak Power Products radiators offer a variety of styles and configurations including radiator and charged air assemblies, radiator and aftercooler assemblies with durable core construction. Our radiators are compact and efficient meeting the most stringent enclosure footprint requirements. All radiators are sized for 50°C (122°F) ambient. The single-source design ensures a perfect match with your genset package.



Radiator Features

Standard Radiator Package

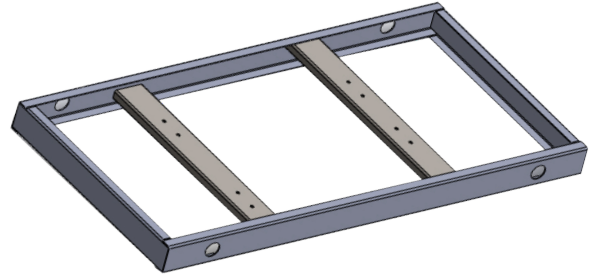
- ▶ Engine-specific tank design with variant coolant connection locations and sizes (dependant on engine size)
- ▶ Complete cooling package with mounting foot and plumbing kit
- ▶ All steel construction of top and bottom tanks
- ▶ Dual Core designs -
 - Jacket Water / Charged Air Circuit
 - Jacket Water / After Cooler Circuit
- ▶ Individual radiators designed to meet manufacturer's specific requirements
- ▶ Top tank has built in expansion capacity - no need for an external recover tank
- ▶ Full or partial deration system built into the top tank
- ▶ Standard cooling package includes fan shroud & fan guard
- ▶ Corrosion preventive options:
 - Hot dipped galvanizing on all steel parts or stainless steel
 - Epoxy coated cores

Fan-On Radiator Design

- ▶ Engine-specific tank design with variant coolant connection locations and sizes (dependant on engine size)
- ▶ Rigid built construction for fan support
- ▶ High speed bearings within pillow blocks
- ▶ Dual Core designs with variable jacket water / after cooler circuit designs
- ▶ All steel construction of top and bottom tanks
- ▶ Individual radiators designed to meet manufacturer's specific requirements

Base Frame

Our formed or structural steel base design provides both high strength and long-lasting durability. From mounting to transportation to installation of your unit, our base provides a strong foundation for your product. Our engineered base design provides for total system integration including added accessories.

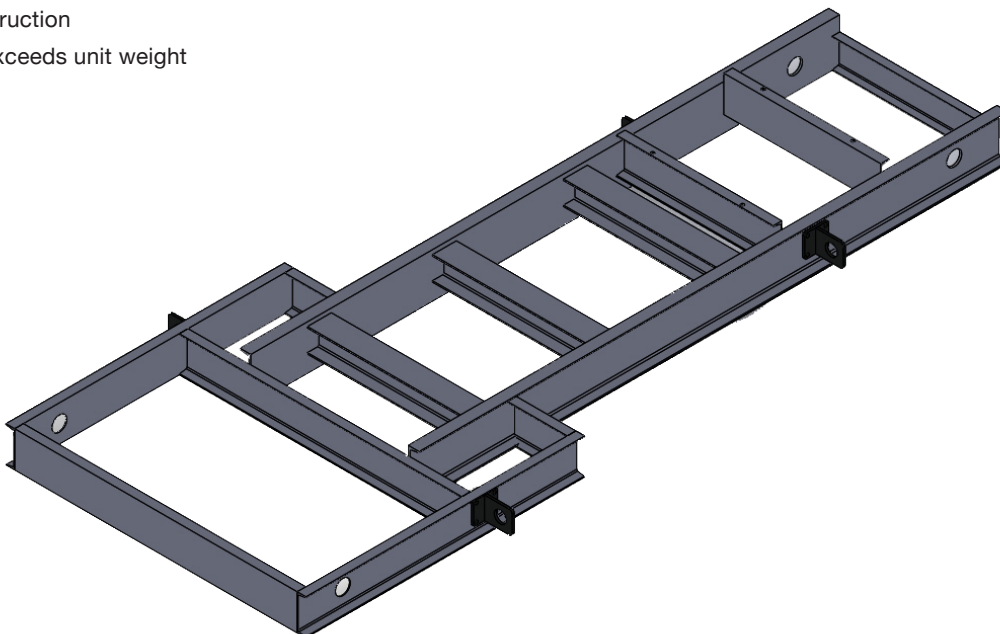


Base Design Standard Features

- ▶ Heavy gage steel or channel construction
- ▶ Pre-engineered mounting and lifting points
- ▶ Total system integration accommodates:
 - Accessories both standard and optional
 - Enclosures Level 1, 2, & 3
 - Fuel Tanks: 24, 48, 72 Hr
- ▶ Painted with durable extreme-wear UL and CSA listed hammer powder coat finish
- ▶ Pre-engineered oil drain extension, coolant drain extension to exterior of base
- ▶ Pre-engineered natural gas / LP supply connection to exterior of base (gaseous units only)

Optional Lifting Bracket Feature

- ▶ Removable by fastener for clean look
- ▶ Heavy-duty construction
- ▶ Lifting capacity exceeds unit weight



Gen-Set Enclosures



Powerdak Power Products gen-set enclosures are specifically designed for optimal protection against the elements. They are designed to protect the entire system from even the most extreme environments, and to reduce sound levels to most specified requirements. Powerdak Power Products's vast flexibility allows the design of standard enclosures to meet most specifications or requirements. All standard enclosure models are constructed of 14 gauge steel and feature a pitched roof for increased structural integrity and superior watershed. All enclosures feature a rugged UL listed hammer powder coat finish as standard for a long lasting and durable finish in standard white, tan or gray. Custom colors are available as specified.

Enclosure Design Features



- ▶ UL 2200 & CSA Listed as standard
- ▶ All enclosures are 150 MPH wind rated
- ▶ Lockable gasketed doors with draw down latches and Stainless Steel component hinges
- ▶ All Stainless Steel fasteners
- ▶ UL & CSA listed extreme-wear hammer powder coat finish
- ▶ Pitched roof for high structural integrity and superior watershed
- ▶ Above-door drip guards
- ▶ Optimal airflow means no cooling system de-rates on most models
- ▶ Internally mounted exhaust silencers standard up to 600 kW
- ▶ Sound attenuation options
- ▶ Stainless Steel and Aluminum enclosure options

Level 1

Weather Proof Enclosure

Powerdak Power Products Level 1 enclosures have the rugged construction and weather proof protection required for most outdoor environments. These enclosures will effectively protect the gen-set through high wind (150 MPH), rain, snow, and other extreme weather conditions. Weather proof enclosures feature standard hinged lockable doors, a pitched roof to prevent water accumulation and improved structural integrity. The enclosure is painted with extreme-wear UL and CSA listed hammer powder coat finish.



Level 2

Weather Proof Enclosure with Foam

Powerdak Power Products Level 2 enclosures include all of the same great features of the Level 1 enclosures. With the addition of high performance 1.5" Type D Sound Attenuating Foam, our Level 2 Enclosures offer an even lower dBA rating with the same great weather proof protection.



Level 3

Sound Attenuated Enclosure

Powerdak Power Products Level 3 enclosures feature the same great weather proof protection and standard features as the Level 1 & 2 enclosure models, but with a greater emphasis on reducing sound levels. Standard Level 3 features include the same high performance 1.5" type D sound attenuating foam, and the addition of a separate frontal exhaust sound chamber and dual rear air intake to ensure that your system runs exceptionally quiet. These features make this enclosure among the best in the industry for noise reduction and quality.



Gen-Set Enclosures (LEGACY)



Powerdak Power Products Legacy gen-set enclosures are specifically designed for optimal protection against the elements. They are designed to protect the entire system from even the most extreme environments, and to reduce sound levels to most specified requirements. Powerdak Power Products's vast flexibility allows the design of Legacy standard enclosures to meet most specifications or requirements. All standard enclosure models are constructed of 14 gauge steel and feature a pitched roof for increased structural integrity and superior watershed. All enclosures feature a rugged UL listed hammer powder coat finish as standard for a long lasting and durable finish in standard white, tan or gray. Custom colors are available as specified.

Enclosure Design Features



- ▶ UL 2200 & CSA Listed as standard
- ▶ All enclosures are 150 MPH wind rated
- ▶ Lockable gasketed doors with draw down latches and Stainless Steel component hinges
- ▶ All Stainless Steel fasteners
- ▶ UL & CSA listed extreme-wear hammer powder coat finish
- ▶ Pitched roof for high structural integrity and superior watershed
- ▶ Above-door drip guards
- ▶ Optimal airflow means no cooling system de-rates on most models
- ▶ Internally mounted exhaust silencers standard
- ▶ Sound attenuation options
- ▶ Stainless Steel and Aluminum enclosure options

Level 1

Weather Proof Enclosure

Powerdak Power Products Level 1 enclosures have the rugged construction and weather proof protection required for most outdoor environments. These enclosures will effectively protect the gen-set through high wind (150 MPH), rain, snow, and other extreme weather conditions. Weather proof enclosures feature dual side air intake baffles, rear door, standard hinged lockable doors, a pitched roof to prevent water accumulation and improved structural integrity. The enclosure is painted with extreme-wear UL and CSA listed hammer powder coat finish.



Level 2

Weather Proof Enclosure with Foam

Powerdak Power Products Level 2 enclosures include all of the same great features of the Level 1 enclosures. With the addition of high performance 1.5" Type D Sound Attenuating Foam, our Level 2 Enclosures offer an even lower dBA rating with the same great weather proof protection.



Level 3

Sound Attenuated Enclosure

Powerdak Power Products Level 3 enclosures feature the same great weather proof protection and standard features as the Level 1 & 2 enclosure models, but with a greater emphasis on reducing sound levels. Standard Level 3 features include the same high performance 1.5" type D sound attenuating foam, and the addition of a separate frontal exhaust sound chamber and dual rear air intake to ensure that your system runs exceptionally quiet. These features make this enclosure among the best in the industry for noise reduction and quality.



Sound Attenuation Foam

Polydamp® Type D Acoustical Foam, (PAF) is an acoustical grade, open cell, flexible ether based urethane foam designed to give maximum sound absorption for a given thickness. It has excellent resistance to heat, moisture and chemicals. All applications use 1.5" foam as standard.



Foam Characteristics

Sound Absorption: Nominal values of random incidence sound absorption coefficient per ASTM C384-77 for Plain/Tuffylm

Foam Thickness	Frequency (Hz)					
	125	250	500	1000	2000	4000
(1.5 in) 38.1 mm	15/20	27/49	60/96	77/93	90/82	98/67
(2.0 in) 50.8 mm	20/30	40/66	90/98	100/96	96/85	100/75

	Test Standard	U.S. Standard
Density, Nominal: (lb/ft³-kg/m³)	ASTM-D-3574-91	1.85
Tensile Strength: (PSI-KPa)	ASTM-D-3574-91	12
Elongation, %	ASTM-D-3574-91	120
Tear Resistance: (lb/in - N/M)	ASTM-D-3574-91	1.3
IFD: (PSI - KN/M²)	ASTM-D-3574-91	30
Compression Set (50%): %	ASTM-D-3574-91	10
Air Permeability (Tested at 1" thickness): (Rayles/M)	ASTM C-522	
Thermal Conductivity		
(BTU/hr. ft², °F/in.)	ASTM C-177	0.25

Service Temperature

Continuous	-45°F (-43°C) TO 212°F (100°C)
Intermittent	250°F (121°C)

Flame Resistance

UL94	HF-1
FAR.853(B)	PASS
SAEJ-369(B)	PASS
MVSS-302	PASS
DIN	PASS

Humidity Resistance

Excellent; no significant decrease in tensile strength or elongation after 5 hrs. of steam autoclave at 250°F (121°C) per ASTM D3574-86, Test J.

Chemical Resistance

Excellent - no significant change in strength after 4 weeks immersion in common solvents, alkalies, acids, and water.

Estimated Service Life:

Min. 10 years at 80F (27°C) and 95% R.H.

Adhesive Characteristics

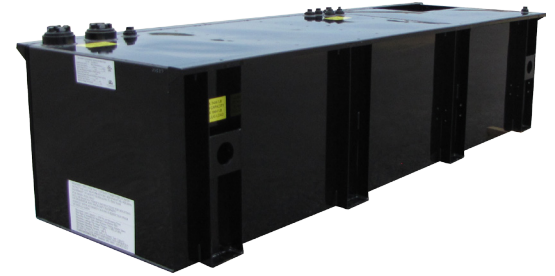
P4 is a high performance unsupported acrylic pressure sensitive adhesive exhibiting aggressive tack, high peel and shear, and good heat resistance. In addition, it has good chemical and plasticizer resistance as well as excellent long term aging and the ability to withstand environmental extremes.

Adhesive Thickness (Nominal)	0.004"
Color of Adhesive	Water Clear
Release Liner	76 lb Polycoated bleached kraft paper
Service Temperature	-40°F +200°F

Sub-Base Fuel Tanks



Powerdak Power Products sub-base fuel tanks are listed and manufactured under UL 142 & ULC-S601 standards for steel above ground tanks, which guarantees that every fuel tank meets the structural and mechanical integrity requirements for mounting a generator set directly on top of the tank. This provides a convenient, efficient, and safe way to store fuel for your gen-set.



Sub-Base Fuel Tank Standard Features

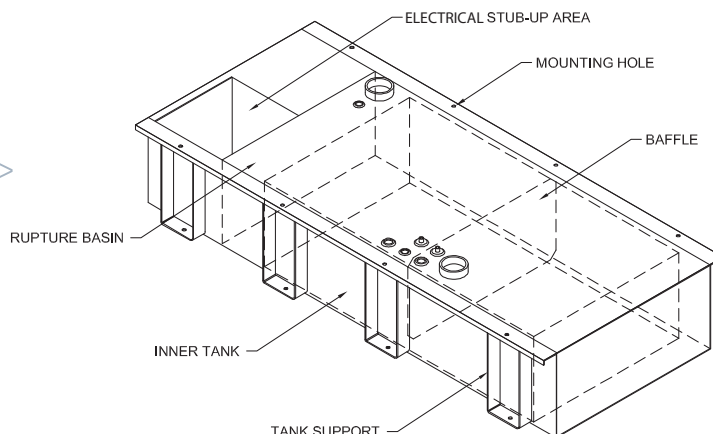
- ▶ Double walled secondary containment UL 142 & ULC-S601 Listed
- ▶ Electrical stub-up openings are standard to provide generator set wiring provisions through the base tank
- ▶ Heavy gauge steel construction
- ▶ Durable two part catalyzed epoxy finish paint
- ▶ Standard fittings: fuel supply with check valve (sized per unit), fuel return (sized per unit), 2" NPT for normal vent, 2" - 6" NPT for emergency vent (sized per unit), 2" NPT for manual fill, 1 1/2" NPT for fuel level gauge, and 3/8" NPT basin drain (plugged). Removable 1/2" supply dip tube standard (size may vary with gen-set model). 1 1/2" NPT for leak detection
- ▶ Interior tank baffle: Separates cold engine supply fuel from hot returning fuel
- ▶ Direct reading fuel level gauge
- ▶ Low fuel level and fuel leak alarms

Design Options

- ▶ High and critical low fuel level shutdowns or alarms
- ▶ Full pumping control systems for a true day tank system with a full array of electrical options
- ▶ Additional Tank Fittings
- ▶ Custom Fuel Tank Designs (sizes and shapes)
- ▶ Fuel Heater
- ▶ Fill / Spill Containment

Powerdak Power Products offers two distinctive types of double wall sub-base fuel tanks, those with an electrical stub up area (standard) and those without. Each type can be customized to any specification to meet your specific requirements.

UL 142 & ULC-S601 double wall secondary containment sub-base fuel tank with stub-up.



MC Series Circuit Breakers

Powerdak Power Products MC (Molded Case) Series Circuit Breakers are the highest quality in the industry. They will protect the power system and corresponding equipment from damaging fault currents circuits and overloads.

MC Series Features

- Broad product line to meet virtually any application need
- Reduced downtime: tripped breakers can be easily spotted and immediately reset
- Eliminates single phasing: a common trip bar disconnects all poles simultaneously
- Offers flexibility through use of a wide variety of accessory devices and attachments
- Repetitive operation: no fuses to replace
- Breakers can be easily tested: fuses must be destroyed to confirm calibration accuracy



Circuit Breaker Type	Ampere Rating	No. Poles	Maximum Voltage Rating	UL Listed Interrupting Ratings (kA)						Dimensions (in.)		
				VAC								
			AC	120	120/240	240	277	480	600	H	W	D
TEB	10-100	2	240	-	-	10	-	-	-	6.3125	2.75	3.375
		3									4.125	
TED	10-150	2	480	-	-	18	-	18	-	6.3125	2.75	3.375
		3	480						14		4.125	
			600									
TQD	100-225	2	240	-	10	10	-	-	-	6.5625	2.75	2.625
	100-225	3	240		-	10					4.125	2.625
SFH	70-250	2	480	-	-	65	-	35	-	10.12	4.12	3.81
		3	600						22			
TJD	250-400	2	240	-	22	22	-	-	-	10.125	8.25	3.8125
		3	240		-	22						
TJJ	125-400	2	600	-	-	42	-	30	22	10.125	8.25	3.8125
		3										
TJK6	250-600	2	600	-	-	42	-	30	22	10.125	8.25	3.8125
		3										
SKHA	300-800	2	600	-	-	42	-	30	22	15.5	8.25	5.5
		3										
SKHA	600-1200	2	600	-	-	42	-	30	22	15.5	8.25	5.5
		3										

BC1206A Series Battery Chargers



The BC1206A charger is built to stand up to the punishing power generation environment. It is engineered to exacting performance specifications, including cULus listing for an extra margin of safety.

Features

- ▶ Automatic 12V 6A, 2-Stage charge rate
- ▶ UL 1236 listed
- ▶ Watertight, shock proof and corrosion proof
- ▶ LED status indicators
- ▶ Reverse polarity protected
- ▶ Short circuit protected
- ▶ EMI/RFI Shielded



Specifications

Specifications	
Output Voltage:	12VDC
Input Rating	
Input Voltage Range:	100 - 130VAC
Input Current Rating:	1.6A maximum
Float - Maintenance Stage	
Float Voltage:	13.3VDC
Float Current:	0.1 A
LED Status:	Green LED On
Full Load - Bulk Stage	
Full Load Voltage:	12.0 - 14.1VDC
Full Load Current:	0.2 - 6.0A
LED Status:	Red LED On

Reverse Polarity Protection	
Available as Standard:	Yes
Short Circuit / Overload Protection	
Maximum Short Circuit Current:	8A (typical)
Current Limit:	7A (+/- 10%)
Operating Temperature Range	
Minimum Temperature:	-20° C
Maximum Temperature:	50° C
Agency Certification	
This product is listed under UL 1236 for battery chargers.	
Warranty	
Warranty Period:	1 Year
Weight	
3.5 Pounds	

BC2405A Series Battery Chargers



The BC2405A charger is built to stand up to the punishing power generation environment. It is engineered to exacting performance specifications, including cULus listing for an extra margin of safety.

Features

- ▶ Automatic 24V 5A, 2-Stage charge rate
- ▶ UL 1236 listed
- ▶ Watertight, shock proof and corrosion proof
- ▶ LED status indicators
- ▶ Reverse polarity protected
- ▶ Short circuit protected
- ▶ EMI/RFI Shielded



Specifications

Specifications	
Output Voltage:	24VDC
Input Rating	
Input Voltage Range:	100 - 130VAC
Input Current Rating:	3.0A maximum
Float - Maintenance Stage	
Float Voltage:	27.1VDC
Float Current:	0.1A
LED Status:	Green LED On
Full Load - Bulk Stage	
Full Load Voltage:	24.0 - 27.1VDC
Full Load Current:	0.1 - 5.0A
LED Status:	Red LED On

Reverse Polarity Protection	
Available as Standard:	Yes
Short Circuit / Overload Protection	
Maximum Short Circuit Current:	8A (typical)
Current Limit:	7A (+/- 10%)
Operating Temperature Range	
Minimum Temperature:	-40° C
Maximum Temperature:	50° C
Agency Certification	
This product is listed under UL 1236 for battery chargers.	
Warranty	
Warranty Period:	1 Year
Weight:	
4.5 Pounds	

NRG Series Battery Chargers



Powerdak Power Products.'s NRG series chargers are the most advanced and feature-rich battery chargers available. NRG battery chargers maximize starting system reliability by utilizing a 10 or 20 amp output, microprocessor controlled power and an array of other features.

Highlights

- ▶ Fully automated battery charging
- ▶ Easy to understand interface with state-of-the-art system status display
- ▶ Battery-fault alarm
- ▶ Watertight, shock and corrosion proof
- ▶ Increases battery life and watering intervals by 400% or more
- ▶ cULus listed



Specifications

AC Input

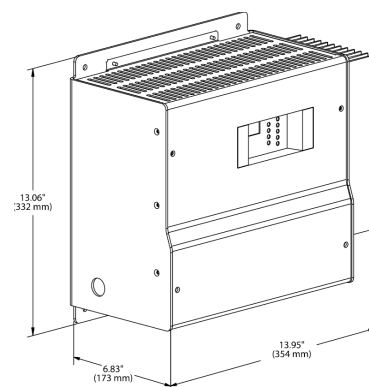
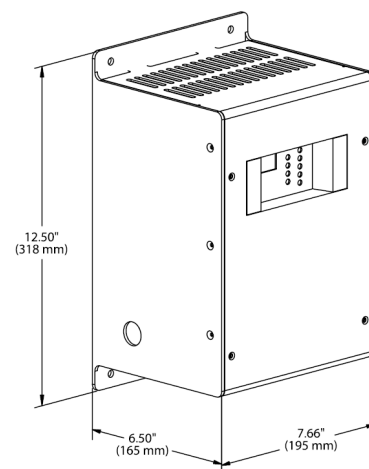
- ▶ Voltage: 110-120/208-240 VAC, +/-10%, single phase, field selectable
- ▶ Input current: 10A charger: 6.6/3.3 amps maximum | 20A charger: 12.6/6.3 amps maximum
- ▶ Frequency: 60 Hz +/-5% standard; 50/60 Hz +/-5% optional
- ▶ Input protection: 1-pole fuse, soft-start, transient suppression

Charger Output

- ▶ Nominal voltage ratings: 12/24 volt nominal
- ▶ Optional voltage rating: 12/24 volt, field selectable
- ▶ Battery settings: Six discrete battery voltage programs
 - Low or high S.G. Flooded
 - Low or high S.G. VRLA (sealed)
 - Nickel cadmium 9, 10, 18, 19 or 20 cells
- ▶ Regulation: +/-0.5% line and load regulation
- ▶ Current: 10 or 20 amps nominal
- ▶ Electronic current limit: 105% rated output typical – no engine cranking disconnect required
- ▶ Charge characteristic: Constant voltage, current limited, 4-rate automatic equalization
- ▶ Temperature compensation: Enable or disable anytime, remote sensor optional
- ▶ Output protection: Current limit, 1-pole fuse, transient suppression

Housing Dimensions

Amps	Width (in.)	Depth (in.)	Height (in.)	Weight (lbs.)
10	7.66	6.5	12.5	23
20	13.95	6.83	13.06	42



Industrial Gen-Set Batteries



Engine Starting Batteries

Built to Handle Extreme Conditions

Blistering heat and bitter cold are ruthless battery killers. That's why Powerdak Power Products utilizes the Exide pioneered climatized battery. Designed to offer you long-life and high-performance starting power that will get your gen-set running even under extreme conditions. Powerdak Power Products' "all-climate" Exide batteries stand up to the harshest temperatures and are available in sizes and configurations to fit almost any application.



Standard Features

- ▶ Unique Manifold Vent - Virtually eliminates corrosion by venting gases away from terminals and cables
- ▶ Exclusive TRP™ Construction – Rib reinforced TRP™ container significantly improves the vibration and impact resistance
- ▶ Armored Plate Cell Bonding - Vibration is the number one killer of commercial batteries. To solve this problem, the cells of every Exide battery are bonded
- ▶ Polyethylene Enveloped Separator Design – Super tough polyethylene material reduces electrical resistance and provides higher cranking performance
- ▶ Center Lug Design - Suppresses the vibration inherent in traditional construction for improved performance (where applicable)
- ▶ TTP™ - Through-the-Partition inter-cell connectors create a shorter current path to deliver more power to the terminals
- ▶ Heavy Duty Cases - Reinforced polyethylene or hard rubber cases stand up to the demands of standby gen-sets
- ▶ Convenient Lifting Slots - a handle is built in the top of the battery for easy carrying and transportation
- ▶ Protective Bottom Design - Waffled bottom design provides protection against nuts, bolts, or stones that might become lodged under the battery
- ▶ Computer Designed Radical Grids - An improved state-of-the-art design which adds power and resists vibration
- ▶ Threaded Accessory Ports - Features a sealed "O" ring that does not work loose during severe service (78DT only)

Specifications

BCI Group Size	Part Number	CCA at 0°F	CCA at 32°F	Dimensions (Inches)			Weight (lbs.)
				Length	Width	Height	
78DT	78DT-72	850	1000	10-3/16	6-13/16	8-1/8	54
4D	COM-4D-P	1000	1200	19-9/16	8-5/16	10	95
8D	COM-8D-P	1155	1380	20-7/8	11	10	117

Battery Heaters



Blanket Style Battery Heaters

Thermostatically controlled battery thermal wraps provide optimum heating regardless of ambient temperature.

- ▶ At 80°F (27°C), the battery will achieve maximum cold cranking amps
- ▶ Battery is constantly maintained at 80°F (27°C)
- ▶ Provides greater heat rise than plates or pads
- ▶ Thermostat will eliminate battery damage caused by overheating



Part Number	Length	Voltage	Watts
14212	26"	120	50
14211	44"	120	80
14136	56"	120	100

Pad Style Battery Heaters

Thermostatically controlled battery pads provide optimum heating regardless of ambient temperature.

- ▶ Preset thermostat maintains 80°F (27°C) battery warmth for quick starts
- ▶ Complete with 8 ft. (2.4m) grounded cord
- ▶ Dimensions: 9" (22.8cm) Length x 6" (15.1cm) Width x 3/4" (1.8cm) Height



Part Number	Voltage	Watts
11662	120	200
14210	240	200

Note: This product not available in Canada (CSA approved model not available)

CAUTION: Battery heaters are not recommended for Nickel Cadmium batteries.

TPS Series Block Heaters

The TPS engine block heater is designed to preheat diesel and gaseous engines. It is simple to install, lightweight, and heats engines up to 12L displacement. Thermosiphon circulation of the coolant delivers even heat throughout the entire engine block.

Features

- ▶ cULus Listed
- ▶ CE Compliant
- ▶ Various temperature settings available, including an optional adjustable thermostat 90° - 130°F (32° - 54°C)
- ▶ Can be supplied with UL marked 120 or 240V NEMA plug



Specifications

Part Number	Volts	Watts	Amps	Male Plug	Outlet Size (Inches)
13224	120	500	4.2	Yes	5/8
14209	240	500	2.1	Yes	5/8
10014	120	1000	8.4	Yes	5/8
10015	240	1000	4.2	Yes	5/8
10016	120	1500	12.5	Yes	5/8
10017	240	1500	6.3	Yes	5/8
10018	120	1800	15	Yes	5/8
10019	240	2000	8.3	Yes	5/8

CB / CL Series Engine Block Heaters



Features

- ▶ Constant circulation of coolant through the engine achieves even heat distribution
- ▶ One-piece, heavy-duty, pressure die-cast aluminum tank with a bolt-on flange element assembly
- ▶ Fixed thermostat ON: 100°F, OFF: 120°F (optional temp ranges available)
- ▶ All parts replaceable - easy to service
- ▶ CSA and cULus approved
- ▶ Classified weather tight
- ▶ Models available for Class I, Group D (Hazardous Locations) applications
- ▶ Various voltages and 3 phase units available



▶ Easy Starts

- ▶ Saves warm-up time
- ▶ Saves fuel
- ▶ Prolongs battery life
- ▶ Protects the Environment
- ▶ Reduces “white smoke” upon start-up
- ▶ Engine is ready for full power operation
- ▶ Reduces noise pollution

▶ Reduces Engine Wear

- ▶ 90% of engine wear is due to low jacket water temp upon start-up
- ▶ Stops destructive condensation
- ▶ Extends engine life

Specifications

Part Number	Volts	Watts	Phase	Amps
10591	120	2500	1	20.8
11376	208	2500	1	12.0
10592	240	2500	1	10.4
14208	480	2500	1	5.2
11136	120	3000	1	25.0
11137	208	3000	1	14.4
10593	240	3000	1	12.5
11138	480	3000	1	6.3
11139	208	4000	1	19.2
10594	240	4000	1	16.7
11140	480	4000	1	8.3
11141	208	5000	1	24.0
10595	240	5000	1	20.8
11142	480	5000	1	10.4

DuraLite Air Cleaner (Single Stage)



DuraLite Air Cleaners are tough, non-metallic, lightweight, self-supporting and completely disposable. They are also easy to install, durable, and reliable. They are designed to function well under high and severe pulsation conditions found in many applications. Vibration-resistant media is potted into molded housings of rugged ABS plastic – so they don't fall apart as other designs might. They can be mounted vertically or horizontally.



SPECIFICATIONS

- ▶ No serviceable parts - Air cleaner housing and filter are one unit
- ▶ Designed to withstand severe intake pulsation
- ▶ Economical replacement cost
- ▶ Self-supporting, sturdy
- ▶ Very reliable: only one critical seal
- ▶ Lightweight and compact in size
- ▶ Non-metallic, non-corrosive
- ▶ Completely disposable - acceptable for normal trash pick-up (DuraLite should not be incinerated)
- ▶ Easily installed and maintained
- ▶ Minimal removal clearance needed: only 1.5"
- ▶ Three airflow styles available to fit virtually any engine intake configuration
- ▶ Various media available for specific genset applications: high pulsation, high humidity, etc.
- ▶ Temperature tolerance: 180°F/83°C continuous 220°F/105°C intermittent

Donaldson Dual Stage Air Cleaner



The Donaldson two-stage FRG radial seal air cleaners provide improved reliability, better durability and reduced weight compared to axial seal style air cleaner designs. Airflow ranges from 82 - 1600 cfm. Ideal for severe duty applications.



Air Cleaner Features

- ▶ Two stage filter system: the first stage removes up to 85% of incoming dust
- ▶ Inlet on side, outlet on end (G flow)
- ▶ Already tapped to accept filter service indicator
- ▶ Vacuator TM Valve automatically releases the pre-cleaned dust
- ▶ Durable, long-lasting finish
- ▶ Composed of two materials: injected molded, high strength polymer service cover and a metal body (the service cover is accessed by latches)

Filter Features

The Radial Seal filter inside the air cleaner is quite different from the conventional filters. It's one piece, molded urethane endcaps encase the filter media and liners – reducing components, adding reliability and lowering cost. The glued-on gasket found on the metal end cap of conventional filters is gone – the inside surface of the filter's open end is actually the sealing surface. For added engine protection during filter service, consider a model with a safety filter.

Two-Stage Filtration

Air cleaner has an integral pre-cleaning stage that separates up to 85% of the incoming dust. The primary filter stops the rest, resulting in engine air that is 99.99% free of dust.

Restriction Indicators



ServiSignal™ Mini Indicator

Small enough to fit just about anywhere (only 42 mm high), the Donaldson ServiSignal™ shows a highly visible, bright red flag in the full-view window when restriction limit is reached. Resets manually via top button after air cleaner service.

The Informer™ for Graduated, Continuous Readings

The Informer, when mounted on the air cleaner provides a continuous reading whether the engine is running or is shut down. Reset button is on top.



Mechanical Indicators

Part Number	Restriction Limits			Fitting
	mbar	Pa	In H2O	
ServiSignal™ Mini Indicators				
X002250	37	3700	15	1/8" - 27 NPT
X002251	50	5000	20	1/8" - 27 NPT
X770052	62	6200	25	1/8" - 27 NPT
X002254	75	7500	30	1/8" - 27 NPT
Informer™ Indicators				
X002278	50	5000	20	1/8" - 27 NPT
X002277	62	6200	25	1/8" - 27 NPT
X002275	75	7500	30	1/8" - 27 NPT

CPJ Series Critical Grade Silencers



Powerdak Power Products "CPJ" Series is the accumulation of research and development offering a compact silencer without compromising performance. It incorporates a unique combination of resonator chambers, acoustically packed internal components and diffusers to achieve a stunning level of performance for its size. All CPJ series silencers are critical grade silencers and are packed with insulation to greatly reduce radiated noise and exterior shell temperature.

Standard Construction Features

- ▶ Available in sizes from 2 inch to 12 inch
- ▶ Multitude of inlet/outlet design styles to meet almost any requirement
- ▶ Packed with fiberglass insulation to reduce shell temperature and noise levels
- ▶ Fully welded double shell carbon steel weldment construction, corrosive resistant
- ▶ High density fiberglass acoustic blanket good to 1500°F, wrapped with 304 Stainless Steel wire mesh cloth and encased in a carbon steel perforated facing
- ▶ Black phenolic resin based finish paint

Optional Construction Features and Accessories

- ▶ Stainless Steel construction
- ▶ Aluminum construction
- ▶ Aluminized Steel construction
- ▶ Vertical mounting legs
- ▶ Round mounting bands
- ▶ Horizontal mounting saddles
- ▶ Horizontal and vertical shell lugs
- ▶ Special finish per specification
- ▶ Air leak test
- ▶ ASME code construction
- ▶ Oversized flanges
- ▶ Acoustic shell lagging
- ▶ High temperature acoustic pack material
- ▶ Contact factory for additional features to meet your requirements



Model #	Part #	Inlet Size	Outlet Size	Flanged Connection	WT (lbs)
CPJS-02	10660	2.0" ID	2.0" OD	No	12
CPJS-25	10661	2.5" ID	2.5" OD	No	18
CPJS-03	10662	3.0" ID	3.0" OD	No	20
CPJS-35	10663	3.5" ID	3.5" OD	No	30
CPJS-04	10664	4.0" ID	4.0" OD	No	31
CPJS-05	10665	5.0" ID	5.0" OD	No	50
CPJS-06	10666	6.0" ID	6.0" OD	Yes	50
CPJS-08	10667	8.0" ID	8.0" OD	Yes	120
CPJS-10	10668	10.0" ID	10.0" OD	Yes	180

Jl Series Industrial Grade Silencers



Powerdak Power Products JI Series Standard Application

- ▶ Heavy-duty industrial grade silencer
- ▶ Designed for heavy-duty stationary and mobile power units
- ▶ Silencing is sufficient for commercial or industrial areas where ambient noise is relatively high

Standard Construction Features

- ▶ Aluminized Steel standard for silencers up to 26 inch body diameter
- ▶ Silencers larger than 26 inch body diameter standard carbon steel
- ▶ Can be mounted vertically or horizontally
- ▶ Standard high temperature (1200°F) satin black finish
- ▶ Fully welded steel construction
- ▶ 1/2" NPT Drains standard
- ▶ Standard NPT inlet and outlet connections on sizes 2 inch to 3.5 inch
- ▶ Standard 125/150# ASA drilled plate flanges on inlet and outlet of silencers 4 inch and larger
- ▶ Two-chamber design

Optional Construction Features and Accessories

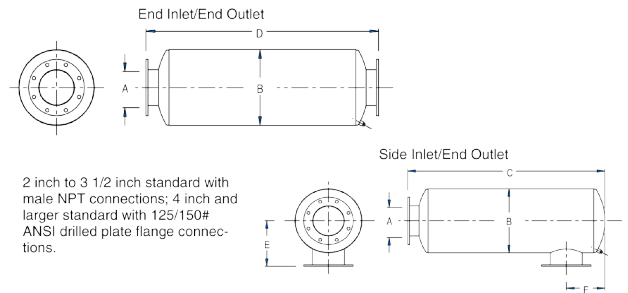
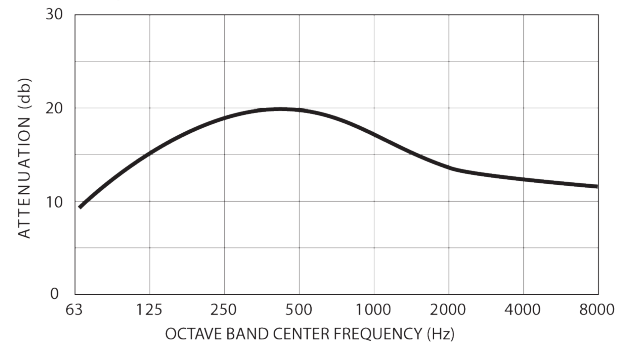
- ▶ Stainless Steel and Aluminum construction
- ▶ Special inlet and outlet connections
- ▶ Special inlet and outlet locations
- ▶ Special finishes available
- ▶ Vertical mounting legs
- ▶ Horizontal mounting saddles
- ▶ Mounting bands
- ▶ Horizontal and vertical shell legs
- ▶ Special acoustical designs
- ▶ Internal and external shell lagging
- ▶ Inspection openings
- ▶ Air leak tests
- ▶ ASME code construction
- ▶ Complete line of engine exhaust accessories

Engine Exhaust Silencer and Optional Accessories

- ▶ Exhaust Silencer
- ▶ Flexible Connector (Stainless Steel)
- ▶ Silencer Mounting Band
- ▶ Rain Cap
- ▶ Mitered Tail Pipe Extension
- ▶ Exhaust Elbows
- ▶ Mating Flanges / Gaskets
- ▶ Wall Thimble



Representative Attenuation Curve for "JI" Series Silencer



Model #	Part #	A	B	D	WT.	Model #	Part #	A	B	C	E	F	WT.
JIE-02	11402	2"	6"	24"	12	JIS-02	11403	2"	6"	22"	5.5"	3"	12
JIE-25	11404	2.5"	8"	24"	18	JIS-25	11405	2.5"	8"	22"	6.5"	3.7"	18
JIE-03	11406	3"	8"	25"	20	JIS-03	11407	3"	8"	22"	7"	4.2"	20
JIE-35	11408	3.5"	10"	31"	30	JIS-35	11409	3.5"	10"	29"	8"	5"	30
JIE-04	11410	4"	10"	32"	31	JIS-04	11411	4"	10"	29.5"	8.5"	5.5"	31
JIE-05	11412	5"	12"	44"	45	JIS-05	11413	5"	12"	41.6"	10"	7.6"	50
JIE-06	11414	6"	12"	44"	50	JIS-06	11415	6"	12"	41.6"	10"	7.6"	50
JIE-08	11416	8"	18"	56"	120	JIS-08	11417	8"	18"	54.5"	13"	10.5"	120
JIE-10	11418	10"	22"	72"	180	JIS-10	11419	10"	22"	69"	15"	15"	180
JIE-12	11420	12"	26"	72"	250	JIS-12	11421	12"	26"	69.5"	17"	17"	250

JC Series Critical Grade Silencers



Powerdak Power Products JC Series Standard Application

- ▶ Heavy-duty critical grade silencer
- ▶ Designed for heavy-duty stationary and mobile power units
- ▶ JC Series silencers provide a high degree of silencing where the ambient noise level is low and a high quality silencer is required

Standard Construction Features

- ▶ Aluminized Steel standard for silencers up to 26 inch body diameter
- ▶ Silencers larger than 26 inch body diameter standard carbon steel
- ▶ Can be mounted vertically or horizontally
- ▶ Standard high temperature (1200°F) satin black finish
- ▶ 1/2" NPT Drains standard
- ▶ Fully welded steel construction
- ▶ Standard NPT inlet and outlet connections on sizes 2 inch to 3.5 inch
- ▶ Standard 125/150# ASA drilled plate flanges on inlet and outlet of silencers 4 inch and larger
- ▶ Multi-chamber design

Optional Construction Features and Accessories

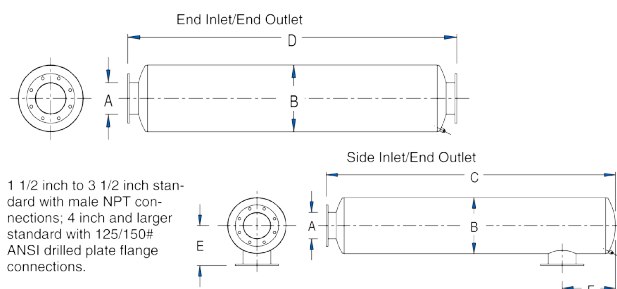
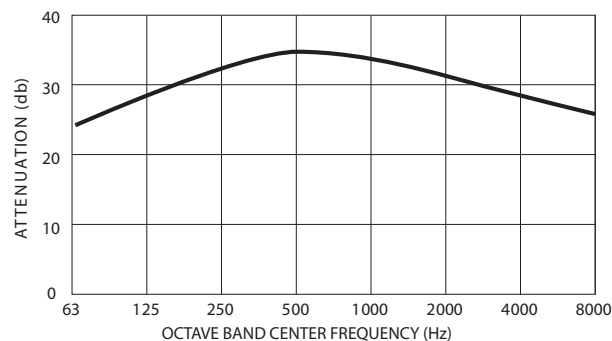
- ▶ Stainless Steel and Aluminum construction
- ▶ Special inlet and outlet connections
- ▶ Special inlet and outlet locations
- ▶ Special finishes available
- ▶ Vertical mounting legs
- ▶ Horizontal mounting saddles
- ▶ Mounting bands
- ▶ Horizontal and vertical shell legs
- ▶ Special acoustical designs
- ▶ Internal and external shell lagging
- ▶ Inspection openings
- ▶ Air leak tests
- ▶ ASME code construction
- ▶ Complete line of engine exhaust accessories

Engine Exhaust Silencer and Optional Accessories

- ▶ Exhaust Silencer
- ▶ Flexible Connector (Stainless Steel)
- ▶ Silencer Mounting Band
- ▶ Rain Cap
- ▶ Mitered Tail Pipe Extension
- ▶ Exhaust Elbows
- ▶ Mating Flanges / Gaskets
- ▶ Wall Thimble



Representative Attenuation Curve for "JC" Series Silencer



Model #	Part #	A	B	D	WT.	Model #	Part #	A	B	C	E	F	WT.
JCE-02	11450	2"	6"	42"	29	JCS-02	11451	2"	6"	39.7"	5.5"	7.2"	29
JCE-25	11452	2.5"	8"	42"	38	JCS-25	11453	2.5"	8"	39.8"	6.5"	7.4"	38
JCE-03	11454	3"	8"	43"	43	JCS-03	11455	3"	8"	40.6"	7"	7.4"	43
JCE-35	11456	3.5"	10"	55"	72	JCS-35	11457	3.5"	10"	53"	8"	9.2"	72
JCE-04	11458	4"	10"	56"	72	JCS-04	11459	4"	10"	53.5"	8.5"	9.2"	72
JCE-05	11460	5"	12"	68"	81	JCS-05	11461	5"	12"	65.6"	10"	12.2"	81
JCE-06	11462	6"	12"	68"	84	JCS-06	11463	6"	12"	65.6"	10"	12.2"	84
JCE-08	11464	8"	18"	92"	249	JCS-08	11465	8"	18"	90.5"	13"	16.5"	249
JCE-10	11466	10"	22"	108"	370	JCS-10	11467	10"	22"	105"	15"	20"	370
JCE-12	11468	12"	26"	120"	506	JCS-12	11469	12"	26"	117"	17"	21.5"	506

POWERDAK
POWER PRODUCTS

- ▶ Heavy-duty hospital grade silencer
- ▶ Designed for heavy-duty stationary and mobile power units
- ▶ JH Series are premium, critical degree silencers for use in low-ambient noise area where the standard critical grade silencer will not adequately suppress noise

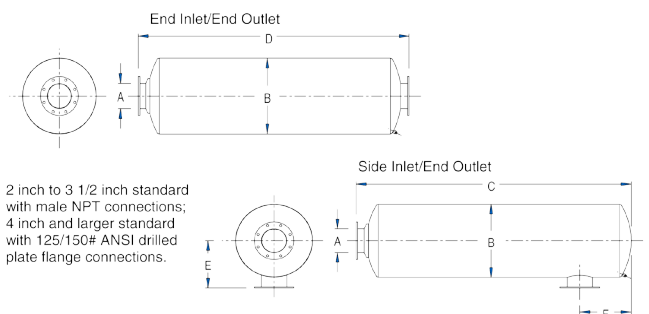
- ▶ Aluminized Steel standard for silencers up to 26 inch body diameter
- ▶ Silencers larger than 26 inch body diameter standard carbon steel
- ▶ Fully welded steel construction
- ▶ Can be mounted vertically or horizontally
- ▶ Standard high temperature (1200°F) satin black finish
- ▶ 1/2" NPT Drains standard
- ▶ Standard NPT inlet and outlet connections on sizes 2 inch to 3.5 inch
- ▶ Standard 125/150# ASA drilled plate flanges on inlet and outlet of silencers 4 inch and larger
- ▶ Multi-chamber design
- ▶ Effectively attenuates the full range of sound frequencies

- ▶ Stainless Steel and Aluminum construction
- ▶ Special inlet and outlet connections
- ▶ Special inlet and outlet locations
- ▶ Special finishes available
- ▶ Vertical mounting legs
- ▶ Horizontal mounting saddles
- ▶ Mounting bands
- ▶ Horizontal and vertical shell legs
- ▶ Special acoustical designs
- ▶ Internal and external shell lagging
- ▶ Inspection openings
- ▶ Air leak tests
- ▶ ASME code construction
- ▶ Complete line of engine exhaust accessories

- ▶ Exhaust Silencer
- ▶ Flexible Connector (Stainless Steel)
- ▶ Silencer Mounting Band
- ▶ Rain Cap
- ▶ Mitered Tail Pipe Extension
- ▶ Exhaust Elbows
- ▶ Mating Flanges / Gaskets
- ▶ Wall Thimble



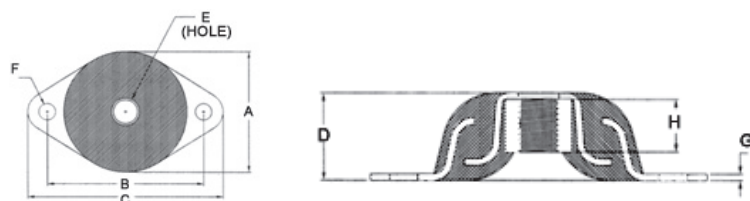
Octave Band Center Frequency (Hz)	Attenuation (dB)
63	28
125	35
250	39
500	40
1000	39
2000	37
4000	35
8000	34



Powerdak Power Products | 13261 Timberline Plaza - Suite A Piedmont, SD 57769 | Phone 1-605-341-9920 | dave@genproenergy.com

Compression Mounts (Dome Style Fail-Safe)

POWERDAK
POWER PRODUCTS



- Chemical and oil resistant black rubber

Part Number	A	B	C	D	E	F	G	H	Axial Spring Rate LBS/IN	Axial Max. Recommended Deflection	Axial Loads in LBS @ Max. Deflection
K61-40	3.25"	4.12"	5.38"	1.66"	1/2"	.53"	.12"	N/A	3000	.125"	375
K61-50	3.25"	4.12"	5.38"	1.66"	1/2"	.53"	.12"	N/A	6400	.125"	800
K61-60	3.25"	4.12"	5.38"	1.66"	1/2"	.53"	.12"	N/A	7400	.125"	925
K61-70	3.25"	4.12"	5.38"	1.66"	1/2"	.53"	.12"	N/A	11500	.125"	1425
K62-C40	3.94"	5.00"	6.25"	1.66"	3/4"	.53"	.12"	N/A	4150	.125"	525
K62-C50	3.94"	5.00"	6.25"	1.66"	3/4"	.53"	.12"	N/A	8300	.125"	1000
K62-C60	3.94"	5.00"	6.25"	1.66"	3/4"	.53"	.12"	N/A	10000	.125"	1250
K62-C70	3.94"	5.00"	6.25"	1.66"	3/4"	.53"	.12"	N/A	15600	.125"	1950
K62-S40	3.94"	5.00"	6.25"	1.66"	5/8"	.53"	.12"	N/A	4150	.125"	525
K62-S50	3.94"	5.00"	6.25"	1.66"	5/8"	.53"	.12"	N/A	8300	.125"	1000
K62-S60	3.94"	5.00"	6.25"	1.66"	5/8"	.53"	.12"	N/A	10000	.125"	1250
K62-S70	3.94"	5.00"	6.25"	1.66"	5/8"	.53"	.12"	N/A	15600	.125"	1950

Center Bonded Vibration Mounts (Two Piece)



The K190 mounts are designed for heavy duty applications where there are dynamic forces in multiple directions.

These are two-piece mounts installed through a mounting hole in a support structure. The mounts are fail-safe when used with snubbing washers. The mounts isolate in all directions.



- Chemical and oil resistant black rubber

Part Number	Diameter	Diameter	Mounting Hole dia.	Elastomer Diameter	Flange Thickness	Support Structure Thickness	Installed Length	Radius Required	Shore A Durometer	Axial Spring Rate LBS/IN	Maximum Axial Recommended Deflection	Axial Load in LBS @ Max. Deflection	Radial Spring Rate LBS/IN	Maximum Radial Recommended Deflection	Radial Load in LBS @ Max. Deflection
K1901-40	.39"	1.25" / 1.25"	.74"	.78"	.50"	.125" / .125"	.98"	.03"	40	900	.05"	45	N/A	N/A	N/A
K1901-50	.39"	1.25" / 1.25"	.74"	.78"	.50"	.125" / .125"	.98"	.03"	50	1600	.05"	80	N/A	N/A	N/A
K1901-60	.39"	1.25" / 1.25"	.74"	.78"	.50"	.125" / .125"	.98"	.03"	60	2200	.05"	110	N/A	N/A	N/A
K1901-70	.39"	1.25" / 1.25"	.74"	.78"	.50"	.125" / .125"	.98"	.03"	70	3700	.05"	185	N/A	N/A	N/A
K1902-40	.39"	1.31" / 1.31"	.75"	.79"	.485"	.375" / .375"	1.25"	.04"	40	1000	.05"	50	2900	.012"	35
K1902-50	.39"	1.31" / 1.31"	.75"	.79"	.485"	.375" / .375"	1.25"	.04"	50	1800	.05"	90	4500	.012"	55
K1902-60	.39"	1.31" / 1.31"	.75"	.79"	.485"	.375" / .375"	1.25"	.04"	60	2500	.05"	130	6600	.012"	80
K1902-70	.39"	1.31" / 1.31"	.75"	.79"	.485"	.375" / .375"	1.25"	.04"	70	4100	.05"	200	10000	.012"	120
K1902-30	.39"	1.31" / 1.31"	.75"	.79"	.485"	.375" / .375"	1.25"	.04"	30	650	.05"	34	2100	.012"	24
K1902-30S	.39"	1.31" / 1.31"	.75"	.79"	.485"	.155" / .155"	1.125"	.04"	30	N/A	N/A	N/A	N/A	N/A	N/A
K1902-40S	.39"	1.31" / 1.31"	.75"	.79"	.485"	.155" / .155"	1.125"	.04"	40	N/A	N/A	N/A	N/A	N/A	N/A
K1902-50S	.39"	1.31" / 1.31"	.75"	.79"	.485"	.155" / .155"	1.125"	.04"	50	N/A	N/A	N/A	N/A	N/A	N/A
K1902-60S	.39"	1.31" / 1.31"	.75"	.79"	.485"	.155" / .155"	1.125"	.04"	60	N/A	N/A	N/A	N/A	N/A	N/A
K1902-70S	.39"	1.31" / 1.31"	.75"	.79"	.485"	.155" / .155"	1.125"	.04"	70	N/A	N/A	N/A	N/A	N/A	N/A
K1903-40	.531"	1.88" / 1.88"	1.25"	1.30"	.78"	.500" / .563"	1.94"	.06"	40	1600	.07"	110	2400	.025"	60
K1903-50	.531"	1.88" / 1.88"	1.25"	1.30"	.78"	.500" / .563"	1.94"	.06"	50	2200	.07"	150	3200	.025"	80
K1903-60	.531"	1.88" / 1.88"	1.25"	1.30"	.78"	.500" / .563"	1.94"	.06"	60	2800	.07"	200	5100	.025"	120
K1903-70	.531"	1.88" / 1.88"	1.25"	1.30"	.78"	.500" / .563"	1.94"	.06"	70	5500	.07"	380	8300	.025"	210
K1904-40	.657"	2.55" / 2.55"	1.50"	1.58"	.90"	.750" / .875"	2.45"	.09"	40	2500	.09"	220	4500	.03"	130
K1904-50	.657"	2.55" / 2.55"	1.50"	1.58"	.90"	.750" / .875"	2.45"	.09"	50	3100	.09"	280	6000	.03"	180
K1904-60	.657"	2.55" / 2.55"	1.50"	1.58"	.90"	.750" / .875"	2.45"	.09"	60	4300	.09"	380	9600	.03"	280
K1904-70	.657"	2.55" / 2.55"	1.50"	1.58"	.90"	.750" / .875"	2.45"	.09"	70	7100	.09"	640	13000	.03"	390
K1905-40	.938"	3.50" / 3.50"	2.25"	2.30"	1.00"	1.00" / 1.125"	2.90"	.12"	40	2300	.10"	230	3100	.048"	150
K1905-50	.938"	3.50" / 3.50"	2.25"	2.30"	1.00"	1.00" / 1.125"	2.90"	.12"	50	4300	.10"	430	4500	.048"	210
K1905-60	.938"	3.50" / 3.50"	2.25"	2.30"	1.00"	1.00" / 1.125"	2.90"	.12"	60	6800	.10"	680	7700	.048"	370
K1905-70	.938"	3.50" / 3.50"	2.25"	2.30"	1.00"	1.00" / 1.125"	2.90"	.12"	70	9200	.10"	920	10300	.048"	500
K1906-40	1.06"	4.88" / 4.88"	2.50"	2.55"	1.25"	1.00" / 1.125"	3.40"	.12"	40	4800	.12"	580	370	.057"	210
K1906-50	1.06"	4.88" / 4.88"	2.50"	2.55"	1.25"	1.00" / 1.125"	3.40"	.12"	50	6500	.12"	780	5700	.057"	320
K1906-60	1.06"	4.88" / 4.88"	2.50"	2.55"	1.25"	1.00" / 1.125"	3.40"	.12"	60	10700	.12"	1280	9200	.057"	520
K1906-70	1.06"	4.88" / 4.88"	2.50"	2.55"	1.25"	1.00" / 1.125"	3.40"	.12"	70	13600	.12"	1630	10900	.057"	620

Vibration Isolation Pads



These ultra durable neoprene pads can be used to effectively control noise and vibration, particularly in applications involving power generation equipment. These pads are available in a multitude of sizes to meet the needs of almost any installation application. They have a smooth pattern on both sides and are colored black.

Features

- ▶ 60 durometer neoprene
- ▶ Solid construction (unlike waffle pads) offers higher loading per square inch
- ▶ Max loading: 1015 PSI
- ▶ Sizes to fit almost any application
- ▶ 1/4" thickness
- ▶ Aids in sound dampening by reducing high frequency noise
- ▶ Easily cut to any desired shape
- ▶ Can be used in multiple layers to increase deflection
- ▶ Chemical and oil resistant
- ▶ -40°F to 194°F temperature range



Specifications

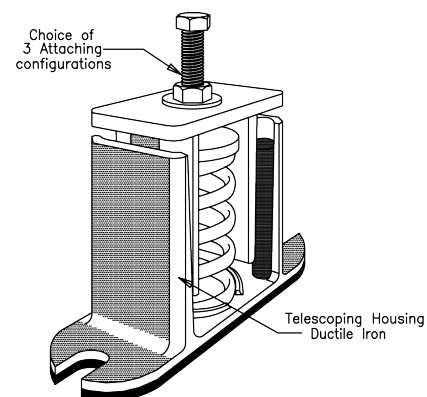
Pad Size (inches)	Part #	Max Load Per Pad	Mounting Hole Size
2 x 4 x 1/4	10155	8120 lbs.	9/16"
2 x 6 x 1/4	10156	12180 lbs.	11/16"
2 x 8 x 1/4	10157	16240 lbs.	13/16"
3 x 8 x 1/4	10158	24360 lbs.	13/16"
2 1/2 x 10 x 1/4	10159	25375 lbs.	13/16"
3 x 12 x 1/4	10160	36540 lbs.	13/16"

TJ Vibration Isolators

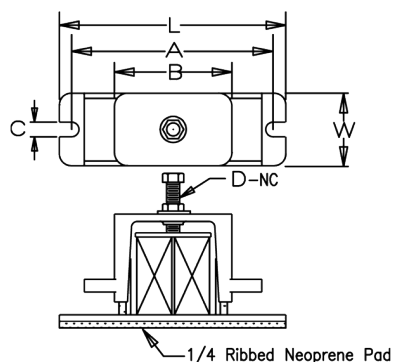


Steel compression springs isolate loads up to 7840 lbs per mount. Moderate spring deflections generally result in usage under medium through high speed equipment such as engine generator sets.

Non-Earthquake Rated



Specifications



P/N	A	B	C	D	L	W
TJB	5 $\frac{3}{8}$	4 $\frac{7}{16}$	$\frac{9}{16}$	$\frac{1}{2}$	6 $\frac{5}{8}$	2
TJC	12	7	$\frac{5}{8}$	$\frac{5}{8}$	13	2 $\frac{3}{8}$
TJE	12	7	1 $\frac{1}{16}$	$\frac{5}{8}$	13	4 $\frac{5}{8}$

1 SPRING		
TYPE	MAXIMUM LOAD (Lbs.)	Max. Defl. (Inches)
TJB	21	1 . 13
TJB	55	1 . 13
TJB	79	1 . 13
TJB	106	1 . 13
TJB	120	2 . 30
TJB	155	2 . 20
TJB	187	1 . 13
TJB	244	1 . 13
TJB	318	1 . 13
TJB	395	1 . 80
TJB	511	1 . 50
TJB	715	1 . 30
*TJB	1060	1 . 00
*TJB	1520	. 78
*TJB	1960	. 78

2 SPRINGS		
TYPE	MAXIMUM LOAD (Lbs.)	Max. Defl. (Inches)
TJC	42	1 . 13
TJC	110	1 . 13
TJC	158	1 . 13
TJC	212	1 . 13
TJC	240	2 . 30
TJC	310	2 . 20
TJC	374	1 . 13
TJC	488	1 . 13
TJC	636	1 . 13
TJC	790	1 . 80
TJC	1022	1 . 50
TJC	1430	1 . 30
*TJC	2120	1 . 00
*TJC	3040	. 78
*TJC	3920	. 78

4 SPRINGS		
TYPE	MAXIMUM LOAD (Lbs.)	Max. Defl. (Inches)
TJE	84	1 . 13
TJE	220	1 . 13
TJE	316	1 . 13
TJE	424	1 . 13
TJE	480	2 . 30
TJE	620	2 . 20
TJE	748	1 . 13
TJE	976	1 . 13
TJE	1272	1 . 13
TJE	1580	1 . 80
TJE	2044	1 . 50
TJE	2860	1 . 30
*TJE	4240	1 . 00
*TJE	6080	. 78
*TJE	7840	. 78

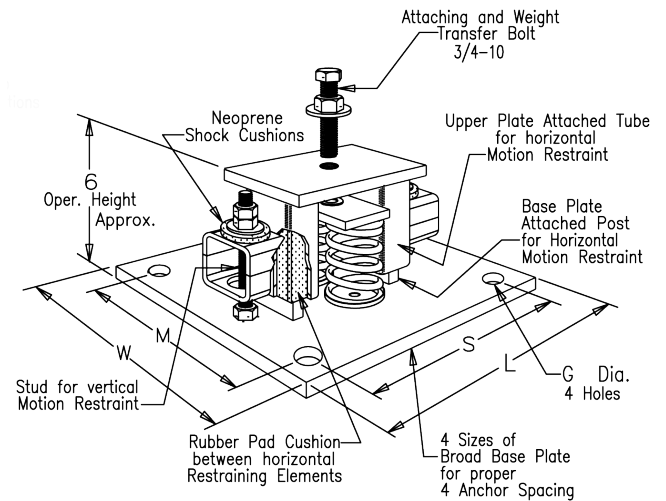
RJJEQ Vibration Isolators



Steel compression springs isolate loads up to 5880 lbs per mount. Moderate spring deflections generally result in usage under medium through high speed equipment such as engine generator sets.

Earthquake Restraints

Pre-Approval # OPA-0012 has been granted by California's Office of Statewide Health Planning and Development (OSHPD).



Specifications

VIBRATION ISOLATION RATINGS				
Type	SIZE	Max. Load (lbs)	Max. Defl. (in)	Spring Rate (lbs/in)
RJJEQ	A, B or C	158	1 . 13	140
RJJEQ	A, B or C	212	1 . 13	188
RJJEQ	A, B or C	240	2 . 30	104
RJJEQ	A, B or C	310	2 . 00	155
RJJEQ	A, B or C	374	1 . 1	340
RJJEQ	A, B or C	402	1 . 70	236
RJJEQ	A, B or C	488	1 . 13	432
RJJEQ	A, B or C	592	1 . 60	370
RJJEQ	A, B or C	636	1 . 13	562
RJJEQ	A, B or C	790	1 . 80	440
RJJEQ	A, B or C	1022	1 . 50	682
RJJEQ	A, B or C	1430	1 . 30	1100
RJJEQ	A, B or C	1602	1 . 00	1602
RJJEQ	A, B or C	2120	1 . 00	2120
RJJEQ	A, B or C	3040	. 78	3900
RJJEQ	A, B or C	3920	. 78	5030
RJJEQ	D	1533	1 . 50	1023
RJJEQ	D	2145	1 . 30	1650
RJJEQ	D	2403	1 . 13	2127
RJJEQ	D	3180	1 . 00	3180
RJJEQ	D	4560	. 78	5844
RJJEQ	D	5880	. 78	7569

PRE-APPROVED MAXIMUM ALLOWABLE LOADS		
HORIZONTAL	3570	Lbs.
VERTICAL	6780	Lbs.

Size	A	B	C	D
L	10	10	12	12
S	8½	8½	10	10
W	7½	9	10½	12
M	6	7½	9	10
G	5⅞	3¼	7⅞	7⅞

TYPICAL CALLOUTS

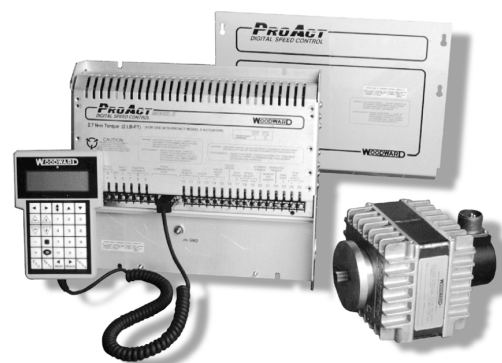
Type RJJEQ B 1022 Max. Load Size

Digital Electric Powered Governor Systems

POWERDAK
POWER PRODUCTS

The ProAct control system is a combination of a 16-bit microprocessor control and a limited-angle rotational torque motor (actuator). The system features user-friendly menus to provide extreme flexibility in the development of special control schemes for different types of engines (requires optional display module).

- ▶ 75° rotary output allows direct coupling to fuel rack, eliminating linkage
- ▶ All-electric actuator requires no drive or hydraulic supply
- ▶ Programmable digital electronics permit tailoring control to various applications
- ▶ Actuators are extremely fast, electronically positioned in both directions
- ▶ Alternate dynamics for dual fuel applications or cogen/standby
- ▶ 3 speed-activated switches
- ▶ Start fuel limit and maximum fuel limit for derating
- ▶ Manifold pressure fuel limiting
- ▶ Two-slope torque limiting



Specifications

Two different ProAct actuators are available. The ProAct I actuator provides 1.4 Nm (1.0 lb-ft) of torque in steady state and 3.55 J (2.62 ft-lbs) of work over 75° of travel. The ProAct II provides 2.7 Nm (2.0 lb-ft) of torque in steady state and 7.11 J (5.24 ft-lbs) of work over the 75° of rotation.

The control has two complete sets of dynamic adjustments to aid when operating with such conditions as two different fuels, or in parallel/stand-alone electrical generation. A four-slope gain schedule is available in each set of dynamics. This permits programming for extremely responsive yet extremely stable operation of carbureted engines. Adjustment of the ProAct control is done through a hand held programmer (optional). The programmer allows access to all of the tunable items. The programmer is separate from the control, and will normally be unplugged and removed during governor system operation. This provides security against unauthorized tampering with system adjustments. The control may be tuned or monitored with a PC rather than with the hand held programmer, if desired.

Actuator

Output Shaft

0.500-36 inch serration on output shaft. Opposite side used for feedback device. (Other configurations available upon request.)

Operating Temperature Range

-40 to +100 °C (-40 to +212°F) operating environment. Contact Woodward for extreme temperature installation procedures.

Feedback

Brushless Hall effect feedback device directly connected to actuator shaft.

Installation

May be mounted on 2.250 inch (57.15 mm) diameter male pilot concentric to the terminal shaft using four bolts through the actuator or with four 0.312-18 inch bolts into the base (M8-6H metric optional). The actuator may be mounted in any attitude. May be connected directly to butterfly shaft, or may be linked to rack or valve.

Weight

The ProAct I and ProAct II actuators each weigh 6.9 kg (15.25 lbs).

Construction

All external surfaces are resistant to water and salt water corrosion. Actuator is waterproof at normal water hose pressure. Do not high-pressure wash.

Vibration and Shock Tested

Tested to US MIL-STD-810C.

MIN Fuel Return Spring

The actuator is equipped with a light spring return toward min fuel to prevent drift in case of position signal interruption. Normal operating conditions do not require spring return, as the actuator is powered in both the increase and decrease directions.

Direction of Rotation

All models are capable of either clockwise or counterclockwise rotation to increase fuel.

Control

Speed

Dynamics maps are field selectable for either low speed (8-300 rpm) or high speed (300-2100 rpm).

Dynamics

Two menus for engine dynamics are switch-selectable for alternate fuel, alternate loads, etc. Four different gain settings in each dynamics menu tailor governor response to various conditions depending on load or non-linearity in the fuel control system.

Limiters

Limiters set minimum, idle, and maximum fuel settings, and minimum and maximum torque schedules. Two-slope torque limit schedule with program-selected breakpoint is available.

Speed Switches

Three speed switches are included with programmable on and off positions according to engine speed. The switches may be used to indicate cranking, idle, rated, or overspeed operation. Switch output is 500 mA when closed. Increase-speed trip points may vary from decrease-speed trip points.

Droop

Two droop schedules are available, with a programmable switch point between idle droop and rated droop.

Speed Reference

Programmable minimum and maximum limiters with 4-20 mA remote reference to raise and lower the rated speed. Rate of change of speed reference may be programmed with different rates for raise and lower.

Accel and Decel Ramps

Acceleration and deceleration times may be programmed to protect engines from damage or to protect processes from sudden changes.

Supply Voltage Range

8-32 Vdc for ProAct I 18-32 Vdc for ProAct II

Stainless Steel Fuel Flexes



PCS Series Flexible Connectors

- ▶ Provide superior vibration isolation
- ▶ Thermal expansion protection
- ▶ Suitable for natural gas, LP vapor, water, and oil applications
- ▶ Custom lengths and fittings available

Construction Materials

- ▶ Flexible section:
(Hose & Braid: Type 321 Stainless Steel)
- ▶ Fittings: Carbon Steel Schedule 40
- ▶ Male pipe thread on both ends



Specifications

Size (NPT)	Part Number	Overall Length	Max Working PSI @ 70° F
3/4"	10147	7"	750
1"	10148	8"	605
1 1/2"	11013	9"	525
2"	11133	10.5"	455
2 1/2"	11134	12"	345
3"	11135	12"	345

Gen-Set Trailers



Mobile Power

Powerdak Power Products gen-set trailers are specifically designed and manufactured for the transportation of mobile generators. All trailers are built to last with heavy duty steel construction. Powerdak Power Products offers custom trailers to fit almost any size or specification up to 600 kWe. Rental grade mobile generators and options available upon request.



Standard Features

- ▶ All Steel Formed or Structural Channel Construction
- ▶ Adjustable Tongue Mounted Jack
- ▶ 2 5/16" Ball Coupler or 3" Pintle Eye
- ▶ Safety Chains
- ▶ DOT Lighting / DOT Reflective Tape
- ▶ License Plate Mount with Light
- ▶ Six Pole Connector Plug
- ▶ Breakaway Kit (Electric Brakes Only)
- ▶ Spring Axles
- ▶ Radial Tires With Rims
- ▶ Two (2) Adjustable Rear Stabilizing Jacks
- ▶ Tie Down Brackets for Shipping
- ▶ Jeep Style Fenders
- ▶ Durable Two Part Catalyzed Epoxy Paint Finish

Design Options:

- ▶ Single or Double Wall Tank Integral to Trailer
- ▶ Hydraulic Surge Brakes
- ▶ Spare Tire With Mounting Bracket
- ▶ Cable/Storage Box, Lockable
- ▶ Bolt-On Fenders
- ▶ Drop or Torsion Axles
- ▶ Wheel Chocks
- ▶ LED Lighting Package
- ▶ Powder Coat Finish
- ▶ Galvanneal Construction
- ▶ Single Point Lift
- ▶ Two (2) Adjustable Front Stabilizing Jacks
- ▶ Power Distribution Center
- ▶ Diamond Plate Accessories

Powerdak Power Products offers trailer designs according to the gross vehicle weight. Powerdak Power Products's flexibility allows for custom designed trailers to fit almost any unique specification or requirement. All trailers meet DOT requirements. Trailer option voids UL 2200 Listing and CSA Certification.

Available Models

Model	Number of Axles	Gross Vehicle Weight Rating
T7000-2	Two	7000 lbs.
T10000-2	Two	10000 lbs.
T12000-2	Two	12000 lbs.
T16000-2	Two	16000 lbs.
T20000-2	Two	20000 lbs.
T30000-3	Three	30000 lbs.



Unit with Level 1 enclosure mounted on tandem axle trailer equipped with front storage option.

Paint & Powder Coat



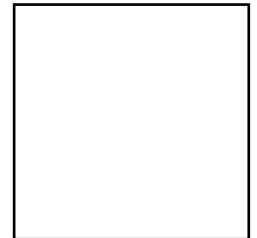
Gen-Set

Powerdak Power Products offers Cardinal Industrial Hammer Textured Semi-Gloss Paint as standard on all of our generator sets. Cardinal offers excellent coverage, performance characteristics, and superior durability. Cardinal paint exceeds UL requirements.

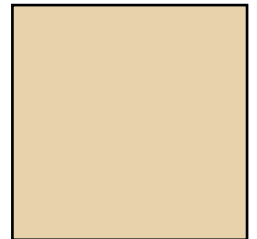
Performance Characteristics

- ▶ 3.0+ Mils TDFT
- ▶ Xenon Arc 1100 hours - Excellent Weatherability
- ▶ 1000 Hour Salt Spray - Over Primer - Passed (3.0 Mils Total TDFT)
- ▶ Adhesion, Crosshatch - 5B
- ▶ Gloss 90+ @ 60°

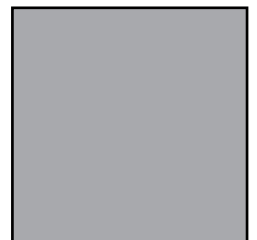
Standard Colors



White | T012-WH260



Tan / Beige | T012-BG755



Gray | C013-GR08

Colors shown are only approximate representation of actual color.

Gen-Set Enclosure and Base

Powerdak Power Products offers Cardinal Industrial Hammer Textured Semi-Gloss Polyester Powder Coating as standard on all our enclosures and bases. Long term exterior durability, high performance mechanical properties, high gloss, and smoothness are common characteristics of Cardinal. Cardinal TGIC Polyester Coating exceed UL requirements.

Performance Characteristics

- ▶ Cured Powder Properties 2.0+ Mils DFT
- ▶ PCI Powder Smoothness 1 Mil
- ▶ Pencil Hardness 2H+
- ▶ Flexibility 1/8 in Diameter - No Fracture
- ▶ Salt Spray ASTM-B117 1000 Hours - Pass
- ▶ Humidity ASTM-02247 1000 Hours - Pass
- ▶ Adhesion, Crosshatch - 5B
- ▶ Gloss 90+ @ 60°



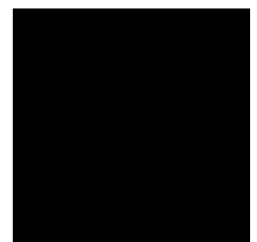
Custom Colors: Powerdak Power Products offers custom color options for your generator set enclosure (NOTE: Custom Colors not available in hammer textured finish). Cardinal is licensed by PANTONE® to accurately simulate both the PANTONE MATCHING SYSTEM® colors and the PANTONE Textile Color System® with our powder and liquid coatings. Please provide PANTONE number with your order. Additional Charges apply.

Sub-Base Fuel Tanks

Powerdak Power Products offers Diamond Vogel Nexgen Technology Paint on all of our sub-base fuel tanks. Nexgen offers excellent coverage and performance characteristics. Nexgen paint exceeds UL requirements. Some tanks offer Cardinal Industrial Hammer Textured Semi-Gloss Polyester Powder Coat.

Performance Characteristics

- ▶ 3.0+ Mils TDFT
- ▶ Xenon Arc 1100 Hours - Excellent Weatherability
- ▶ 500 Hour Salt Spray - Over Primer - Passed (3.0 Mils Total TDFT)
- ▶ Adhesion Crosshatch - 5B
- ▶ Gloss 90+ @ 60°



Jet Black | IB-9541

What Is UL 2200 Listing & Why Is It Important?



Underwriters Laboratories Inc. (UL) is the leading independent product safety certification organization in the United States. Founded in 1894, UL is an impartial and not-for-profit organization devoted to safety testing of a wide assortment of products. The UL Listing mark is widely recognized as a standard for various electrical and building codes and is often called for as a specification.

The UL 2200 Listing is a comprehensive safety standard encompassing the design, construction and performance of stationary generators. This benchmark will be increasingly important to manufacturers, specifying engineers and end users alike, since national and municipal electrical codes will mandate UL 2200 Listing for all standby installations in coming years.

When manufacturers bring their products to UL, they are subjecting them to extremely rigorous safety testing. Manufacturers not only enhance the value of their products, they are also strengthening their own brands among consumers who perceive a manufacturer's commitment to safety. Because of the many rigorous tests, a manufacturer must follow stringent UL guidelines in creating, building and testing its products in-house to UL's uncompromising standards. The Listing process involves numerous steps: creation of product, construction descriptions, process reviews, design modifications as needed and product testing. It is a comprehensive procedure focused upon manufacturing standards and product safety. With the addition of UL 2200 Listed product, Powerdak Power Products has positioned itself as a leader in providing state-of-the-art electrical power generation and energy solutions.

Powerdak Power Products offers Diesel and Gaseous models ranging from 25 kWe to 2000 kWe that are UL 2200 listed.

GASEOUS PRODUCT LINE OVERVIEW

POWERDAK
POWER PRODUCTS

Gaseous Product Line

25 - 425 kWe

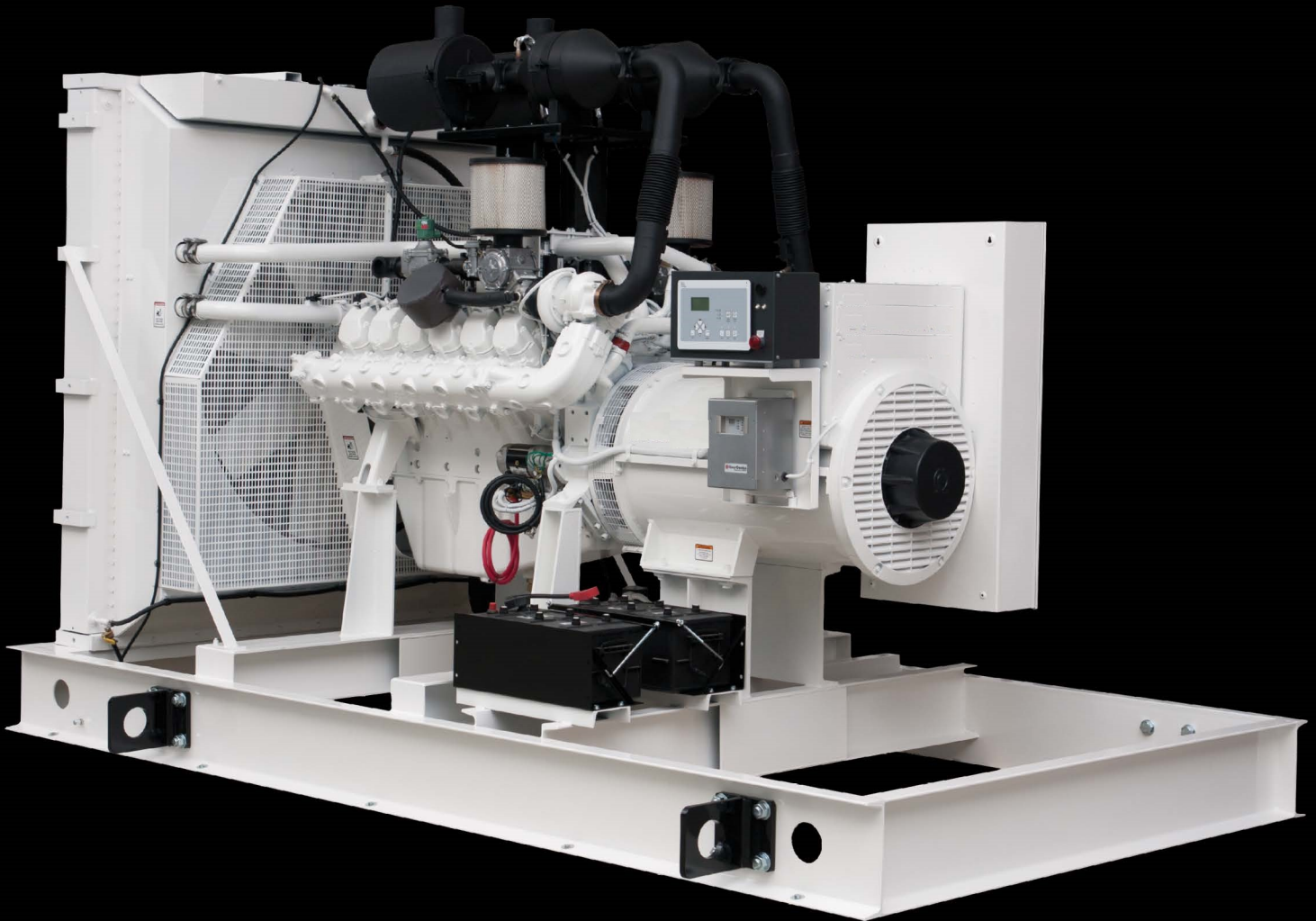
60 Hz at 1800 RPM

Engine Manufacturers

General Motors

Power Solutions Int.

Powerdak Power Products offers gaseous generator sets ranging from 25 - 425 kWe. From prime power to back-up emergency power, our experience in gas makes ease of a wide variety of applications in a multitude of environments. Special applications that require gaseous options because of local fuel codes, containment, or customer preferences are available in natural gas, propane, and combined fuel options. Meeting the most current EPA standards ensures offering the most innovative technical solutions for reducing emissions, and providing you with the best unit for your application.



