Cat® C15 DIESEL GENERATOR SETS

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

Image shown might not reflect actual configuration

Engine Model	Cat® C15 ACERT In-line 6, 4-cycle diesel
Bore x Stroke	137mm x 171mm (5.4in x 6.8in)
Displacement	15.2 L (928 in³)
Compression Ratio	16.1:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Model	Standby	Prime	Emission Strategy
DE500E0	**500 kVA, 400 ekW**	**450 kVA, 360 ekW**	**Non-Certified Emissions**

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	500 kVA	450 kVA
Gen set power rating with fan @ 0.8 power factor	400 ekW	360 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	DM8491	DM8490
Fuel Consumption		
100% load with fan	103.7 L/hr 27.4 gal/hr	94.5 L/hr 25.0 gal/hr
75% load with fan	77.9 L/hr 20.6 gal/hr	71.8 L/hr 19.0 gal/hr
50% load with fan	55.3 L/hr 14.6 gal/hr	51.5 L/hr 13.6 gal/hr
25% load with fan	33.4 L/hr 8.8 gal/hr	31.6 L/hr 8.3 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	476 m3/min, 16809 cfm	476 m3/min, 16809 cfm
Engine coolant capacity	20.8 L, 5.5 gal	20.8 L, 5.5 gal
Radiator coolant capacity	37 L, 9.7 gal	37 L, 9.7 gal
Total coolant capacity	57.8 L, 15.2 gal	57.8 L, 15.2 gal
Inlet Air		
Combustion air inlet flow rate	29.3 m³/min 1036.4 cfm	27.3 m³/min 965.0 cfm
Max. Allowable Combustion Air Inlet Temp	48 ° C 118 ° F	46 ° C 114 ° F
Exhaust System		
Exhaust stack gas temperature	523.6 ° C 974.4 ° F	515.3 ° C 959.5 ° F
Exhaust gas flow rate	79.4 m³/min 2802.2 cfm	73.1 m³/min 2580.2 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	151 kW 8583 Btu/min	139 kW 7923 Btu/min
Heat rejection to exhaust (total)	377 kW 21425 Btu/min	344 kW 19561 Btu/min
Heat rejection to aftercooler	71 kW 4053 Btu/min	61 kW 3450 Btu/min
Heat rejection to atmosphere from engine	44 kW 2477 Btu/min	42 kW 2396 Btu/min
Heat Rejection to Atmosphere from Generator	28 kW 1592 Btu/min	22 kW 1251 Btu/min

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Emissions (Nominal)[2]		
NOx	3458.8 mg/Nm³ 6.8 g/hp-hr	3357.6 mg/Nm³ 6.6 g/hp-hr
CO	171.2 mg/Nm³ 0.3 g/hp-hr	159.3 mg/Nm³ 0.3 g/hp-hr
HC	5.2 mg/Nm³ 0.0 g/hp-hr	6.6 mg/Nm³ 0.0 g/hp-hr
PM	7.8 mg/Nm³ 0.0 g/hp-hr	8.8 mg/Nm³ 0.0 g/hp-hr

Alternator[3]						
Voltages	**415V**		**400V**		**380V**	
Motor Starting Capability @ 30% Voltage Dip	1439 skVA		1066 skVA		1207 skVA	
Current	Standby: 695A | Prime: 626A		Standby: 722A | Prime: 650A		Standby: 747A | Prime: 650A	
Frame Size	A2975L4		A2975L4		A2975L4	
Excitation	SE		SE		SE	
Temperature Rise	SB:163°C, 325°F	PP: 125°C, 257°F	SB:163°C, 325°F	PP: 125°C, 257°F	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: Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/litre (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

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