

Cat® DE500 GC

Diesel Generator Sets



Standby & Prime: 50 Hz



Image shown might not reflect actual configuration.

Engine Model	Cat® C13 In-line 6, 4-cycle Diesel
Bore x Stroke	130 mm x 157 mm (5.1 in x 6.2 in)
Displacement	12.5 L (763 in ³)
Compression Ratio	15.8:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	EUI
Governor	Electronic ADEM™ A4 – G3 Class* capable

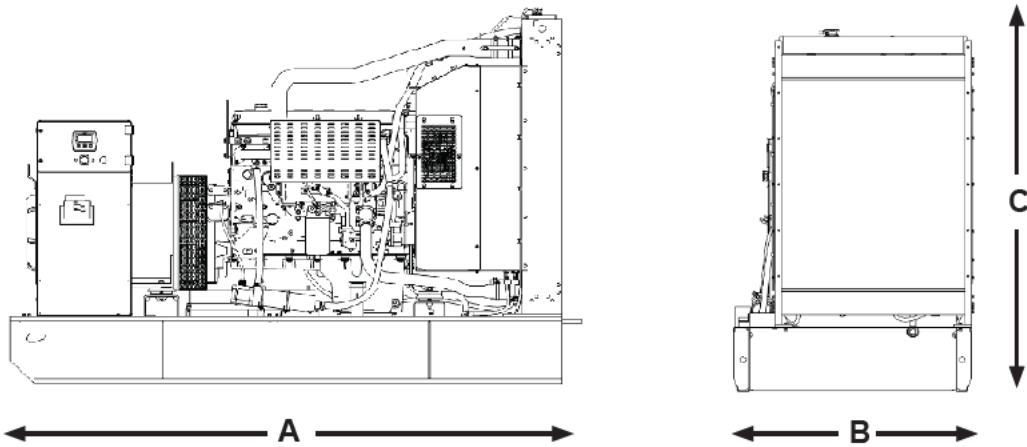
Model	Standby	Prime	Emission Strategy
DE500 GC	500 kVA	450 kVA	Low BSFC

PACKAGE PERFORMANCE

Performance	Standby	Prime
Genset Power Rating, kVA	500	450
Genset power rating with fan @ 0.8 power factor, ekW	400	360
Emissions	Low BSFC	
Performance Number	EM5628	EM5684
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	100.3 (26.5)	89.2 (23.6)
75% load with fan, L/hr (gal/hr)	72 (19.0)	64.7 (17.1)
50% load with fan, L/hr (gal/hr)	50 (13.2)	45.5 (12.0)
25% load with fan, L/hr (gal/hr)	28.8 (7.6)	26.5 (7.0)
Cooling System ¹		
Radiator air flow, m ³ /min (CFM)	467 (16492)	
Radiator air flow restriction (system), kPa (in. water)	0.125 (0.5)	
Total coolant capacity, L (gal)	47 (12.4)	
Inlet Air		
Combustion air inlet flow rate, m ³ /min (CFM)	29.3 (1035.2)	26.9 (949)
Max. combustion air intake restriction, kPa (in. water)	6.2 (25)	6.2 (25)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	510.4 (951)	488 (910)
Exhaust gas flow rate, m ³ /min (CFM)	81.7 (2886.5)	72.9 (2575)
Exhaust system backpressure (maximum allowable), kPa (in water)	14.7 (59)	14.7 (59)
Heat Rejection		
Heat rejection to jacket water, kW (BTU/min)	152 (8642)	140 (7943)
Heat rejection to exhaust (total), kW (BTU/min)	372 (21181)	372 (18625)
Heat rejection to aftercooler, kW (BTU/min)	94 (5344)	81 (4601)
Heat rejection to atmosphere from engine, kW (BTU/min)	27.4 (1559)	23.7 (1349)

Alternator ²	Standby			Prime		
	380V	415V	400V	380V	415V	400V
Voltages	380V	415V	400V	380V	415V	400V
Motor starting capability @ 30% Voltage Dip, skVA	1195	1607	1327	1195	1607	1327
Current, Amps	760	696	722	684	626	649
Temperature Rise, °C	163			163		
Frame Size	A2975L41			A2975L41		
Excitation	S.E			S.E		

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3100 (122.0)	1338 (52.6)	2168 (85.3)	2924 (6446.3)

Note: General configuration not to be used for installation. See general dimension drawings for detail.

APPLICABLE CODES AND STANDARDS:

AS1359, IEC60034-1, ISO 3046, ISO 8528, NEMA MG1-33, EAC, CE, UKCA.

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. 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 ISO 3046 standard conditions.

Fuel Rates Fuel rates are based on diesel with a 35 API gravity; a lower heating value is 42,780 kJ/kg (18,390 BTU/lb) when used at 15°C (59°F), where the density is 850 gm/l (7.0936 lbs/gal).

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

² Generator temperature rise is based on a 27°C ambient per IEC60034-1.

* Governing Class capability as per ISO 8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.