Emergency Standby Stationary

Unit Model	kWe		cULus/ CSA	EPA	Engine		Alternator Manufacturer	Available Voltages	
	NG	LP			Manufacturer	Model		3 Phase 208 - 600 Volt - 0.8 PF	1 Phase 240 Volt - 1.0 PF
GM25-02	25	25	Standard	Certified	General Motors	GM 3.0L	Marathon	Available	Available
GM40-04	40	40	Standard	Certified	General Motors	GM 5.7L	Marathon	Available	Available
GM50-03	50	50	Standard	Certified	General Motors	GM 5.7L	Marathon	Available	Available
GM60-02	60	60	Standard	Certified	General Motors	GM 5.7L	Marathon	Available	Available
GM100-03	90	80	Standard	Certified	General Motors	GM 5.7LTCAC	Marathon	Available	Available
PS125-01	110	105	Standard	Certified	Power Solutions Int.	PSI 8.8LT	Marathon	Available	Available
PS130-01	130	125	Standard	Certified	Power Solutions Int.	PSI 8.8LTCAC	Marathon	Available	Available
PS150-01	150	125	Standard	Certified	Power Solutions Int.	PSI 8.8LTCAC	Marathon	Available	Available
NG150-01	150	95	Standard	Certified	Power Solutions Int.	PSI D081TIC	Marathon	Available	Available
NG200-01	190	130	Standard	Certified	Power Solutions Int.	PSI D111TIC	Marathon	Available	Available
NG265-01	265	155	Standard	Certified	Power Solutions Int.	PSI D146TIC	Marathon	Available	Available
NG300-01	300	155	Standard	Certified	Power Solutions Int.	PSI D146LTICHO	Marathon	Available	Available
NG350-01	350	225	Standard	Certified	Power Solutions Int.	PSI D183TIC	Marathon	Available	N/A
NG400-01	400	300	Standard	Certified	Power Solutions Int.	PSI D219TIC	Marathon	Available	N/A
NG425-01	425	300	Standard	Certified	Power Solutions Int.	PSI D219LTICHO	Marathon	Available	N/A

Prime Power Stationary

Unit Model	kWe		cULus/ CSA	EPA	Engine		Alternator Manufacturer	Available Voltages	
	NG	LP			Manufacturer	Model		3 Phase 208 - 600 Volt - 0.8 PF	1 Phase 240 Volt - 1.0 PF
GM25-02P	25	25	Available	Certified	General Motors	GM 3.0L	Marathon	Available	Available
GM40-02P	35	35	Available	Certified	General Motors	GM 4.3L	Marathon	Available	Available
GM60-02P	55	55	Available	Certified	General Motors	GM 5.7L	Marathon	Available	Available
NG150-01P	125	N/A	Available	Certified	Power Solutions Int.	PSI D081TIC	Marathon	Available	Available
NG200-01P	175	N/A	Available	Certified	Power Solutions Int.	PSI D111TIC	Marathon	Available	Available
NG265-01P	230	N/A	Available	Certified	Power Solutions Int.	PSI D146TIC	Marathon	Available	Available
NG350-01P	300	N/A	Available	Certified	Power Solutions Int.	PSI D183TIC	Marathon	Available	N/A
NG400-01P	350	N/A	Available	Certified	Power Solutions Int.	PSI D219TIC	Marathon	Available	N/A

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM25-02

60 Hz / 1800 RPM

25 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	283PSL1707	283PSL1706	283PSL1706	283PSL1706	283PSL5250
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	25 (25)	25 (25)	25 (25)	25 (25)	25 (25)
AMPS Nat (LP)	104 (104)	87 (87)	75 (75)	38 (38)	30 (30)
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
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ 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

25 kWe



Application Data

Engine			
Manufacturer:	General Motors	Displacement - Cu. In. (lit):	181 (3.00)
Model:	GM 3.0L EPA	Bore - in. (cm) x Stroke - in. (cm):	4.00 (10.2) x 3.60 (9.1)
Type:	4-Cycle	Compression Ratio:	9.30:1
Aspiration:	Natural	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	51.5 (38.4)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	249 (7.05)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	16.8 (63.6)
Heat Rejection to Coolant: BTUM (kW)	1,436 (25.1)
Heat Rejection to CAC: BTUM (kW)	N/A
Heat Radiated to Ambient: BTUM (kW)	326 (5.70)

Air Requirements	
Aspirating: CFM (m³/min)	77.2 (2.18)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	4,752 (135)
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)	431 (12.2)	184 (5.21)
At 75% of Power Rating: ft³/hr (m³/hr)	339 (9.59)	140 (3.96)
At 50% of Power Rating: ft³/hr (m³/hr)	262 (7.41)	104 (2.94)
Fuel Inlet Size: NPT		0.75"
Fuel Pressure Required: in. H₂O (kPa)		7.00 (1.75) - 11.0 (2.75)

Fluids Capacity	
Total Oil System: gal (lit)	1.00 (3.79)
Engine Jacket Water Capacity: gal (lit)	1.00 (3.79)
System Coolant Capacity: gal (lit)	3.90 (14.8)

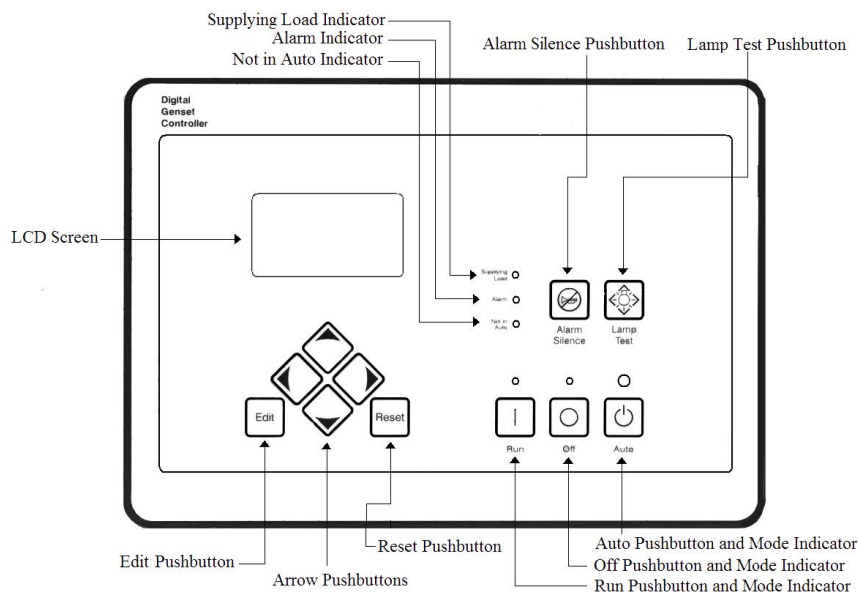
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft Over 328 ft

DGC-2020 Control Panel

Standard Features

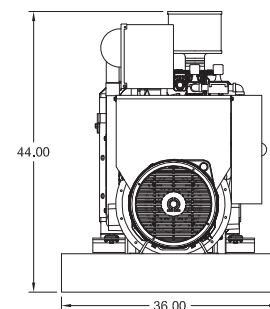
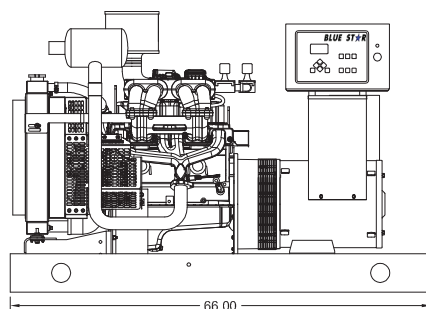
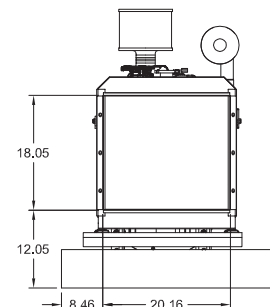
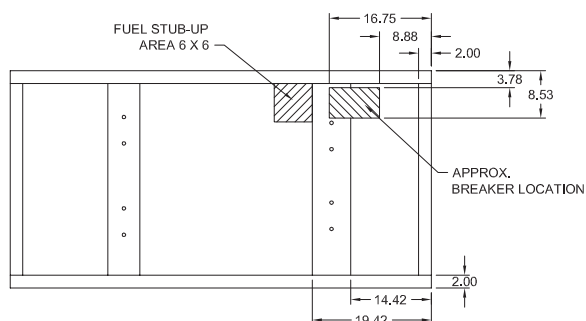
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	66 x 36 x 44 in	1,050
Level 1	80 x 36 x 48 in	1,400
Level 2	80 x 36 x 48 in	1,425
Level 3	104 x 36 x 48 in	1,550

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



	No Load	Full Load
OPU	73 dBA	75 dBA
Level 1	66 dBA	68 dBA
Level 2	64 dBA	66 dBA
Level 3	61 dBA	62 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.

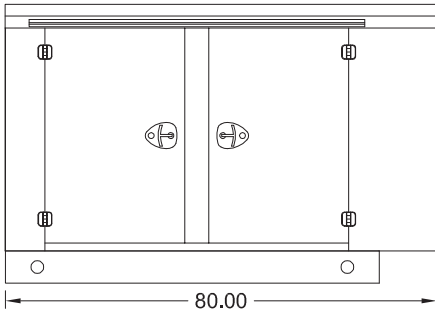
Gaseous Product Line

25 kWe

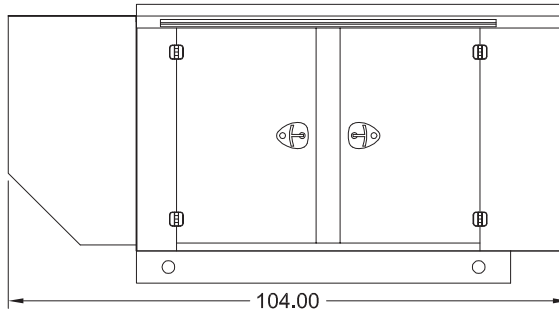


Enclosures

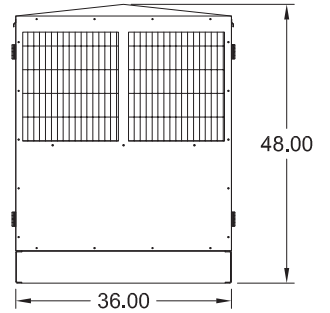
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



American Made

Distributed By:

Powerdak Power Products

3350 Jet Dr

Rapid City , South Dakota 57703

Phone + 1 605 341 6160

dave@genproenergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM25-02P

60 Hz / 1800 RPM

25 kWe

Prime

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	284PSL1708	283PSL1707	283PSL1707	283PSL1706	283PSL5250
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Prime					
kWe Nat (LP)	25 (25)	25 (25)	25 (25)	25 (25)	25 (25)
AMPS Nat (LP)	104 (104)	87 (87)	75 (75)	38 (38)	30 (30)
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ $\pm 1\%$ Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst 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
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

25 kWe



Application Data

Engine			
Manufacturer:	General Motors	Displacement - Cu. In. (lit):	181 (3.00)
Model:	GM 3.0L EPA	Bore - in. (cm) x Stroke - in. (cm):	4.00 (10.2) x 3.60 (9.1)
Type:	4-Cycle	Compression Ratio:	9.30:1
Aspiration:	Natural	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	51.5 (38.4)

Exhaust System	Prime
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	249 (7.05)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	16.8 (63.6)
Heat Rejection to Coolant: BTUM (kW)	1,436 (25.1)
Heat Rejection to CAC: BTUM (kW)	N/A
Heat Radiated to Ambient: BTUM (kW)	326 (5.70)

Air Requirements	
Aspirating: CFM (m³/min)	77.2 (2.18)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	4,752 (135)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	Consult Factory For Remote Cooled Applications

Fuel Consumption	Natural Gas	LP
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At 75% of Power Rating: ft³/hr (m³/hr)	339 (9.59)	140 (3.96)
At 50% of Power Rating: ft³/hr (m³/hr)	262 (7.41)	104 (2.94)
Fuel Inlet Size: NPT		0.75"
Fuel Pressure Required: in. H₂O (kPa)		7.00 (1.75) - 11.0 (2.75)

Fluids Capacity	
Total Oil System: gal (lit)	1.00 (3.79)
Engine Jacket Water Capacity: gal (lit)	1.00 (3.79)
System Coolant Capacity: gal (lit)	3.90 (14.8)

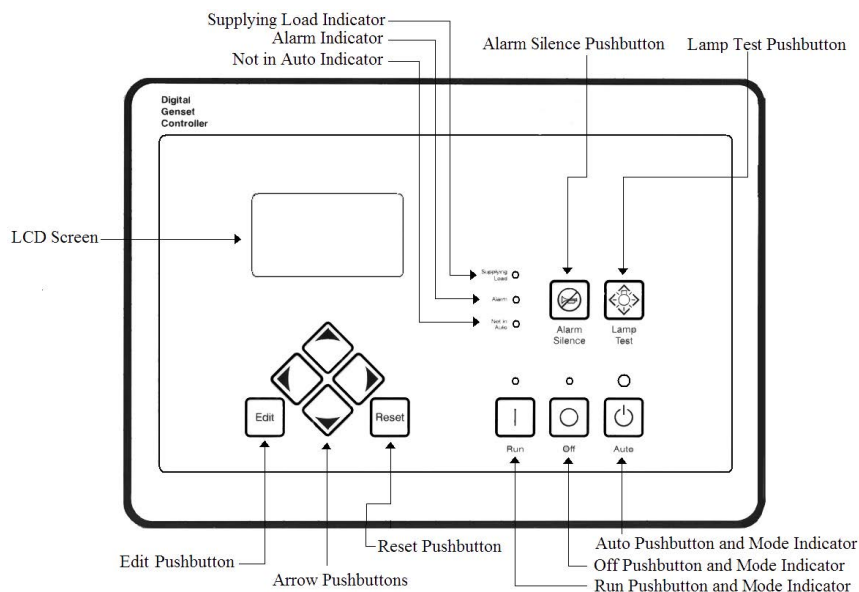
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Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft Over 328ft

DGC-2020 Control Panel

Standard Features

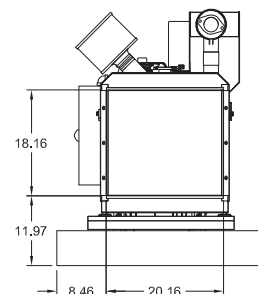
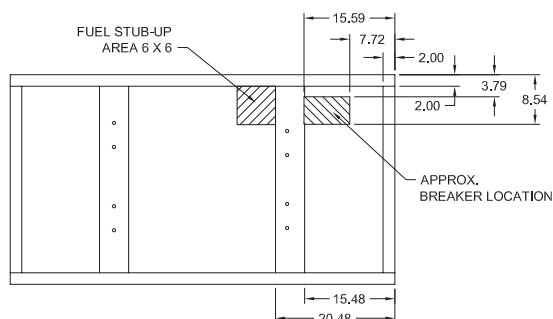
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



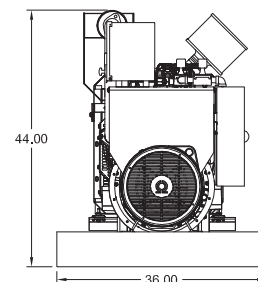
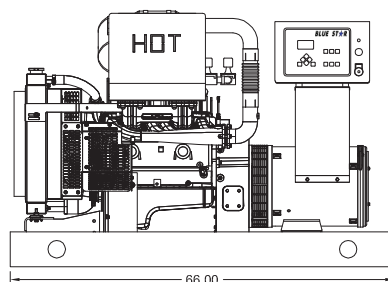
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	66 x 36 x 44 in	1,075
Level 1	80 x 36 x 48 in	1,425
Level 2	80 x 36 x 48 in	1,450
Level 3	104 x 36 x 48 in	1,575

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



	No Load	Full Load
OPU	73 dBA	75 dBA
Level 1	66 dBA	68 dBA
Level 2	64 dBA	66 dBA
Level 3	61 dBA	62 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 prime rating.

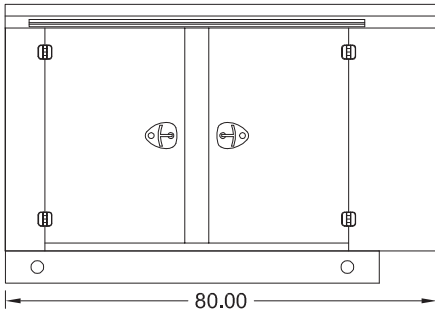
Gaseous Product Line

25 kWe

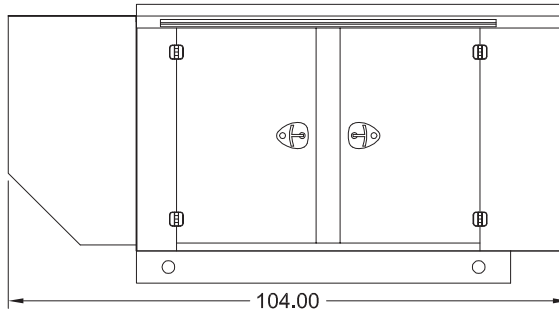


Enclosures

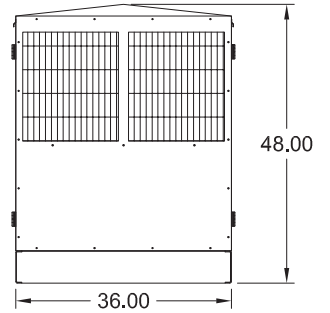
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



American Made

Distributed By:

Powerdak Power Products

13261 Timberline Plaza

Suite B

Piedmont, SD 57769

605-341-9920

Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

PS40-01

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	361CSL1600	361CSL1600	361CSL1600	361PSL1632
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
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
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted (Standby)
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 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:	Power Solutions International	Displacement - Cu. In. (lit):	262 (4.30)
Model:	PSI 4.3L	Bore - in. (cm) x Stroke - in. (cm):	4.00 (10.2) x 3.48 (8.80)
Type:	4-Cycle	Compression Ratio:	9.80:1
Aspiration:	Natural	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	82.2 (61.3)
Exhaust System			
Gas Temp. (Stack): °F (°C)			1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)			362 (10.2)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)			40.8 (10.2)
Cooling System			
Ambient Capacity of Radiator: °F (°C)			122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)			0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)			36.6 (138)
Heat Rejection to Coolant: BTUM (kW)			2,300 (40.3)
Heat Rejection to CAC: BTUM (kW)			N/A
Heat Radiated to Ambient: BTUM (kW)			512 (8.96)
Air Requirements			
Aspirating: CFM (m³/min)			112 (3.17)
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)		628 (17.8)	251 (7.10)
At 75% of Power Rating: ft³/hr (m³/hr)		505 (14.3)	202 (5.72)
At 50% of Power Rating: ft³/hr (m³/hr)		389 (11.0)	155 (4.39)
Fuel Inlet Size: NPT			1.0"
Fuel Pressure Required: in. H₂O (kPa)			7.00 (1.75) - 11.0 (2.75)
Fluids Capacity			
Total Oil System: gal (lit)			1.13 (4.28)
Engine Jacket Water Capacity: gal (lit)			2.00 (7.6)
System Coolant Capacity: gal (lit)			6.00 (22.7)

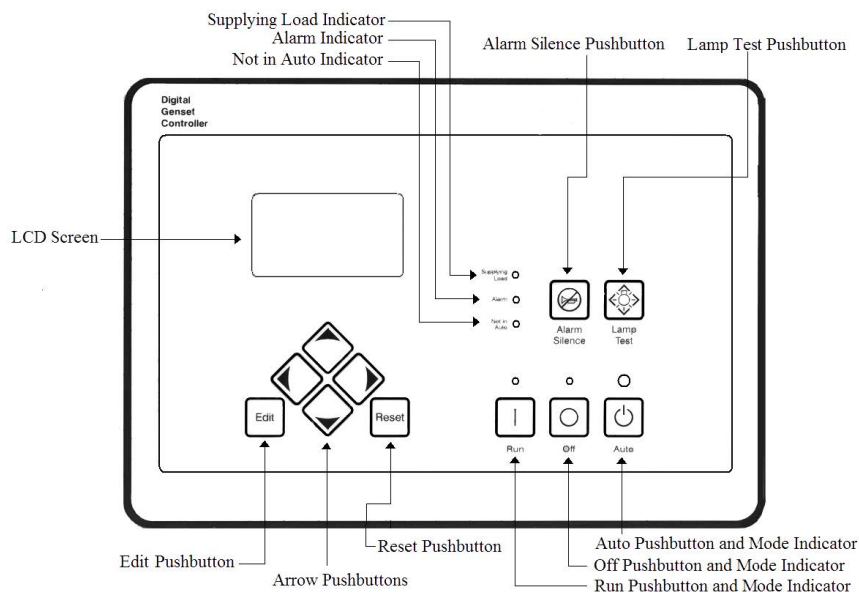
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft Over 328 ft

DGC-2020 Control Panel

Standard Features

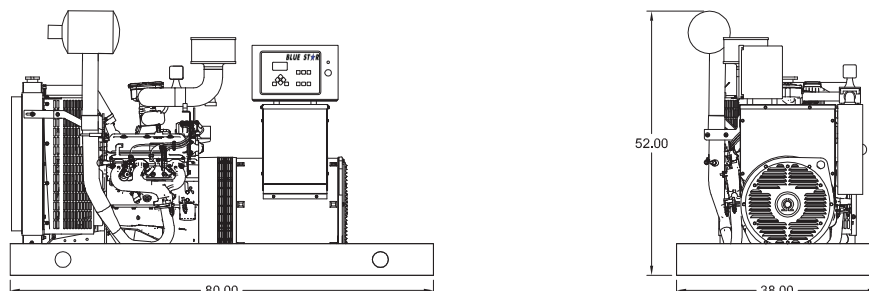
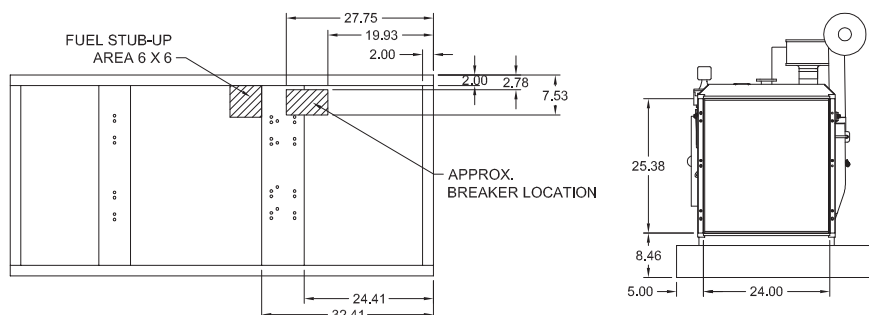
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	80 x 38 x 52 in	1,425
Level 1	90 x 38 x 60 in	1,925
Level 2	90 x 38 x 60 in	1,950
Level 3	120 x 38 x 60 in	2,075

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



	No Load	Full Load
OPU	74 dBA	76 dBA
Level 1	68 dBA	70 dBA
Level 2	65 dBA	67 dBA
Level 3	62 dBA	63 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.

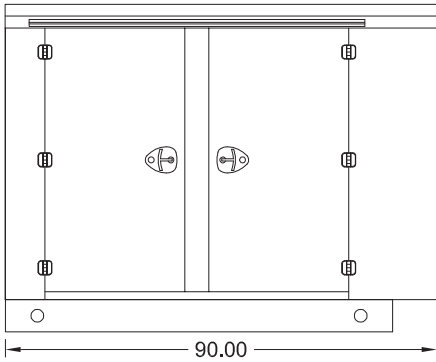
Gaseous Product Line

40 kWe

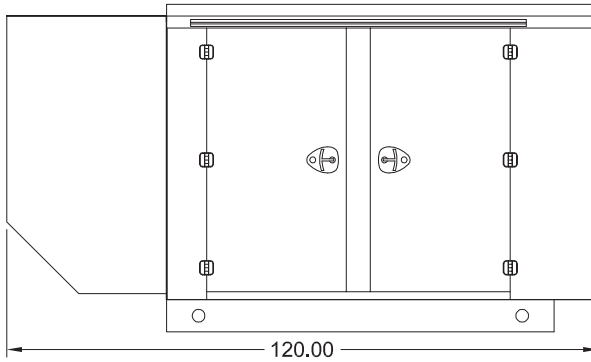


Enclosures

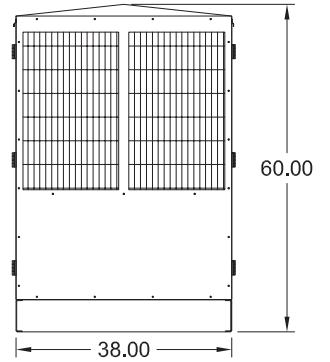
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

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Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM40-02P

60 Hz / 1800 RPM

35 kWe

Prime

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	361CSL1600	361CSL1600	361CSL1600	361CSL1600	361PSL1632
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Prime					
kWe Nat (LP)	35 (35)	35 (35)	35 (35)	35 (35)	35 (35)
AMPS Nat (LP)	146 (146)	122 (122)	105 (105)	53 (53)	42 (42)
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst 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
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

35 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): 4.00 (10.2) x 3.60 (9.10)
Type:	4-Cycle	Compression Ratio: 9.4 : 1
Aspiration:	Natural	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Vee	Max HP Stby (kWm): 67.0 (50.0)
Exhaust System		Prime
Gas Temp. (Stack): °F (°C)		1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)		289 (8.17)
Maximum Allowable Exhaust Restriction: in. H ₂ 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 ₂ O (kPa)		0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)		36.6 (138)
Heat Rejection to Coolant: BTUM (kW)		1,943 (34.0)
Heat Rejection to CAC: BTUM (kW)		N/A
Heat Radiated to Ambient: BTUM (kW)		448 (7.84)
Air Requirements		
Aspirating: CFM (m³/min)		119 (3.37)
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)		484 (13.7) 194 (5.48)
At 75% of Power Rating: ft³/hr (m³/hr)		390 (11.0) 156 (4.41)
At 50% of Power Rating: ft³/hr (m³/hr)		299 (8.47) 120 (3.40)
Fuel Inlet Size: NPT		1.00"
Fuel Pressure Required: in. H ₂ O (kPa)		7.00 - 11.0 (1.75 - 2.75)
Fluids Capacity		
Total Oil System: gal (lit)		1.40 (5.30)
Engine Jacket Water Capacity: gal (lit)		2.00 (7.60)
System Coolant Capacity: gal (lit)		6.00 (22.7)

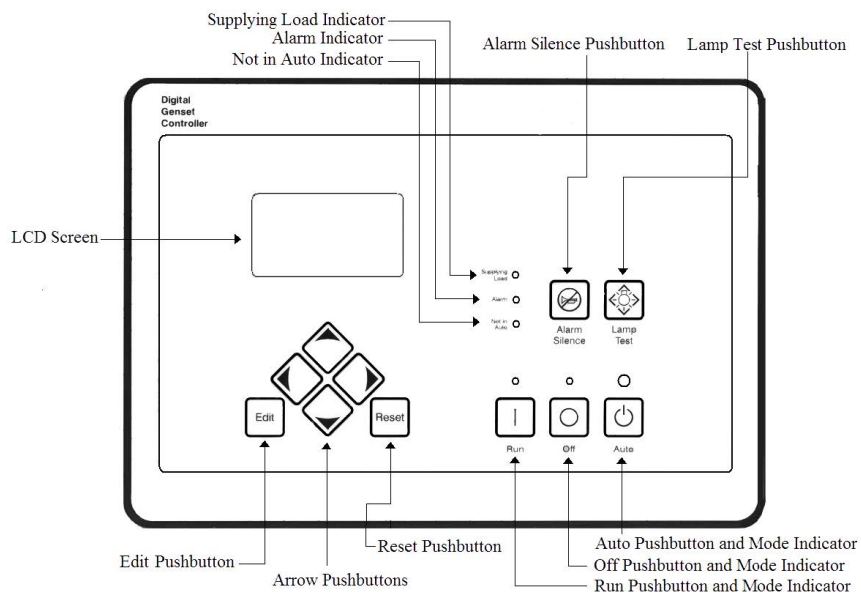
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft (305m) Over 1,000 ft (305m)

DGC-2020 Control Panel

Standard Features

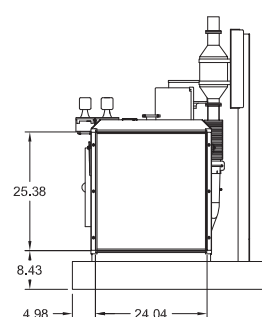
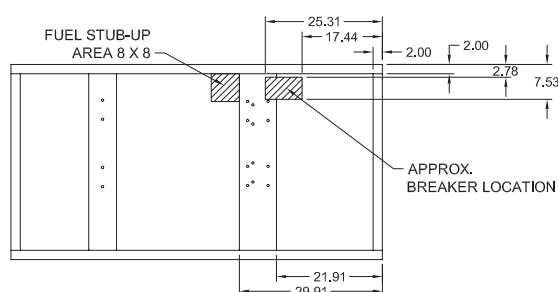
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



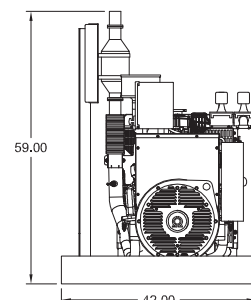
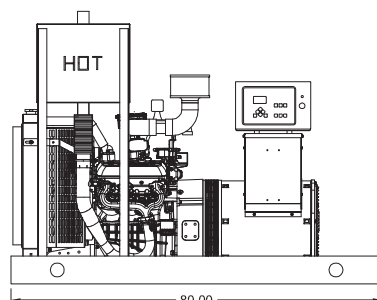
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	80 x 42 x 59 in	1,350
Level 1	96 x 42 x 66 in	1,700
Level 2	96 x 42 x 66 in	1,750
Level 3	126 x 42 x 66 in	1,900

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



	No Load	Full Load
OPU	74 dBA	76 dBA
Level 1	68 dBA	70 dBA
Level 2	65 dBA	67 dBA
Level 3	62 dBA	63 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 prime rating.

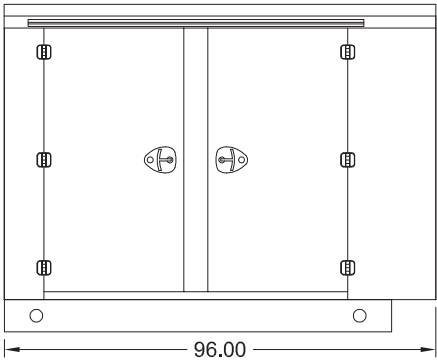
Gaseous Product Line

35 kWe

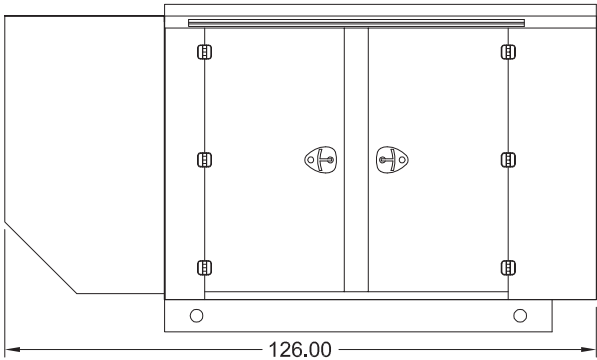


Enclosures

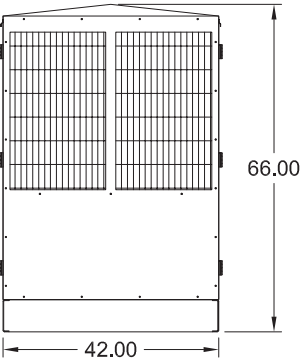
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM50-03

60 Hz / 1800 RPM

50 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	361CSL1602	361CSL1601	361CSL1601	361CSL1601	361PSL1633
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	50 (50)	50 (50)	50 (50)	50 (50)	50 (50)
AMPS Nat (LP)	208 (208)	174 (174)	151 (151)	75 (75)	60 (60)
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ 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 ▶ Air Cleaner (Dry Single Stage) ▶ Flexible Fuel Connector ▶ EPA Certified 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± 1% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 105°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 style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Formed Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 12V 6 Amp ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves ▶ Vibration Isolation Mounts ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Gaseous Product Line

50 kWe



Application Data

Engine		
Manufacturer:	General Motors	Displacement - Cu. In. (lit): 350 (5.70)
Model:	GM 5.7L EPA	Bore - in. (cm) x Stroke - in. (cm): 4.00 (10.2) x 3.50 (8.80)
Type:	4-Cycle	Compression Ratio: 9.40:1
Aspiration:	Natural	Rated RPM: 1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm): 113 (78.1)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	553 (15.7)
Maximum Allowable Exhaust Restriction: in. H ₂ 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 ₂ O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	36.6 (139)
Heat Rejection to Coolant: BTUM (kW)	3,120 (54.6)
Heat Rejection to CAC: BTUM (kW)	N/A
Heat Radiated to Ambient: BTUM (kW)	854 (14.9)

Air Requirements	
Aspirating: CFM (m³/min)	173 (4.90)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	7,400 (209)
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)	734 (20.8)	308 (8.72)
At 75% of Power Rating: ft³/hr (m³/hr)	614 (17.4)	250 (7.08)
At 50% of Power Rating: ft³/hr (m³/hr)	482 (13.6)	195 (5.51)
Fuel Inlet Size: NPT		1.00"
Fuel Pressure Required: in. H ₂ O (kPa)	7.00 - 11.0 (1.75 - 2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	1.25 (4.73)
Engine Jacket Water Capacity: gal (lit)	2.03 (7.68)
System Coolant Capacity: gal (lit)	6.00 (22.7)

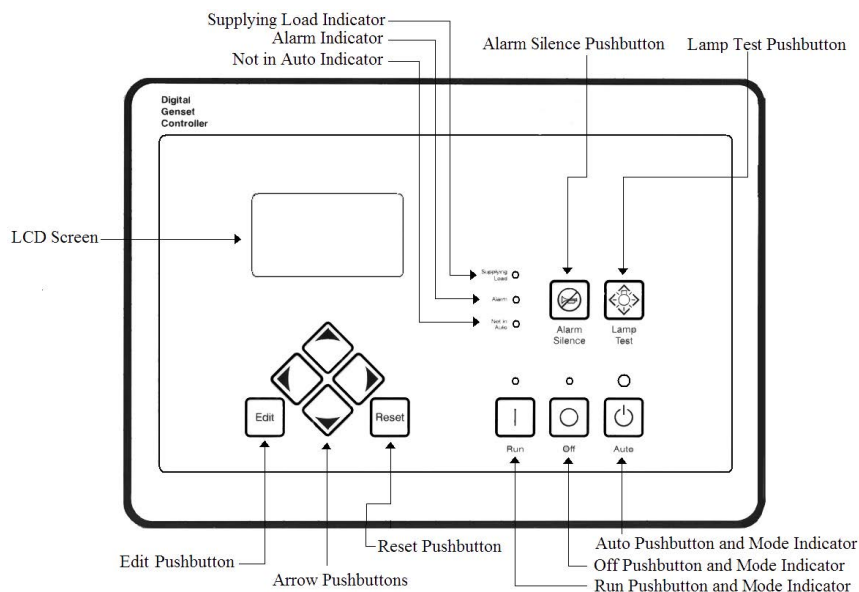
All calculations based on natural gas fuel.

Deration Factors: Altitude: Derate 3% Per 1,000 ft (305 m) Over 2,000 ft (610 m)

DGC-2020 Control Panel

Standard Features

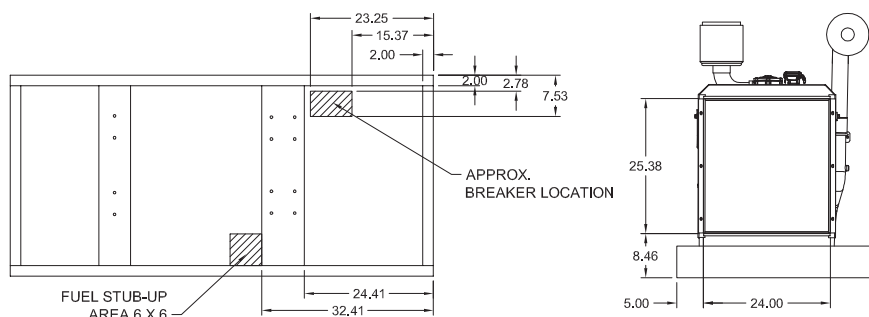
- ▶ Digital Metering
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- ▶ NFPA 110 Level 1 Compatible



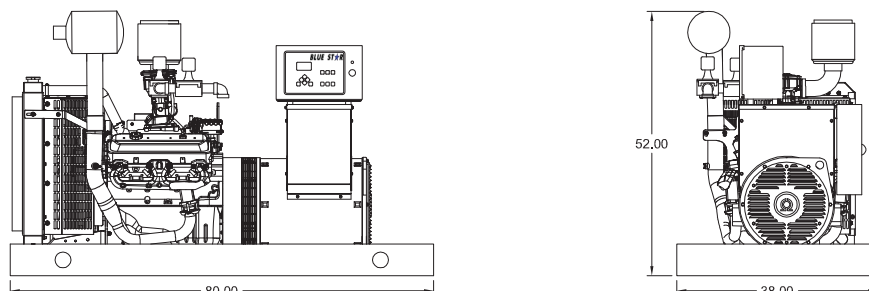
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	80 x 38 x 52 in	1,675
Level 1	90 x 38 x 60 in	2,150
Level 2	90 x 38 x 60 in	2,175
Level 3	120 x 38 x 60 in	2,325

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



	No Load	Full Load
OPU	76 dBA	79 dBA
Level 1	71 dBA	73 dBA
Level 2	66 dBA	68 dBA
Level 3	63 dBA	64 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.

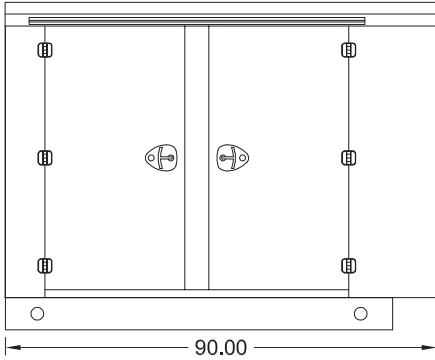
Gaseous Product Line

50 kWe

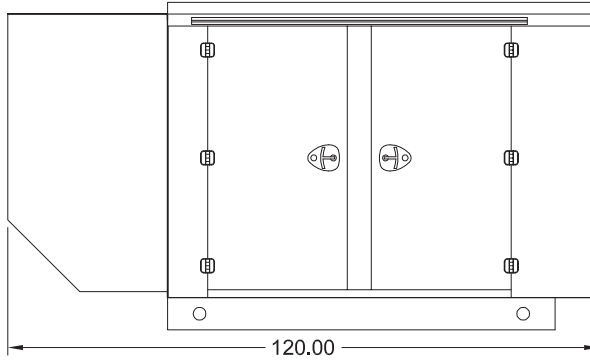


Enclosures

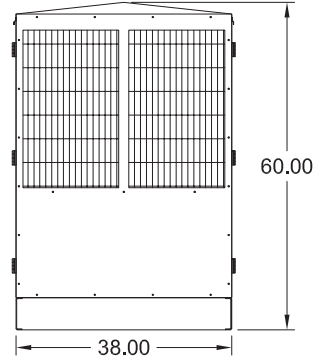
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



American Made

Distributed By:

Powerdak Power Products

13261 Timberline Plaza

Suite B

Piedmont, SD 57769

605-341-9920

Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM60-02

60 Hz / 1800 RPM

60 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	362CSL1604	361CSL1602	361CSL1602	361CSL1601	361PSL1633
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	60 (60)	60 (60)	60 (60)	60 (60)	60 (60)
AMPS Nat (LP)	250 (250)	208 (208)	181 (181)	90 (90)	72 (72)
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
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 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

60 kWe



Application Data

Engine			
Manufacturer:	General Motors	Displacement - Cu. In. (lit):	350 (5.70)
Model:	GM 5.7L EPA	Bore - in. (cm) x Stroke - in. (cm):	4.00 (10.2) x 3.5 (8.80)
Type:	4-Cycle	Compression Ratio:	9.40:1
Aspiration:	Natural	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm):	113 (78.1)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	553 (15.7)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	36.6 (139)
Heat Rejection to Coolant: BTUM (kW)	3,120 (54.6)
Heat Rejection to CAC: BTUM (kW)	N/A
Heat Radiated to Ambient: BTUM (kW)	854 (14.9)

Air Requirements	
Aspirating: CFM (m³/min)	173 (4.90)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	7,400 (209)
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)	859 (24.3)	363 (10.3)
At 75% of Power Rating: ft³/hr (m³/hr)	725 (20.5)	305 (8.63)
At 50% of Power Rating: ft³/hr (m³/hr)	578 (16.4)	244 (6.91)
Fuel Inlet Size: NPT		1.00"
Fuel Pressure Required: in. H₂O (kPa)	7.00 - 11.0 (1.75 - 2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	1.25 (4.73)
Engine Jacket Water Capacity: gal (lit)	2.03 (7.68)
System Coolant Capacity: gal (lit)	6.00 (22.7)

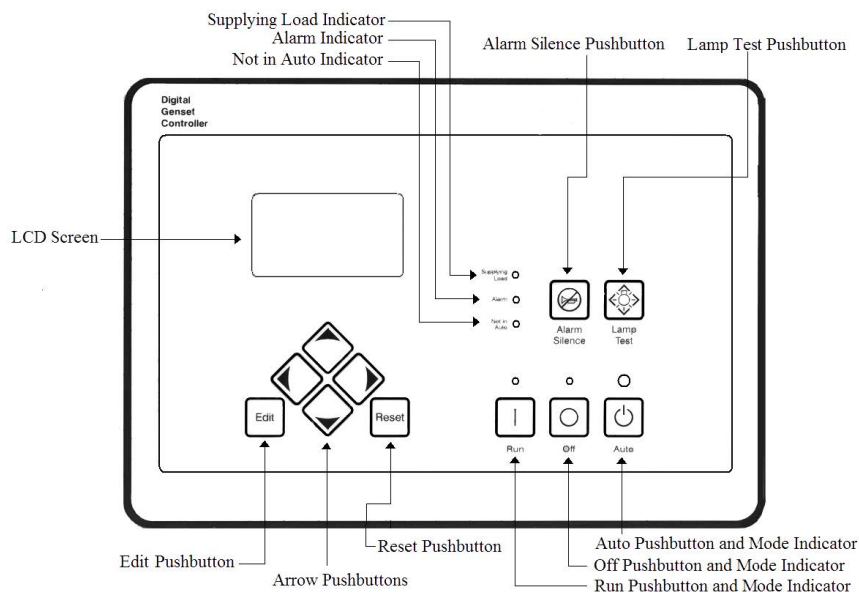
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft Over 328 ft

DGC-2020 Control Panel

Standard Features

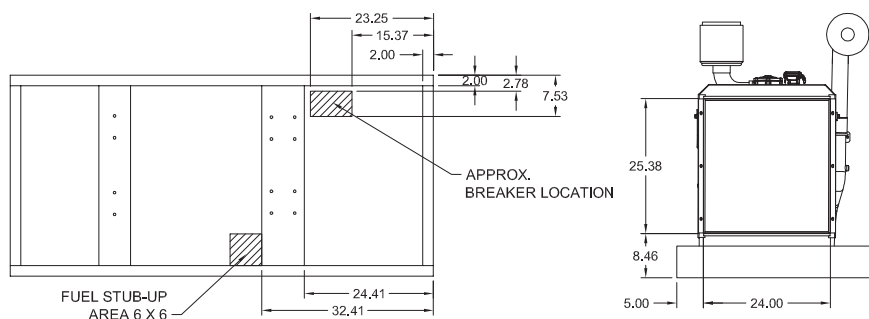
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



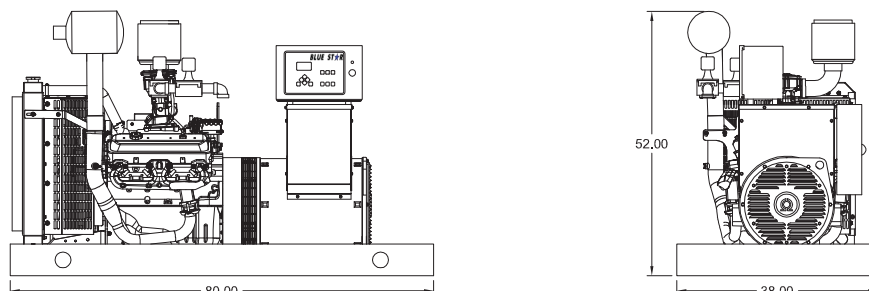
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	80 x 38 x 52 in	1,675
Level 1	90 x 38 x 60 in	2,150
Level 2	90 x 38 x 60 in	2,175
Level 3	120 x 38 x 60 in	2,325

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



	No Load	Full Load
OPU	76 dBA	79 dBA
Level 1	71 dBA	73 dBA
Level 2	66 dBA	68 dBA
Level 3	63 dBA	64 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.

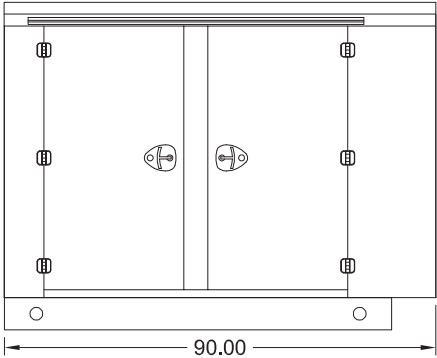
Gaseous Product Line

60 kWe

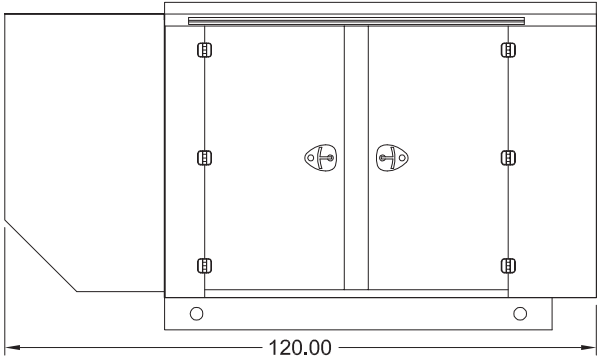


Enclosures

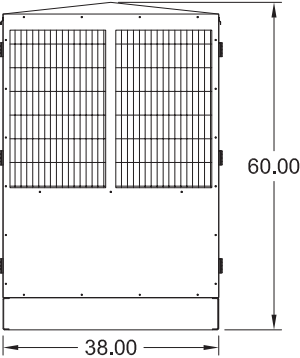
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

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POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM60-02P

60 Hz / 1800 RPM

55kWe

Prime

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	362CSL1604	361CSL1602	361CSL1602	361CSL1601	361PSL1633
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Prime					
kWe Nat (LP)	55 (55)	55 (55)	55 (55)	55 (55)	55 (55)
AMPS Nat (LP)	229 (229)	191 (191)	166 (166)	83 (83)	66 (66)
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

55kWe



Application Data

Engine			
Manufacturer:	General Motors	Displacement - Cu. In. (lit):	350 (5.70)
Model:	GM 5.7L EPA	Bore - in. (cm) x Stroke - in. (cm):	4.00 (10.2) x 3.50 (8.80)
Type:	4-Cycle	Compression Ratio:	9.40:1
Aspiration:	Natural	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm):	113 (78.1)

Exhaust System		Prime
Gas Temp. (Stack): °F (°C)		1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)		553 (15.1)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)		40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	36.6 (139)
Heat Rejection to Coolant: BTUM (kW)	2,950 (52.2)
Heat Rejection to CAC: BTUM (kW)	N/A
Heat Radiated to Ambient: BTUM (kW)	783 (13.7)

Air Requirements	
Aspirating: CFM (m³/min)	161 (4.56)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	7,400 (209)
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)	787 (22.3)	315 (8.91)
At 75% of Power Rating: ft³/hr (m³/hr)	665 (18.8)	266 (7.53)
At 50% of Power Rating: ft³/hr (m³/hr)	530 (15.0)	212 (6.00)
Fuel Inlet Size: NPT		1.00"
Fuel Pressure Required: in. H₂O (kPa)	7.00 - 11.0 (1.75 - 2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	1.25 (4.73)
Engine Jacket Water Capacity: gal (lit)	2.03 (7.68)
System Coolant Capacity: gal (lit)	6.00 (22.7)

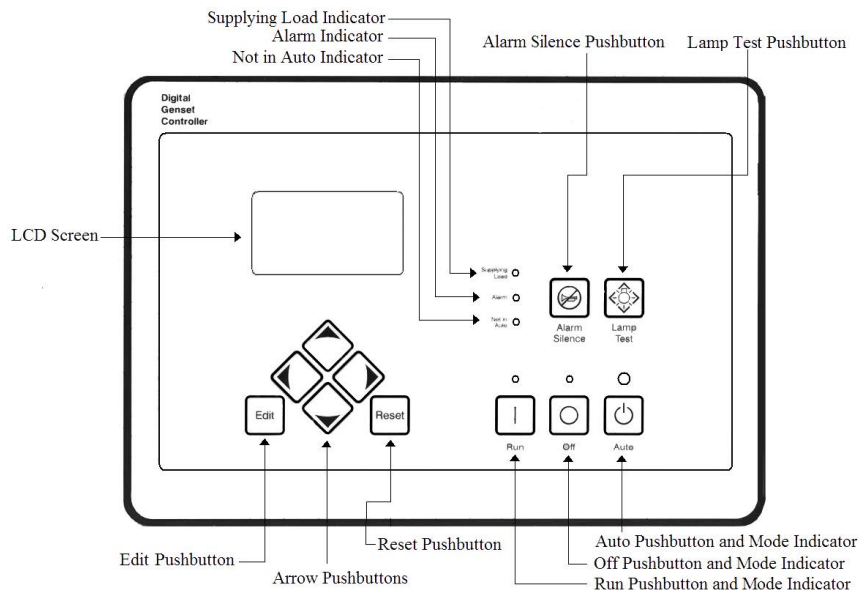
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft Over 328ft

DGC-2020 Control Panel

Standard Features

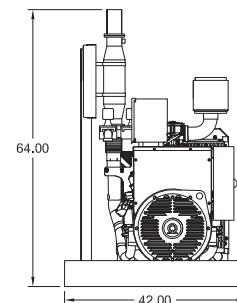
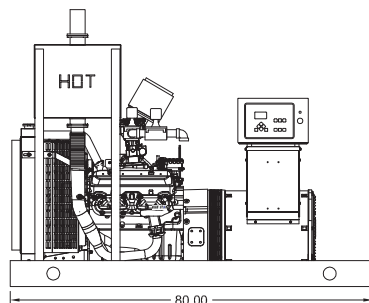
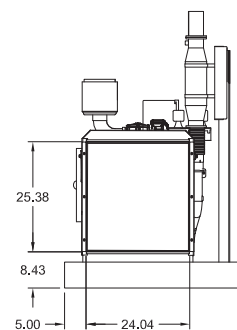
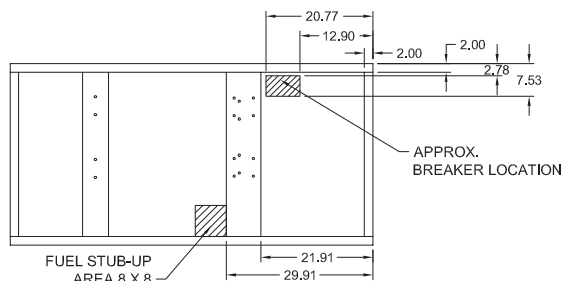
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- ▶ Engine Protection
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- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, 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
OPU	80 x 42 x 64 in	1,725
Level 1	96 x 42 x 66 in	2,200
Level 2	96 x 42 x 66 in	2,225
Level 3	126 x 42 x 66 in	2,375

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



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 prime rating.

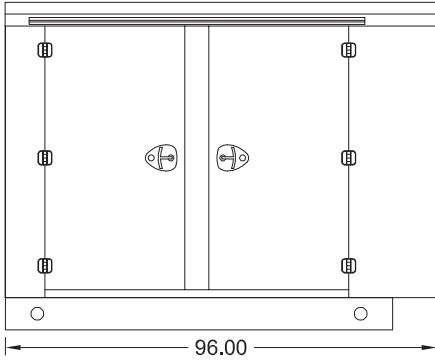
Gaseous Product Line

55kWe

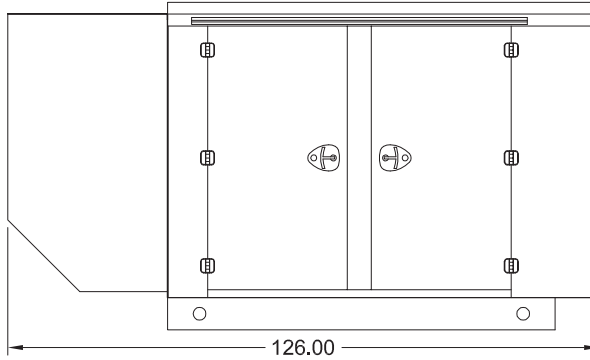


Enclosures

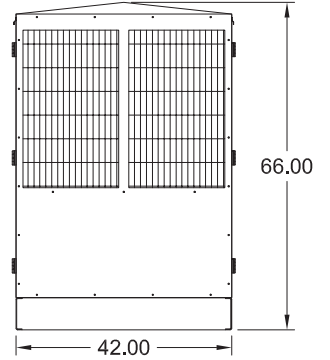
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

GM100-03

60 Hz / 1800 RPM

90 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	363CSL1607	362CSL1606	362CSL1606	362CSL1604	362PSL1635
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	90 (80)	90 (80)	90 (80)	90 (80)	90 (80)
AMPS Nat (LP)	375 (333)	313 (278)	271 (241)	135 (120)	108 (96)
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
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 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

90 kWe



Application Data

Engine			
Manufacturer:	General Motors	Displacement - Cu. In. (lit):	350 (5.70)
Model:	GM 5.7LTCAC	Bore - in. (cm) x Stroke - in. (cm):	4.00 (10.2) x 3.50 (8.80)
Type:	4-Cycle	Compression Ratio:	9.40:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm):	124 (92.5)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	787 (22.3)
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)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	40.0 (147.6)
Heat Rejection to Coolant: BTUM (kW)	3,525 (61.7)
Heat Rejection to CAC: BTUM (kW)	711 (12.4)
Heat Radiated to Ambient: BTUM (kW)	1,536 (26.9)

Air Requirements	
Aspirating: CFM (m³/min)	244 (6.91)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	16,500 (467)
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)	1,360 (38.5)	509 (14.4)
At 75% of Power Rating: ft³/hr (m³/hr)	1,110 (31.4)	411 (11.6)
At 50% of Power Rating: ft³/hr (m³/hr)	770 (21.8)	290 (8.22)
Fuel Inlet Size: NPT		1.50"
Fuel Pressure Required: in. H₂O (kPa)	7.00 (1.75) - 11.0 (2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	1.50 (5.70)
Engine Jacket Water Capacity: gal (lit)	2.03 (7.67)
System Coolant Capacity: gal (lit)	6.30 (23.8)

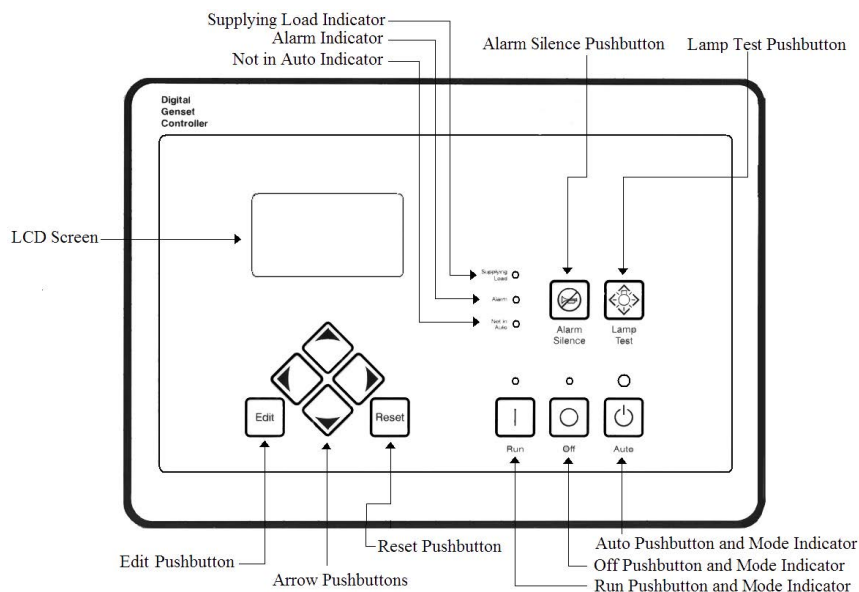
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 3% Per 1,000 ft Over 328ft

DGC-2020 Control Panel

Standard Features

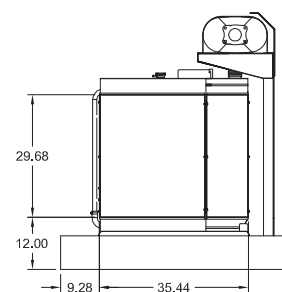
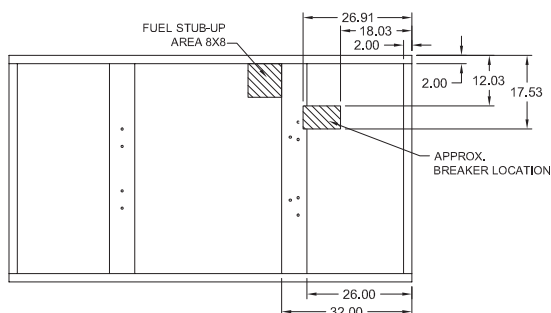
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- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



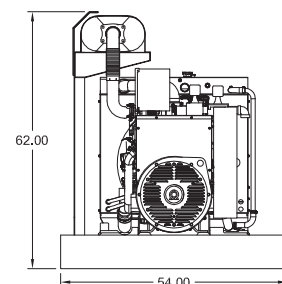
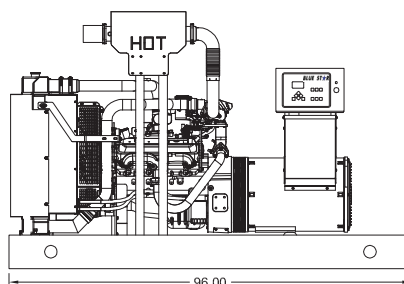
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	96 x 54 x 62 in	2,600
Level 1	112 x 54 x 80 in	3,450
Level 2	112 x 54 x 80 in	3,475
Level 3	152 x 54 x 80 in	3,750

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



	No Load	Full Load
OPU	81 dBA	83 dBA
Level 1	75 dBA	78 dBA
Level 2	71 dBA	74 dBA
Level 3	67 dBA	69 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.

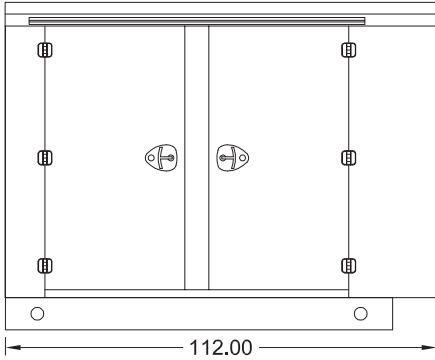
Gaseous Product Line

90 kWe

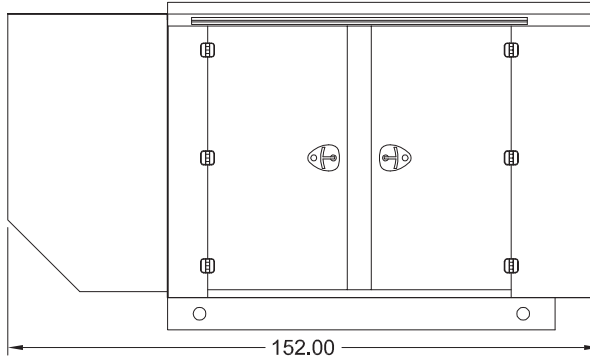


Enclosures

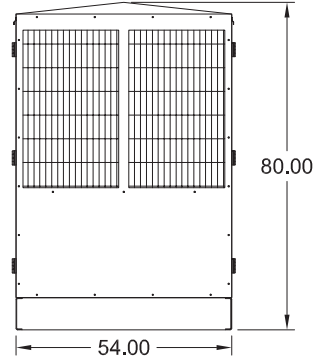
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

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American Made

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605-341-9920

Dave@GenProEnergy.com



Gaseous Product Line

208-600 Volt

PS125-01

60 Hz / 1800 RPM

110 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	431CSL6204	363CSL1607	363CSL1607	363CSL1607	363PSL1658
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	110 (105)	110 (105)	110 (105)	110 (105)	110 (105)
AMPS Nat (LP)	458 (438)	382 (365)	331 (316)	165 (158)	132 (126)
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 105°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 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

110 kW_e



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	537 (8.80)
Model:	8.8LT	Bore - in. (cm) x Stroke - in. (cm):	4.35 (11.0) x 4.50 (11.4)
Type:	4-Cycle	Compression Ratio:	10.1 : 1
Aspiration:	Turbo Charged	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kW _m):	198 (148)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,200 (649)
Gas Volume at Stack Temp: CFM (m³/min)	750 (21.2)
Maximum Allowable Exhaust Restriction: in. H ₂ 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 ₂ O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	33.0 (125)
Heat Rejection to Coolant: BTUM (kW)	4,180 (73.2)
Heat Rejection to CAC: BTUM (kW)	N/A
Heat Radiated to Ambient: BTUM (kW)	2,312 (40.5)

Air Requirements	
Aspirating: CFM (m³/min)	244 (6.90)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	10,800 (306)
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)	1,511 (42.8)	605 (17.1)
At 75% of Power Rating: ft³/hr (m³/hr)	1,202 (34.0)	481 (13.6)
At 50% of Power Rating: ft³/hr (m³/hr)	891 (24.9)	356 (10.1)
Fuel Inlet Size: NPT		1.50"
Fuel Pressure Required: in. H ₂ O (kPa)	7.00 (1.75) - 11.0 (2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	2.40 (9.00)
Engine Jacket Water Capacity: gal (lit)	3.50 (13.2)
System Coolant Capacity: gal (lit)	7.40 (28.0)

All calculations based on natural gas fuel.

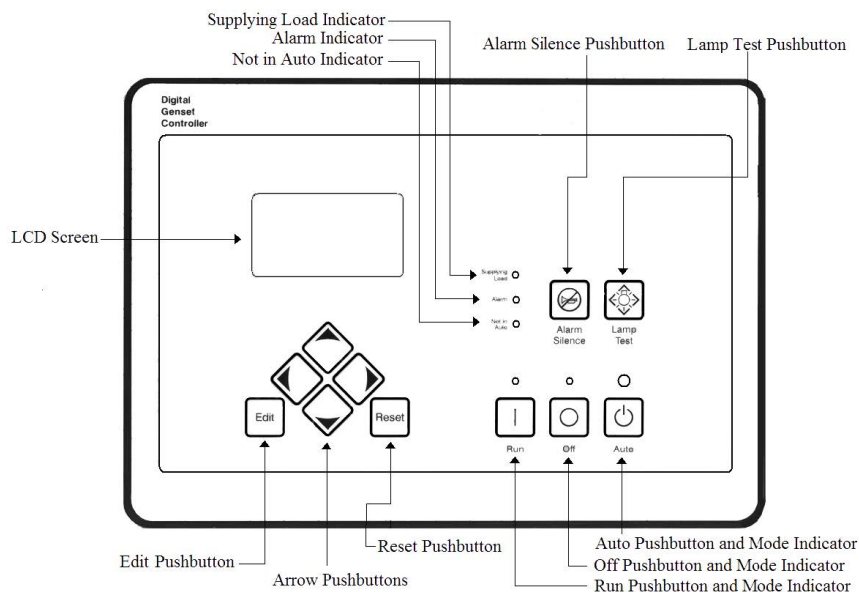
Deration Factors: Temperature: Derate 3% per 10°F (5°C) above 77°F (25°C) air inlet temperature. | Altitude: Derate 3% per 1,000 ft (305 m) above 1,200 ft (366 m).

Weather Proof or Sound Attenuated Enclosure: Derate 5% if a an Enclosure is applied.

DGC-2020 Control Panel

Standard Features

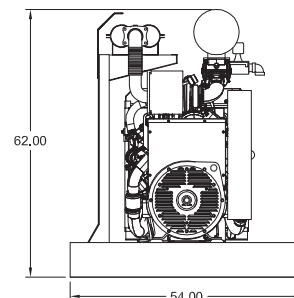
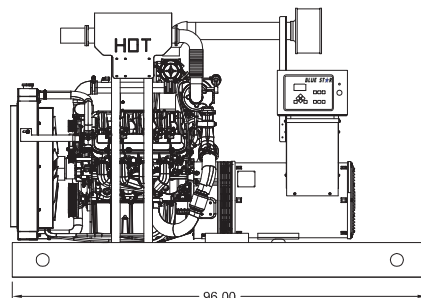
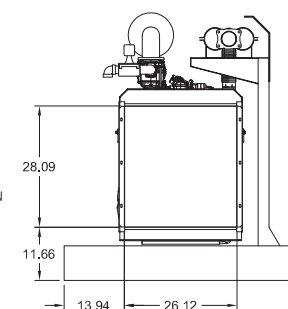
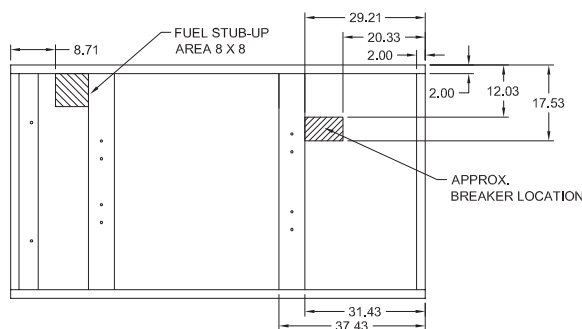
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	96 x 54 x 62 in	2,650
Level 1	112 x 54 x 80 in	3,500
Level 2	112 x 54 x 80 in	3,550
Level 3	152 x 54 x 80 in	3,800

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



	No Load	Full Load
OPU	81 dBA	83 dBA
Level 1	75 dBA	77 dBA
Level 2	71 dBA	73 dBA
Level 3	67 dBA	69 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.

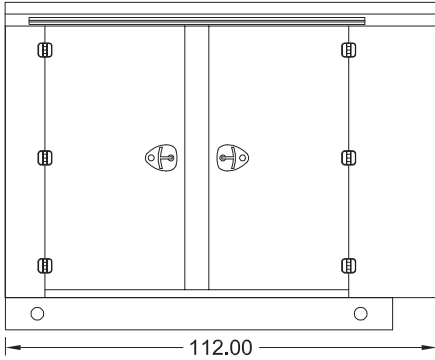
Gaseous Product Line

110 kWe

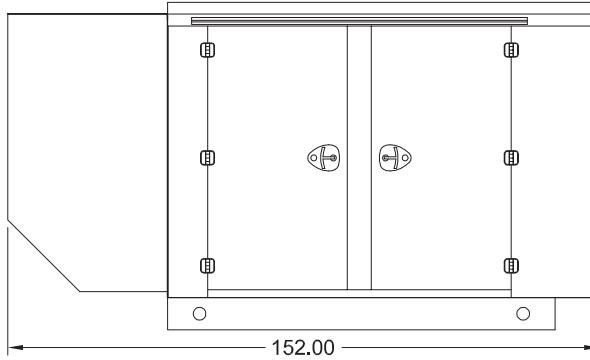


Enclosures

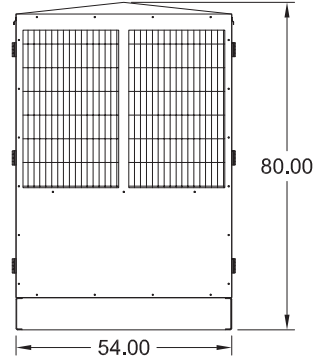
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



American Made

Distributed By:

Powerdak Power Products

13261 Timberline Plaza

Suite B

Piedmont, SD 57769

605-341-9920

Dave@GenProEnergy.com



Gaseous Product Line

208-600 Volt

PS130-01

60 Hz / 1800 RPM

130 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	431CSL6204	431CSL6202	431CSL6202	363CSL1607	363CSL1658
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	130 (125)	130 (125)	130 (125)	130 (125)	130 (125)
AMPS Nat (LP)	542 (521)	452 (434)	391 (376)	191 (188)	157 (151)
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
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 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

130 kW_e



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	535 (8.80)
Model:	8.8LTCAC	Bore - in. (cm) x Stroke - in. (cm):	4.35 (11.0) x 4.50 (11.4)
Type:	4-Cycle	Compression Ratio:	10.1 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kW _m):	261 (195)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	1,178 (33.3)
Maximum Allowable Exhaust Restriction: in. H ₂ 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 ₂ O (kPa)	0.5 (0.12)
Water Pump Flow Rate: GPM (lit/min)	33.0 (125)
Heat Rejection to Coolant: BTUM (kW)	5,021 (87.9)
Heat Rejection to CAC: BTUM (kW)	642 (11.2)
Heat Radiated to Ambient: BTUM (kW)	1,921 (33.6)

Air Requirements	
Aspirating: CFM (m³/min)	365 (10.3)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	12,000 (340)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	N/A

Fuel Consumption	Natural Gas	LP
At 100% of Power Rating: ft³/hr (m³/hr)	1,703 (48.2)	681 (19.3)
At 75% of Power Rating: ft³/hr (m³/hr)	1,325 (37.5)	530 (15.0)
At 50% of Power Rating: ft³/hr (m³/hr)	955 (27.0)	382 (10.8)
Fuel Inlet Size: NPT		1.50"
Fuel Pressure Required: in. H ₂ O (kPa)	7.00 (1.75) - 11.0 (2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	2.00 (7.57)
Engine Jacket Water Capacity: gal (lit)	3.63 (13.72)
System Coolant Capacity: gal (lit)	6.25 (23.7)

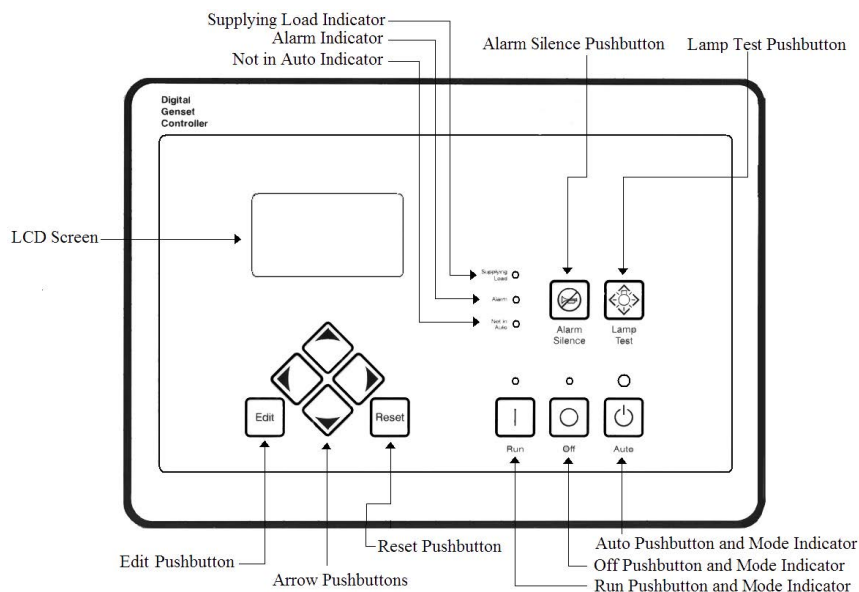
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 3% per 10°F (5°C) above 104°F (40°C) air inlet temperature. | Altitude: Derate 3% per 1,000 ft (305 m) above 3,000 ft (914 m).

DGC-2020 Control Panel

Standard Features

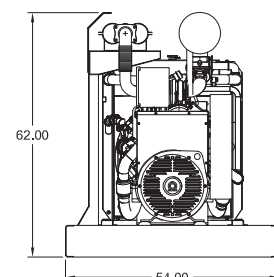
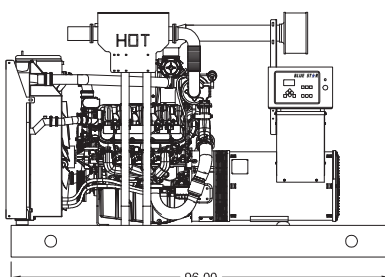
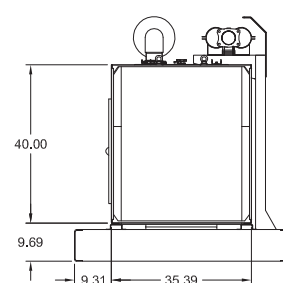
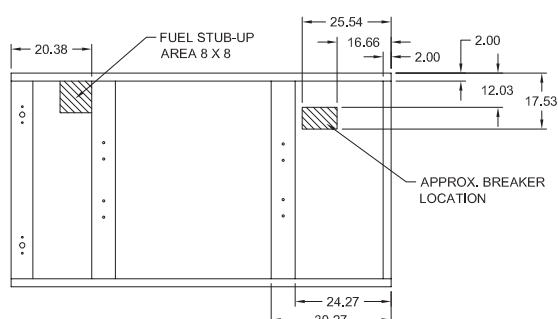
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	96 x 54 x 62 in	2,650
Level 1	112 x 54 x 80 in	3,500
Level 2	112 x 54 x 80 in	3,550
Level 3	152 x 54 x 80 in	3,800

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



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.

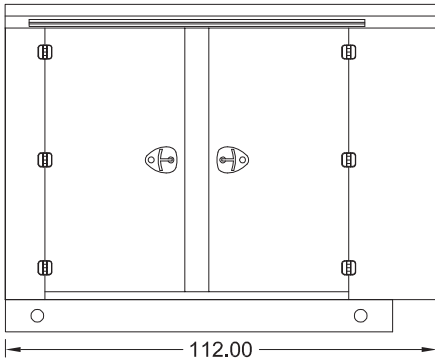
Gaseous Product Line

130 kWe

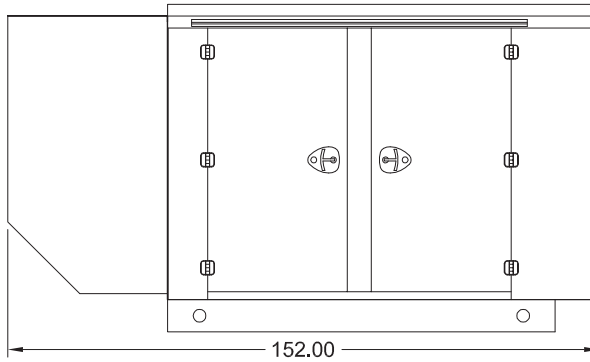


Enclosures

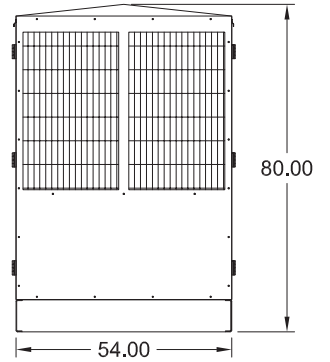
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



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Distributed By:

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13261 Timberline Plaza

Suite B

Piedmont, SD 57769

605-341-9920

Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

PS150-01

60 Hz / 1800 RPM

150 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	431CSL6206	431CSL6202	431CSL6202	431CSL6202	431CSL6240
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	150 (125)	150 (125)	150 (125)	150 (125)	150 (125)
AMPS Nat (LP)	625 (521)	521 (434)	452 (376)	226 (188)	181 (151)
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 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

150 kW_e



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	535 (8.80)
Model:	8.8LTCAC	Bore - in. (cm) x Stroke - in. (cm):	4.35 (11.0) x 4.50 (11.4)
Type:	4-Cycle	Compression Ratio:	10.1:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kW _m):	261 (195)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	1,178 (33.3)
Maximum Allowable Exhaust Restriction: in. H ₂ 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 ₂ O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	33.0 (125)
Heat Rejection to Coolant: BTUM (kW)	5,021 (87.9)
Heat Rejection to CAC: BTUM (kW)	642 (11.2)
Heat Radiated to Ambient: BTUM (kW)	1,921 (33.6)

Air Requirements	
Aspirating: CFM (m³/min)	365 (10.3)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	12,000 (340)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	N/A

Fuel Consumption	Natural Gas	LP
At 100% of Power Rating: ft³/hr (m³/hr)	1,965 (55.6)	713 (20.2)
At 75% of Power Rating: ft³/hr (m³/hr)	1,529 (43.3)	547 (15.5)
At 50% of Power Rating: ft³/hr (m³/hr)	1102 (31.2)	399 (11.3)
Fuel Inlet Size: NPT		1.50"
Fuel Pressure Required: in. H ₂ O (kPa)	7.00 (1.75) - 11.0 (2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	2.00 (7.57)
Engine Jacket Water Capacity: gal (lit)	3.63 (13.72)
System Coolant Capacity: gal (lit)	6.25 (23.7)

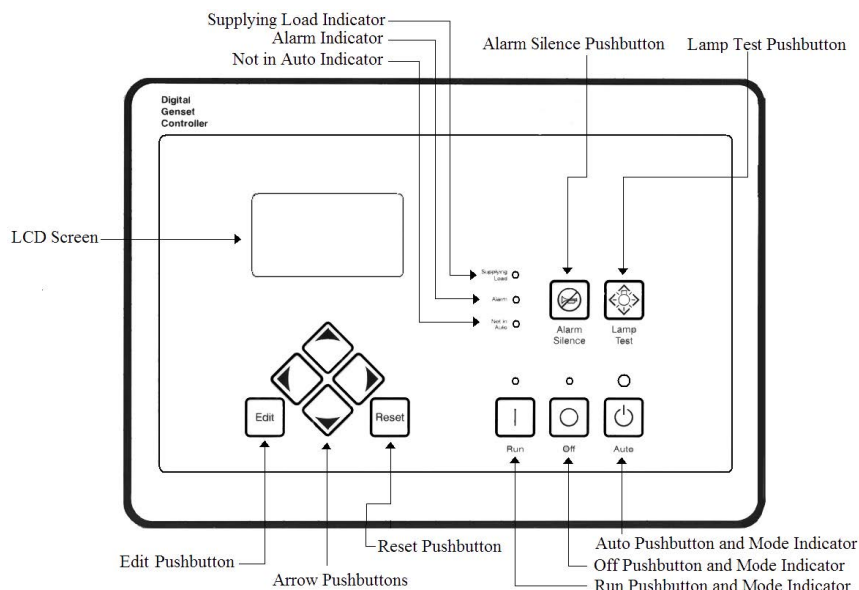
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 3% per 10°F (5°C) above 77°F (25°C) air inlet temperature. | Altitude: Derate 3% per 1,000 ft (305 m) above 1,200 ft (366 m).

DGC-2020 Control Panel

Standard Features

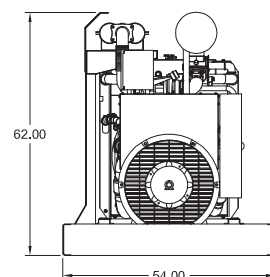
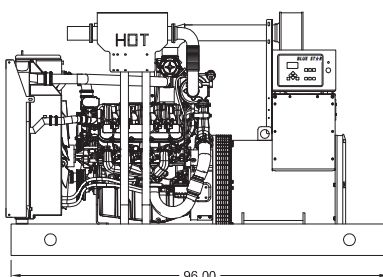
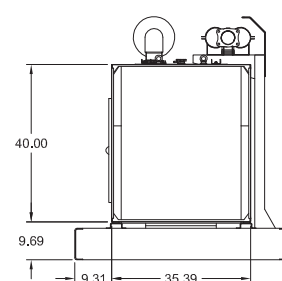
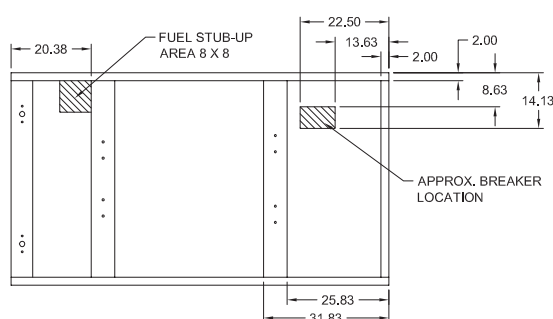
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- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	96 x 54 x 62 in	2,950
Level 1	112 x 54 x 80 in	3,775
Level 2	112 x 54 x 80 in	3,825
Level 3	152 x 54 x 80 in	4,100

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



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.

