Cat® C7.1 DIESEL GENERATOR SETS

Prime: 60Hz; 480V, 208V, 600V, 240V

Image shown might not reflect actual configuration

Engine Model	Cat® C7.1 ACERT In-line 6, 4-cycle diesel
Bore x Stroke	105mm x 127mm (4.1in x 5.0 in)
Displacement	7.01 L (428 in^3)
Compression Ratio	16.7:1
Aspiration	Turbocharged Air-to-Air-Aftercooled
Fuel Injection System	Electronic, Common Rail
Governor	Electronic ADEM™ A4

PACKAGE PERFORMANCE

Model	Standby	Emission Strategy
C7.1	**250 kVA, 200 ekW**	**US EPA TIER III**

Performance	Standby	
Frequency	60 Hz	
Genset Power Rating	250 kVA	
Gen set power rating with fan @ 0.8 power factor	200 eKW	
Fuelling strategy	TIER III	
Fuel Consumption		
100% load with fan	56.4 L/hr	14.9 gal/hr
75% load with fan	45.8 L/hr	12.1 gal/hr
50% load with fan	32.6 L/hr	8.6 gal/hr
25% load with fan	14.3 L/hr	3.7 gal/hr
Cooling System[1]		
Radiator air flow restriction (system)	0.12 kPa	0.48 in of water
Engine coolant capacity	9.5 L	2.5 gal
Radiator coolant capacity	11.5 L	3.0 gal
Engine coolant capacity with Radiator/Exp Tank	21 L	5.5 gal
Inlet Air		
Combustion air inlet flow rate	15.8 m^3 / min	558 cfm
Max. Allowable Combustion Air Inlet Temp	51°C, 124°F	
Exhaust System		
Exhaust stack gas temperature	533°C	991°F
Exhaust gas flow rate	38.3 m^3/min	1353 cfm
Exhaust system backpressure (maximum allowable)	15.0 kPa	60.2 in Water
Heat Rejection		
Heat rejection to jacket water	91.8 kW	5221 Btu/min
Heat rejection to exhaust (total)	183.0 kW	10407 Btu/min
Heat rejection to aftercooler	45.0 kW	2559 Btu/min
Heat rejection to atmosphere from engine	35.3 kW	2019 Btu/min
Heat rejection from Alternator	15.7 kW	892.3 Btu/min

Emissions (Nominal)[2]	Standby	
NOx + HC	2196.0 mg/Nm³	3.73 g/hp-hr
CO	771.24 mg/Nm³	1.31 g/hp-hr
PM	105.8 mg/Nm³	0.18 g/hp-hr

Alternator[3]	Standby							
Voltages	**480V**		**208V**		**600V**		**240V**	
Motor Starting Capability @ 30% Voltage Dip	454 skVA		641 skVA		516 sKVA		641 sKVA	
Current	300 amps		693 amps		240 amps		601.4 amps	
Frame Size	LC5014F		LC5024J		LC5024F		LC5024J	
Excitation	SE		AR		AR		AR	
Temperature Rise	130 °C	234 °F	105 °C	221 °F	105 °C	221 °F	105 °C	221 °F

DEFINITIONS AND CONDITIONS

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

[2] Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.

[3] The nominal emissions data shown is subject to instrumentation, measurement, facility, and engine-to-engine variations. Emissions data is based on 100% Prime load. This information should not be used for permitting purposes and is subject to change without notice. Contact your Cat dealer for further details.

APPLICABLE CODES AND STANDARDS:

Applicable Codes and Standards: AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC.

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.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil to specification EPA 2D 89.330-96 with a density of 0.845 – 0.850 kg/L (7.052 – 7.094 lbs/U.S. gal.) @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

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