

# Cat<sup>®</sup> 7.1

## Diesel Generator Sets



### Standby & Prime: 50 Hz



Image shown might not reflect actual configuration.

Engine Model	Cat <sup>®</sup> 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 in <sup>3</sup> )
Compression Ratio	16.8:1
Aspiration	Turbocharged Air To Air Charge Cooled
Fuel Injection System	Inline
Governor	Electronic - G3 Class* capable

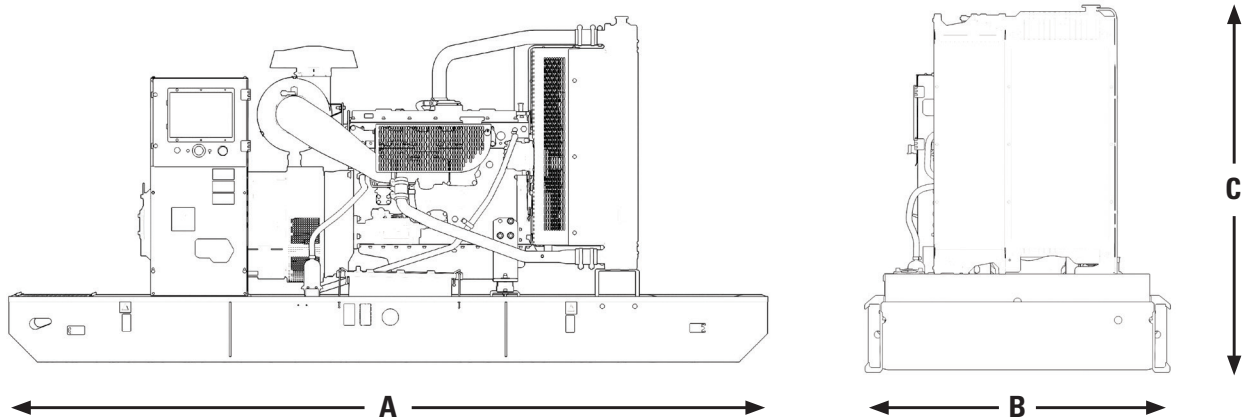
Model	Standby	Prime	Emission Strategy
DE200E3	50 Hz	50 Hz	EU IIIA
	200.0 kVA (160.0 kW)	180.0 kVA (144.0 kW)	

### PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	200.0 kVA	180.0 kVA
Genset power rating with fan @ 0.8 power factor	160.0 kW	144.0 kW
Emissions	EU IIIA	
Performance Number	P4378B	
<b>Fuel Consumption</b>		
Fuel Tank Capacity, litres (US gal)	394 (104.1)	
100% load with fan, L/hr (gal/hr)	45.9 (12.1)	41.9 (11.1)
75% load with fan, L/hr (gal/hr)	35.9 (9.5)	32.9 (8.7)
50% load with fan, L/hr (gal/hr)	25.9 (6.8)	23.9 (6.3)
<b>Cooling System<sup>1</sup></b>		
Radiator air flow, m <sup>3</sup> /min (cfm)	328.0 (11583)	
Total coolant capacity, L (gal)	27.0 (7.1)	
<b>Inlet Air</b>		
Max. Combustion Air Intake Restriction, kPa (in H <sub>2</sub> O)	8.0 (32.1)	
Combustion air inlet flow rate, m <sup>3</sup> /min (cfm)	13.2 (466)	12.8 (452)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	50 (122)	
<b>Exhaust System</b>		
Exhaust stack gas temperature, °C (°F)	530 (986)	
Exhaust gas flow rate, m <sup>3</sup> /min (cfm)	31.7 (1119)	30.2 (1067)
Exhaust system backpressure (maximum allowable), kPa (in H <sub>2</sub> O)	15.0 (4.4)	
<b>Heat Rejection</b>		
Heat rejection to jacket water, kW (Btu/min)	80.8 (4595)	72.7 (4134)
Heat rejection to alternator, kW (Btu/min)	15.6 (887)	
Heat rejection to atmosphere from engine, kW (Btu/min)	45.4 (2582)	41.3 (2349)

Alternator <sup>3</sup>	50 Hz		
	Voltages	415V	400V
Motor starting capability @ 30% Voltage Dip, skVA	328	307	280
Current, Amps	278	289	304
Temperature Rise, °C	105/40		
Frame Size	M2294L4		
Excitation	S.E		

## WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
2510 (98.8)	1010 (39.8)	1640 (64.6)	1561 (3441)

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

### APPLICABLE CODES AND STANDARDS:

AS1359, 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.

### 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> Generator temperature rise is based on a 40°C ambient per NEMA MG1-32.
- \* Governing Class capability as per ISO8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.

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