

# Cat<sup>®</sup> C18 DIESEL GENERATOR SETS



Standby & Prime: 60 Hz, 480V



Engine Model	Cat <sup>®</sup> C18 ATTAC™ In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
Displacement	18.13 L (1106.3 in <sup>3</sup> )
Compression Ratio	16.1:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	Electronic Unit Injection
Governor	Electronic ADEM™ A4

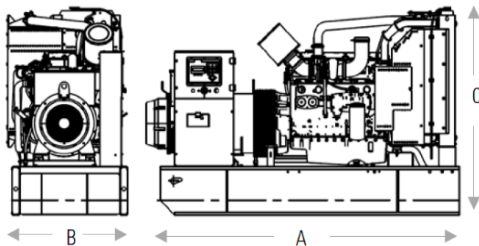
Model	Standby	Prime	Emission Strategy
<b>C18</b>	<b>625 kVA, 500 ekW</b>	<b>569 kVA, 455 ekW</b>	<b>US EPA TIER IV Final, Non-Road</b>

## PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	60 Hz
Genset power rating	625 kVA	569 kVA
Genset power rating with fan @ 0.8 power factor	500 ekW	455 ekW
Fuelling strategy	US EPA TIER IV Final, Non-Road	US EPA TIER IV Final, Non-Road
Performance number	EM1017	EM1112
Fuel Consumption		
100% load with fan	140.1 L/hr, 37 gal/hr	126.6 L/hr, 33.4 gal/hr
75% load with fan	106.7 L/hr, 28.2 gal/hr	96.7 L/hr, 25.6 gal/hr
50% load with fan	75.9 L/hr, 20.1 gal/hr	69.2 L/hr, 18.3 gal/hr
25% load with fan	47 L/hr, 12.4 gal/hr	43.2 L/hr, 11.4 gal/hr
Cooling System <sup>1</sup>		
Radiator air flow restriction (system)	0.12 kPa, 0.48 in. Water	0.12 kPa, 0.48 in. Water
Radiator air flow	804 m <sup>3</sup> /min, 28393 cfm	804 m <sup>3</sup> /min, 28393 cfm
Engine coolant capacity	26.9 L, 7.1 gal	26.9 L, 7.1 gal
Radiator coolant capacity	61 L, 16.11 gal	61 L, 16.11 gal
Total coolant capacity	87.9 L, 23.2 gal	87.9 L, 23.2 gal
Inlet Air		
Combustion air inlet flow rate	37.9 m <sup>3</sup> /min, 1340 cfm	36.3 m <sup>3</sup> /min, 1208 cfm
Max. allowable combustion air inlet temp	50 °C, 122 °F	50 °C, 122 °F
Exhaust System		
Exhaust stack gas temperature	447 °C, 836.8 °F	426.3 °C, 799.3 °F
Exhaust gas flow rate	69.8 m <sup>3</sup> /min, 2465.3 cfm	66.5 m <sup>3</sup> /min, 2349.7 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa, 40.0 in. water	10.0 kPa, 40.0 in. water
Heat Rejection		
Heat rejection to jacket water	283 kW, 16110 Btu/min	256 kW, 14548 Btu/min
Heat rejection to exhaust (total)	514 kW, 29204 Btu/min	462 kW, 26276 Btu/min
Heat rejection to aftercooler	113 kW, 6454 Btu/min	101 kW, 5721 Btu/min
Heat rejection to atmosphere from engine	28 kW, 1603 Btu/min	26.1 kW, 1483 Btu/min
Heat rejection to atmosphere from Generator	29 kW, 1621 Btu/min	25.5 kW, 1450 Btu/min

Emissions (Nominal) <sup>2</sup>		
NOx	100.5 mg/Nm <sup>3</sup> , 0.2 g/hp-hr	122.8 mg/Nm <sup>3</sup> , 0.26 g/hp-hr
CO	NA	NA
HC	4.9 mg/Nm <sup>3</sup> , 0.01 g/hp-hr	3.9 mg/Nm <sup>3</sup> , 0.01 g/hp-hr
PM	2.2 mg/Nm <sup>3</sup> , 0.01 g/hp-hr	1.6 mg/Nm <sup>3</sup> , 0.00 g/hp-hr
Alternator <sup>3</sup>		
Voltages	<b>480V</b>	<b>480V</b>
Motor starting capability @30% Voltage Dip	1729 skVA	1729 skVA
Current	752 amps	684 amps
Frame Size	LC6124G	LC6124G
Excitation	AR	AR
Temperature Rise	105 °C, 221 °F	105 °C, 221 °F

## WEIGHTS & DIMENSIONS – OPEN



Standby Rating	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Generator Set Weight kg (lb)
<b>500 ekW</b>	5310	2286	2179	5160

Note: Weights & Dimensions are for open set on skid base

### 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, 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.

<sup>3</sup> 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 at 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.

# LET'S DO THE WORK.™

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