

Standby & Prime: 50Hz, 230, 380, 400V & 415V



Image shown might not reflect actual configuration

Engine Model	Cat® C9 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	112mm x 149mm (4.4in x 5.9in)
Displacement	8.8 L (538 in³)
Compression Ratio	16.1:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

## PACKAGE PERFORMANCE

Model	Standby	Prime	Emissions Strategy
DE275E0	275 kVA, 220 ekW	250 kVA, 200 ekW	Non-Certified Emissions

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	275 kVA	250 kVA
Gen set power rating with fan @ 0.8 power factor	220 ekW	200 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	EM0878	EM1035
Fuel Consumption		
100% load with fan	57.5 L/hr 15.1 gal/hr	52.4 L/hr 13.8 gal/hr
75% load with fan	44 L/hr, 11.6 gal/hr	40.3 L/hr, 10.6 gal/hr
50% load with fan	31.5 L/hr, 8.3 gal/hr	29.1 L/hr, 7.6 gal/hr
25% load with fan	19.4 L/hr, 5.1 gal/hr	18.3 L/hr, 4.8 gal/hr
Cooling System <sup>1</sup>		
Radiator air flow restriction (system)	0.12 kPa, 0.48 in. Water	0.12 kPa, 0.48 in. Water
Radiator air flow	409 m³/min, 14443 cfm	409 m³/min, 14443 cfm
Engine coolant capacity	13.9 L, 3.7 gal	13.9 L, 3.7 gal
Radiator coolant capacity	43 L, 11.5 gal	43 L, 11.5 gal
Total coolant capacity	56.9 L, 15.2 gal	56.9 L, 15.2 gal
Inlet Air		
Combustion air inlet flow rate	16.1 m³/min, 537 cfm	15.2 m³/min, 537 cfm
Max. Allowable Combustion Air Inlet Temp	48 °C, 118 °F	48 °C, 118 °F
Exhaust System		
Exhaust stack gas temperature	470 °C, 878 °F	471 °C, 880 °F
Exhaust gas flow rate	38.8 m³/min, 1371 cfm	39.1 m³/min, 1381 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa, 40.0 in. water	10.0 kPa, 40.0 in. water
Heat Rejection		
Heat rejection to jacket water	111 kW, 6312 Btu/min	103 kW, 5857 Btu/min
Heat rejection to exhaust (total)	177 kW, 10065 Btu/min	162 kW, 9212 Btu/min
Heat rejection to aftercooler	30.4 kW, 1729 Btu/min	27.6 kW, 1570 Btu/min
Heat rejection to atmosphere from engine	38 kW, 2161 Btu/min	32.8 kW, 1865 Btu/min

Emissions (Nominal) <sup>2</sup>								
NOx	4407 mg/Nm <sup>3</sup> , 9.1 g/hp-hr				4216 mg/Nm <sup>3</sup> , 8.8 g/hp-hr			
CO	845 mg/Nm <sup>3</sup> , 1.76 g/hp-hr				717 mg/Nm <sup>3</sup> , 1.5 g/hp-hr			
HC	15 mg/Nm <sup>3</sup> , 0.04 g/hp-hr				14.4 mg/Nm <sup>3</sup> , 0.03 g/hp-hr			
PM	33 mg/Nm <sup>3</sup> , 0.09 g/hp-hr				30.6 mg/Nm <sup>3</sup> , 0.08 g/hp-hr			
Alternator <sup>3</sup>								
Voltages	230V		380V		400V		415V	
Motor Starting Capability @ 30% Voltage Dip	546 skVA		493 skVA		546 skVA		588 skVA	
Current	690 amps		403 amps		397 amps		362 amps	
Frame Size	R2475L4		R2475L4		R2475L4		R2475L4	
Excitation	SE		SE		SE		SE	
Temperature Rise	130 °C	266 °F	130 °C	266 °F	130 °C	266 °F	130 °C	266 °F

## 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.

## APPLICABLE CODES AND STANDARDS:

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.

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 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 ISO3046 standard conditions.

Fuel Rates are 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.

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