Cat® C18 DIESEL GENERATOR SETS

Standby & Prime: 50Hz; 415V, 400V, & 380V

Image shown might not reflect actual configuration

Engine Model	Cat® C18 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	145 mm x 183 mm (5.7 in x 7.2 in)
Displacement	18.1 L (1106 in³)
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Model	Standby	Prime	Emission Strategy
DE660E0	660 kVA, 528 ekW	600 kVA, 480 ekW	Non-Certified Emissions

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	660 kVA	600 kVA
Gen set power rating with fan @ 0.8 power factor	528 ekW	480 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	DM9822	DM9821
Fuel Consumption		
100% Load with Fan	130.7 L/hr, 34.5 gal/hr	118.8 L/hr, 31.4 gal/hr
75% Load with Fan	97.7 L/hr, 25.8 gal/hr	89.0 L/hr, 23.5 gal/hr
50% Load with Fan	67.3 L/hr, 17.8 gal/hr	61.9 L/hr, 16.3 gal/hr
25% Load with Fan	38.8 L/hr, 10.3 gal/hr	36.1 L/hr, 9.5 gal/hr
Cooling System[1]		
Radiator air flow restriction (system)	0.12 kPa, 0.48 in. Water	0.12 kPa, 0.48 in. Water
Radiator air flow	373 m3/min, 13172 cfm	373 m3/min, 13172 cfm
Engine coolant capacity	20.8 L, 5.5 gal	20.8 L, 5.5 gal
Radiator coolant capacity	34 L, 8.9 gal	34 L, 8.9 gal
Total coolant capacity	54.8 L, 14.4 gal	54.8 L, 14.4 gal
Inlet Air		
Combustion air inlet flow rate	34.2 m³/min, 1206.4 cfm	32.3 m³/min, 1142.0 cfm
Max. Allowable Combustion Air Inlet Temp	49 ° C, 121 ° F	47 ° C, 117 ° F
Exhaust System		
Exhaust stack gas temperature	571.1 ° C, 1060.0 ° F	555.6 ° C, 1032.0 ° F
Exhaust gas flow rate	102.4 m³/min, 3614.4 cfm	94.3 m³/min, 3329.2 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa, 40.0 in. water	10.0 kPa, 40.0 in. water
Heat Rejection		
Heat rejection to jacket water	169 kW, 9625 Btu/min	157 kW, 8947 Btu/min
Heat rejection to exhaust (total)	504 kW, 28661 Btu/min	458 kW, 26037 Btu/min
Heat rejection to aftercooler	91 kW, 5186 Btu/min	79 kW, 4475 Btu/min
Heat rejection to atmosphere from engine	84 kW, 4787 Btu/min	79 kW, 4468 Btu/min
Heat Rejection to Atmosphere from Generator	33 kW, 1877 Btu/min	28 kW, 1592 Btu/min

Emissions (Nominal)[2]	Standby	Prime
NOx	3486.4 mg/Nm³, 7.0 g/hp-hr	3490.3 mg/Nm³, 6.9 g/hp-hr
CO	507.4 mg/Nm³, 1.0 g/hp-hr	506.5 mg/Nm³, 1.0 g/hp-hr
HC	1.7 mg/Nm³, 0.0 g/hp-hr	2.6 mg/Nm³, 0.0 g/hp-hr
PM	4.7 mg/Nm³, 0.0 g/hp-hr	4.7 mg/Nm³, 0.0 g/hp-hr

Alternator[3]			
Voltages	380V	400V	415V
Motor Starting Capability @ 30% Voltage Dip	1564 skVA	1739 skVA	1869 skVA
Current	SB: 1003A PP: 902A	SB: 953A PP: 866A	SB: 918A PP: 835A
Frame Size	A3335L4	A3335L4	A3335L4
Excitation	SE	SE	SE
Temperature Rise	SB:163°C, 325°F PP: 125°C, 257°F		

SB: Standby PP: Prime Power

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.

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 fuel Consumption reported in accordance with ISO3046-1.

LEHE1659-00-ISO3046 (09/18)

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