

Cat® DG450 GC

SPARK-IGNITED GENERATOR SETS



Image shown may not reflect actual configuration.

Standby/Demand Response

450 ekW

563 kVA – 60 Hz

- UL2200:** Evaluated by ETL to UL Standard for Safety UL2200
- CSA:** Designed in accordance to CSA22.2 standards
- NFPA:** Facilitates compliance with NFPA110
- Type 10:** Product was tested to NFPA110 Type 10

BENEFITS & FEATURES

CAT® GENERATOR SET PACKAGE

Cat natural gas fuel generator sets deliver dependable, clean, economical power even in the most demanding conditions. Cat generator sets are available in a wide range of configurations with optional equipment. Cat generator sets are designed, engineered, and manufactured for optimal performance. All major components are tested individually. Once assembled, the entire unit is tested at and above 100% of rated load for safety and operation. The generator set facilitates compliance with NFPA 110 and meets ISO 8528-5 requirements for transient response.

These complete, ready-to-run packages have another distinct advantage. They all come with the comprehensive service and support of Cat dealers – beginning with prompt delivery and ongoing support throughout the life of the generator set.

ENGINES

The spark-ignited engines features include Cat air filter (dry, disposable), radiator outlet duct adapter, oil filters, flexible exhaust connection (open generator sets), and are factory filled with Caterpillar approved oil and extended life coolant.

COOLING SYSTEM

The cooling system is designed to operate in 50°C/122°F ambient temperatures. It has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat dealer for specific ambient and altitude capabilities.

ALTERNATOR

Full load capacity, three-phase, 12 lead, and reconnectable alternator built for extended, dependable life. Features include permanent magnet excitation, amortisseur winding, skewed stator, voltage adjustment through the EMCP controller, Class H winding insulation, and 2/3 pitch incorporated.

EMCP CONTROL PANELS

The Cat EMCP 4.2B control panel is fully equipped with all necessary engine gauges, AC meters, and warnings, providing expanded generator set protection and monitoring. Additional monitoring and expansion modules provide control and protection for critical installations and applications.

SPECIFICATIONS

ENGINE SPECIFICATIONS

Engine Model	21.9 L, V12, 4-cycle
Bore x Stroke	128 mm x 142 mm (5.03 in x 5.6 in)
Displacement	21.9 L (1336.42 in³)
Compression Ratio	10:1
Aspiration	Turbocharged-Aftercooled
Fuel System	Carburetor, Down Draft
Governor	Electronic
Fuel Type	Natural Gas
Emission Certifications	U.S. EPA Certified for Non-Emergency
Rated Engine Speed	1800 rpm

GENERATOR SET SPECIFICATIONS

Alternator Design	Sealed Bearings, Brushless, IP21
Stator	2/3 Pitch
Poles	4
Available Voltages	120/208, 120/240, 277/480, 347/600 VAC (3-phase)
Frequency	60 Hz
Alternator Insulation	Class H
Voltage Regulator Type	Full Digital
Available Excitation Types	Permanent Magnet Excitation
Steady State Regulation Accuracy	± 0.25%
Harmonic Distortion	<5%

