Cat® C18
Diesel Generator Sets

Standby & Prime: 60 Hz

Image shown might not reflect actual configuration.

Engine Model	Cat® C18 In-line 6, 4-cycle Diesel
Bore x Stroke	145 mm x 183 mm (5.7 in x 7.2 in)
Displacement	18.1 L (1106 in^3)
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4 – G3 Class* capable

Model	Standby	Prime	Emission Strategy
DE550SE0	688 kVA, 550 ekW	625 kVA, 500 ekW	Non-Certified Emissions

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	60 Hz
Genset Power Rating	688 kVA	625 kVA
Genset power rating with fan @ 0.8 power factor	550 ekW	500 ekW
Emissions	Non-Certified Emissions	
Performance Number	DM9832	DM9831
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	147.8 (39.1)	133.9 (35.4)
75% load with fan, L/hr (gal/hr)	107.9 (28.5)	101.1 (26.7)
50% load with fan, L/hr (gal/hr)	73.9 (19.5)	70.8 (18.7)
25% load with fan, L/hr (gal/hr)	43.6 (11.5)	43.3 (11.4)
Cooling System[1]		
Radiator air flow restriction (system), kPa (in. water)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m^3/min (CFM)	481 (16987)	481 (16987)
Engine coolant capacity, L (gal)	20.8 (5.5)	20.8 (5.5)
Radiator coolant capacity, L (gal)	34 (8.9)	34 (8.9)
Total coolant capacity, L (gal)	54.8 (14.4)	54.8 (14.4)
Inlet Air		
Combustion air inlet flow rate, m^3/min (CFM)	44.6 (1574.9)	42.0 (1483.1)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	50 (123)	46 (115)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	487.9 (910.2)	466.0 (870.8)
Exhaust gas flow rate, m^3/min (CFM)	119.9 (4233.7)	109.5 (3866.8)
Exhaust system backpressure (maximum allowable) kPa (in. water)	10.0 (40.0)	10.0 (40.0)
Heat Rejection		
Heat rejection to jacket water, kW (BTU/min)	172 (9781)	161 (9156)
Heat rejection to exhaust (total) kW (BTU/min)	523 (29742)	468 (26617)
Heat rejection to aftercooler, kW (BTU/min)	125 (7109)	109 (6199)
Heat rejection to atmosphere from engine, kW (BTU/min)	138 (7848)	124 (7052)
Emissions (Nominal)[2]		
NO_x, mg/Nm^3 (g/hp-hr)	3374.3 (6.8)	3530.2 (7.0)
CO, mg/Nm^3 (g/hp-hr)	75.0 (0.2)	87.1 (0.2)
HC, mg/Nm^3 (g/hp-hr)	4.0 (0.0)	4.8 (0.0)
PM, mg/Nm^3 (g/hp-hr)	6.4 (0.0)	5.8 (0.0)

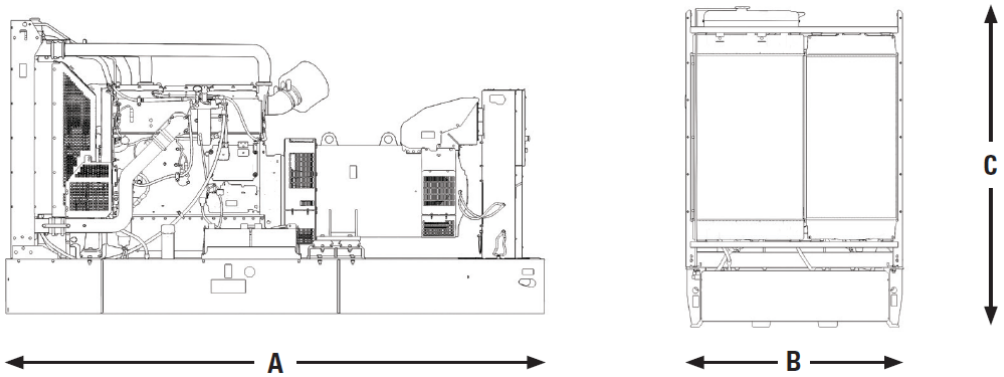
C18 Diesel Generator Sets
Electric Power

ALTERNATOR DATA

Alternator[3]					
Voltages, V	220V	240V	380V	400V	415V
Motor starting capability @ 30% Voltage Dip	1750 skVA	2085 skVA	1007 skVA	1750 skVA	2085 skVA
Current, A	SB: 1968A, PP: 1640A	SB: 1654A, PP: 1503A	SB: 1044A, PP: 949A	SB: 902A, PP: 820A	SB: 827A, PP: 752A
Frame Size	A3335L4	A3335L4	A3335L4	A3335L4	A3335L4
Excitation	SE	SE	SE	SE	SE
Temperature Rise,°C	SB: 163°C, PP: 125°C105				

SB: Standby PP: Prime Power.

WEIGHTS & DIMENSIONS



Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Dry Weight kg (lb)
3910 (154)	1461 (58)	2156 (85)	3862 (8514)

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

APPLICABLE CODES AND STANDARDS:

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO 8528, 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 ekW 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

[1] 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] Generator temperature rise is based on a 40° 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.

www.cat.com/electricpower
©2026 Caterpillar
All rights reserved.
Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.
CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.