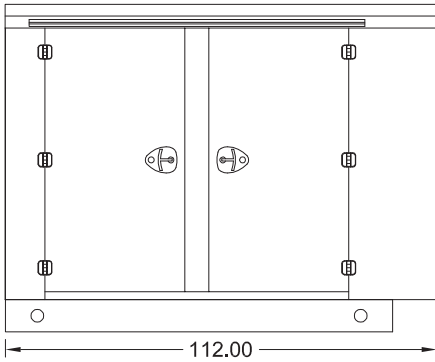
Gaseous Product Line

150 kW_e

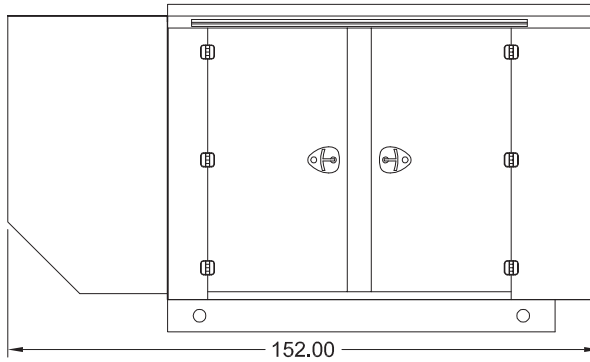


Enclosures

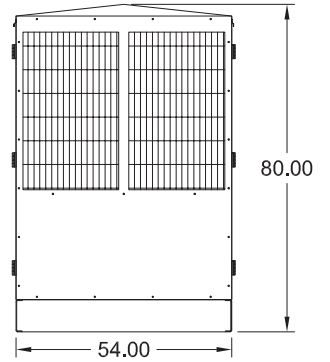
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

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American Made

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Suite B

Piedmont, SD 57769

605-341-9920

Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG150-01 / NG150-01P

60 Hz / 1800 RPM

150 kWe / 125 kWe

Standby / Prime

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	431CSL6206	431CSL6202	431CSL6202	431CSL6202	431PSL6240
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	150 (95)	150 (95)	150 (95)	150 (95)	150 (95)
AMPS Nat (LP)	625 (396)	521 (330)	452 (286)	226 (143)	181 (114)
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime					
kWe Nat (LP)	125 (NA)	125 (NA)	125 (NA)	125 (NA)	125 (NA)
AMPS Nat (LP)	521 (NA)	434 (NA)	376 (NA)	188 (NA)	151 (NA)
Temp Rise	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 (50°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
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 2500W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

150 kWe / 125 kWe



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	492 (8.10)
Model:	D081TIC	Bore - in. (cm) x Stroke - in. (cm):	4.37 (11.1) x 5.47 (13.9)
Type:	4-Cycle	Compression Ratio:	10.5 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	239 (178)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,350 (732)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	1,129 (31.9)	941 (26.6)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)	40.8 (10.2)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	63.0 (238)	63.0 (238)
Heat Rejection to Coolant: BTUM (kW)	9,357 (163)	7,798 (136)
Heat Rejection to CAC: BTUM (kW)	760 (13.3)	633 (11.1)
Heat Radiated to Ambient: BTUM (kW)	2,348 (41.1)	1,957 (34.2)

Air Requirements		
Aspirating: CFM (m³/min)	355 (10.0)	296 (8.37)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	12,500 (354)	12,500 (354)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	Consult Factory For Remote Cooled Applications	

Fuel Consumption	Standby		Prime	
	Natural Gas	LP	Natural Gas	LP
At 100% of Power Rating: ft³/hr (m³/hr)	1,539 (43.6)	517 (14.7)	1,283 (36.3)	N/A
At 75% of Power Rating: ft³/hr (m³/hr)	1,191 (33.7)	390 (11.1)	993 (28.1)	N/A
At 50% of Power Rating: ft³/hr (m³/hr)	845 (23.9)	338 (9.57)	704 (19.9)	N/A
Fuel Inlet Size: NPT	1.50"		1.50"	
Fuel Pressure Required: in. H₂O (kPa)	7.00 - 11.0 (1.75 - 2.75)		7.00 - 11.0 (1.75 - 2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	1.40 (5.30)
Engine Jacket Water Capacity: gal (lit)	2.00 (7.60)
System Coolant Capacity: gal (lit)	6.00 (22.7)

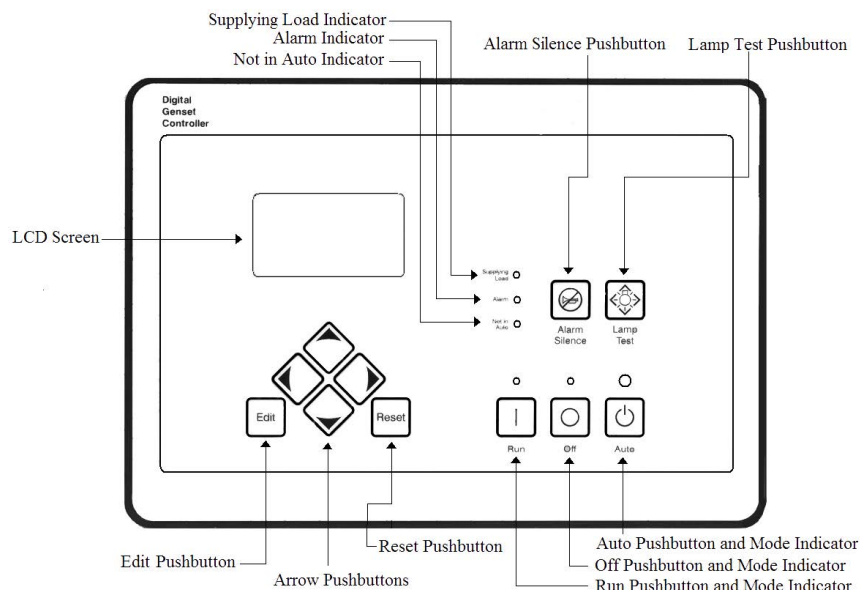
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1,000 ft Over 1,200 ft

DGC-2020 Control Panel

Standard Features

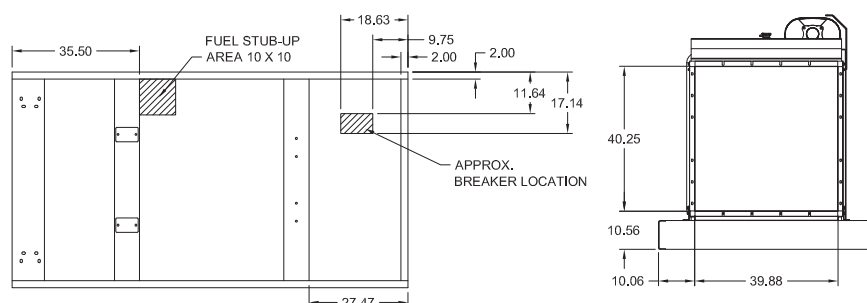
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



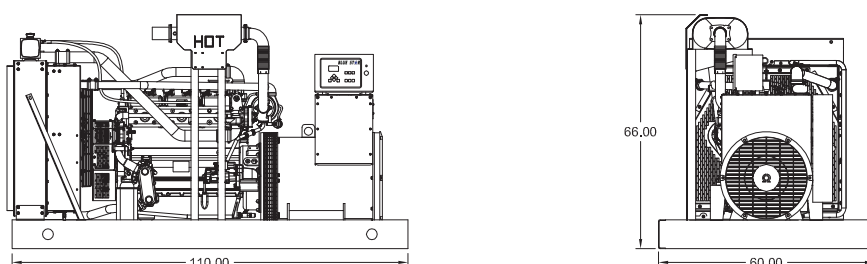
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 60 x 66 in	5,150
Level 1	134 x 60 x 80 in	6,075
Level 2	134 x 60 x 80 in	6,125
Level 3	174 x 60 x 80 in	6,400

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



	No Load	Full Load
OPU	80 dBA	82 dBA
Level 1	77 dBA	79 dBA
Level 2	75 dBA	76 dBA
Level 3	68 dBA	70 dBA



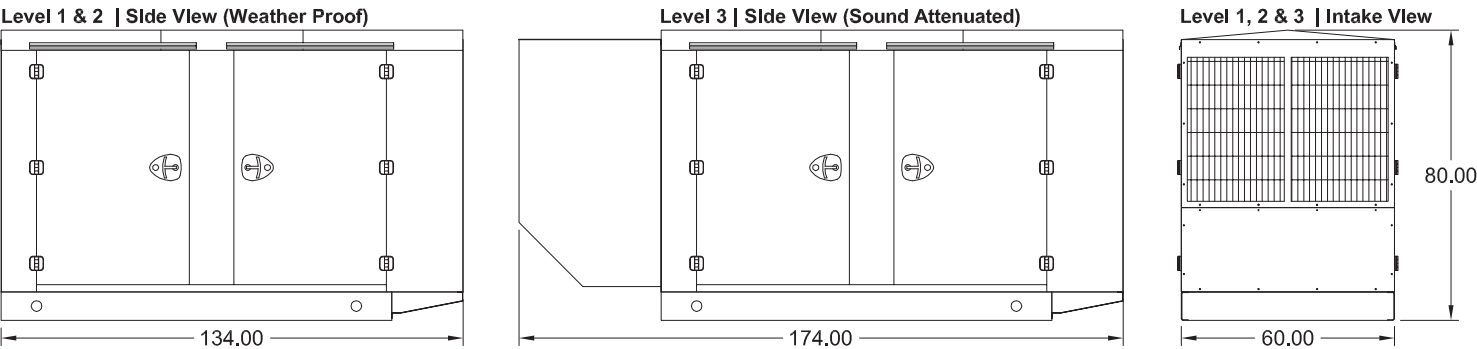
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Gaseous Product Line

150 kW_e / 125 kW_e



Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

Distributed By:



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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG200-01 / NG200-01P

60 Hz / 1800 RPM

190 - 200 kWe / 175 kWe

Standby UL 2200 / Non-UL 2200 / Prime UL 2200

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	432CSL6210	431CSL6206	431CSL6206	431CSL6206	431PSL6243
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby UL 2200					
kWe Nat (LP)	190 (130)	190 (130)	190 (130)	190 (130)	190 (130)
AMPS Nat (LP)	792 (542)	660 (452)	572 (391)	286 (196)	229 (157)
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Standby Non-UL 2200 [This rating not available with UL 2200 Listing or CSA Certification]					
kWe Nat (LP)	200 (130)	200 (130)	200 (130)	200 (130)	200 (130)
AMPS Nat (LP)	833 (542)	695 (452)	602 (391)	301 (196)	241 (157)
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime					
kWe Nat (LP)	175 (NA)	175 (NA)	175 (NA)	175 (NA)	175 (NA)
AMPS Nat (LP)	729 (NA)	608 (NA)	527 (NA)	263 (NA)	211 (NA)
Temp Rise	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 (50°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
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

NG200-01 / NG200-01P

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 3000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

190 - 200 kWe / 175 kWe



Application Data

Engine							
Manufacturer:		Power Solutions International		Displacement - Cu. In. (lit):	673 (11.1)		
Model:		D111TIC		Bore - in. (cm) x Stroke - in. (cm):	4.84 (12.3) x 6.1 (15.5)		
Type:		4-Cycle		Compression Ratio:	10.5 : 1		
Aspiration:		Turbo Charged, CAC		Rated RPM:	1800		
Cylinder Arrangement:		6 Cylinder Inline		Max HP Stby (kWm):	302 (225)		
Exhaust System				Standby	Prime		
Gas Temp. (Stack): °F (°C)				1,350 (732)	1,350 (732)		
Gas Volume at Stack Temp: CFM (m³/min)				1,247 (35.3)	1,247 (35.3)		
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)				40.8 (10.2)	40.8 (10.2)		
Cooling System							
Ambient Capacity of Radiator: °F (°C)				122 (50.0)	122 (50.0)		
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)				81.9 (310)	81.9 (310)		
Heat Rejection to Coolant: BTUM (kW)				9,687 (170)	9,687 (170)		
Heat Rejection to CAC: BTUM (kW)				1,278 (22.4)	1,278 (22.4)		
Heat Radiated to Ambient: BTUM (kW)				1,893 (33.1)	1,893 (33.1)		
Air Requirements							
Aspirating: CFM (m³/min)				392 (11.1)	392 (11.1)		
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)				18,000 (509)	18,000 (509)		
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)				Consult Factory For Remote Cooled Applications			
				Standby		Prime	
Fuel Consumption				Natural Gas		LP	
At 100% of Power Rating: ft3/hr (m3/hr)				2,115 (59.9)		704 (19.9)	
At 75% of Power Rating: ft3/hr (m3/hr)				1,648 (46.7)		549 (15.5)	
At 50% of Power Rating: ft3/hr (m3/hr)				1,157 (32.8)		463 (13.1)	
Fuel Inlet Size: NPT				2.00"		2.00"	
Fuel Pressure Required: in. H₂O (kPa)				7.00 - 11.0 (1.75 - 2.75)		7.00 - 11.0 (1.75 - 2.75)	
Fluids Capacity							
Total Oil System: gal (lit)						6.60 (25.0)	
Engine Jacket Water Capacity: gal (lit)						6.60 (25.0)	
System Coolant Capacity: gal (lit)						27.7 (105)	

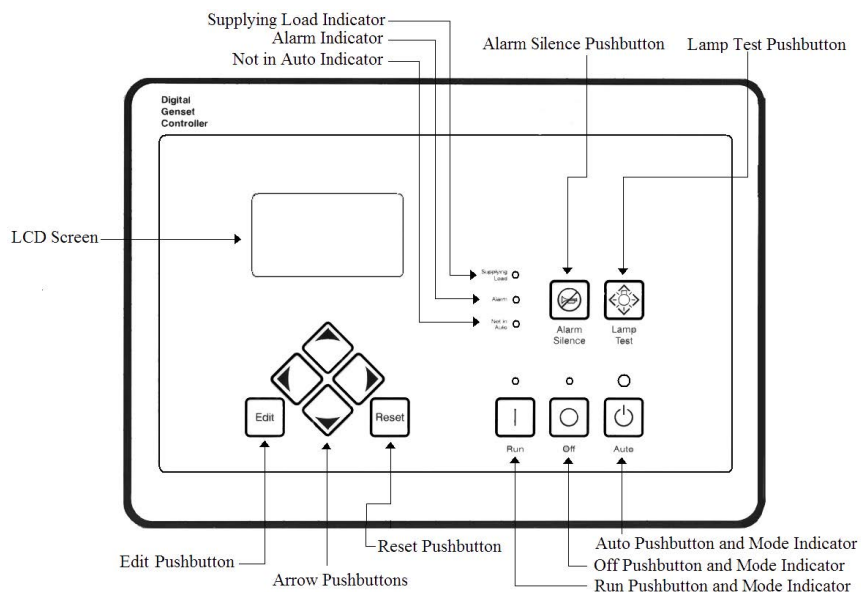
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1,000 ft Over 1,200 ft

DGC-2020 Control Panel

Standard Features

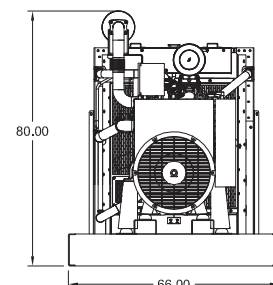
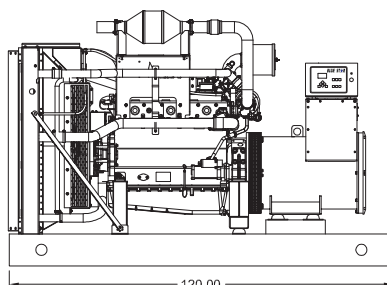
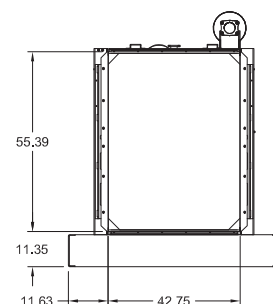
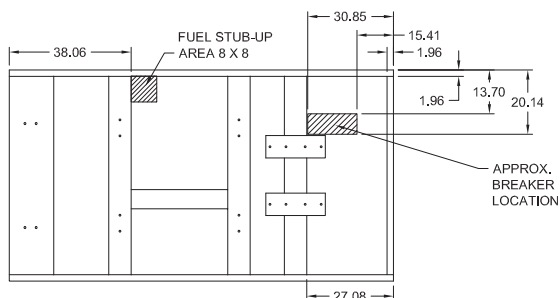
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	120 x 66 x 80 in	6,475
Level 1	156 x 66 x 94 in	7,725
Level 2	156 x 66 x 94 in	7,775
Level 3	196 x 66 x 94 in	8,100

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



	No Load	Full Load
OPU	82 dBA	84 dBA
Level 1	80 dBA	82 dBA
Level 2	75 dBA	77 dBA
Level 3	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.

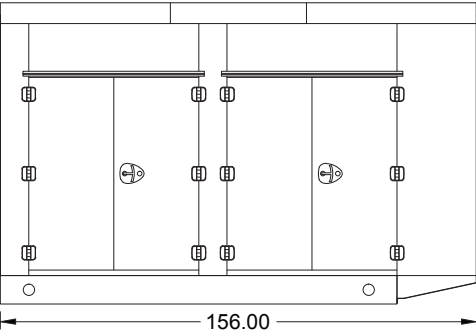
Gaseous Product Line

190 - 200 kWe / 175 kWe

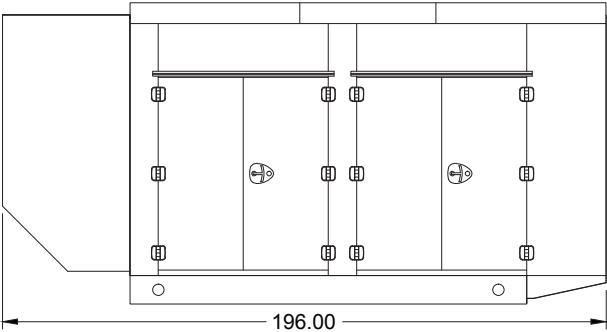


Enclosures

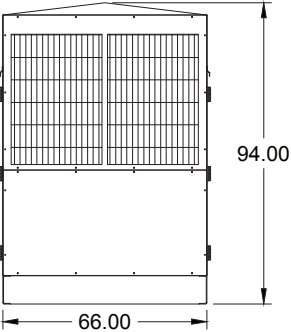
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

Distributed By:



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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG265-01 / NG265-01P

60 Hz / 1800 RPM

265 kWe / 230 kWe

Standby / Prime

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	572RSL4027	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	265 (155)	265 (155)	265 (155)	265 (155)	265 (155)
AMPS Nat (LP)	1104 (646)	921 (538)	798 (467)	399 (233)	319 (187)
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime					
kWe Nat (LP)	230 (NA)	230 (NA)	230 (NA)	230 (NA)	230 (NA)
AMPS Nat (LP)	958 (NA)	799 (NA)	692 (NA)	346 (NA)	277 (NA)
Temp Rise	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 (50°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
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

265 kWe / 230 kWe



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	892 (14.6)
Model:	D146TIC	Bore - in. (cm) x Stroke - in. (cm):	5.04 (12.8) x 5.59 (14.2)
Type:	4-Cycle	Compression Ratio:	10.5 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm):	402 (300)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,350 (732)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	1,895 (53.6)	1,645 (46.5)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)	40.8 (10.2)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	180 (681)	180 (681)
Heat Rejection to Coolant: BTUM (kW)	16,189 (285)	14,051 (246)
Heat Rejection to CAC: BTUM (kW)	4,682 (81.9)	4,064 (71.1)
Heat Radiated to Ambient: BTUM (kW)	3,017 (52.8)	2,619 (45.8)

Air Requirements		
Aspirating: CFM (m³/min)	603 (17.1)	523 (14.8)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	30,000 (849)	30,000 (849)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	Consult Factory For Remote Cooled Applications	

Fuel Consumption	Standby		Prime	
	Natural Gas	LP	Natural Gas	LP
At 100% of Power Rating: ft³/hr (m³/hr)	2,782 (78.7)	926 (26.2)	2,415 (68.3)	N/A
At 75% of Power Rating: ft³/hr (m³/hr)	2,168 (61.4)	722 (20.4)	1,882 (53.3)	N/A
At 50% of Power Rating: ft³/hr (m³/hr)	1,522 (43.1)	507 (14.3)	1,321 (37.4)	N/A
Fuel Inlet Size: NPT	3.00"		3.00"	
Fuel Pressure Required: in. H₂O (kPa)	7.00 - 11.0 (1.75 - 2.75)		7.00 - 11.0 (1.75 - 2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	8.19 (31.0)
Engine Jacket Water Capacity: gal (lit)	11.4 (43.2)
System Coolant Capacity: gal (lit)	33.5 (127)

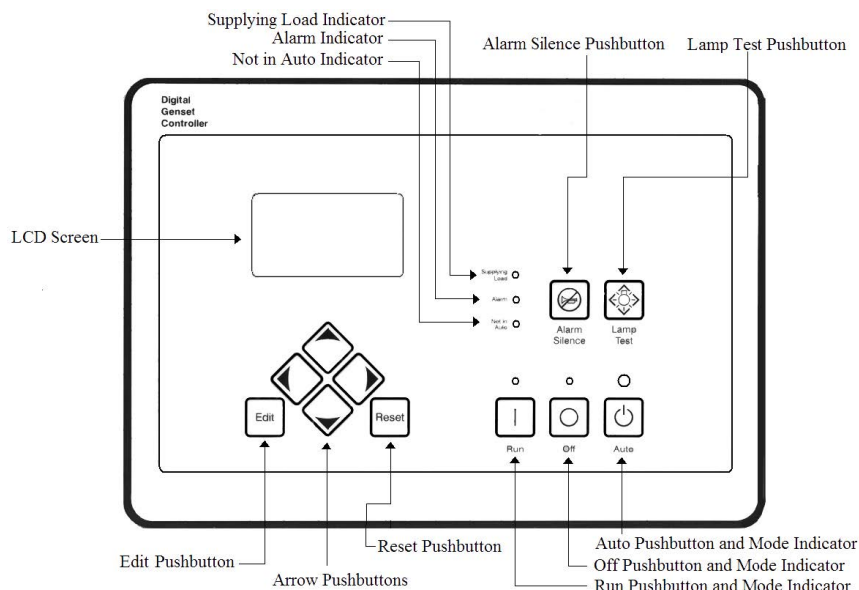
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1000ft Over 1200ft

DGC-2020 Control Panel

Standard Features

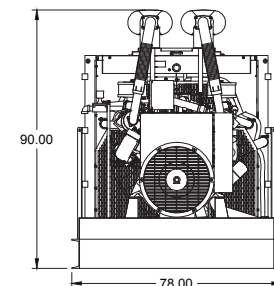
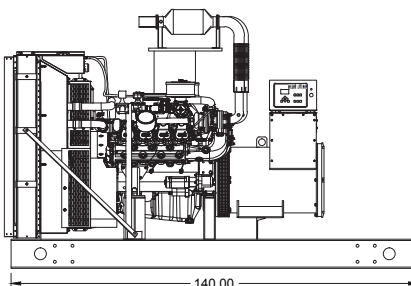
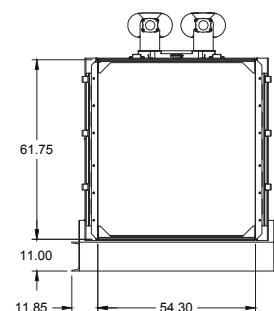
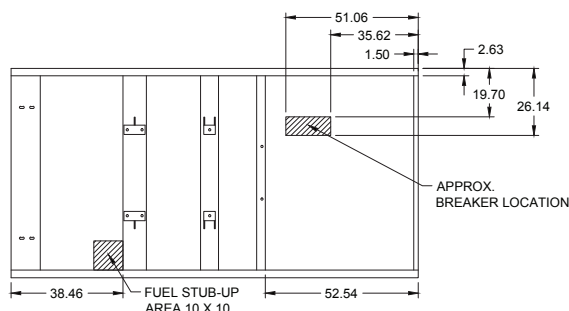
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	140 x 78 x 90 in	8,725
Level 1	140 x 78 x 96 in	10,100
Level 2	140 x 78 x 96 in	10,200
Level 3	200 x 78 x 96 in	11,150

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



	No Load	Full Load
OPU	82 dBA	85 dBA
Level 1	80 dBA	82 dBA
Level 2	75 dBA	77 dBA
Level 3	70 dBA	72 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.

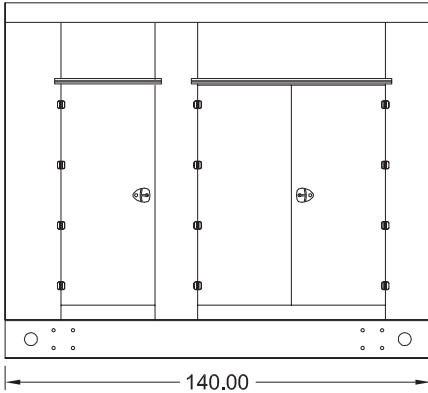
Gaseous Product Line

265 kWe / 230 kWe

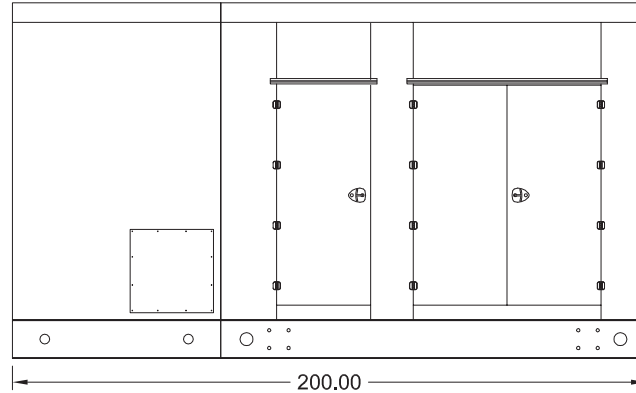


Enclosures

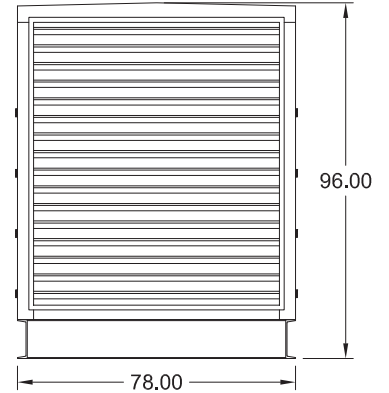
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



American Made

Distributed By:

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Suite B

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605-341-9920

Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG300-01

60 Hz / 1800 RPM

300 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	572RSL4029	433CSL6216	433CSL6216	432CSL6212	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe Nat (LP)	300 (155)	300 (155)	300 (155)	300 (155)	300 (155)
AMPS Nat (LP)	1250 (646)	1042 (538)	903 (467)	452 (233)	361 (187)
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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

300 kWe



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	892 (14.6)
Model:	D146TICHO	Bore - in. (cm) x Stroke - in. (cm):	5.04 (12.8) x 5.59 (14.2)
Type:	4-Cycle	Compression Ratio:	10.5 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm):	459 (300)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,382 (750)
Gas Volume at Stack Temp: CFM (m³/min)	2,521 (71.3)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	180 (681)
Heat Rejection to Coolant: BTUM (kW)	18,456 (323)
Heat Rejection to CAC: BTUM (kW)	5,338 (93.4)
Heat Radiated to Ambient: BTUM (kW)	4,269 (74.7)

Air Requirements	
Aspirating: CFM (m³/min)	687 (19.4)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	30,000 (849)
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)	3,172 (89.8)	926 (26.2)
At 75% of Power Rating: ft³/hr (m³/hr)	2,538 (71.8)	741 (21.0)
At 50% of Power Rating: ft³/hr (m³/hr)	1,745 (49.4)	509 (14.4)
Fuel Inlet Size: NPT		3.00"
Fuel Pressure Required: in. H₂O (kPa)		7.00 - 11.0 (1.75 - 2.70)

Fluids Capacity	
Total Oil System: gal (lit)	8.19 (31.0)
Engine Jacket Water Capacity: gal (lit)	9.50 (36.0)
System Coolant Capacity: gal (lit)	33.5 (127)

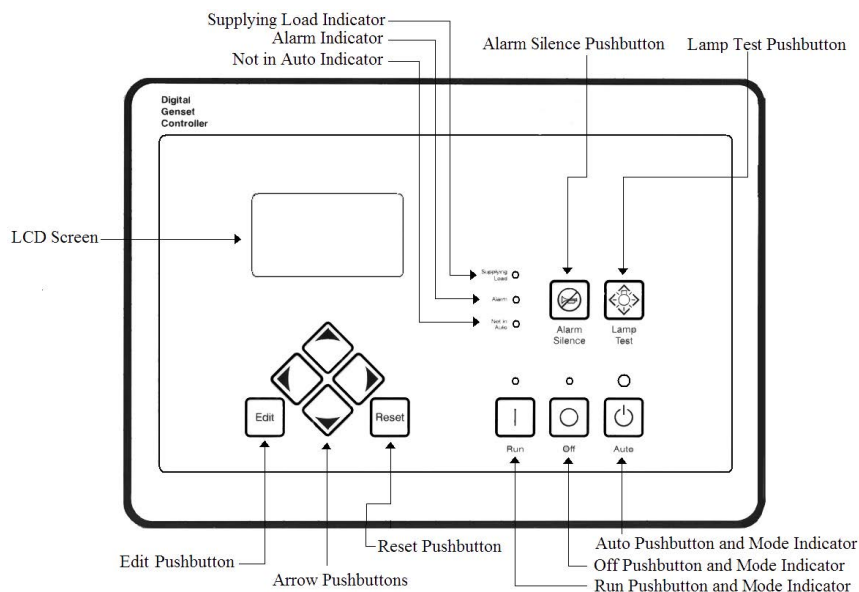
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1,000 ft Over 1,200 ft

DGC-2020 Control Panel

Standard Features

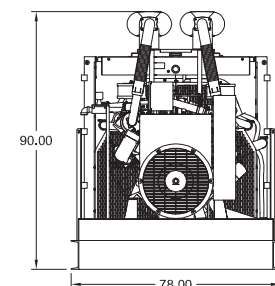
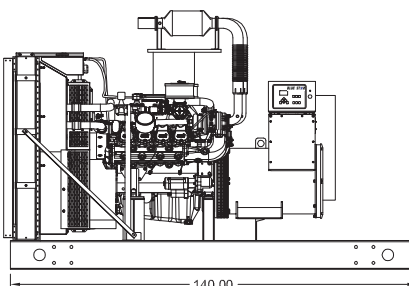
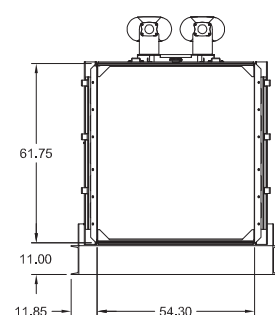
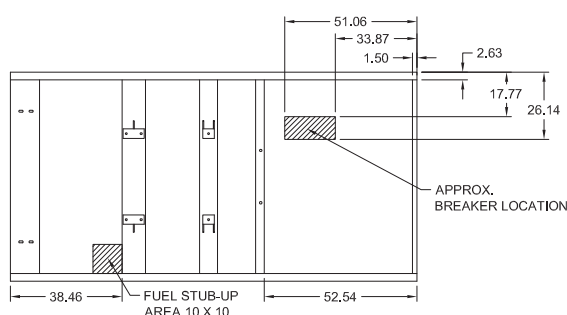
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	140 x 78 x 90 in	8,800
Level 1	140 x 78 x 96 in	10,150
Level 2	140 x 78 x 96 in	10,250
Level 3	200 x 78 x 96 in	11,275

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

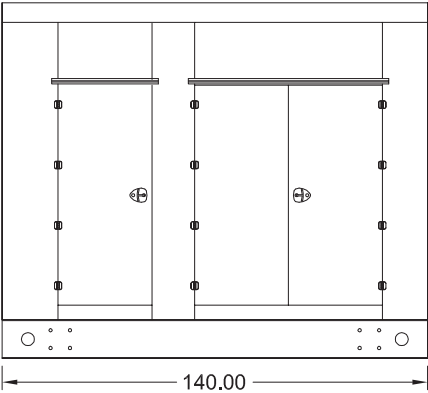


	No Load	Full Load
OPU	82 dBA	85 dBA
Level 1	80 dBA	82 dBA
Level 2	75 dBA	77 dBA
Level 3	70 dBA	72 dBA

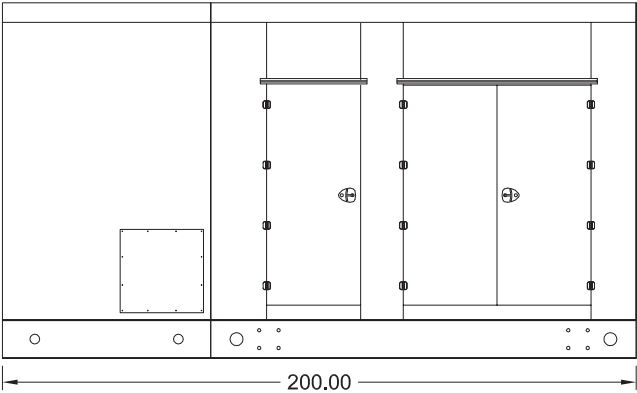
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Enclosures

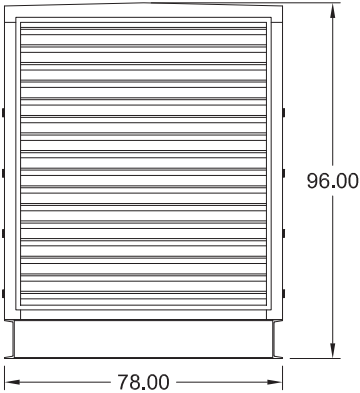
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
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Distributed By:



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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG350-01 / NG350-01P

60 Hz / 1800 RPM

350 kWe / 300 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	433CSL6216	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe Nat (LP)	350 (225)	350 (225)	350 (225)	350 (225)
AMPS Nat (LP)	1216 (782)	1054 (677)	527 (339)	421 (271)
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe Nat (LP)	300 (NA)	300 (NA)	300 (NA)	300 (NA)
AMPS Nat (LP)	1042 (NA)	903 (NA)	452 (NA)	361 (NA)
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

350 kWe / 300 kWe



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	1115 (18.3)
Model:	D183TIC	Bore - in. (cm) x Stroke - in. (cm):	5.04 (12.8) x 5.59 (14.2)
Type:	4-Cycle	Compression Ratio:	10.5 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	10 Cylinder Vee	Max HP Stby (kWm):	536 (400)

Exhaust System	Standby	Prime		
Gas Temp. (Stack): °F (°C)	1,350 (732)	1,350 (732)		
Gas Volume at Stack Temp: CFM (m³/min)	2,366 (67.0)	2,028 (57.4)		
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)	40.8 (10.2)		
Cooling System				
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)		
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)	174 (659)	174 (659)		
Heat Rejection to Coolant: BTUM (kW)	20,784 (364)	17,815 (312)		
Heat Rejection to CAC: BTUM (kW)	4,120 (72.1)	3,531 (61.8)		
Heat Radiated to Ambient: BTUM (kW)	3,486 (61.0)	2,988 (52.3)		
Air Requirements				
Aspirating: CFM (m³/min)	788 (22.0)	675 (19.1)		
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	36,000 (1,019)	36,000 (1,019)		
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	Consult Factory For Remote Cooled Applications			
Fuel Consumption	Standby		Prime	
	Natural Gas	LP	Natural Gas	LP
At 100% of Power Rating: ft3/hr (m3/hr)	3,499 (99.0)	1,400 (39.6)	2,999 (84.9)	N/A
At 75% of Power Rating: ft3/hr (m3/hr)	2,727 (77.2)	1091 (30.7)	2,337 (66.1)	N/A
At 50% of Power Rating: ft3/hr (m3/hr)	1,914 (54.2)	766 (21.7)	1,640 (46.4)	N/A
Fuel Inlet Size: NPT	3.00"		3.00"	
Fuel Pressure Required: in. H2o (kPa)	7.00 - 11.0 (1.75 - 2.75)		7.00 - 11.0 (1.75 - 2.75)	
Fluids Capacity				
Total Oil System: gal (lit)				9.25 (35.0)
Engine Jacket Water Capacity: gal (lit)				13.2 (50.0)
System Coolant Capacity: gal (lit)				56.0 (212)

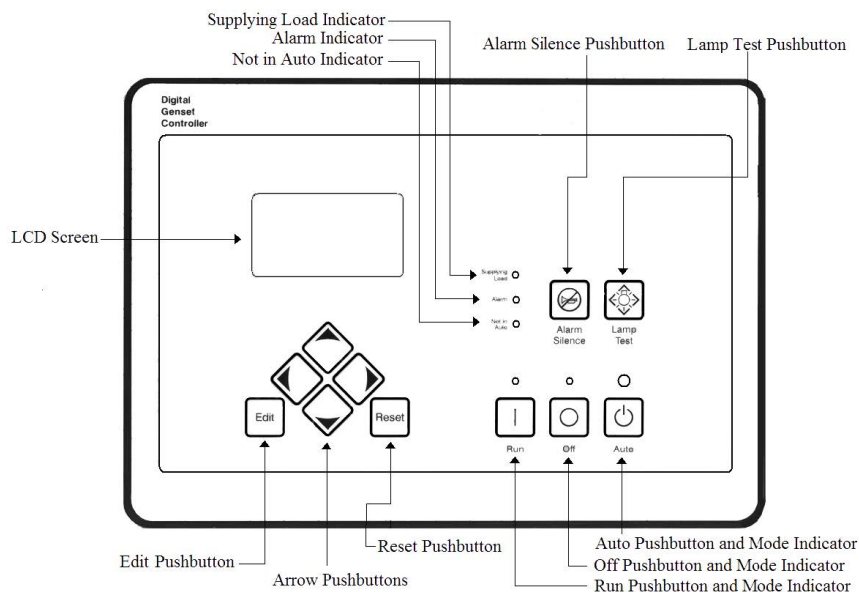
All calculations based on natural gas fuel.

Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1,000 ft Over 1,200 ft

DGC-2020 Control Panel

Standard Features

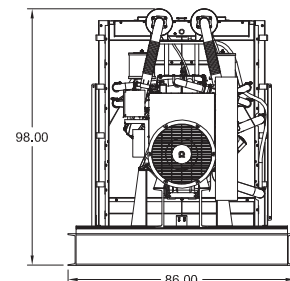
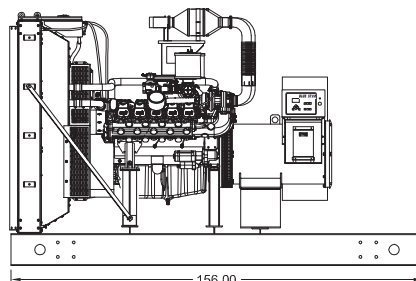
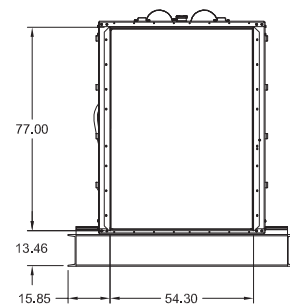
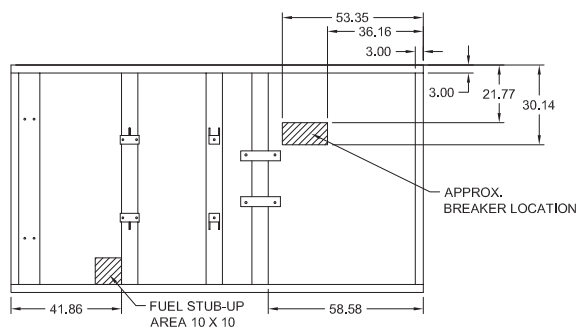
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- ▶ UL Recognized, CSA Certified, CE Approved
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- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	156 x 86 x 98 in	9,925
Level 1	156 x 86 x 110 in	11,600
Level 2	156 x 86 x 110 in	11,700
Level 3	228 x 86 x 110 in	12,425

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



	No Load	Full Load
OPU	83 dBA	86 dBA
Level 1	81 dBA	84 dBA
Level 2	76 dBA	79 dBA
Level 3	71 dBA	74 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.

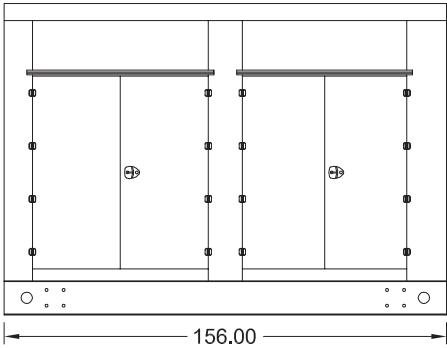
Gaseous Product Line

350 kWe / 300 kWe

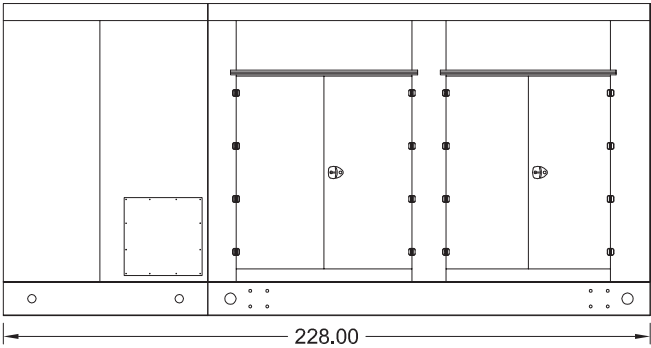


Enclosures

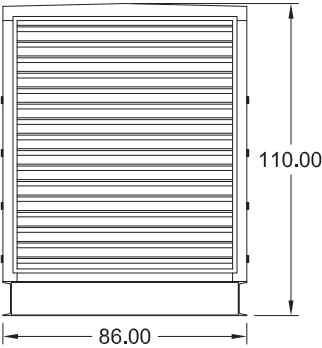
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

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Materials and specifications subject to change without notice.

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Distributed By:

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POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG400-01 / NG400-01P

60 Hz / 1800 RPM

400 kWe / 350 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6220	433CSL6220	433CSL6220	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe Nat (LP)	400 (300)	400 (300)	400 (300)	400 (300)
AMPS Nat (LP)	1390 (1042)	1204 (903)	602 (451)	482 (361)
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe Nat (LP)	350 (NA)	350 (NA)	350 (NA)	350 (NA)
AMPS Nat (LP)	1246 (NA)	1054 (NA)	527 (NA)	421 (NA)
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts Pad Type
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

400 kWe / 350 kWe



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	1,338 (21.9)
Model:	D219TIC	Bore - in. (cm) x Stroke - in. (cm):	5.04 (12.8) x 5.59 (14.2)
Type:	4-Cycle	Compression Ratio:	10.5 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	612 (457)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,350 (732)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	2,995 (84.8)	2,621 (74.2)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	40.8 (10.2)	40.8 (10.2)

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 ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	174 (659)	174 (659)
Heat Rejection to Coolant: BTUM (kW)	25,760 (451)	22,540 (394)
Heat Rejection to CAC: BTUM (kW)	6,080 (106)	5,320 (93.1)
Heat Radiated to Ambient: BTUM (kW)	3,415 (59.8)	2,988 (52.3)

Air Requirements		
Aspirating: CFM (m³/min)	968 (27.0)	847 (24.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	40,000 (1,132)	40,000 (1,132)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min)	Consult Factory For Remote Cooled Applications	

Fuel Consumption	Standby		Prime	
	Natural Gas	LP	Natural Gas	LP
At 100% of Power Rating: ft³/hr (m³/hr)	4,230 (120)	1,408 (39.8)	3,701 (105)	N/A
At 75% of Power Rating: ft³/hr (m³/hr)	3,297 (93.3)	1,097 (31.1)	2,885 (81.6)	N/A
At 50% of Power Rating: ft³/hr (m³/hr)	2,314 (65.5)	770 (21.8)	2,025 (57.3)	N/A
Fuel Inlet Size: NPT	3.00"		3.00"	
Fuel Pressure Required: in. H ₂ O (kPa)	7.00 - 11.0 (1.75 - 2.75)		7.00 - 11.0 (1.75 - 2.75)	

Fluids Capacity	
Total Oil System: gal (lit)	10.6 (40.0)
Engine Jacket Water Capacity: gal (lit)	13.8 (52.3)
System Coolant Capacity: gal (lit)	60.2 (228)

All calculations based on natural gas fuel.

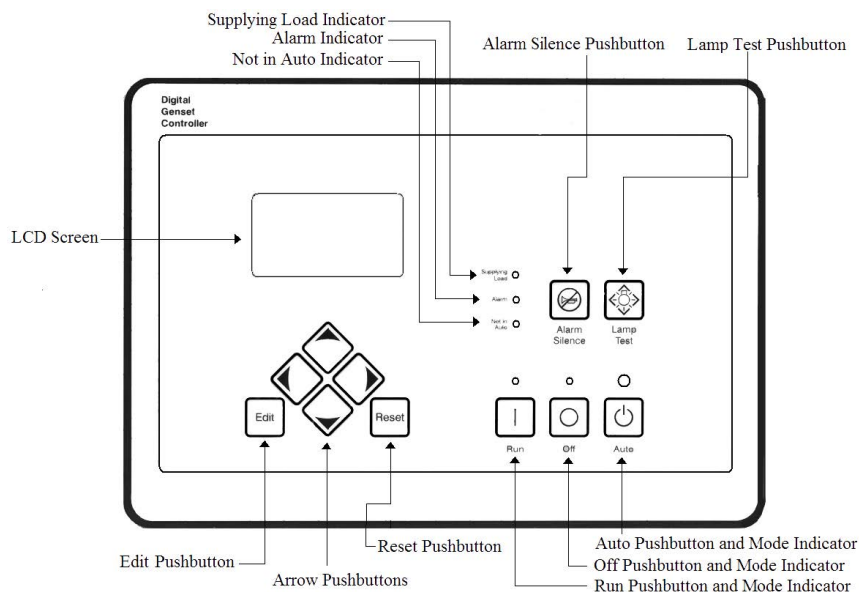
Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1,000 ft Over 1,200 ft

400 kWe / 350 kWe



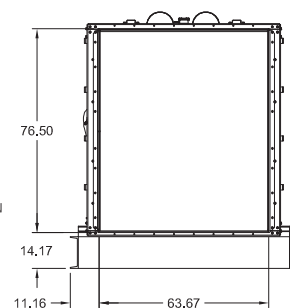
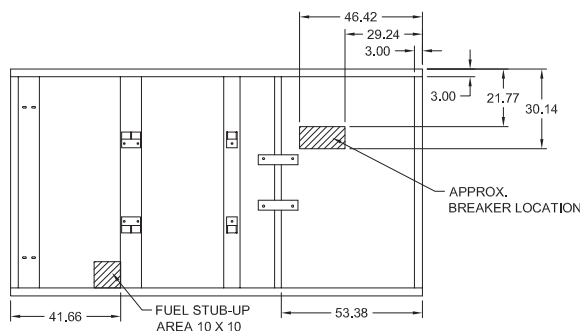
Standard Features

- ▶ 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

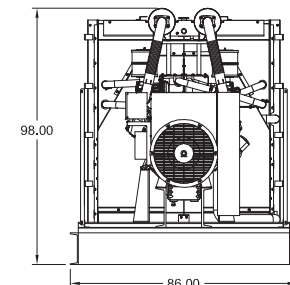
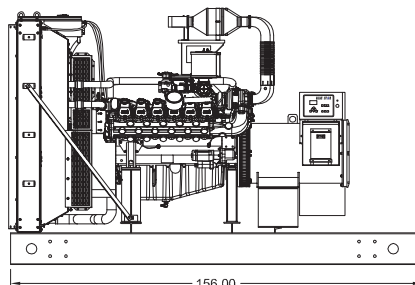


	L x W x H	Weight lbs
OPU	156 x 86 x 98 in	10,375
Level 1	156 x 86 x 110 in	12,025
Level 2	156 x 86 x 110 in	12,150
Level 3	228 x 86 x 110 in	12,850

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



	No Load	Full Load
OPU	84 dBA	87 dBA
Level 1	82 dBA	85 dBA
Level 2	77 dBA	80 dBA
Level 3	72 dBA	75 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.

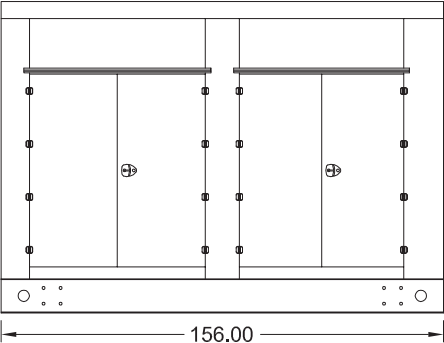
Gaseous Product Line

400 kWe / 350 kWe

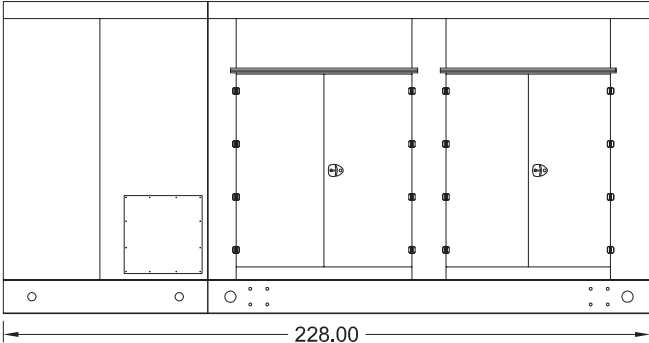


Enclosures

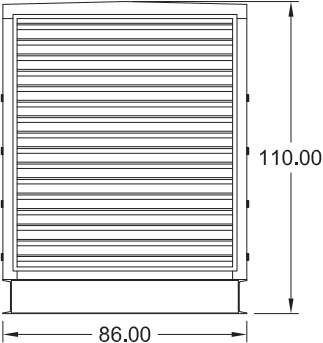
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.



Distributed By:

Powerdak Power Products
13261 Timberline Plaza
Suite B
Piedmont, SD 57769
605-341-9920
Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Gaseous Product Line

208-600 Volt

NG425-01

60 Hz / 1800 RPM

425 kWe

Standby

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4025	572RSL4025	572RSL4025	572RSS4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe Nat (LP)	425 (300)	425 (300)	425 (300)	425 (300)
AMPS Nat (LP)	1476 (1042)	1280 (903)	639 (451)	512 (361)
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified
- ▶ MasterTrak Remote Monitoring System

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 105°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Gaseous Product Line

425 kWe



Application Data

Engine			
Manufacturer:	Power Solutions International	Displacement - Cu. In. (lit):	1,338 (21.9)
Model:	D219TICHO	Bore - in. (cm) x Stroke - in. (cm):	5.04 (12.8) x 5.59 (14.2)
Type:	4-Cycle	Compression Ratio:	10.5 : 1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	649 (484)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,350 (732)
Gas Volume at Stack Temp: CFM (m³/min)	3,179 (89.8)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.8 (10.2)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	174 (659)
Heat Rejection to Coolant: BTUM (kW)	27,342 (479)
Heat Rejection to CAC: BTUM (kW)	6,454 (113)
Heat Radiated to Ambient: BTUM (kW)	3,629 (63.5)

Air Requirements	
Aspirating: CFM (m³/min)	1027 (29.1)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	40,000 (1,132)
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)	4,490 (127)	1,408 (39.8)
At 75% of Power Rating: ft³/hr (m³/hr)	3,500 (99.0)	1,098 (31.1)
At 50% of Power Rating: ft³/hr (m³/hr)	2,456 (69.54)	770 (21.8)
Fuel Inlet Size: NPT		3.00"
Fuel Pressure Required: in. H₂O (kPa)		7.00 - 11.0 (1.75 - 2.70)

Fluids Capacity	
Total Oil System: gal (lit)	10.6 (40.0)
Engine Jacket Water Capacity: gal (lit)	13.8 (52.3)
System Coolant Capacity: gal (lit)	60.2 (228)

All calculations based on natural gas fuel.

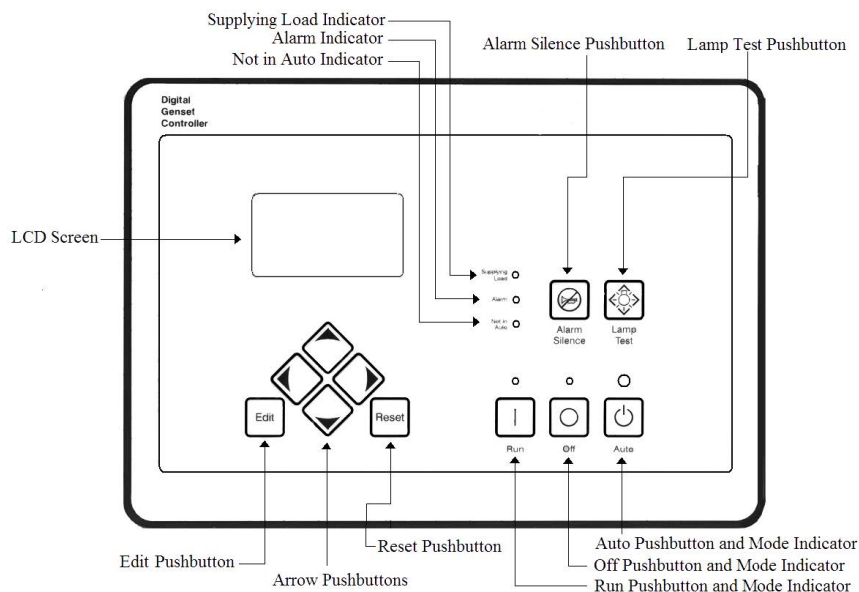
Deration Factors: Temperature: Derate 1.5% Per 10°F Over 77°F Air Inlet Temperature | Altitude: Derate 2.5% Per 1,000 ft Over 1,200 ft

425 kWe



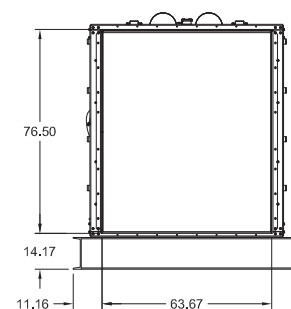
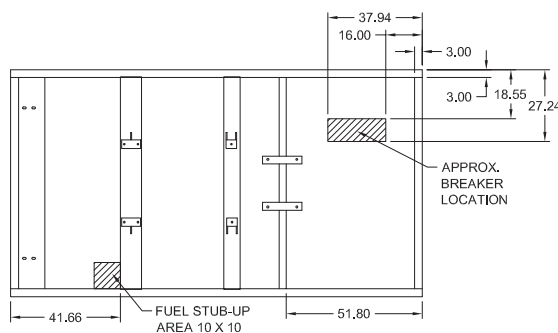
Standard Features

- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
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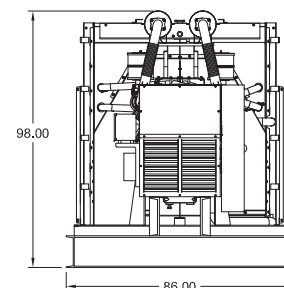
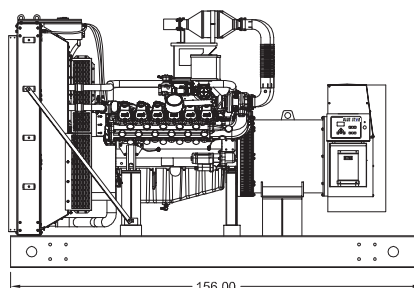


	L x W x H	Weight lbs
OPU	156 x 86 x 98 in	10,875
Level 1	156 x 86 x 110 in	12,525
Level 2	156 x 86 x 110 in	12,650
Level 3	228 x 86 x 110 in	13,350

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



	No Load	Full Load
OPU	84 dBA	87 dBA
Level 1	82 dBA	85 dBA
Level 2	77 dBA	80 dBA
Level 3	72 dBA	75 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.

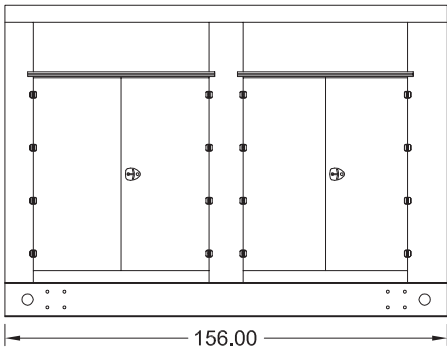
Gaseous Product Line

425 kWe

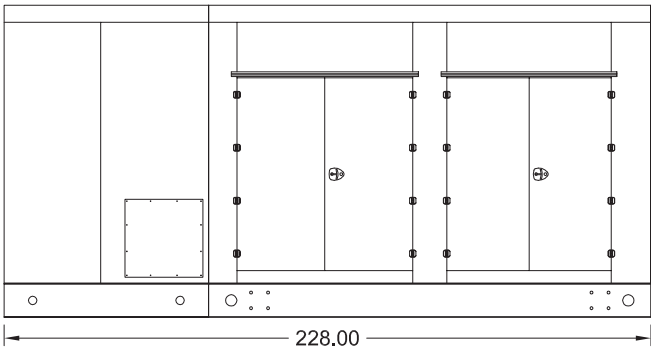


Enclosures

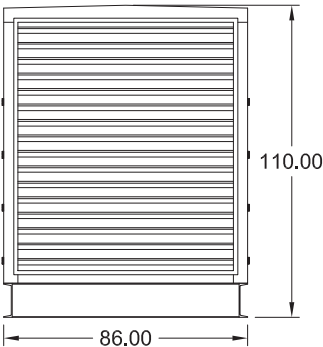
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
Materials and specifications subject to change without notice.

American Owned



American Made

Distributed By:

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DIESEL PRODUCT LINE OVERVIEW

POWERDAK
POWER PRODUCTS

Diesel Product Lines

30 - 2000 kWe

60 Hz at 1800 RPM

Engine Manufacturers

John Deere

Mitsubishi

MTU

Volvo Penta

Powered by a wide variety of engines to suit our customers' most unique requirements, Powerdak Power Products offers diesel generator sets ranging from 30 - 2000 kWe. From our standard product line to our customized product, our quality and attention to detail is unparalleled. Our expertise and flexible customized solutions offer you the unique opportunity to receive a unit that is fit perfectly to you or your customer's particular application. Whether your need is Tier 4 Final continuous power, the ability to cover peak loads, or simply peace of mind with back-up emergency power, our goal is always to develop a long term partnership well beyond the sale. Our commitment to fuel efficiency, and current EPA emissions standards provide you with the most technologically advanced, environmentally friendly unit available. Additional offerings available for mobile generators ranging from 30 - 600 kWe.



Emergency Standby Stationary, Prime Power & Mobile

Unit Model	kWe	cULus/ CSA	EPA	Engine		Alternator Manufacturer	Available Voltages	
	Standby			Manufacturer	Model		3 Phase 208 - 600 Volt - 0.8 PF	1 Phase 240 Volt - 1.0 PF
JD30-03IT4	30	Standard	IT4	John Deere	3029TFG80	Marathon	Available	Available
JD40-03	40	Standard	T3	John Deere	4045TF280	Marathon	Available	Available
JD50-03	50	Standard	T3	John Deere	4045TF280	Marathon	Available	Available
JD60-02	60	Standard	T3	John Deere	4045TF280	Marathon	Available	Available
JD80-02	80	Standard	T3	John Deere	4045HF285	Marathon	Available	Available
VD100-01	100	Standard	T3	Volvo Penta	TAD551GE	Marathon	Available	Available
VD100-02FT4	100	Standard	FT4	Volvo Penta	TAD571VE	Marathon	Available	Available
JD100-01	100	Standard	T3	John Deere	4045HF285	Marathon	Available	Available
VD125-02FT4	125	Standard	FT4	Volvo Penta	TAD572VE	Marathon	Available	Available
JD125-02	125	Standard	T3	John Deere	4045HF285	Marathon	Available	Available
VD150-01	150	Standard	T3	Volvo Penta	TAD751GE	Marathon	Available	Available
VD150-02FT4	150	Standard	FT4	Volvo Penta	TAD871VE	Marathon	Available	Available
JD150-01	150	Standard	T3	John Deere	6068HF285	Marathon	Available	Available
VD200-01	200	Standard	T3	Volvo Penta	TAD753GE	Marathon	Available	Available
VD200-02FT4	200	Standard	FT4	Volvo Penta	TAD1170VE	Marathon	Available	Available
JD200-01	200	Standard	T3	John Deere	6068HFG85	Marathon	Available	Available
VD250-01	250	Standard	T3	Volvo Penta	TAD1350GE	Marathon	Available	Available
VD250-02FT4	250	Standard	FT4	Volvo Penta	TAD1371VE	Marathon	Available	Available
JD250-02	250	Standard	T3	John Deere	6090HF484	Marathon	Available	Available
TD250-01	250	Standard	T3	MTU	6R1600G70S	Marathon	Available	N/A
JD275-02	275	Standard	T3	John Deere	6090HF484	Marathon	Available	Available
TD275-01	275	Standard	T3	MTU	6R1600G70S	Marathon	Available	N/A
VD300-01	300	Standard	T3	Volvo Penta	TAD1351GE	Marathon	Available	Available
VD300-02FT4	300	Standard	FT4	MTU	TAD1373VE	Marathon	Available	Available
JD300-02	300	Standard	T3	John Deere	6090HFG86	Marathon	Available	Available
TD300-01	300	Standard	T3	MTU	6R1600G80S	Marathon	Available	N/A
VD350-01	350	Standard	T3	Volvo Penta	TAD1352GE	Marathon	Available	N/A
VD350-02FT4	350	Standard	FT4	Volvo Penta	TAD1670VE	Marathon	Available	N/A
JD350-02	350	Standard	T3	John Deere	6135HFG84	Marathon	Available	N/A
TD350-01	350	Standard	T3	MTU	8V1600G70S	Marathon	Available	N/A
VD400-01	400	Standard	T3	Volvo Penta	TAD1353GE	Marathon	Available	N/A
VD400-02FT4	400	Standard	FT4	Volvo Penta	TAD1672VE	Marathon	Available	N/A
TD400-01	400	Standard	T3	MTU	8V1600G80S	Marathon	Available	N/A
JD415-03	415	Standard	T3	John Deere	6135HFG84	Marathon	Available	N/A
VD450-01	450	Standard	T3	Volvo Penta	TAD1650GE	Marathon	Available	N/A
TD450-01	450	Standard	T3	MTU	10V1600G70S	Marathon	Available	N/A
VD500-01	500	Standard	T2	Volvo Penta	TAD1641GE	Marathon	Available	N/A
TD500-01	500	Standard	T2	MTU	10V1600G80S	Marathon	Available	N/A
VD550-01	550	Standard	T2	Volvo Penta	TAD1642GE	Marathon	Available	N/A
VD550-02FT4	550	Standard	FT4	Volvo Penta	TWD1672GE	Marathon	Available	N/A
TD550-01	550	Standard	T2	MTU	12V1600G70S	Marathon	Available	N/A
VD600-01	600	Standard	T2	Volvo Penta	TWD1643GE	Marathon	Available	N/A
VD600-02FT4	600	Standard	FT4	Volvo Penta	TWD1673GE	Marathon	Available	N/A
TD600-01	600	Standard	T2	MTU	12V1600G80S	Marathon	Available	N/A
MD800-01	800	Standard	T2	Mitsubishi	S12A2 Y2PTAW-2	Marathon	Available	N/A
MD1000-01	1000	Standard	T2	Mitsubishi	S12H Y2PTAW-1	Marathon	Available	N/A
MD1250-01	1250	Standard	T2	Mitsubishi	S12R Y2PTAW-1	Marathon	Available	N/A
MD1600-01	1600	Standard	T2	Mitsubishi	S16R Y2PTAW-1	Marathon	Available	N/A
MD2000-01	2000	Standard	T2	Mitsubishi	S16R Y2PTAW2-1	Marathon	Available	N/A

MTU Models ranging from 80-200 kW / 750-2500 kW available upon request.

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD30-03IT4

60 Hz / 1800 RPM

30 kWe / 25 kWe

Standby / Prime

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	284PSL1708	283PSL1707	283PSL1707	283PSL1707	283PSL5251
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	30	30	30	30	30
AMPS	125	104	90	45	36
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime					
kWe	25	25	25	25	25
AMPS	104	87	75	38	30
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ 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 ▶ Air Cleaner (Dry Single Stage) ▶ Flexible Fuel Connector ▶ EPA Certified Tier IT4 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± 1% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ 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 ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

30 kWe / 25 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	177 (2.90)
Model:	3029TFG80	Bore - in. (cm) x Stroke - in. (cm):	4.20 (10.6) x 4.30 (11.0)
Type:	4-Cycle	Compression Ratio:	17.2:1
Aspiration:	Turbo Charged	Rated RPM:	1800
Cylinder Arrangement:	3 Cylinder Inline	Max HP Stby (kWm):	47.0 (35.1)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,076 (580)	1,076 (580)
Gas Volume at Stack Temp: CFM (m³/min)	293 (8.30)	293 (8.30)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	30.0 (7.50)	30.0 (7.50)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	29.0 (110)	29.0 (110)
Heat Rejection to Coolant: BTUM (kW)	1,144 (20.1)	1,144 (20.1)
Heat Radiated to Ambient: BTUM (kW)	342 (5.99)	285 (4.98)
Air Requirements		
Aspirating: CFM (m³/min)	127 (3.60)	127 (3.60)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	4,013 (114)	4,013 (114)
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)	2.65 (10.0)	2.20 (8.33)
At 75% of Power Rating: gal/hr (lit/hr)	1.99 (7.19)	1.65 (6.25)
At 50% of Power Rating: gal/hr (lit/hr)	1.37 (5.19)	1.13 (4.28)
Fluids Capacity		
Total Oil System: gal (lit)	3.10 (11.8)	3.10 (11.8)
Engine Jacket Water Capacity: gal (lit)	1.51 (5.70)	1.51 (5.70)
System Coolant Capacity: gal (lit)	4.51 (17.1)	4.51 (17.1)

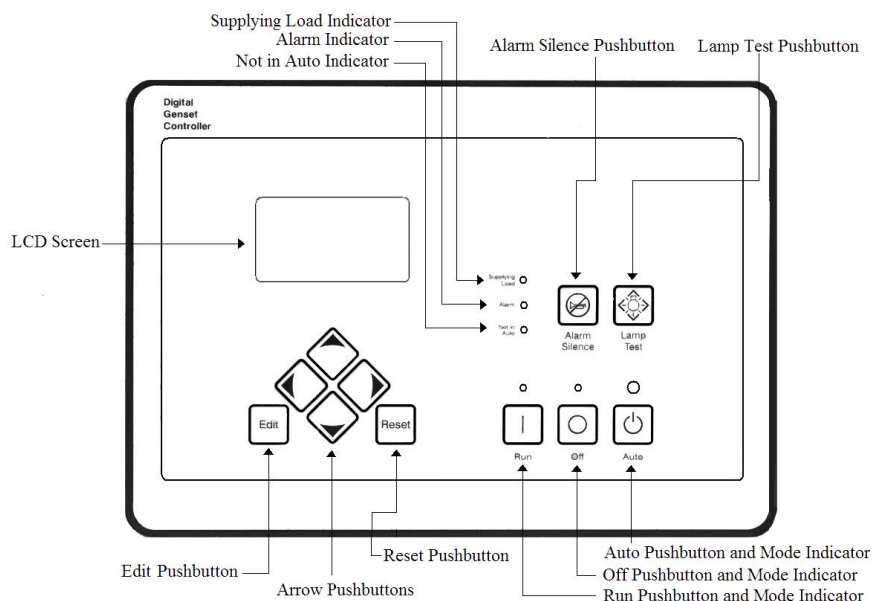
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

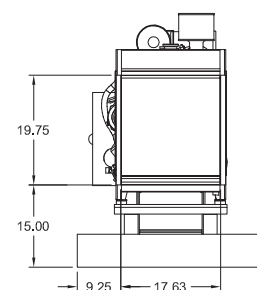
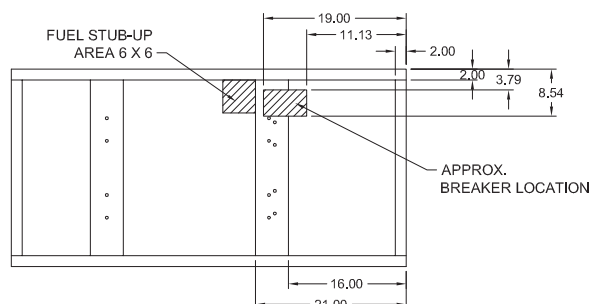
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- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
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- ▶ Up to 15 Contact Outputs (7 standard)
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- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



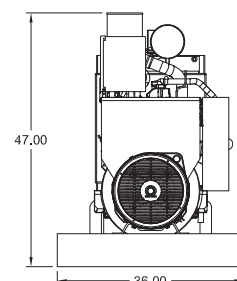
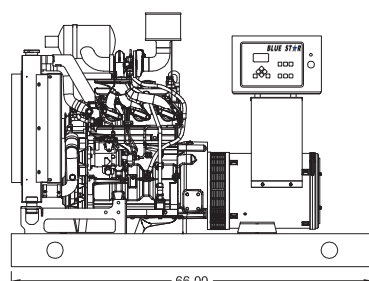
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	66 x 36 x 47 in	1,525
Level 1	80 x 36 x 48 in	1,875
Level 2	80 x 36 x 48 in	1,925
Level 3	104 x 36 x 48 in	2,050

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



	No Load	Full Load
OPU	72 dBA	74 dBA
Level 1	66 dBA	68 dBA
Level 2	62 dBA	65 dBA
Level 3	60 dBA	62 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.

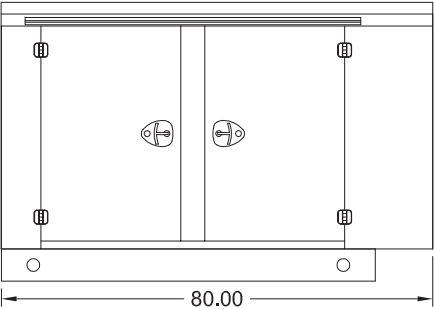
Diesel Product Line

30 kWe / 25 kWe

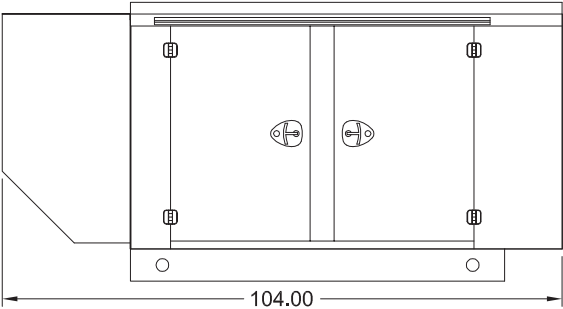


Enclosures

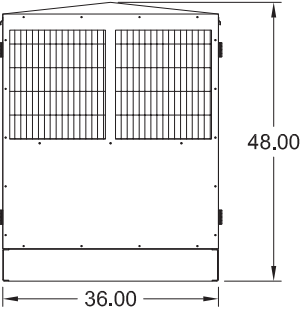
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



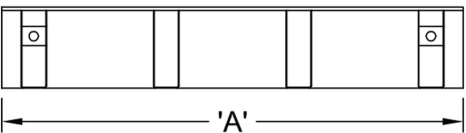
Level 1, 2 & 3 | Intake View



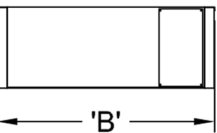
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 70 Gallon	48 Hour 140 Gallon	72 Hour 210 Gallon
A	66.00	66.00	84.00
B	36.00	36.00	36.00
C	16.00	30.00	32.00

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.



Distributed By:

Powerdak Power Products
13261 Timberline Plaza
Suite B
Piedmont, SD 57769
605-341-9920
Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD40-03

60 Hz / 1800 RPM

40 kWe / 35 kWe

Standby / Prime

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	361CSL1601	361CSL1600	361CSL1600	361CSL1600	361PSL1632
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	40	40	40	40	40
AMPS	167	139	120	60	48
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime [Only Available For Mobile Applications]					
kWe	35	35	35	35	35
AMPS	146	122	105	53	42
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

40 kWe / 35 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	275 (4.50)
Model:	4045TF280	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	75.0 (56.0)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	945 (507)	918 (492)
Gas Volume at Stack Temp: CFM (m³/min)	448 (12.7)	424 (12.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	30.0 (7.50)	30.0 (7.50)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	38.0 (144)	38.0 (144)
Heat Rejection to Coolant: BTUM (kW)	1,821 (31.9)	1,707 (29.9)
Heat Radiated to Ambient: BTUM (kW)	512 (9.00)	448 (7.80)
Air Requirements		
Aspirating: CFM (m³/min)	180 (5.09)	173 (4.90)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	4,760 (135)	4,760 (135)
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)	4.13 (15.6)	3.82 (14.4)
At 75% of Power Rating: gal/hr (lit/hr)	3.25 (12.3)	2.99 (11.3)
At 50% of Power Rating: gal/hr (lit/hr)	2.21 (8.37)	2.11 (8.00)
Fluids Capacity		
Total Oil System: gal (lit)	3.88 (14.7)	3.88 (14.7)
Engine Jacket Water Capacity: gal (lit)	2.25 (8.52)	2.25 (8.52)
System Coolant Capacity: gal (lit)	5.38 (20.4)	5.38 (20.4)

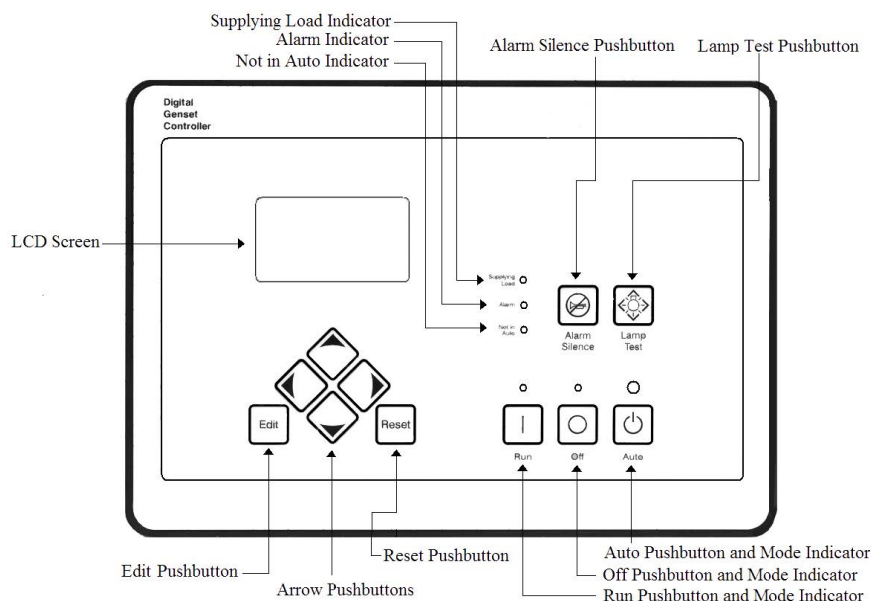
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

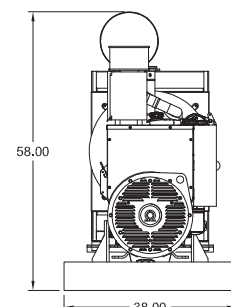
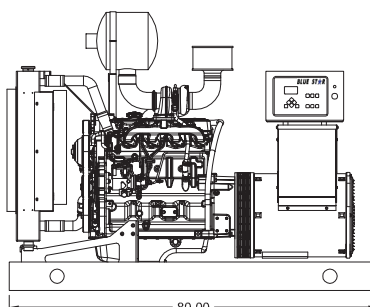
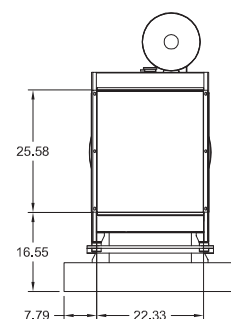
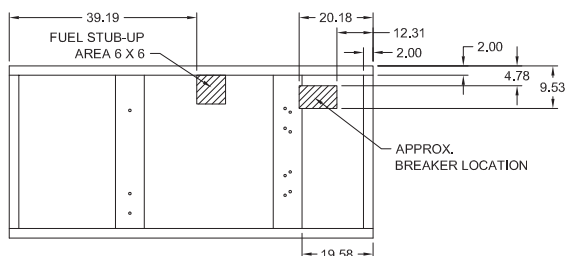
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	80 x 38 x 58 in	1,950
Level 1	90 x 38 x 60 in	2,425
Level 2	90 x 38 x 60 in	2,475
Level 3	120 x 38 x 60 in	2,625

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



	No Load	Full Load
OPU	73 dBA	77 dBA
Level 1	71 dBA	73 dBA
Level 2	68 dBA	70 dBA
Level 3	63 dBA	65 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.

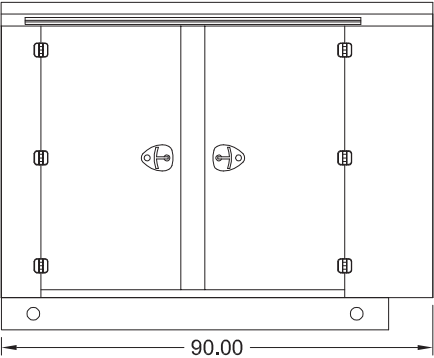
Diesel Product Line

40 kWe / 35 kWe

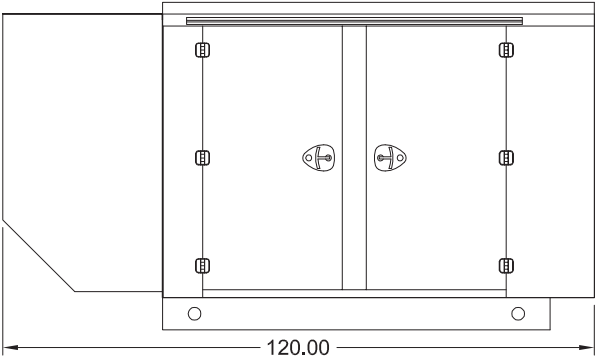


Enclosures

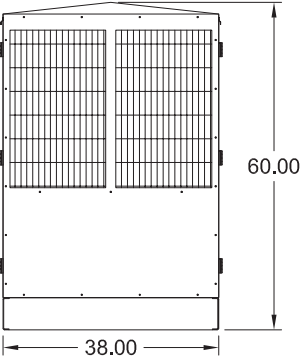
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



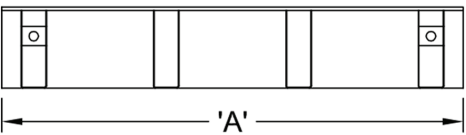
Level 1, 2 & 3 | Intake View



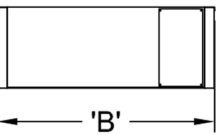
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 120 Gallon	48 Hour 240 Gallon	72 Hour 360 Gallon
A	80.00	80.00	108.00
B	38.00	38.00	38.00
C	20.00	36.00	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.
Materials and specifications subject to change without notice.



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POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD50-03

60 Hz / 1800 RPM

50 kWe / 45 kWe

Standby / Prime

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	361CSL1602	361CSL1601	361CSL1601	361CSL1601	361PSL1633
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	50	50	50	50	50
AMPS	208	174	151	75	60
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime [Only Available For Mobile Applications]					
kWe	45	45	45	45	45
AMPS	188	156	135	68	54
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

50 kWe / 45 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	275 (4.5)
Model:	4045TF280	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	75.0 (56.0)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	945 (507)	918 (492)
Gas Volume at Stack Temp: CFM (m³/min)	448 (12.7)	424 (12.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	30 (7.50)	30 (7.50)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	38.0 (144)	38.0 (144)
Heat Rejection to Coolant: BTUM (kW)	1,821 (31.9)	1707 (29.9)
Heat Radiated to Ambient: BTUM (kW)	512 (9.00)	448 (7.80)
Air Requirements		
Aspirating: CFM (m³/min)	180 (5.09)	173 (4.90)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	4,760 (135)	4,760 (135)
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)	4.13 (15.6)	3.82 (14.4)
At 75% of Power Rating: gal/hr (lit/hr)	3.25 (12.3)	2.99 (11.3)
At 50% of Power Rating: gal/hr (lit/hr)	2.21 (8.37)	2.11 (8.00)
Fluids Capacity		
Total Oil System: gal (lit)	3.88 (14.7)	3.88 (14.7)
Engine Jacket Water Capacity: gal (lit)	2.25 (8.52)	2.25 (8.52)
System Coolant Capacity: gal (lit)	5.38 (20.4)	5.38 (20.4)

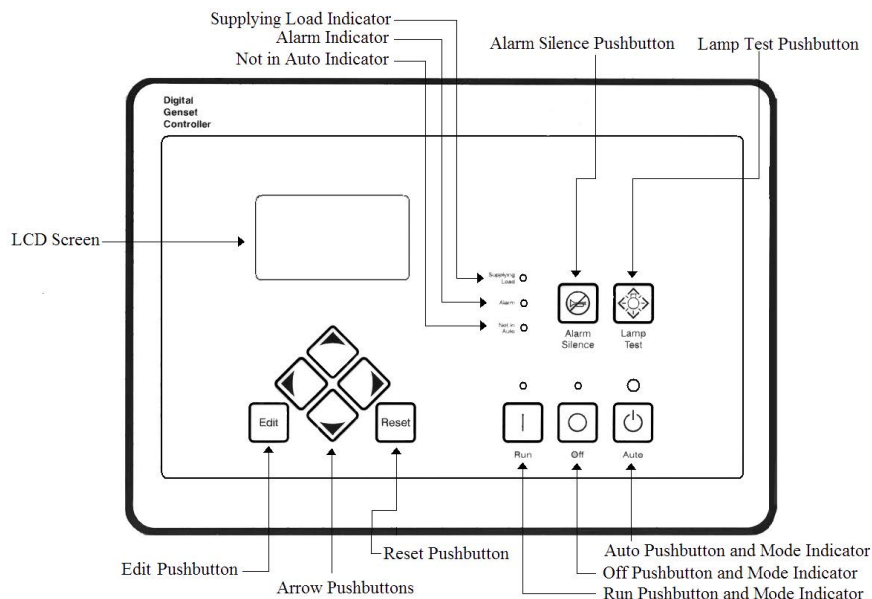
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

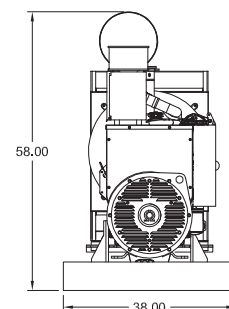
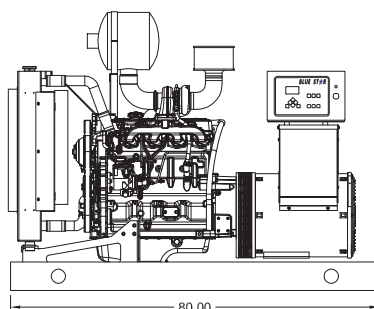
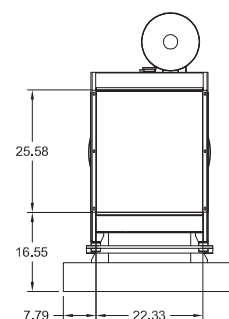
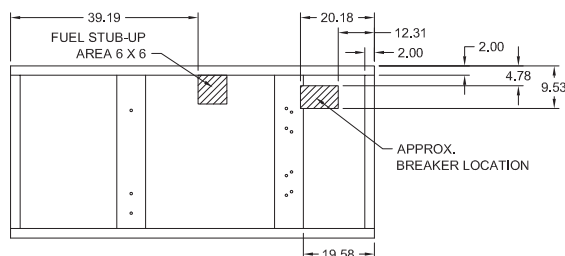
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	80 x 38 x 58 in	2,000
Level 1	90 x 38 x 60 in	2,500
Level 2	90 x 38 x 60 in	2,550
Level 3	120 x 38 x 60 in	2,700

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



	No Load	Full Load
OPU	73 dBA	77 dBA
Level 1	71 dBA	73 dBA
Level 2	68 dBA	70 dBA
Level 3	63 dBA	65 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.