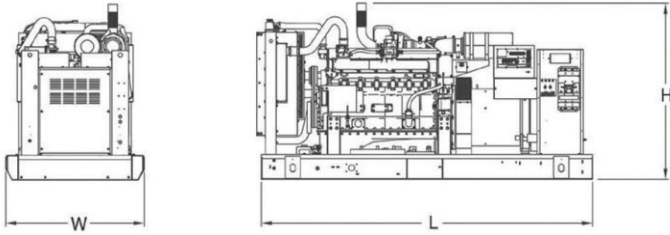
STANDARD EQUIPMENT

Engine System	General: <ul style="list-style-type: none"> • Oil drain extension • Heavy duty air cleaner • Fan guard • Stainless steel flexible exhaust connection • Factory-filled oil and coolant • Radiator duct adapter (open set only) • Critical exhaust silencer
	Fuel System: <ul style="list-style-type: none"> • Flexible fuel line – NPT connection • Primary and secondary fuel shutoff
	Cooling System: <ul style="list-style-type: none"> • Closed coolant recovery system • UV/ozone resistant hoses • Factory-installed radiator • Radiator drain extension • 50/50 ethylene glycol antifreeze
	Engine Electrical System: <ul style="list-style-type: none"> • Battery charging alternator • Battery cables • Battery tray • Solenoid activated starter motor • Rubber-booted engine electrical connections
Alternator System	GENprotect™
	Class H insulation material
	2/3 pitch
	Skewed stator
	Permanent magnet excitation
	Sealed bearings
	Amortisseur winding
Generator Set	Full-load capacity alternator
	Internal generator set vibration isolation
	Separation of circuits – high/low voltage
	Separation of circuits – multiple breakers
	Wrapped exhaust piping (enclosed units)
	Standard factory testing
	2-year limited warranty (Standby/Demand Response rated units)
	Silencer mounted in the discharge hood (enclosed only)
Enclosure (if selected)	Rust-proof fasteners with nylon washers to protect finish
	High performance sound-absorbing material (sound attenuation enclosures)
	Gasketed doors
	Stamped air-intake louvers
	Upward facing discharge hoods (radiator and exhaust)
	Stainless steel lift-off door hinges
	Stainless steel lockable handles
	RhinoCoat™ – Textured polyester powder coat paint

CONFIGURABLE OPTIONS

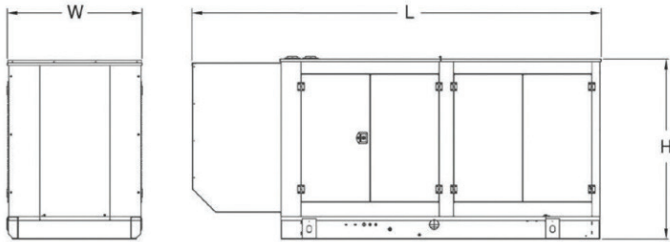
Engine System	General: <ul style="list-style-type: none"> • Engine coolant heater with ball valves • Flexible fuel line – NPT connection • Oil heater • Air filter restriction indicator • Stone guard (open set only) • Fan and belt guards
	Engine Electrical System: <ul style="list-style-type: none"> • 20A UL battery charger • Battery warmer
	Alternator System <ul style="list-style-type: none"> • Anti-condensation heater • Tropical coating
Generator Set	Gen-Link® Communications Software (English only)
	Extended factory testing (3-phase only)
	12-position load center
Circuit Breaker Options	Vapor recovery heater
	Main line circuit breaker
	2nd main line circuit breaker
	Shunt trip and auxiliary contact
Enclosure	Electronic trip breakers
	Standard enclosure
	Level 1 sound attenuation
	Level 2 sound attenuation
	Level 3 sound attenuation
	Level 2 sound attenuation with motorized dampers
	Steel enclosure
	Aluminum enclosure
	Up to 200 mph wind load rating*
	AC/DC enclosure lighting kit
Enclosure ambient heaters	
Control System	16-light remote annunciator
	Oil temperature sender with alarm
	Remote E-stop (break glass-type, surface mount)
	Remote E-stop (red mushroom-type, surface mount)
	Remote E-stop (red mushroom-type, flush mount)
	Remote communication – modem
	10A run relay
Warranty	Ground fault indication and protection functions
	120V GFCI and 240V outlet
	100 dB alarm horn
	2-year extended limited warranty
	5-year warranty
	5-year extended limited warranty
7-year extended limited warranty	
10-year extended limited warranty	

WEIGHTS & DIMENSIONS*



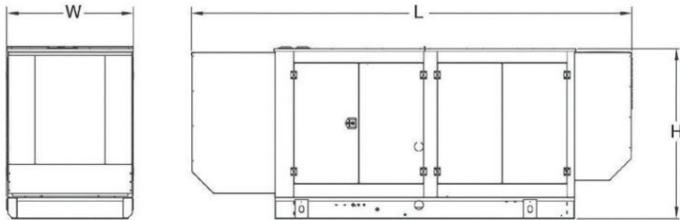
OPEN SET (Includes Exhaust Flex)

