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	16.1:1
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	625 kVA, 500 ekW	569 kVA, 455 ekW	US EPA TIER IV Final, Non-Road

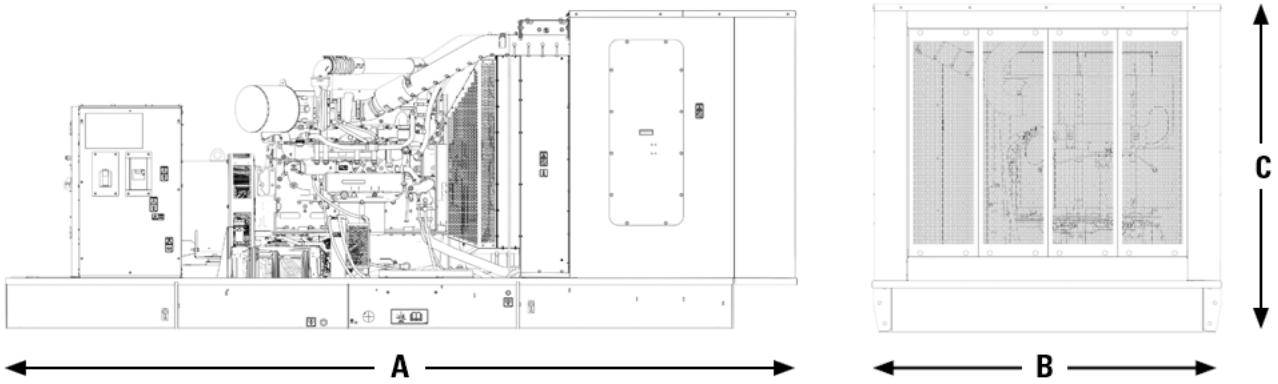
PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	625 kVA	569 kVA
Genset power rating with fan @ 0.8 power factor	500 ekW	455 ekW
Emissions	US EPA TIER IV Final, Non-Road	
Performance Number	EM1017	EM1112
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	136.9 (36.1)	123.8 (32.7)
75% load with fan, L/hr (gal/hr)	104.3 (27.5)	94.6 (24.9)
50% load with fan, L/hr (gal/hr)	74.2 (19.6)	67.7 (17.8)
25% load with fan, L/hr (gal/hr)	46.0 (12.1)	42.3 (11.1)
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)	804 (28393)	804 (28393)
Engine coolant capacity, L (gal)	26.9 (7.1)	26.9 (7.1)
Radiator coolant capacity, L (gal)	61 (16.11)	61 (16.11)
Total coolant capacity, L (gal)	87.9 (23.2)	87.9 (23.2)
Inlet Air		
Combustion air inlet flow rate, m³/min (CFM)	37.9 (1340)	36.3 (1208)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	50 (122)	
Exhaust System		
Exhaust stack gas temperature, °C (°F)	447 (836.8)	426.3 (799.3)
Exhaust gas flow rate, m³/min (CFM)	69.8 (2465.3)	66.5 (2349.7)
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)	282 (16037)	256 (14558)
Heat rejection to exhaust (total), kW (BTU/min)	435 (24738)	392 (22292)
Heat rejection to aftercooler, kW (BTU/min)	114 (6483)	102 (5800)
Heat rejection to atmosphere from engine, kW (BTU/min)	101 (5743)	94.1 (5351)

Emissions (Nominal)[2]	Standby	Prime
NOx, mg/Nm³ (g/hp-hr)	100.5 (0.2)	122.8 (0.26)
CO, mg/Nm³ (g/hp-hr)	NA	NA
HC, mg/Nm³ (g/hp-hr)	4.9 (0.01)	3.9 (0.01)
PM, mg/Nm³ (g/hp-hr)	2.2 (0.01)	1.6 (0.00)

Alternator[3]							
Duty Cycle		Standby			Prime		
Phase		3-Phase			3-Phase		
Voltages, V		208	480	600	208	480	600
Current, Amps		1735	752	601	1579	684	547
Frame: LC6124G Excitation: AREP	Temperature Rise @ 40°C	130	105	105	130	105	105
	Motor Starting Capability @ 30% Voltage Dip, skVA	1335	1729	1731	1335	1729	1731

WEIGHTS & DIMENSIONS



Standby Rating	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
500 ekW	5310	2286	2179	5160

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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