# Cat® C9 DIESEL GENERATOR SETS



### Standby & Prime: 60Hz



	I configuration

Engine Model	Cat® C9 In-line 6, 4-cycle Diesel
Bore x Stroke	112 mm x 149 mm (4.4 in x 5.9 in)
Displacement	8.8 L (538 in <sup>3</sup> )
Compression Ratio	16.1:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	HEUI
Governor	Electronic ADEM™ A4

Model	Standby	Prime	Emission Strategy
<b>C9</b>	200 ekW, 250 kVA	180 ekW, 225 kVA	TIER III Non-Road

### **PACKAGE PERFORMANCE**

Performance	Standby	Prime	
Frequency	60 Hz		
Genset Power Rating	250 kVA	225 kVA	
Genset power rating with fan @ 0.8 power factor	200 ekW	180 ekW	
Emissions	TIER III N	Non-Road	
Performance Number	EM0095	EM0094	
Fuel Consumption			
100% load with fan, L/hr (gal/hr)	56.9 (15)	51.2 (13.5)	
75% load with fan, L/hr (gal/hr)	45.5 (12)	41.4 (10.9)	
50% load with fan, L/hr (gal/hr)	34.1 (9)	30.8 (8.1)	
25% load with fan, L/hr (gal/hr)	20.9 (5.5)	18.8 (4.9)	
Cooling System <sup>1</sup>			
Radiator air flow restriction (system), kPa (in. water)	0.12 (0.48)	0.12 (0.48)	
Radiator air flow, m³/min (CFM)	497 (17551)	497 (17551)	
Engine coolant capacity, L (gal)	13.9 (3.7)	13.9 (3.7)	
Radiator coolant capacity, L (gal)	43 (11.5)	43 (11.5)	
Total coolant capacity, L (gal)	57 (15)	57 (15)	
Inlet Air			
Combustion air inlet flow rate, m³/min (CFM)	22.0 (775.5)	21.0 (740.3)	
Max. allowable combustion air inlet temp, °C (°F)	50 (121)	49 (121)	
Exhaust System			
Exhaust stack gas temperature, °C (°F)	435.7 (816.2)	426.9 (800.4)	
Exhaust gas flow rate, m³/min (CFM)	53.8 (1898.6)	50.4 (1779.3)	
Exhaust system backpressure (maximum allowable), kPa (in. water)	10.0 (40.0)	10.0 (40.0)	
Heat Rejection			
Heat rejection to jacket water, kW (BTU/min)	87 (4948)	82 (4638)	
Heat rejection to exhaust (total), kW (BTU/min)	277 (12925)	210 (11939)	
Heat rejection to aftercooler, kW (BTU/min)	58 (3284)	50 (2861)	
Heat rejection to atmosphere from engine, kW (BTU/min)	14 (820)	12 (699)	

LEHE1570-03 1/3

# Cat® C9 DIESEL GENERATOR SETS



Emissions (Nominal) <sup>2</sup>	Standby	Prime
NOx, mg/Nm³ (g/hp-hr)	1281.1 (2.5)	1196.7 (2.4)
CO, mg/Nm³ (g/hp-hr)	149.2 (0.3)	162.4 (0.4)
HC, mg/Nm³ (g/hp-hr)	44.8 (0.1)	54.4 (0.1)
PM, mg/Nm³ (g/hp-hr)	17.7 (0.1)	29.1 (0.1)

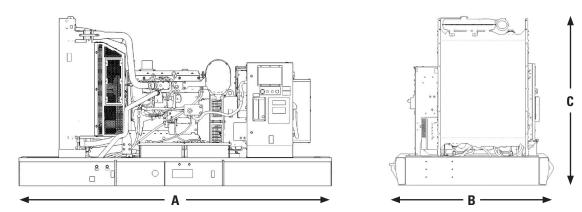
Alternator <sup>3</sup>							
Duty Cycle		Standby		Prime			
Phase		3-Phase		3-Phase			
Voltages, V		208	480	600	208	480	600
Current, Amps	Current, Amps		301	241	625	271	217
Frame: LC5024H Excitation: AREP	Temperature Rise @ 40°C	105	105	150	80	80	105
	Motor Starting Capability @ 30% Voltage Dip,skVA	511	652	656	511	652	656
Frame: LC5024J Excitation: AREP	Temperature Rise @ 40°C	105	105	105	80	80	80
	Motor Starting Capability @ 30% Voltage Dip,skVA	641	816	754	641	816	754
Frame: LC5014H Excitation: SE	Temperature Rise @ 40°C	150	150		125	125	
	Motor Starting Capability @ 30% Voltage Dip,skVA	425	543		425	543	
Frame: LC5014F Excitation: SE	Temperature Rise @ 40°C		150			125	
	Motor Starting Capability @ 30% Voltage Dip,skVA		454			454	
Frame: LC5014J	Temperature Rise @ 40°C	105	105		80	80	
Excitation: SE	Motor Starting Capability @ 30% Voltage Dip,skVA	536	683		536	683	

LEHE1570-03 2/3

## Cat® C9 DIESEL GENERATOR SETS



### **WEIGHTS & DIMENSIONS**



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3091 (122)	1622 (64)	2066 (82)	2157 (4755)

Note: General configuration not to be used for installation. See general dimension drawings for detail.

### **APPLICABLE CODES AND STANDARDS:**

CSA C22.2 No 100-04, UL142, UL489, UL869, cUL/UL2200, NFPA 37, NFPA 70, NFPA 99,NFPA 110, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-33.

Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

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

**PRIME:** Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

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

### **DEFINITIONS AND CONDITIONS**

- <sup>1</sup> For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.
- <sup>2</sup> Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 BTU/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.
- <sup>3</sup> UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40° C ambient per NEMA MG1-32.

## **LET'S DO THE WORK.**