

# Cat® C18

## Diesel Generator Sets



### Standby & Prime: 50 Hz



Image shown might not reflect actual configuration

Engine Model	Cat® C18 ACERT™ 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 <sup>3</sup> )
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

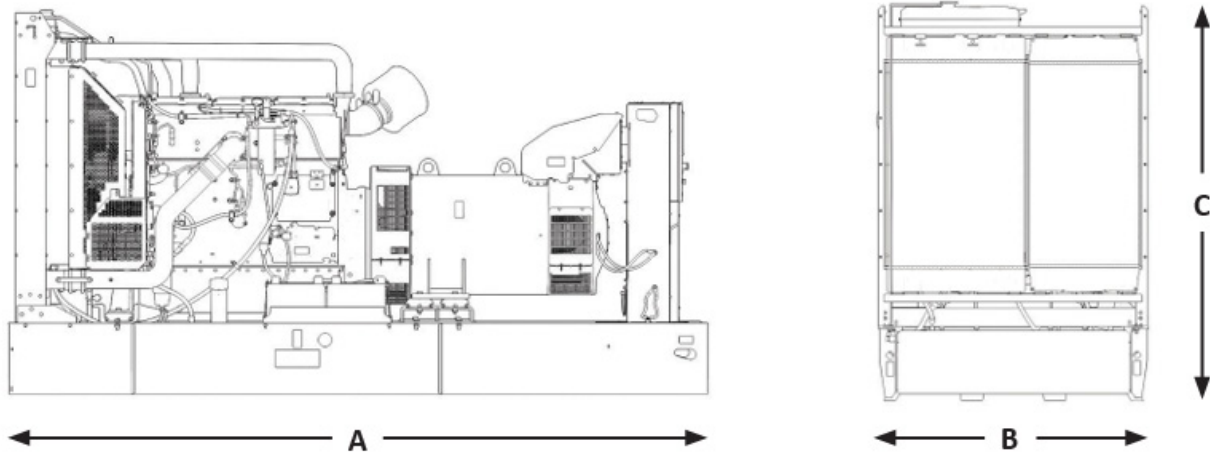
Model	Standby	Prime	Emission Strategy
DE715E0	50 Hz	50 Hz	Non-Certified Emissions
	715 kVA, 572 ekW	650 kVA, 520 ekW	

### PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	715 kVA	650 kVA
Genset power rating with fan @ 0.8 power factor	572 ekW	520 ekW
Emissions	Non-Certified Emissions	
Performance Number	EM1390	EM1391
<b>Fuel Consumption</b>		
100% load with fan, L/hr (gal/hr)	144.2 (31.7)	131.4 (28.9)
75% load with fan, L/hr (gal/hr)	106.6 (23.5)	97.1 (21.4)
50% load with fan, L/hr (gal/hr)	72.2 (15.9)	66.3 (14.6)
25% load with fan, L/hr (gal/hr)	40.5 (8.9)	37.5 (8.2)
<b>Cooling System<sup>1</sup></b>		
Radiator air flow restriction (system), kPa (in H <sub>2</sub> O)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m <sup>3</sup> /min (cfm)	374 (13207)	374 (13207)
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)
<b>Inlet Air</b>		
Combustion air inlet flow rate, m <sup>3</sup> /min (cfm)	37.5 (1325.8)	35.3 (1246.1)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	51 (124)	49 (119)
<b>Exhaust System</b>		
Exhaust stack gas temperature, °C (°F)	568.2 (1054.8)	550.5 (1022.9)
Exhaust gas flow rate, m <sup>3</sup> /min (cfm)	110.6 (3906.1)	101.2 (3572.0)
Exhaust system backpressure (maximum allowable) kPa (in H <sub>2</sub> O)	10.0 (40.0)	10.0 (40.0)
<b>Heat Rejection</b>		
Heat rejection to jacket water, kW (Btu/min)	179 (10181)	165 (9375)
Heat rejection to exhaust (total) kW (Btu/min)	541 (30791)	487 (27711)
Heat rejection to aftercooler, kW (Btu/min)	107 (6091)	91 (5192)
Heat rejection to atmosphere from engine, kW (Btu/min)	89 (5064)	83 (4729)
<b>Emissions (Nominal)<sup>2</sup></b>		
NO <sub>x</sub> , mg/Nm <sup>3</sup> (g/hp-hr)	2989.7 (6.1)	3135.1 (6.2)
CO, mg/Nm <sup>3</sup> (g/hp-hr)	354.8 (0.7)	411.8 (0.8)
HC, mg/Nm <sup>3</sup> (g/hp-hr)	4.3 (0.0)	7.2 (0.0)
PM, mg/Nm <sup>3</sup> (g/hp-hr)	9.4 (0.0)	14.2 (0.0)

Alternator <sup>3</sup>	50 Hz		
Voltages	380V	400V	415V
Motor starting capability @ 30% Voltage Dip, skVA	1859 skVA	2064 skVA	2228 skVA
Current, amps	SB: 1086A, PP: 988A	SB: 1032A, PP: 938A	SB: 995A, PP: 904A
Temperature Rise, °C	SB: 163, PP: 125		
Frame Size	A3355L4		
Excitation	S.E		

**WEIGHTS & DIMENSIONS**



Dim "A" mm (in)	Dim "B" mm (in)	Dim "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, 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**

- <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.

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