# Cat® C18 DIESEL GENERATOR SETS



### Standby & Prime: 60Hz



Engine Model	Cat® C18 ATAAC™ In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
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

Image shown might not reflect actual configuration

Model	Standby	Prime	Emission Strategy
C18	750 ekW	680 ekW	EPA TIER II
938 kVA	938 kVA	850 kVA	LFA HLN H

### PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency, Hz	60	60
Genset Power Rating, kVA	938	850
Gen set power rating with fan @ 0.8 power factor, ekW	750	680
Fuelling strategy	EPA TIER II	EPA TIER II
Performance Number	EM3842	EM3843
Fuel Consumption		
100% load with fan, L/hr, gal/hr	205.5, 54.2	188.5, 49.7
75% load with fan, L/hr, gal/hr	164.3, 43.4	146.3, 38.6
50% load with fan, L/hr, gal/hr	108.9, 28.7	100.3, 26.5
25% load with fan, L/hr, gal/hr	63.5, 16.7	59.4, 15.6
Cooling System <sup>1</sup>		
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	67.3, 2376	65.6, 2316
Max. Allowable Combustion Air Inlet Temp, °C, °F	49, 120	49,120
Exhaust System		
Exhaust stack gas temperature, °C, °F	452.9, 847.2	432.9, 811.2
Exhaust gas flow rate, m³/min, cfm	170.7, 6028	161, 5686
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	225, 12795	208, 11828
Heat rejection to exhaust (total) kW, Btu/min	714, 40604	664, 37761
Heat rejection to aftercooler, kW, Btu/min	272, 15468	253, 14387
Heat rejection to atmosphere from engine, kW, Btu/min	142, 8075	123, 6995

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Emissions (Nominal) <sup>2</sup>					
NOx, mg/Nm³, g/hp-hr		2468, 5.42		2213, 4.91	
CO, mg/Nm³, g/hp-hr		100.1, 0.22		75.6, 0.17	
HC, mg/Nm³, g/hp-hr		23.5, 0.06		24.1, 0.06	
PM, mg/Nm³, g/hp-hr		11.7, 0.03		10.6, 0.03	
Alternator <sup>3</sup>					
Voltages, V	208V	220V	240V	480V	600V
10.149007	200 V	2200	240 V	4004	DUUV
Motor Starting Capability @ 30% Voltage Dip, skVA	1917	2129	2501	2512	2512
<u> </u>					
Motor Starting Capability @ 30% Voltage Dip, skVA	1917	2129 2460.3	2501	2512	2512
Motor Starting Capability @ 30% Voltage Dip, skVA Current, amps	1917 2602.2	2129 2460.3	2501 2512	2512 1127.6	2512 902.1

### **DEFINITIONS AND CONDITIONS**

### APPLICABLE CODES AND STANDARDS:

AS1359, CSA C22.2 No100-04, UL142, UL489, UL269, 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:** Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

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## **BUILT FOR IT.**

<sup>&</sup>lt;sup>1</sup> For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> 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.