

Cat® D450 GC DIESEL GENERATOR SETS



Standby: 60 Hz, 480V & 600V



Image shown might not reflect actual configuration

Engine Model	Cat® C15 In-line 6, 4-cyclediesel
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

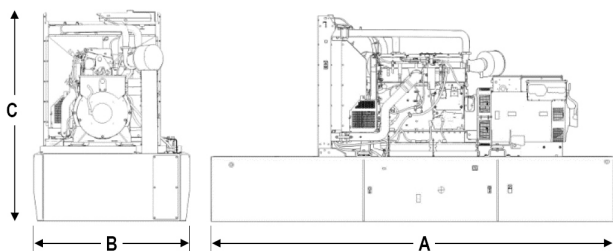
Standby	Performance Strategy
450 ekW, 562.5 kVA	EPA Certified for Stationary Emergency Application

PACKAGE PERFORMANCE

Performance	Standby	
Frequency	60 Hz	
Genset Power Rating	562.5 kVA	
Gen set power rating with fan @ 0.8 power factor	450 ekW	
Emissions	EPA TIER 3	
Performance Number	DM8153	
Fuel Consumption		
100% load with fan	131.7 L/hr	34.8 gal/hr
75% load with fan	106.1 L/hr	28.0 gal/hr
50% load with fan	79.1 L/hr	20.9 gal/hr
25% load with fan	45.1 L/hr	11.9 gal/hr
Cooling System¹		
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	41.9 m³/min	1479.3 cfm
Max. Allowable Combustion Air Inlet Temp	48 °C	118 °F
Exhaust System		
Exhaust stack gas temperature	491.3 °C	916.3 °F
Exhaust gas flow rate	111.3 m³/min	3929.1 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.0 in. water
Heat Rejection		
Heat rejection to jacket water	177 kW	10047 Btu/min
Heat rejection to exhaust (total)	505 kW	28699 Btu/min
Heat rejection to aftercooler	133 kW	7546 Btu/min
Heat rejection to atmosphere from engine	70 kW	4000 Btu/min
Heat rejection from alternator	26 kW	1462 Btu/min

Emissions (Nominal) ²	Standby	
NOx	2105.4 mg/nm ³	4.54 g/bhp-hr
CO	303.9 mg/nm ³	0.63 g/bhp-hr
HC	8.9 mg/nm ³	0.02 g/bhp-hr
PM	9.5 mg/nm ³	0.03 g/bhp-hr
Alternator ³		
Voltages	480V	600V
Motor Starting Capability @ 30% Voltage Dip	871	1103
Current	676.6	541.3
Frame Size	M3136L4	M3136L4
Excitation	S.E	AREP
Temperature Rise	105°C	105°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)	3707 (8172.5)
Integral Tank Base	4815 (189.6)	1630 (64.2)	2584 (101.7)	4644 (10238.3)

FUEL TANK CAPACITY

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

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.

RATINGS: Ratings are based on SAE J1349 standard conditions. These ratings also apply to 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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