Cat® C1C2 DIESEL GENERATOR SETS

Standby & Prime: 380/220V, 400/230V, 415/240V, 50Hz and 220/127V, 60 Hz

Engine Model	Cat® C2.2 In-line 4, 4-cycle diesel
Bore x Stroke	84 mm x 100 mm (3.3 in x 3.9 in)
Displacement	2.2 L (135.2 in³)
Compression Ratio	23.3:1
Aspiration	Naturally Aspirated
Fuel Injection System	Inline
Governor	Mechanical

Model	Standby		Prime		Performance Strategy
DE22E3	50 Hz	60 Hz	50 Hz	60 Hz	EU IIIA
	22.0 kVA	25.0 kVA	20.0 kVA	22.5 kVA	

PACKAGE PERFORMANCE

Performance	Standby		Prime	
Frequency	50 Hz	60 Hz	50 Hz	60 Hz
Genset Power Rating	22.0 kVA	25.0 kVA	20.0 kVA	22.5 kVA
Gen set power rating with fan @ 0.8 power factor	17.6 ekW	20.0 ekW	16.0 ekW	18.0 ekW
Fuelling strategy	EU IIIA	EU IIIA	EU IIIA	EU IIIA
Fuel Consumption				
110% Load with Fan	NA	NA	5.9 L/hr, 1.6 gal/hr	6.5 L/hr, 1.7 gal/hr
100% Load with Fan	5.9 L/hr, 1.6 gal/hr	6.5 L/hr, 1.7 gal/hr	5.3 L/hr, 1.4 gal/hr	5.8 L/hr, 1.5 gal/hr
75% Load with Fan	4.3 L/hr, 1.1 gal/hr	4.9 L/hr, 1.3 gal/hr	3.9 L/hr, 1.0 gal/hr	4.5 L/hr, 1.2 gal/hr
50% Load with Fan	3.1 L/hr, 0.8 gal/hr	3.6 L/hr, 1.0 gal/hr	2.9 L/hr, 0.8 gal/hr	3.3 L/hr, 0.9 gal/hr
Cooling System[1]				
Radiator air flow restriction (system)	125 Pa, 0.5 in. Water	125 Pa, 0.5 in. Water	125 Pa, 0.5 in. Water	125 Pa, 0.5 in. Water
Radiator air flow	33 m³/min, 1165 cfm	41.4 m³/min,1462 cfm	33 m³/min, 1165 cfm	41.4 m³/min,1462 cfm
Total coolant capacity	6.5 L, 1.7 gal	6.5 L, 1.7 gal	6.5 L, 1.7 gal	6.5 L, 1.7 gal
Inlet Air				
Combustion air inlet flow rate	1.5 m³/min, 51 cfm	1.7 m³/min, 61 cfm	1.5 m³/min, 51 cfm	1.7 m³/min, 61 cfm
Max. Allowable Combustion Air Inlet Temp	50° C	50° C	50° C	50° C
Exhaust System				
Exhaust stack gas temperature	505° C, 941° F	510° C, 950° F	445° C, 833° F	440° C, 824° F
Exhaust gas flow rate	3.9 m³/min, 139 cfm	4.8 m³/min, 168 cfm	3.6 m³/min, 129 cfm	4.3 m³/min, 153 cfm
Exhaust system backpressure (maximum allowable)	10.2 kPa, 3 in. Hg	10.2 kPa, 3 in. Hg	10.2 kPa, 3 in. Hg	10.2 kPa, 3 in. Hg
Heat Rejection				
Heat Rejection to Jacket Water	19.6 kW, 1115 Btu/min	22.2 kW, 1262 Btu/min	17.0 kW, 967 Btu/min	19.9 kW, 1132 Btu/min
Heat Rejection to Atmosphere from Engine & alternator	7.1 kW, 404 Btu/min	7.4 kW, 421 Btu/min	5.7 kW, 324 Btu/min	6.3 kW, 358 Btu/min

Alternator[2]	50 Hz			60 Hz
Voltages	415/240V	400/230V	380/220V	220/127V
Motor Starting Capability @ 30% Voltage Dip	55 kVA	52 kVA	48 kVA	52 kVA
Current	25 amps	26 amps	27.3 amps	57.7 amps
Frame Size	LC1114M			
Excitation	SE			
Temperature Rise	105 ° C			

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] 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.

APPLICABLE CODES AND STANDARDS:

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, 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 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 are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/litre (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

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