

# Cat® D500 GC DIESEL GENERATOR SETS



Standby: 60 Hz, 480V & 600V

Engine Model	Cat® C15 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



Image shown might not reflect actual configuration

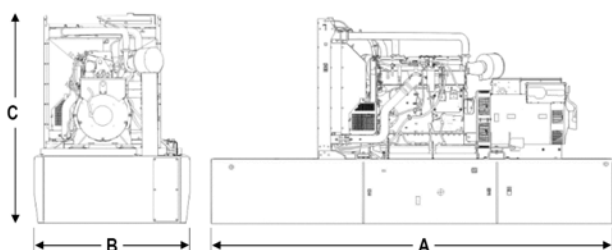
Standby	Performance Strategy
500 ekW, 625 kVA	EPA Certified for Stationary Emergency Application

## PACKAGE PERFORMANCE

Performance	Standby	
Frequency	60 Hz	
Genset Power Rating	625 kVA	
Gen set power rating with fan @ 0.8 power factor	500 ekW	
Emissions	EPA TIER 2	
Performance Number	DM8155	
Fuel Consumption		
100% load with fan	137.0 L/hr	36.2 gal/hr
75% load with fan	110.5 L/hr	29.2 gal/hr
50% load with fan	71.3 L/hr	18.8 gal/hr
25% load with fan	41.9 L/hr	11.1 gal/hr
Cooling System <sup>1</sup>		
Radiator air flow restriction (system)	0.12 kPa	0.48 in. Water
Radiator air flow	720 m³/min	25426 cfm
Engine coolant capacity	20.8 L	5.5 gal
Radiator coolant capacity	54 L	14 gal
Total coolant capacity	75 L	20 gal
Inlet Air		
Combustion air inlet flow rate	38.2 m³/min	1347.7 cfm
Max. Allowable Combustion Air Inlet Temp	49°C	120°F
Exhaust System		
Exhaust stack gas temperature	531.1°C	988.0 °F
Exhaust gas flow rate	102.1 m³/min	3605.5 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.0 in. water
Heat Rejection		
Heat rejection to jacket water	182 kW	10375 Btu/min
Heat rejection to exhaust (total)	493 kW	28039 Btu/min
Heat rejection to aftercooler	121 kW	6860 Btu/min
Heat rejection to atmosphere from engine	91 kW	5182 Btu/min
Heat rejection from alternator	29 kW	1655 Btu/min

Emissions(Nominal) <sup>2</sup>		Standby	
NOx	2129.1 mg/Nm <sup>3</sup>	4.6 g/hp-hr	
CO	301.5 mg/Nm <sup>3</sup>	0.6 g/hp-hr	
HC	8.8 mg/Nm <sup>3</sup>	0.03 g/hp-hr	
PM	9.5 mg/Nm <sup>3</sup>	0.03 g/hp-hr	
Alternator <sup>3</sup>		Standby	
Voltages	<b>480V</b>	<b>600V</b>	
Motor Starting Capability @ 30% Voltage Dip	1019	1103	
Current	751.8	601.4	
Frame Size	M3154L4	M3136L4	
Excitation	S.E	AREP	
Temperature Rise	105°C	130°C	

## WEIGHTS & DIMENSIONS – OPEN SET



Base	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Generator Set Weight kg (lb)
Skid (Wide Base)	4815 (189.6)	1630 (64.2)	2034 (80.1)	3756 (8280.6)
Integral Tank Base	4815 (189.6)	1630 (64.2)	2584 (101.7)	4693 (10346.3)

## FUEL TANK CAPACITY

Tank Design	Total Capacity		Useable Capacity	
	Litre	Gallon	Litre	Gallon
Integral	3671	969.7	3323	877.8

## DEFINITIONS AND CONDITIONS

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

<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>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 MG-1-32.

## 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.

**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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[www.Cat.com/electricpower](http://www.Cat.com/electricpower)

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