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
DE715E0	**715 kVA, 572 ekW**	**650 kVA, 520 ekW**	**Non-Certified Emissions**

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	715 kVA	650 kVA
Gen set power rating with fan @ 0.8 power factor	572 ekW	520 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	DM9824	DM9823
Fuel Consumption		
100% Load with Fan	139.9 L/hr, 37.0 gal/hr	126.4 L/hr, 33.4 gal/hr
75% Load with Fan	103.6 L/hr, 27.4 gal/hr	93.8 L/hr, 24.8 gal/hr
50% Load with Fan	71.2 L/hr, 18.8 gal/hr	64.9 L/hr, 17.1 gal/hr
25% Load with Fan	41.0 L/hr, 10.8 gal/hr	37.6 L/hr, 9.9 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	374 m3/min, 13207 cfm	374 m3/min, 13207 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	37.5 m³/min, 1325.8 cfm	35.3 m³/min, 1246.1 cfm
Max. Allowable Combustion Air Inlet Temp	51 ° C, 124 ° F	49 ° C, 119 ° F
Exhaust System		
Exhaust stack gas temperature	568.2 ° C, 1054.8 ° F	550.5 ° C, 1022.9 ° F
Exhaust gas flow rate	110.6 m³/min, 3906.1 cfm	101.2 m³/min, 3572.0 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	179 kW, 10181 Btu/min	165 kW, 9375 Btu/min
Heat rejection to exhaust (total)	541 kW, 30791 Btu/min	487 kW, 27711 Btu/min
Heat rejection to aftercooler	107 kW, 6091 Btu/min	91 kW, 5192 Btu/min
Heat rejection to atmosphere from engine	89 kW, 5064 Btu/min	83 kW, 4729 Btu/min
Heat Rejection to Atmosphere from Generator	32 kW, 1820 Btu/min	28 kW, 1592 Btu/min

Emissions (Nominal)[2]	Standby	Prime
NOx	2989.7 mg/Nm³, 6.1 g/hp-hr	3135.1 mg/Nm³, 6.2 g/hp-hr
CO	354.8 mg/Nm³, 0.7 g/hp-hr	411.8 mg/Nm³, 0.8 g/hp-hr
HC	4.3 mg/Nm³, 0.0 g/hp-hr	7.2 mg/Nm³, 0.0 g/hp-hr
PM	9.4 mg/Nm³, 0.0 g/hp-hr	14.2 mg/Nm³, 0.0 g/hp-hr

Alternator[3]			
Voltages	380V	400V	415V
Motor Starting Capability @ 30% Voltage Dip	1859 skVA	2064 skVA	2228 skVA
Current	SB: 1086A PP: 988A	SB: 1032A PP: 938A	SB: 995A PP: 904A
Frame Size	A3355L4	A3355L4	A3355L4
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.

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