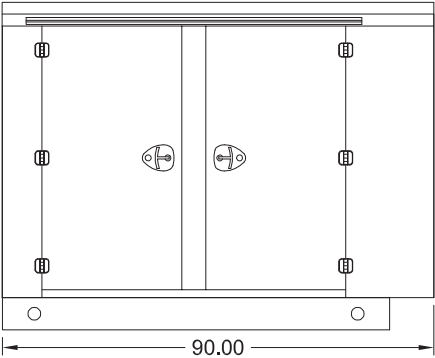
Diesel Product Line

50 kWe / 45 kWe

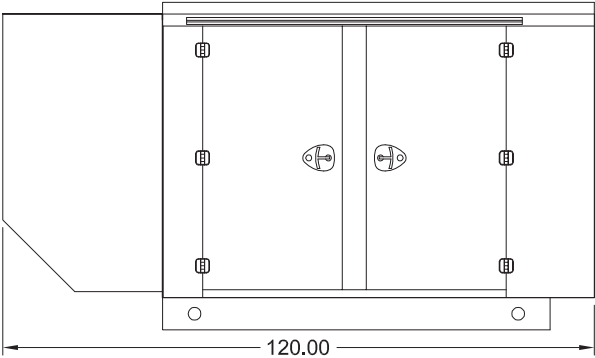


Enclosures

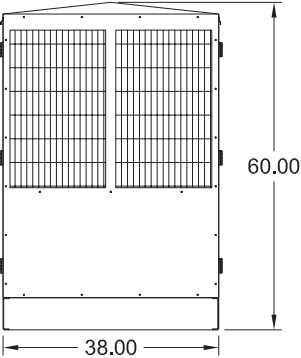
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



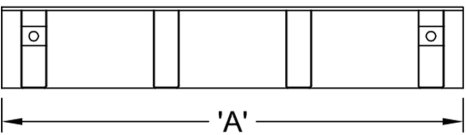
Level 1, 2 & 3 | Intake View



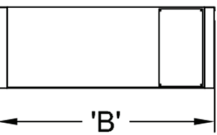
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 120 Gallon	48 Hour 240 Gallon	72 Hour 360 Gallon
A	80.00	80.00	108.00
B	38.00	38.00	38.00
C	20.00	36.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD60-02

60 Hz / 1800 RPM

60 kWe / 50 kWe

Standby / Prime

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	362CSL1604	361CSL1602	361CSL1602	361CSL1601	361PSL1633
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	60	60	60	60	60
AMPS	250	208	181	90	72
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	50	50	50	50	50
AMPS	208	174	150	75	60
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

60 kWe / 50 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	275 (4.50)
Model:	4045TF280	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	85.0 (76.0)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,074 (579)	1,024 (551)
Gas Volume at Stack Temp: CFM (m³/min)	679 (19.2)	645 (18.3)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	30.0 (7.50)	30.0 (7.50)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	38.0 (144)	38.0 (144)
Heat Rejection to Coolant: BTUM (kW)	2,049 (35.9)	1,878 (32.9)
Heat Radiated to Ambient: BTUM (kW)	854 (14.9)	712 (12.5)
Air Requirements		
Aspirating: CFM (m³/min)	187 (5.29)	180 (5.09)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	4,760 (135)	4,760 (135)
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)	4.59 (17.4)	4.21 (15.9)
At 75% of Power Rating: gal/hr (lit/hr)	3.56 (13.5)	3.28 (12.4)
At 50% of Power Rating: gal/hr (lit/hr)	2.48 (9.38)	2.35 (8.9)
Fluids Capacity		
Total Oil System: gal (lit)	3.88 (14.7)	3.88 (14.7)
Engine Jacket Water Capacity: gal (lit)	2.32 (8.50)	2.32 (8.50)
System Coolant Capacity: gal (lit)	5.40 (20.4)	5.40 (20.4)

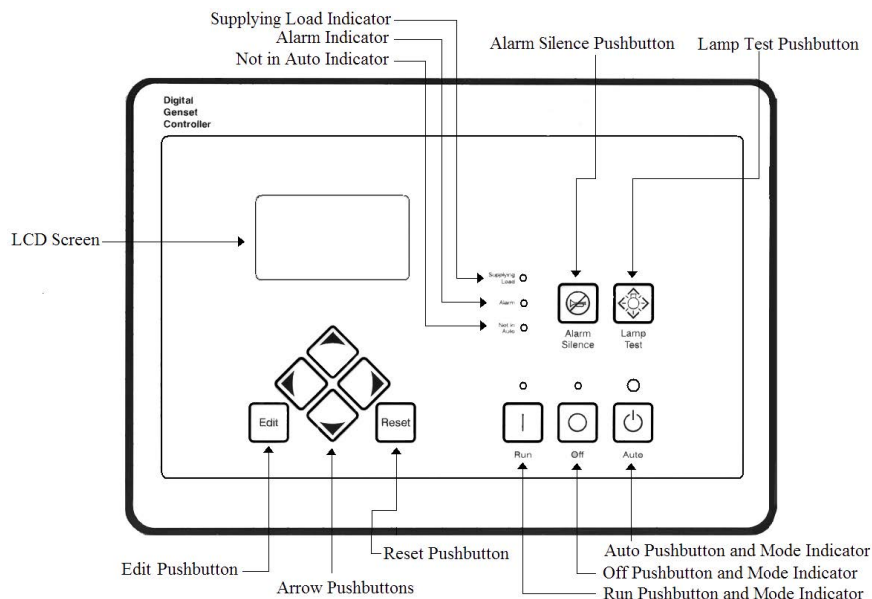
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

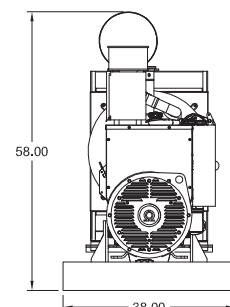
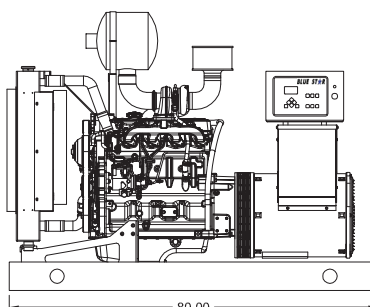
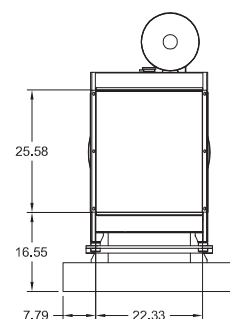
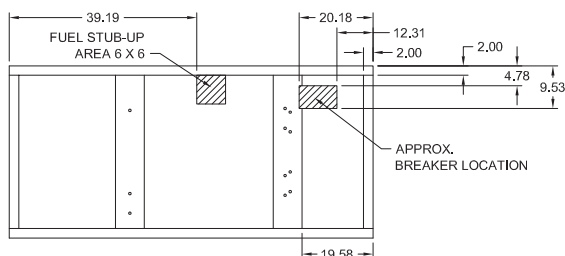
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	80 x 38 x 58 in	2,000
Level 1	90 x 38 x 60 in	2,500
Level 2	90 x 38 x 60 in	2,550
Level 3	120 x 38 x 60 in	2,700

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



	No Load	Full Load
OPU	73 dBA	77 dBA
Level 1	71 dBA	73 dBA
Level 2	68 dBA	70 dBA
Level 3	63 dBA	65 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.

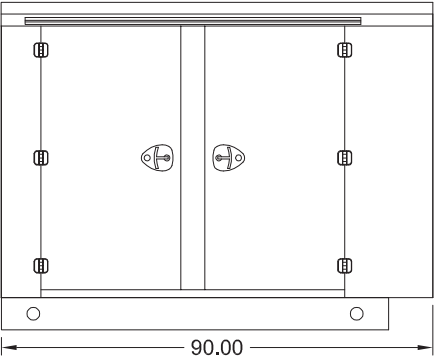
Diesel Product Line

60 kWe / 50 kWe

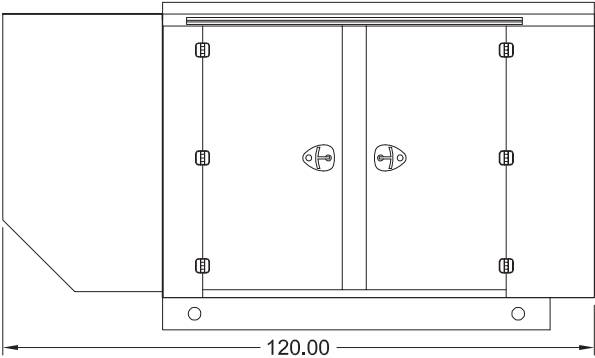


Enclosures

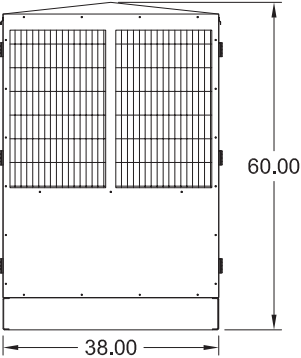
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



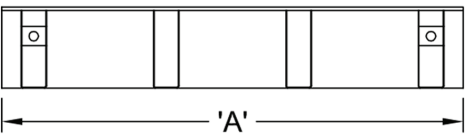
Level 1, 2 & 3 | Intake View



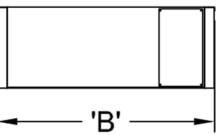
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 120 Gallon	48 Hour 240 Gallon	72 Hour 360 Gallon
A	80.00	80.00	108.00
B	38.00	38.00	38.00
C	20.00	36.00	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.
Materials and specifications subject to change without notice.



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POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD80-02

60 Hz / 1800 RPM

80 kWe / 70 kWe

Standby / Prime

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	363CSL1607	362CSL1604	362CSL1604	362CSL1604	362PSL1635
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	80	80	80	80	80
AMPS	333	278	241	120	96
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	70	70	70	70	70
AMPS	292	243	211	105	84
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

80 kWe / 70 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	275 (4.50)
Model:	4045HF285	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	126 (94.0)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,069 (576)	1,042 (561)
Gas Volume at Stack Temp: CFM (m³/min)	651 (18.4)	612 (17.3)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	30.0 (7.50)	30.0 (7.50)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	48.0 (182)	48.0 (182)
Heat Rejection to Coolant: BTUM (kW)	2,990 (52.3)	2,855 (50.5)
Heat Rejection to CAC: BTUM (kW)	627 (11.8)	640 (11.2)
Heat Radiated to Ambient: BTUM (kW)	1,138 (19.9)	996 (17.4)

Air Requirements		
Aspirating: CFM (m³/min)	234 (6.62)	223 (6.31)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	6,541 (185)	6,541 (185)
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)	6.60 (25.0)	6.04 (22.9)
At 75% of Power Rating: gal/hr (lit/hr)	5.37 (20.3)	4.93 (18.7)
At 50% of Power Rating: gal/hr (lit/hr)	3.96 (15.0)	3.63 (13.8)

Fluids Capacity		
Total Oil System: gal (lit)	3.43 (13.0)	3.43 (13.0)
Engine Jacket Water Capacity: gal (lit)	2.24 (8.50)	2.24 (8.50)
System Coolant Capacity: gal (lit)	5.40 (20.4)	5.40 (20.4)

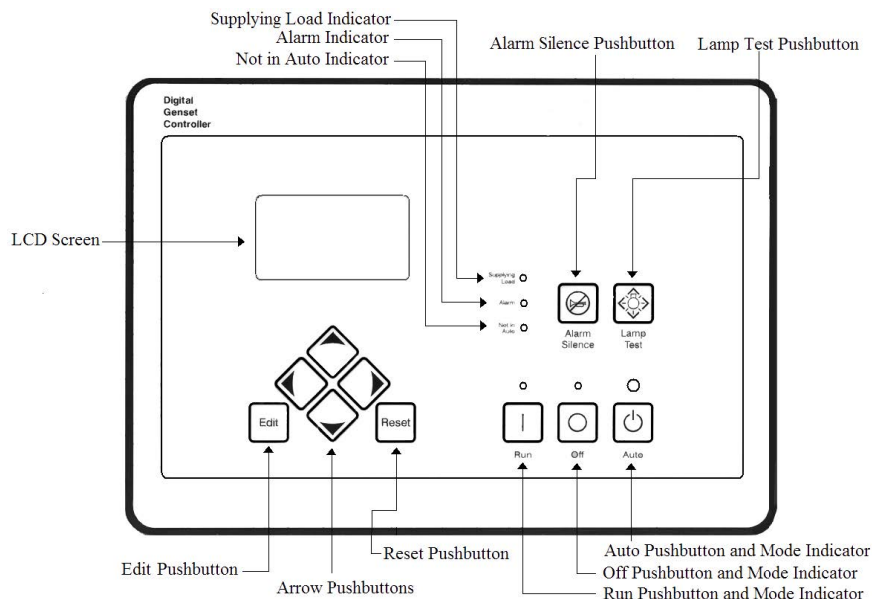
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

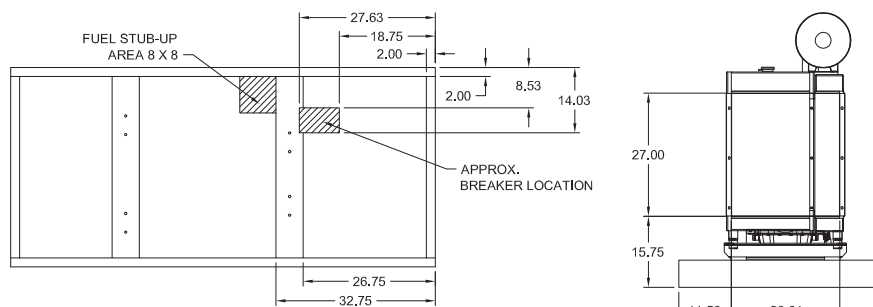
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- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact 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



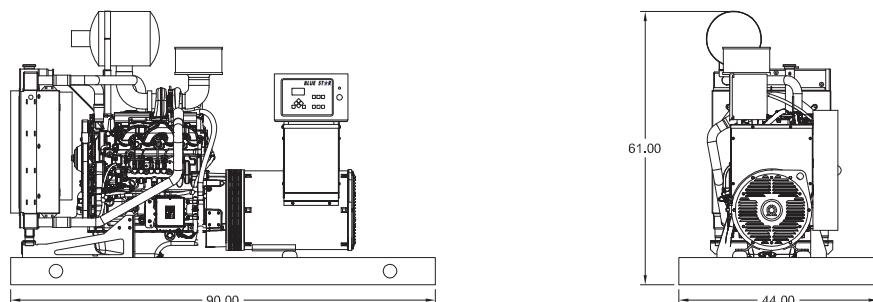
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	90 x 44 x 61 in	2,425
Level 1	102 x 44 x 66 in	3,050
Level 2	102 x 44 x 66 in	3,100
Level 3	132 x 44 x 66 in	3,275

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



	No Load	Full Load
OPU	77 dBA	81 dBA
Level 1	74 dBA	77 dBA
Level 2	71 dBA	73 dBA
Level 3	65 dBA	67 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.

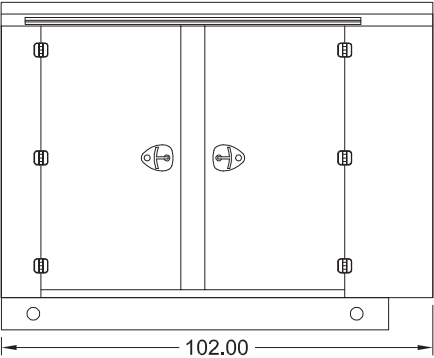
Diesel Product Line

80 kWe / 70 kWe

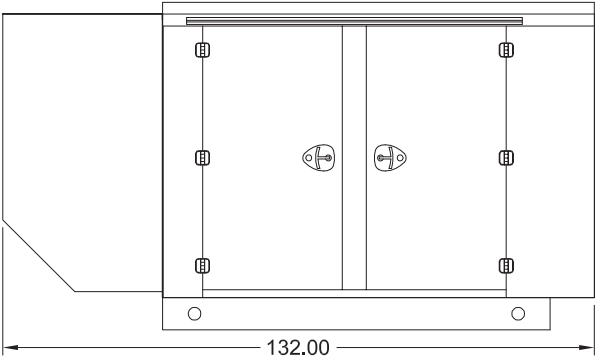


Enclosures

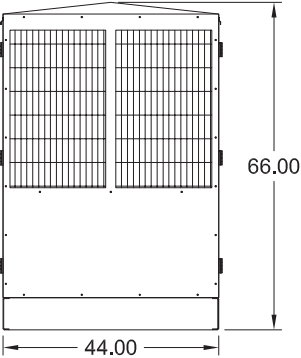
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



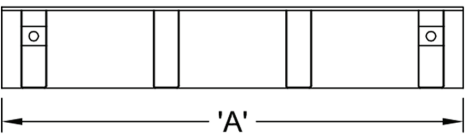
Level 1, 2 & 3 | Intake View



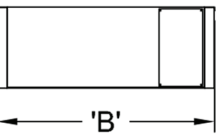
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 250 Gallon	48 Hour 500 Gallon	72 Hour 750 Gallon
A	90.00	120.00	174.00
B	44.00	44.00	44.00
C	28.00	36.00	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.
Materials and specifications subject to change without notice.



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POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD100-01

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	363PSL3133	362CSL1606	362CSL1606	362CSL1606	362PSL1636
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	100	100	100	100	100
AMPS	417	347	301	151	120
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 (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 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

100 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	291 (4.76)
Model:	TAD551GE	Bore - in. (cm) x Stroke - in. (cm):	4.25 (10.8) x 5.12 (13.0)
Type:	4-Cycle	Compression Ratio:	18.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	155 (116)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,148 (620)
Gas Volume at Stack Temp: CFM (m³/min)	851 (24.1)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	27.7 (7.00)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	39.6 (150)
Heat Rejection to Coolant: BTUM (kW)	3,810 (66.8)
Heat Rejection to CAC: BTUM (kW)	1,308 (22.9)
Heat Radiated to Ambient: BTUM (kW)	1,281 (22.4)

Air Requirements	
Aspirating: CFM (m³/min)	332 (9.40)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	5,936 (168)
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)	7.29 (27.6)
At 75% of Power Rating: gal/hr (lit/hr)	6.09 (23.1)
At 50% of Power Rating: gal/hr (lit/hr)	4.88 (18.5)

Fluids Capacity	
Total Oil System: gal (lit)	5.40 (20.4)
Engine Jacket Water Capacity: gal (lit)	1.98 (7.50)
System Coolant Capacity: gal (lit)	5.81 (22.0)

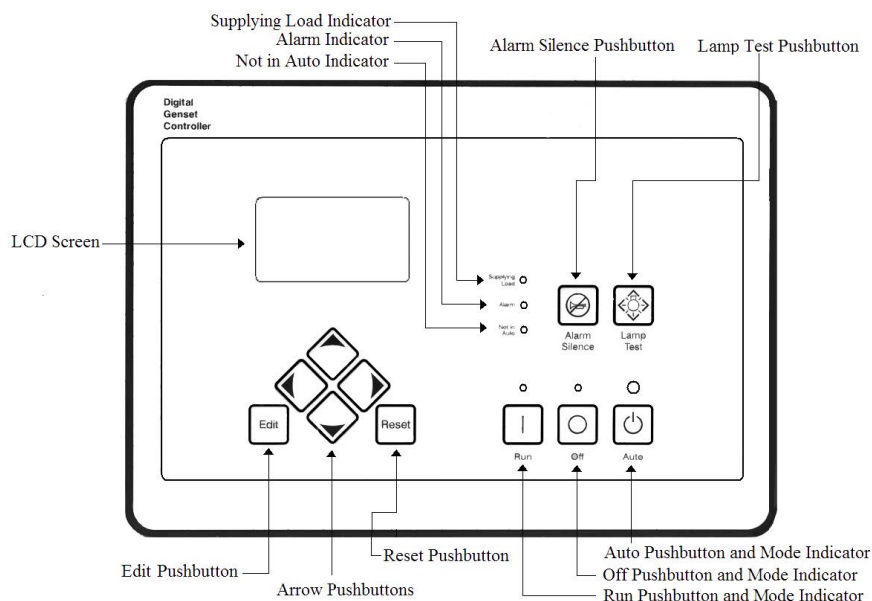
Deration Factors

Rated Power is available up to 3,280 Ft (1,000 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

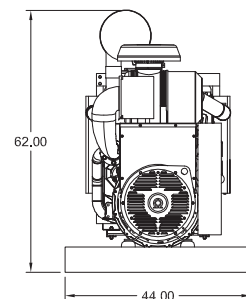
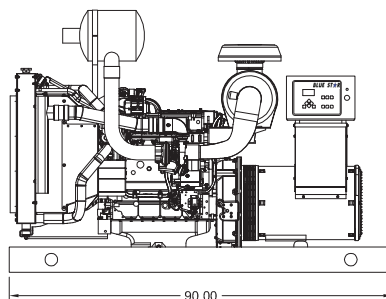
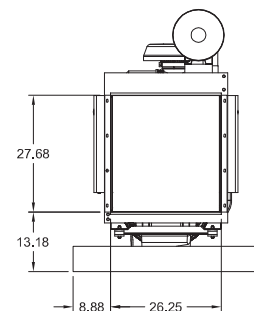
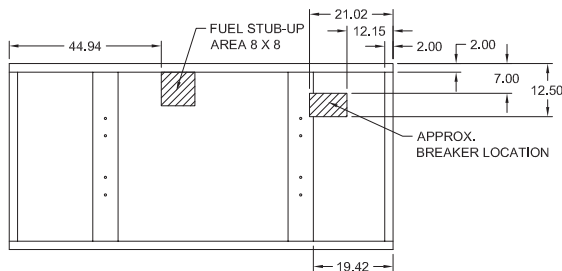
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- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	90 x 44 x 62 in	2,950
Level 1	102 x 44 x 66 in	3,600
Level 2	102 x 44 x 66 in	3,650
Level 3	132 x 44 x 66 in	3,850

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



	No Load	Full Load
OPU	79 dBA	82 dBA
Level 1	75 dBA	78 dBA
Level 2	71 dBA	74 dBA
Level 3	67 dBA	69 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.

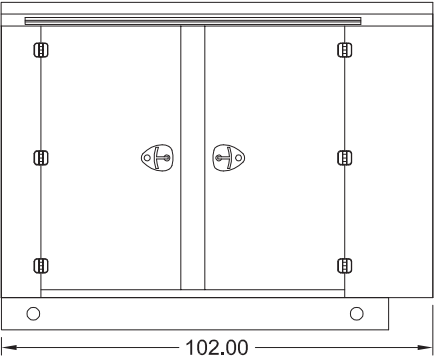
Diesel Product Line

100 kW

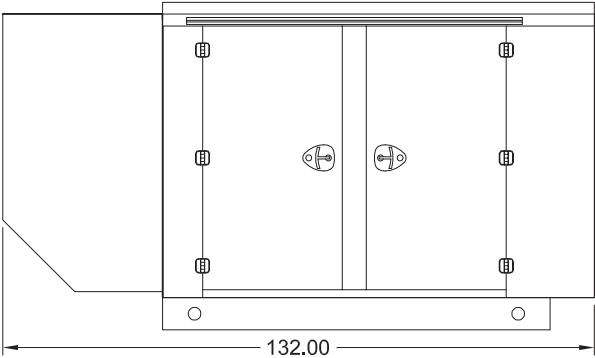


Enclosures

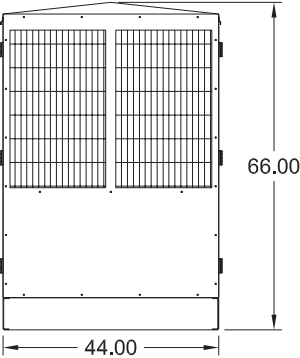
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



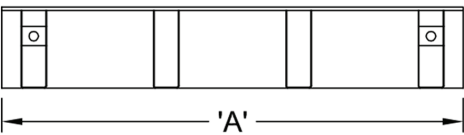
Level 1, 2 & 3 | Intake View



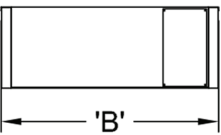
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 250 Gallon	48 Hour 500 Gallon	72 Hour 750 Gallon
A	90.00	120.00	174.00
B	44.00	44.00	44.00
C	28.00	36.00	36.00

All specification sheet dimensions are represented in inches.
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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD100-02FT4

60 Hz / 1800 RPM

100 kWe / 100 kWe

Standby / Prime

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	431CSL6202	431CSL6202	431CSL6202	431CSL6202	431PSL6240
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	100	100	100	100	100
AMPS	417	347	301	151	120
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime					
kWe	100	100	100	100	100
AMPS	417	347	301	151	120
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

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)

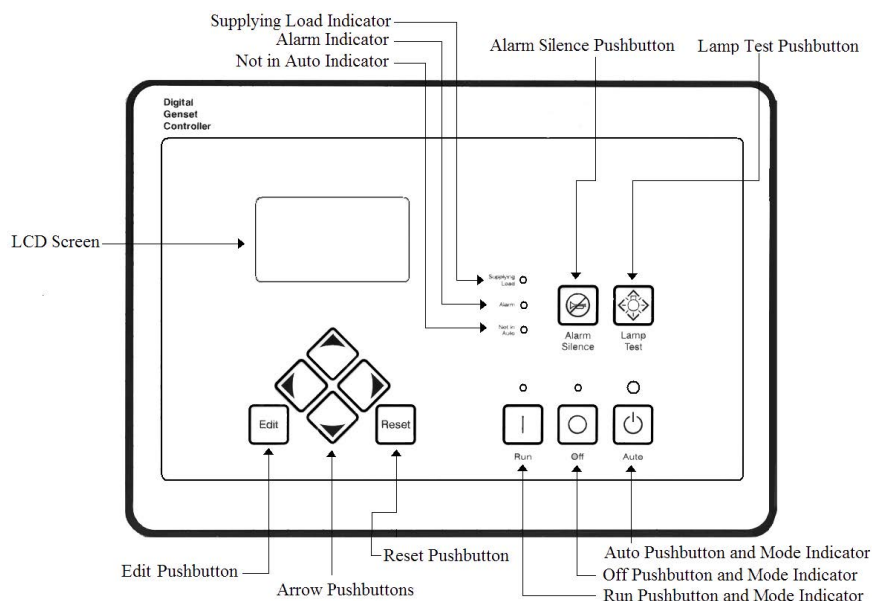
Deration Factors

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

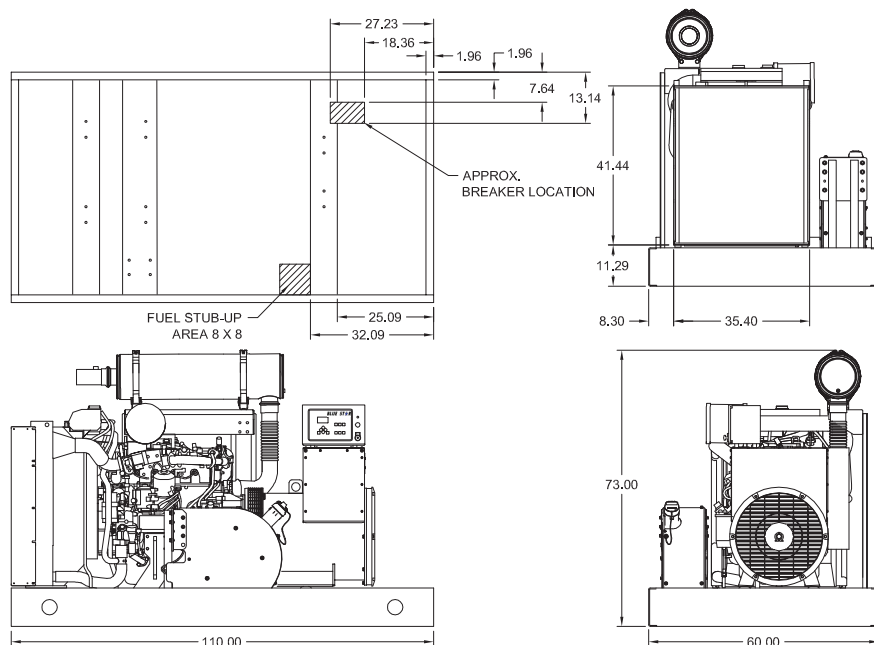


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 60 x 73 in	3,975
Level 1	134 x 60 x 82 in	4,900
Level 2	134 x 60 x 82 in	4,950
Level 3	174 x 60 x 82 in	5,225

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

	No Load	Full Load
OPU	77 dBA	80 dBA
Level 1	73 dBA	76 dBA
Level 2	69 dBA	72 dBA
Level 3	65 dBA	67 dBA



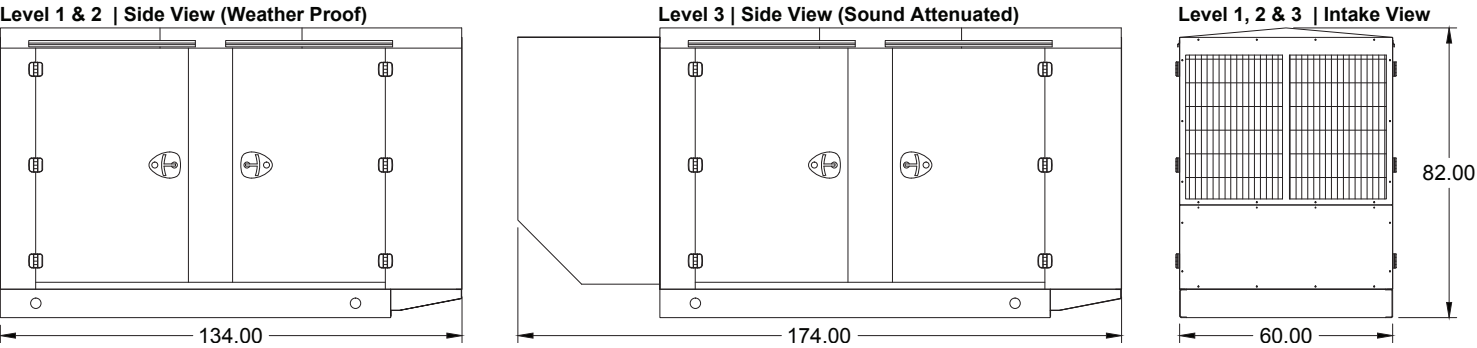
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice. Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

100 kW_e / 100 kW_e

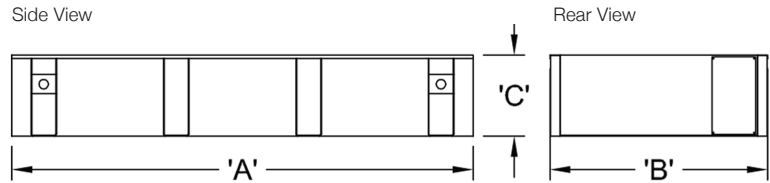


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



	24 Hour 250 Gallon	48 Hour 500 Gallon	72 Hour 750 Gallon
A	110.00	110.00	120.00
B	60.00	60.00	60.00
C	14.00	28.00	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.
Materials and specifications subject to change without notice.



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POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD100-01

60 Hz / 1800 RPM

100 kWe / 90 kWe

Standby / Prime

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	363PSL3133	362CSL1606	362CSL1606	362CSL1606	362PSL1636
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	100	100	100	100	100
AMPS	417	347	301	151	120
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	90	90	90	90	90
AMPS	375	312	271	135	108
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ 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 ▶ Air Cleaner (Dry Single Stage) ▶ Flexible Fuel Connector ▶ EPA Certified Tier 3 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± 1% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Formed Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 12V 6 Amp ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves ▶ Vibration Isolation Mounts ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

100 kWe / 90 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	275 (4.50)
Model:	4045HF285	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	158 (118)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,076 (580)	1,040 (560)
Gas Volume at Stack Temp: CFM (m³/min)	805 (22.8)	750 (21.2)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	30.0 (7.50)	30.0 (7.50)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	48.0 (182)	48.0 (182)
Heat Rejection to Coolant: BTUM (kW)	3,544 (62.0)	3,470 (60.7)
Heat Rejection to CAC: BTUM (kW)	1,127 (19.8)	1,002 (17.6)
Heat Radiated to Ambient: BTUM (kW)	1,281 (22.4)	1,153 (20.2)

Air Requirements		
Aspirating: CFM (m³/min)	288 (8.15)	273 (7.73)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	6,640 (188)	6,640 (188)
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)	8.21 (31.1)	7.55 (28.6)
At 75% of Power Rating: gal/hr (lit/hr)	6.56 (24.8)	6.03 (22.8)
At 50% of Power Rating: gal/hr (lit/hr)	4.69 (17.8)	4.31 (16.3)

Fluids Capacity		
Total Oil System: gal (lit)	3.43 (13.0)	3.43 (13.0)
Engine Jacket Water Capacity: gal (lit)	2.24 (8.50)	2.24 (8.50)
System Coolant Capacity: gal (lit)	5.40 (20.4)	5.40 (20.4)

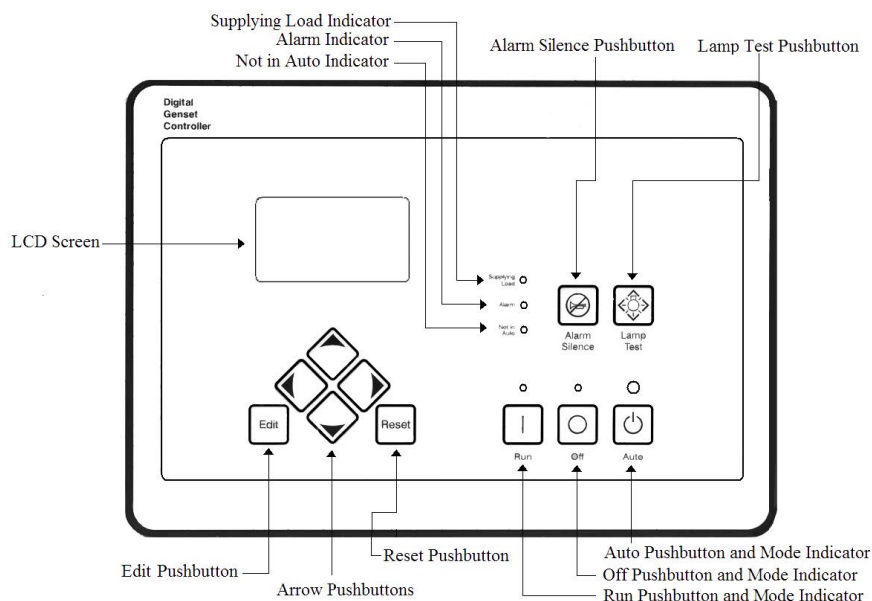
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

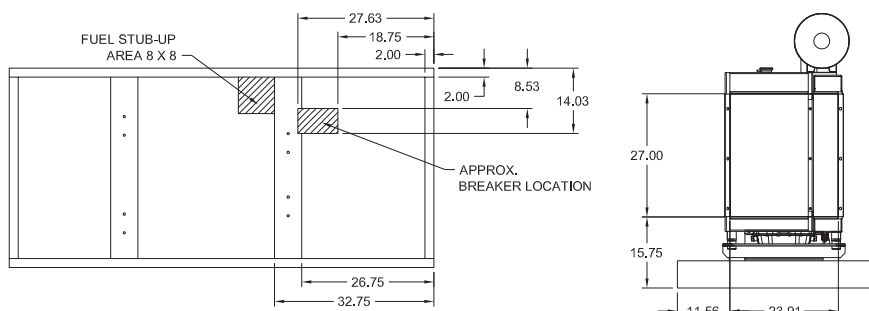
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



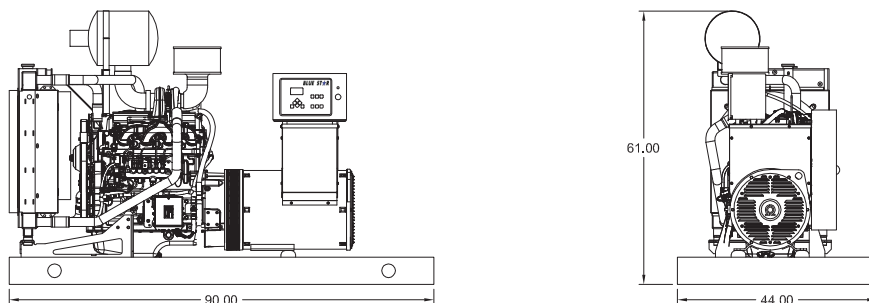
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	90 x 44 x 61 in	2,550
Level 1	102 x 44 x 66 in	3,150
Level 2	102 x 44 x 66 in	3,200
Level 3	132 x 44 x 66 in	3,375

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



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.

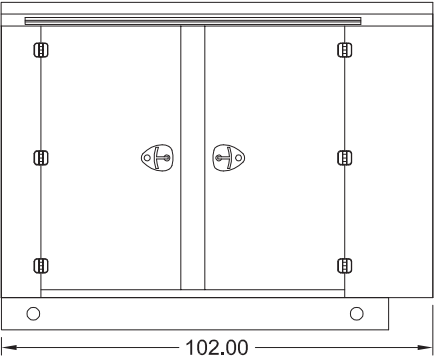
Diesel Product Line

100 kWe / 90 kWe

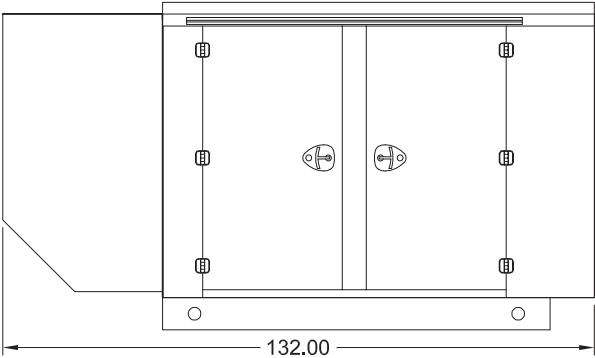


Enclosures

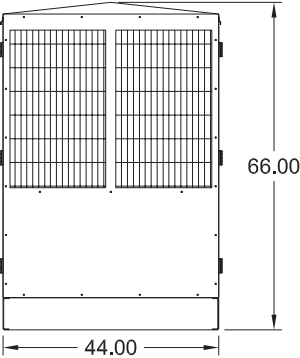
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



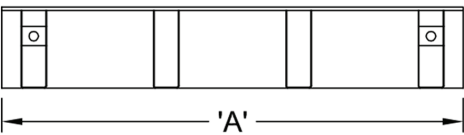
Level 1, 2 & 3 | Intake View



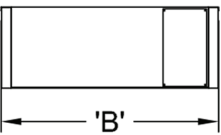
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 250 Gallon	48 Hour 500 Gallon	72 Hour 750 Gallon
A	90.00	120.00	174.00
B	44.00	44.00	44.00
C	28.00	36.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD125-02FT4

60 Hz / 1800 RPM

125 kWe / 125 kWe

Standby / Prime

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	431CSL6204	431CSL6202	431CSL6202	431CSL6202	431PSL6240
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	125	125	125	125	125
AMPS	521	434	376	188	151
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime					
kWe	125	125	125	125	125
AMPS	521	434	376	188	151
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

125 kWe / 125 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	313 (5.13)
Model:	TAD572VE	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):	218 (160)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	912 (489)	912 (489)
Gas Volume at Stack Temp: CFM (m³/min)	848 (24.0)	848 (24.0)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	28.00 (7.00)	28.00 (7.00)
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)	5,050 (88.4)	5,050 (88.4)
Heat Rejection to CAC: BTUM (kW)	1,518 (26.6)	1,518 (26.6)
Heat Radiated to Ambient: BTUM (kW)	1,457 (25.5)	1,457 (25.5)
Air Requirements		
Aspirating: CFM (m³/min)	353 (10.0)	353 (10.0)
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)	8.75 (33.1)	8.75 (33.1)
At 75% of Power Rating: gal/hr (lit/hr)	7.31 (27.7)	7.31 (27.7)
At 50% of Power Rating: gal/hr (lit/hr)	5.86 (22.2)	5.86 (22.2)
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)

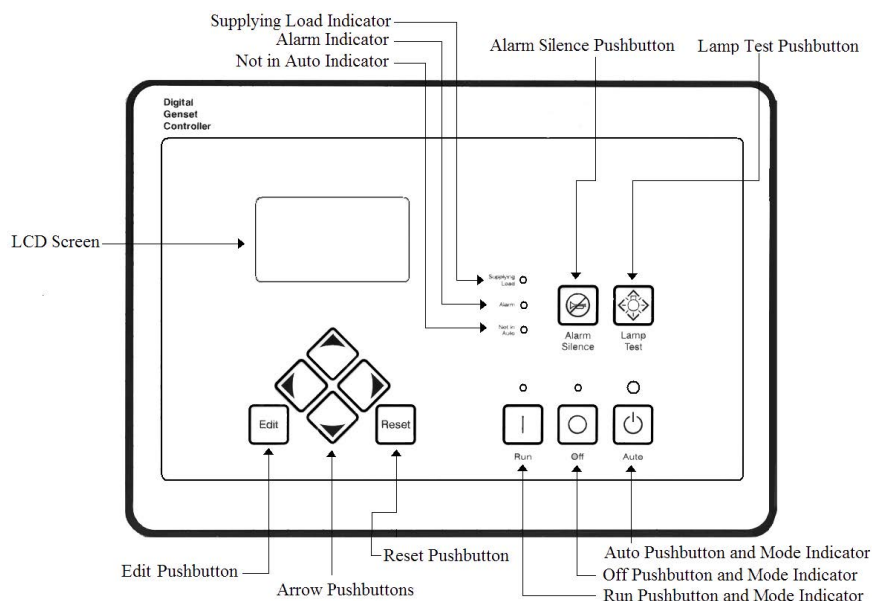
Deration Factors

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

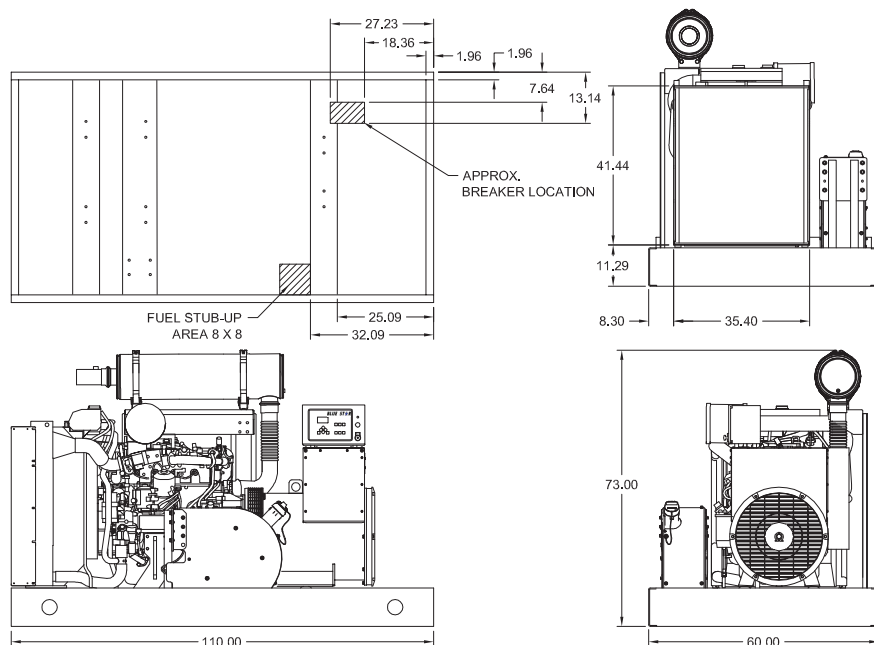


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 60 x 73 in	3,975
Level 1	134 x 60 x 82 in	4,900
Level 2	134 x 60 x 82 in	4,950
Level 3	174 x 60 x 82 in	5,225

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

	No Load	Full Load
OPU	78 dBA	81 dBA
Level 1	74 dBA	77 dBA
Level 2	70 dBA	73 dBA
Level 3	66 dBA	68 dBA



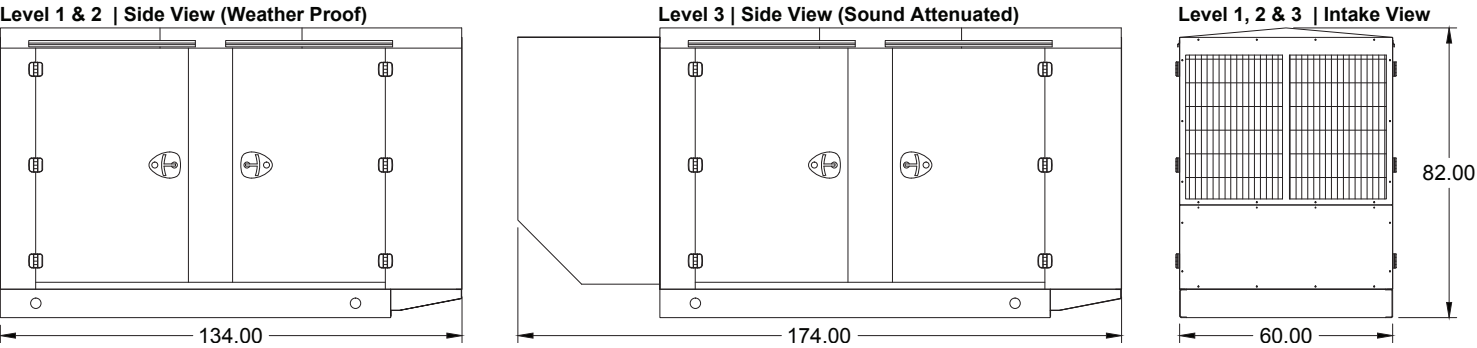
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

125 kW_e / 125 kW_e

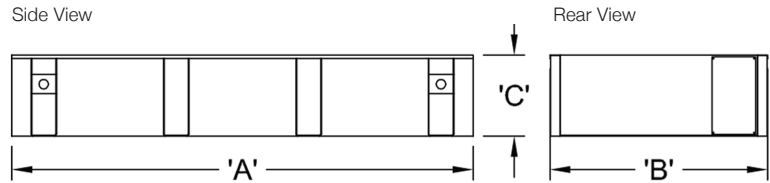


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



	24 Hour 250 Gallon	48 Hour 500 Gallon	72 Hour 750 Gallon
A	110.00	110.00	120.00
B	60.00	60.00	60.00
C	14.00	28.00	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.
Materials and specifications subject to change without notice.



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Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD125-02

60 Hz / 1800 RPM

125 kWe / 110 kWe

Standby / Prime

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	431CSL6204	363CSL1607	363CSL1607	363CSL1607	363PSL1658
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	125	125	125	125	125
AMPS	521	434	376	188	151
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	110	110	110	110	110
AMPS	458	382	331	166	132
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ 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 ▶ Air Cleaner (Dry Single Stage) ▶ Flexible Fuel Connector ▶ EPA Certified Tier 3 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± 1% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Formed Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 12V 6 Amp ▶ Jacket Water Heater -20°F 1500W 120V w/Isolation Valves ▶ Vibration Isolation Mounts ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

125 kWe / 110 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	275 (4.50)
Model:	4045HF285	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	4 Cylinder Inline	Max HP Stby (kWm):	197 (147)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,076 (580)	1,062 (572)
Gas Volume at Stack Temp: CFM (m³/min)	953 (27.0)	869 (24.6)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	30.0 (7.50)	30.0 (7.50)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	48.0 (180)	48.0 (180)
Heat Rejection to Coolant: BTUM (kW)	4,098 (72.0)	3,643 (64.0)
Heat Rejection to CAC: BTUM (kW)	1,508 (26.5)	1,295 (22.8)
Heat Radiated to Ambient: BTUM (kW)	1,457 (25.5)	1,252 (21.9)

Air Requirements		
Aspirating: CFM (m³/min)	341 (9.65)	311 (8.80)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	7,845 (222)	7,845 (222)
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)	9.86 (37.3)	9.15 (34.7)
At 75% of Power Rating: gal/hr (lit/hr)	7.63 (28.9)	7.08 (26.8)
At 50% of Power Rating: gal/hr (lit/hr)	5.56 (21.1)	5.13 (19.4)

Fluids Capacity		
Total Oil System: gal (lit)	3.88 (14.7)	3.88 (14.7)
Engine Jacket Water Capacity: gal (lit)	2.25 (8.50)	2.25 (8.50)
System Coolant Capacity: gal (lit)	5.40 (20.4)	5.40 (20.4)

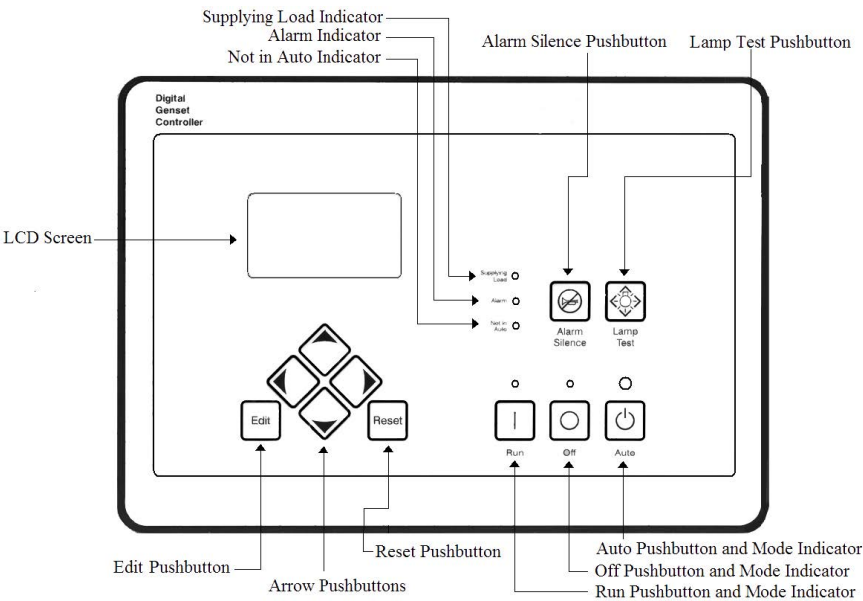
Deration Factors

Rated Power is available up to 7,500 ft (2,286 m) standby and 10,000 ft (3,048 m) prime at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

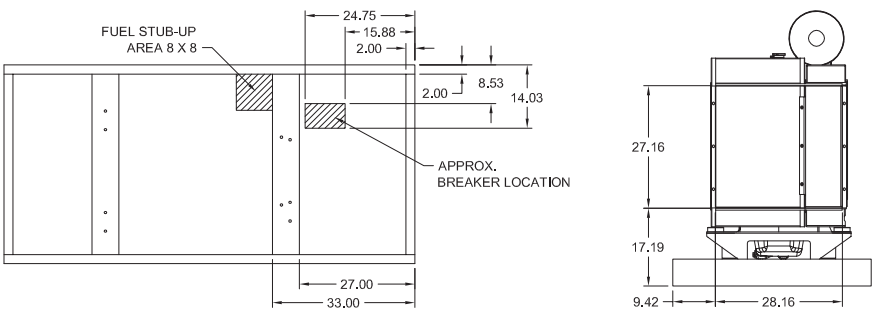
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



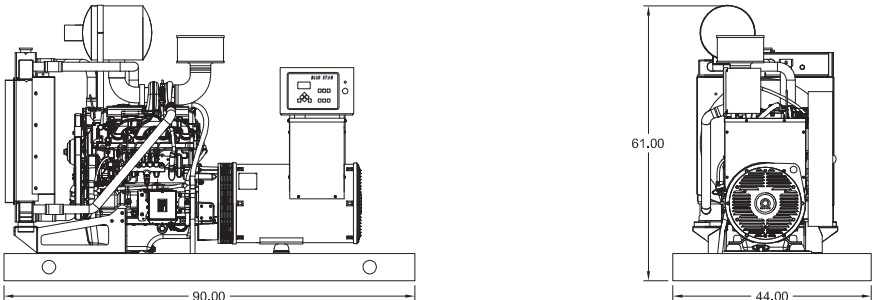
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	90 x 44 x 61 in	2,675
Level 1	102 x 44 x 66 in	3,300
Level 2	102 x 44 x 66 in	3,350
Level 3	132 x 44 x 66 in	3,550

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



	No Load	Full Load
OPU	82 dBA	85 dBA
Level 1	78 dBA	81 dBA
Level 2	75 dBA	77 dBA
Level 3	68 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.

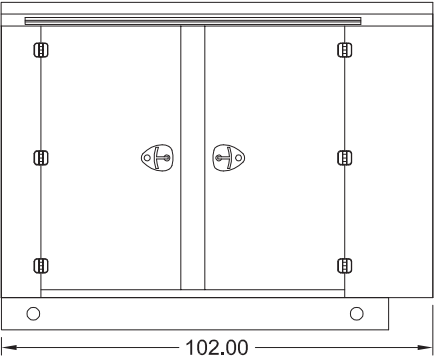
Diesel Product Line

125 kW_e / 110 kW_e

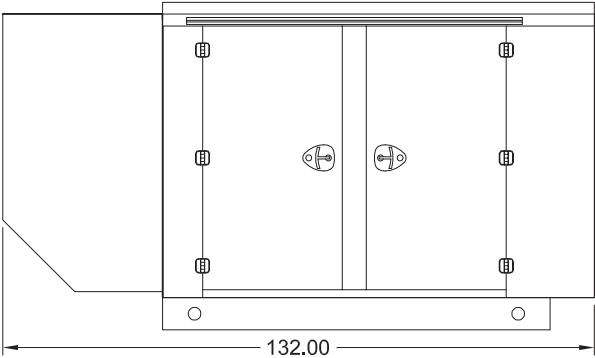


Enclosures

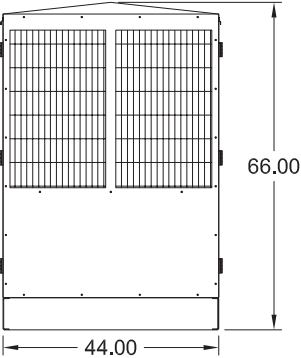
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



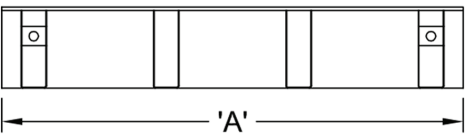
Level 1, 2 & 3 | Intake View



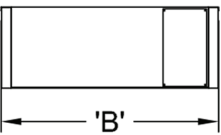
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks

Side View



Rear View



	24 Hour 250 Gallon	48 Hour 500 Gallon	72 Hour 750 Gallon
A	90.00	120.00	174.00
B	44.00	44.00	44.00
C	28.00	36.00	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.
Materials and specifications subject to change without notice.



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POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD150-01

60 Hz / 1800 RPM

150 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	431CSL6206	431CSL6202	431CSL6202	431CSL6202	431PSL6240
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	150	150	150	150	150
AMPS	625	521	452	226	181
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 (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 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 2000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

150 kW_e



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	436 (7.15)
Model:	TAD751GE	Bore - in. (cm) x Stroke - in. (cm):	4.25 (10.8) x 5.12 (13.0)
Type:	4-Cycle	Compression Ratio:	18.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kW _m):	236 (176)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	988 (531)
Gas Volume at Stack Temp: CFM (m³/min)	1,243 (35.2)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	27.7 (7.00)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	43.2 (164)
Heat Rejection to Coolant: BTUM (kW)	4,339 (75.9)
Heat Rejection to CAC: BTUM (kW)	1,717 (30.0)
Heat Radiated to Ambient: BTUM (kW)	2,135 (37.4)

Air Requirements	
Aspirating: CFM (m³/min)	403 (11.4)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	7633 (216)
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)	11.5 (43.5)
At 75% of Power Rating: gal/hr (lit/hr)	9.62 (36.4)
At 50% of Power Rating: gal/hr (lit/hr)	6.81 (25.8)

Fluids Capacity	
Total Oil System: gal (lit)	6.10 (23.1)
Engine Jacket Water Capacity: gal (lit)	2.59 (9.80)
System Coolant Capacity: gal (lit)	6.10 (23.1)

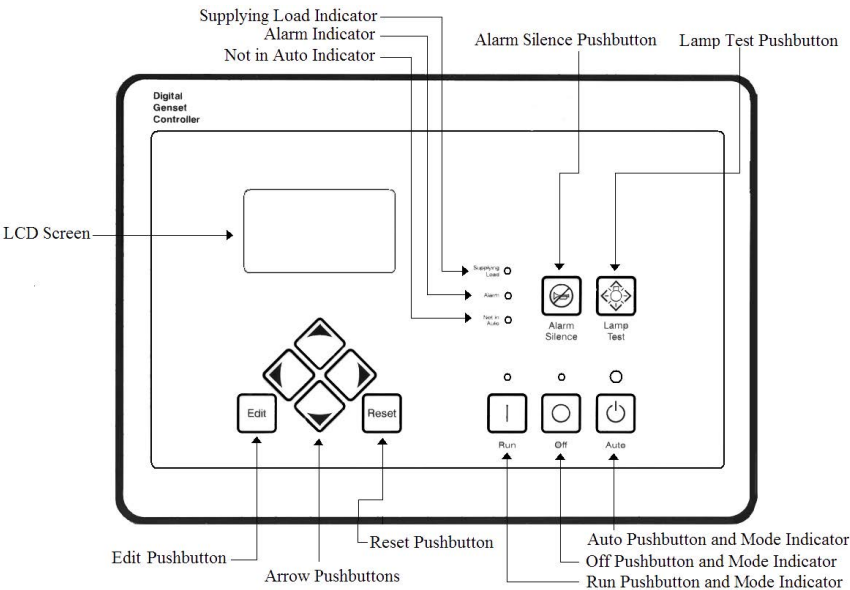
Deration Factors

Rated Power is available up to 9,842 Ft (3,000 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

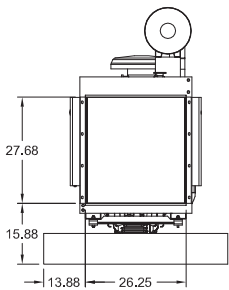
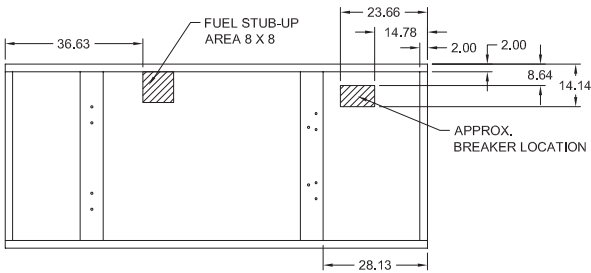
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- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



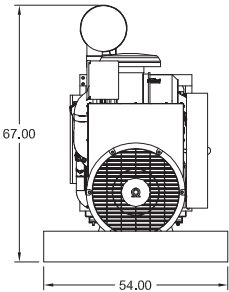
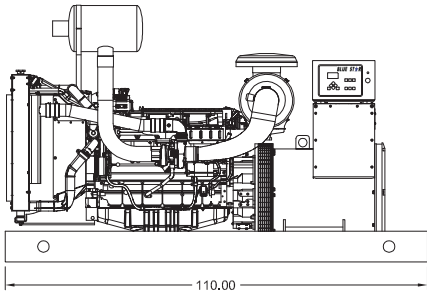
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 54 x 67 in	4,300
Level 1	130 x 54 x 74 in	5,175
Level 2	130 x 54 x 74 in	5,225
Level 3	164 x 54 x 74 in	5,500

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



	No Load	Full Load
OPU	80 dBA	83 dBA
Level 1	77 dBA	79 dBA
Level 2	72 dBA	75 dBA
Level 3	68 dBA	70 dBA



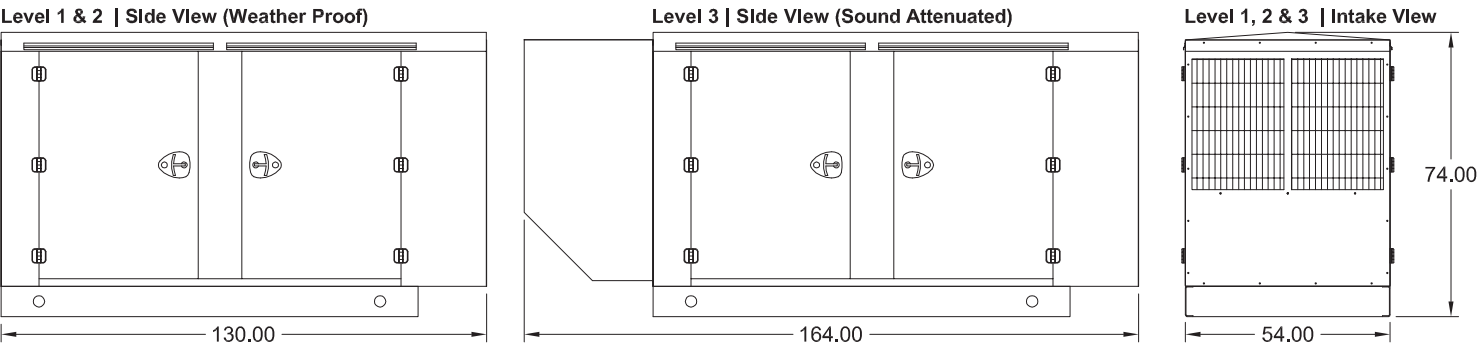
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

150 kW

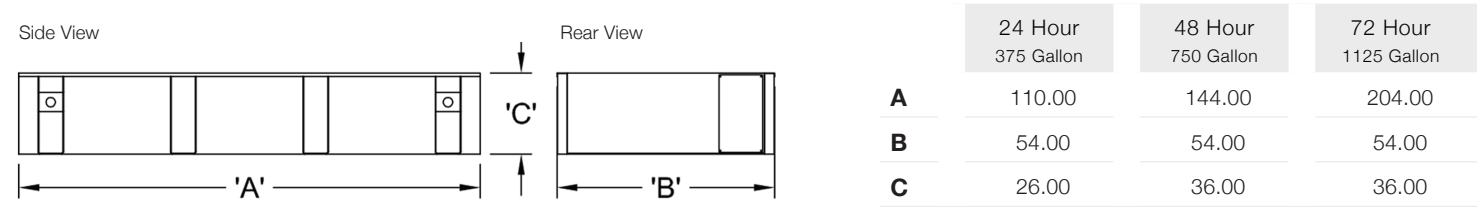


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD150-02FT4

60 Hz / 1800 RPM

150 kWe / 150 kWe

Standby / Prime

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	431CSL6206	431CSL6204	431CSL6204	431CSL6204	431PSL6242
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	150	150	150	150	150
AMPS	625	521	452	226	181
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime					
kWe	150	150	150	150	150
AMPS	625	521	452	226	181
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 2500W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

150 kWe / 150 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 470 (7.70)
Model:	TAD871VE	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:	6 Cylinder Inline	Max HP Stby (kWm): 252 (185)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	709 (376)	709 (376)
Gas Volume at Stack Temp: CFM (m³/min)	886 (25.1)	886 (25.1)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	32.0 (8.00)	32.0 (8.00)
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)	123 (465)	123 (465)
Heat Rejection to Coolant: BTUM (kW)	7,285 (128)	7,285 (128)
Heat Rejection to CAC: BTUM (kW)	1,666 (29.3)	1,666 (29.3)
Heat Radiated to Ambient: BTUM (kW)	2,135 (37.4)	2,135 (37.4)
Air Requirements		
Aspirating: CFM (m³/min)	445 (12.6)	445 (12.6)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	16,961 (480)	16,961 (480)
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)	11.5 (43.5)	11.5 (43.5)
At 75% of Power Rating: gal/hr (lit/hr)	9.62 (36.4)	9.62 (36.4)
At 50% of Power Rating: gal/hr (lit/hr)	6.81 (25.8)	6.81 (25.8)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%
Fluids Capacity		
Total Oil System: gal (lit)	7.13 (27.0)	7.13 (27.0)
Engine Jacket Water Capacity: gal (lit)	4.50 (17.0)	4.50 (17.0)
System Coolant Capacity: gal (lit)	11.6 (43.9)	11.6 (43.9)
DEF Tank Capacity: gal (lit)	18.5 (70.0)	18.5 (70.0)

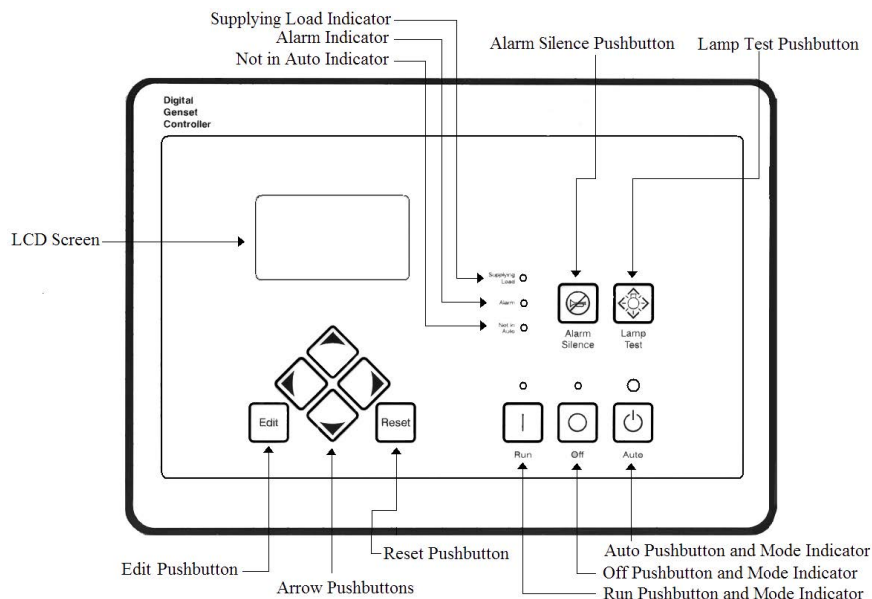
Deration Factors

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

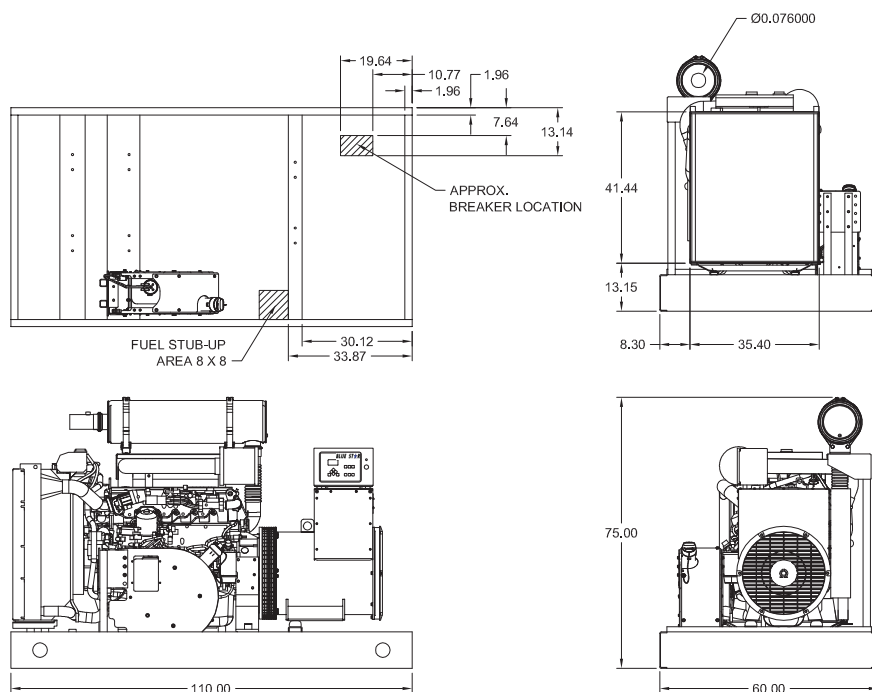
- ▶ Digital Metering
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- ▶ CAN Bus ECU Communications
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- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	110 x 60 x 75 in	4,525
Level 1	134 x 60 x 82 in	5,450
Level 2	134 x 60 x 82 in	5,500
Level 3	174 x 60 x 82 in	5,775

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



	No Load	Full Load
OPU	79 dBA	82 dBA
Level 1	75 dBA	78 dBA
Level 2	71 dBA	74 dBA
Level 3	67 dBA	69 dBA

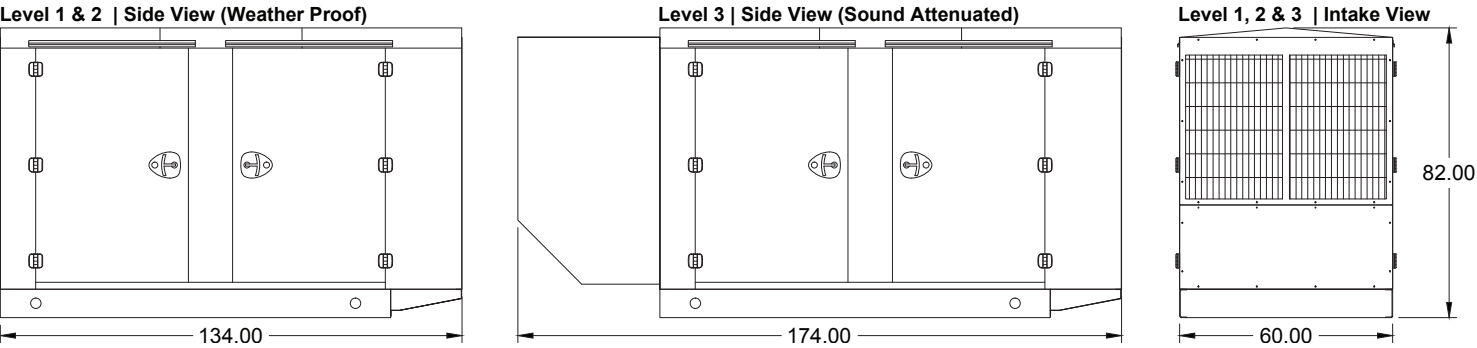
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

150 kW_e / 150 kW_e

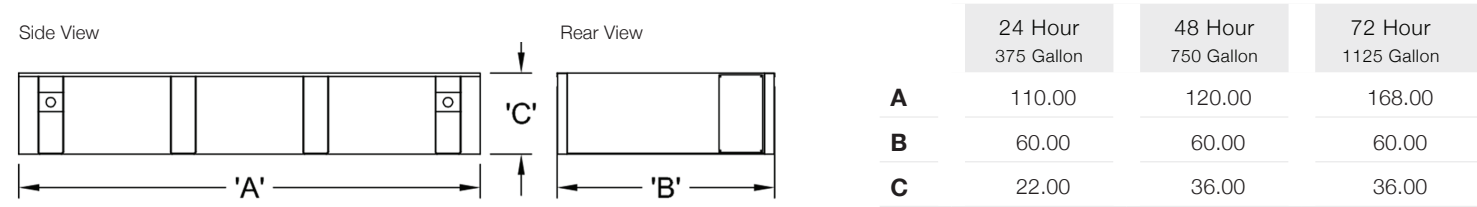


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD150-01

60 Hz / 1800 RPM

150 kWe / 140 kWe

Standby / Prime

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	431CSL6206	431CSL6202	431CSL6202	431CSL6202	431PSL6240
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	150	150	150	150	150
AMPS	625	521	452	226	181
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	140	140	140	140	140
AMPS	583	486	421	211	169
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 2000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

150 kWe / 140 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	415 (6.80)
Model:	6068HF285	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	19.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	237 (177)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	981 (527)	981 (527)
Gas Volume at Stack Temp: CFM (m³/min)	1,158 (32.8)	1,104 (31.3)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	30.0 (7.50)	30.0 (7.50)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	48.0 (182)	48.0 (182)
Heat Rejection to Coolant: BTUM (kW)	5,407 (94.6)	5,009 (87.7)
Heat Rejection to CAC: BTUM (kW)	1,708 (29.9)	1,508 (26.4)
Heat Radiated to Ambient: BTUM (kW)	2,135 (37.4)	1,992 (34.7)

Air Requirements		
Aspirating: CFM (m³/min)	448 (12.7)	427 (12.1)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	10,683 (302)	10,683 (302)
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)	11.8 (44.7)	10.9 (41.4)
At 75% of Power Rating: gal/hr (lit/hr)	9.40 (35.5)	8.50 (32.1)
At 50% of Power Rating: gal/hr (lit/hr)	6.90 (26.1)	6.20 (23.5)

Fluids Capacity		
Total Oil System: gal (lit)	5.02 (19.0)	5.02 (19.0)
Engine Jacket Water Capacity: gal (lit)	3.14 (11.9)	3.14 (11.9)
System Coolant Capacity: gal (lit)	6.10 (23.1)	6.10 (23.1)

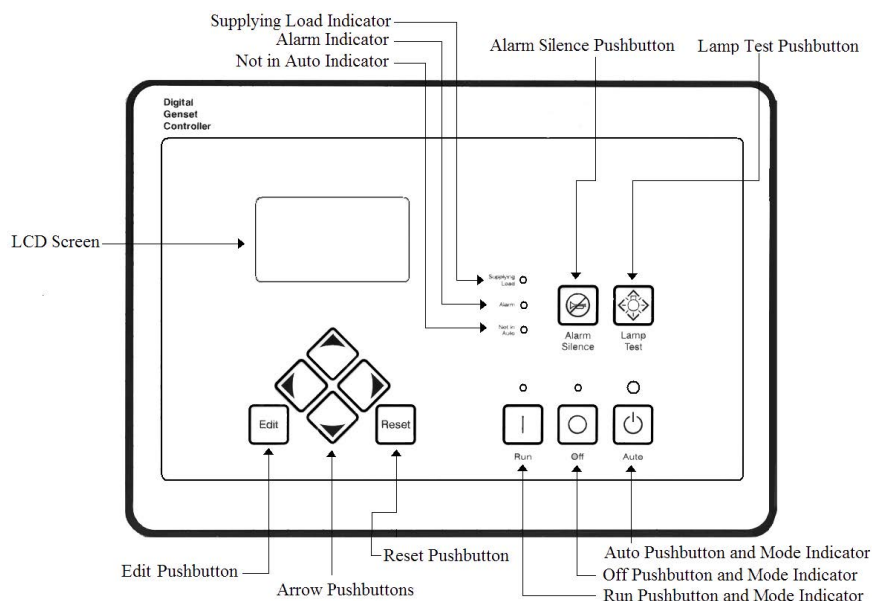
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

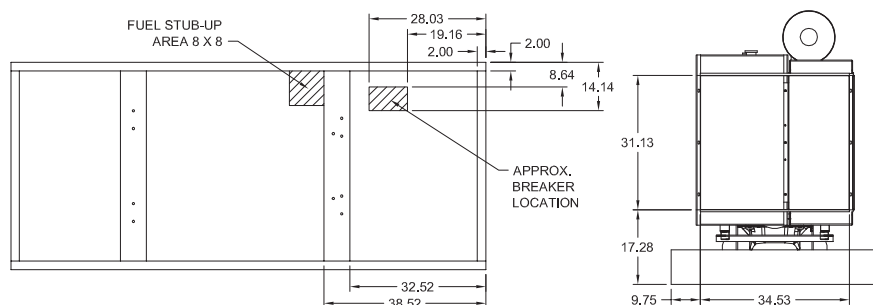
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



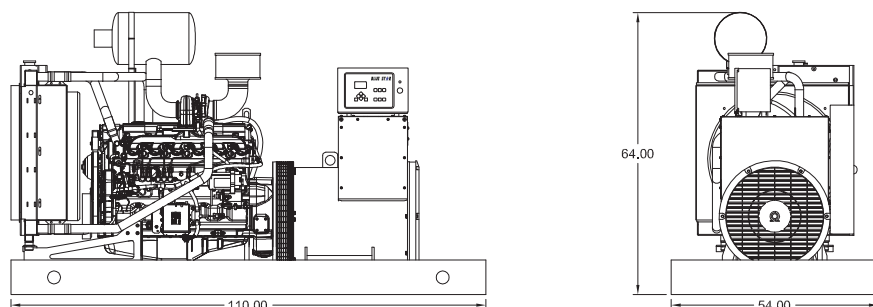
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 54 x 64 in	3,425
Level 1	130 x 54 x 74 in	4,300
Level 2	130 x 54 x 74 in	4,350
Level 3	164 x 54 x 74 in	4,650

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



	No Load	Full Load
OPU	82 dBA	85 dBA
Level 1	80 dBA	82 dBA
Level 2	75 dBA	78 dBA
Level 3	71 dBA	73 dBA



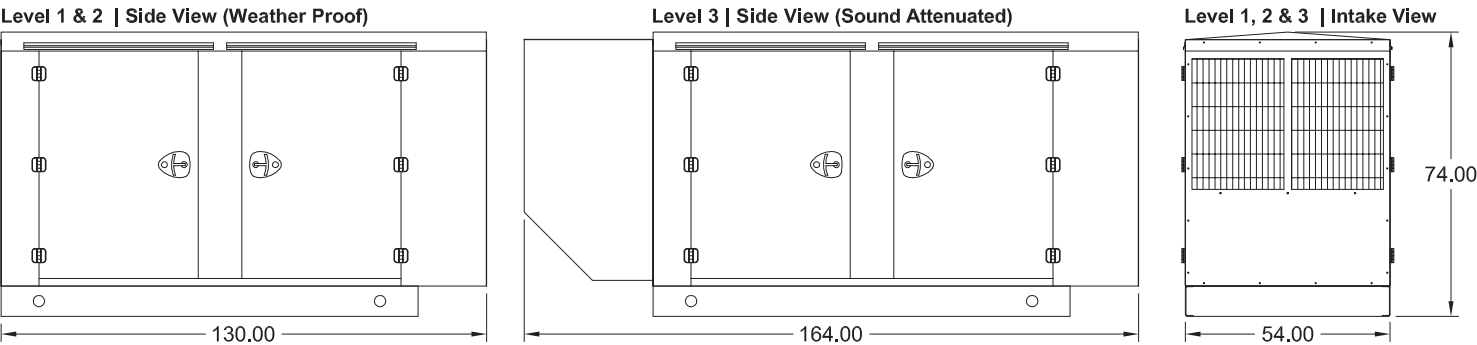
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice. Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

150 kW_e / 140 kW_e

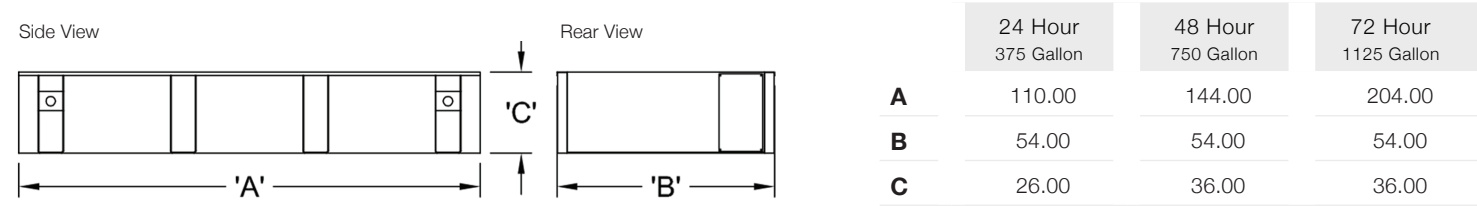


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD200-01

60 Hz / 1800 RPM

200 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	432CSL6210	431CSL6206	431CSL6206	431CSL6206	431PSL6243
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	200	200	200	200	200
AMPS	833	695	602	301	241
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 (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 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 2000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

200 kW_e



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	436 (7.15)
Model:	TAD753GE	Bore - in. (cm) x Stroke - in. (cm):	4.25 (10.8) x 5.12 (13.0)
Type:	4-Cycle	Compression Ratio:	18.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kW _m):	317 (233)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	1,022 (550)
Gas Volume at Stack Temp: CFM (m³/min)	1,508 (42.7)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	27.7 (7.00)

Cooling System	
Ambient Capacity of Radiator: °F (°C)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	78.0 (295)
Heat Rejection to Coolant: BTUM (kW)	7,450 (131)
Heat Rejection to CAC: BTUM (kW)	2,445 (43.0)
Heat Radiated to Ambient: BTUM (kW)	2,419 (42.3)

Air Requirements	
Aspirating: CFM (m³/min)	530 (15.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	11,660 (330)
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)	14.9 (56.4)
At 75% of Power Rating: gal/hr (lit/hr)	11.6 (44.0)
At 50% of Power Rating: gal/hr (lit/hr)	8.29 (31.4)

Fluids Capacity	
Total Oil System: gal (lit)	8.90 (34.0)
Engine Jacket Water Capacity: gal (lit)	2.64 (10.0)
System Coolant Capacity: gal (lit)	8.98 (34.0)

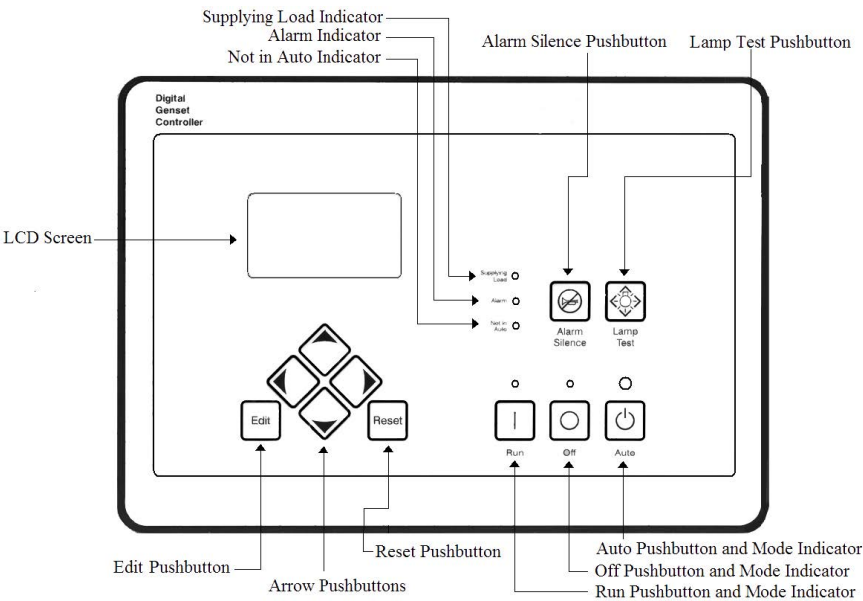
Deration Factors

Rated Power is available up to 3,280 Ft (1,000 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

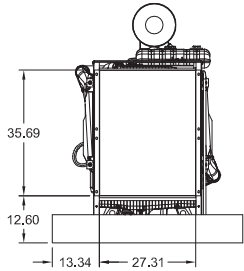
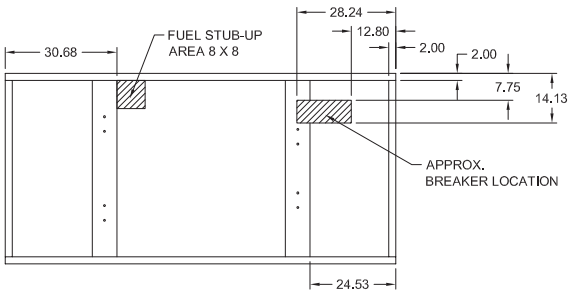
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



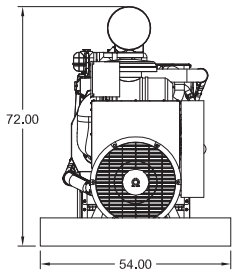
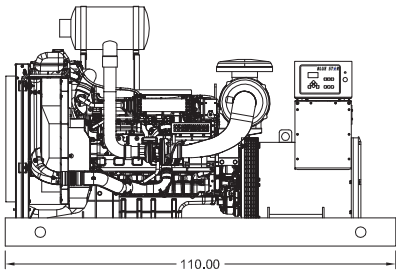
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 54 x 72 in	4,575
Level 1	130 x 54 x 74 in	5,450
Level 2	130 x 54 x 74 in	5,500
Level 3	164 x 54 x 74 in	5,800

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



	No Load	Full Load
OPU	85 dBA	87 dBA
Level 1	82 dBA	84 dBA
Level 2	76 dBA	79 dBA
Level 3	70 dBA	72 dBA



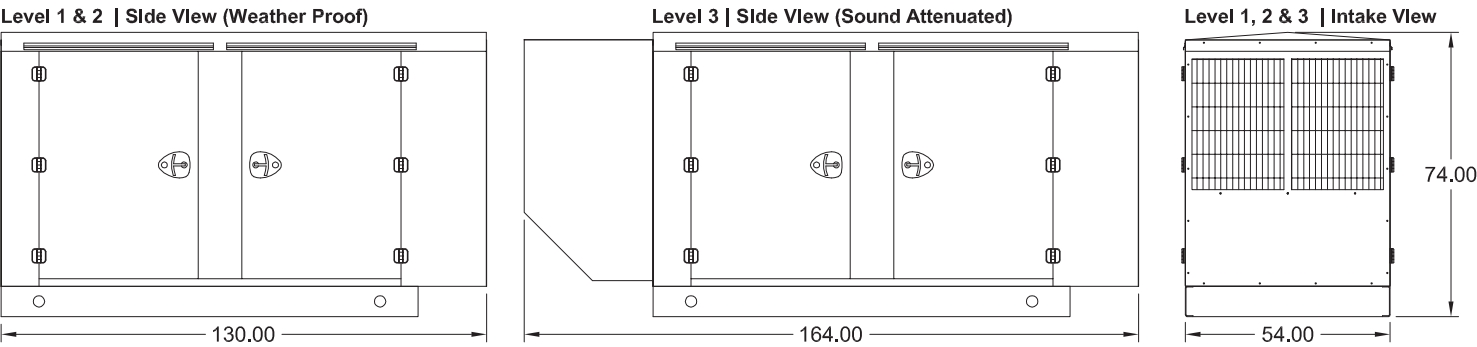
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

200 kW

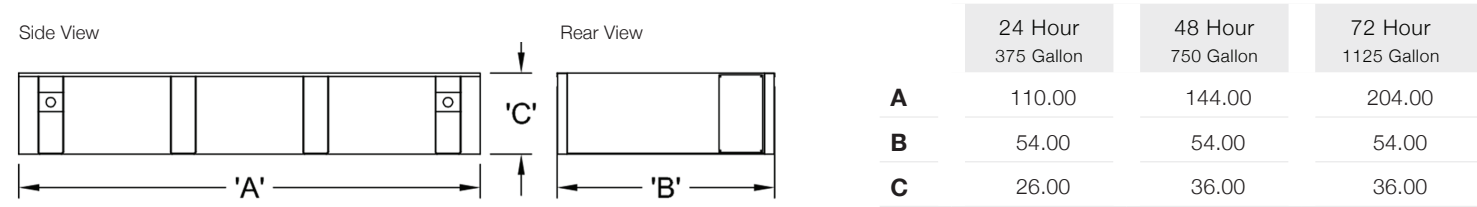


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD200-02FT4

60 Hz / 1800 RPM

200 kWe / 200 kWe

Standby / Prime

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	433CSL6216	431CSL6208	431CSL6208	431CSL6206	431PSL6243
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	200	200	200	200	200
AMPS	833	695	602	301	241
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime					
kWe	200	200	200	200	200
AMPS	833	695	602	301	241
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 3000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

200 kWe / 200 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	661 (10.8)
Model:	TAD1170VE	Bore - in. (cm) x Stroke - in. (cm):	4.84 (12.3) x 5.98 (15.2)
Type:	4-Cycle	Compression Ratio:	17.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	320 (235)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	775 (413)	775 (413)
Gas Volume at Stack Temp: CFM (m³/min)	1,564 (44.3)	1,564 (44.3)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	28.0 (7.00)	28.0 (7.00)
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)	96.0 (372)	96.0 (372)
Heat Rejection to Coolant: BTUM (kW)	6,824 (120)	6,824 (120)
Heat Rejection to CAC: BTUM (kW)	2,843 (50.0)	2,843 (50.0)
Heat Radiated to Ambient: BTUM (kW)	2,419 (42.3)	2,419 (42.3)
Air Requirements		
Aspirating: CFM (m³/min)	745 (21.1)	745 (21.1)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	16,725 (480)	16,725 (480)
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)	14.9 (56.4)	14.9 (56.4)
At 75% of Power Rating: gal/hr (lit/hr)	11.6 (44.0)	11.6 (44.0)
At 50% of Power Rating: gal/hr (lit/hr)	8.29 (31.4)	8.29 (31.4)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%
Fluids Capacity		
Total Oil System: gal (lit)	9.77 (37.0)	9.77 (37.0)
Engine Jacket Water Capacity: gal (lit)	4.50 (17.0)	4.50 (17.0)
System Coolant Capacity: gal (lit)	10.20 (38.6)	10.20 (38.6)
DEF Tank Capacity: gal (lit)	18.5 (70.0)	18.5 (70.0)

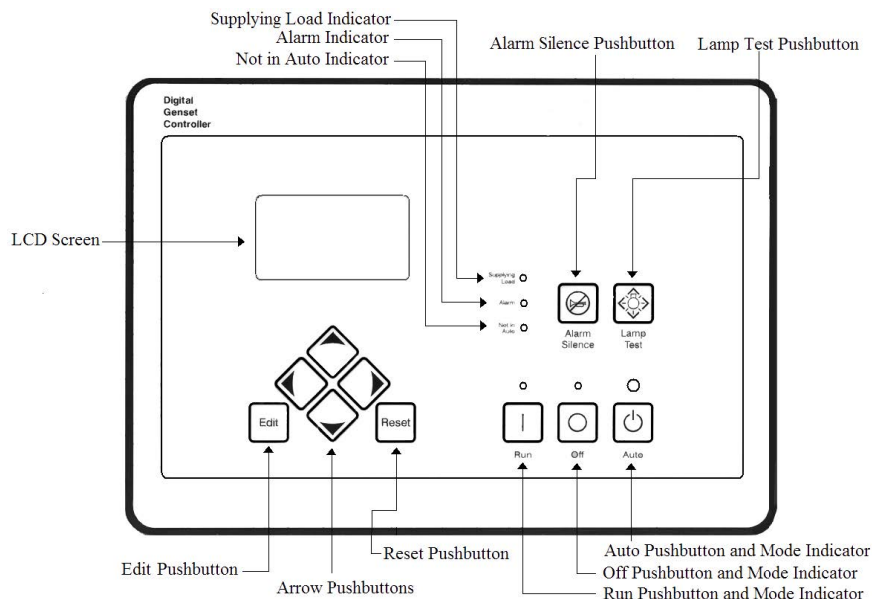
Deration Factors

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

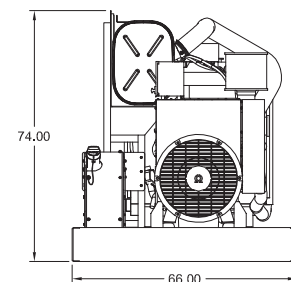
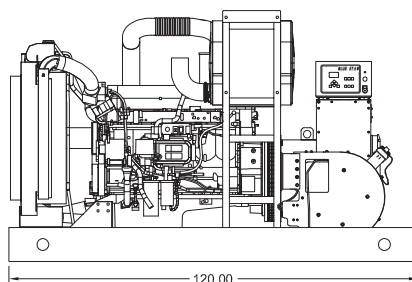
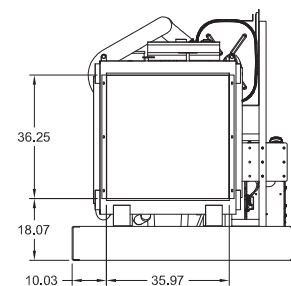
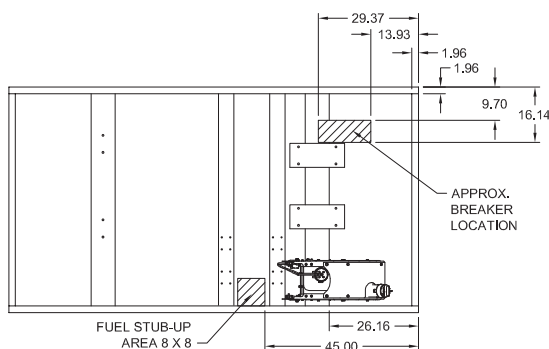
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 74 in	5,675
Level 1	156 x 66 x 94 in	6,575
Level 2	156 x 66 x 94 in	6,625
Level 3	196 x 66 x 94 in	6,900

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



	No Load	Full Load
OPU	81 dBA	84 dBA
Level 1	77 dBA	79 dBA
Level 2	73 dBA	76 dBA
Level 3	69 dBA	71 dBA

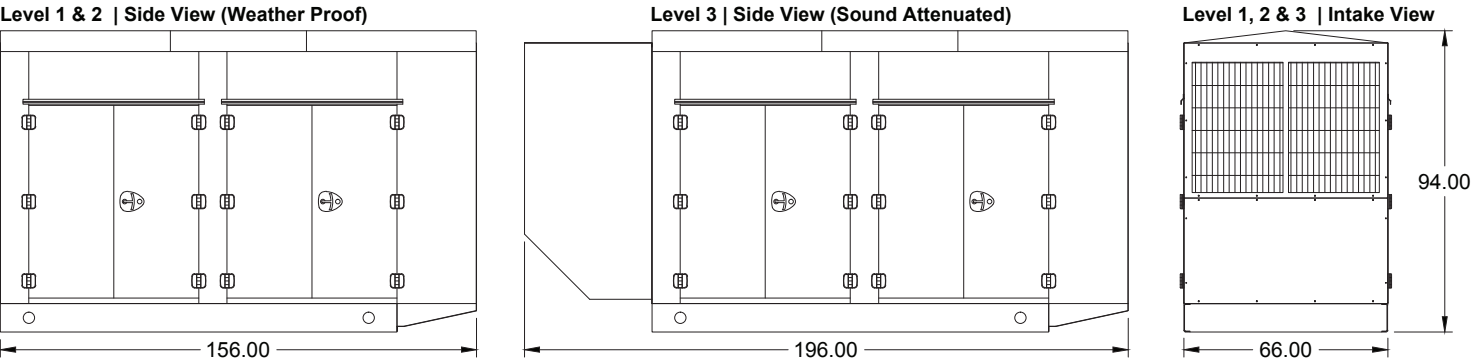
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

200 kWe / 200 kWe

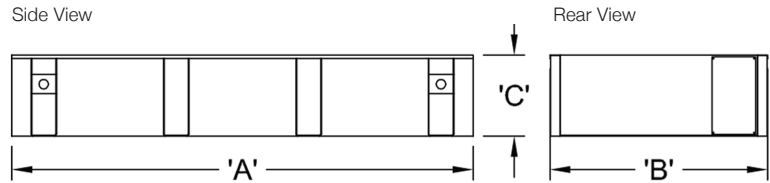


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



	24 Hour 375 Gallon	48 Hour 750 Gallon	72 Hour 1125 Gallon
A	120.00	120.00	162.00
B	66.00	66.00	66.00
C	18.00	36.00	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.
Materials and specifications subject to change without notice.



