Cat® DG450 GC SPARK-IGNITED GENERATOR SETS

Image shown may not reflect actual configuration

Standby 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

SPECIFICATIONS

Engine	
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 in^3)
Compression Ratio	10:1
Aspiration	Turbocharged-Aftercooled
Fuel System	Carburetor, Down Draft
Governor	Electronic
Fuel Type	Natural Gas
Emission Certifications	U.S. EPA Certified
Rated Engine Speed	1800 rpm
General	
Cylinder No.	12
Engine Governing	
Frequency Regulation (Steady State)	+/- 0.25%
Lubrication System	
Oil Pump Type	Gear
Oil Filter Type	Twin Full-flow with Intercooler
Crankcase Capacity – L (qts)	30 (31.7)

Cooling System	
Cooling System Type	Pressurized Closed Recovery
Water Pump Flow – gal/min (l/min)	211 (800)
Coolant Heater Standard Voltage/Wattage	120 V/2500 W
Fuel System	
Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
Operating Fuel Pressure	7" - 11" H_2O
Engine Electrical System	
System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Voltage	(2) 12 VDC

ENGINEERED OPTIONS

Engine System	Fluid Containment Pans
Alternator System	3rd Breaker Systems
Control System	EMCP 4.2B
	Battery Disconnect Switch

Generator Set	Special Testing
	Battery Box
Enclosure	Door Alarm Switch

POWER RATINGS – NATURAL GAS

	Natural Gas	
Three-Phase 120/208 VAC @0.8pf	450 kW	Amps: 1561
Three-Phase 120/240 VAC @0.8pf	450 kW	Amps: 1353
Three-Phase 277/480 VAC @0.8pf	450 kW	Amps: 677
Three-Phase 346/600 VAC @0.8pf	450 kW	Amps: 541

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STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip														
	480 VAC							208/240 VAC						
Alternator	kW	10%	15%	20%	25%	30%	35%	kW	10%	15%	20%	25%	30%	35%
Standard	500	457	686	914	1143	1371	1600	500	429	643	857	1071	1286	1500

FUEL CONSUMPTION RATES*

Natural Gas – ft³/hr (m³/hr)	
Percent Load	Standby
25%	2088 (59)
50%	3200 (91)
75%	4310 (122)
100%	5420 (153)

*Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby
Air Flow (inlet air combustion and radiator)	ft³/min (m³/min)	25,100 (711)
Coolant Flow per Minute	gpm (lpm)	211 (800)
Coolant System Capacity	gal (Liters)	23 (87)
Heat Rejection to Coolant	BTU/hr	1,240,000
Maximum Radiator Backpressure	in H_2O	0.5

COMBUSTION AIR REQUIREMENTS

		Standby
Flow at Rated Power	cfm (m³/min)	844 (23.6)

ENGINE

		Standby
Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	718
BMEP	psi	236

**Refer to "Emissions Data Sheet" for maximum bhp for EPA and SCAQMD permitting purposes.

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m³/min)	3060 (87)
Maximum Exhaust Backpressure	inHg (kPa)	0.75 (2.5)
Exhaust Temp (Rated Output)	°F (°C)	1326 (719)

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

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LEHE1605-06 (06/20)