Cat® C18
Diesel Generator Sets

Standby & Prime: 60 Hz

Image shown might not reflect actual configuration.

Engine Model	Cat® C18 In-line 6, 4-cycle Diesel
Bore x Stroke	145 mm x 183 mm (5.7 in x 7.2 in)
Displacement	18.13 L (1106.3 in³)
Compression Ratio	14:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	Electronic Unit Injection
Governor	Electronic ADEM™ A4 – G3 Class* capable

Model	Standby	Prime	Emission Strategy
C18	650 ekW, 812 kVA	600 ekW, 750 kVA	EPA TIER II

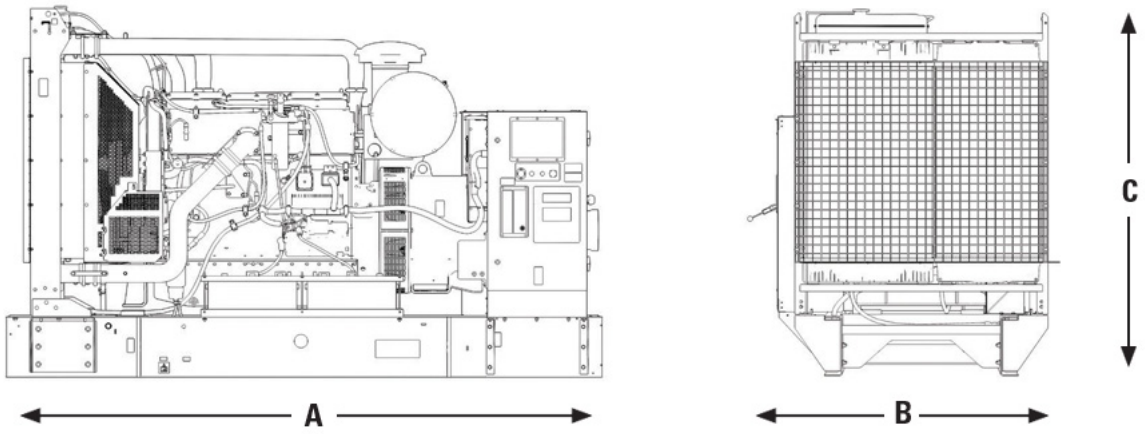
PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	812 kVA	750 kVA
Genset power rating with fan @ 0.8 power factor	650 ekW	600 ekW
Emissions	EPA TIER II	
Performance Number	EM3838	EM3839
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	181.7 (48.0)	166.7 (44.0)
75% load with fan, L/hr (gal/hr)	137.2 (36.2)	125.1 (33.0)
50% load with fan, L/hr (gal/hr)	95.0 (25.1)	88.8 (23.4)
25% load with fan, L/hr (gal/hr)	56.6 (14.9)	53.4 (14.1)
Cooling System[1]		
Radiator air flow restriction (system), kPa (in. water)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m³/min (CFM)	900 (31783)	900 (31783)
Engine coolant capacity, L (gal)	20.8 (5.5)	20.8 (5.5)
Radiator coolant capacity, L (gal)	77 (20.3)	77 (20.3)
Total coolant capacity, L (gal)	97.8 (25.8)	97.8 (25.8)
Inlet Air		
Combustion air inlet flow rate, m³/min (CFM)	65.4 (2309)	63.3 (2235.4)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	48 (119)	48 (118)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	425.9 (798)	403.8 (758)
Exhaust gas flow rate, m³/min (CFM)	159.1 (5618)	148.2 (5233)
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)	208 (11828)	190 (10805)
Heat rejection to exhaust (total), kW (BTU/min)	662 (37647)	600 (34121)
Heat rejection to aftercooler, kW (BTU/min)	249 (14160)	230 (13079)
Heat rejection to atmosphere from engine, kW (BTU/min)	122 (6938)	113 (6426)

Emissions (Nominal)[2]	Standby	Prime
NOx, mg/Nm³ (g/hp-hr)	2053.7 (4.61)	1,994.4 (4.43)
CO, mg/Nm³ (g/hp-hr)	95.3 (0.21)	64.0 (0.15)
HC, mg/Nm³ (g/hp-hr)	34.1 (0.09)	34.0 (0.09)
PM, mg/Nm³ (g/hp-hr)	13.0 (0.03)	10.6 (0.03)

Alternator[3]											
Duty Cycle		Standby					Prime				
Phase		3-Phase					3-Phase				
Voltages, V		208	220	240	480	600	208	220	240	480	600
Current, Amps		2255	2132	1955	977	782	2082	1968	1804	902	722
Frame: LC7224H Excitation: AREP	Temperature Rise @ 40°C		150	130	130	150		125	105	105	125
	Motor Starting Capability @ 30% Voltage Dip, skVA		1829	2147	2147	1598		1829	2147	2147	1598
Frame: LC7224J Excitation: AREP	Temperature Rise @ 40°C	150	130	105	105	105	125	105	105	105	105
	Motor Starting Capability @ 30% Voltage Dip, skVA	1930	2142	2512	2512	2512	1930	2142	2512	2512	2512
Frame: LC7224L Excitation: AREP	Temperature Rise @ 40°C	105	105	80	80	105	105	80	80	80	80
	Motor Starting Capability @ 30% Voltage Dip, skVA	1917	2129	2501	2501	2503	1917	2129	2501	2501	2503
Frame: LC7224N Excitation: AREP	Temperature Rise @ 40°C	105	80			80	80	80			80
	Motor Starting Capability @ 30% Voltage Dip, skVA	2403	2666			3368	2403	2666			3368
Frame: LC7224P Excitation: AREP	Temperature Rise @ 40°C	80					80				
	Motor Starting Capability @ 30% Voltage Dip, skVA	2392					2392				

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3512 (138)	1746 (69)	2322 (92)	4863 (10721)

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 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 ISO 3046 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.

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

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