

Cat® C7.1

Diesel Generator Sets



Standby & Prime: 50 Hz



Image shown might not reflect actual configuration.

Engine Model	Cat® C7.1 Inline 4-stroke Diesel
Bore x Stroke	105.0 mm x 135.0 mm (4.1 in x 5.3 in)
Displacement	7.0 L (427.8 in³)
Compression Ratio	16.0:1
Aspiration	Turbocharged Air To Air Charge Cooled
Fuel Injection System	Inline
Governor	Electronic – G3 Class* capable

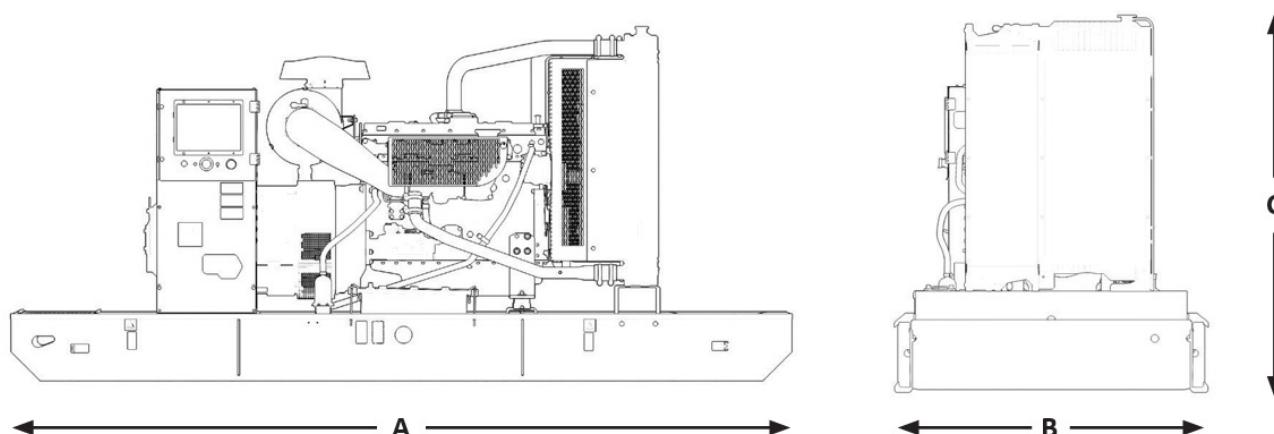
Model	Standby	Prime	Emission Strategy
DE220E0	50 Hz	50 Hz	Low BSFC
	220.0 kVA (176.0 kW)	200.0 kVA (160.0 kW)	

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	220.0 kVA	200.0 kVA
Genset power rating with fan @ 0.8 power factor	176.0 kW	160.0 kW
Emissions	Low BSFC	
Performance Number	P3692A	
Fuel Consumption		
Fuel Tank Capacity, litres (US gal)	418 (110.4)	
100% load with fan, L/hr (gal/hr)	49.5 (13.1)	45.4 (12.0)
75% load with fan, L/hr (gal/hr)	38.0 (10.0)	34.7 (9.2)
50% load with fan, L/hr (gal/hr)	25.7 (6.8)	23.4 (6.2)
Cooling System¹		
Radiator air flow, m³/min (CFM)	307.2 (10849)	
Total coolant capacity, L (gal)	27.0 (7.1)	
Inlet Air		
Max. Combustion Air Intake Restriction, kPa (in water)	8.0 (32.1)	
Combustion air inlet flow rate, m³/min (CFM)	13.2 (466)	12.6 (445)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	50 (122)	
Exhaust System		
Exhaust stack gas temperature, °C (°F)	580 (1076)	527 (981)
Exhaust gas flow rate, m³/min (CFM)	36.8 (1300)	34.9 (1232)
Exhaust system backpressure (maximum allowable), kPa (in water)	15.0 (60.2)	
Heat Rejection		
Heat rejection to jacket water, kW (BTU/min)	81.0 (4606)	78.2 (4447)
Heat rejection to alternator, kW (BTU/min)	15.2 (864)	
Heat rejection to atmosphere from engine, kW (BTU/min)	28.4 (1615)	26.0 (1479)

Alternator ²		50 Hz									
Duty Cycle		Standby					Prime				
Phase		3-Phase					3-Phase				
Voltages, V		220/110	230/115	380/220	400/230	415/240	220/110	230/115	380/220	400/230	415/240
Current, Amps			552		318	306		502		289	278
Frame: LC5114F Excitation: SE	Temperature Rise @ 40°C		163		163	163		125		125	125
	Motor Starting Capability @ 30% Voltage Dip, skVA		467		470	499		467		470	499
Frame: M2294L4 Excitation: SE	Temperature Rise, °C			163	163	163			125	125	125
	Motor Starting Capability @ 30% Voltage Dip skVA			280	307	328			280	307	328

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
2500 (98.4)	1320 (52.0)	1626 (64.0)	1731 (3816)

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

APPLICABLE CODES AND STANDARDS:

AS1359, IEC60034-1, ISO 3046, ISO 8528, NEMA MG1-33, EAC, CE, UKCA.

Note: Codes may not be available in all model configurations. 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.

DEFINITIONS AND CONDITIONS

¹ For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

² Generator temperature rise is based on a 40°C ambient per IEC60034-1.

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The International System of Units (SI) is used in this publication.

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