Cat® C7.1 DIESEL GENERATOR SETS

Standby & Prime: 60Hz

Image shown might not reflect actual configuration

Engine Model	Cat® C7.1 In-line 6, 4-cycle Diesel
Bore x Stroke	105 mm x 127 mm (4.1in x 5.0 in)
Displacement	7.01 L (428 in³)
Compression Ratio	16.7:1
Aspiration	Turbocharged Air-to-Air-Aftercooled
Fuel Injection System	Common Rail
Governor	Electronic

Model	Standby	Prime	Emission Strategy
C7.1	175 ekW	158 ekW	EPA TIER III

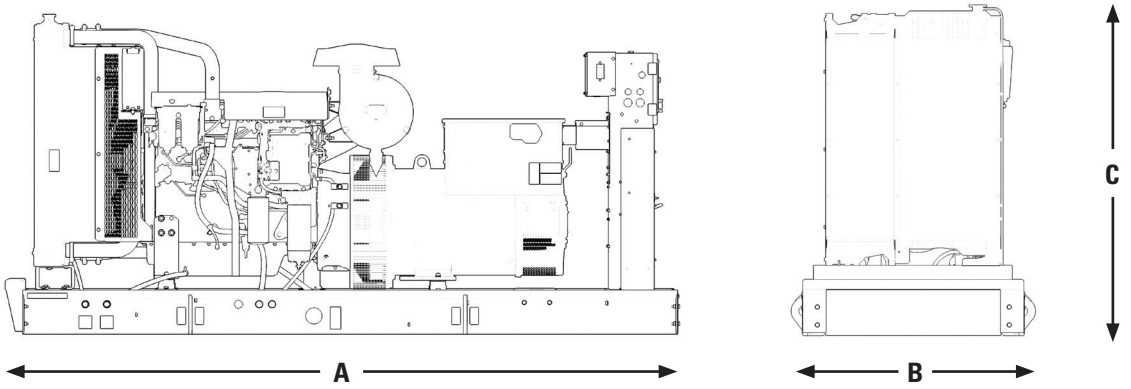
PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	219 kVA	196.9 kVA
Genset power rating with fan @ 0.8 power factor	175 ekW	157.5 ekW
Emissions	EPA TIER III	
Performance Number	P4378A	P4378C
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	49.6 (13.1)	46.5 (12.3)
75% load with fan, L/hr (gal/hr)	40.6 (10.7)	37.1 (9.8)
50% load with fan, L/hr (gal/hr)	27.7 (7.3)	24.7 (6.5)
Cooling System[1]		
Radiator air flow restriction (system), kPa (in. water)	0.12 (0.48)	0.12 (0.48)
Engine coolant capacity, L (gal)	9.5 (2.5)	9.5 (2.5)
Radiator coolant capacity, L (gal)	11.5 (3.0)	11.5 (3.0)
Total coolant capacity, L (gal)	21 (5.5)	21 (5.5)
Inlet Air		
Combustion air inlet flow rate, m³/min (CFM)	15.4 (543.8)	15.2 (536.8)
Max. allowable combustion air inlet temp, °C (°F)	51 (124)	
Exhaust System		
Exhaust stack gas temperature, °C (°F)	509 (948)	487.2 (909)
Exhaust gas flow rate, m³/min (CFM)	34.8 (1229)	33.7 (1190)
Exhaust system backpressure (maximum allowable), kPa (in. water)	15.0 (60.2)	15.0 (60.2)
Heat Rejection		
Heat rejection to exhaust (total), kW (BTU/min)	159.0 (9042)	149.0 (8473)
Heat rejection to aftercooler, kW (BTU/min)	37.0 (2104)	36.0 (2047)
Heat rejection to atmosphere from engine, kW (BTU/min)	32.0 (1820)	30.2 (1717)

Emissions (Nominal)[2]	Standby	Prime
NOx + HC g/kW-hr	4.0	4.0
CO	1.0	1.0
PM	0.2	0.2

Alternator[3]									
Duty Cycle		Standby				Prime			
Phase		3-Phase				3-Phase			
Voltages, V		480/277	240/120	208/120	600/347	480/277	240/120	208/120	600/347
Current, Amps		263	526	607	211	237	474	547	189
Excitation		SE	SE	SE	AREP	SE	SE	SE	AREP
Frame: LC5014D	Temperature Rise, °C	130	150	150		105	125	125	
	Motor Starting Capability @ 30% Voltage Dip, skVA	387	302	302		387	302	302	
Frame: LC5014F	Temperature Rise, °C	105	130	130		80	105	105	
	Motor Starting Capability @ 30% Voltage Dip, skVA	456	356	357		456	356	357	
Frame: LC5024D	Temperature Rise, °C				130				105
	Motor Starting Capability @ 30% Voltage Dip, skVA				464				464
Frame: LC5024F	Temperature Rise, °C				105				105
	Motor Starting Capability @ 30% Voltage Dip, skVA				516				516

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3039 (120)	1110 (44)	1476 (58)	1500 (3307)

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, UL142, UL489, UL869, cUL/UL2200, NFPA 37, NFPA 70, NFPA 99,NFPA 110, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-33.

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 ekW 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

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

[2] 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.

[3] 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.

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