

# Cat® C9

## Diesel Generator Sets



### Standby & Prime: 60 Hz



Image shown might not reflect actual 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 – G3 Class* capable

Model	Standby	Prime	Emission Strategy
D200	200 ekW, 250 kVA	180 ekW, 225 kVA	TIER III Non-Road

### PACKAGE PERFORMANCE

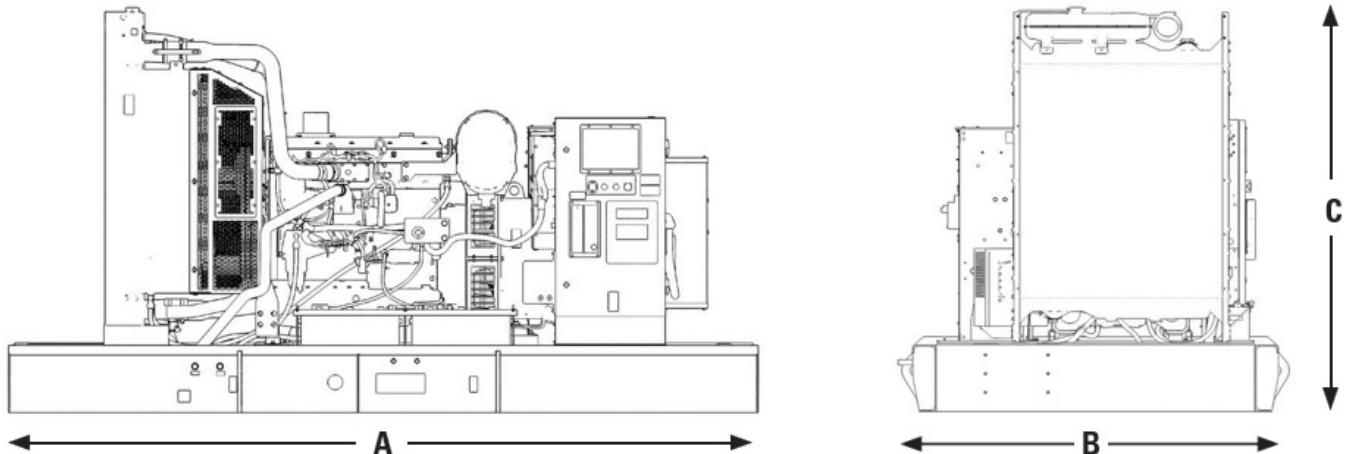
Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	250 kVA	225 kVA
Genset power rating with fan @ 0.8 power factor	200 ekW	180 ekW
Emissions	TIER III Non-Road	
Performance Number	EM0095	EM0094
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	56.9 (15)	51.2 (13.5)
75% load with fan, L/hr (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, m <sup>3</sup> /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, m <sup>3</sup> /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, m <sup>3</sup> /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)
Heat rejection from alternator, kW (BTU/min)	15.5 (881)	13.3 (756)

Emissions (Nominal) <sup>2</sup>					Standby		Prime		
NOx, mg/Nm <sup>3</sup> (g/hp-hr)					1281.1 (2.5)		1196.7 (2.4)		
CO, mg/Nm <sup>3</sup> (g/hp-hr)					149.2 (0.3)		162.4 (0.4)		
HC, mg/Nm <sup>3</sup> (g/hp-hr)					44.8 (0.1)		54.4 (0.1)		
PM, mg/Nm <sup>3</sup> (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	220	380	480	600	208	220	380	480	600
Current Amps		694	656	380	301	241	625	590.5	342	271	217
Frame: LC5024H	Temperature Rise @ 40°C	105			105	150	80			80	105
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA	511			652	656	511			652	656
Frame: LC5024J	Temperature Rise @ 40°C					105					80
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA					754					754
Frame: LC5014H	Temperature Rise @ 40°C	150	105	130	150		125	105	130	125	
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA	425	468	362	543		425	468	362	543	
Frame: LC5014F	Temperature Rise @ 40°C				150						125
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA				454						454
Frame: LC5014J	Temperature Rise @ 40°C	105			105		80			80	
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA	536			683		536			683	

**\*Note:** 220V and 380V are additional offerings for the Latin America Market.

## 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, UL489, UL869, UL2200, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-22, NEMA MG 1-33 and facilitates the compliance to NFPA 37, NFPA70, NFPA 99, NFPA110.

**Note:** Codes may not be available for all model configurations. Site level review needed for NFPA 70. Please consult your Cat Dealer 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 kW 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 ISO 3046 standard conditions.

**FUEL RATES:** Based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/litre (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

## 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 ISO 8178-1 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.

\*Governing Class capability as per ISO 8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.