

Cat® C13

Diesel Generator Sets



Standby & Prime: 60 Hz



Image shown might not reflect actual configuration.

Engine Model	Cat® C13 In-line 6, 4-cycle Diesel
Bore x Stroke	130 mm x 157 mm (5.1 in x 6.2 in)
Displacement	12.5 L (763 in ³)
Compression Ratio	16.3:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4 – G2 Class* capable

Model	Standby	Prime	Emission Strategy
C13	400 ekW, 500 kVA	365 ekW, 456.25 kVA	TIER III Non-Road

PACKAGE PERFORMANCE

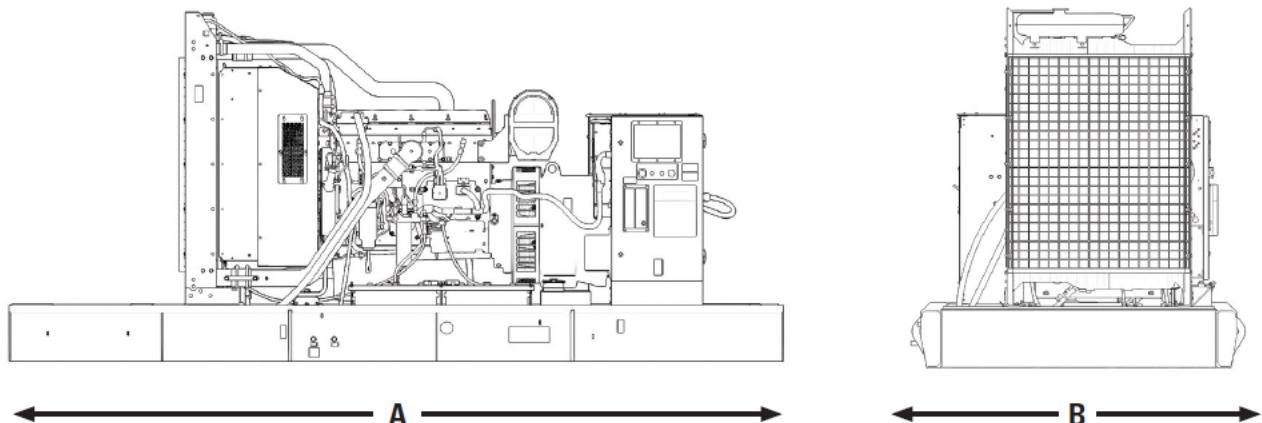
Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	500 kVA	456.25 kVA
Genset power rating with fan @ 0.8 power factor	400 ekW	365 ekW
Emissions	TIER III Non-Road	
Performance Number	EM1694	EM1695
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	105.0 (27.7)	95.4 (25.2)
75% load with fan, L/hr (gal/hr)	88.6 (23.4)	82.9 (21.8)
50% load with fan, L/hr (gal/hr)	64.7 (17)	60.0 (15.8)
25% load with fan, L/hr (gal/hr)	36.8 (9.7)	34.3 (9.0)
Cooling System ¹		
Radiator air flow restriction (system), kPa (in. water)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m ³ /min (CFM)	497 (17551)	497 (17551)
Engine coolant capacity, L (gal)	14.2 (3.8)	14.2 (3.8)
Radiator coolant capacity, L (gal)	30 (8)	30 (8)
Total coolant capacity, L (gal)	34 (12)	34 (12)
Inlet Air		
Combustion air inlet flow rate, m ³ /min (CFM)	27.7 (978)	26.0 (918)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	47 (116)	45 (113)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	570.5 (1059)	554.5 (1030)
Exhaust gas flow rate, m ³ /min (CFM)	83.2 (2938)	76.0 (2684)
Exhaust system backpressure (maximum allowable), kPa (in. water)	10.0 (40.0)	10.0 (40.0)
Heat Rejection		
Heat rejection to jacket water, kW (BTU/min)	157 (8928)	146 (8302)
Heat rejection to exhaust (total), kW (BTU/min)	405 (23032)	366 (20814)
Heat rejection to aftercooler, kW (BTU/min)	72.6 (4128)	61.9 (3520)
Heat rejection to atmosphere from engine, kW (BTU/min)	51.4 (2923)	48.2 (2741)
Heat rejection from alternator, kW (BTU/min)	28.3 (1609)	25.0 (1422)

Emissions (Nominal) ²					Standby		Prime	
NOx, mg/Nm ³ (g/hp-hr)					2,481.2 (4.98)		2,318.5 (4.65)	
CO, mg/Nm ³ (g/hp-hr)					1,150.6 (2.32)		614.4 (1.23)	
HC, mg/Nm ³ (g/hp-hr)					7.5 (0.02)		4.6 (0.01)	
PM, mg/Nm ³ (g/hp-hr)					41.1 (0.1)		22.4 (0.06)	

Alternator ³									
Duty Cycle		Standby					Prime		
Phase		3-Phase					3-Phase		
Voltages*, V		208	220	240	480	600	208	220	240
Current, Amps		1388	1312	1203	601	481	1266	1197	1098
Frame: LC6124D	Temperature Rise @ 40°C	130	105	105	105	105	105	105	105
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA	1008	1118	1309	1309	1408	1008	1118	1309
Frame: LC6124F	Temperature Rise @ 40°C	130	105	105	150	105	105	105	125
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA	1325	1466	1712	1712	1714	1325	1466	1712
Frame: LC6124B	Temperature Rise @ 40°C			150	150	150			125
Excitation: AREP	Motor Starting Capability @ 30% Voltage Dip, skVA			1055	1055	1057			1055
Frame: LC6114D	Temperature Rise @ 40°C	130	105	105	105		105	105	105
Excitation: SE	Motor Starting Capability @ 30% Voltage Dip, skVA	839	930	1089	1089		839	930	1089
Frame: LC6114F	Temperature Rise @ 40°C	105	105	105	105		80	80	80
Excitation: SE	Motor Starting Capability @ 30% Voltage Dip, skVA	1104	1222	1428	1428		1104	1222	1428
Frame: LC6114B	Temperature Rise @ 40°C			150	150				125
Excitation: SE	Motor Starting Capability @ 30% Voltage Dip, skVA			880	880				880

***Note:** 220V and 380V are additional offerings for the Latin America Market.

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3505 (138)	1652 (65)	2069 (82)	3823 (8427)

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, UL489, UL869, UL2200, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-22, NEMA MG 1-33 and facilitates the compliance to NFPA 37, NFPA70, NFPA 99, NFPA110.

Note: Codes may not be available for all model configurations. Site level review needed for NFPA 70. Please consult your Cat Dealer 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.

FUEL RATES: 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.

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.

*Governing Class capability as per ISO 8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.