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BLUE STAR

Power Systems Inc.

Diesel Product Line

208-600 Volt

JD200-01

60 Hz / 1800 RPM

200 kWe / 185 kWe

Standby / Prime

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	432CSL6210	431CSL6206	431CSL6206	431CSL6206	431PSL6243
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	200	200	200	200	200
AMPS	833	695	602	301	241
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	185	185	185	185	185
AMPS	771	643	557	278	223
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 2000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

200 kWe / 185 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	415 (6.80)
Model:	6068HFG85	Bore - in. (cm) x Stroke - in. (cm):	4.19 (10.6) x 5.00 (12.7)
Type:	4-Cycle	Compression Ratio:	17.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	315 (235)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	905 (485)	905 (485)
Gas Volume at Stack Temp: CFM (m³/min)	1,515 (42.9)	1,370 (38.8)
Maximum Allowable Exhaust Restriction: in. H ₂ 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 ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	70.0 (265)	70.0 (265)
Heat Rejection to Coolant: BTUM (kW)	5,402 (94.9)	4,764 (83.7)
Heat Rejection to CAC: BTUM (kW)	3,264 (57.3)	2,298 (40.4)
Heat Radiated to Ambient: BTUM (kW)	2,419 (42.3)	2,238 (39.2)

Air Requirements	Standby	Prime
Aspirating: CFM (m³/min)	618 (17.5)	519 (17.7)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	11,066 (313)	11,066 (313)
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)	15.5 (58.5)	13.7 (51.8)
At 75% of Power Rating: gal/hr (lit/hr)	11.3 (42.9)	10.3 (39.0)
At 50% of Power Rating: gal/hr (lit/hr)	7.90 (30.0)	7.20 (27.4)

Fluids Capacity	Standby	Prime
Total Oil System: gal (lit)	8.59 (32.5)	8.59 (32.5)
Engine Jacket Water Capacity: gal (lit)	3.14 (11.9)	3.14 (11.9)
System Coolant Capacity: gal (lit)	7.10 (29.3)	7.10 (29.3)

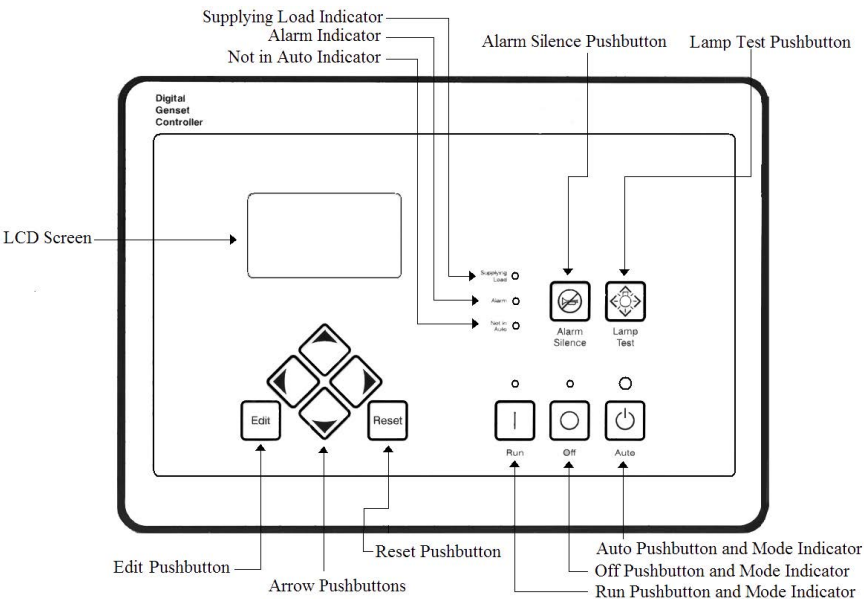
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) 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

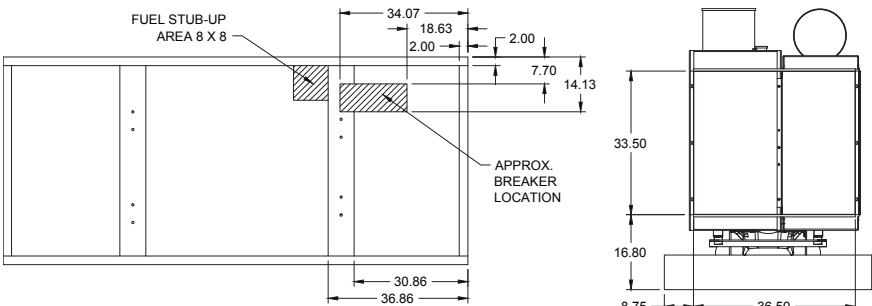
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



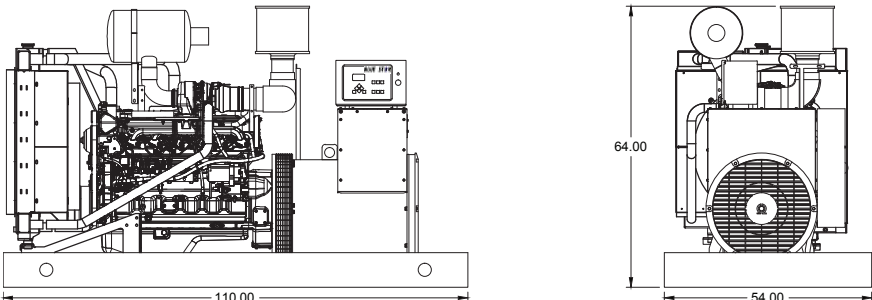
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	110 x 54 x 64 in	3,850
Level 1	130 x 54 x 74 in	4,725
Level 2	130 x 54 x 74 in	4,775
Level 3	164 x 54 x 74 in	5,075

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



	No Load	Full Load
OPU	83 dBA	86 dBA
Level 1	81 dBA	83 dBA
Level 2	76 dBA	79 dBA
Level 3	72 dBA	74 dBA



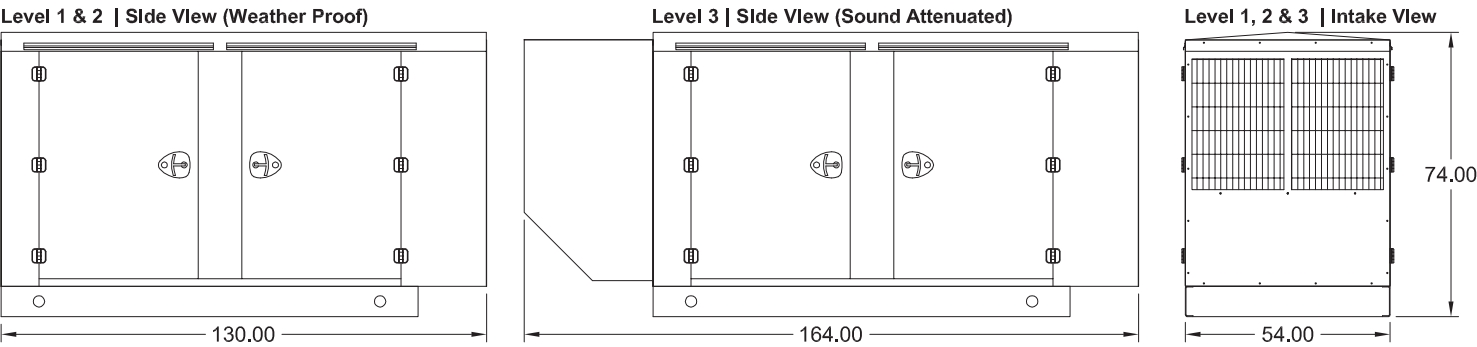
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

200 kW_e / 185 kW_e

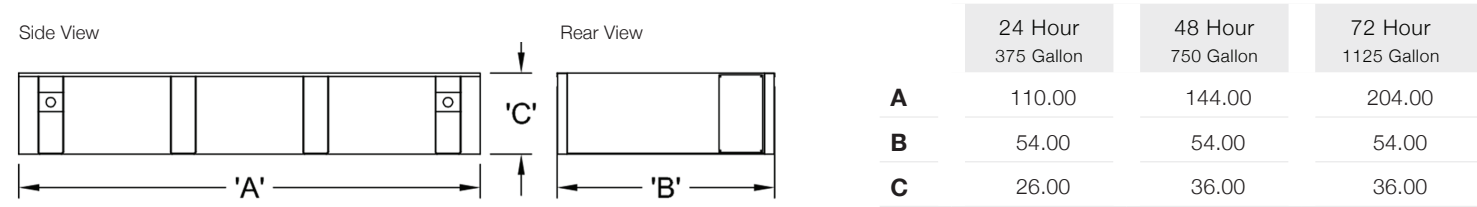


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD250-01

60 Hz / 1800 RPM

250 kWe / 225 kWe

Standby / Prime

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	572RSL4027	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	250	250	250	250	250
AMPS	1042	868	753	376	301
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	225	225	225	225	225
AMPS	938	782	677	339	271
Temp Rise	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 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

250 kWe / 225 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	780 (12.8)
Model:	TAD1350GE	Bore - in. (cm) x Stroke - in. (cm):	5.16 (13.1) x 6.22 (15.8)
Type:	4-Cycle	Compression Ratio:	18.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	382 (285)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	824 (440)	806 (430)
Gas Volume at Stack Temp: CFM (m³/min)	1,928 (54.6)	1,819 (51.5)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	41.6 (10.4)	41.6 (10.4)
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)	87.0 (329)	87.0 (329)
Heat Rejection to Coolant: BTUM (kW)	7,734 (136)	7,165 (126)
Heat Rejection to CAC: BTUM (kW)	3,981 (70.0)	3,526 (62.0)
Heat Radiated to Ambient: BTUM (kW)	2,312 (40.5)	2,312 (40.5)
Air Requirements		
Aspirating: CFM (m³/min)	840 (23.8)	795 (22.5)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	11,449 (324)	11,449 (324)
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)	18.7 (70.7)	17.3 (65.3)
At 75% of Power Rating: gal/hr (lit/hr)	14.3 (54.0)	13.2 (49.8)
At 50% of Power Rating: gal/hr (lit/hr)	9.71 (36.8)	9.19 (34.8)
Fluids Capacity		
Total Oil System: gal (lit)	9.50 (36.0)	9.50 (36.0)
Engine Jacket Water Capacity: gal (lit)	5.28 (20.0)	5.28 (20.0)
System Coolant Capacity: gal (lit)	6.34 (24.0)	6.34 (24.0)

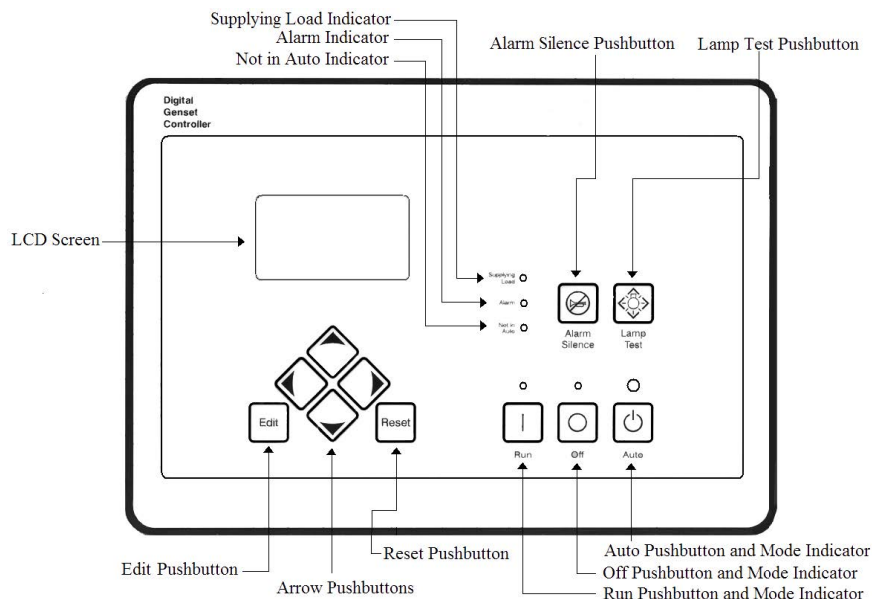
Deration Factors

Rated Power is available up to 9,842 Ft (3,000 m) 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

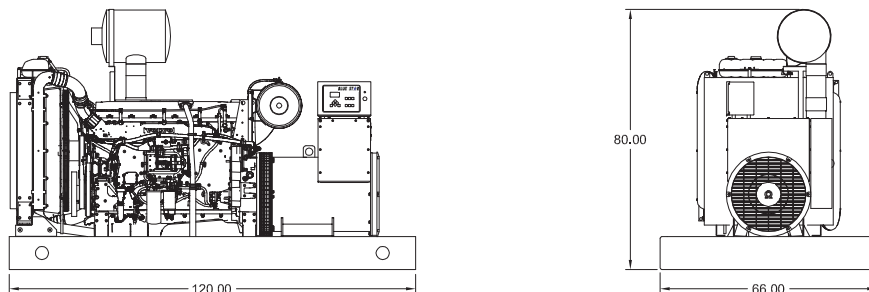
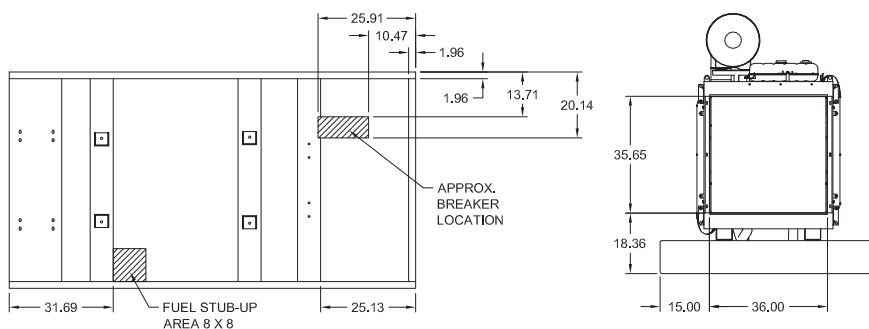
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 80 in	6,250
Level 1	156 x 66 x 94 in	7,475
Level 2	156 x 66 x 94 in	7,550
Level 3	196 x 66 x 94 in	7,850

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



	No Load	Full Load
OPU	86 dBA	88 dBA
Level 1	83 dBA	85 dBA
Level 2	77 dBA	79 dBA
Level 3	69 dBA	71 dBA

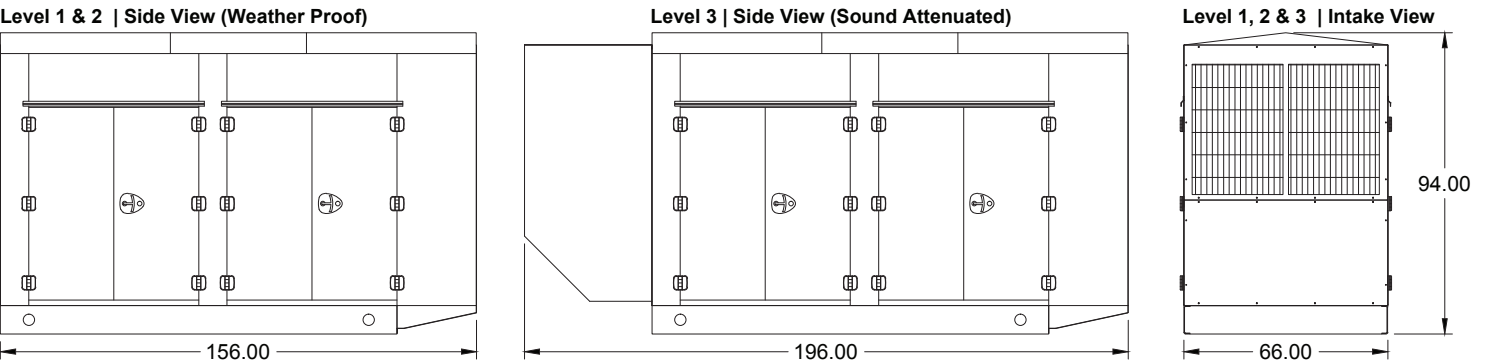
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

250 kW_e / 225 kW_e

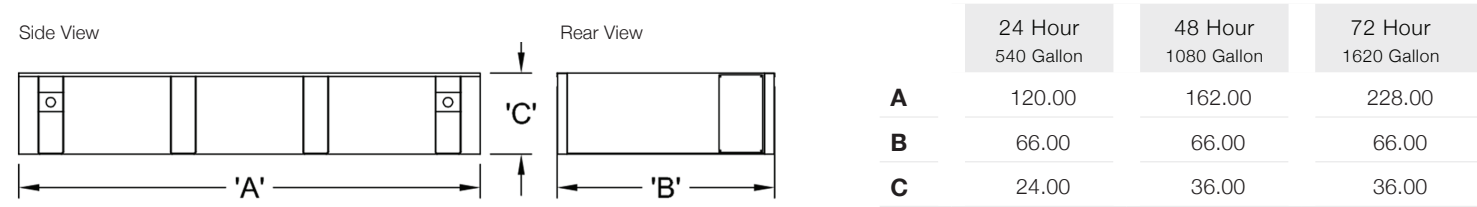


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD250-02FT4

60 Hz / 1800 RPM

250 kWe / 250 kWe

Standby / Prime

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	572RSL4027	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	250	250	250	250	250
AMPS	1042	868	753	376	301
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime					
kWe	250	250	250	250	250
AMPS	1042	868	753	376	301
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

250 kWe / 250 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	780 (12.8)
Model:	TAD1371VE	Bore - in. (cm) x Stroke - in. (cm):	5.16 (13.1) x 6.22 (15.8)
Type:	4-Cycle	Compression Ratio:	17.8:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	388 (285)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	725 (385)	725 (385)
Gas Volume at Stack Temp: CFM (m³/min)	1,872 (53.0)	1,872 (53.0)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	32.0 (8.00)	32.0 (8.00)
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)	90.6 (343)	90.6 (343)
Heat Rejection to Coolant: BTUM (kW)	7,677 (103)	7,677 (103)
Heat Rejection to CAC: BTUM (kW)	3,526 (62.0)	3,526 (62.0)
Heat Radiated to Ambient: BTUM (kW)	2,312 (40.5)	2,312 (40.5)
Air Requirements		
Aspirating: CFM (m³/min)	918 (26.0)	918 (26.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	14,196 (402)	14,196 (402)
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)	18.7 (70.7)	17.3 (65.3)
At 75% of Power Rating: gal/hr (lit/hr)	14.3 (54.0)	13.2 (49.8)
At 50% of Power Rating: gal/hr (lit/hr)	9.71 (36.8)	9.19 (34.8)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%
Fluids Capacity		
Total Oil System: gal (lit)	9.50 (36.0)	9.50 (36.0)
Engine Jacket Water Capacity: gal (lit)	5.28 (20.0)	5.28 (20.0)
System Coolant Capacity: gal (lit)	6.34 (24.0)	6.34 (24.0)

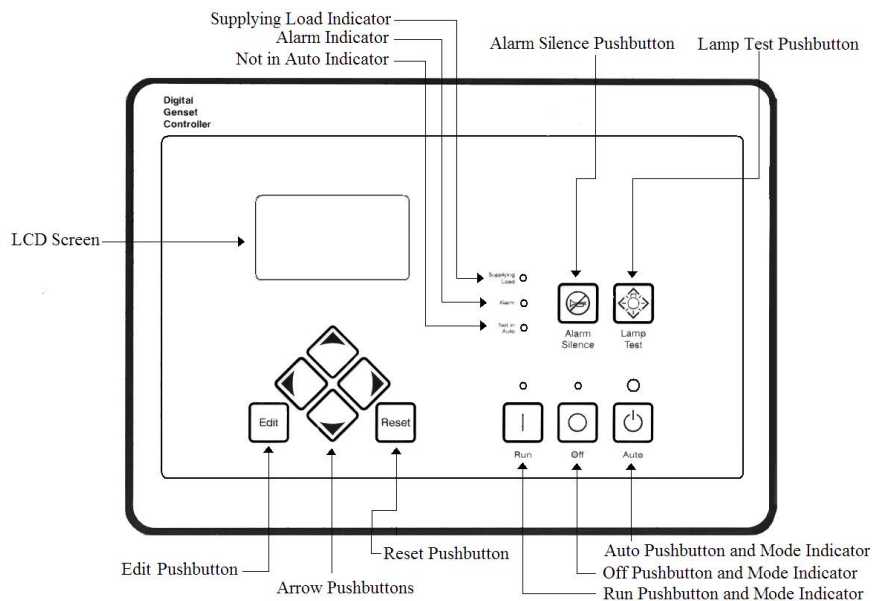
Deration Factors

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

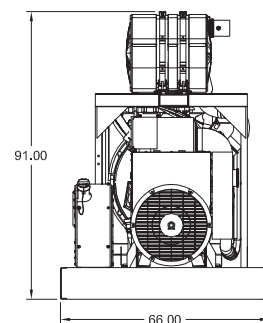
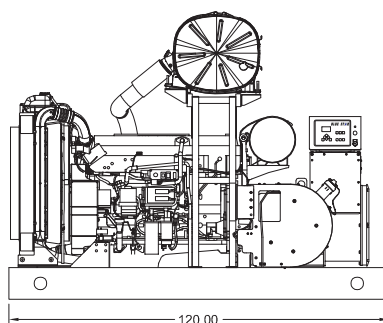
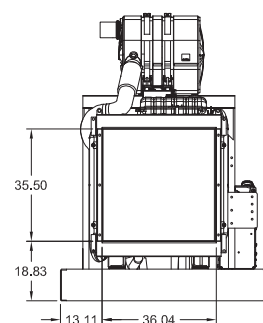
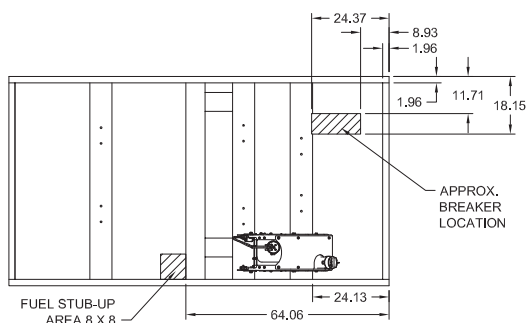
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 91 in	8,075
Level 1	156 x 66 x 94 in	9,200
Level 2	156 x 66 x 94 in	9,250
Level 3	196 x 66 x 94 in	9,650

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



	No Load	Full Load
OPU	83 dBA	86 dBA
Level 1	79 dBA	81 dBA
Level 2	75 dBA	77 dBA
Level 3	69 dBA	71 dBA

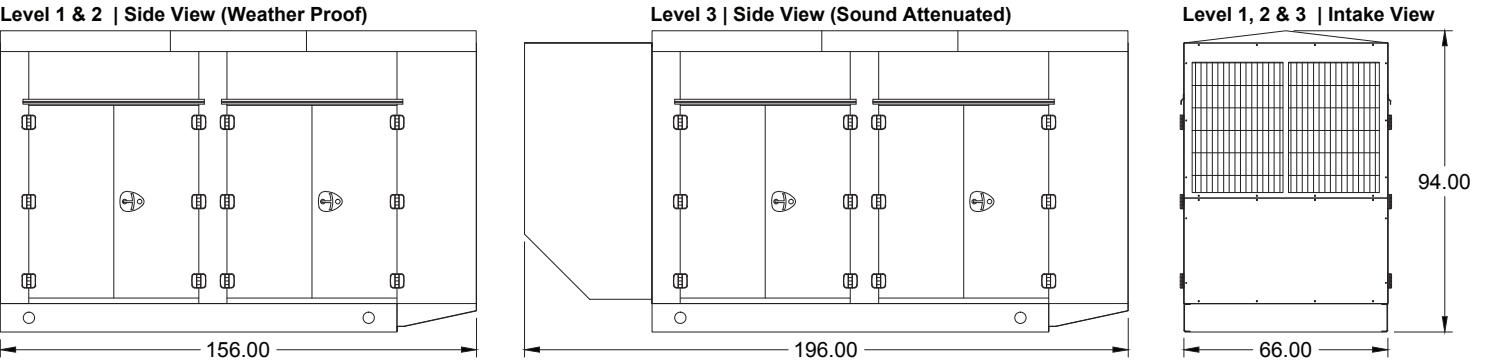
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

250 kW / 250 kW

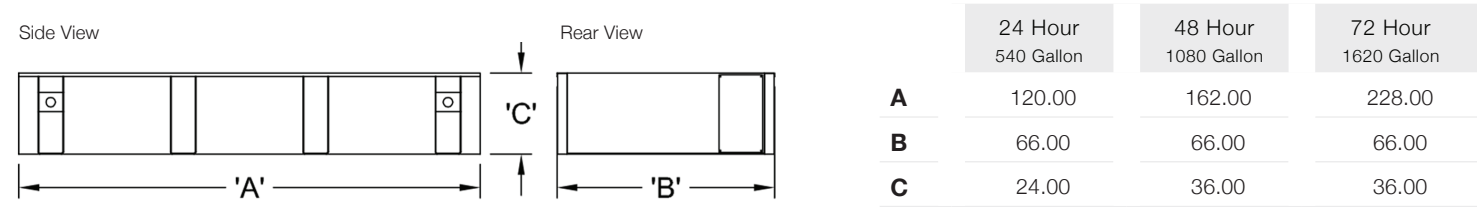


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD250-02

60 Hz / 1800 RPM

250 kWe / 250 kWe

Standby / Prime

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	572RSL4027	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	250	250	250	250	250
AMPS	1042	868	753	376	301
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime [Only Available For Mobile Applications]					
kWe	250	250	250	250	250
AMPS	1042	868	753	376	301
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified - Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 2500W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

250 kWe / 250 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	549 (9.00)
Model:	6090HF484	Bore - in. (cm) x Stroke - in. (cm):	4.66 (11.8) x 5.35 (13.6)
Type:	4-Cycle	Compression Ratio:	16.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	422 (315)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,180 (638)	1,180 (638)
Gas Volume at Stack Temp: CFM (m³/min)	2,085 (59.0)	2,067 (58.5)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	30.0 (7.50)	30.0 (7.50)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	74.0 (280)	74.0 (280)
Heat Rejection to Coolant: BTUM (kW)	5,943 (104)	5,371 (94)
Heat Rejection to CAC: BTUM (kW)	5,029 (88.0)	4,943 (86.5)
Heat Radiated to Ambient: BTUM (kW)	2,312 (40.5)	2,312 (40.5)

Air Requirements		
Aspirating: CFM (m³/min)	901 (25.5)	901 (25.5)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	15,333 (434)	15,333 (434)
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)	19.6 (74.3)	18.4 (69.9)
At 75% of Power Rating: gal/hr (lit/hr)	17.0 (64.2)	15.9 (60.2)
At 50% of Power Rating: gal/hr (lit/hr)	12.0 (45.4)	11.3 (42.7)

Fluids Capacity		
Total Oil System: gal (lit)	8.20 (31.0)	8.20 (31.0)
Engine Jacket Water Capacity: gal (lit)	4.25 (16.0)	4.25 (16.0)
System Coolant Capacity: gal (lit)	13.2 (50.0)	13.2 (50.0)

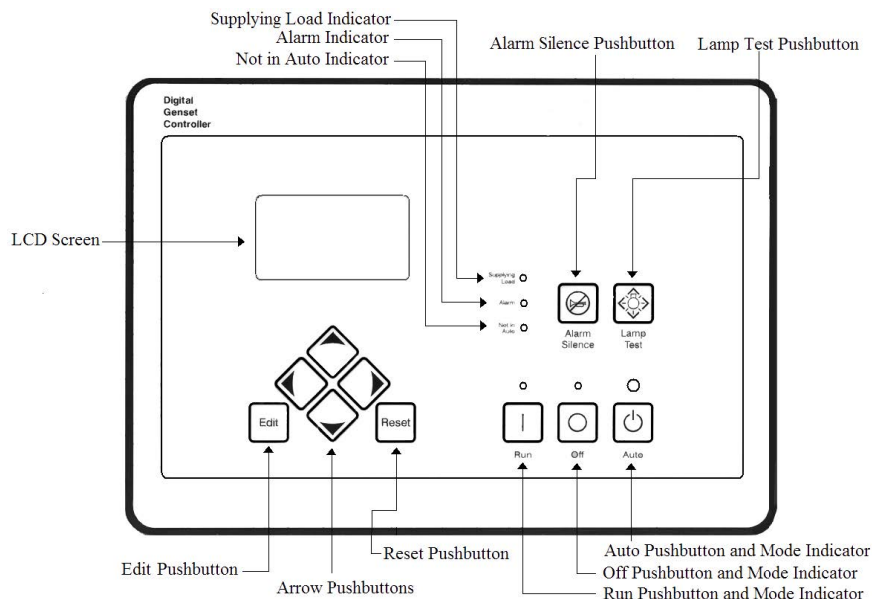
Deration Factors

Rated Power is available up to 5,500 ft (1,677 m) 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

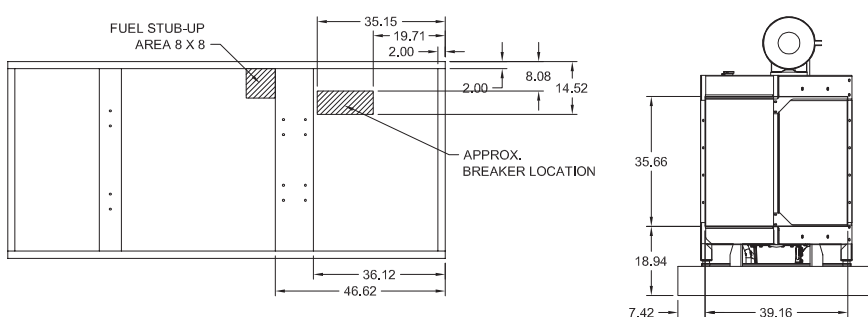
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



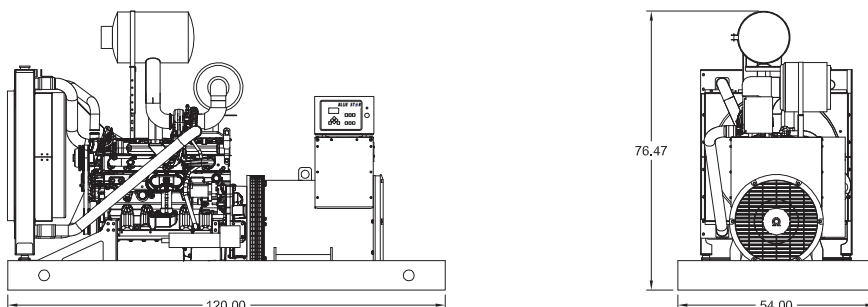
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 54 x 76.47 in	4,850
Level 1	120 x 54 x 98 in	5,875
Level 2	120 x 54 x 98 in	5,950
Level 3	160 x 54 x 98 in	6,775

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



	No Load	Full Load
OPU	84 dBA	86 dBA
Level 1	80 dBA	82 dBA
Level 2	75 dBA	77 dBA
Level 3	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.

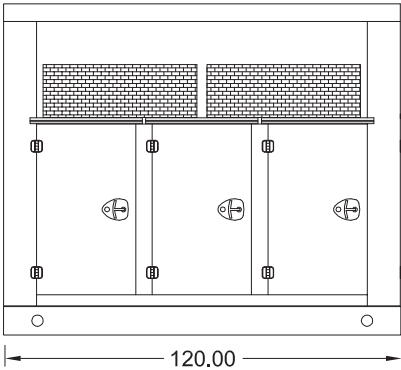
Diesel Product Line

250 kW_e / 250 kW_e



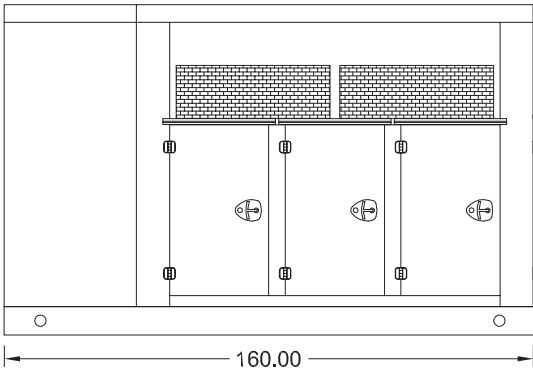
Enclosures (LEGACY)

Level 1 & 2 | Side View (Weather Proof)



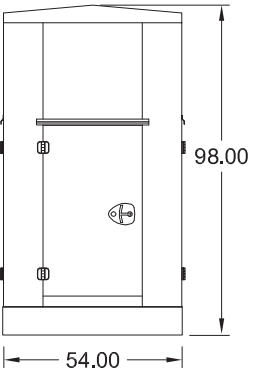
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.

Level 3 | Side View (Sound Attenuated)

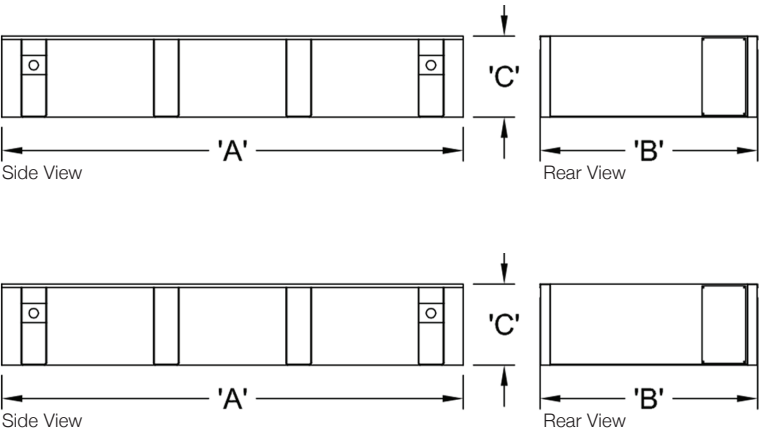


Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Level 1, 2 & 3 | Rear View



Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	24 Hour 540 Gallon	48 Hour 1080 Gallon	72 Hour 1620 Gallon
A	120.00	185.00	264.00
B	54.00	54.00	54.00
C	28.00	36.00	36.00

	Level 3		
	24 Hour 540 Gallon	48 Hour 1080 Gallon	72 Hour 1620 Gallon
A	160.00	186.00	264.00
B	54.00	54.00	54.00
C	24.00	36.00	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.
Materials and specifications subject to change without notice.



Distributed By:

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605-341-9920
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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD250-01 / TD250-01P

60 Hz / 1800 RPM

250 kWe / 250 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	250	250	250	250
AMPS	868	753	376	301
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime [Only Available For Mobile Applications]				
kWe	250	250	250	250
AMPS	868	753	376	301
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 3000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

250 kWe / 250 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	641 (10.5)
Model Standby (Prime):	6R1600G70S (6R1600G10S)	Bore - in. (cm) x Stroke - in. (cm):	4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	418 (312)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	806 (430)	806 (430)
Gas Volume at Stack Temp: CFM (m³/min)	2,543 (72.0)	2,543 (72.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	73.1 (277)	73.1 (277)
Heat Rejection to Coolant: BTUM (kW)	8,132 (143)	8,132 (143)
Heat Rejection to CAC: BTUM (kW)	4,777 (84.0)	4,777 (84.0)
Heat Radiated to Ambient: BTUM (kW)	2,177 (38.1)	2,177 (38.1)
Air Requirements		
Aspirating: CFM (m³/min)	1,059 (30.0)	1,059 (30.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	13,985 (396)	13,985 (396)
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)	19.7 (74.0)	19.7 (74.0)
At 75% of Power Rating: gal/hr (lit/hr)	15.9 (60.0)	15.9 (60.0)
At 50% of Power Rating: gal/hr (lit/hr)	12.2 (46.0)	12.2 (46.0)
Fluids Capacity		
Total Oil System: gal (lit)	12.2 (46.0)	12.2 (46.0)
Engine Jacket Water Capacity: gal (lit)	11.9 (45.0)	11.9 (45.0)
System Coolant Capacity: gal (lit)	21.7 (82.0)	21.7 (82.0)

Deration Factors

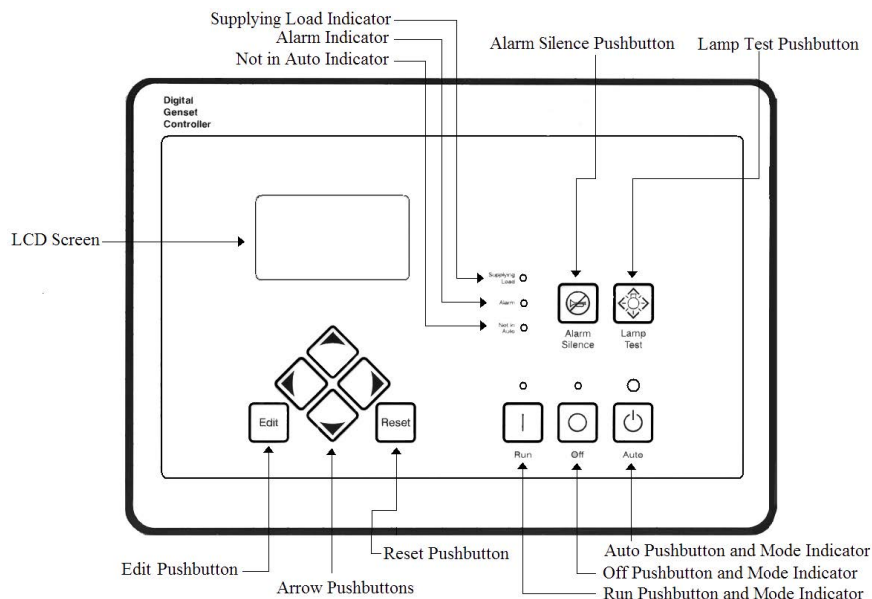
Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 3,280 ft (1,500 m). Consult factory for site conditions above these parameters.

250 kWe / 250 kWe



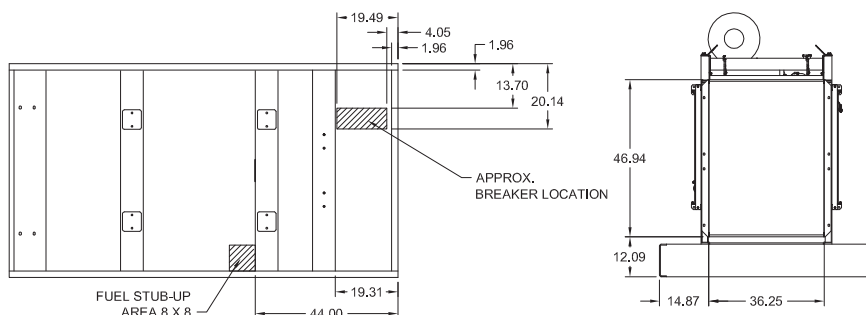
Standard Features

- ▶ 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

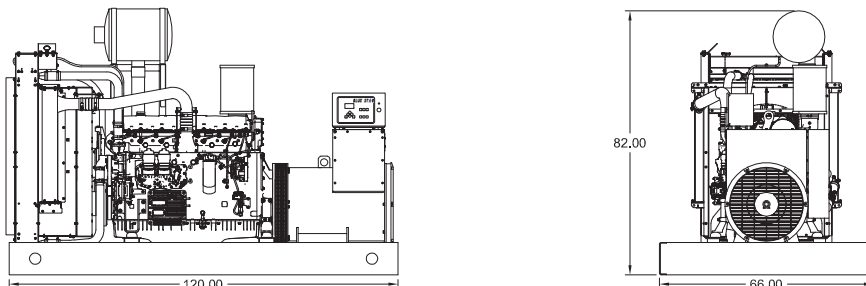


	L x W x H	Weight lbs
OPU	120 x 66 x 82 in	6,350
Level 1	156 x 66 x 94 in	7,600
Level 2	156 x 66 x 94 in	7,650
Level 3	196 x 66 x 94 in	7,950

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



	No Load	Full Load
OPU	86 dBA	88 dBA
Level 1	84 dBA	86 dBA
Level 2	78 dBA	80 dBA
Level 3	70 dBA	73 dBA



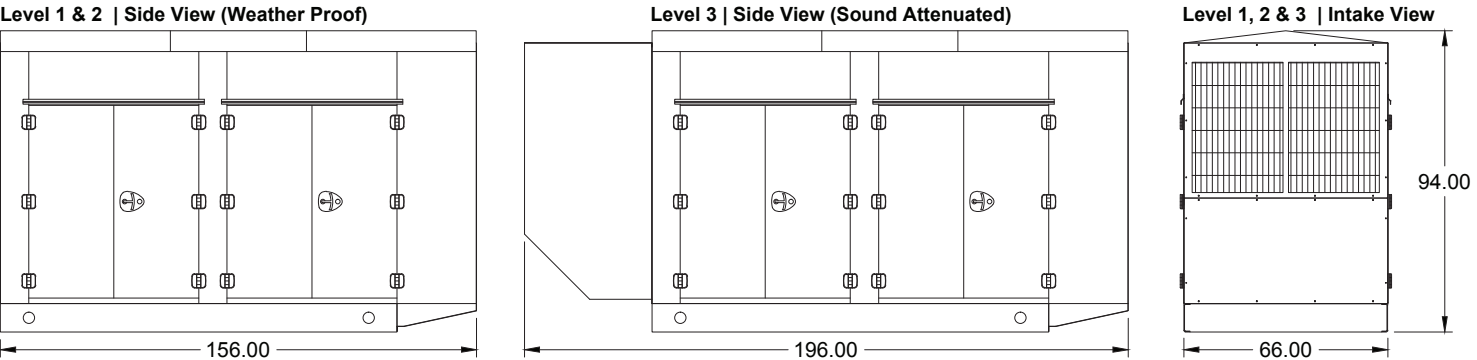
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

250 kW / 250 kW

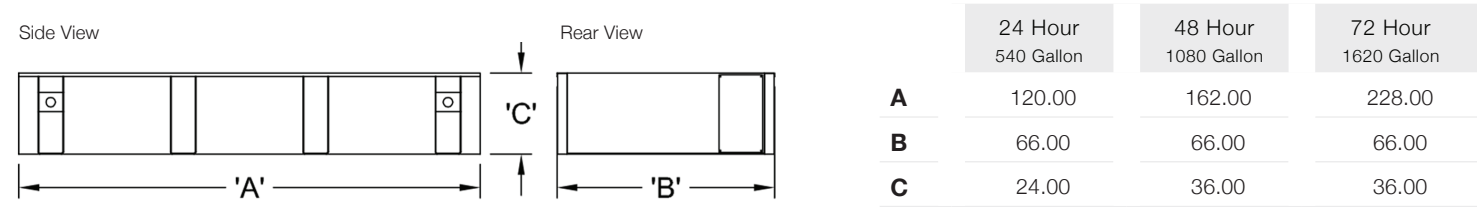


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD275-02

60 Hz / 1800 RPM

275 kWe / 250 kWe

Standby / Prime

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	572RSL4027	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby					
kWe	275	275	275	275	275
AMPS	1146	955	828	414	331
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]					
kWe	250	250	250	250	250
AMPS	1042	868	752	376	301
Temp Rise	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 (50°C)
- ▶ 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)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified - Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted (Standby)
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 2500W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

275 kWe / 250 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	549 (9.00)
Model:	6090HF484	Bore - in. (cm) x Stroke - in. (cm):	4.66 (11.84) x 5.35 (13.6)
Type:	4-Cycle	Compression Ratio:	16.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	422 (315)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	1,180 (638)	1,180 (638)
Gas Volume at Stack Temp: CFM (m³/min)	2,085 (59.0)	2,067 (58.5)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	30.0 (7.50)	30.0 (7.50)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	74.0 (280)	74.0 (280)
Heat Rejection to Coolant: BTUM (kW)	5,943 (104)	5,371 (94.0)
Heat Rejection to CAC: BTUM (kW)	5,029 (88.0)	4,943 (86.5)
Heat Radiated to Ambient: BTUM (kW)	2,312 (40.5)	2,312 (40.5)

Air Requirements		
Aspirating: CFM (m³/min)	901 (25.5)	901 (25.5)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	15,333 (434)	15,333 (434)
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)	19.6 (74.3)	18.4 (69.9)
At 75% of Power Rating: gal/hr (lit/hr)	17.0 (64.2)	15.9 (60.2)
At 50% of Power Rating: gal/hr (lit/hr)	12.0 (45.4)	11.3 (42.7)

Fluids Capacity		
Total Oil System: gal (lit)	8.20 (31.0)	8.20 (31.0)
Engine Jacket Water Capacity: gal (lit)	4.25 (16.0)	4.25 (16.0)
System Coolant Capacity: gal (lit)	13.2 (50.0)	13.2 (50.0)

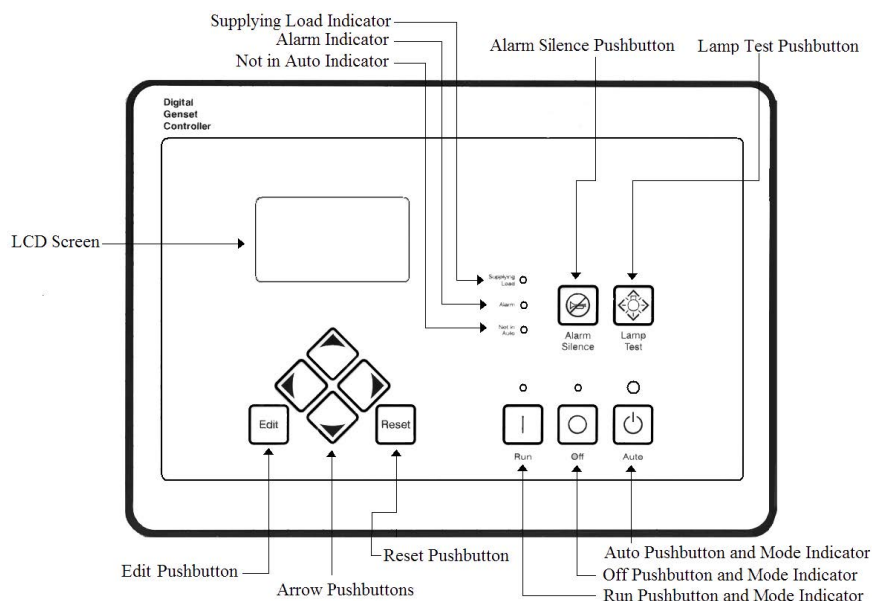
Deration Factors

Rated Power is available up to 5,500 ft (1,677 m) 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

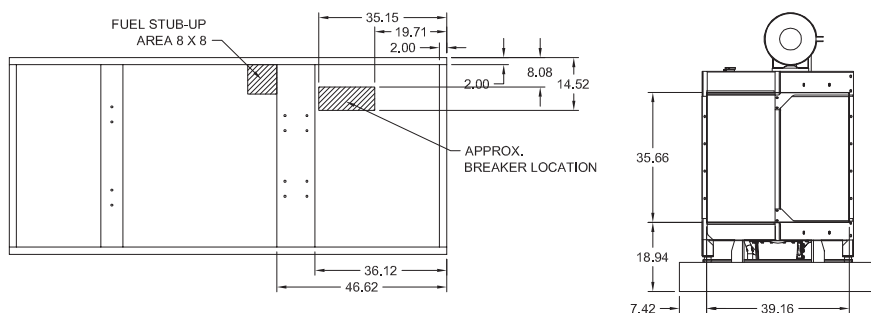
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



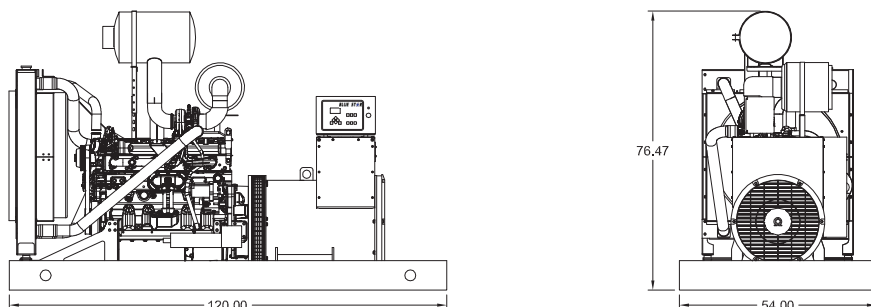
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 54 x 76.47 in	4,925
Level 1	120 x 54 x 98 in	5,950
Level 2	120 x 54 x 98 in	6,025
Level 3	160 x 54 x 98 in	6,850

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



	No Load	Full Load
OPU	84 dBA	86 dBA
Level 1	80 dBA	82 dBA
Level 2	75 dBA	77 dBA
Level 3	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.

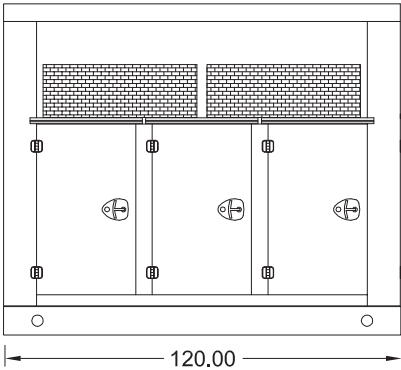
Diesel Product Line

275 kW_e / 250 kW_e



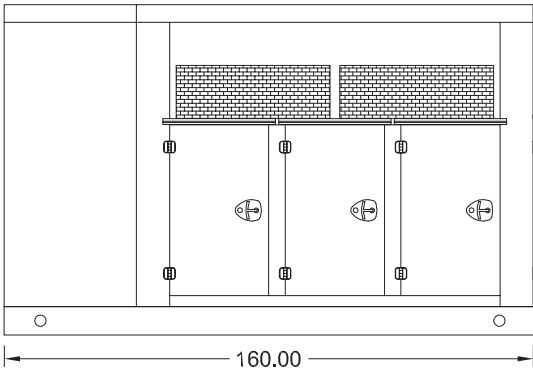
Enclosures (LEGACY)

Level 1 & 2 | Side View (Weather Proof)



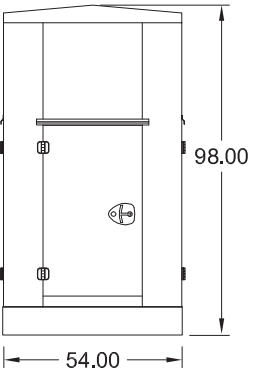
All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.

Level 3 | Side View (Sound Attenuated)

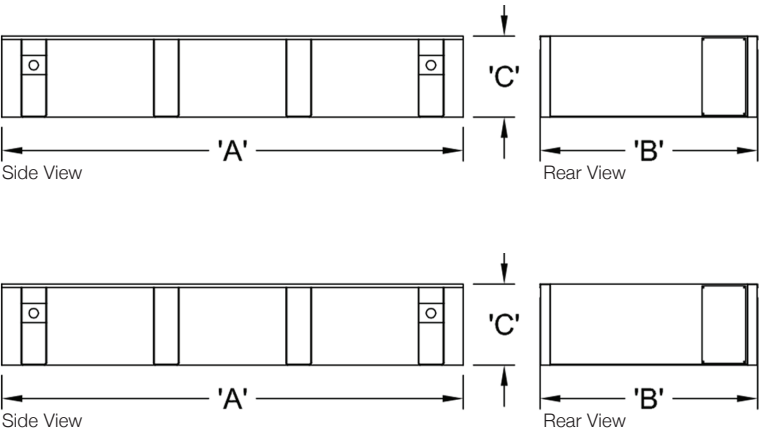


Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Level 1, 2 & 3 | Rear View



Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	24 Hour 540 Gallon	48 Hour 1080 Gallon	72 Hour 1620 Gallon
A	120.00	186.00	264.00
B	54.00	54.00	54.00
C	32.00	36.00	36.00

	Level 3		
	24 Hour 540 Gallon	48 Hour 1080 Gallon	72 Hour 1620 Gallon
A	160.00	186.00	264.00
B	54.00	54.00	54.00
C	24.00	36.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD275-01 / TD275-01P

60 Hz / 1800 RPM

275 kWe / 250 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	432CSL6210	432CSL6210	432CSL6210	432PSL6246
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	275	275	275	275
AMPS	955	828	414	331
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	250	250	250	250
AMPS	868	752	376	301
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 3000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

275 kWe / 250 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	641 (10.5)
Model Standby (Prime):	6R1600G70S (6R1600G10S)	Bore - in. (cm) x Stroke - in. (cm):	4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	418 (312)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	806 (430)	734 (390)
Gas Volume at Stack Temp: CFM (m³/min)	2,543 (72.0)	2,119 (60.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	73.1 (277)	73.1 (277)
Heat Rejection to Coolant: BTUM (kW)	8,132 (143)	7,336 (128)
Heat Rejection to CAC: BTUM (kW)	4,777 (84.0)	4,322 (75.6)
Heat Radiated to Ambient: BTUM (kW)	2,348 (41.1)	2,177 (38.1)
Air Requirements		
Aspirating: CFM (m³/min)	1,059 (30.0)	636 (18.1)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	13,988 (396)	13,988 (396)
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)	19.7 (74.0)	19.1 (72.3)
At 75% of Power Rating: gal/hr (lit/hr)	15.9 (60.0)	14.8 (56.0)
At 50% of Power Rating: gal/hr (lit/hr)	12.2 (46.0)	10.9 (41.3)
Fluids Capacity		
Total Oil System: gal (lit)	12.2 (46.0)	12.2 (46.0)
Engine Jacket Water Capacity: gal (lit)	11.9 (45.0)	11.9 (45.0)
System Coolant Capacity: gal (lit)	21.7 (82.0)	21.7 (82.0)

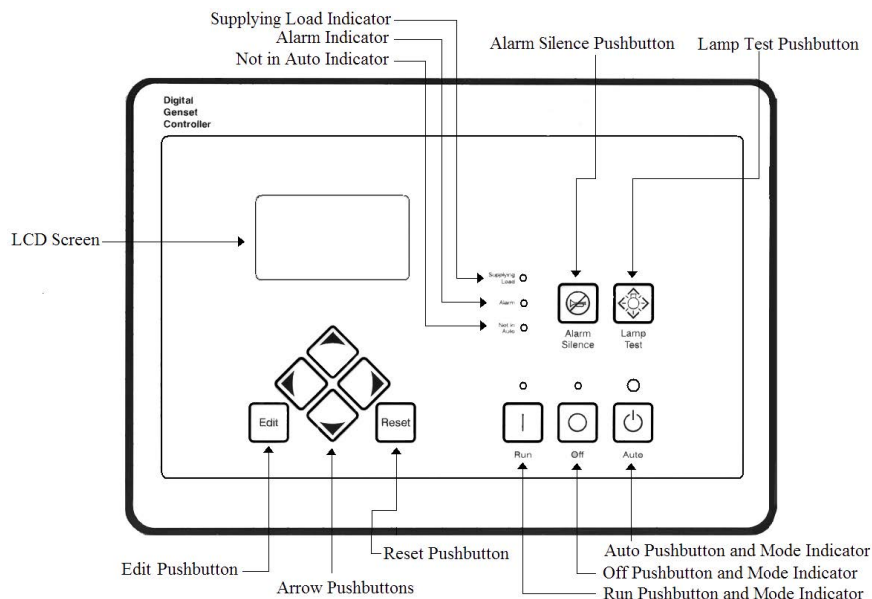
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 3,280 ft (1,000 m). Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

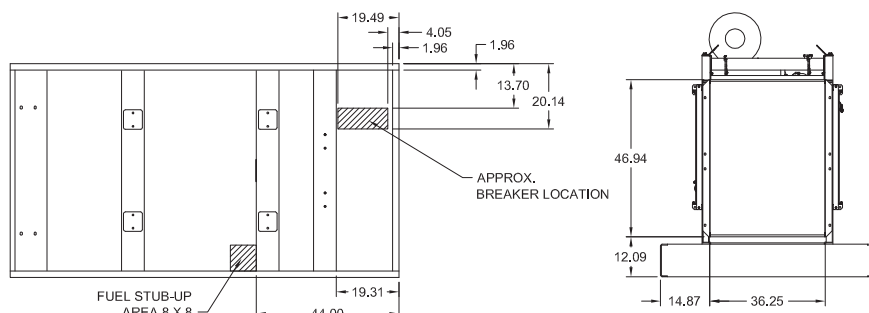
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



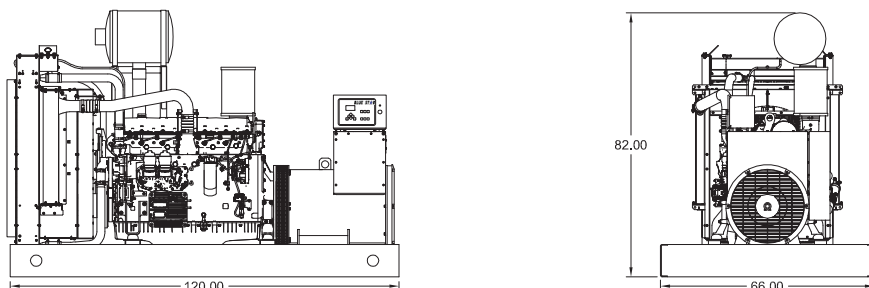
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 82 in	6,350
Level 1	156 x 66 x 94 in	7,600
Level 2	156 x 66 x 94 in	7,650
Level 3	196 x 66 x 94 in	7,950

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



	No Load	Full Load
OPU	86 dBA	88 dBA
Level 1	84 dBA	86 dBA
Level 2	78 dBA	80 dBA
Level 3	70 dBA	73 dBA



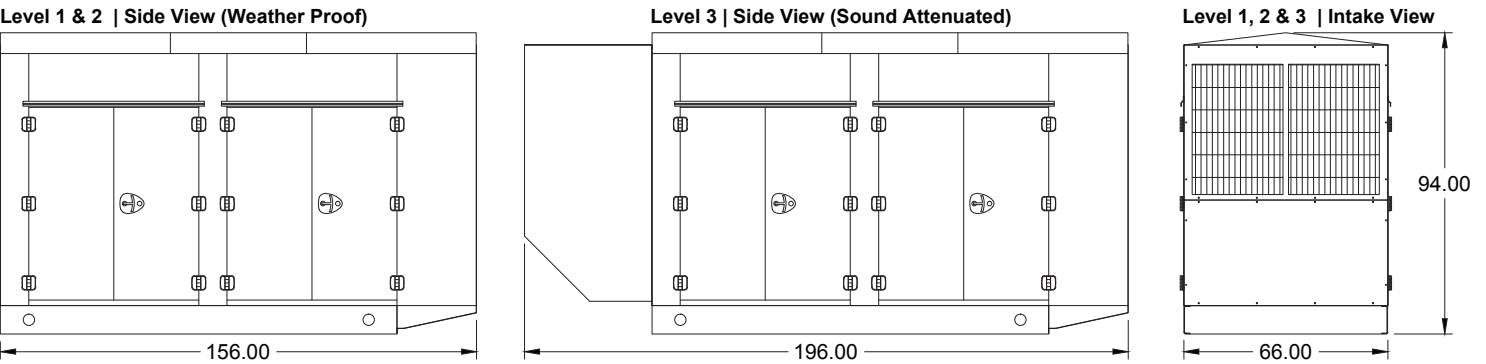
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

275 kW_e / 250 kW_e

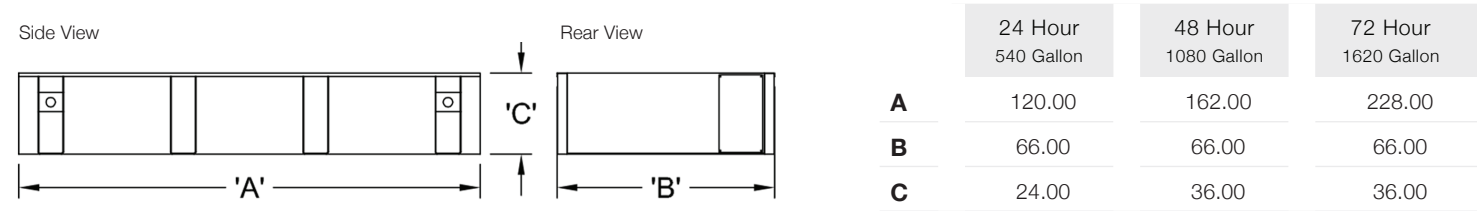


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



All specification sheet dimensions are represented in inches.
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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD300-01

60 Hz / 1800 RPM

300 kWe / 275 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	432CSL6212	432PSL6246
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	300	300	300	300
AMPS	1042	903	452	361
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	275	275	275	275
AMPS	955	828	414	331
Temp Rise	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 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

300 kWe / 275 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	780 (12.8)
Model:	TAD1351GE	Bore - in. (cm) x Stroke - in. (cm):	5.16 (13.1) x 6.22 (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):	456 (335)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	869 (465)	833 (445)
Gas Volume at Stack Temp: CFM (m³/min)	2,129 (60.3)	1,999 (56.6)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	41.6 (10.4)	33.3 (8.32)
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)	87.0 (329)	87.0 (329)
Heat Rejection to Coolant: BTUM (kW)	8,872 (156)	8,132 (143)
Heat Rejection to CAC: BTUM (kW)	4,663 (82.0)	4,151 (73.0)
Heat Radiated to Ambient: BTUM (kW)	2,668 (46.7)	2,348 (38.1)
Air Requirements		
Aspirating: CFM (m³/min)	908 (25.7)	865 (24.5)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	12,085 (342)	12,085 (342)
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)	21.8 (82.7)	20.0 (75.9)
At 75% of Power Rating: gal/hr (lit/hr)	16.6 (62.7)	15.2 (57.7)
At 50% of Power Rating: gal/hr (lit/hr)	11.5 (43.5)	10.7 (40.6)
Fluids Capacity		
Total Oil System: gal (lit)	9.50 (36.0)	9.50 (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

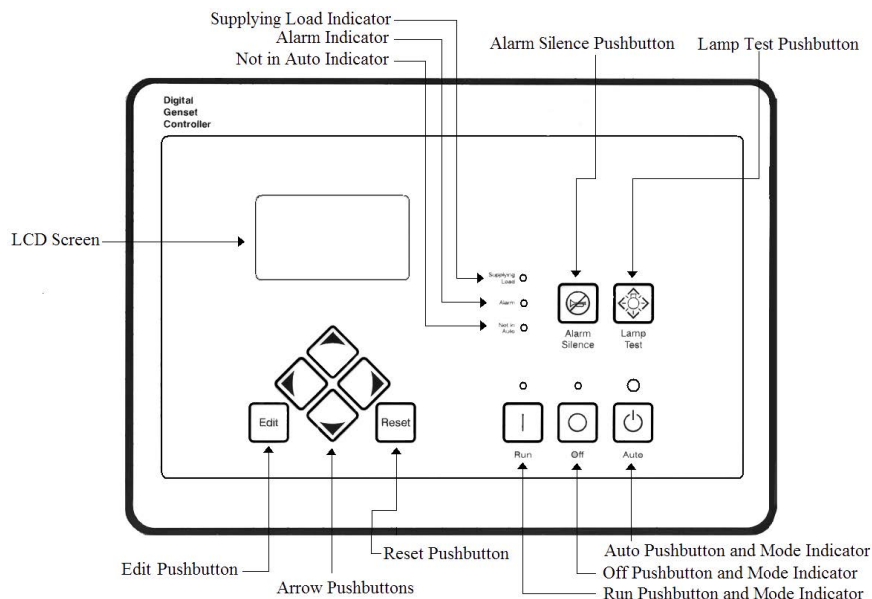
Rated power available up to 6,560 ft (2,000 m) at ambient temperatures to 122° F (50° C)
Consult factory for site conditions above these parameters.

