

Standby & Prime: 60Hz; 220V, 240V, 380V, 440V & 480V



Image shown might not reflect actual configuration

Engine Model	Cat® C15 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	137 mm x 171 mm (5.4 in x 6.8 in)
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
DE500SE0	625 kVA, 500 ekW	569 kVA, 455 ekW	Non-Certified Emissions

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	60 Hz
Genset Power Rating	625 kVA	569 kVA
Gen set power rating with fan @ 0.8 power factor	500 ekW	455 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	DM8165	DM8164
Fuel Consumption		
100% Load with Fan	123.1 L/hr, 32.5 gal/hr	113.6 L/hr, 30.0 gal/hr
75% Load with Fan	95.2 L/hr, 25.1 gal/hr	87.5 L/hr, 23.1 gal/hr
50% Load with Fan	67.6 L/hr, 17.9 gal/hr	62.5 L/hr, 16.5 gal/hr
25% Load with Fan	40.4 L/hr, 10.7 gal/hr	37.9 L/hr, 10.0 gal/hr
Cooling System¹		
Radiator air flow restriction (system)	0.12 kPa, 0.48 in. Water	0.12 kPa, 0.48 in. Water
Radiator air flow	659 m³/min, 23272 cfm	659 m³/min, 23272 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	37.9 m³/min, 1337.4 cfm	35.2 m³/min, 1241.5 cfm
Max. Allowable Combustion Air Inlet Temp	47 °C, 117 °F	43 °C, 110 °F
Exhaust System		
Exhaust stack gas temperature	510.3 °C, 950.6 °F	505.4 °C, 941.7 °F
Exhaust gas flow rate	102.7 m³/min, 3627.4 cfm	94.2 m³/min, 3327.5 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	185 kW, 10501 Btu/min	180 kW, 10224 Btu/min
Heat rejection to exhaust (total)	477 kW, 27109 Btu/min	436 kW, 24783 Btu/min
Heat rejection to aftercooler	108 kW, 6125 Btu/min	91 kW, 5186 Btu/min
Heat rejection to atmosphere from engine	13 kW, 767 Btu/min	22 kW, 1244 Btu/min
Heat Rejection to Atmosphere from Generator	26 kW, 1479 Btu/min	22 kW, 1251 Btu/min

Emissions (Nominal) ²	Standby			Prime	
NOx	3377.5 mg/Nm³, 6.6 g/hp-hr			3329.0 mg/Nm³, 6.6 g/hp-hr	
CO	197.8 mg/Nm³, 0.4 g/hp-hr			186.1 mg/Nm³, 0.4 g/hp-hr	
HC	3.0 mg/Nm³, 0.0 g/hp-hr			2.8 mg/Nm³, 0.0 g/hp-hr	
PM	9.0 mg/Nm³, 0.0 g/hp-hr			11.1 mg/Nm³, 0.0 g/hp-hr	
Alternator ³					
Voltages	220V	240V	380V	440V	480V
Motor Starting Capability @ 30% Voltage Dip	1305 skVA	1553 skVA	971 skVA	1305 skVA	1553 skVA
Current	SB: 1624A PP: 1476A	SB: 1503A PP: 1368A	SB: 824A PP: 751A	SB: 812A PP: 738A	SB: 752A PP: 684A
Frame Size	A2985L4	A2985L4	A2985L4	A2985L4	A2985L4
Excitation	SE	SE	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, NO_x. 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 kW 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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