

# 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

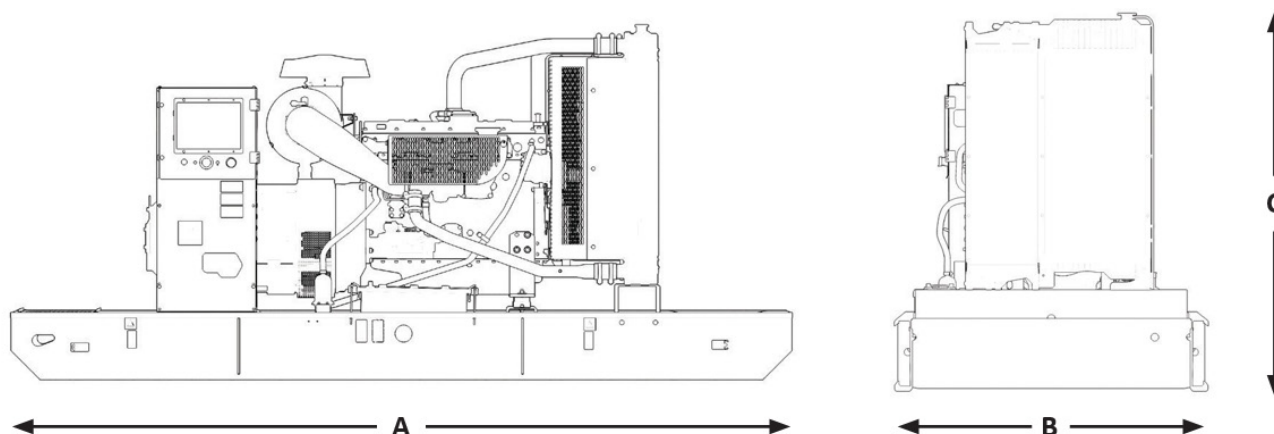
Model	Standby	Prime	Emission Strategy
DE220E0	50 Hz	50 Hz	Low BSFC
	220.0 kVA (176.0 kW)	200.0 kVA (160.0 kW)	

### 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 <sup>2</sup>		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

## 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

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

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