300 kWe / 275 kWe



Standard Features

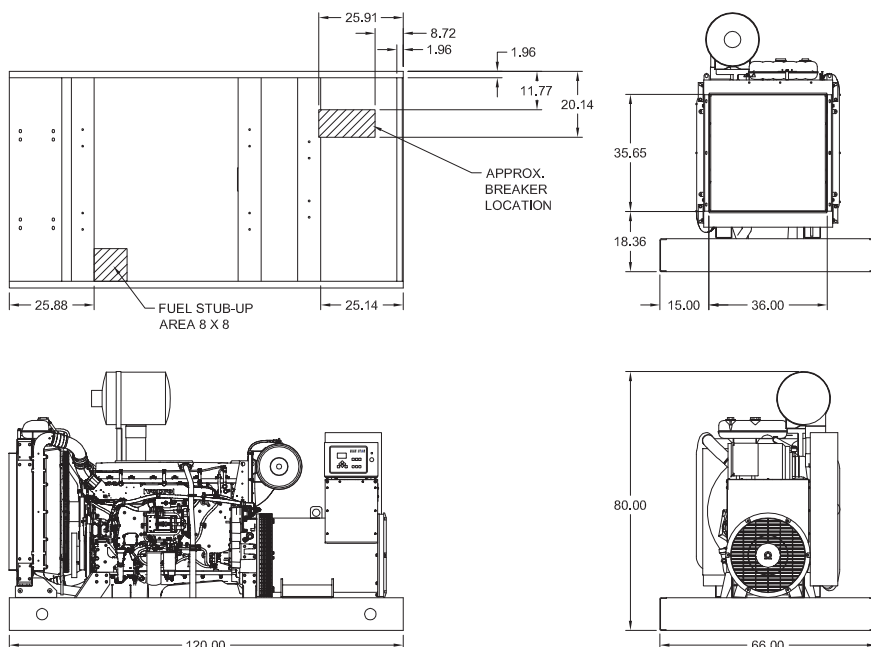
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



	L x W x H	Weight lbs
OPU	120 x 66 x 80 in	7,775
Level 1	156 x 66 x 94 in	9,025
Level 2	156 x 66 x 94 in	9,100
Level 3	196 x 66 x 94 in	9,400

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

	No Load	Full Load
OPU	86 dBA	88 dBA
Level 1	83 dBA	85 dBA
Level 2	77 dBA	79 dBA
Level 3	69 dBA	71 dBA



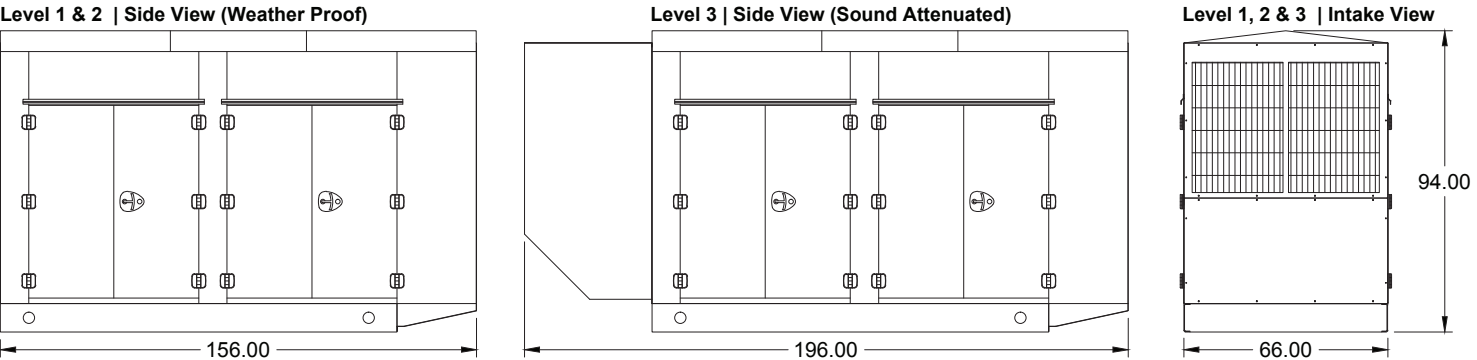
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

300 kW_e / 275 kW_e

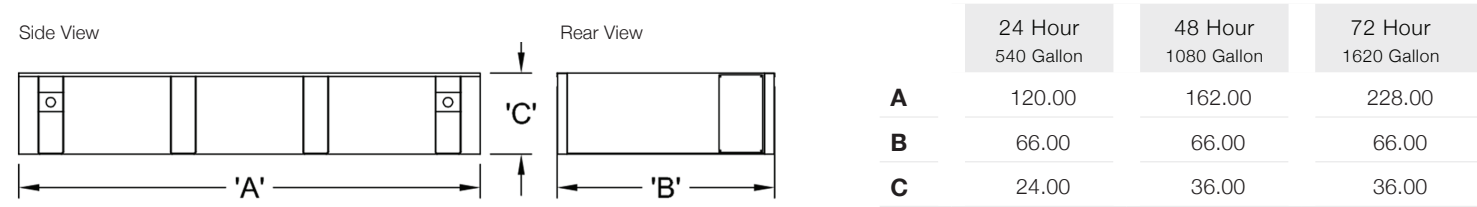


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD300-02FT4

60 Hz / 1800 RPM

300 kWe / 300 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	433CSL6216	433RSS4266
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	300	300	300	300
AMPS	1042	903	452	361
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime				
kWe	300	300	300	300
AMPS	1042	903	452	361
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

300 kWe / 300 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 780 (12.8)	
Model:	TAD1373VE	Bore - in. (cm) x Stroke - in. (cm): 5.16 (13.1) x 6.22 (15.8)	
Type:	4-Cycle	Compression Ratio: 17.8:1	
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800	
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 469 (345)	
Exhaust System		Standby	Prime
Gas Temp. (Stack): °F (°C)		869 (465)	869 (465)
Gas Volume at Stack Temp: CFM (m³/min)		2,084 (59.0)	2,084 (59.0)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)		32.0 (8.00)	32.0 (8.00)
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)		90.0 (341)	90.0 (341)
Heat Rejection to Coolant: BTUM (kW)		8,815 (154)	8,815 (154)
Heat Rejection to CAC: BTUM (kW)		3,640 (63.7)	3,640 (63.7)
Heat Radiated to Ambient: BTUM (kW)		2,668 (46.7)	2,668 (46.7)
Air Requirements			
Aspirating: CFM (m³/min)		918 (26.0)	918 (26.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)		13,074 (370)	13,074 (370)
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)		21.8 (82.7)	21.8 (82.7)
At 75% of Power Rating: gal/hr (lit/hr)		16.6 (62.7)	16.6 (62.7)
At 50% of Power Rating: gal/hr (lit/hr)		11.5 (43.5)	11.5 (43.5)
DEF Consumption (% of fuel consumption)		± 6.00%	± 6.00%
Fluids Capacity			
Total Oil System: gal (lit)		9.50 (36.0)	9.50 (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)
DEF Tank Capacity: gal (lit)		18.5 (70.0)	18.5 (70.0)

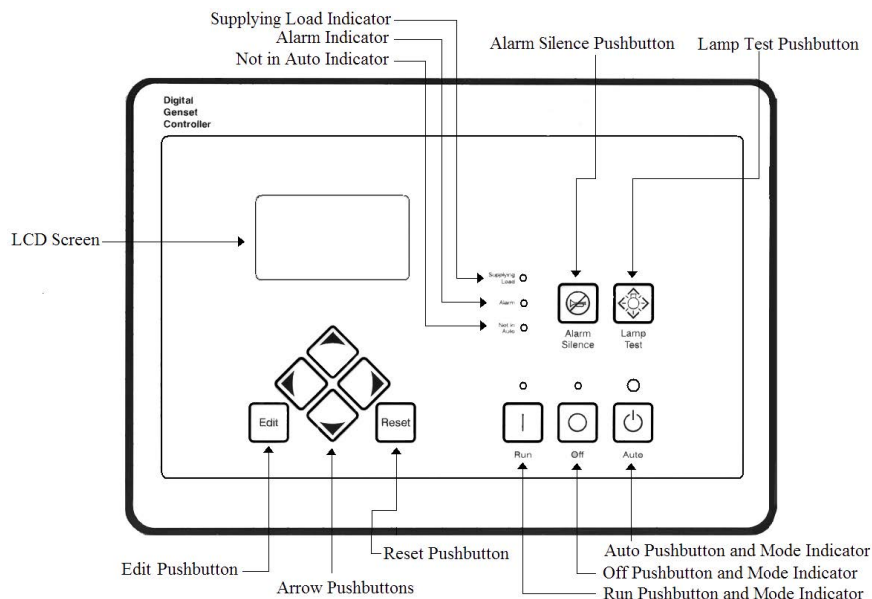
Deration Factors

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

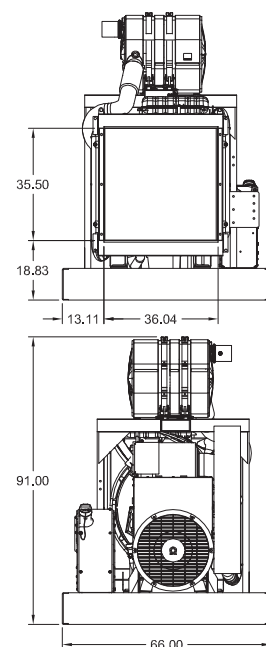
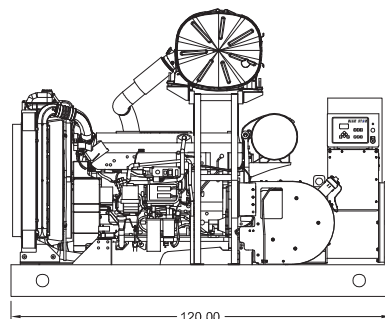
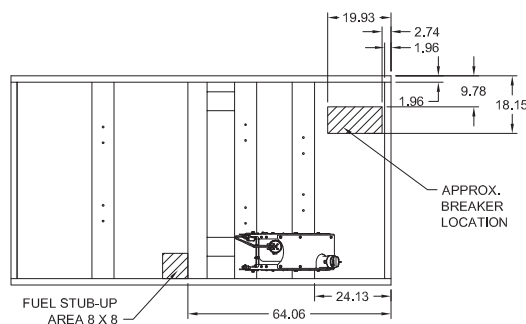


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 91 in	8,650
Level 1	156 x 66 x 94 in	9,775
Level 2	156 x 66 x 94 in	9,825
Level 3	196 x 66 x 94 in	10,225

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

	No Load	Full Load
OPU	84 dBA	87 dBA
Level 1	80 dBA	82 dBA
Level 2	76 dBA	78 dBA
Level 3	70 dBA	72 dBA



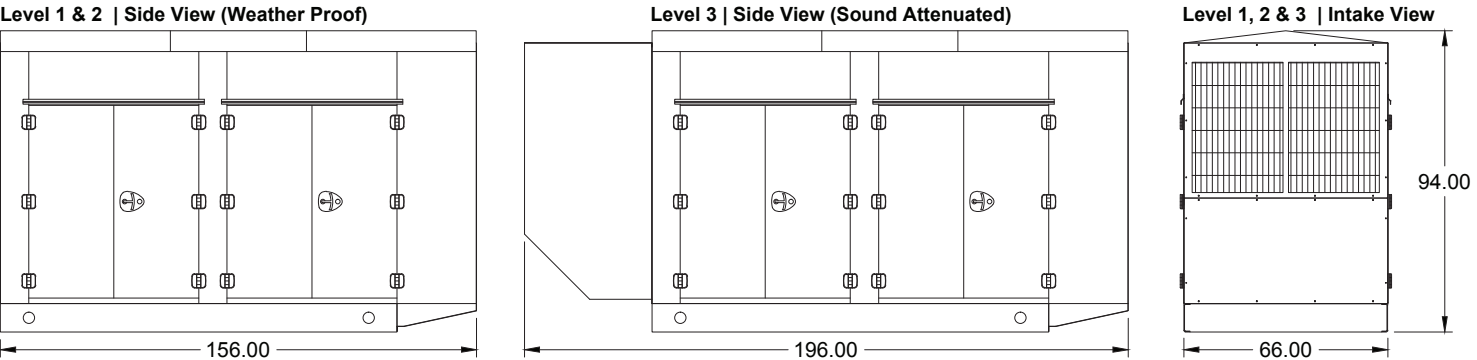
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

300 kWe / 300 kWe

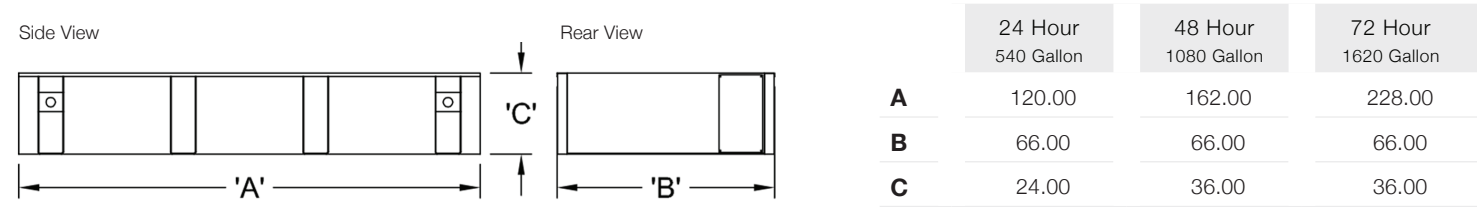


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD300-02

60 Hz / 1800 RPM

300 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	572RSL4029	433CSL6216	433CSL6216	432CSL6212	432PSL6246
Connection	12 LEAD ZIG-ZAG	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby (Stationary Applications Only)					
kWe	300	300	300	300	300
AMPS	1250	1042	903	452	361
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
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified - Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 12V 6 Amp
- ▶ Jacket Water Heater -20°F 2500W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

300 kW_e



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	549 (9.00)
Model:	6090HFG86	Bore - in. (cm) x Stroke - in. (cm):	4.66 (11.8) x 5.35 (13.6)
Type:	4-Cycle	Compression Ratio:	16.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kW _m):	463 (345)

Exhaust System	Standby
Gas Temp. (Stack): °F (°C)	927 (497)
Gas Volume at Stack Temp: CFM (m³/min)	2,246 (63.6)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	30.0 (7.50)

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)	78.0 (295)
Heat Rejection to Coolant: BTUM (kW)	6,489 (114)
Heat Rejection to CAC: BTUM (kW)	5,641 (99.1)
Heat Radiated to Ambient: BTUM (kW)	3,244 (56.8)

Air Requirements	
Aspirating: CFM (m³/min)	936 (26.5)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	19,014 (538)
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)	22.1 (83.7)
At 75% of Power Rating: gal/hr (lit/hr)	17.8 (67.3)
At 50% of Power Rating: gal/hr (lit/hr)	13.1 (49.5)

Fluids Capacity	
Total Oil System: gal (lit)	8.20 (31.0)
Engine Jacket Water Capacity: gal (lit)	4.23 (16.0)
System Coolant Capacity: gal (lit)	13.2 (50.0)

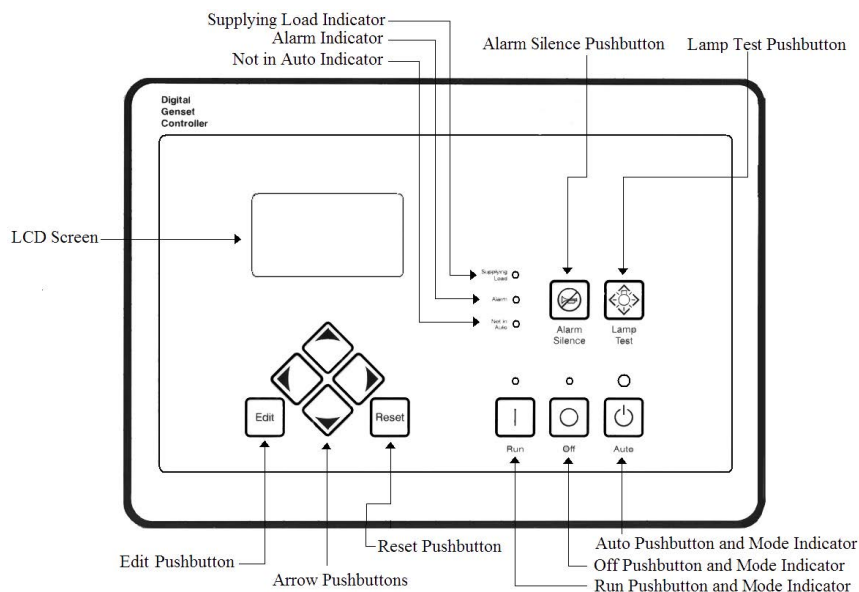
Deration Factors

Rated Power is available up to 2,500 ft (762 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

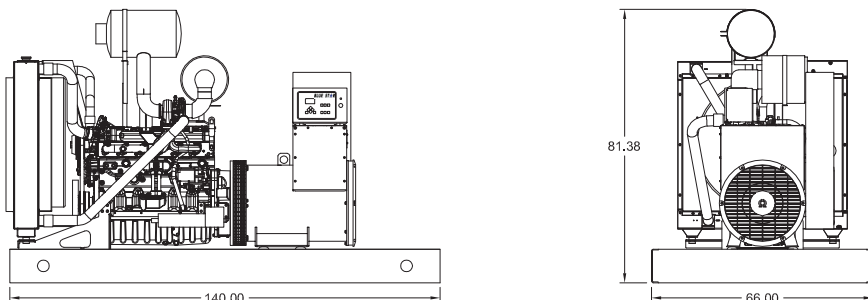
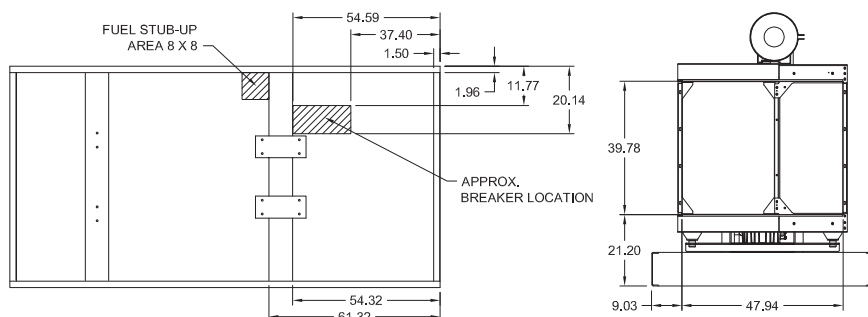
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (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
OPU	140 x 66 x 81.38 in	4,950
Level 1	140 x 66 x 112 in	6,375
Level 2	140 x 66 x 112 in	6,450
Level 3	195 x 66 x 112 in	7,275

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



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.

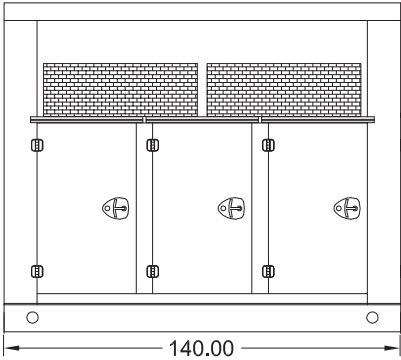
Diesel Product Line

300 kW

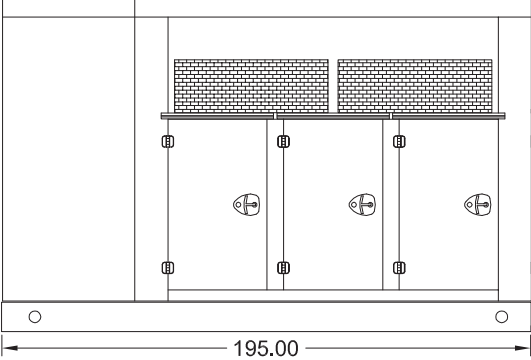


Enclosures (LEGACY)

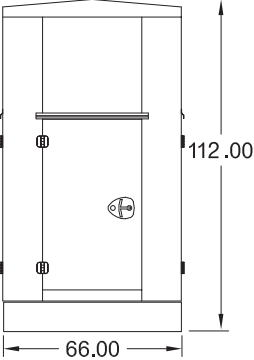
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



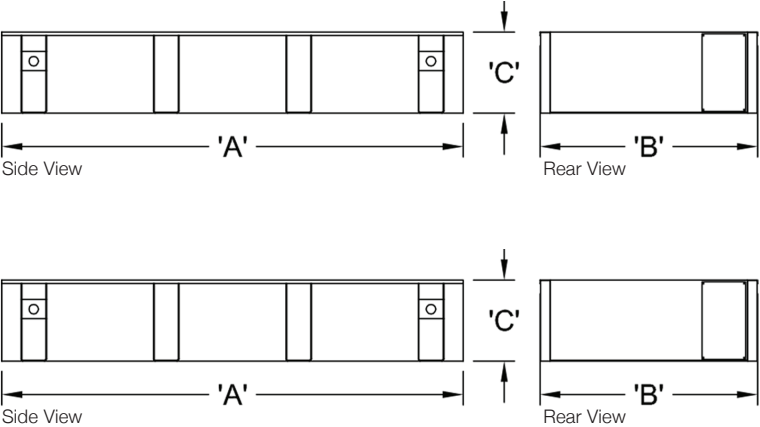
Level 1, 2 & 3 | Rear View



All enclosures are 150 MPH Wind Rated.
*Enclosure height does not include exhaust stack.

Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	24 Hour 540 Gallon	48 Hour 1080 Gallon	72 Hour 1620 Gallon
A	140.00	154.00	216.00
B	66.00	66.00	66.00
C	22.00	36.00	36.00

	Level 3		
	24 Hour 540 Gallon	48 Hour 1080 Gallon	72 Hour 1620 Gallon
A	195.00	195.00	216.00
B	66.00	66.00	66.00
C	16.00	28.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD300-01 / TD300-01P

60 Hz / 1800 RPM

300 kWe / 275 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	432CSL6212	432PSL6246
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	300	300	300	300
AMPS	1042	903	452	361
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	275	275	275	275
AMPS	955	828	414	331
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 3000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

300 kWe / 275 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	641 (10.5)
Model Standby (Prime):	6R1600G80S (6R1600G20S)	Bore - in. (cm) x Stroke - in. (cm):	4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	460 (343)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	824 (440)	824 (440)
Gas Volume at Stack Temp: CFM (m³/min)	2,544 (72.0)	2,544 (72.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	73.1 (277)	73.1 (277)
Heat Rejection to Coolant: BTUM (kW)	8,758 (153)	8,132 (143)
Heat Rejection to CAC: BTUM (kW)	5,118 (89.6)	4,322 (75.6)
Heat Radiated to Ambient: BTUM (kW)	2,668 (46.7)	2,348 (38.1)
Air Requirements		
Aspirating: CFM (m³/min)	1,059 (30.0)	932 (26.4)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	13,985 (396)	13,985 (396)
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)	21.6 (81.8)	19.7 (74.0)
At 75% of Power Rating: gal/hr (lit/hr)	17.5 (66.2)	15.9 (60.0)
At 50% of Power Rating: gal/hr (lit/hr)	15.4 (58.3)	12.2 (46.0)
Fluids Capacity		
Total Oil System: gal (lit)	12.2 (46.0)	12.2 (46.0)
Engine Jacket Water Capacity: gal (lit)	11.9 (45.0)	11.9 (45.0)
System Coolant Capacity: gal (lit)	21.7 (82.0)	21.7 (82.0)

Deration Factors

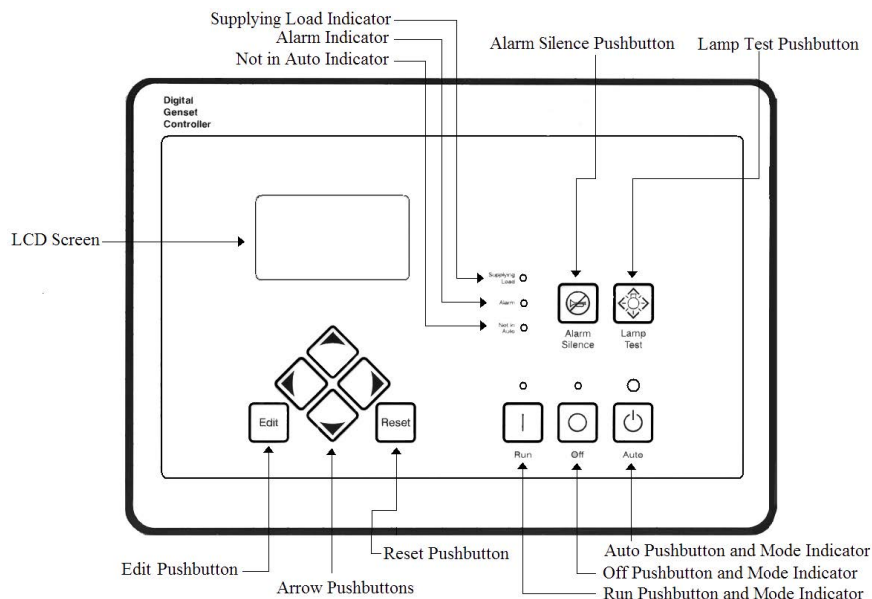
Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 3,280 ft (1,000 m). Consult factory for site conditions above these parameters.

300 kWe / 275 kWe



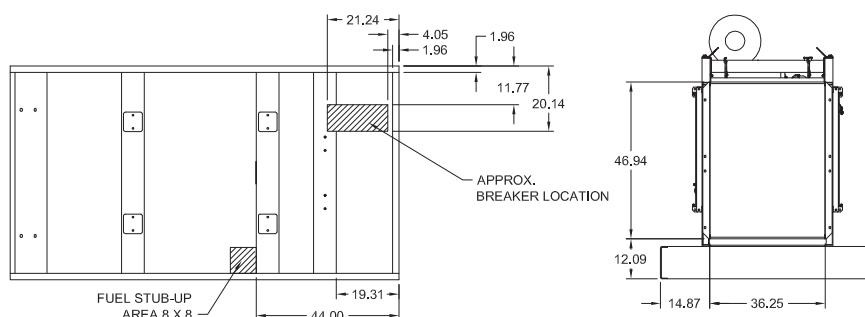
Standard Features

- ▶ 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

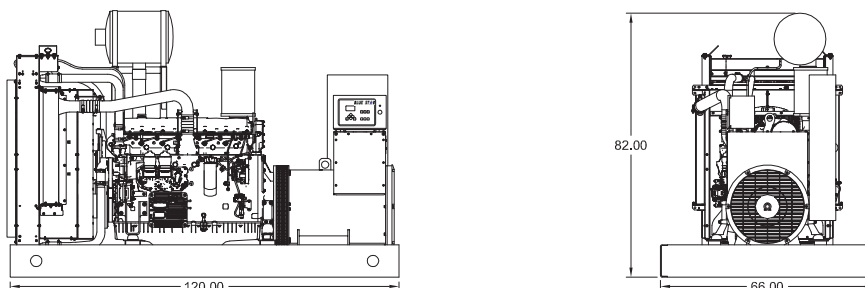


	L x W x H	Weight lbs
OPU	120 x 66 x 82 in	6,425
Level 1	156 x 66 x 94 in	7,675
Level 2	156 x 66 x 94 in	7,725
Level 3	196 x 66 x 94 in	8,025

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



	No Load	Full Load
OPU	87 dBA	89 dBA
Level 1	85 dBA	87 dBA
Level 2	79 dBA	81 dBA
Level 3	71 dBA	73 dBA



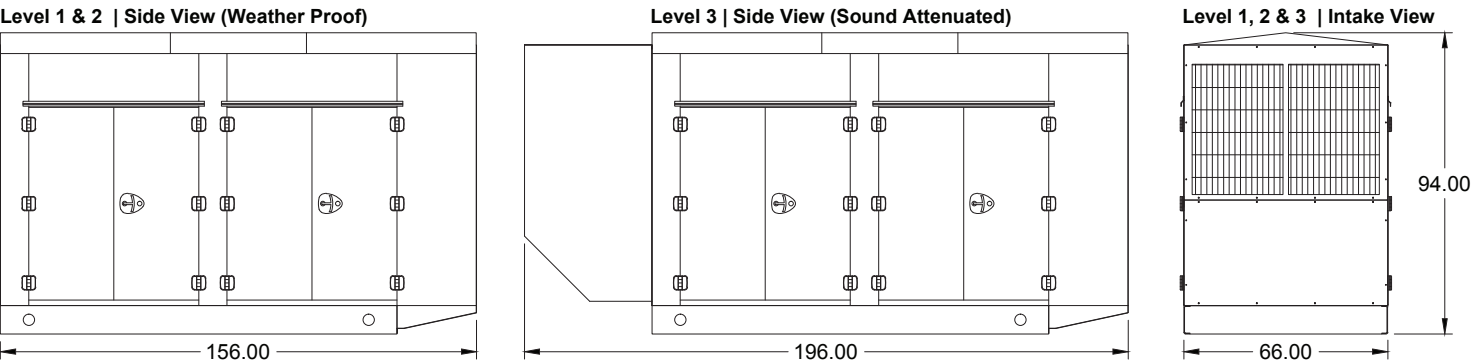
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

300 kW_e / 275 kW_e

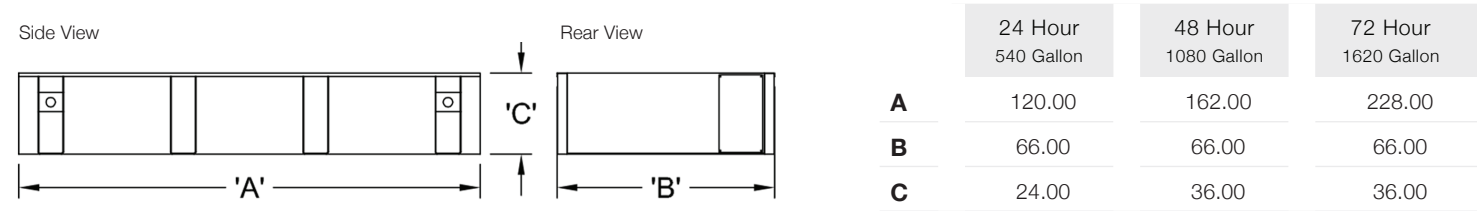


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD350-01

60 Hz / 1800 RPM

350 kWe / 330 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	433CSL6216	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	350	350	350	350
AMPS	1216	1054	527	421
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	330	330	330	330
AMPS	1146	993	497	397
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

- | | | |
|---|--|---|
| <p>Engine</p> <ul style="list-style-type: none"> ▶ 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 3 <p>Listing Certifications</p> <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 | <p>Generator</p> <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± 1% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 | <p>Additional</p> <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Formed Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 24V 5 Amp ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves ▶ Vibration Isolation Mounts ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray |
|---|--|---|

Diesel Product Line

350 kWe / 330 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 780 (12.8)
Model:	TAD1352GE	Bore - in. (cm) x Stroke - in. (cm): 5.20 (13.1) x 6.20 (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): 537 (395)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	995 (535)	878 (470)
Gas Volume at Stack Temp: CFM (m³/min)	2,391 (67.7)	2,214 (62.7)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.0 (10.00)	32.0 (8.00)

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)	87.0 (329)	87.0 (329)
Heat Rejection to Coolant: BTUM (kW)	10,066 (177)	9,327 (164)
Heat Rejection to CAC: BTUM (kW)	4,948 (87.0)	4,720 (83.0)
Heat Radiated to Ambient: BTUM (kW)	2,988 (52.3)	2,818 (49.3)

Air Requirements		
Aspirating: CFM (m³/min)	918 (26.0)	918 (26.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	16,325 (462)	16,325 (462)
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)	25.5 (96.5)	23.1 (87.4)
At 75% of Power Rating: gal/hr (lit/hr)	19.3 (73.1)	17.7 (67.0)
At 50% of Power Rating: gal/hr (lit/hr)	13.2 (50.0)	12.3 (46.6)

Fluids Capacity		
Total Oil System: gal (lit)	9.00 (36.0)	9.00 (36.0)
Engine Jacket Water Capacity: gal (lit)	5.28 (20.0)	5.28 (20.0)
System Coolant Capacity: gal (lit)	11.7 (44.0)	11.7 (44.0)

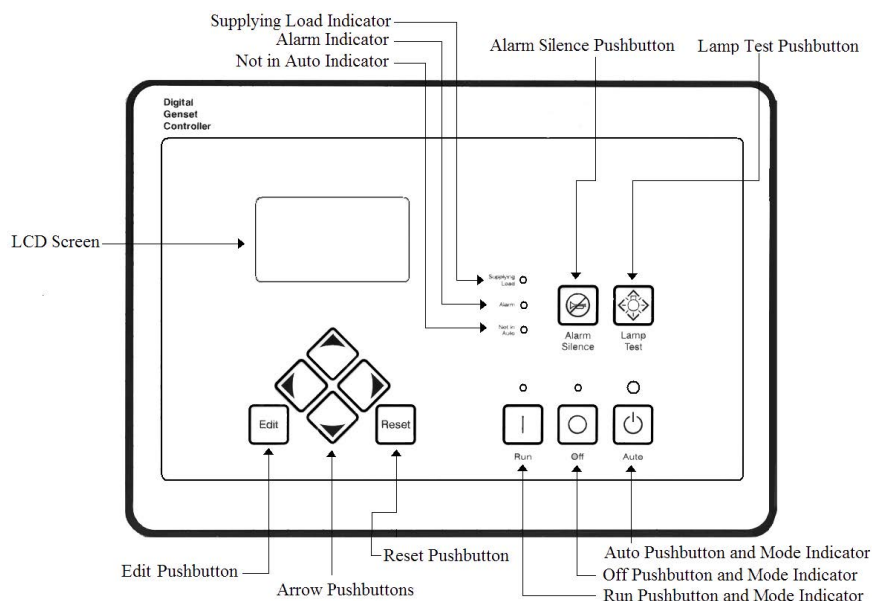
Deration Factors

Rated Power is available up to 3,280 Ft (1,000 m) 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

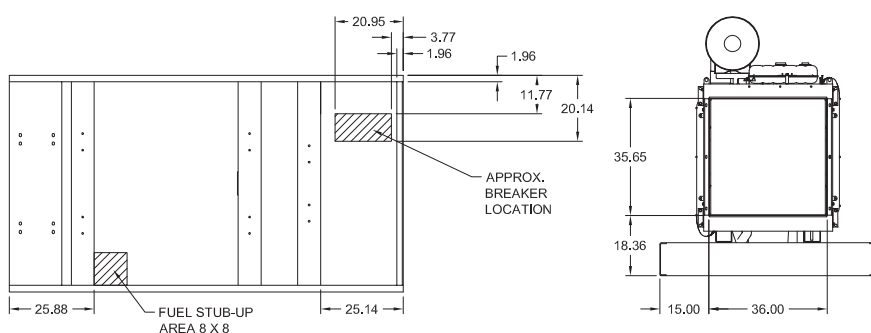
- ▶ Digital Metering
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- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



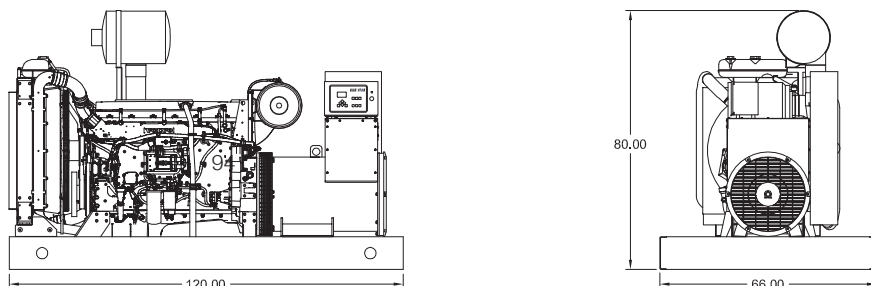
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 80 in	7,775
Level 1	156 x 66 x 94 in	9,025
Level 2	156 x 66 x 94 in	9,100
Level 3	196 x 66 x 94 in	9,400

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



	No Load	Full Load
OPU	87 dBA	89 dBA
Level 1	83 dBA	85 dBA
Level 2	78 dBA	80 dBA
Level 3	70 dBA	73 dBA



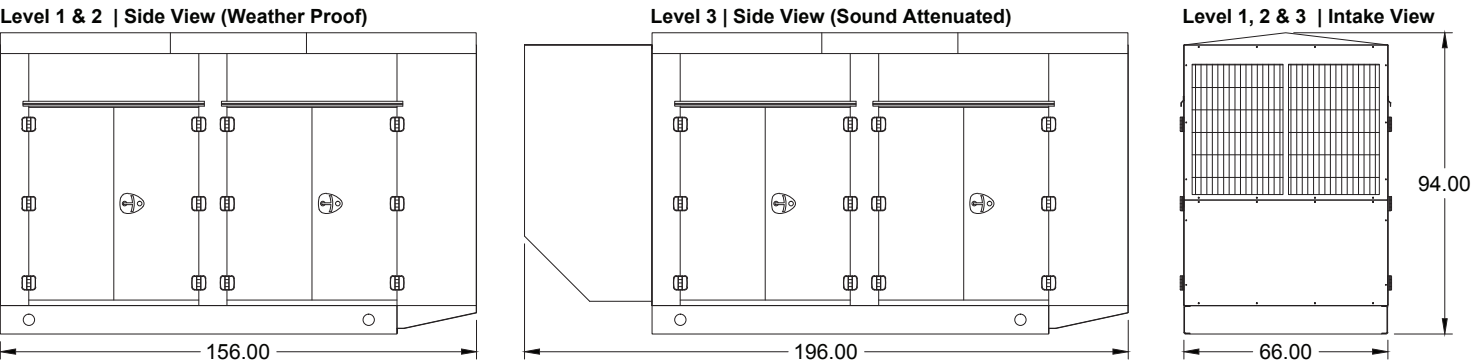
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

350 kW_e / 330 kW_e

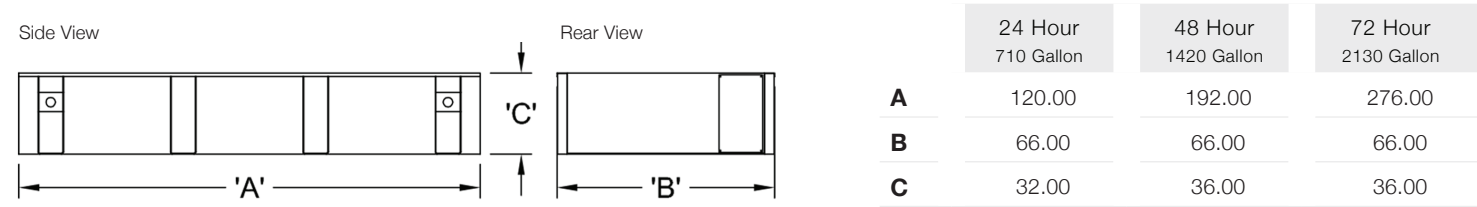


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD350-02FT4

60 Hz / 1800 RPM

350 kWe / 350 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6220	433CSL6220	433CSL6220	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	350	350	350	350
AMPS	1216	1054	527	421
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime				
kWe	350	350	350	350
AMPS	1216	1054	527	421
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 1% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

350 kWe / 350 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.1)
Model:	TAD1670VE	Bore - in. (cm) x Stroke - in. (cm): 5.67 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio: 17.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 551 (405)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	869 (465)	869 (465)
Gas Volume at Stack Temp: CFM (m³/min)	2,861 (81.0)	2,861 (81.0)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	16.0 (4.00)	16.0 (4.00)

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)	108 (409)	108 (409)
Heat Rejection to Coolant: BTUM (kW)	9,668 (169)	9,668 (169)
Heat Rejection to CAC: BTUM (kW)	4,891 (85.6)	4,891 (85.6)
Heat Radiated to Ambient: BTUM (kW)	2,988 (52.3)	2,988 (52.3)

Air Requirements		
Aspirating: CFM (m³/min)	1,155 (32.7)	1,155 (32.7)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	17,340 (491)	17,340 (491)
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)	25.5 (96.5)	23.1 (87.4)
At 75% of Power Rating: gal/hr (lit/hr)	19.3 (73.1)	17.7 (67.0)
At 50% of Power Rating: gal/hr (lit/hr)	13.2 (50.0)	12.3 (46.6)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%

Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.1)	12.7 (48.1)
Engine Jacket Water Capacity: gal (lit)	8.70 (32.9)	8.70 (32.9)
System Coolant Capacity: gal (lit)	15.9 (60.2)	15.9 (60.2)
DEF Tank Capacity: gal (lit)	18.5 (70.0)	18.5 (70.0)

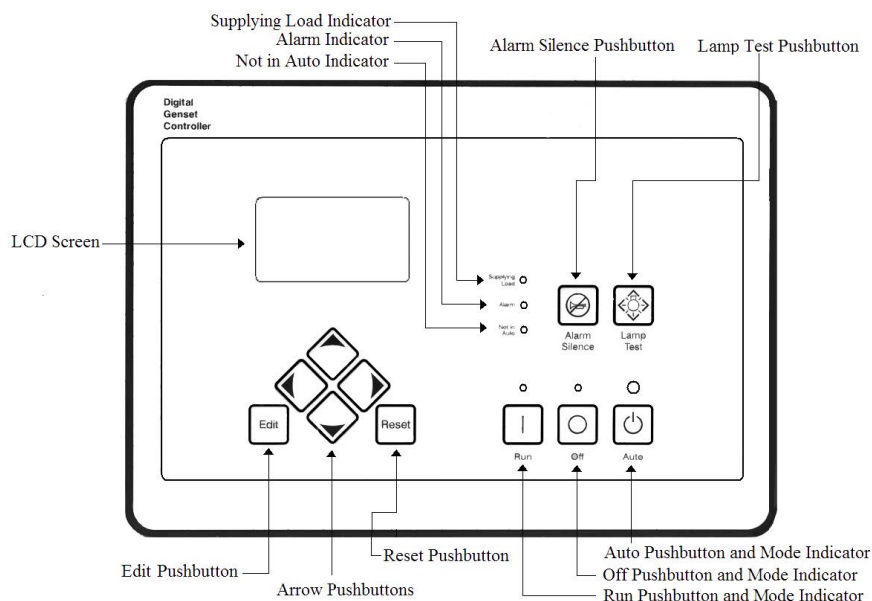
Deration Factors

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

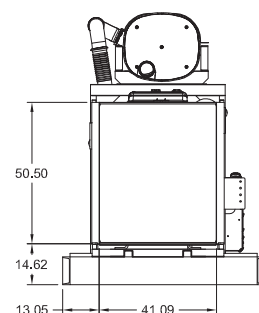
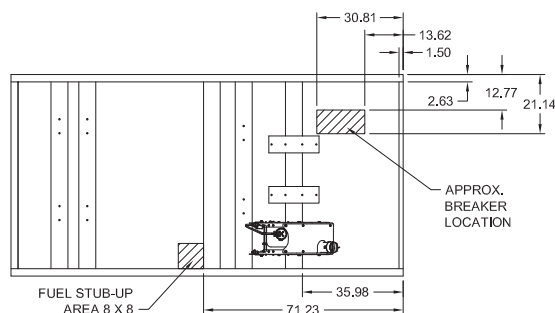
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



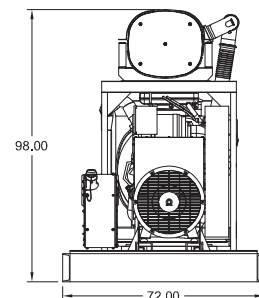
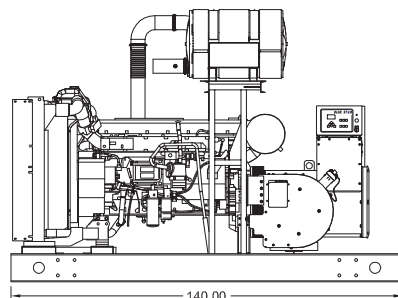
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 98 in	9,550
Level 1	180 x 72 x 103 in	11,150
Level 2	180 x 72 x 103 in	11,225
Level 3	225 x 72 x 103 in	11,675

Height measured from bottom of base to exhaust stack.



	No Load	Full Load
OPU	85 dBA	87 dBA
Level 1	81 dBA	83 dBA
Level 2	77 dBA	79 dBA
Level 3	71 dBA	73 dBA



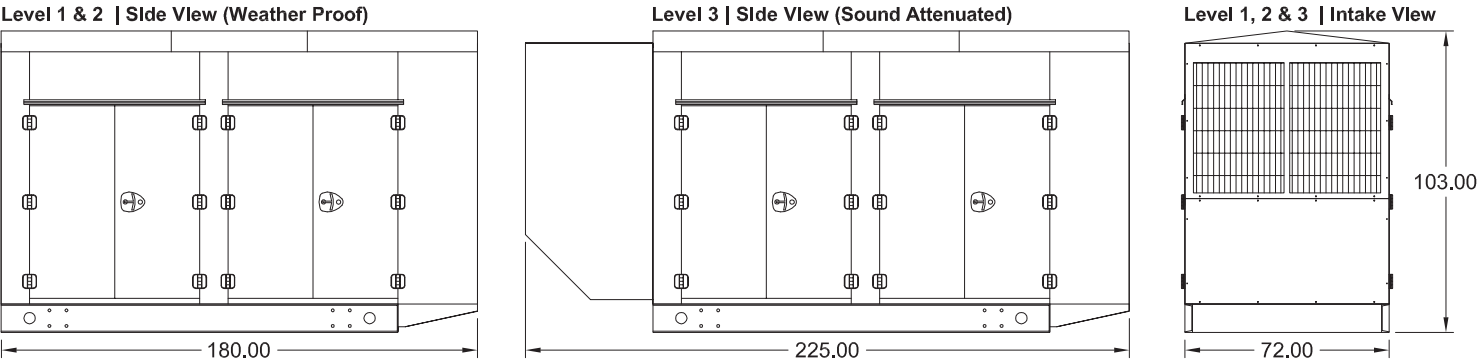
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

350 kW / 350 kWe

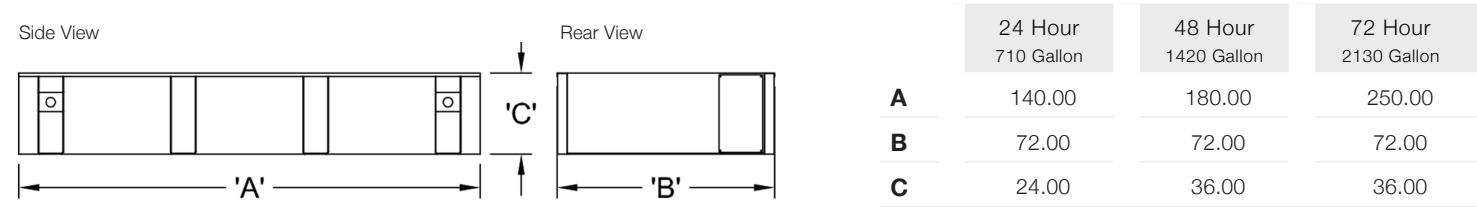


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD350-02

60 Hz / 1800 RPM

350 kWe

Standby

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	433CSL6216	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby (Stationary Applications Only)				
kWe	350	350	350	350
AMPS	1216	1054	527	421
Temp Rise	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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified - Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts Pad Type
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

350 kWe



Application Data

Engine

Manufacturer:	John Deere	Displacement - Cu. In. (lit):	824 (13.5)
Model:	6135HFG84	Bore - in. (cm) x Stroke - in. (cm):	5.19 (13.2) x 6.49 (16.5)
Type:	4-Cycle	Compression Ratio:	16.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	538 (401)

Exhaust System

Standby

Gas Temp. (Stack): °F (°C)	1,017 (547)
Gas Volume at Stack Temp: CFM (m³/min)	2,387 (67.6)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	30.0 (7.50)

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)	106 (400)
Heat Rejection to Coolant: BTUM (kW)	9,961 (175)
Heat Rejection to CAC: BTUM (kW)	4,269 (75.0)
Heat Radiated to Ambient: BTUM (kW)	3,984 (69.7)

Air Requirements

Aspirating: CFM (m³/min)	883 (25.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	26,661 (754)
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)	26.4 (99.9)
At 75% of Power Rating: gal/hr (lit/hr)	21.1 (79.9)
At 50% of Power Rating: gal/hr (lit/hr)	14.9 (56.4)

Fluids Capacity

Total Oil System: gal (lit)	15.9 (60.0)
Engine Jacket Water Capacity: gal (lit)	4.76 (18.0)
System Coolant Capacity: gal (lit)	23.0 (87.1)

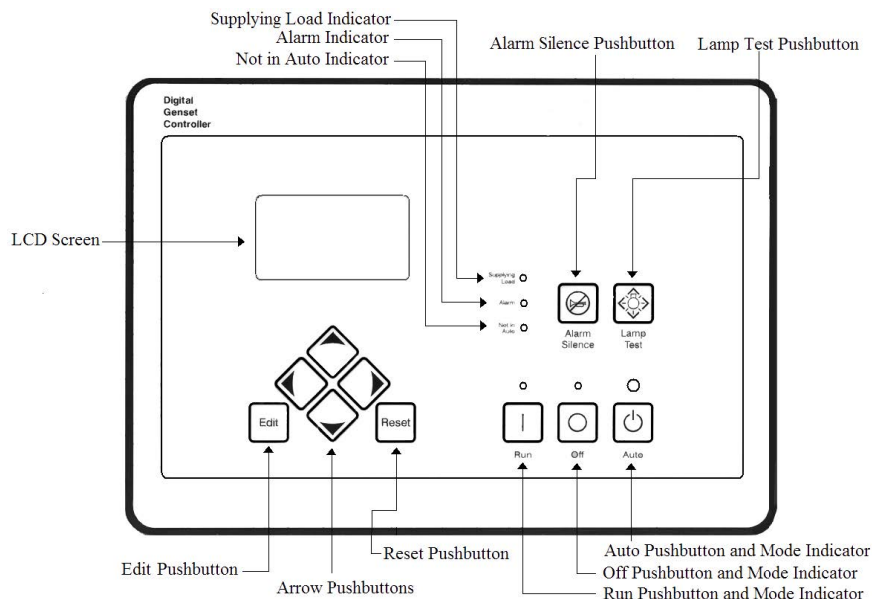
Deration Factors

Rated Power is available up to 5,500 ft (1,676 m) at ambient temperatures to 122°F (50°C) standby.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

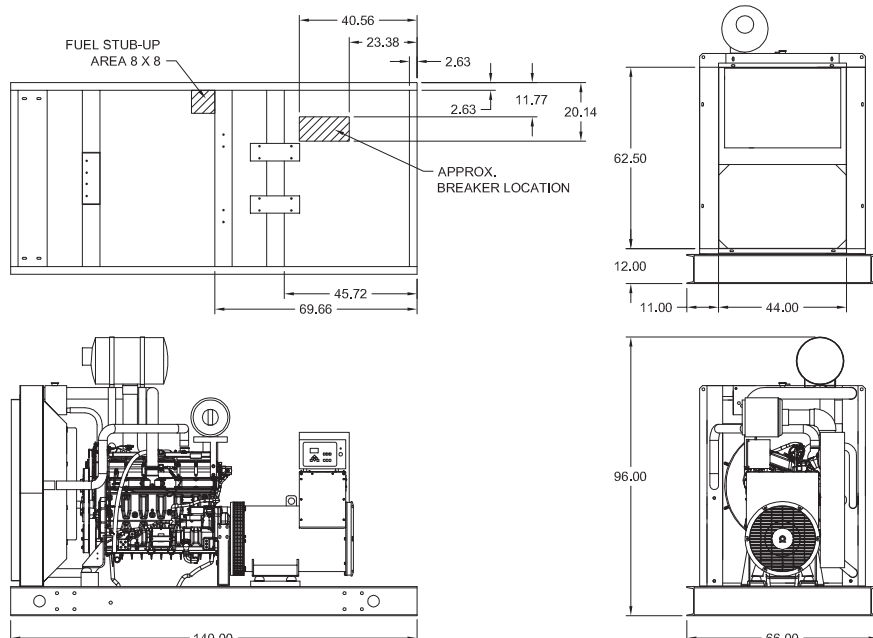
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 66 x 96 in	8,025
Level 1	140 x 66 x 112 in	9,200
Level 2	140 x 66 x 112 in	9,275
Level 3	195 x 66 x 112 in	9,750

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



	No Load	Full Load
OPU	85 dBA	88 dBA
Level 1	82 dBA	84 dBA
Level 2	77 dBA	79 dBA
Level 3	70 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.

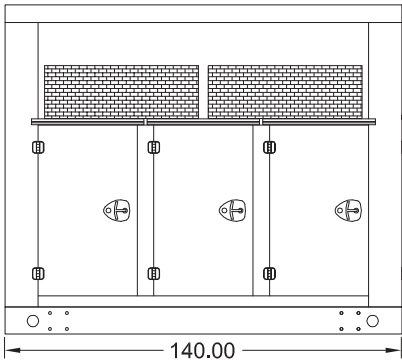
Diesel Product Line

350 kW

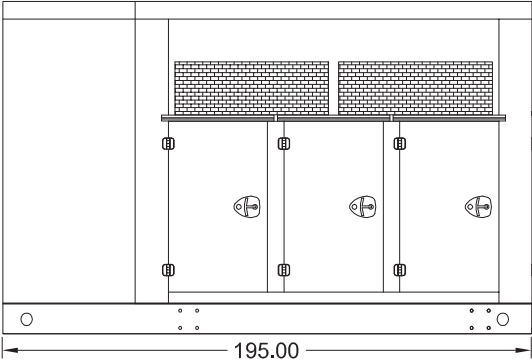


Enclosures (LEGACY)

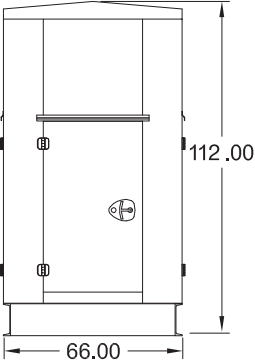
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



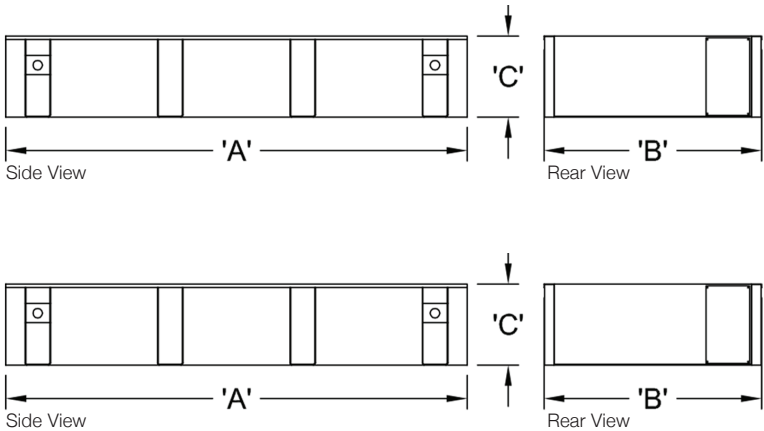
Level 1, 2 & 3 |



All enclosures are 150 MPH Wind Rated.
*Enclosure height does not include exhaust stack.

Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	24 Hour 710 Gallon	48 Hour 1420 Gallon	72 Hour 2130 Gallon
A	140.00	178.00	255.00
B	66.00	66.00	66.00
C	24.00	36.00	36.00

	Level 3		
	24 Hour 710 Gallon	48 Hour 1420 Gallon	72 Hour 2130 Gallon
A	195.00	195.00	255.00
B	66.00	66.00	66.00
C	16.00	32.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD350-01 / TD350-01P

60 Hz / 1800 RPM

350 kWe / 325 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6216	433CSL6216	433CSL6216	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	350	350	350	350
AMPS	1216	1054	527	421
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	325	325	325	325
AMPS	1129	978	489	391
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

350 kWe / 325 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	854 (14.0)
Model Standby (Prime):	8V1600G70S (8V1600G10S)	Bore - in. (cm) x Stroke - in. (cm):	4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm):	547 (408)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	887 (475)	860 (460)
Gas Volume at Stack Temp: CFM (m³/min)	2,966 (83.9)	2,966 (83.9)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	95.0 (360)	95.0 (360)
Heat Rejection to Coolant: BTUM (kW)	11,658 (204)	10,805 (189)
Heat Rejection to CAC: BTUM (kW)	6,824 (119)	5,403 (94.6)
Heat Radiated to Ambient: BTUM (kW)	2,739 (47.9)	2,544 (44.5)
Air Requirements		
Aspirating: CFM (m³/min)	1,124 (31.8)	1,060 (30.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	18,010 (510)	18,010 (510)
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)	26.1 (98.8)	24.5 (92.7)
At 75% of Power Rating: gal/hr (lit/hr)	21.3 (80.6)	20.6 (78.0)
At 50% of Power Rating: gal/hr (lit/hr)	15.8 (59.8)	14.5 (54.9)
Fluids Capacity		
Total Oil System: gal (lit)	12.2 (46.2)	12.2 (46.2)
Engine Jacket Water Capacity: gal (lit)	13.2 (50.0)	13.2 (50.0)
System Coolant Capacity: gal (lit)	21.2 (80.3)	21.2 (80.3)

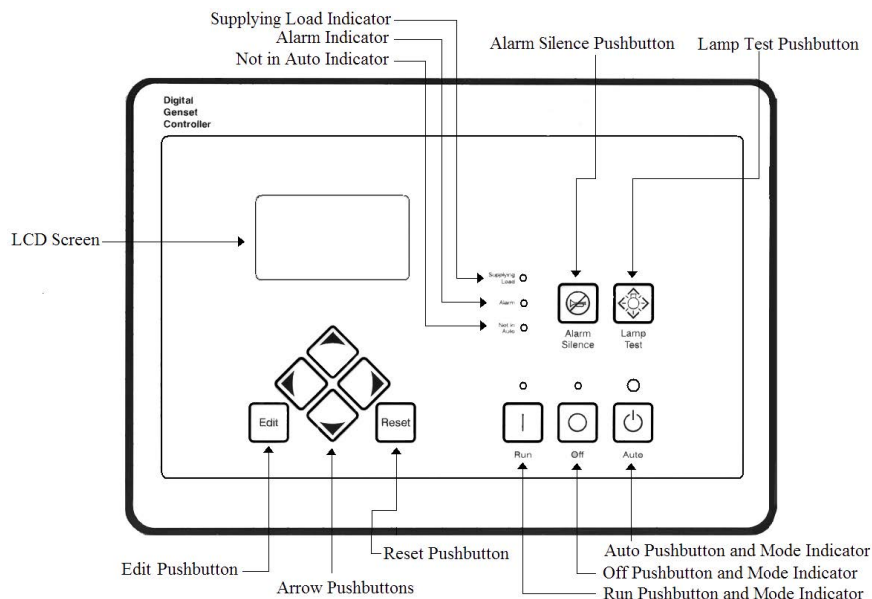
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 4,920 ft (1,500 m).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

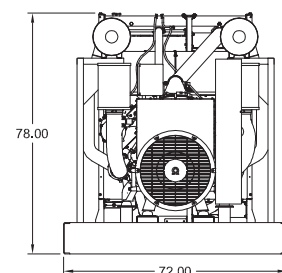
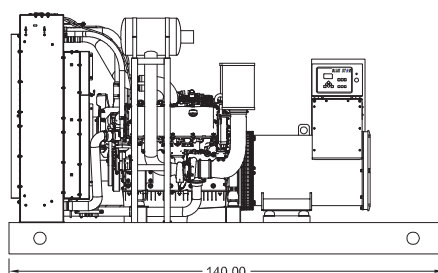
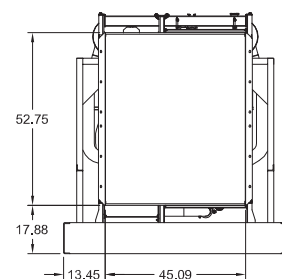
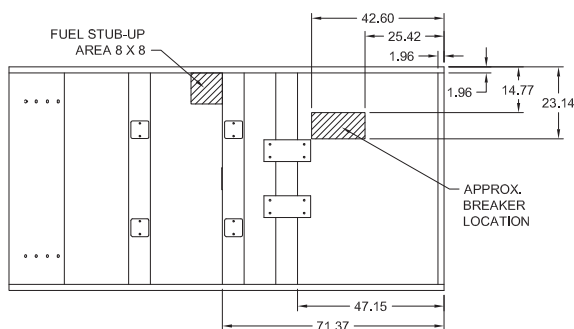
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 78 in	8,375
Level 1	180 x 72 x 103 in	9,875
Level 2	180 x 72 x 103 in	9,950
Level 3	225 x 72 x 103 in	10,350

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



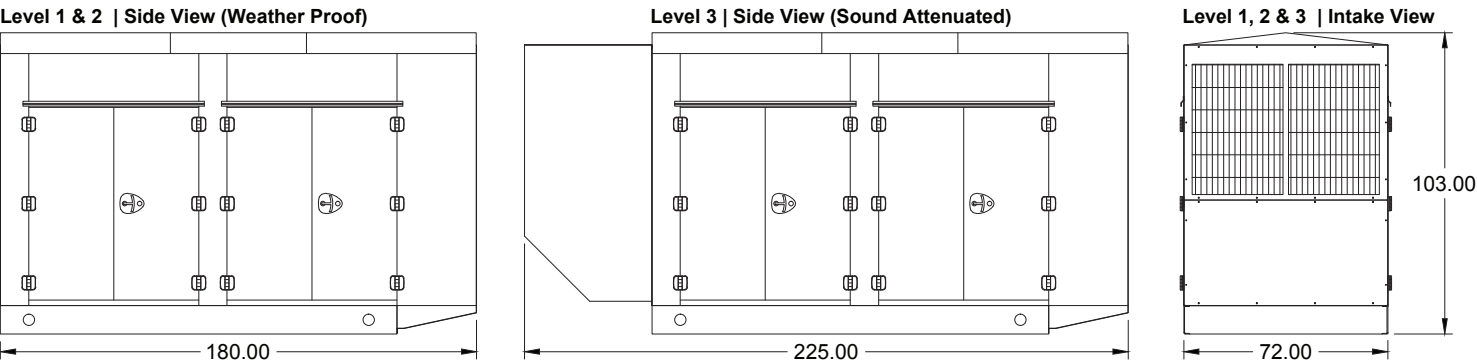
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

350 kWe / 325 kWe

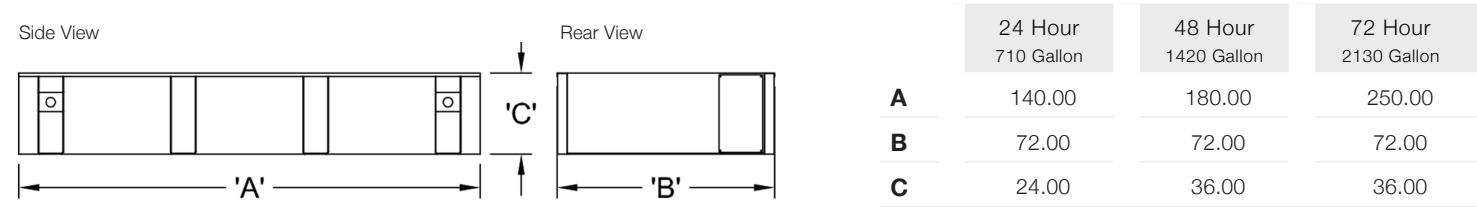


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD400-01

60 Hz / 1800 RPM

400 kWe / 360 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6220	433CSL6220	433CSL6220	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	400	400	400	400
AMPS	1390	1204	602	482
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	360	360	360	360
AMPS	1251	1084	542	434
Temp Rise	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 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

400 kWe / 360 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 780 (12.8)
Model:	TAD1353GE	Bore - in. (cm) x Stroke - in. (cm): 5.20 (13.1) x 6.20 (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)	932 (500)	905 (485)
Gas Volume at Stack Temp: CFM (m³/min)	2,790 (79.0)	2,613 (74.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.0 (10.0)	40.0 (10.0)

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)	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		
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		
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		
Total Oil System: gal (lit)	9.50 (36.0)	9.50 (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)

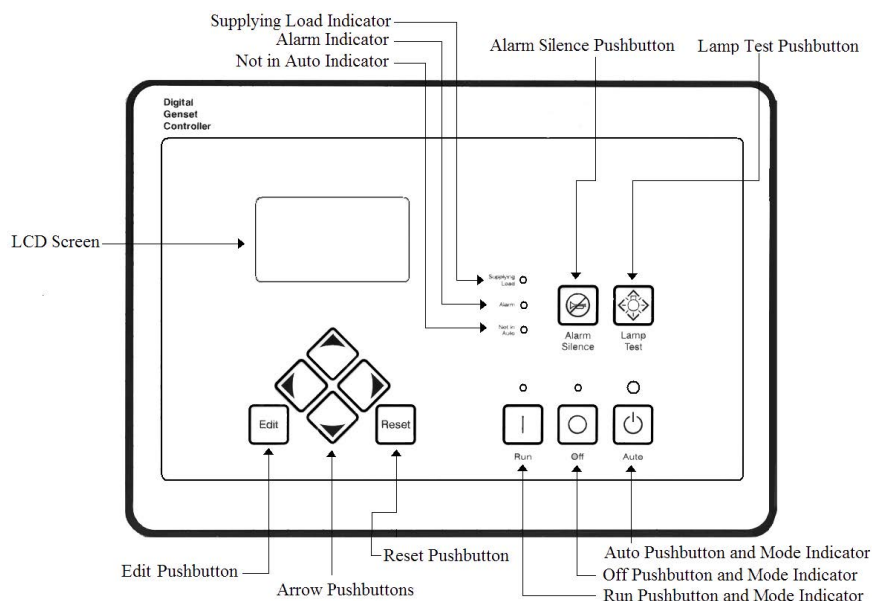
Deration Factors

Rated Power is available up to 3,280 Ft (1,000 m) 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

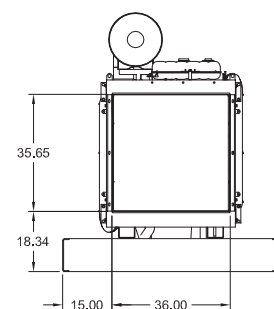
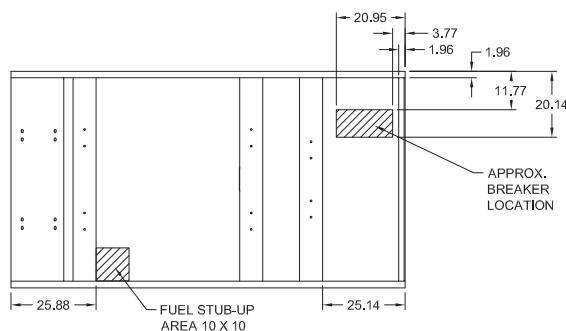
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



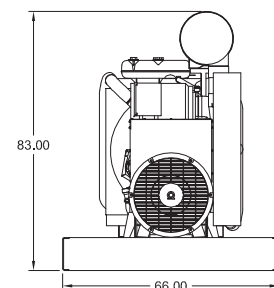
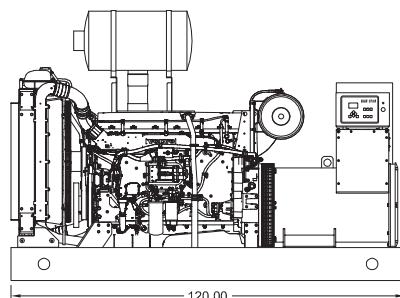
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	120 x 66 x 83 in	7,875
Level 1	156 x 66 x 94 in	9,125
Level 2	156 x 66 x 94 in	9,200
Level 3	204 x 66 x 94 in	9,500

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



	No Load	Full Load
OPU	88 dBA	91 dBA
Level 1	84 dBA	86 dBA
Level 2	79 dBA	81 dBA
Level 3	70 dBA	73 dBA



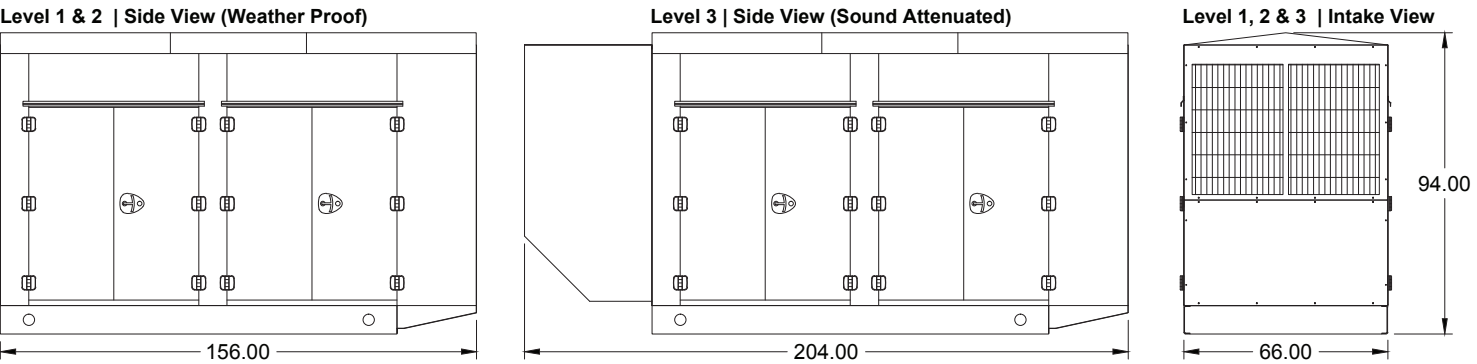
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

400 kWe / 360 kWe

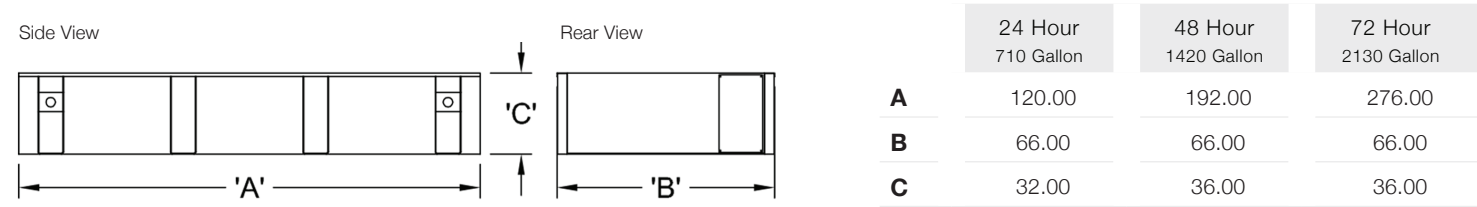


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD400-02FT4

60 Hz / 1800 RPM

400 kWe / 400 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4025	572RSL4025	572RSL4025	572RSS4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	400	400	400	400
AMPS	1390	1204	602	482
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C
Prime				
kWe	400	400	400	400
AMPS	1390	1204	602	482
Temp Rise	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
- ▶ SAE Flywheel Housing
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connectors
- ▶ EPA Certified - Tier 4 Final

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± 0.25% 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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst /Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

400 kWe / 400 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.1)
Model:	TAD1672VE	Bore - in. (cm) x Stroke - in. (cm): 5.67 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio: 17.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 700 (515)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	932 (500)	932 (500)
Gas Volume at Stack Temp: CFM (m³/min)	3,461 (97.9)	3,461 (97.9)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H₂O (kPa)	16.0 (4.00)	16.0 (4.00)

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)	108 (409)	108 (409)
Heat Rejection to Coolant: BTUM (kW)	12,113 (212)	12,113 (212)
Heat Rejection to CAC: BTUM (kW)	6,028 (105)	6,028 (105)
Heat Radiated to Ambient: BTUM (kW)	3,415 (59.8)	3,415 (59.8)

Air Requirements		
Aspirating: CFM (m³/min)	1,324 (37.5)	1,324 (37.5)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	18,180 (514)	18,180 (514)
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)	32.0 (121)	32.0 (121)
At 75% of Power Rating: gal/hr (lit/hr)	25.6 (96.9)	25.6 (96.9)
At 50% of Power Rating: gal/hr (lit/hr)	20.8 (78.7)	20.8 (78.7)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%

Fluids Capacity		
Total Oil System: gal (lit)	12.68 (48.0)	12.68 (48.0)
Engine Jacket Water Capacity: gal (lit)	8.70 (32.9)	8.70 (32.9)
System Coolant Capacity: gal (lit)	15.9 (60.2)	15.9 (60.2)
DEF Tank Capacity: gal (lit)	18.5 (70.0)	18.5 (70.0)

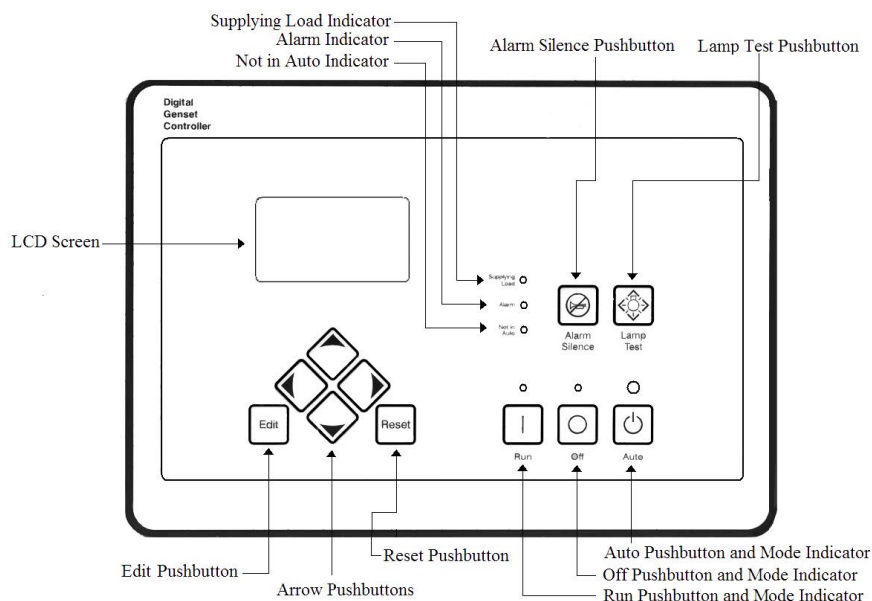
Deration Factors

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

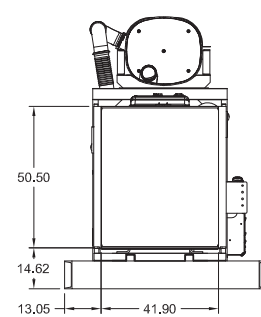
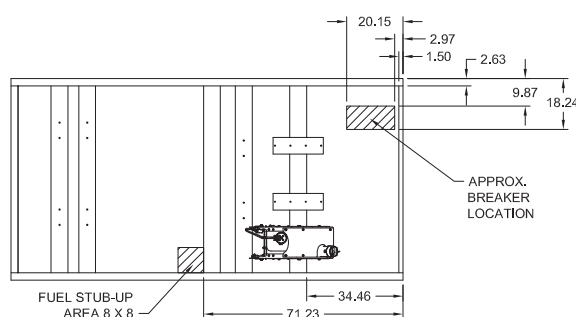
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



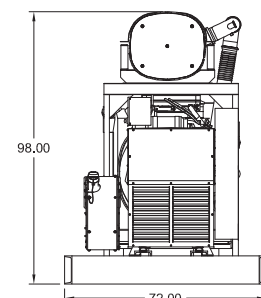
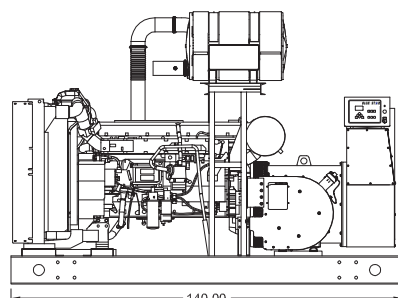
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 98 in	10,000
Level 1	180 x 72 x 103 in	11,650
Level 2	180 x 72 x 103 in	11,725
Level 3	225 x 72 x 103 in	12,175

Height measured from bottom of base to highest point



	No Load	Full Load
OPU	86 dBA	88 dBA
Level 1	82 dBA	84 dBA
Level 2	78 dBA	80 dBA
Level 3	72 dBA	74 dBA



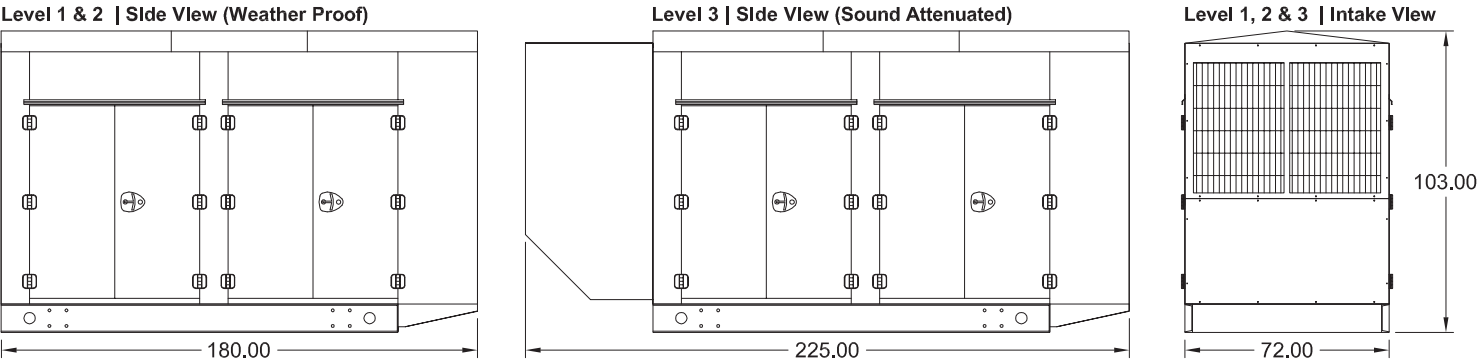
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

400 kW_e / 400 kW_e

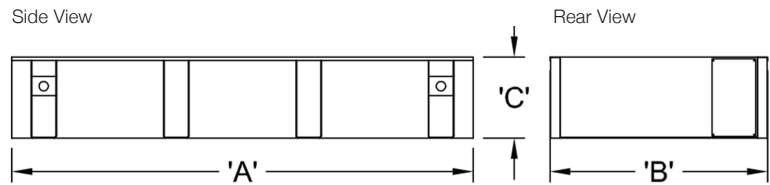


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



	24 Hour 710 Gallon	48 Hour 1420 Gallon	72 Hour 2130 Gallon
A	140.00	180.00	250.00
B	72.00	72.00	72.00
C	24.00	36.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD400-01 / TD400-01P

60 Hz / 1800 RPM

400 kWe / 360 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	433CSL6220	433CSL6220	433CSL6220	433PSL6248
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	400	400	400	400
AMPS	1390	1204	602	482
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	360	360	360	360
AMPS	1251	1084	542	434
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

400 kWe / 360 kWe



Application Data

Engine		
Manufacturer:	MTU	Displacement - Cu. In. (lit): 854 (14.0)
Model Standby (Prime):	8V1600G80S (8V1600G20S)	Bore - in. (cm) x Stroke - in. (cm): 4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio: 17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800
Cylinder Arrangement:	8 Cylinder Vee	Max HP Stby (kWm): 601 (448)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	892 (478)	887 (475)
Gas Volume at Stack Temp: CFM (m³/min)	3,180 (90.0)	2,966 (83.9)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)	60.2 (15.0)	60.2 (15.0)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	95.0 (360)	95.0 (360)
Heat Rejection to Coolant: BTUM (kW)	11,658 (204)	11,658 (204)
Heat Rejection to CAC: BTUM (kW)	6,824 (119)	6,824 (119)
Heat Radiated to Ambient: BTUM (kW)	3,358 (58.8)	2,818 (49.3)

Air Requirements		
Aspirating: CFM (m³/min)	1,145 (32.4)	1,124 (31.8)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	18,010 (510)	18,010 (510)
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)	28.0 (106)	26.1 (98.8)
At 75% of Power Rating: gal/hr (lit/hr)	23.0 (87.1)	21.3 (80.6)
At 50% of Power Rating: gal/hr (lit/hr)	17.5 (66.2)	15.8 (59.8)

Fluids Capacity		
Total Oil System: gal (lit)	12.2 (46.2)	12.2 (46.2)
Engine Jacket Water Capacity: gal (lit)	13.2 (50.0)	13.2 (50.0)
System Coolant Capacity: gal (lit)	21.2 (80.3)	21.2 (80.3)

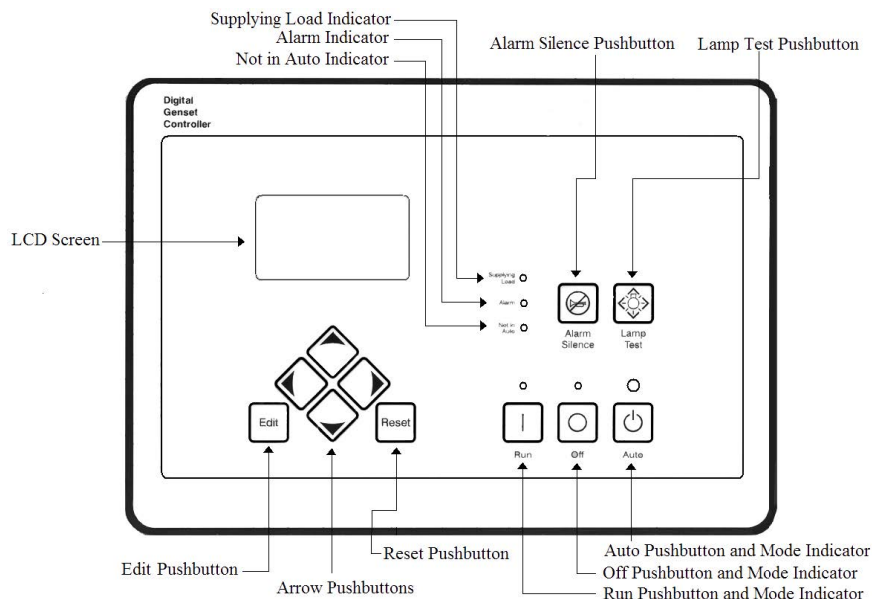
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 4,920 ft (1,500 m). Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

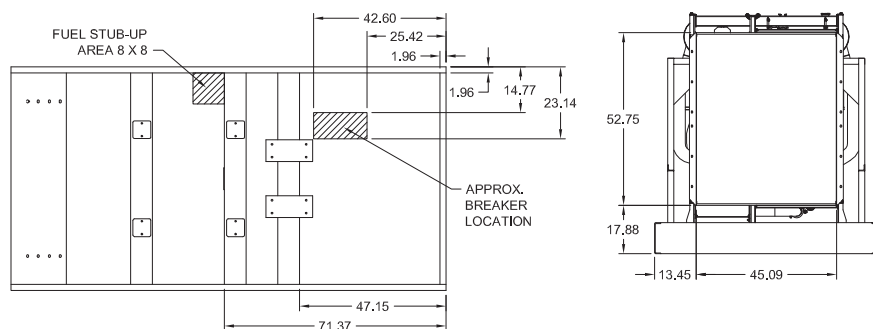
- ▶ Digital Metering
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- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact 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



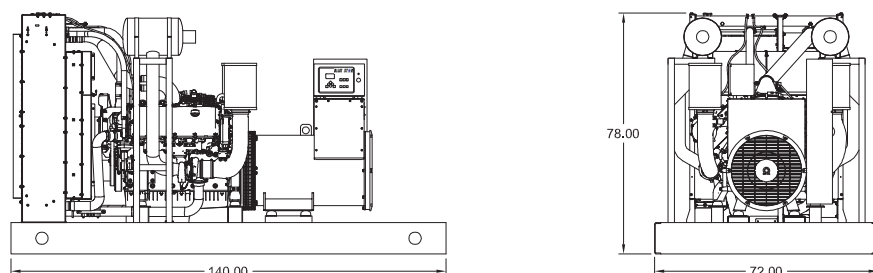
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 78 in	9,375
Level 1	180 x 72 x 103 in	9,875
Level 2	180 x 72 x 103 in	9,950
Level 3	225 x 72 x 103 in	10,350

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



	No Load	Full Load
OPU	87 dBA	89 dBA
Level 1	85 dBA	87 dBA
Level 2	81 dBA	83 dBA
Level 3	71 dBA	74 dBA



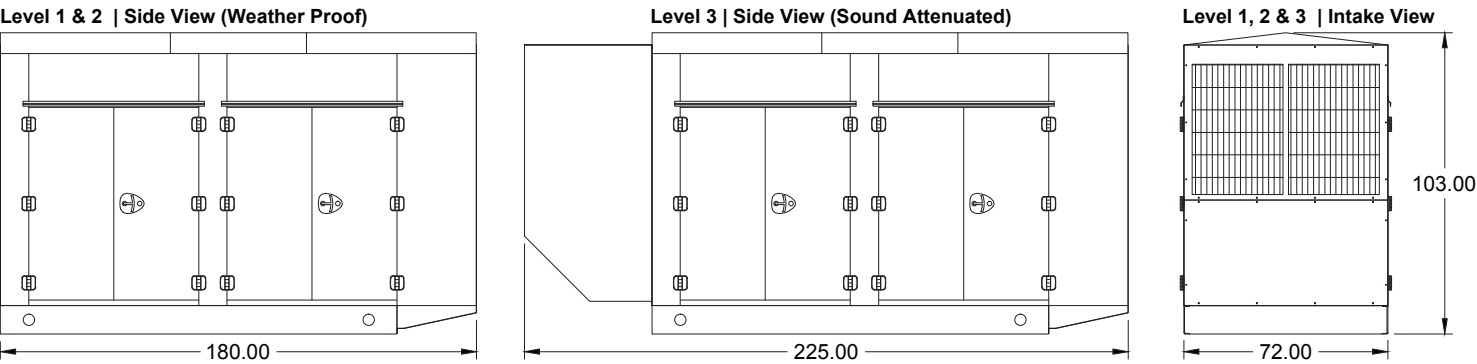
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

400 kWe / 360 kWe

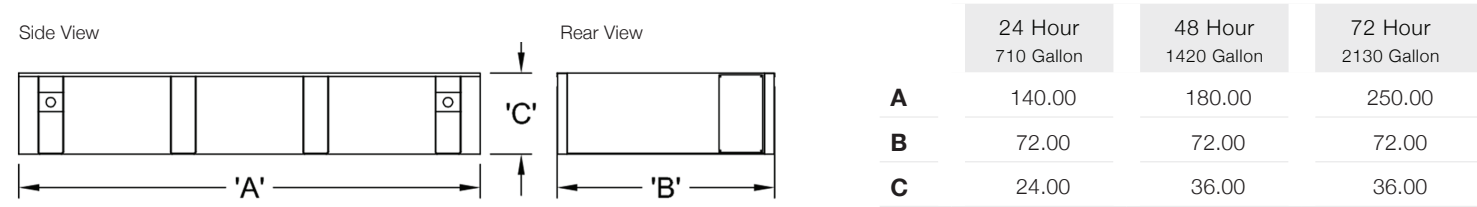


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

JD415-03

60 Hz / 1800 RPM

415 kWe

Standby

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4025	572RSL4025	433CSL6220	572RSS4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby (Stationary Applications Only)				
kWe	415	415	415	415
AMPS	1442	1249	625	500
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ Radiator Cooled Unit Mounted (50°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 3 	Generator <ul style="list-style-type: none"> ▶ 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 style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Structural Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted (Standby) ▶ Battery Charger 24V 5 Amp ▶ Jacket Water Heater -20°F 4000W 240V w/Isolation Valves ▶ Vibration Isolation Mounts Pad Type ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

415 kWe



Application Data

Engine			
Manufacturer:	John Deere	Displacement - Cu. In. (lit):	824 (13.5)
Model:	6135HFG84	Bore - in. (cm) x Stroke - in. (cm):	5.20 (13.2) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio:	16.0:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	617 (460)
Exhaust System			
Gas Temp. (Stack): °F (°C)			981 (527)
Gas Volume at Stack Temp: CFM (m³/min)			2,606 (73.8)
Maximum Allowable Exhaust Restriction: in. H ₂ O (kPa)			30.0 (7.50)
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)			106 (401)
Heat Rejection to Coolant: BTUM (kW)			11,839 (207)
Heat Rejection to CAC: BTUM (kW)			5,350 (93.6)
Heat Radiated to Ambient: BTUM (kW)			3,543 (62.0)
Air Requirements			
Aspirating: CFM (m³/min)			996 (28.2)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)			24,455 (692)
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)			29.2 (110)
At 75% of Power Rating: gal/hr (lit/hr)			23.9 (90.5)
At 50% of Power Rating: gal/hr (lit/hr)			16.8 (63.4)
Fluids Capacity			
Total Oil System: gal (lit)			15.9 (60.0)
Engine Jacket Water Capacity: gal (lit)			4.76 (18.0)
System Coolant Capacity: gal (lit)			23.0 (87.1)

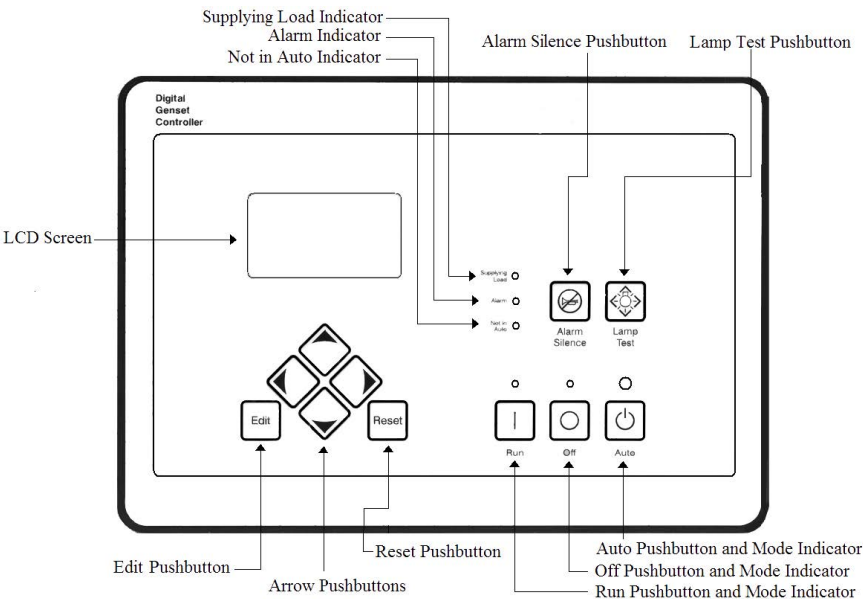
Deration Factors

Rated Power is available up to 10,000 ft (3,048 m) at ambient temperatures to 122°F (50°C) standby.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

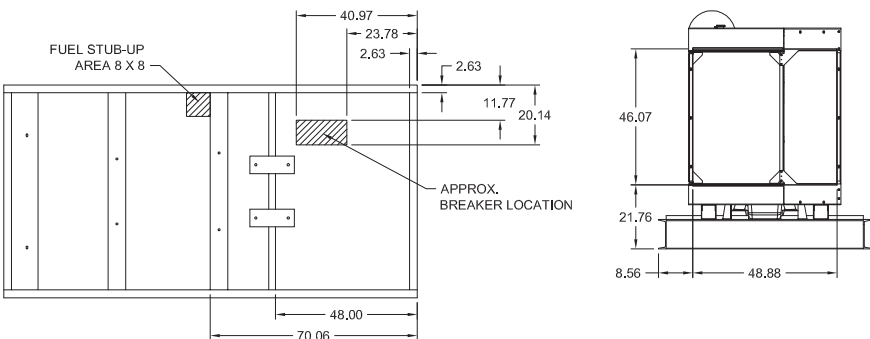
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



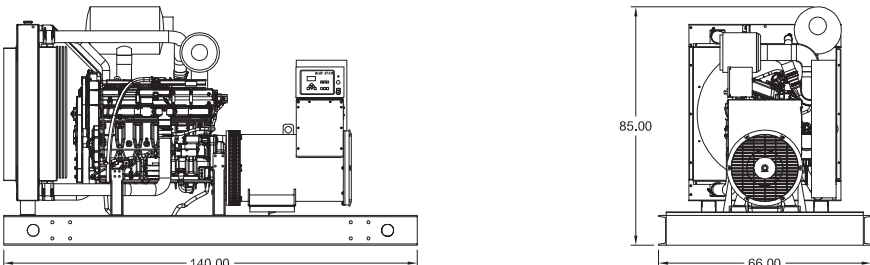
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 66 x 85 in	8,050
Level 1	140 x 66 x 112 in	9,600
Level 2	140 x 66 x 112 in	9,675
Level 3	195 x 66 x 112 in	10,125

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



	No Load	Full Load
OPU	86 dBA	89 dBA
Level 1	83 dBA	85 dBA
Level 2	78 dBA	81 dBA
Level 3	70 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.

