

Cat® C18

Diesel Generator Sets



Standby & Prime: 50 Hz



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 in³)
Compression Ratio	14.5:1
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
DE605E0	605 kVA, 484 ekW	550 kVA, 440 ekW	Non-Certified Emissions

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	
Genset power rating	605 kVA	550 kVA
Genset power rating with fan @ 0.8 power factor	484 ekW	440 ekW
Emissions	Non-Certified Emissions	
Performance number	DM9820	DM9819
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	122.7 (32.4)	111.0 (29.3)
75% load with fan, L/hr (gal/hr)	92.0 (24.3)	83.9 (22.2)
50% load with fan, L/hr (gal/hr)	64.0 (16.9)	58.8 (15.5)
25% load with fan, L/hr (gal/hr)	37.2 (9.8)	34.4 (9.1)
Cooling System¹		
Radiator air flow restriction (system), kPa (in. water)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m³/min (cfm)	373 (13172)	373 (13172)
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, m³/min (cfm)	31.6 (1117.5)	29.2 (1032.0)
Max. allowable combustion air inlet temp, °C (°F)	49 (121)	47 (117)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	553.8 (1028.8)	543.1 (1009.6)
Exhaust gas flow rate, m³/min (cfm)	92.1 (3251.0)	83.5 (2948.0)
Exhaust system backpressure (maximum allowable), kPa (in. water)	10.0 (40.0)	10.0 (40.0)
Exhaust System		
Heat rejection to jacket water, kW (Btu/min)	157 (8945)	146 (8309)
Heat rejection to exhaust (total), kW (Btu/min)	449 (25525)	404 (22965)
Heat rejection to aftercooler, kW (Btu/min)	76 (4313)	63 (3606)
Heat rejection to atmosphere from engine, kW (Btu/min)	84 (4784)	78 (4438)
Heat rejection to atmosphere from generator kW (Btu/min)	36 (2047)	31 (1763)

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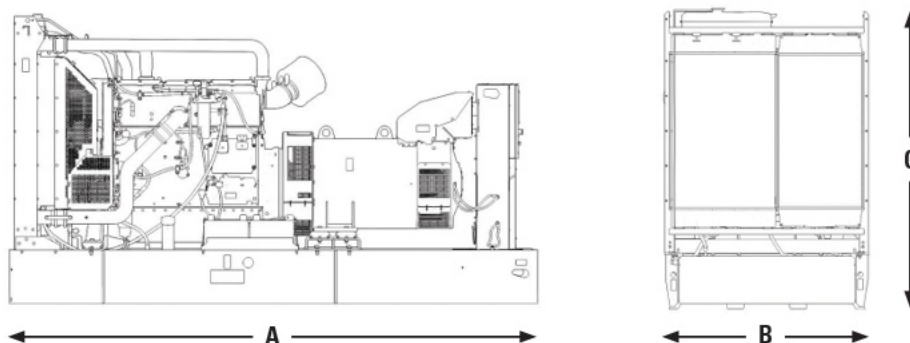
Electric Power



Emissions (Nominal) ²			
NOx, mg/Nm ³ (g/hp-hr)	3762.8 (7.7)	4029.2 (8.1)	
CO, mg/Nm ³ (g/hp-hr)	656.7 (1.3)	615.0 (1.2)	
HC, mg/Nm ³ (g/hp-hr)	3.2 (0.0)	3.3 (0.0)	
PM, mg/Nm ³ (g/hp-hr)	12.6 (0.0)	10.4 (0.0)	
Alternator ³			
Voltages	380V	400V	415V
Motor Starting Capability @ 30% Voltage Dip	1362 skVA	1507 skVA	1539 skVA
Current	SB: 919A, PP: 811A	SB: 873A, PP: 794A	SB: 842A, PP: 765A
Frame Size	A3325L4	A3325L4	A3325L4
Excitation	SE	SE	SE
Temperature Rise, °C (°F)	SB: 163°C, PP: 125°C		

SB: Standby PP: Prime Power.

WEIGHTS & DIMENSIONS



Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Dry Weight kg (lb)
3325 (130.9)	1134 (44.6)	1666 (65.9)	1931 (4257.1)

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

DEFINITIONS AND CONDITIONS

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.

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 ISO3046 standard conditions.

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.

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