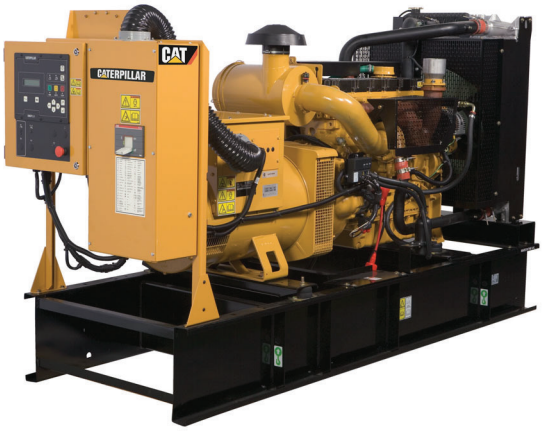
Cat® C7.1 DIESEL GENERATOR SETS

Standby & Prime: 60 Hz, 480V



Engine Model	Cat® C7.1 In-line 6, 4-cycle diesel
Bore x Stroke	105mm x 127mm (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	Electronic, Common Rail

Standby	Prime	Performance Strategy
175 ekW	**158 ekW**	**EPA TIER III**

PACKAGE PERFORMANCE

Performance	Standby		Prime	
Genset power rating	219 kVA		196.9 kVA	
Genset power rating with fan @ 0.8 power factor	175 ekW		157.5 ekW	
Performance number	P4378A-00		P4378C-00	
Fuel Consumption				
100% Load with fan	51.2 L/hr	13.5 g/hr	48.0 L/hr	12.7 g/hr
75% Load with fan	41.9 L/hr	11.1 g/hr	38.3 L/hr	10.1 g/hr
50% Load with fan	28.6 L/hr	7.6 g/hr	25.5 L/hr	6.7 g/hr
Cooling System[1]				
Radiator air flow restriction (system)	0.12 kPa	0.48 in Water	0.12 kPa	0.48 in Water
Engine coolant capacity	9.5 L	2.5 gal	9.5 L	2.5 gal
Radiator coolant capacity	11.5 L	3.0 gal	11.5 L	3.0 gal
Total coolant capacity	21 L	5.5 gal	21 L	5.5 gal
Inlet Air				
Combustion air inlet flow rate	15.4 m³/min	543.8	15.2 m³/min	536.8 cm
Max. allowable combustion air inlet temp	51°C, 124°F			
Exhaust System				
Exhaust stack gas temperature	509°C	948°F	487.2°C	909°F
Exhaust gas flow rate	34.8 m³/min	1229 cfm	33.7 m³/min	1190 cfm
Exhaust system backpressure (maximum allowable)	15.0 kPa	60.2 in water	15.0 kPa	60.2 in water
Exhaust flange size (internal diameter)	89.0 mm	3.5 in	89.0 mm	3.5 in
Heat Rejection				
Heat rejection to Coolant (total)	85.0 kW	4834 Btu/min	78.0 kW	4436 Btu/min
Heat rejection to Exhaust (total)	159.0 kW	9042 Btu/min	149.0 kW	8473 Btu/min
Heat rejection to Aftercooler	37.0 kW	2104 Btu/min	36.0 kW	2047 Btu/min
Heat rejection to Atmosphere from Engine	32.0 kW	1820 Btu/min	30.2 kW	1717 Btu/min
Heat rejection from alternator	14.6 kW	830.3 Btu/min	12.8 kW	727.9 Btu/min
Lube System				
Sump refill with filter	17.5 L	4.4 gal	17.5 L	4.4 gal

Emissions (Nominal)[2]	Standby		Prime	
NOx + HC	4.0 g/kW-hr		4.0 g/kW-hr	
CO	1.0 g/kW-hr		1.0 g/kW-hr	
PM	0.2 g/kW-hr		0.2 g/kW-hr	
Alternator[3]				
Voltages	480V		480V	
Motor starting capability @ 30% Voltage Dip	387 skVA		387 skVA	
Frame Size	LC5014D		LC5014D	
Excitation	Self Excited		Self Excited	
Temperature Rise	105°C	234°F	105°C	189°F

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] 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 Caterpillar dealer for further details.

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

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.

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.

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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