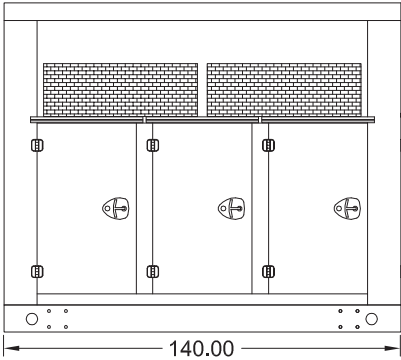
Diesel Product Line

415 kW

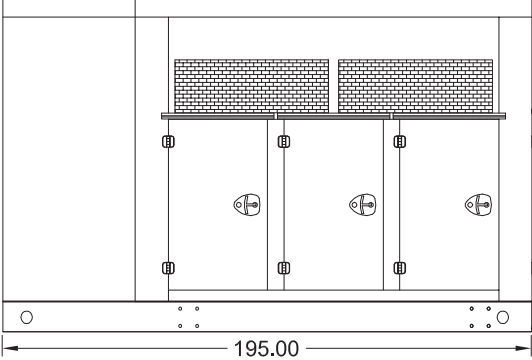


Enclosures (LEGACY)

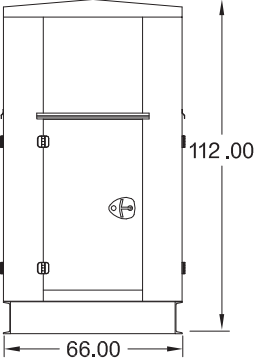
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



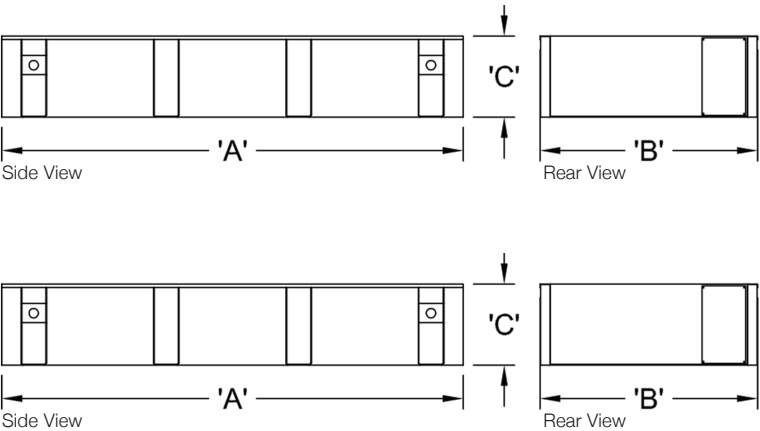
Level 1, 2 & 3 |



All enclosures are 150 MPH Wind Rated.
*Enclosure height does not include exhaust stack.

Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	24 Hour 710 Gallon	48 Hour 1420 Gallon	72 Hour 2130 Gallon
A	140.00	195.00	276.00
B	66.00	66.00	66.00
C	28.00	36.00	36.00

	Level 3		
	24 Hour 710 Gallon	48 Hour 1420 Gallon	72 Hour 2130 Gallon
A	195.00	195.00	276.00
B	66.00	66.00	66.00
C	20.00	36.00	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.
Materials and specifications subject to change without notice.



Distributed By:

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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD450-01

60 Hz / 1800 RPM

450 kWe / 410 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4027	572RSL4027	572RSL4025	572RSS4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	450	450	450	450
AMPS	1563	1355	677	542
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	410	410	410	410
AMPS	1424	1234	617	494
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ 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 3 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± .25% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Structural Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 24V 5 Amp ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves ▶ Vibration Isolation Mounts Pad Type ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

450 kWe / 410 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	984 (16.1)
Model:	TAD1650GE	Bore - in. (cm) x Stroke - in. (cm):	5.70 (14.4) x 6.5 (16.5)
Type:	4-Cycle	Compression Ratio:	16.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	677 (498)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	946 (508)	874 (468)
Gas Volume at Stack Temp: CFM (m³/min)	3,214 (91.0)	2,966 (84.0)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.2 (10.0)	32.1 (8.00)
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)	122 (461)	122 (461)
Heat Rejection to Coolant: BTUM (kW)	12,511 (219)	11,715 (205)
Heat Rejection to CAC: BTUM (kW)	7,109 (125)	6,483 (114)
Heat Radiated to Ambient: BTUM (kW)	4,803 (84.0)	4,376 (76.6)
Air Requirements		
Aspirating: CFM (m³/min)	1,271 (36.0)	1,236 (35.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	22,473 (636)	22,473 (636)
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)	32.1 (121.5)	29.0 (109.8)
At 75% of Power Rating: gal/hr (lit/hr)	24.1 (91.2)	21.9 (82.9)
At 50% of Power Rating: gal/hr (lit/hr)	16.7 (63.2)	15.4 (58.3)
Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.0)	11.1 (42.0)
Engine Jacket Water Capacity: gal (lit)	8.70 (33.0)	8.70 (33.0)
System Coolant Capacity: gal (lit)	15.9 (60.0)	15.9 (60.0)

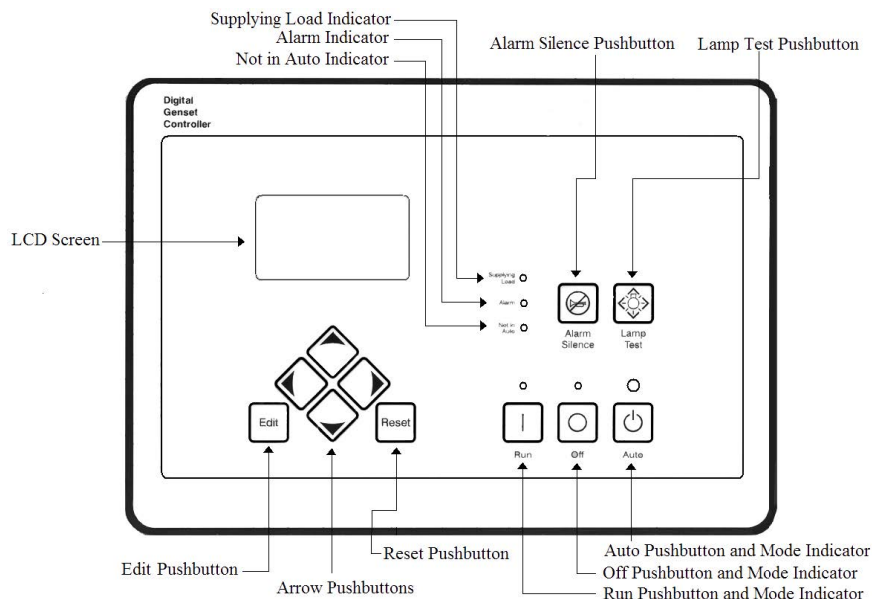
Deration Factors

Rated Power is available up to 3,280 ft (1,000 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

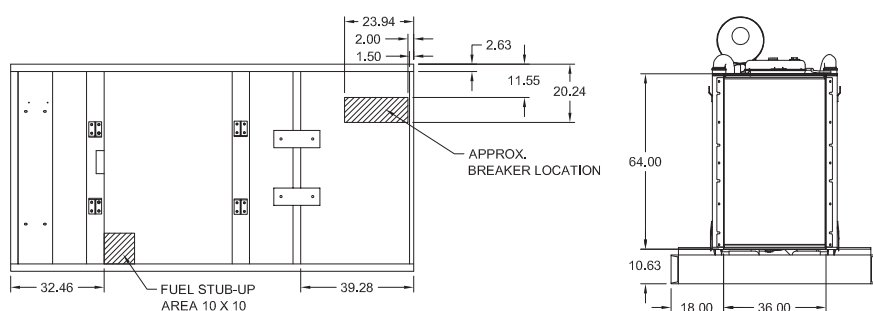
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



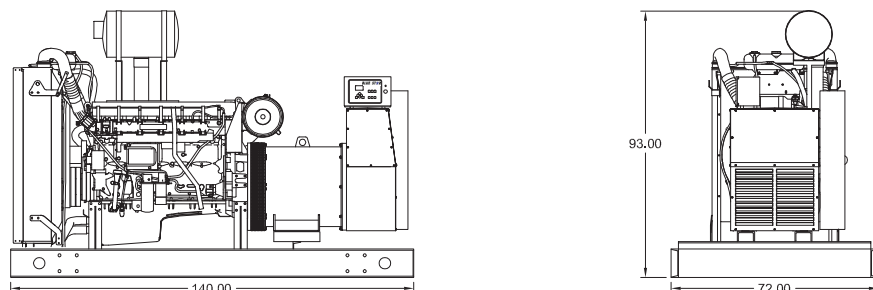
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 93 in	9,200
Level 1	180 x 72 x 103 in	10,850
Level 2	180 x 72 x 103 in	10,950
Level 3	225 x 72 x 103 in	11,350

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



	No Load	Full Load
OPU	90 dBA	93 dBA
Level 1	85 dBA	88 dBA
Level 2	81 dBA	83 dBA
Level 3	73 dBA	75 dBA



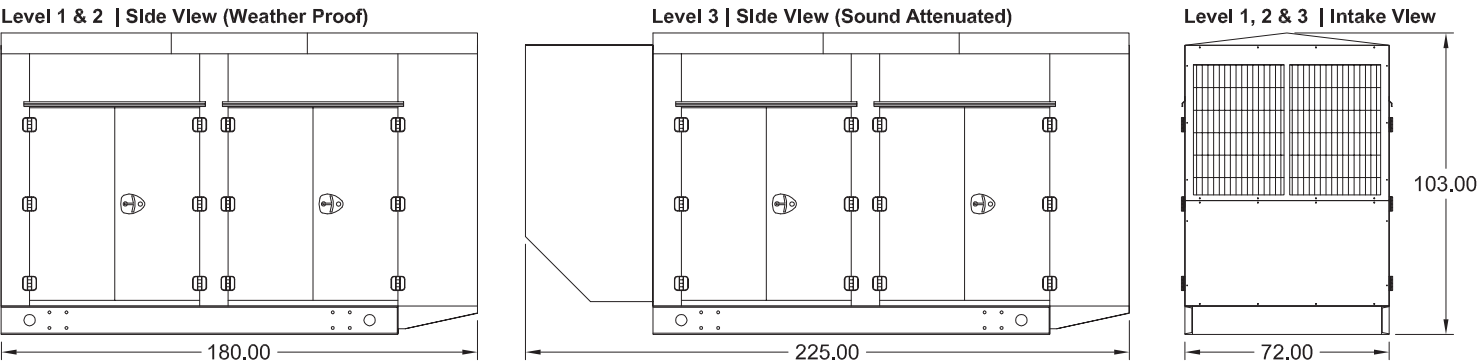
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

450 kWe / 410 kWe

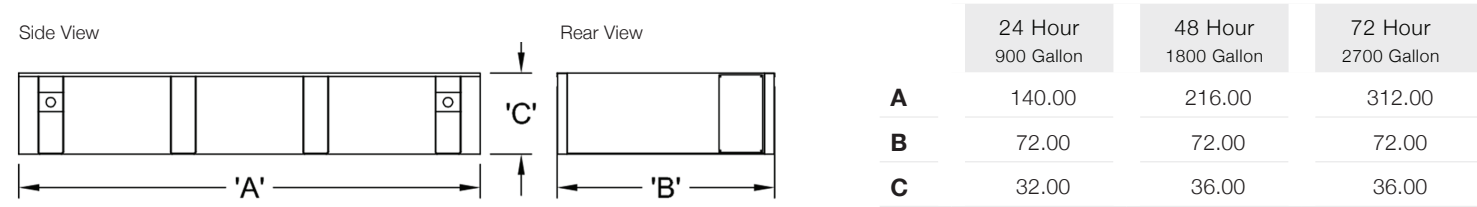


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD450-01 / TD450-01P

60 Hz / 1800 RPM

450 kWe / 415 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4027	572RSL4027	572RSL4025	572RSS4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	450	450	450	450
AMPS	1563	1355	677	542
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	415	415	415	415
AMPS	1442	1249	625	500
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 3

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

450 kWe / 415 kWe



Application Data

Engine		
Manufacturer:	MTU	Displacement - Cu. In. (lit): 1068 (17.5)
Model Standby (Prime):	10V1600G70S (10V1600G10S)	Bore - in. (cm) x Stroke - in. (cm): 4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio: 17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800
Cylinder Arrangement:	10 Cylinder Vee	Max HP Stby (kWm): 685 (511)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	862 (461)	837 (447)
Gas Volume at Stack Temp: CFM (m³/min)	3,623 (103)	3,350 (94.8)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	123 (466)	123 (466)
Heat Rejection to Coolant: BTUM (kW)	13,364 (234)	12,857 (225)
Heat Rejection to CAC: BTUM (kW)	6,710 (117)	6,571 (115)
Heat Radiated to Ambient: BTUM (kW)	3,970 (69.5)	3,661 (64.1)

Air Requirements		
Aspirating: CFM (m³/min)	1,527 (43.2)	1,336 (37.8)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	22,672 (642)	22,672 (642)
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)	33.5 (127)	30.5 (115)
At 75% of Power Rating: gal/hr (lit/hr)	25.7 (97.3)	23.4 (88.6)
At 50% of Power Rating: gal/hr (lit/hr)	19.2 (72.7)	17.5 (66.2)

Fluids Capacity		
Total Oil System: gal (lit)	16.0 (60.6)	16.0 (60.6)
Engine Jacket Water Capacity: gal (lit)	15.9 (60.2)	15.9 (60.2)
System Coolant Capacity: gal (lit)	26.2 (99.2)	26.2 (99.2)

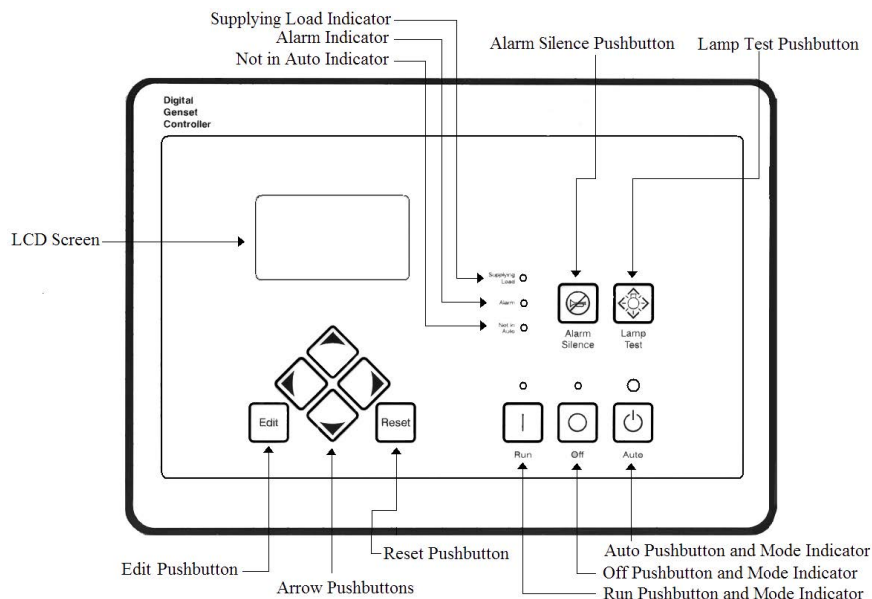
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 3,280 ft (1,000 m). Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

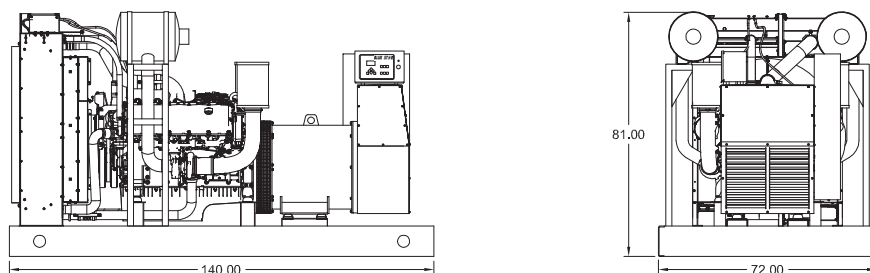
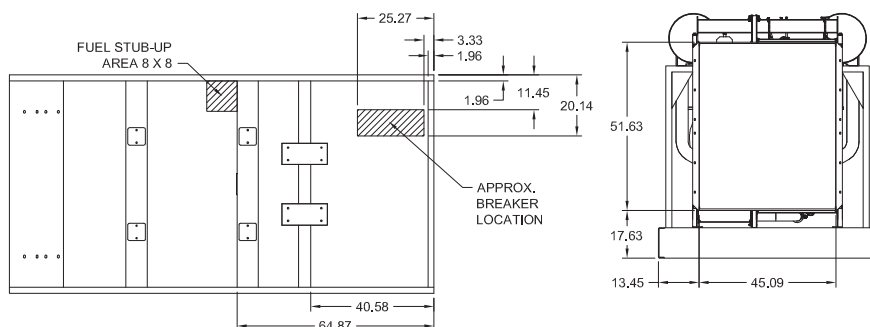
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- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Level 1 Compatible



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 81 in	9,725
Level 1	180 x 72 x 103 in	11,225
Level 2	180 x 72 x 103 in	11,300
Level 3	225 x 72 x 103 in	11,700

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



	No Load	Full Load
OPU	88 dBA	91 dBA
Level 1	85 dBA	87 dBA
Level 2	81 dBA	83 dBA
Level 3	72 dBA	75 dBA

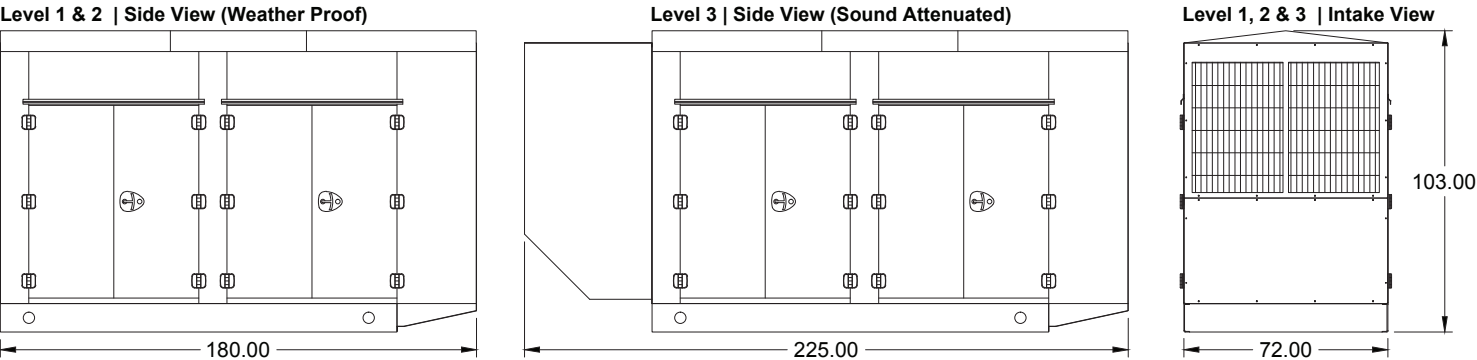
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

450 kW_e / 415 kW_e

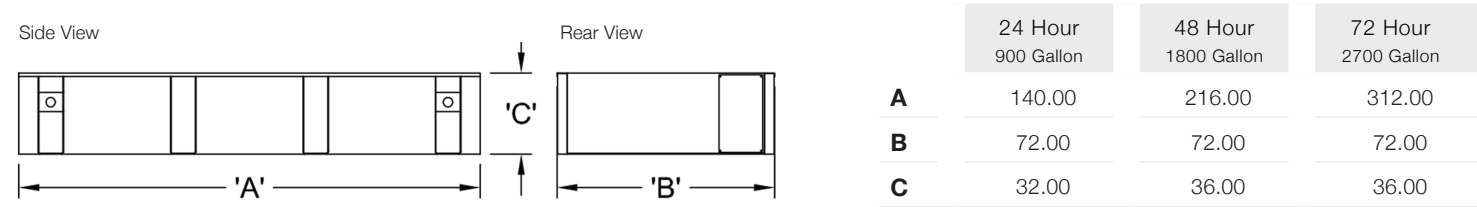


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD500-01

60 Hz / 1800 RPM

500 kWe / 460 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4029	572RSL4029	572RSL4027	572RSL4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	500	500	500	500
AMPS	1737	1505	753	602
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	460	460	460	460
AMPS	1598	1385	692	554
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ 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 2 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± .25% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Structural Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 24V 5 Amp ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves ▶ Vibration Isolation Mounts Pad Type ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

500 kWe / 460 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.1)
Model:	TAD1641GE	Bore - in. (cm) x Stroke - in. (cm): 5.70 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio: 16.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 768 (573)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	893 (478)	817 (436)
Gas Volume at Stack Temp: CFM (m³/min)	3,899 (110)	3,553 (101)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.2 (10.0)	40.2 (10.0)

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)	122 (462)	122 (462)
Heat Rejection to Coolant: BTUM (kW)	13,137 (230)	12,056 (211)
Heat Rejection to CAC: BTUM (kW)	7,109 (125)	6,483 (114)
Heat Radiated to Ambient: BTUM (kW)	3,700 (64.8)	3,404 (59.6)

Air Requirements		
Aspirating: CFM (m³/min)	1,617 (45.8)	1,554 (44.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	21,120 (598)	21,120 (598)
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)	36.8 (139.3)	32.2 (121.9)
At 75% of Power Rating: gal/hr (lit/hr)	26.8 (101.4)	23.7 (89.6)
At 50% of Power Rating: gal/hr (lit/hr)	18.0 (68.1)	16.0 (60.6)

Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.1)	12.7 (48.1)
Engine Jacket Water Capacity: gal (lit)	8.70 (33.0)	8.70 (33.0)
System Coolant Capacity: gal (lit)	16.0 (60.6)	16.0 (60.6)

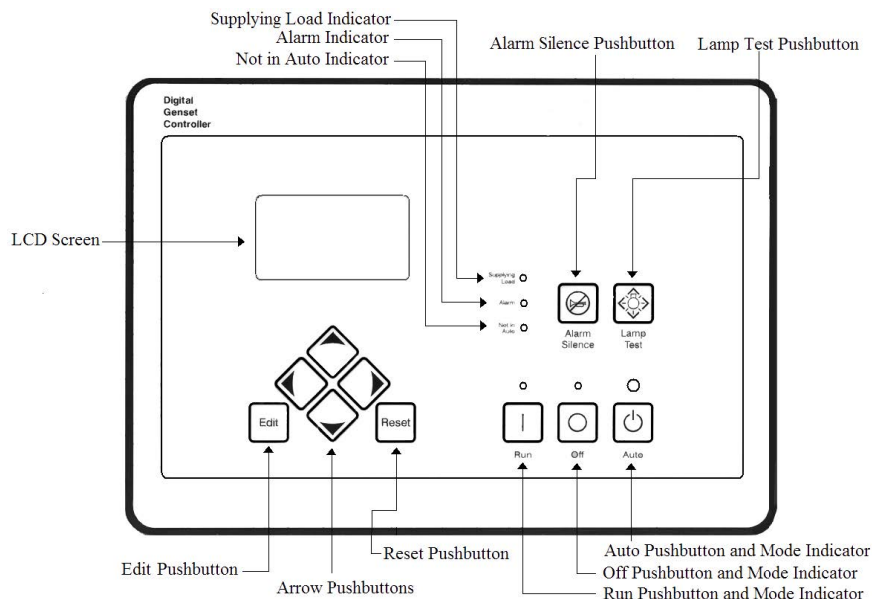
Deration Factors

Rated Power is available up to 4,920 ft (1,500 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

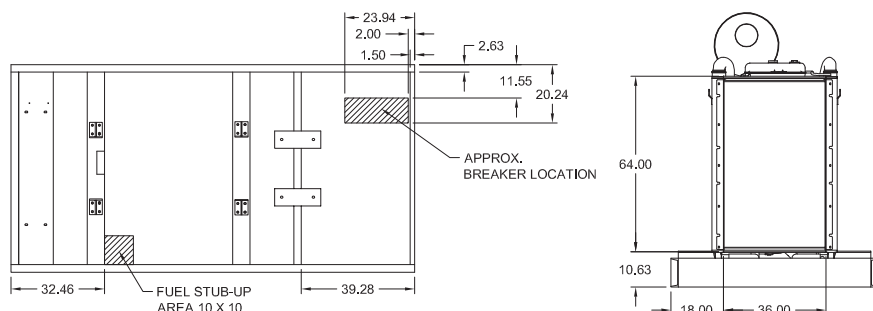
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



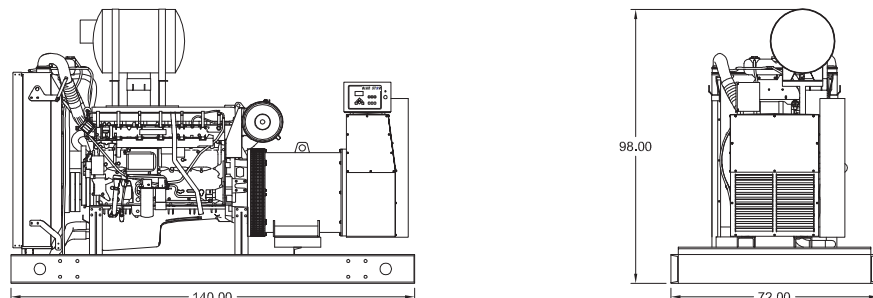
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 98 in	9,425
Level 1	180 x 72 x 103 in	11,075
Level 2	180 x 72 x 103 in	11,175
Level 3	225 x 72 x 103 in	11,575

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



	No Load	Full Load
OPU	91 dBA	94 dBA
Level 1	86 dBA	89 dBA
Level 2	81 dBA	83 dBA
Level 3	73 dBA	75 dBA



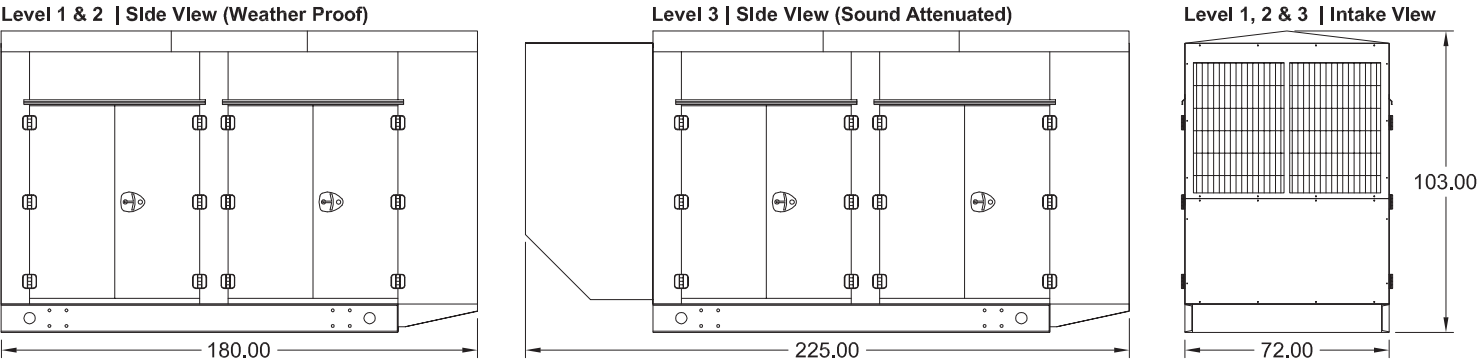
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice. Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

500 kWe / 460 kWe

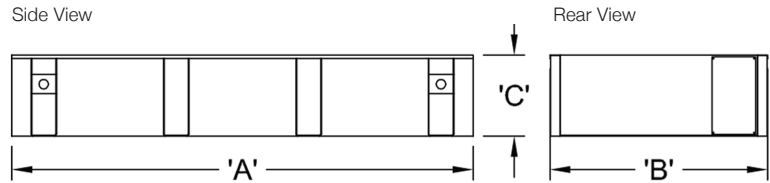


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



	24 Hour 900 Gallon	48 Hour 1800 Gallon	72 Hour 2700 Gallon
A	140.00	216.00	312.00
B	72.00	72.00	72.00
C	32.00	36.00	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.
Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD500-01 / TD500-01P

60 Hz / 1800 RPM

500 kWe / 460 kWe

Standby / Prime

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4029	572RSL4029	572RSL4027	572RSS4270
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	500	500	500	500
AMPS	1737	1505	753	602
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	460	460	460	460
AMPS	1598	1385	692	554
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Formed Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

500 kWe / 460 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	1068 (17.5)
Model Standby (Prime):	10V1600G80S (10V1600G20S)	Bore - in. (cm) x Stroke - in. (cm):	4.80 (12.2) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	10 Cylinder Vee	Max HP Stby (kWm):	752 (561)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	862 (461)	856 (458)
Gas Volume at Stack Temp: CFM (m³/min)	3,625 (103)	3,357 (95)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	123 (466)	123 (466)
Heat Rejection to Coolant: BTUM (kW)	13,429 (235)	13,429 (235)
Heat Rejection to CAC: BTUM (kW)	6,743 (118)	5,771 (101)
Heat Radiated to Ambient: BTUM (kW)	4,551 (79.7)	4,058 (71.0)
Air Requirements		
Aspirating: CFM (m³/min)	1,527 (43.2)	1,187 (33.6)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	22,672 (642)	22,672 (642)
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)	33.5 (127)	29.6 (112)
At 75% of Power Rating: gal/hr (lit/hr)	25.7 (97.3)	23.7 (89.7)
At 50% of Power Rating: gal/hr (lit/hr)	19.2 (72.7)	17.5 (65.1)
Fluids Capacity		
Total Oil System: gal (lit)	16.0 (60.6)	16.0 (60.6)
Engine Jacket Water Capacity: gal (lit)	15.9 (60.2)	15.9 (60.2)
System Coolant Capacity: gal (lit)	26.2 (99.2)	26.2 (99.2)

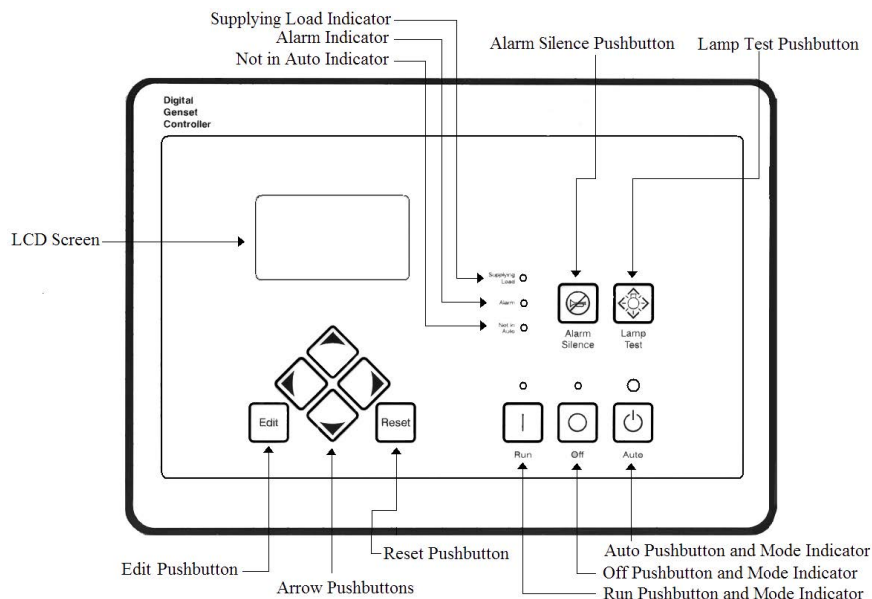
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 6,560 ft (2,000 m).
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

Standard Features

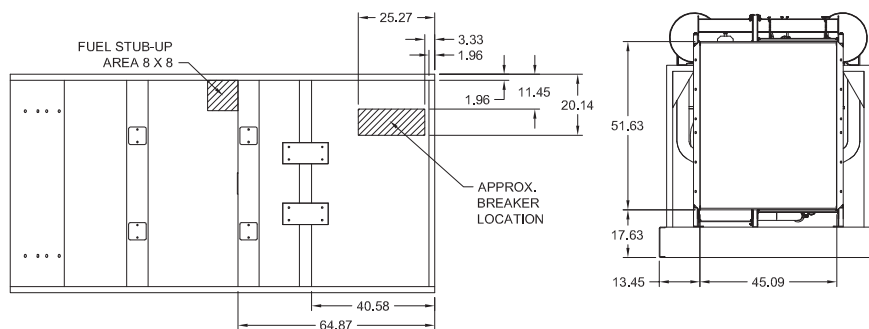
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



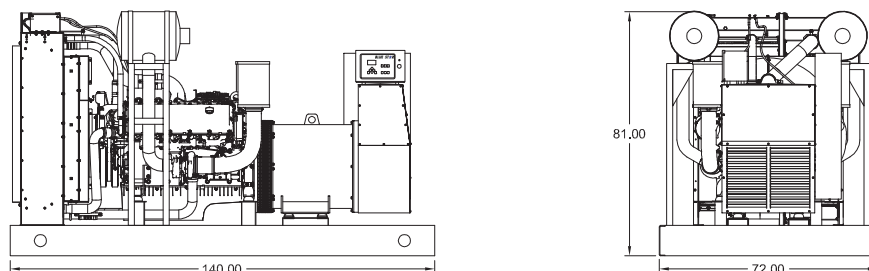
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 81 in	10,050
Level 1	180 x 72 x 103 in	11,550
Level 2	180 x 72 x 103 in	11,625
Level 3	225 x 72 x 103 in	12,025

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



	No Load	Full Load
OPU	89 dBA	92 dBA
Level 1	86 dBA	88 dBA
Level 2	82 dBA	84 dBA
Level 3	73 dBA	75 dBA



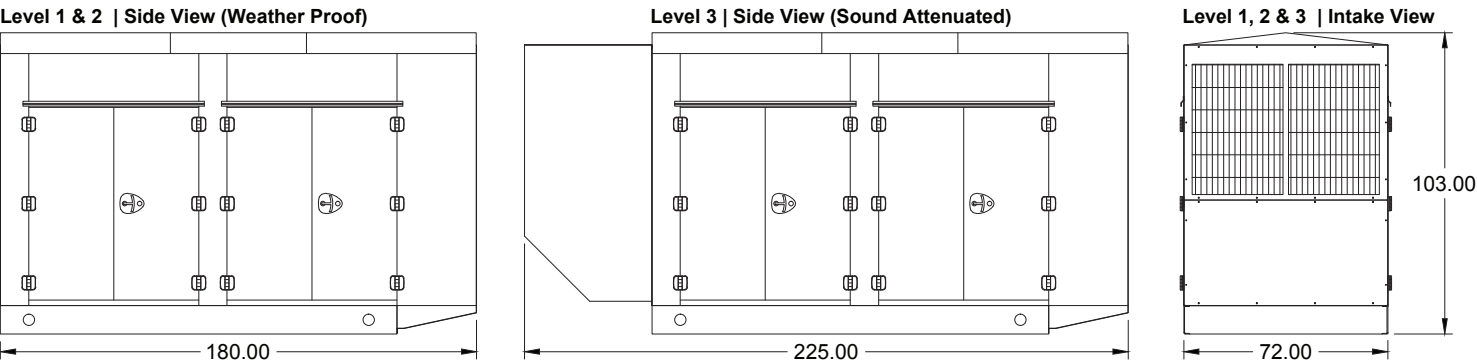
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

500 kWe / 460 kWe

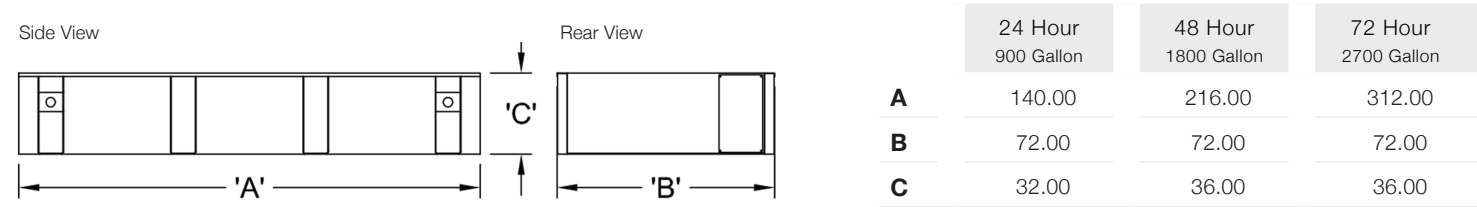


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD550-01

60 Hz / 1800 RPM

550 kWe / 510 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4031	572RSL4031	572RSL4029	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	550	550	550	550
AMPS	1911	1656	828	662
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	510	510	510	510
AMPS	1772	1535	768	614
Temp Rise	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 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts Pad Type
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

550 kWe / 510 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.12)
Model:	TAD1642GE	Bore - in. (cm) x Stroke - in. (cm): 5.70 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio: 16.5:1
Aspiration:	Turbo Charged, Air to Air CAC	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 822 (613)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	954 (512)	874 (468)
Gas Volume at Stack Temp: CFM (m³/min)	4,153 (118)	3,846 (109)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.2 (10.0)	32.1 (8.00)

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)	122 (462)	122 (462)
Heat Rejection to Coolant: BTUM (kW)	14,104 (248)	12,397 (218)
Heat Rejection to CAC: BTUM (kW)	9,042 (158)	7,957 (139)
Heat Radiated to Ambient: BTUM (kW)	4,253 (74.4)	3,919 (68.6)

Air Requirements		
Aspirating: CFM (m³/min)	1,646 (46.6)	1,603 (45.4)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	21,120 (598)	21,120 (598)
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)	39.9 (151.0)	35.9 (136.0)
At 75% of Power Rating: gal/hr (lit/hr)	28.8 (109.0)	26.0 (98.0)
At 50% of Power Rating: gal/hr (lit/hr)	19.1 (72.0)	17.5 (66.0)

Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.0)	12.7 (48.0)
Engine Jacket Water Capacity: gal (lit)	8.70 (33.0)	8.70 (33.0)
System Coolant Capacity: gal (lit)	15.9 (60.0)	15.9 (60.0)

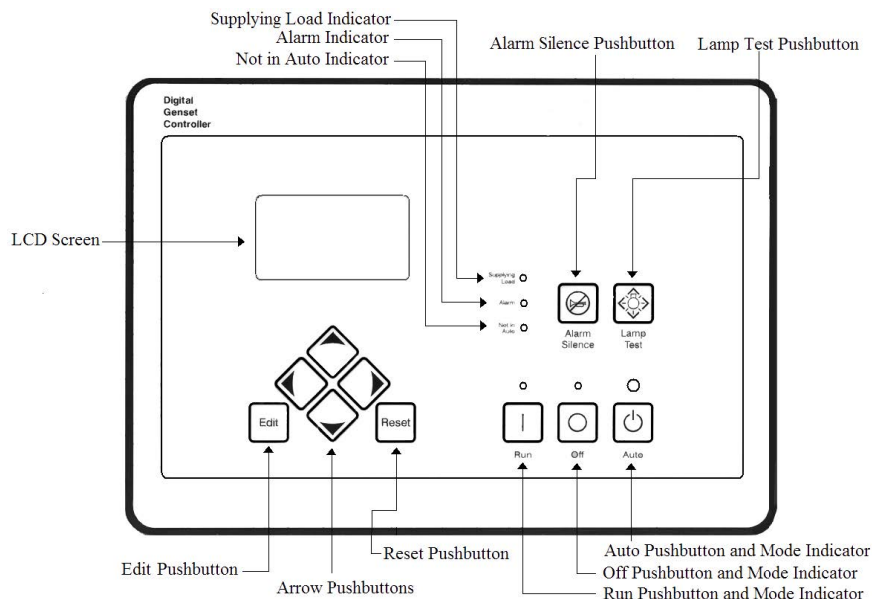
Deration Factors

Rated Power is available up to 4,920 Ft (1,500 m) 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

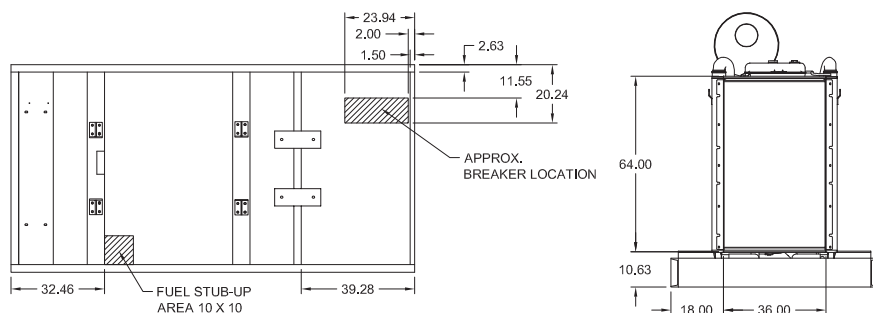
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



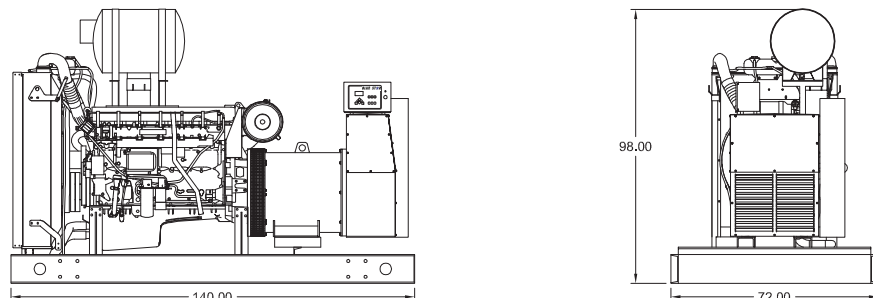
Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	140 x 72 x 98 in	9,650
Level 1	180 x 72 x 103 in	11,300
Level 2	180 x 72 x 103 in	11,400
Level 3	225 x 72 x 103 in	11,800

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



	No Load	Full Load
OPU	92 dBA	94 dBA
Level 1	87 dBA	90 dBA
Level 2	82 dBA	84 dBA
Level 3	74 dBA	76 dBA



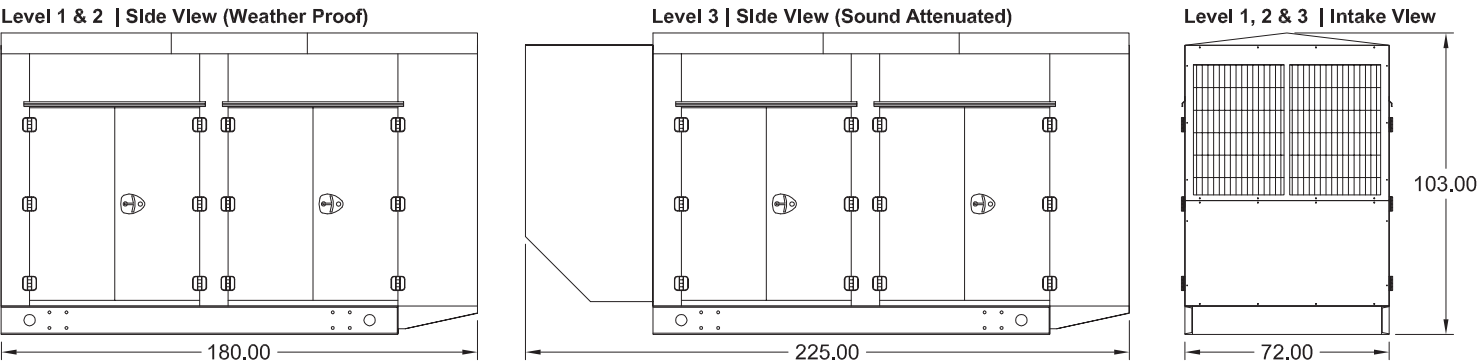
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

550 kWe / 510 kWe

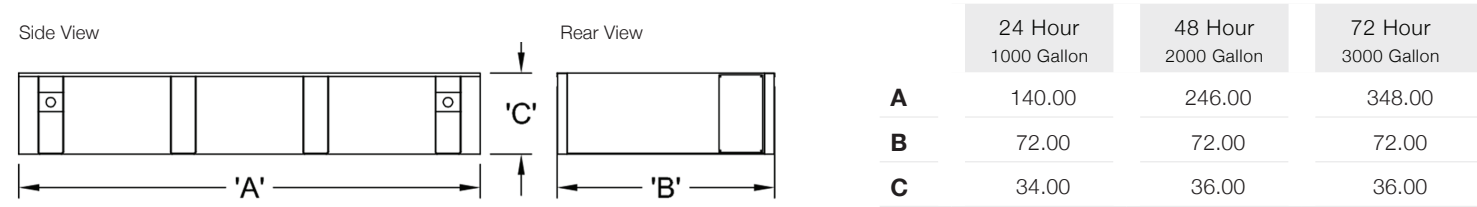


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD550-02FT4

60 Hz / 1800 RPM

550 kWe / 500 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4031	572RSL4031	572RSL4029	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	550	550	550	550
AMPS	1911	1656	828	662
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe	500	500	500	500
AMPS	1737	1505	753	602
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

550 kWe / 500 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.12)
Model:	TWD1672GE	Bore - in. (cm) x Stroke - in. (cm): 5.67 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio: 16.8:1
Aspiration:	Turbo Charged, H ₂ O to Air CAC	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 836 (615)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	831 (444)	793 (423)
Gas Volume at Stack Temp: CFM (m³/min)	4,347 (123)	4,025 (114)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H ₂ O (kPa)	40.0 (10.0)	40.0 (10.0)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	131 (55.0)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	95.1 (360)	95.1 (360)
Heat Rejection to Coolant: BTUM (kW)	12,682 (223)	11,544 (203)
Heat Rejection to CAC: BTUM (kW)	11,715 (206)	10,635 (187)
Heat Radiated to Ambient: BTUM (kW)	4,253 (74.4)	3,842 (67.2)

Air Requirements		
Aspirating: CFM (m³/min)	1,646 (46.6)	1,603 (45.4)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	29,894 (846)	29,894 (846)
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)	39.9 (151.0)	35.9 (136.0)
At 75% of Power Rating: gal/hr (lit/hr)	28.8 (109.0)	26.0 (98.0)
At 50% of Power Rating: gal/hr (lit/hr)	19.1 (72.0)	17.5 (66.0)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%

Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.0)	12.7 (48.0)
Engine Jacket Water Capacity: gal (lit)	8.70 (33.0)	8.70 (33.0)
System Coolant Capacity: gal (lit)	15.9 (60.0)	15.9 (60.0)
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.

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD600-02FT4

60 Hz / 1800 RPM

600 kWe / 570 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	573RSL4033	573RSL4033	572RSL4031	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	600	600	600	600
AMPS	2084	1806	903	723
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe	570	570	570	570
AMPS	1980	1716	858	686
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

600 kWe / 570 kWe



Application Data

Engine		
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.12)
Model:	TWD1673GE	Bore - in. (cm) x Stroke - in. (cm): 5.67 (14.4) x 6.5 (16.5)
Type:	4-Cycle	Compression Ratio: 16.8:1
Aspiration:	Turbo Charged, H ₂ O to Air CAC	Rated RPM: 1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 932 (695)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	903 (484)	851 (455)
Gas Volume at Stack Temp: CFM (m³/min)	4,866 (138)	4,471 (127)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H ₂ O (kPa)	40.0 (10.0)	40.0 (10.0)

Cooling System		
Ambient Capacity of Radiator: °F (°C)	131 (55.0)	131 (55.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H ₂ O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	95.1 (360)	95.1 (360)
Heat Rejection to Coolant: BTUM (kW)	13,933 (245)	12,682 (222)
Heat Rejection to CAC: BTUM (kW)	12,284 (216)	11,829 (208)
Heat Radiated to Ambient: BTUM (kW)	3,928 (68.7)	3,732 (65.3)

Air Requirements		
Aspirating: CFM (m³/min)	1,805 (51.1)	1,699 (48.1)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	29,470 (834)	29,470 (834)
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)	42.8 (162)	40.1 (152)
At 75% of Power Rating: gal/hr (lit/hr)	29.7 (112)	26.9 (101)
At 50% of Power Rating: gal/hr (lit/hr)	20.0 (75.7)	18.3 (69.3)
DEF Consumption (% of fuel consumption)	± 6.00%	± 6.00%

Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.0)	12.7 (48.0)
Engine Jacket Water Capacity: gal (lit)	8.72 (33.0)	8.72 (33.0)
System Coolant Capacity: gal (lit)	25.1 (95.0)	25.1 (95.0)

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.

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD550-01 / TD550-01P

60 Hz / 1800 RPM

550 kWe / 500 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	572RSL4031	572RSL4031	572RSL4029	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	550	550	550	550
AMPS	1911	1656	828	662
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	500	500	500	500
AMPS	1736	1505	753	602
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°C

Standard Equipment

Engine <ul style="list-style-type: none"> ▶ Radiator Cooled Unit Mounted (50°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 2 	Generator <ul style="list-style-type: none"> ▶ Brushless Single Bearing ▶ Automatic Voltage Regulator ▶ ± .25% Voltage Regulation ▶ 4 Pole, Rotating Field ▶ 130°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 <ul style="list-style-type: none"> ▶ Microprocessor Based Digital Control ▶ Interface Connection Box ▶ Control Panel Mounted in NEMA 12 Enclosure ▶ Base - Structural Steel ▶ Main Line Circuit Breaker Mounted & Wired ▶ Critical Grade Silencer Mounted ▶ Battery Charger 24V 5 Amp ▶ Jacket Water Heater -20°F 6000W 240V w/Isolation Valves ▶ Vibration Isolation Mounts ▶ Radiator Duct Flange (OPU Only) ▶ Single Source Supplier ▶ 2YR / 2000HR Standby Warranty ▶ 1YR / 1500HR Prime Warranty ▶ Standard Colors - White / Tan / Gray
Listing Certifications <ul style="list-style-type: none"> ▶ UL 2200 Listed ▶ cUL Listed ▶ CSA Certified ▶ Seismic Certified to IBC 2012 		

Diesel Product Line

550 kWe / 500 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	1282 (21.0)
Model Standby (Prime):	12V1600G70S (12V1600G10S)	Bore - in. (cm) x Stroke - in. (cm):	4.72 (12.0) x 5.91 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	822 (613)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	775 (413)	754 (401)
Gas Volume at Stack Temp: CFM (m³/min)	4,450 (126)	4,026 (114)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	137 (517)	137 (517)
Heat Rejection to Coolant: BTUM (kW)	13,762 (241)	12,681 (223)
Heat Rejection to CAC: BTUM (kW)	8,530 (149)	7,051 (123)
Heat Radiated to Ambient: BTUM (kW)	4,539 (79.4)	4,127 (72.2)
Air Requirements		
Aspirating: CFM (m³/min)	1,844 (52.2)	1,653 (46.8)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	26,700 (756)	26,700 (756)
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)	37.1 (140)	35.0 (132)
At 75% of Power Rating: gal/hr (lit/hr)	28.0 (106)	26.9 (102)
At 50% of Power Rating: gal/hr (lit/hr)	19.9 (75.3)	18.6 (70.4)
Fluids Capacity		
Total Oil System: gal (lit)	19.3 (73.1)	19.3 (73.1)
Engine Jacket Water Capacity: gal (lit)	17.2 (65.1)	17.2 (65.1)
System Coolant Capacity: gal (lit)	28.1 (106)	28.1 (106)

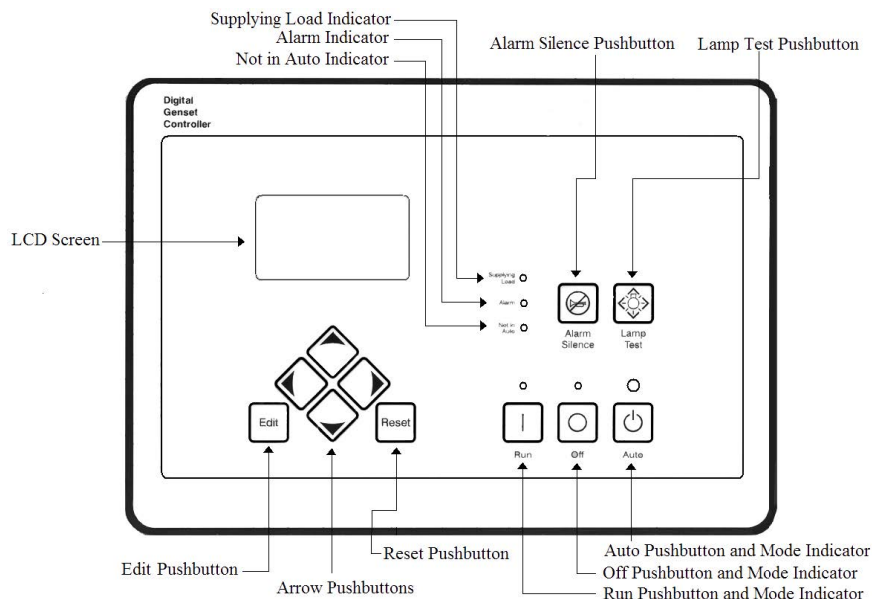
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 6,560 ft (2,000 m).
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

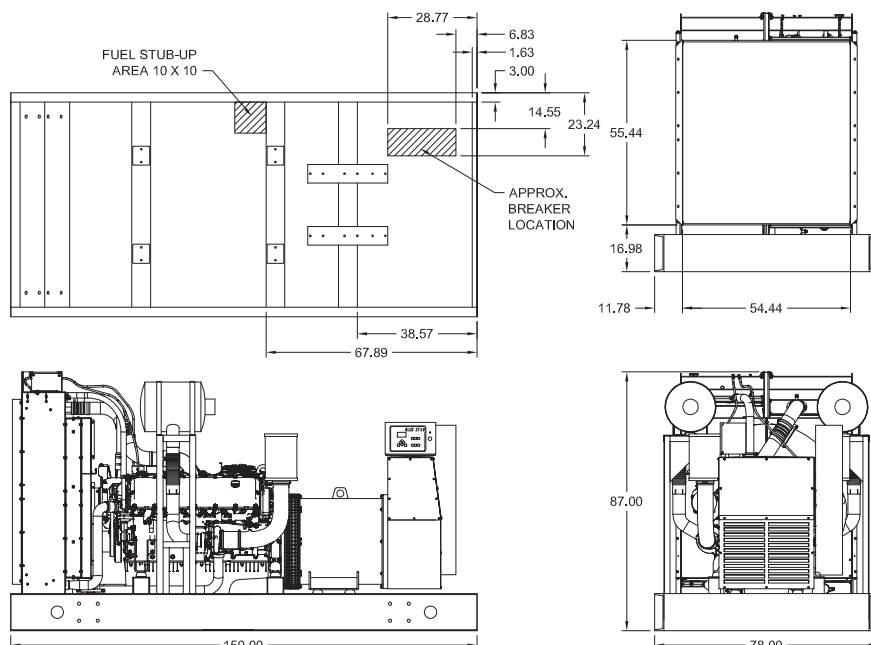


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	150 x 78 x 87 in	10,600
Level 1	200 x 78 x 110 in	12,300
Level 2	200 x 78 x 110 in	12,400
Level 3	255 x 78 x 110 in	12,875

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

	No Load	Full Load
OPU	91 dBA	94 dBA
Level 1	89 dBA	91 dBA
Level 2	84 dBA	87 dBA
Level 3	74 dBA	77 dBA



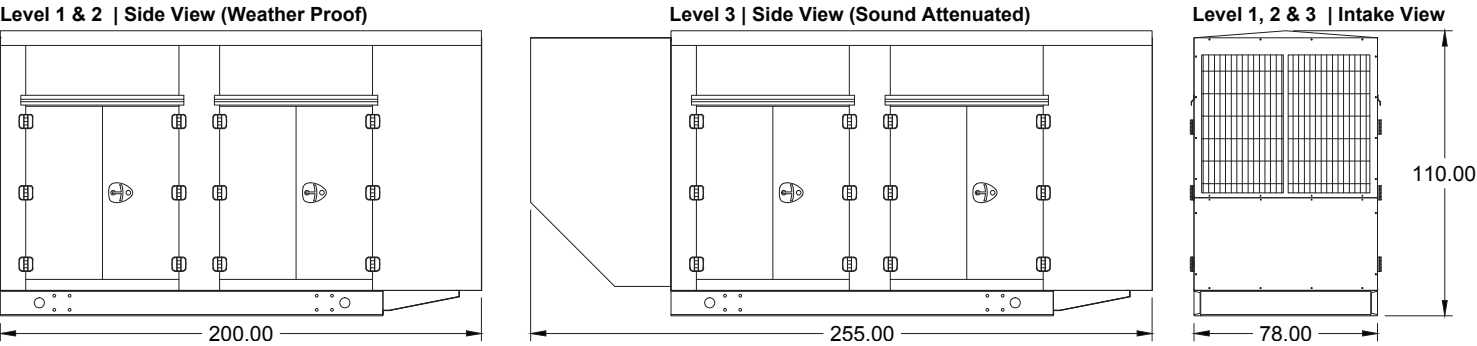
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

550 kW_e / 500 kW_e

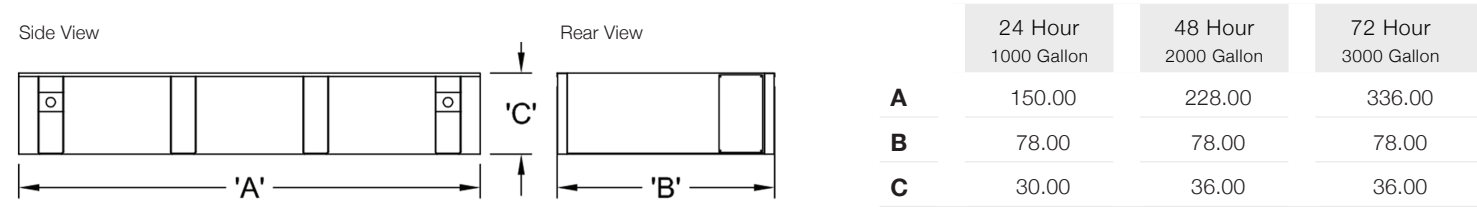


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD600-01

60 Hz / 1800 RPM

600 kWe / 550 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	573RSL4033	573RSL4033	572RSL4031	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	600	600	600	600
AMPS	2084	1806	903	723
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	550	550	550	550
AMPS	1911	1656	828	662
Temp Rise	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 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts Pad Type
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

600 kWe / 550 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit):	984 (16.12)
Model:	TWD1643GE	Bore - in. (cm) x Stroke - in. (cm):	5.70 (14.4) x 6.50 (16.5)
Type:	4-Cycle	Compression Ratio:	16.5:1
Aspiration:	Turbo Charged, H ₂ O to Air CAC	Rated RPM:	1800
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm):	917 (674)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	862 (461)	792 (422)
Gas Volume at Stack Temp: CFM (m³/min)	4,594 (130)	4,202 (119)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	40.2 (10.0)	40.2 (10.0)
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)	95.4 (361)	95.4 (361)
Heat Rejection to Coolant: BTUM (kW)	15,355 (270)	13,990 (246)
Heat Rejection to CAC: BTUM (kW)	7,677 (135)	6,881 (121)
Heat Radiated to Ambient: BTUM (kW)	3,928 (68.7)	3,600 (63.0)
Air Requirements		
Aspirating: CFM (m³/min)	1,937 (54.8)	1,874 (53.0)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	31,802 (900)	31,802 (900)
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)	40.8 (154.4)	36.7 (138.9)
At 75% of Power Rating: gal/hr (lit/hr)	29.7 (112.4)	26.9 (101.8)
At 50% of Power Rating: gal/hr (lit/hr)	20.0 (75.7)	18.3 (69.3)
Fluids Capacity		
Total Oil System: gal (lit)	12.7 (48.0)	12.7 (48.0)
Engine Jacket Water Capacity: gal (lit)	8.70 (33.0)	8.70 (33.0)
System Coolant Capacity: gal (lit)	25.1 (95.0)	25.1 (95.0)

Deration Factors

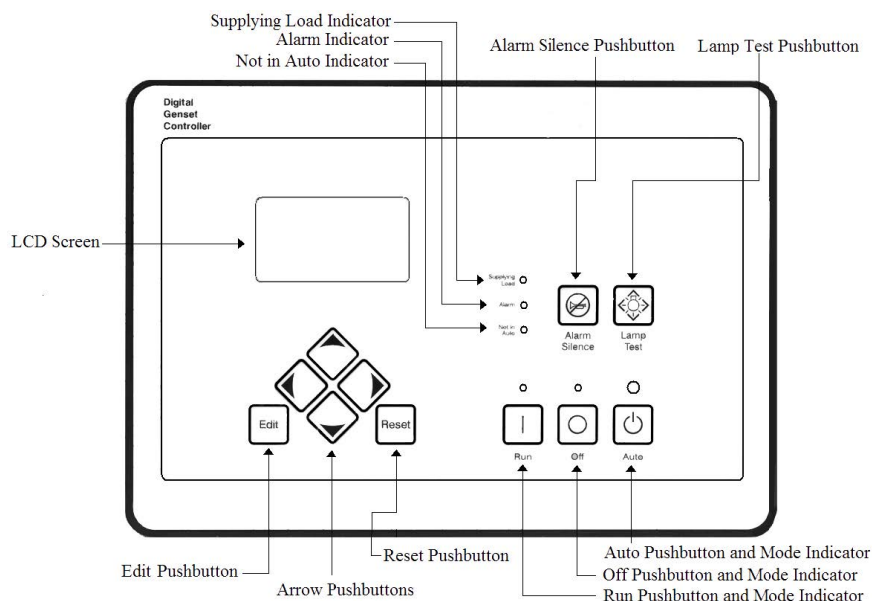
Rated Power is available up to 4,920 ft (1,500 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.

600 kWe / 550 kWe



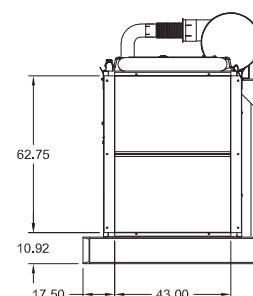
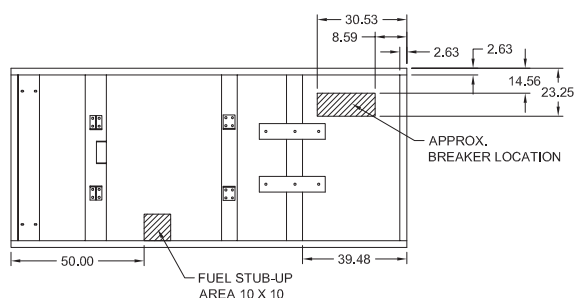
Standard Features

- ▶ 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

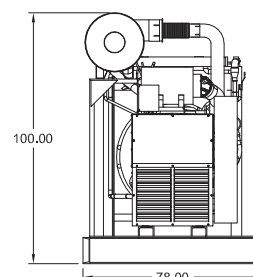
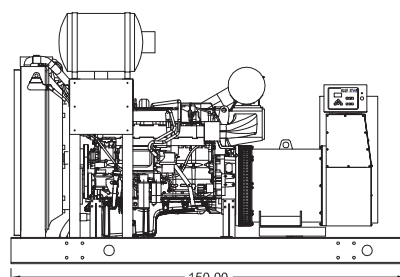


	L x W x H	Weight lbs
OPU	150 x 78 x 100 in	10,275
Level 1	200 x 78 x 110 in	12,100
Level 2	200 x 78 x 110 in	12,200
Level 3	255 x 78 x 110 in	12,700

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



	No Load	Full Load
OPU	92 dBA	94 dBA
Level 1	87 dBA	90 dBA
Level 2	82 dBA	84 dBA
Level 3	74 dBA	76 dBA



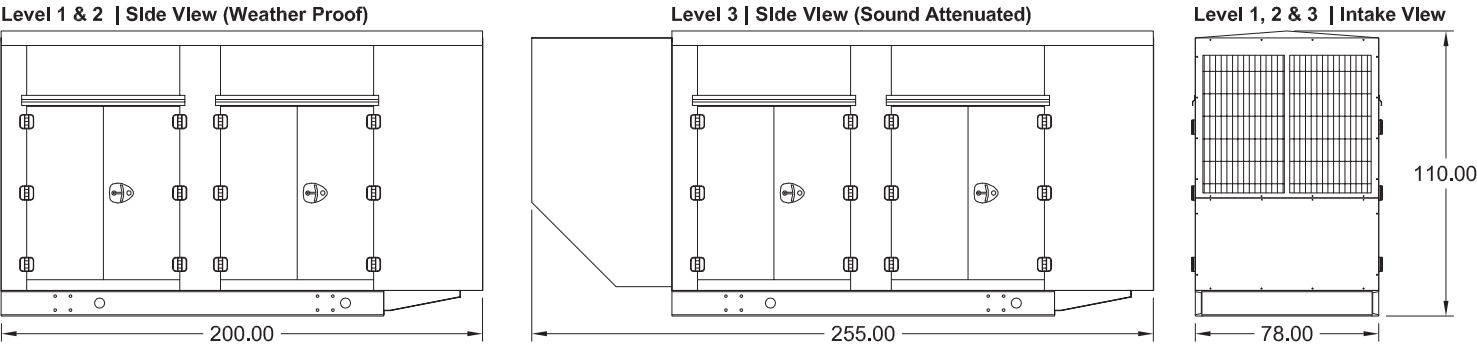
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

600 kW_e / 550 kW_e

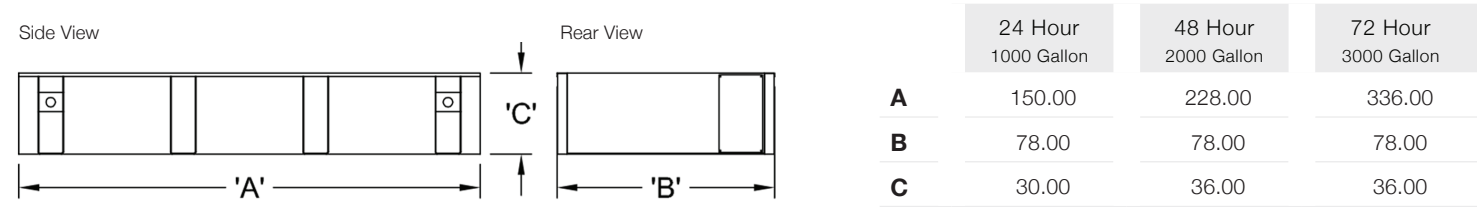


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

VD600-02FT4

60 Hz / 1800 RPM

600 kWe / 570 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	573RSL4033	573RSL4033	572RSL4031	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	600	600	600	600
AMPS	2084	1806	903	723
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe	570	570	570	570
AMPS	1980	1716	858	686
Temp Rise	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

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ SCR Catalyst / Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 5000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

600 kWe / 570 kWe



Application Data

Engine			
Manufacturer:	Volvo Penta	Displacement - Cu. In. (lit): 984 (16.12)	
Model:	TWD1673GE	Bore - in. (cm) x Stroke - in. (cm): 5.67 (14.4) x 6.5 (16.5)	
Type:	4-Cycle	Compression Ratio: 16.8:1	
Aspiration:	Turbo Charged, H2O to Air CAC	Rated RPM: 1800	
Cylinder Arrangement:	6 Cylinder Inline	Max HP Stby (kWm): 932 (695)	
Exhaust System		Standby	Prime
Gas Temp. (Stack): °F (°C)		903 (484)	851 (455)
Gas Volume at Stack Temp: CFM (m³/min)		4,866 (138)	4,471 (127)
Maximum Allowable Exhaust Restriction (Post SCR Cat.): in. H2O (kPa)		40.0 (10.0)	40.0 (10.0)
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)		95.1 (360)	95.1 (360)
Heat Rejection to Coolant: BTUM (kW)		13,933 (245)	12,682 (222)
Heat Rejection to CAC: BTUM (kW)		12,284 (216)	11,829 (208)
Heat Radiated to Ambient: BTUM (kW)		3,928 (68.7)	3,732 (65.3)
Air Requirements			
Aspirating: CFM (m³/min)		1,805 (51.1)	1,699 (48.1)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)		29,470 (834)	29,470 (834)
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)		42.8 (162)	40.1 (152)
At 75% of Power Rating: gal/hr (lit/hr)		29.7 (112)	26.9 (101)
At 50% of Power Rating: gal/hr (lit/hr)		20.0 (75.7)	18.3 (69.3)
DEF Consumption (% of fuel consumption)		± 6.00%	± 6.00%
Fluids Capacity			
Total Oil System: gal (lit)		12.7 (48.0)	12.7 (48.0)
Engine Jacket Water Capacity: gal (lit)		8.72 (33.0)	8.72 (33.0)
System Coolant Capacity: gal (lit)		25.1 (95.0)	25.1 (95.0)

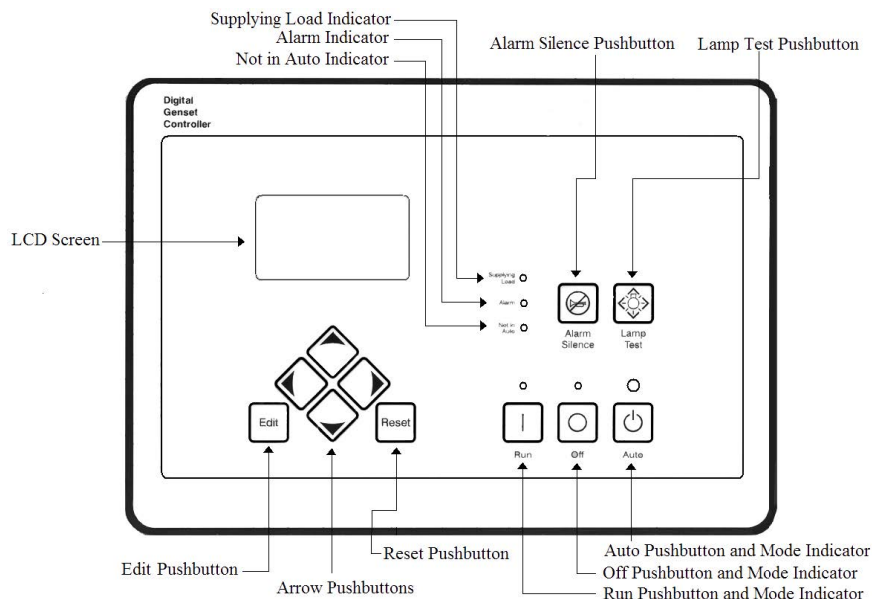
Deration Factors

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

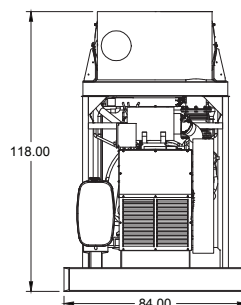
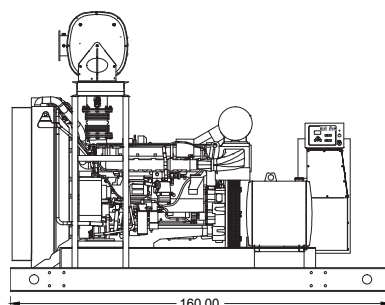
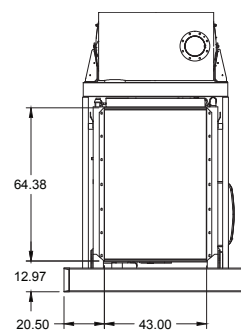
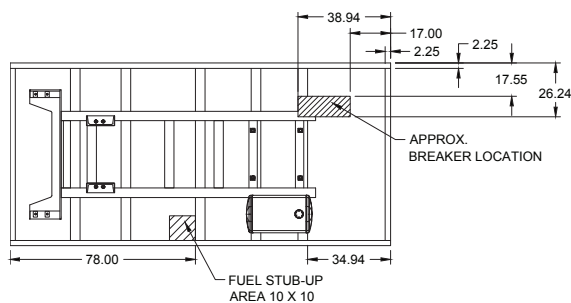
- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs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



Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	160 x 84 x 118 in	12,600
Level 1	198 x 84 x 122 in	14,500
Level 2	198 x 84 x 122 in	14,575
Level 3	252 x 84 x 122 in	15,225

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



	No Load	Full Load
OPU	91 dBA	94 dBA
Level 1	86 dBA	89 dBA
Level 2	82 dBA	84 dBA
Level 3	74 dBA	76 dBA

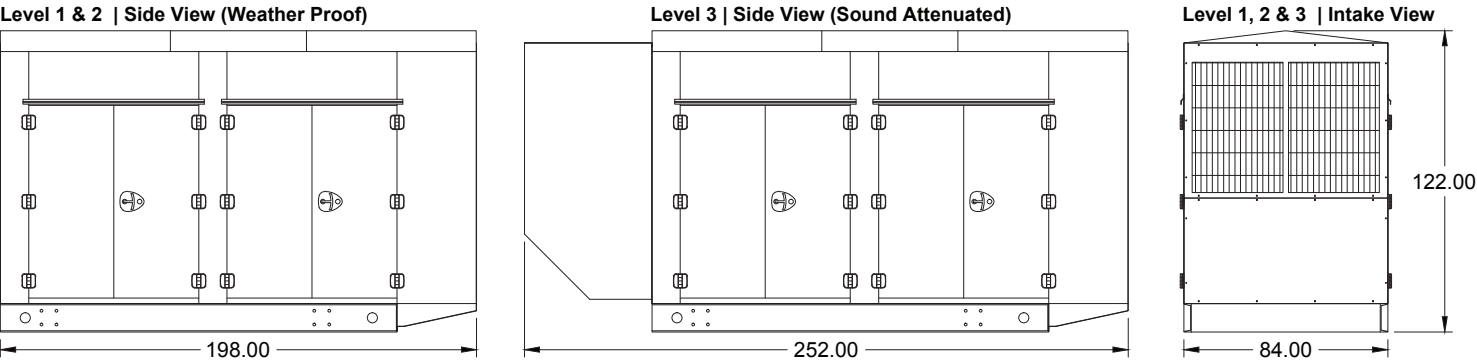
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

600 kWe / 570 kWe

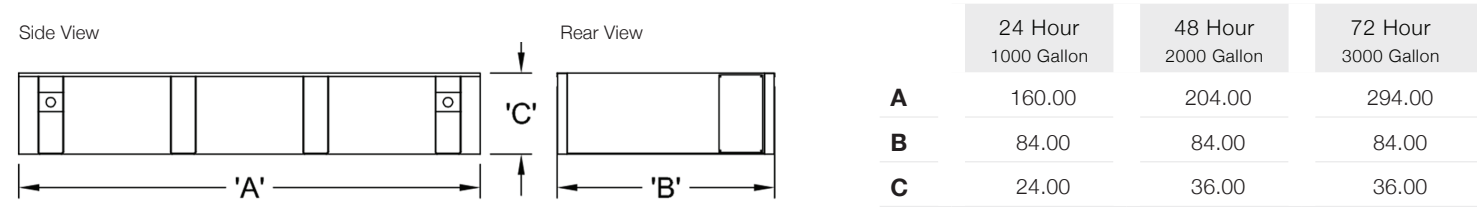


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

TD600-01 / TD600-01P

60 Hz / 1800 RPM

600 kWe / 550 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	573RSL4033	573RSL4033	572RSL4031	572RSS4272
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	600	600	600	600
AMPS	2084	1806	903	723
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime [Only Available For Mobile Applications]				
kWe	550	550	550	550
AMPS	1911	1656	828	662
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Mounted
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water Heater -20°F 6000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

600 kWe / 550 kWe



Application Data

Engine			
Manufacturer:	MTU	Displacement - Cu. In. (lit):	1282 (21.0)
Model Standby (Prime):	12V1600G80S (12V1600G20S)	Bore - in. (cm) x Stroke - in. (cm):	4.80 (12.2) x 5.90 (15.0)
Type:	4-Cycle	Compression Ratio:	17.5:1
Aspiration:	Turbo Charged, CAC	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	896 (668)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	797 (425)	777 (414)
Gas Volume at Stack Temp: CFM (m³/min)	4,662 (132)	4,450 (126)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	60.2 (15.0)	60.2 (15.0)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
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)	137 (517)	137 (517)
Heat Rejection to Coolant: BTUM (kW)	15,354 (269)	13,762 (241)
Heat Rejection to CAC: BTUM (kW)	9,667 (169)	8,530 (149)
Heat Radiated to Ambient: BTUM (kW)	5,123 (89.7)	4,305 (75.3)
Air Requirements		
Aspirating: CFM (m³/min)	1,907 (54.0)	1,865 (52.8)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	26,700 (756)	26,700 (756)
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)	40.0 (151)	37.0 (140)
At 75% of Power Rating: gal/hr (lit/hr)	30.2 (114)	28.0 (106)
At 50% of Power Rating: gal/hr (lit/hr)	21.2 (80.3)	19.8 (75.0)
Fluids Capacity		
Total Oil System: gal (lit)	19.3 (73.1)	19.3 (73.1)
Engine Jacket Water Capacity: gal (lit)	17.2 (65.1)	17.2 (65.1)
System Coolant Capacity: gal (lit)	28.1 (106)	28.1 (106)

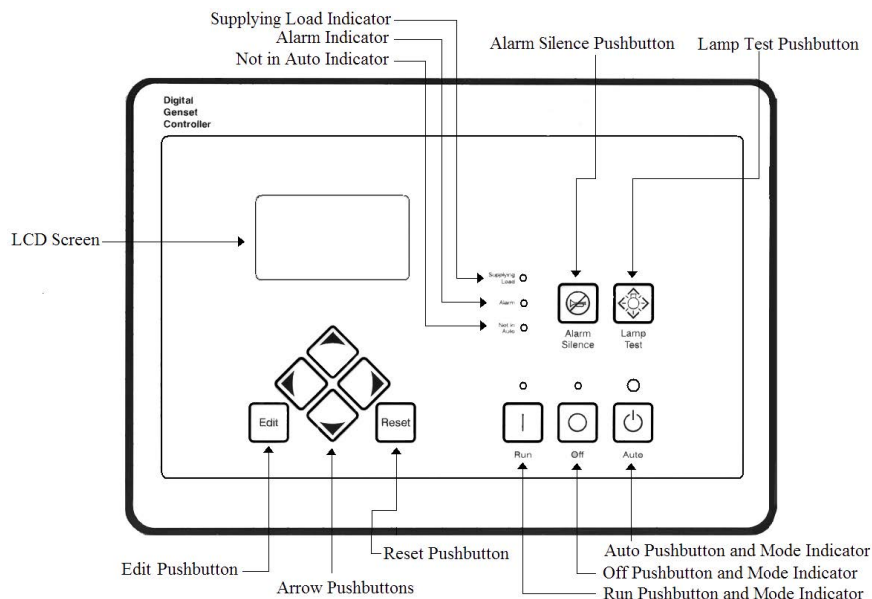
Deration Factors

Rated power available at ambient temperatures to 50°C. Derate 3% per 1,640 ft (500 m) above 4,265 ft (1,300 m).
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

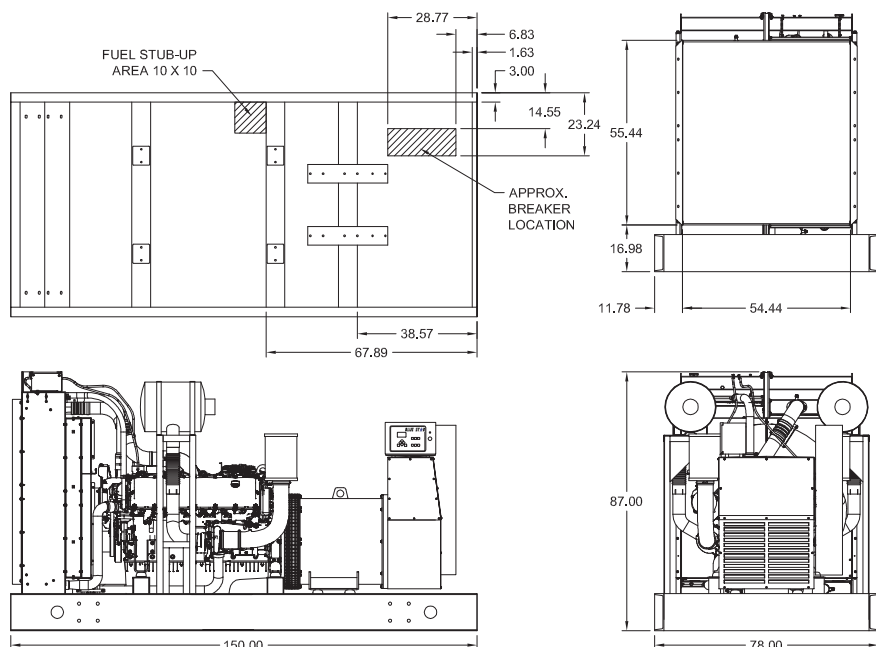


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	150 x 78 x 87 in	10,675
Level 1	200 x 78 x 110 in	12,525
Level 2	200 x 78 x 110 in	12,625
Level 3	255 x 78 x 110 in	13,100

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

	No Load	Full Load
OPU	91 dBA	94 dBA
Level 1	89 dBA	91 dBA
Level 2	84 dBA	87 dBA
Level 3	74 dBA	77 dBA



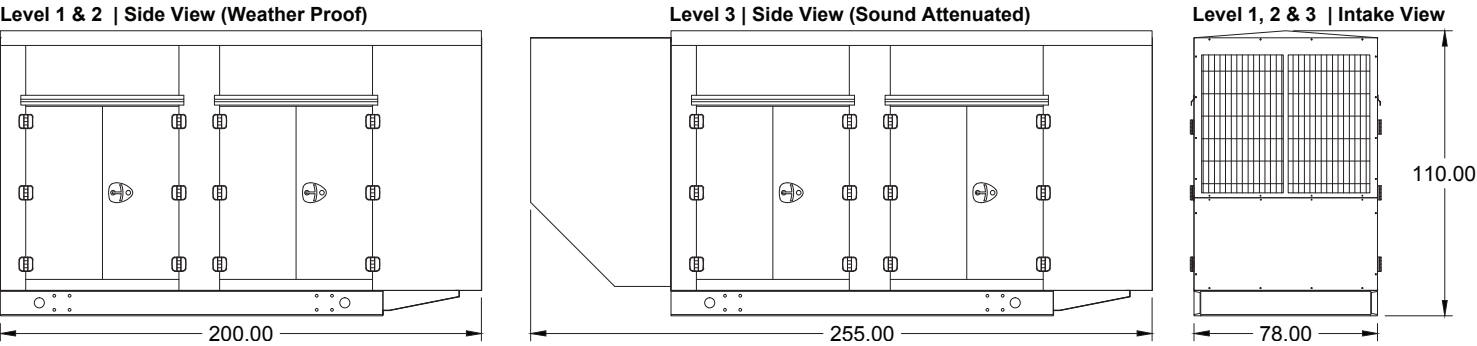
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

600 kW_e / 550 kW_e

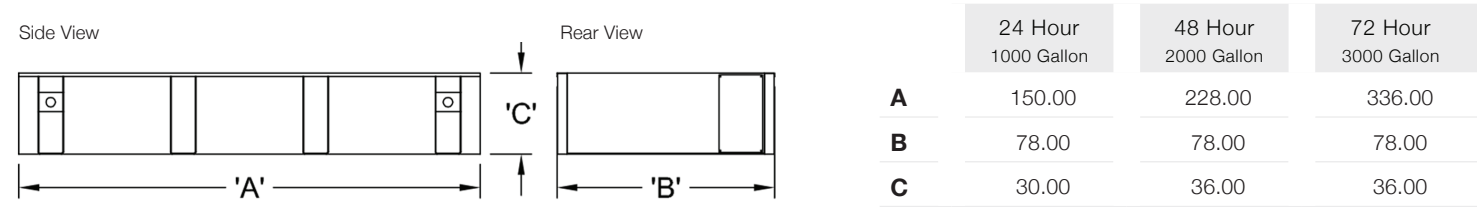


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust stack.

