

# Cat® C15

## Diesel Generator Sets



Engine Model	Cat® C15 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

Image shown might not reflect actual configuration.

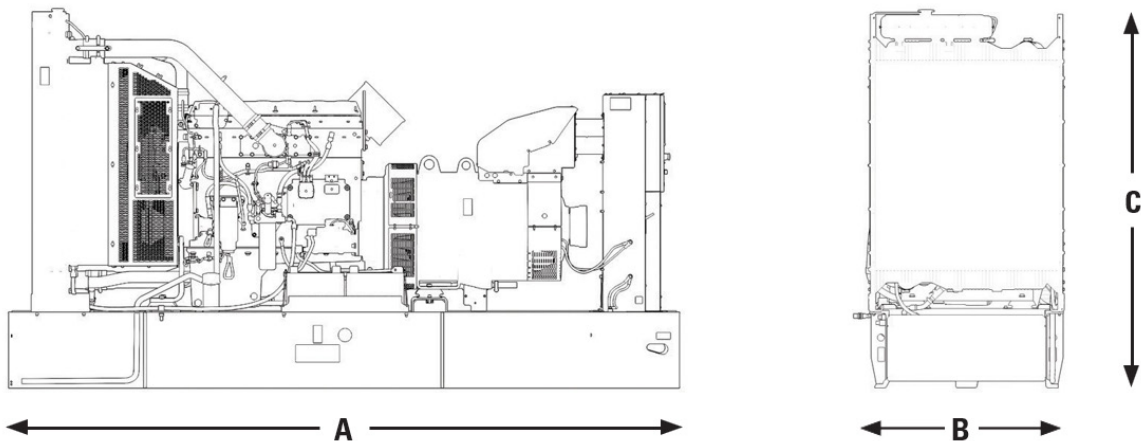
Model	Standby	Prime	Emission Strategy
DE550E3	550 kVA, 440 ekW	500 kVA, 400 ekW	EU3a – Certified Emissions

### PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	
Genset Power Rating	550 kVA	500 kVA
Gen set power rating with fan @ 0.8 power factor	440 ekW	400 ekW
Fuelling strategy	EU3a – Certified Emissions	
Performance Number	EM1247	EM0430
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	116.7 (30.8)	108.8 (28.7)
75% load with fan, L/hr (gal/hr)	92.0 (24.0)	85.6 (22.6)
50% load with fan, L/hr (gal/hr)	65.7 (17.3)	61.1 (16.1)
25% load with fan, L/hr (gal/hr)	37.0 (9.7)	34.6 (9.1)
Cooling System <sup>1</sup>		
Radiator air flow restriction (system), kPa (in. Water)	0.12 (0.48)	
Radiator air flow, m³/min (CFM)	476 (16809)	
Engine coolant capacity, L (gal)	20.8 (5.5)	
Radiator coolant capacity, L (gal)	34 (8.9)	
Total coolant capacity, L (gal)	54.8 (14.4)	
Inlet Air		
Combustion air inlet flow rate, m³/min (CFM)	35.9 (1269.4)	35.0 (1237.4)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	48 (118)	47 (116)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	484.2 (903.6)	471.3 (880.4)
Exhaust gas flow rate, m³/min (CFM)	95.8 (3383.6)	91.4 (3226.7)
Exhaust system backpressure (maximum allowable), kPa (in. Water)	10.0 (40.0)	10.0 (40.0)
Exhaust Rejection		
Heat rejection to jacket water, kW (BTU/min)	165 (9374)	153 (8681)
Heat rejection to exhaust (total), kW (BTU/min)	426 (24213)	400 (22769)
Heat rejection to aftercooler, kW (BTU/min)	126 (7171)	118 (6712)
Heat rejection to atmosphere from engine, kW (BTU/min)	66 (3767)	59 (3366)
Emissions (Nominal) <sup>2</sup>		
NO <sub>x</sub> , mg/Nm³ (g/hp-hr)	1634.6 (3.5)	1470.6 (3.2)
CO, mg/Nm³ (g/hp-hr)	279.8 (0.6)	260.8 (0.6)
HC, mg/Nm³ (g/hp-hr)	10.1 (0.0)	13.0 (0.0)
PM, mg/Nm³ (g/hp-hr)	11.5 (0.0)	12.8 (0.0)

Alternator <sup>3</sup>			
Voltages	415V	400V	380V
Motor Starting Capability @ 30% Voltage Dip	1391 skVA	1291 skVA	1165 skVA
Current, amps	Standby: 765A, Prime: 696A	Standby: 794A, Prime: 722A	Standby: 830A, Prime: 722A
Frame Size	A2985L4	A2985L4	A2985L4
Excitation	SE	SE	SE
Temperature Rise, °C (°F)	Standby: 163°C, Prime: 125°C	Standby: 163°C, Prime: 125°C	Standby: 163°C, Prime: 125°C

## WEIGHTS & DIMENSIONS



Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Dry Weight kg (lb)
3830 (151)	1130 (44)	2255 (89)	3700 (8157)

**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

**RATINGS:** Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO 3046 standard conditions.

### 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, NO<sub>x</sub>. 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> Generator temperature rise is based on a 40° C ambient per IEC60034-1.

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