L x W x H in (mm)	154.4 (3923) x 71 (1803) x 67.6 (1716)
Weight lbs (kg)	8274 (3753)
Sound Level (dBA*)	93



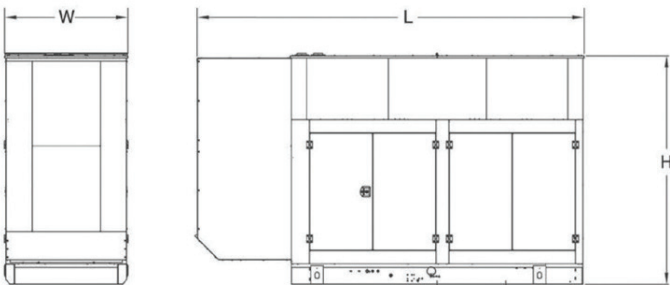
STANDARD ENCLOSURE

L x W x H in (mm)	207.4 (5268) x 70 (1800) x 80 (2032)
Weight lbs (kg)	Steel: 10463 (4746) Aluminum: 9376 (4253)
Sound Level (dBA*)	87



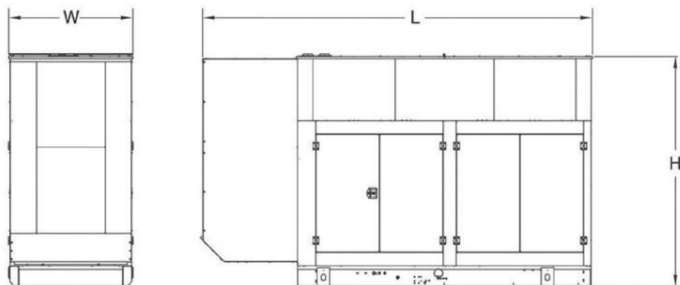
LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	247.5 (6285) x 71 (1803) x 80 (2032)
Weight lbs (kg)	Steel: 11470 (5203) Aluminum: 9808 (4449)
Sound Level (dBA*)	82



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	207.4 (5268) x 71 (1803) x 114 (2899)
Weight lbs (kg)	Steel: 11808 (5356) Aluminum: 9954 (4515)
Sound Level (dBA*)	76



LEVEL 3 ACOUSTIC ENCLOSURE

L x W x H in (mm)	232 (5892) x 76.9 (1954) x 129.2 (3281)
Weight lbs (kg)	Steel: 16997 (7710) Aluminum: 14447 (6553)
Sound Level (dBA*)	71.3

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EMCP 4.2B CONTROL PANEL FEATURES:



- Control-panel-provided power metering and protective relaying along with engine and generator control and monitoring.
- Embedded with programmable logic controller (PLC) functionality, which enables the generator set to monitor and control other equipment within the operation.
- Includes inputs to collect supplementary data for the PLC to process when operating the generator set and activating external equipment. On a remote location without the ability to supply power to the battery charger, the PLC would likewise monitor the battery voltage to start and stop the machine to preserve battery, ensuring the unit is ready to run when needed.

FINANCING

Caterpillar offers an array of financial products to help you succeed through financial service excellence. Options include loans, finance lease, operating lease, working capital, and revolving line of credit. Contact your local Cat dealer for availability in your region.

WORLDWIDE PRODUCT SUPPORT

Cat dealers provide extensive post-sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Cat S•O•SSM program effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

DEFINITIONS AND CONDITIONS

Applicable Codes and Standards: CSA C22.2 No 100-04, UL 489, UL 869, UL 2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33.

Standby/Demand Response: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby/demand response power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Deration: For power deration rates reference, please consult Cat LEHE1699-00.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on heat value for natural gas of 1015 BTU/SCF @77°F (25°C) and 328 ft (100 m) above sea level. Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

LET'S DO THE WORK.™

www.cat.com/electricpower

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