Double Wall UL 142 Listed Fuel Tanks



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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POWER PRODUCTS

Diesel Product Line

208-600 Volt

MD800-01

60 Hz / 1800 RPM

800 kWe / 735 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	741RSL4045	741RSL4045	574RSL4037	574RSS4278
Connection	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	4 LEAD WYE
Standby				
kWe	800	800	800	800
AMPS	2779	2408	1204	963
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe	735	735	735	735
AMPS	2553	2213	1106	885
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Loose
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water 2 Qty: 9000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

800 kWe / 735 kWe



Application Data

Engine			
Manufacturer:	Mitsubishi	Displacement - Cu. In. (lit):	2,071 (33.9)
Model:	S12A2-Y2PTAW-2	Bore - in. (cm) x Stroke - in. (cm):	5.91 (15.0) x 6.30 (16.0)
Type:	4-Cycle	Compression Ratio:	15.3:1
Aspiration:	Turbo Charged, H ₂ O/Air Intercooled	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	1,207 (900)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	883 (473)	860 (460)
Gas Volume at Stack Temp: CFM (m³/min)	8,192 (232)	7,062 (200)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	23.6 (5.90)	23.6 (5.90)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)	0.50 (0.12)
Jacket Water Pump Flow Rate: GPM (lit/min)	291 (1,102)	291 (1,102)
Intercooler Pump Flow Rate: GPM (lit/min)	124 (470)	124 (470)
Heat Rejection to Jacket Coolant: BTUM (kW)	20,418 (357)	17,531 (307)
Heat Rejection to Intercooler: BTUM (kW)	16,043 (281)	13,774 (241)
Heat Radiated to Ambient: BTUM (kW)	7,969 (139)	7,321 (128)
Air Requirements		
Aspirating: CFM (m³/min)	3,107 (87.9)	2,648 (74.9)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	37,314 (1,056)	37,314 (1,056)
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)	67.4 (255)	58.7 (222)
At 75% of Power Rating: gal/hr (lit/hr)	46.1 (175)	42.0 (159)
At 50% of Power Rating: gal/hr (lit/hr)	31.3 (119)	28.6 (108)
Fluids Capacity		
Total Oil System: gal (lit)	31.7 (120)	31.7 (120)
Engine Jacket Water Capacity w/Intercooler: gal (lit)	26.4 (100)	26.4 (100)
System Coolant Capacity: gal (lit)	107.3 (406)	107.3 (406)

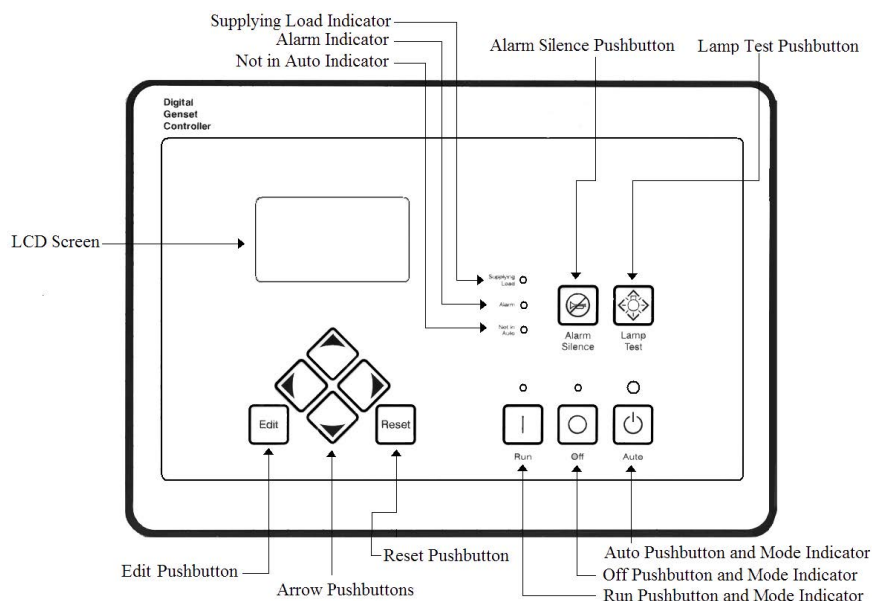
Deration Factors

Altitude: Derate 0.5% per 328 ft (100 m) above 3,280 ft (1,000 m) standby and prime. | Temperature: Derate 1.0% per 18°F (10°C) above 104°F (40°C) standby and prime.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

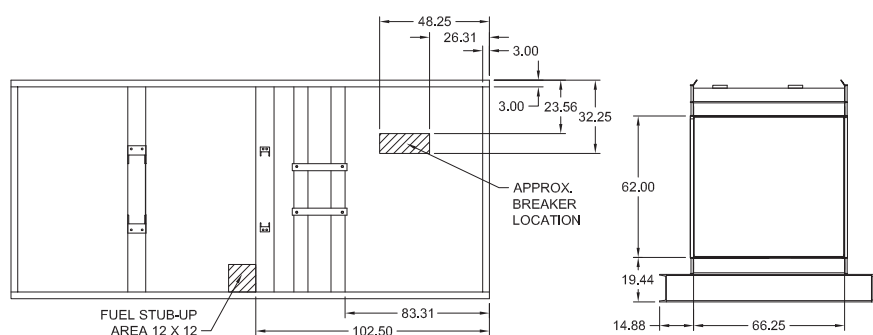
Standard Features

- ▶ 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 Compatible

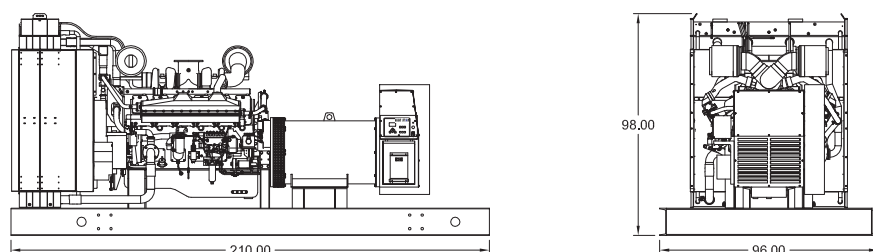


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	210 x 96 x 98 in	18,375
Level 1	210 x 96 x 108 in	20,825
Level 2	210 x 96 x 108 in	20,950
Level 3	285 x 96 x 108 in	22,225



	No Load	Full Load
OPU	86 dBA	88 dBA
Level 1	80 dBA	83 dBA
Level 2	78 dBA	80 dBA
Level 3	74 dBA	76 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.

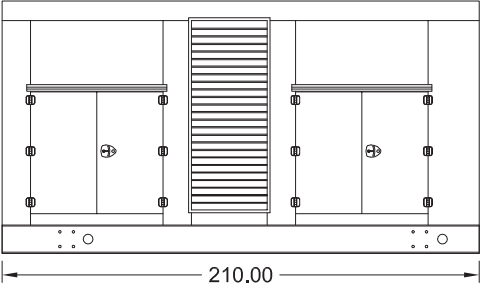
Diesel Product Line

800 kWe / 735 kWe

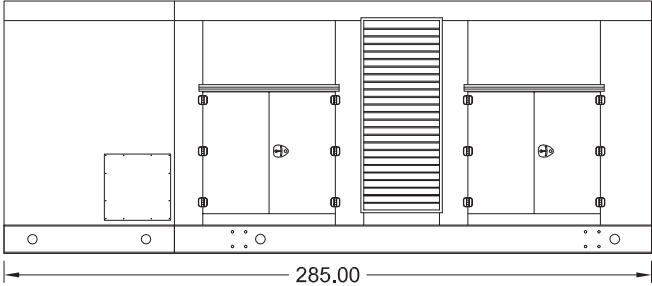


Enclosures

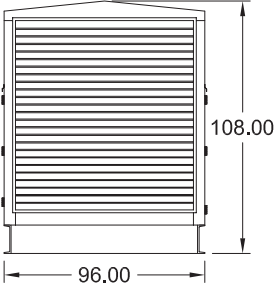
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)

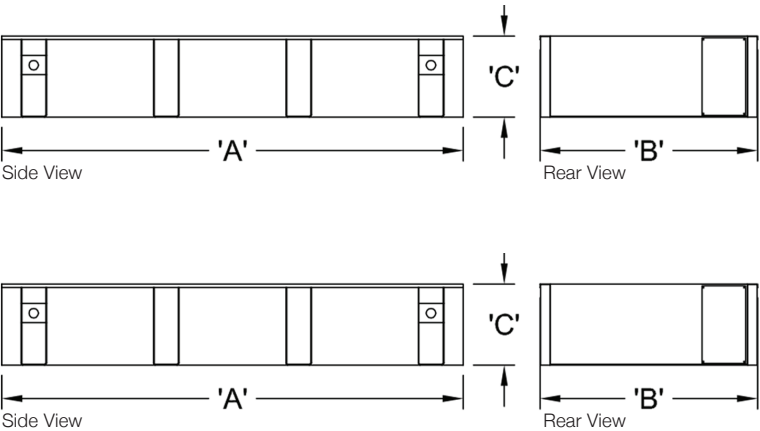


Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust system.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	12 Hour 900 Gallon	24 Hour 1800 Gallon	48 Hour 3600 Gallon
A	210.00	210.00	348.00
B	96.00	96.00	96.00
C	16.00	30.00	36.00

	Level 3		
	12 Hour 900 Gallon	24 Hour 1800 Gallon	48 Hour 3600 Gallon
A	285.00	285.00	348.00
B	96.00	96.00	96.00
C	12.00	22.00	36.00

All specification sheet dimensions are represented in inches.
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Materials and specifications subject to change without notice.



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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

MD1000-01

60 Hz / 1800 RPM

1000 kWe / 920 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	741RSL4045	741RSL4045	575RSL4044	741RSS4282
Connection	12 LEAD WYE	12 LEAD DELTA	4 LEAD WYE	4 LEAD WYE
Standby				
kWe	1000	1000	1000	1000
AMPS	3474	3011	1505	1204
Temp Rise	130°C / 27°C	130°C / 27°C	130°C / 27°C	130°C / 27°C
Prime				
kWe	920	920	920	920
AMPS	3196	2770	1385	1108
Temp Rise	105°C / 40°C	105°C / 40°C	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Loose
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water 2 Qty: 9000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

1000 kWe / 920 kWe



Application Data

Engine			
Manufacturer:	Mitsubishi	Displacement - Cu. In. (lit):	2,265 (37.1)
Model:	S12H-Y2PTAW-1	Bore - in. (cm) x Stroke - in. (cm):	5.91 (15.0) x 6.89 (17.5)
Type:	4-Cycle	Compression Ratio:	14.5:1
Aspiration:	Turbo Charged, H ₂ O/Air Intercooled	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	1,528 (1,140)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	910 (488)	870 (465)
Gas Volume at Stack Temp: CFM (m³/min)	9,534 (270)	8,722 (247)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	23.6 (5.90)	23.6 (5.90)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)	0.50 (0.12)
Jacket Water Pump Flow Rate: GPM (lit/min)	383 (1,450)	383 (1,450)
Intercooler Pump Flow Rate: GPM (lit/min)	132 (500)	132 (500)
Heat Rejection to Coolant: BTUM (kW)	23,715 (415)	21,678 (379)
Heat Rejection to Intercooler: BTUM (kW)	18,633 (326)	17,033 (298)
Heat Radiated to Ambient: BTUM (kW)	7,115 (125)	6,546 (115)
Air Requirements		
Aspirating: CFM (m³/min)	3,602 (102)	3,284 (92.9)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	42,191 (1,194)	42,191 (1,194)
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)	75.0 (284)	70.2 (266)
At 75% of Power Rating: gal/hr (lit/hr)	59.7 (226)	54.6 (207)
At 50% of Power Rating: gal/hr (lit/hr)	39.8 (151)	36.0 (136)
Fluids Capacity		
Total Oil System: gal (lit)	52.8 (200)	52.8 (200)
Engine Jacket Water Capacity w/Intercooler: gal (lit)	26.4 (100)	26.4 (100)
System Coolant Capacity: gal (lit)	115.2 (436)	115.2 (436)

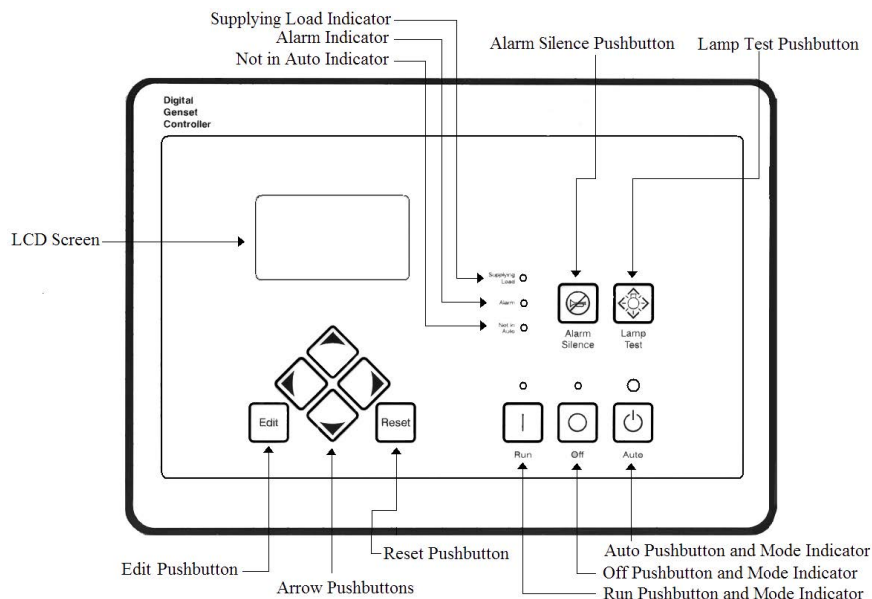
Deration Factors

Altitude: Derate 0.5% per 328 ft (100 m) above 3,280 ft (1,000 m) standby and prime. | Temperature: Derate 1.0% per 18°F (10°C) above 104°F (40°C) standby and prime.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

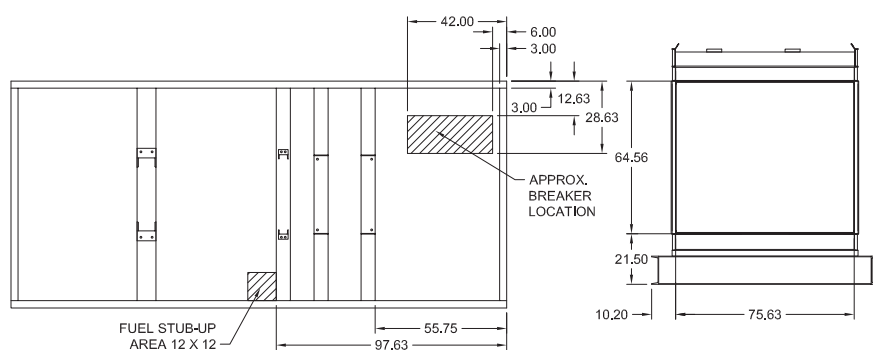
Standard Features

- ▶ 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 Compatible

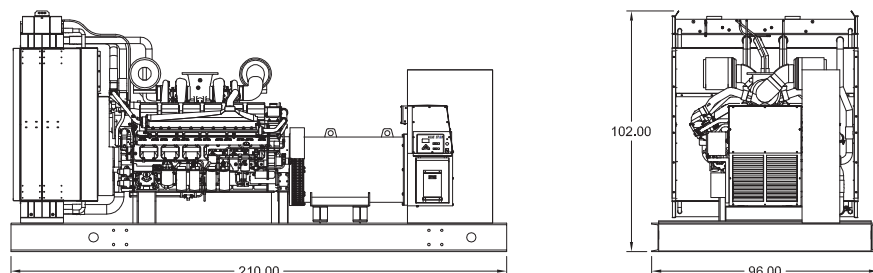


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	210 x 96 x 102 in	22,675
Level 1	210 x 96 x 108 in	25,375
Level 2	210 x 96 x 108 in	25,525
Level 3	285 x 96 x 108 in	26,725



	No Load	Full Load
OPU	87 dBA	89 dBA
Level 1	81 dBA	83 dBA
Level 2	79 dBA	81 dBA
Level 3	75 dBA	77 dBA



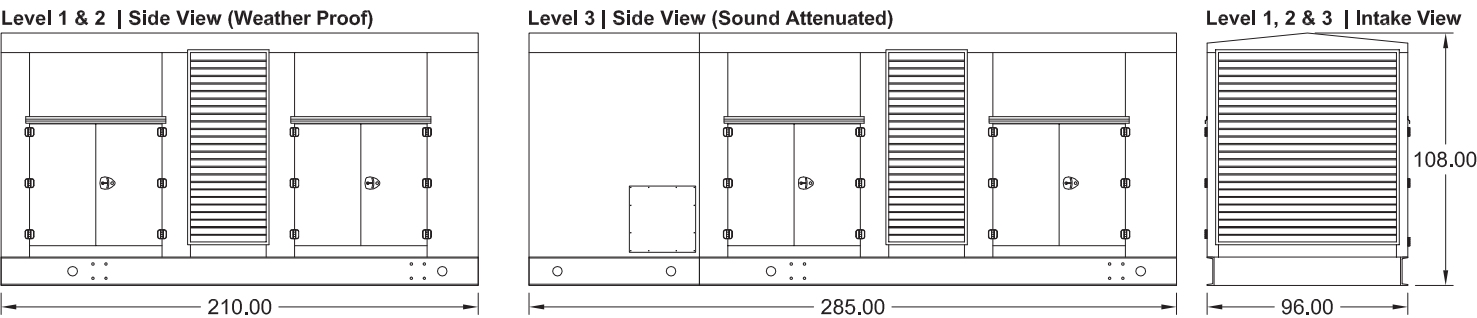
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

1000 kW / 920 kW

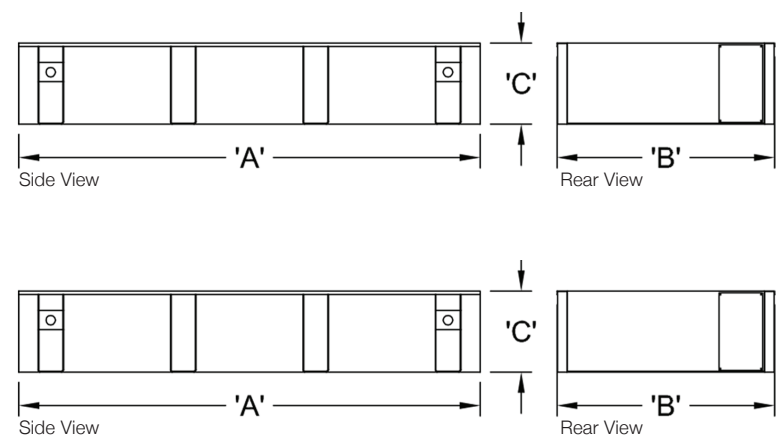


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust system.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	12 Hour 900 Gallon	24 Hour 1800 Gallon	48 Hour 3600 Gallon
A	210.00	210.00	348.00
B	96.00	96.00	96.00
C	16.00	30.00	36.00

	Level 3		
	12 Hour 900 Gallon	24 Hour 1800 Gallon	48 Hour 3600 Gallon
A	285.00	285.00	348.00
B	96.00	96.00	96.00
C	12.00	22.00	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.
Materials and specifications subject to change without notice.



Distributed By:

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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

MD1250-01

60 Hz / 1800 RPM

1250 kWe / 1150 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	Consult Factory	Consult Factory	742RSL4048	743RSS4288
Connection	4 LEAD WYE	4 LEAD DELTA	4 LEAD WYE	4 LEAD WYE
Standby				
kWe	1250	1250	1250	1250
AMPS	4342	3763	1881	1505
Temp Rise	Consult Factory	Consult Factory	130°C / 27°C	130°C / 27°C
Prime				
kWe	1150	1150	1150	1150
AMPS	3995	3462	1731	1385
Temp Rise	Consult Factory	Consult Factory	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Loose
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water 2 Qty: 9000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

1250 kWe / 1150 kWe



Application Data

Engine			
Manufacturer:	Mitsubishi	Displacement - Cu. In. (lit):	2,992 (49.0)
Model:	S12R-Y2PTAW-1	Bore - in. (cm) x Stroke - in. (cm):	6.69 (17.0) x 7.09 (18.0)
Type:	4-Cycle	Compression Ratio:	14.5:1
Aspiration:	Turbo Charged, H ₂ O/Air Intercooled	Rated RPM:	1800
Cylinder Arrangement:	12 Cylinder Vee	Max HP Stby (kWm):	1,881 (1,403)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	927 (497)	890 (477)
Gas Volume at Stack Temp: CFM (m³/min)	12,570 (356)	11,299 (320)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	23.6 (5.90)	23.6 (5.90)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)	0.50 (0.12)
Jacket Water Pump Flow Rate: GPM (lit/min)	489 (1,851)	489 (1,851)
Intercooler Pump Flow Rate: GPM (lit/min)	89.8 (340)	89.8 (340)
Heat Rejection to Jacket Coolant: BTUM (kW)	29,045 (508)	26,111 (457)
Heat Rejection to Intercooler: BTUM (kW)	29,045 (508)	26,111 (457)
Heat Radiated to Ambient: BTUM (kW)	8,182 (143)	7,528 (132)
Air Requirements		
Aspirating: CFM (m³/min)	4,767 (135)	4,273 (121)
Air Flow Required for Rad.Cooled Unit: CFM (m³/min)	62,756 (1,776)	62,756 (1,776)
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)	103 (392)	91.0 (344)
At 75% of Power Rating: gal/hr (lit/hr)	75.1 (284)	68.4 (259)
At 50% of Power Rating: gal/hr (lit/hr)	51.0 (193)	46.4 (176)
Fluids Capacity		
Total Oil System: gal (lit)	39.6 (150)	39.6 (150)
Engine Jacket Water Capacity w/Intercooler: gal (lit)	34.3 (130)	34.3 (130)
System Coolant Capacity: gal (lit)	140.6 (532)	140.6 (532)

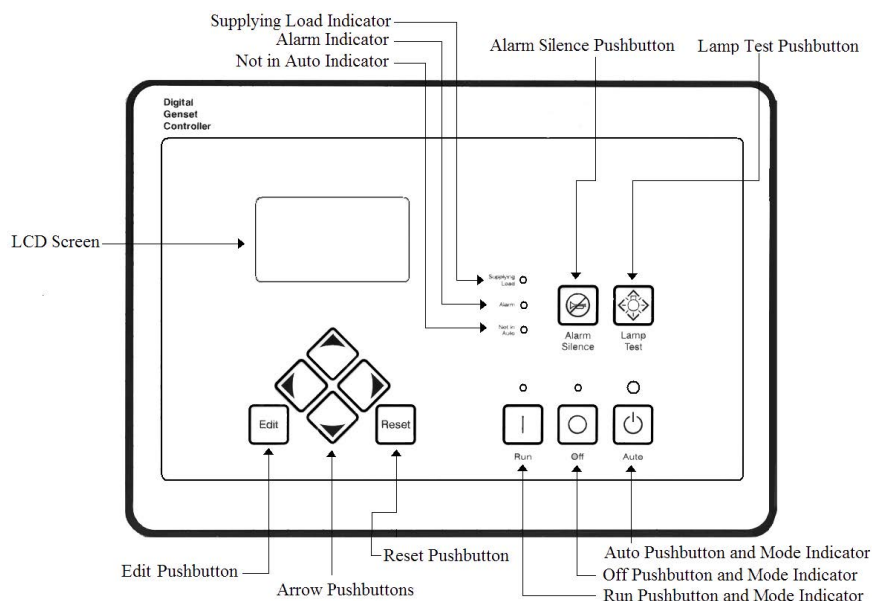
Deration Factors

Altitude: Derate 0.5% per 328 ft (100 m) above 3,280 ft (1,000 m) standby and prime. | Temperature: Derate 1.0% per 18°F (10°C) above 104°F (40°C) standby and prime.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

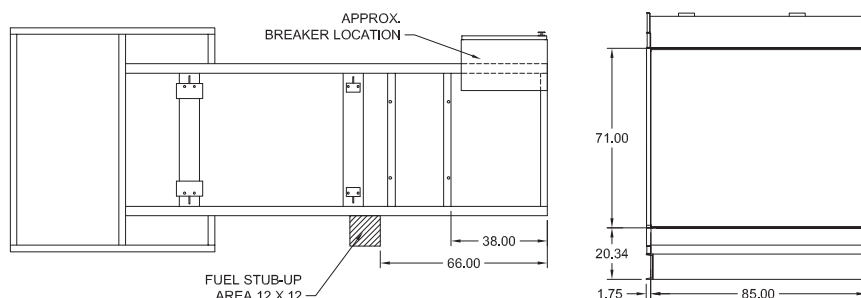
Standard Features

- ▶ 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 Compatible

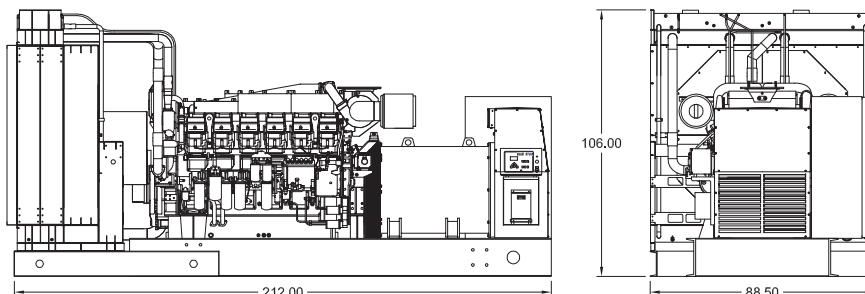


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	220 x 95 x 112 in	27,375
Level 1	252 x 106 x 129 in	32,450
Level 2	252 x 106 x 129 in	32,675
Level 3	342 x 106 x 129 in	35,000



	No Load	Full Load
OPU	89 dBA	91 dBA
Level 1	83 dBA	85 dBA
Level 2	81 dBA	83 dBA
Level 3	77 dBA	79 dBA



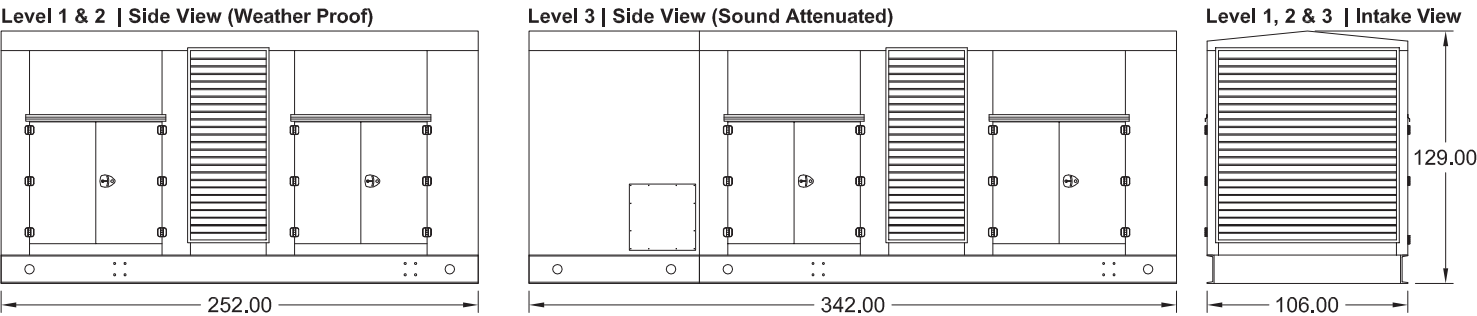
Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.
Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

Diesel Product Line

1250 kW / 1150 kW

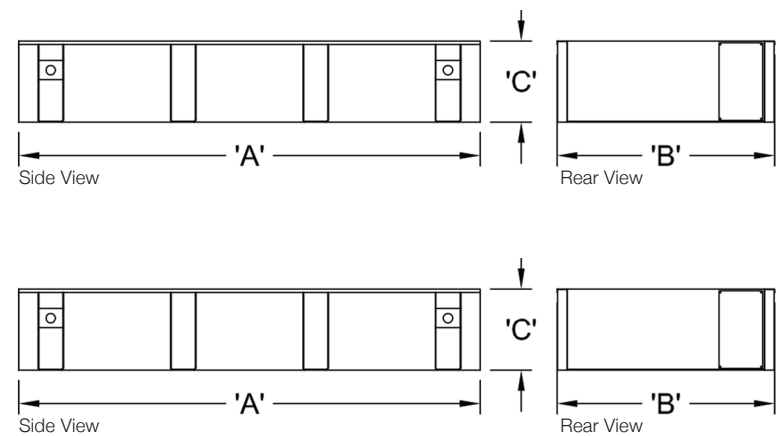


Enclosures



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust system.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	12 Hour 1250 Gallon	24 Hour 2500 Gallon	48 Hour 5000 Gallon
A	252.00	252.00	410.00
B	106.00	106.00	106.00
C	18.00	32.00	36.00

	Level 3		
	12 Hour 1250 Gallon	24 Hour 2500 Gallon	48 Hour 5000 Gallon
A	342.00	342.00	410.00
B	106.00	106.00	106.00
C	12.00	24.00	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.
Materials and specifications subject to change without notice.



Distributed By:

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POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

MD1600-01

60 Hz / 1800 RPM

1600 kWe / 1450 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	Consult Factory	Consult Factory	743RSL4052	743RSS4290
Connection	4 LEAD WYE	4 LEAD DELTA	4 LEAD WYE	4 LEAD WYE
Standby				
kWe	1600	1600	1600	1600
AMPS	5558	4817	2408	1927
Temp Rise	Consult Factory	Consult Factory	130°C / 27°C	130°C / 27°C
Prime				
kWe	1450	1450	1450	1450
AMPS	5037	4365	2183	1746
Temp Rise	Consult Factory	Consult Factory	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Loose
- ▶ Catalyst / Silencer Mounted (Prime)
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water 2 Qty: 9000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

1600 kWe / 1450 kWe



Application Data

Engine			
Manufacturer:	Mitsubishi	Displacement - Cu. In. (lit):	3,989 (65.4)
Model:	S16R-Y2PTAW-1	Bore - in. (cm) x Stroke - in. (cm):	6.69 (17.0) x 7.09 (18.0)
Type:	4-Cycle	Compression Ratio:	14.5:1
Aspiration:	Turbo Charged, H ₂ O/Air Intercooled	Rated RPM:	1800
Cylinder Arrangement:	16 Cylinder Vee	Max HP Stby (kWm):	2,346 (1,750)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	940 (504)	890 (477)
Gas Volume at Stack Temp: CFM (m³/min)	15,642 (443)	14,089 (399)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	23.6 (5.9)	23.6 (5.9)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)	0.50 (0.12)
Jacket Water Pump Flow Rate: GPM (lit/min)	489 (1,851)	489 (1,851)
Intercooler Pump Flow Rate: GPM (lit/min)	243 (920)	243 (920)
Heat Rejection to Jacket Coolant: BTUM (kW)	36,167 (633)	32,563 (570)
Heat Rejection to Intercooler: BTUM (kW)	36,167 (633)	32,563 (570)
Heat Radiated to Ambient: BTUM (kW)	8,652 (151)	7,841 (137)
Air Requirements		
Aspirating: CFM (m³/min)	5,932 (168)	5,5332 (151)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	75,053 (2,124)	75,053 (2,124)
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)	129.2 (487)	115.4 (436)
At 75% of Power Rating: gal/hr (lit/hr)	94.1 (356)	86.8 (325)
At 50% of Power Rating: gal/hr (lit/hr)	64.4 (241)	58.7 (220)
Fluids Capacity		
Total Oil System: gal (lit)	52.8 (200)	52.8 (200)
Engine Jacket Water Capacity w/Intercooler: gal (lit)	44.9 (170)	44.9 (170)
System Coolant Capacity: gal (lit)	174.4 (660)	174.4 (660)

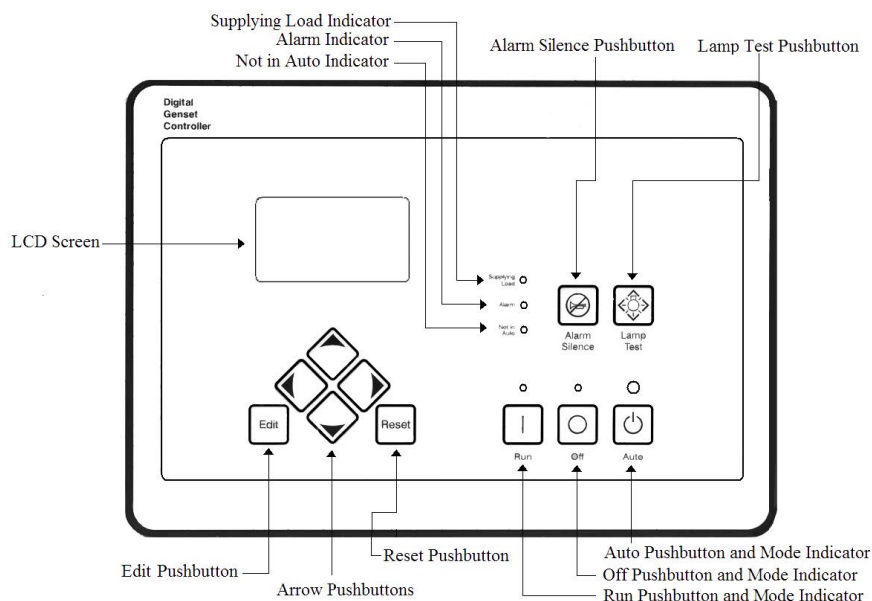
Deration Factors

Altitude: Derate 0.5% per 328 ft (100 m) above 3,280 ft (1,000 m) standby and prime. | Temperature: Derate 1.0% per 18°F (10°C) above 104°F (40°C) standby and prime.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

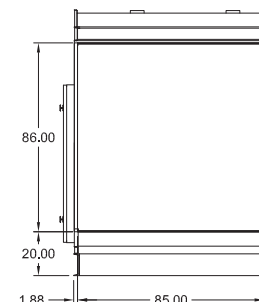
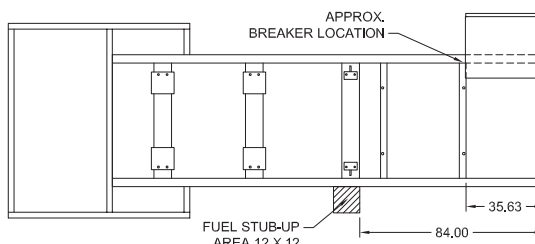
Standard Features

- ▶ 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 Compatible

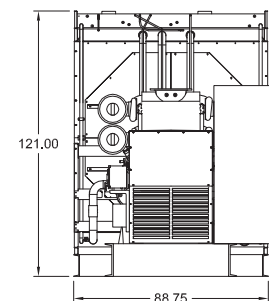
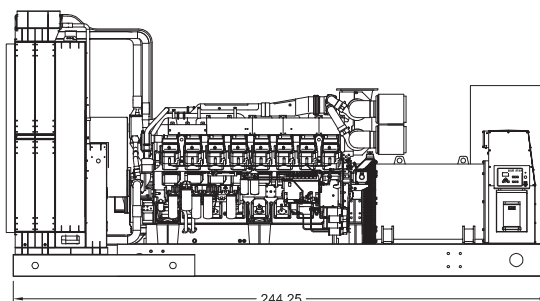


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	244.25 x 88.75 x 121 in	34,450
Level 1	282 x 110 x 145 in	39,850
Level 2	282 x 110 x 145 in	40,050
Level 3	378 x 110 x 145 in	42,475



	No Load	Full Load
OPU	92 dBA	94 dBA
Level 1	85 dBA	87 dBA
Level 2	83 dBA	85 dBA
Level 3	80 dBA	82 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.

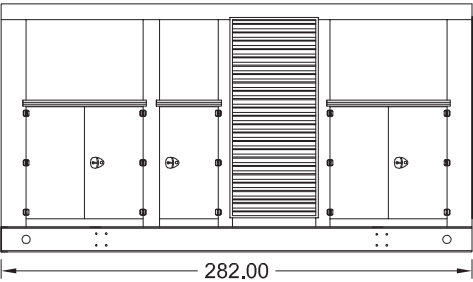
Diesel Product Line

1600 kW / 1450 kW

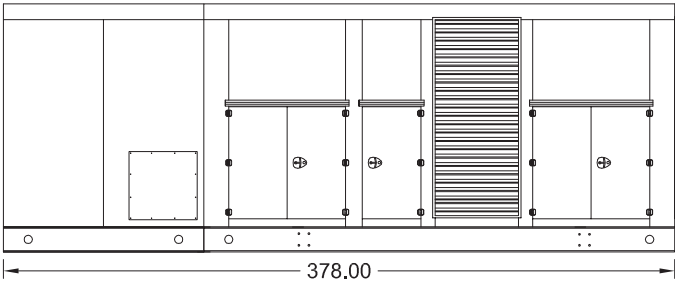


Enclosures

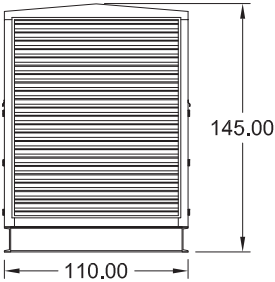
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)

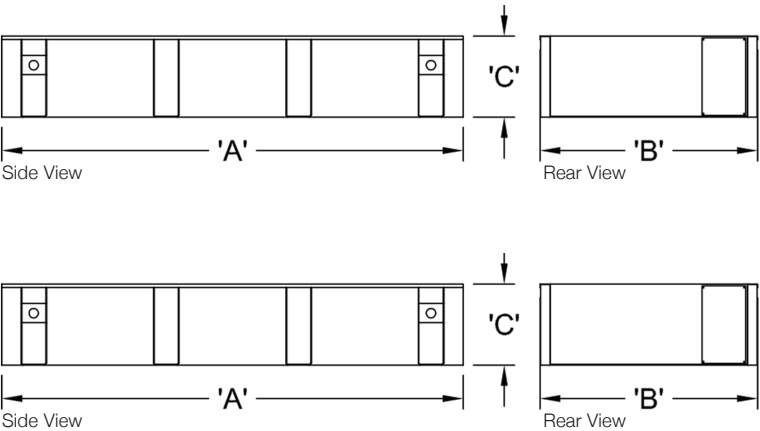


Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust system.

Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	12 Hour 1925 Gallon	24 Hour 3850 Gallon	48 Hour 7700 Gallon
A	282.00	312.00	576.00
B	110.00	110.00	110.00
C	22.00	36.00	36.00

	Level 3		
	12 Hour 1925 Gallon	24 Hour 3850 Gallon	48 Hour 7700 Gallon
A	378.00	378.00	576.00
B	110.00	110.00	110.00
C	16.00	28.00	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.
Materials and specifications subject to change without notice.



Distributed By:

Powerdak Power Products
13261 Timberline Plaza
Suite B
Piedmont, SD 57769
605-341-9920
Dave@GenProEnergy.com

POWERDAK

POWER PRODUCTS

Diesel Product Line

208-600 Volt

MD2000-01

60 Hz / 1800 RPM

2000 kWe / 1850 kWe

Standby / Prime

Ratings

	208V	240V	480V	600V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	60	60	60	60
Generator Model	Consult Factory	Consult Factory	744RSL4054	743RSS4292
Connection	4 LEAD WYE	4 LEAD DELTA	4 LEAD WYE	4 LEAD WYE
Standby				
kWe	2000	2000	2000	2000
AMPS	6948	6021	3011	2408
Temp Rise	Consult Factory	Consult Factory	130°C / 27°C	130°C / 27°C
Prime				
kWe	1850	1850	1850	1850
AMPS	6426	5569	2785	2228
Temp Rise	Consult Factory	Consult Factory	105°C / 40°C	105°C / 40°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
- ▶ 24V Battery System & Cables
- ▶ Air Cleaner (Dry Single Stage)
- ▶ Flexible Fuel Connector
- ▶ EPA Certified Tier 2

Listing Certifications

- ▶ UL 2200 Listed
- ▶ cUL Listed
- ▶ CSA Certified
- ▶ Seismic Certified to IBC 2012

Generator

- ▶ Brushless Single Bearing
- ▶ Automatic Voltage Regulator
- ▶ ± .25% Voltage Regulation
- ▶ 4 Pole, Rotating Field
- ▶ 130°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

- ▶ Microprocessor Based Digital Control
- ▶ Interface Connection Box
- ▶ Control Panel Mounted in NEMA 12 Enclosure
- ▶ Base - Structural Steel
- ▶ Main Line Circuit Breaker Mounted & Wired
- ▶ Critical Grade Silencer Loose
- ▶ Catalyst / Silencer Mounted (Prime)
- ▶ Battery Charger 24V 5 Amp
- ▶ Jacket Water 2 Qty: 9000W 240V w/Isolation Valves
- ▶ Vibration Isolation Mounts (Pad Type)
- ▶ Radiator Duct Flange (OPU Only)
- ▶ Single Source Supplier
- ▶ 2YR / 2000HR Standby Warranty
- ▶ 1YR / 1500HR Prime Warranty
- ▶ Standard Colors - White / Tan / Gray

Diesel Product Line

2000 kWe / 1850 kWe



Application Data

Engine			
Manufacturer:	Mitsubishi	Displacement - Cu. In. (lit):	3,989 (65.4)
Model:	S16R-Y2PTAW2-1	Bore - in. (cm) x Stroke - in. (cm):	6.69 (17.0) x 7.09 (18.0)
Type:	4-Cycle	Compression Ratio:	14.5:1
Aspiration:	Turbo Charged, H ₂ O/Air Intercooled	Rated RPM:	1800
Cylinder Arrangement:	16 Cylinder Vee	Max HP Stby (kWm):	2,923 (2,181)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	979 (526)	882 (472)
Gas Volume at Stack Temp: CFM (m³/min)	19,209 (544)	17,302 (490)
Maximum Allowable Exhaust Restriction: in. H₂O (kPa)	23.6 (5.90)	23.6 (5.90)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa)	0.50 (0.12)	0.50 (0.12)
Jacket Water Pump Flow Rate: GPM (lit/min)	489 (1,851)	489 (1,851)
Intercooler Pump Flow Rate: GPM (lit/min)	243 (920)	243 (920)
Heat Rejection to Jacket Coolant: BTUM (kW)	44,374 (777)	39,937 (699)
Heat Rejection to Intercooler: BTUM (kW)	44,374 (777)	39,937 (699)
Heat Radiated to Ambient: BTUM (kW)	11,384 (199)	10,530 (184)
Air Requirements		
Aspirating: CFM (m³/min)	7,274 (206)	6,532 (185)
Air Flow Required for Rad. Cooled Unit: CFM (m³/min)	86,078 (2,436)	86,078 (2,436)
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)	160.1 (606)	141.5 (535)
At 75% of Power Rating: gal/hr (lit/hr)	116.7 (442)	106.6 (403)
At 50% of Power Rating: gal/hr (lit/hr)	79.0 (299)	71.7 (272)
Fluids Capacity		
Total Oil System: gal (lit)	52.8 (200)	52.8 (200)
Engine Jacket Water Capacity w/Intercooler: gal (lit)	44.9 (170)	44.9 (170)
System Coolant Capacity: gal (lit)	182 (689)	182 (689)

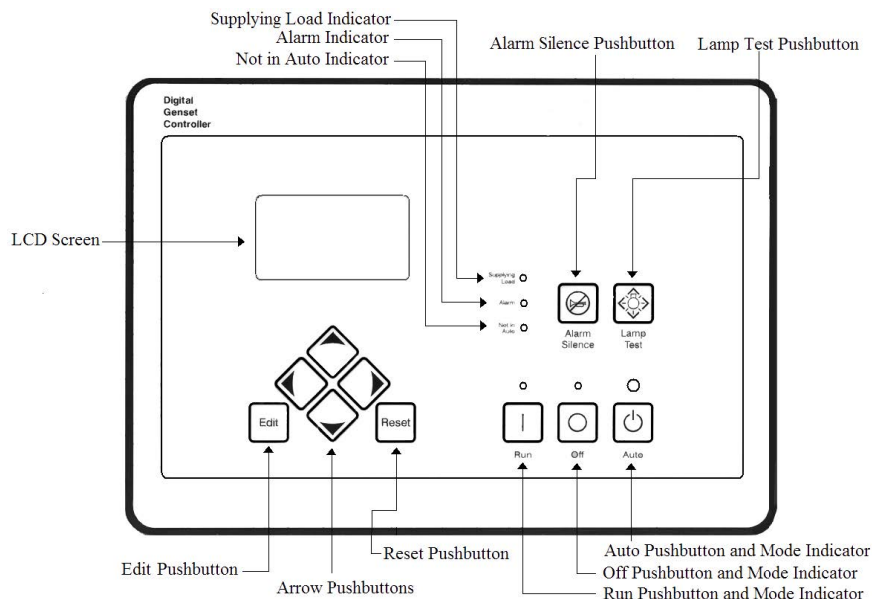
Deration Factors

Altitude: Derate 0.5% per 328 ft (100 m) above 3,280 ft (1,000 m) standby and prime. | Temperature: Derate 1.0% per 18°F (10°C) above 104°F (40°C) standby and prime.
Consult factory for site conditions above these parameters.

DGC-2020 Control Panel

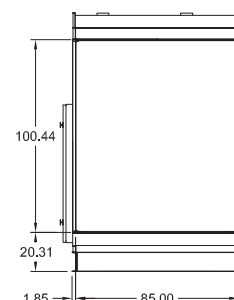
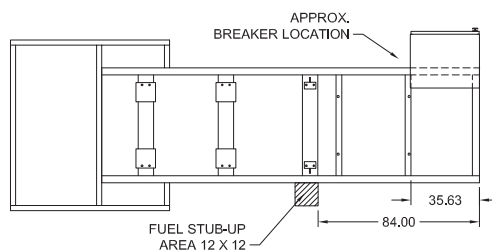
Standard Features

- ▶ 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 Compatible

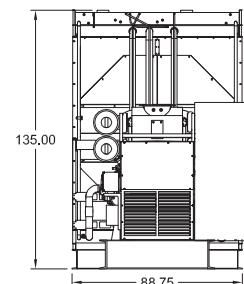
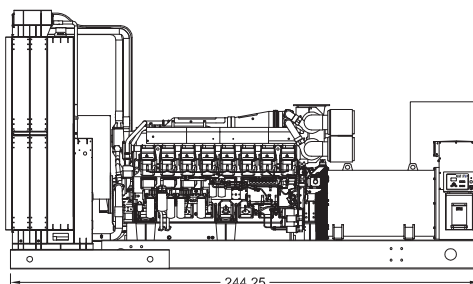


Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
OPU	244.25 x 88.75 x 135 in	37,675
Level 1	282 x 110 x 145 in	41,700
Level 2	282 x 110 x 145 in	41,900
Level 3	378 x 110 x 145 in	44,300



	No Load	Full Load
OPU	96 dBA	98 dBA
Level 1	88 dBA	91 dBA
Level 2	85 dBA	87 dBA
Level 3	82 dBA	84 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.

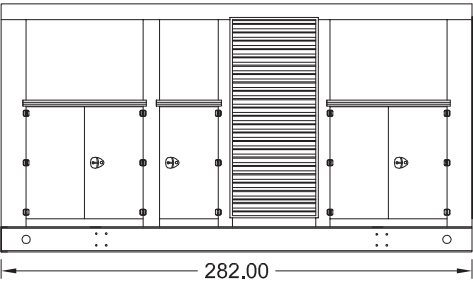
Diesel Product Line

2000 kW / 1850 kW

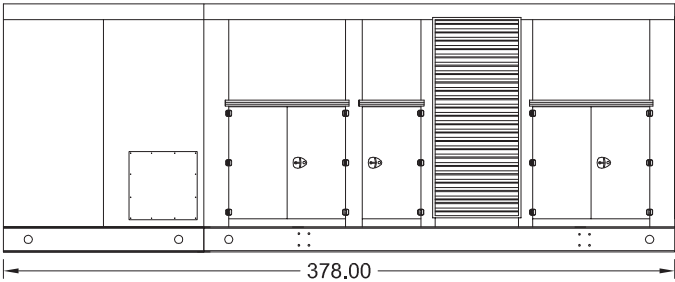


Enclosures

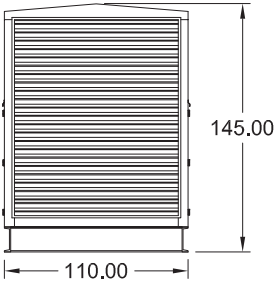
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)

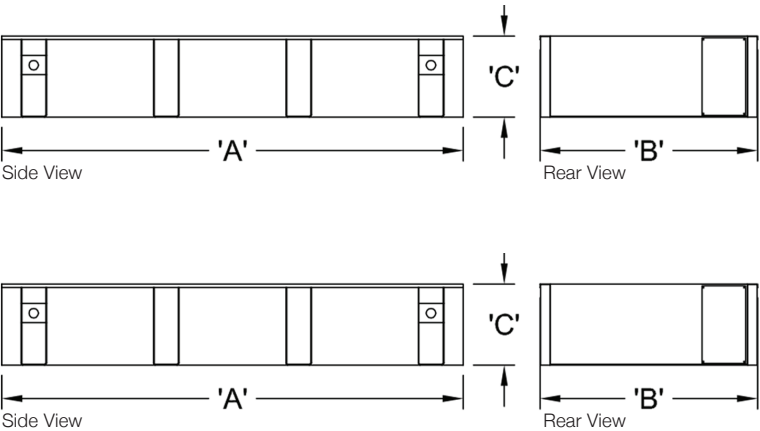


Level 1, 2 & 3 | Intake View



All enclosures are 150 MPH Wind Rated.
Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.
*Enclosure height does not include exhaust system.

Double Wall UL 142 Listed Fuel Tanks



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AUTOMATIC TRANSFER SWITCH PRODUCT LINE OVERVIEW

POWERDAK
POWER PRODUCTS

Transfer Switches

30 - 4000 Amps

Series 185

Series 300 G

Series 4000

Series 7000

Emerson Network Power ASCO Transfer Switches offer the best in class technology available. From light commercial to the critical power needs of health care, financial and data centers, ASCO has a switch to cover your needs. Available in a multitude of configurations to meet your design specifications.



ASCO Automatic Transfer Switches

Comparison Features	Series 185	Series 300 G	Series 4000	Series 7000
Intended Application	Light Commercial	Commercial / Light Industrial	Industrial	Mission Critical / Critical Power
Ampere sizes available	100 - 400	30 - 3,000	30 - 4,000	30 - 4,000
Phases Available	Single	Single or Three	Single or Three	Single or Three
Pole Counts Available	2	2, 3 or 4	2, 3 or 4	2, 3 or 4
Low Voltage	220 - 240V	115 - 600V	115 - 600V	115 - 600V
PRODUCT TYPE				
Open Transition Transfer Switch	Yes	Yes	Yes	Yes
Service Entrance Rated Transfer Switch	Yes	N/A	Yes	Yes
Power Transfer Load Center	Yes	N/A	N/A	Yes
Closed-Transition Transfer Switch	N/A	N/A	Yes	Yes
Delayed-Transition Transfer Switch	N/A	Yes	Yes	Yes
Soft Load Transfer	N/A	N/A	N/A	Yes
Bypass-Isolation transfer Switch	N/A	N/A	N/A	Yes
Closed-Transition Bypass-Isolation TS	N/A	N/A	N/A	Yes
Delayed-Transition Bypass-Isolation TS	N/A	N/A	N/A	Yes
Soft Load Bypass-Isolation TS	N/A	N/A	N/A	Yes
WITHSTAND AND CLOSE-ON RATINGS				
WCR when used with any circuit breaker	N/A	N/A	10 - 125kA	10 - 125kA
WCR when used with specific circuit breakers	10kA - 35kA	22 - 100kA	22 - 125kA	22 - 125kA
WCR when used with current limiting fuses	100 - 200kA	100 - 200kA	100 - 200kA	100 - 200kA
Withstand Short Time Rating	N/A	N/A	36 - 100kA	36 - 100kA
NEUTRAL CONFIGURATION				
Solid	Standard	Standard	Yes	Yes
Switched	N/A	Yes	Yes	Yes
Overlapped	N/A	N/A	N/A	Yes
Ground Termination	Yes	Yes	Yes	Yes
TIME DELAY SETTINGS				
Override Normal Source Momentary Outage	1 or 3 Seconds	0 to 6 Seconds	0 to 6 Seconds	0 to 6 Seconds
Transfer to Emergency	10 Seconds	0 to 60 Minutes 59 Seconds	0 to 60 Minutes	0 to 60 Minutes
Re-transfer to Normal Utility Power Loss Mode	5 Minutes	0 to 60 Minutes 59 Seconds	0 to 60 Minutes	0 to 60 Minutes
Engine Cool Down	2 or 5 Minutes	0 to 60 Minutes 59 Seconds	0 to 60 Minutes	0 to 60 Minutes
Override Emergency Source Momentary Outage	4 Seconds	0 to 6 Seconds	0 to 60 Minutes	0 to 60 Minutes
Emergency Exerciser	7 Day	7 Day	Programmable	Programmable
INDICATION AND CONTROLS				
Load Connected to Normal	Yes	Yes	Yes	Yes
Load Connected to Emergency	Yes	Yes	Yes	Yes
Normal Source Available	Yes	Yes	Yes	Yes
Emergency Source Available	Yes	Yes	Yes	Yes
Transfer Test Switch	Yes	Yes	Yes	Yes
Terminals for Remote Transfer Control	Standard	Standard	Standard	Standard
By-pass Time Delay	Yes	Yes	Yes	Yes
Transfer Inhibit	N/A	Yes	Yes	Yes
In-Phase Monitor	N/A	Yes	Yes	Yes
Load Disconnect Contacts with Time Delay	N/A	Standard	Optional	Optional
Event Log	N/A	Optional	Yes	Yes
Power Manager	N/A	Optional	Optional	Optional
Transfer Controls Lock Out	N/A	N/A	Yes	Optional
ENCLOSURES				
Type 1 / 3R	Yes	Yes	Yes	Yes
Type 4 / 4X / 12	N/A	Yes	Yes	Yes
CONNECTIVITY				
RS-485 Serial	N/A	Yes	Yes	Yes
Ethernet	Yes	Yes	Yes	Yes
Modbus	N/A	Yes	Yes	Yes
Monitoring and Control via ASCO Products	Yes	Yes	Yes	Yes

ENGINEERING GUIDEBOOK

POWERDAK
POWER PRODUCTS

WARRANTY DOCUMENTS

POWERDAK
POWER PRODUCTS

Engine Generator Set (3) Year 2000 Hour Standby Limited Warranty



Your Powerdak Power Products product has been designed and manufactured with care by people with many years of experience. Powerdak Power Products warrants to its Buyer that the product is free from defects in materials and/or workmanship for the period of time outlined below. If the product should prove defective within the time period outlined below, it will be repaired, adjusted or replaced at the option of Powerdak Power Products provided that the product, upon inspection by Powerdak Power Products has been properly installed, maintained and operated in accordance with Blue Star Power Systems Inc.'s Installation and Operating Manuals. This limited warranty is not valid or enforceable unless: (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. This warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear. The warranty is not assignable.

Powerdak Power Products product warranty period: Engine generator set: Parts and Labor for three (3) years from the date of factory invoice or 2000 hours (whichever occurs first). Accessories (installed on the engine generator set or shipped loose): Parts and Labor for one (1) year from the date of factory invoice or 2000 hours (whichever occurs first). Transfer Switches: If purchased with a generator set (same order number): Parts and Labor for two (2) years from the date of factory invoice or 2000 hours (whichever occurs first).

The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up. Additionally, the engine manufacturer's engine registration form must be completed and returned to the engine manufacturer as stated in the instructions with the registration form.

To obtain warranty service: Contact your nearest Powerdak Power Products Service Representative. For assistance in locating your nearest authorized service representative, contact Powerdak Power Products Attention: Service Department (see contact information below).

Warranty service may be performed by authorized Powerdak Power Products service providers only. Service work performed by unauthorized persons will void all warranties.

Powerdak Power Products shall not be liable for any claim in amount greater than the purchase price of the product. In no event shall Powerdak Power Products be held liable for any special, indirect, consequential or liquidated damages.

Powerdak Power Products shall not be liable for any claim that requires replacement of engine, part, or component of the gen-set that is no longer manufactured or available. Additionally, Powerdak Power Products will not be liable for any engine replacement that may require emissions tier level change.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED HEREIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR OTHERWISE CREATED UNDER THE UNIFORM COMMERCIAL CODE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

The following items and/or circumstances are excluded from this limited warranty:

- ▶ Engine starting batteries: The battery manufacturers' warranty applies. Consult your local battery supplier for warranty service.
- ▶ Fuel system and/or governing system adjustments performed during or after start-up.
- ▶ Normal maintenance items: Consumable items such as belts, filters and hoses.
- ▶ Adjustments and tune-ups performed during start-up or thereafter.
- ▶ Loose connections (electrical and mechanical) not found during start-up.
- ▶ All fluid level related items including low coolant not found during start-up or checked during regular maintenance intervals.
- ▶ Equipment modifications made without the written consent of Powerdak Power Products will void all warranties.
- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap.
- ▶ Any special access fees, requirements or after hours scheduling to gain access to the equipment for warranty service purposes.
- ▶ Buyer requested rental generators used while warranty work is being performed.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
- ▶ Improper installation or operation as outlined in the Installation and Operation Manuals.
- ▶ Misapplication of the equipment such as usage outside the original design parameters as stated on the nameplate of the equipment.
- ▶ Equipment purchased at the standby rating that is being used in a prime power application(s).
- ▶ Diesel engine "Wet Stacking" due to lightly loaded diesel engines.
- ▶ All travel labor and mileage on portable equipment must be approved before any work is performed.

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County, South Dakota.

Engine Generator Set Five (5) Year 3000 Hour Standby Limited Warranty



Your Powerdak Power Products product has been designed and manufactured with care by people with many years of experience. Powerdak Power Products warrants to its Buyer that the product is free from defects in materials and/or workmanship for the period of time outlined below. If the product should prove defective within the time period outlined below, it will be repaired, adjusted or replaced at the option of Powerdak Power Products provided that the product, upon inspection by Powerdak Power Products has been properly installed, maintained and operated in accordance with Blue Star Power Systems Inc.'s Installation and Operating Manuals. This limited warranty is not valid or enforceable unless: (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. This warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear. The warranty is not assignable.

Powerdak Power Products product warranty period: Engine generator set: Parts and Labor for three (3) years from the date of factory invoice or 2000 hours (whichever occurs first). Warranty coverage for years four (4) thru five (5) or up to 3000 hours is parts only. Accessories (installed on the engine generator set or shipped loose): Parts and Labor for one (1) year from the date of factory invoice or 2000 hours (whichever occurs first). Transfer Switches: If purchased with a generator set (same order number): Parts and Labor for two (2) years from the date of factory invoice or 2000 hours (whichever occurs first).

The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up. Additionally, the engine manufacturer's engine registration form must be completed and returned to the engine manufacturer as stated in the instructions with the registration form.

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Powerdak Power Products shall not be liable for any claim in amount greater than the purchase price of the product. In no event shall Powerdak Power Products be held liable for any special, indirect, consequential or liquidated damages.

Powerdak Power Products shall not be liable for any claim that requires replacement of engine, part, or component of the gen-set that is no longer manufactured or available. Additionally, Powerdak Power Products will not be liable for any engine replacement that may require emissions tier level change.

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- ▶ Engine starting batteries: The battery manufacturers' warranty applies. Consult your local battery supplier for warranty service.
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- ▶ All fluid level related items including low coolant not found during start-up or checked during regular maintenance intervals.
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- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap.
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- ▶ Buyer requested rental generators used while warranty work is being performed.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
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Engine Generator Set Five (5) Year 3000 Hour Standby Comprehensive Warranty



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Powerdak Power Products product warranty period: Engine generator set: Parts and Labor for five (5) years from the date of factory invoice or 3000 hours (whichever occurs first). Accessories (installed on the engine generator set or shipped loose): Parts and Labor for one (1) year from the date of factory invoice or 2000 hours (whichever occurs first). Transfer Switches: If purchased with a generator set (same order number): Parts and Labor for two (2) years from the date of factory invoice or 2000 hours (whichever occurs first).

The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up. Additionally, the engine manufacturer's engine registration form must be completed and returned to the engine manufacturer as stated in the instructions with the registration form.

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- ▶ Equipment modifications made without the written consent of Powerdak Power Products will void all warranties.
- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap.
- ▶ Any special access fees, requirements or after hours scheduling to gain access to the equipment for warranty service purposes.
- ▶ Buyer requested rental generators used while warranty work is being performed.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
- ▶ Improper installation or operation as outlined in the Installation and Operation Manuals.
- ▶ Misapplication of the equipment such as usage outside the original design parameters as stated on the nameplate of the equipment.
- ▶ Equipment purchased at the standby rating that is being used in a prime power application(s).
- ▶ Diesel engine "Wet Stacking" due to lightly loaded diesel engines.
- ▶ All travel labor and mileage on portable equipment must be approved before any work is performed.

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County, South Dakota.

Engine Generator Set Ten (10) Year 3000 Hour Standby Limited Warranty



Your Powerdak Power Products product has been designed and manufactured with care by people with many years of experience. Powerdak Power Products warrants to its Buyer that the product is free from defects in materials and/or workmanship for the period of time outlined below. If the product should prove defective within the time period outlined below, it will be repaired, adjusted or replaced at the option of Powerdak Power Products provided that the product, upon inspection by Powerdak Power Products has been properly installed, maintained and operated in accordance with Blue Star Power Systems Inc.'s Installation and Operating Manuals. This limited warranty is not valid or enforceable unless: (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. This warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear. The warranty is not assignable.

Powerdak Power Products product warranty period: Engine generator set: Parts and Labor for five (5) years from the date of factory invoice or 3000 hours (whichever occurs first). Warranty coverage for years six (6) thru ten (10) or up to 3000 hours is major component parts only (*see below). Accessories (installed on the engine generator set or shipped loose): Parts and Labor for one (1) year from the date of factory invoice or 2000 hours (whichever occurs first). Transfer Switches: If purchased with a generator set (same order number): Parts and Labor for two (2) years from the date of factory invoice or 2000 hours (whichever occurs first).

The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up. Additionally, the engine manufacturer's engine registration form must be completed and returned to the engine manufacturer as stated in the instructions with the registration form.

To obtain warranty service: Contact your nearest Powerdak Power Products Service Representative. For assistance in locating your nearest authorized service representative, contact Powerdak Power Products Attention: Service Department (see contact information below).

Warranty service may be performed by authorized Powerdak Power Products service providers only. Service work performed by unauthorized persons will void all warranties.

Powerdak Power Products shall not be liable for any claim in amount greater than the purchase price of the product. In no event shall Powerdak Power Products be held liable for any special, indirect, consequential or liquidated damages.

Powerdak Power Products shall not be liable for any claim that requires replacement of engine, part, or component of the gen-set that is no longer manufactured or available. Additionally, Powerdak Power Products will not be liable for any engine replacement that may require emissions tier level change.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED HEREIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR OTHERWISE CREATED UNDER THE UNIFORM COMMERCIAL CODE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

The following items and/or circumstances are excluded from this limited warranty:

- ▶ Engine starting batteries: The battery manufacturers' warranty applies. Consult your local battery supplier for warranty service.
- ▶ Fuel system and/or governing system adjustments performed during or after start-up.
- ▶ Normal maintenance items: Consumable items such as belts, filters and hoses.
- ▶ Adjustments and tune-ups performed during start-up or thereafter.
- ▶ Loose connections (electrical and mechanical) not found during start-up.
- ▶ All fluid level related items including low coolant not found during start-up or checked during regular maintenance intervals.
- ▶ Equipment modifications made without the written consent of Powerdak Power Products will void all warranties.
- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap.
- ▶ Any special access fees, requirements or after hours scheduling to gain access to the equipment for warranty service purposes.
- ▶ Buyer requested rental generators used while warranty work is being performed.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
- ▶ Improper installation or operation as outlined in the Installation and Operation Manuals.
- ▶ Misapplication of the equipment such as usage outside the original design parameters as stated on the nameplate of the equipment.
- ▶ Equipment purchased at the standby rating that is being used in a prime power application(s).
- ▶ Diesel engine "Wet Stacking" due to lightly loaded diesel engines.
- ▶ All travel labor and mileage on portable equipment must be approved before any work is performed.

***Major Components:**

Engine: Cylinder block, camshaft, crankshaft, connecting rods, and flywheel. Generator: (Alternator) Main rotor, main stator, and drive disk.

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County, South Dakota.

Engine Generator Set One (1) Year 1500 Hour Prime Power Limited Warranty



Your Powerdak Power Products product has been designed and manufactured with care by people with many years of experience. Powerdak Power Products warrants to its Buyer that the product is free from defects in materials and/or workmanship for the period of time outlined below. If the product should prove defective within the time period outlined below, it will be repaired, adjusted or replaced at the option of Powerdak Power Products provided that the product, upon inspection by Powerdak Power Products has been properly installed, maintained and operated in accordance with Blue Star Power Systems Inc.'s Installation and Operating Manuals. This limited warranty is not valid or enforceable unless: (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. This warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear. The warranty is not assignable.

Powerdak Power Products product warranty period: Engine generator set: Parts and Labor for one (1) year from the date of factory invoice or 1500 hours (whichever occurs first). Accessories (installed on the engine generator set or shipped loose): Parts and Labor for one (1) year from the date of factory invoice or 1500 hours (whichever occurs first). Transfer Switches: If purchased with a generator set (same order number): Parts and Labor for two (2) years from the date of factory invoice or 2000 hours (whichever occurs first).

The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up. Additionally, the engine manufacturer's engine registration form must be completed and returned to the engine manufacturer as stated in the instructions with the registration form.

To obtain warranty service: Contact your nearest Powerdak Power Products Service Representative. For assistance in locating your nearest authorized service representative, contact Powerdak Power Products Attention: Service Department (see contact information below).

Warranty service may be performed by authorized Powerdak Power Products service providers only. Service work performed by unauthorized persons will void all warranties.

Powerdak Power Products shall not be liable for any claim in amount greater than the purchase price of the product. In no event shall Powerdak Power Products be held liable for any special, indirect, consequential or liquidated damages.

Powerdak Power Products shall not be liable for any claim that requires replacement of engine, part, or component of the gen-set that is no longer manufactured or available. Additionally, Powerdak Power Products will not be liable for any engine replacement that may require emissions tier level change.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED HEREIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR OTHERWISE CREATED UNDER THE UNIFORM COMMERCIAL CODE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

The following items and/or circumstances are excluded from this limited warranty:

- ▶ Engine starting batteries: The battery manufacturers' warranty applies. Consult your local battery supplier for warranty service.
- ▶ Fuel system and/or governing system adjustments performed during or after start-up.
- ▶ Normal maintenance items: Consumable items such as belts, filters and hoses.
- ▶ Adjustments and tune-ups performed during start-up or thereafter.
- ▶ Loose connections (electrical and mechanical) not found during start-up.
- ▶ All fluid level related items including low coolant not found during start-up or checked during regular maintenance intervals.
- ▶ Equipment modifications made without the written consent of Powerdak Power Products will void all warranties.
- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap.
- ▶ Any special access fees, requirements or after hours scheduling to gain access to the equipment for warranty service purposes.
- ▶ Buyer requested rental generators used while warranty work is being performed.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
- ▶ Improper installation or operation as outlined in the Installation and Operation Manuals.
- ▶ Misapplication of the equipment such as usage outside the original design parameters as stated on the nameplate of the equipment.
- ▶ Diesel engine "Wet Stacking" due to lightly loaded diesel engines.
- ▶ All travel labor and mileage on portable equipment must be approved before any work is performed.

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County South Dakota.

Engine Generator Set One (1) Year 4500 Hour Prime Power Limited Warranty



Your Powerdak Power Products product has been designed and manufactured with care by people with many years of experience. Powerdak Power Products warrants to its Buyer that the product is free from defects in materials and/or workmanship for the period of time outlined below. If the product should prove defective within the time period outlined below, it will be repaired, adjusted or replaced at the option of Powerdak Power Products provided that the product, upon inspection by Powerdak Power Products has been properly installed, maintained and operated in accordance with Blue Star Power Systems Inc.'s Installation and Operating Manuals. This limited warranty is not valid or enforceable unless: (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. This warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear. The warranty is not assignable.

Powerdak Power Products product warranty period: Engine generator set: Parts and Labor for one (1) year from the date of factory invoice or 4500 hours (whichever occurs first). Accessories (installed on the engine generator set or shipped loose): Parts and Labor for one (1) year from the date of factory invoice or 1500 hours (whichever occurs first). Transfer Switches: If purchased with a generator set (same order number): Parts and Labor for two (2) years from the date of factory invoice or 2000 hours (whichever occurs first).

The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up. Additionally, the engine manufacturer's engine registration form must be completed and returned to the engine manufacturer as stated in the instructions with the registration form.

To obtain warranty service: Contact your nearest Powerdak Power Products Service Representative. For assistance in locating your nearest authorized service representative, contact Powerdak Power Products Attention: Service Department (see contact information below).

Warranty service may be performed by authorized Powerdak Power Products service providers only. Service work performed by unauthorized persons will void all warranties.

Powerdak Power Products shall not be liable for any claim in amount greater than the purchase price of the product. In no event shall Powerdak Power Products be held liable for any special, indirect, consequential or liquidated damages.

Powerdak Power Products shall not be liable for any claim that requires replacement of engine, part, or component of the gen-set that is no longer manufactured or available. Additionally, Powerdak Power Products will not be liable for any engine replacement that may require emissions tier level change.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED HEREIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR OTHERWISE CREATED UNDER THE UNIFORM COMMERCIAL CODE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

The following items and/or circumstances are excluded from this limited warranty:

- ▶ Engine starting batteries: The battery manufacturers' warranty applies. Consult your local battery supplier for warranty service.
- ▶ Fuel system and/or governing system adjustments performed during or after start-up.
- ▶ Normal maintenance items: Consumable items such as belts, filters and hoses.
- ▶ Adjustments and tune-ups performed during start-up or thereafter.
- ▶ Loose connections (electrical and mechanical) not found during start-up.
- ▶ All fluid level related items including low coolant not found during start-up or checked during regular maintenance intervals.
- ▶ Equipment modifications made without the written consent of Powerdak Power Products will void all warranties.
- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap.
- ▶ Any special access fees, requirements or after hours scheduling to gain access to the equipment for warranty service purposes.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
- ▶ Buyer requested rental generators used while warranty work is being performed.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Improper installation or operation as outlined in the Installation and Operation Manuals.
- ▶ Misapplication of the equipment such as usage outside the original design parameters as stated on the nameplate of the equipment.
- ▶ Diesel engine "Wet Stacking" due to lightly loaded diesel engines.
- ▶ All travel labor and mileage on portable equipment must be approved before any work is performed.

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County, South Dakota.

ASCO Transfer Switch

Two (2) Year Limited Warranty



Your Emerson Network Power ASCO Transfer Switches have been designed and manufactured with care by people with many years of experience. Powerdak Power Products warrants to its Buyer that the product is free from defects in materials and/or workmanship for the period of time outlined below. If the product should prove defective within the time period outlined below, it will be repaired, adjusted or replaced at the option of Powerdak Power Products provided that the product, upon inspection by Powerdak Power Products has been properly installed, maintained and operated in accordance with the ATS manufacture's Installation and Operating Manuals. This limited warranty is not valid or enforceable unless: (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. This warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear. The warranty is not assignable

Powerdak Power Products warrants that the ATS will be free from defects in material and workmanship and will conform to the manufactures standard specifications of the ATS for a period of two (2) years from the date of factory invoice. The start of the warranty period can be adjusted to the date of unit start-up (limited to 180 days from invoice date) provided that the following information is provided to Powerdak Power Products at the time of start-up. The warranty will not be effective unless a copy of the Powerdak Power Products start-up validation checklist is properly and completely filled out and returned to Powerdak Power Products within 30 days of start-up.

The foregoing Limited Warranty is conditioned upon User's compliance with the following:

1. The Power Transfer Switch is installed in accordance with Manufacture's specifications and state and local codes and standards by an electrician licensed in the state of installation.
2. The Power Transfer Switch is maintained in accordance with instructions and used under normal conditions for the purposes intended by the manufacturer.
3. All warranty field-related repairs, replacements or adjustments must be made by Powerdak Power Products. Authorized representative.

Optional extended warranty coverage may be purchased from Powerdak Power Products for a specified fee at the time of the original sale. If purchased, warranty period shall be extended up to an additional three (3) years beyond the standard two (2) years to provide up to five (5) year coverage applicable to the above referenced products. The length of optional extended coverage shall be reflected on the Powerdak Power Products invoice and/or order acknowledgement document. Warranty extends to first purchaser for use, non-transferable: This Warranty is extended to the first person, firm, association or corporation for whom the product specified herein is. Originally installed for use (the "User") in the fifty United States or Canada. This Warranty is not transferable.

THIS WARRANTY DOES NOT COVER DAMAGE OR DEFECT CAUSED BY misuse, improper application or installation, wrong or inadequate electrical current/voltage or connection, negligence, inappropriate on site operating conditions, repair by non-Blue Star designated personnel, accident in transit, tampering, alterations, a change in location or operating use, exposure to the elements, water, or other corrosive liquids or gases, Acts of God, theft or installation contrary to manufactures recommendations or specifications, or in any event if the manufactures serial number has been altered, defaced, or removed.

THIS WARRANTY DOES NOT COVER shipping costs, installation costs, external circuit breaker resetting or maintenance or service items and further, except as may be provided herein, does NOT include labor costs or transportation charges arising from the replacement of the manufactures product or any part thereof or charges to remove or reinstall same at any premises of User.

Powerdak Power Products shall not be liable for any claim in amount greater than the purchase price of the product. In no event shall Powerdak Power Products be held liable for any special, indirect, consequential or liquidated damages. Powerdak Power Products shall not be liable for any claim that requires replacement, part, or component of the Transfer Switch that is no longer manufactured or available.

REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT OR PART THEREOF DOES NOT EXTEND THE ORIGINAL WARRANTY PERIOD.

THE PRODUCTS LISTED IN THIS WARRANTY ARE NOT FOR USE IN THE CONTROL AREA OR ANY REACTOR CONNECTED OR SAFETY APPLICATIONS OR WITHIN THE CONTAINMENT AREA OF A NUCLEAR FACILITY OR FOR INTEGRATION INTO MEDICAL DEVICES.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED HEREIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR OTHERWISE CREATED UNDER THE UNIFORM COMMERCIAL CODE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

The following items and/or circumstances are excluded from this limited warranty:

- ▶ Normal maintenance items
- ▶ Adjustments performed during start-up or thereafter.
- ▶ Loose connections (electrical and mechanical) not found during start-up.
- ▶ Equipment modifications made without the written consent of Powerdak Power Products will void all warranties.
- ▶ Shipping damage of any type. All equipment is shipped F.O.B. factory and risk of loss transfers to the carrier once loaded for shipment. It is the responsibility of the receiving party to sign for the receipt of, and note any shipping damage to the equipment. Freight damage claim filing is the responsibility of the receiving party. In the rare event that damage occurs during shipment, Powerdak Power Products will not warrant any damage to the unit resulting from shrink wrap. ▶ Any special access fees, requirements or after hours scheduling to gain access to the equipment for warranty service purposes.
- ▶ Damages caused by acts of nature, such as lightning, wind, flood, or earthquake.
- ▶ Any damage due to situations beyond the control of the manufacturing and/or workmanship of the product.
- ▶ Use of non-protected steel enclosure within 10 miles of the coast.
- ▶ Improper installation or operation as outlined in the Installation and Operation Manuals.
- ▶ Misapplication of the equipment such as usage outside the original design parameters as stated on the nameplate of the equipment.

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County South Dakota.

Product Warranty Policy & Claims Submission Procedures



Warranty Coverage:

Warranty coverage and length varies. Please refer to the warranty document provided with each particular product to verify warranty terms and conditions.

Warranty Period:

The warranty period begins on the invoice date. The warranty start date can be adjusted to the date the unit was put into service, provided that the unit start-up validation form is completed and returned to Powerdak Power Products within 180 days from the ship date of the product. The warranty is not valid unless the engine manufacturer's engine registration form is completed and returned to the engine manufacturer as stated in the instructions with the registration form.

Submitting a Warranty Claim:

All warranty repairs must be authorized by the Powerdak Power Products warranty department prior to the work being performed. An authorization number will be assigned to each case. All requests for warranty reimbursement must be completed and submitted on a Powerdak Power Products warranty claim form with the authorization number. The warranty authorization number is used for record keeping only and is not an authorization for payment.

All claims for warranty reimbursement must be submitted for consideration within 60 days of the approval date.

A copy of your work order should be provided along with the claim form. Providing as much complete, detailed information regarding the problem, correction, parts used and charges will expedite the reimbursement process. Photos of the problem, correction and installation are encouraged and at times required.

If requested by Powerdak Power Products defective parts are to be returned to the address below, along with the completed forms. Please mark all packages with the warranty authorization number. All warranties may not be valid or enforceable unless (1) all supporting maintenance records are kept on file with the end user and made available upon request from factory, and (2) the generator set is routinely exercised in accordance with operating instructions. Warranty does not apply to malfunctions caused by physical damage, misuse, improper installation, repair or service by unauthorized persons, or normal wear and tear.

We value your input and suggestions on how to improve and enhance the quality and reliability of our products. Please take a moment to fill out the appropriate section of the claim form or call us directly.

Rate Agreements:

The rates for labor, travel and mileage, as well as a maximum travel distance radius must be pre-approved and on file with Powerdak Power Products prior to the commencement of any work. Requests for rate adjustments must be submitted for approval to Powerdak Power Products in writing 60 days prior to the desired effectivity date.

Any work that is to be performed outside of normal working hours that could result in over-time rates must be approved prior to the work being performed. Sub-contracted work performed by others will be reimbursed at the actual cost, not exceeding the pre-approved rate agreements.

Payment:

Unless other arrangements are made, reimbursement of approved warranty settlements will be in the form of a credit to your account with Powerdak Power Products. To receive approved warranty settlement credits or payments, your account must be in good standing, which includes all open accounts receivable balances being current and within approved terms. If at the time of approved warranty settlement your account is not current or within the approved terms you will have 30 days to get your account current or you will forfeit your approved warranty settlement credits or payments. No exceptions will be made.

Contact and shipping information:

Powerdak Power Products
Attn: Warranty Department
3350 Jet Dr
Rapid City South Dakota 57703
Ph: 605.341.6160
Fax: 605.341.9918

Terms of warranty shall be deemed made and executed in Rapid City, Pennington County, South Dakota. Venue for all legal proceedings shall be in Pennington County South Dakota.

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