

Standby & Prime: 50Hz, 415V,400V, 380V



Image shown might not reflect actual configuration

Engine Model	Cat <sup>®</sup> C18 ATAAC™ 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	14:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	Electronic Unit Injection
Governor	Electronic ADEM™ A4

Model	Standby	Prime	Emission Strategy
DE850E0	850 kVA	770 kVA	Low BSFC

## PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency, Hz	50	50
Genset Power Rating, kVA	850	770
Gen set power rating with fan @ 0.8 power factor, kW	680	616
Fuelling strategy	Low BSFC	Low BSFC
Performance Number	EM3830	EM3831
<b>Fuel Consumption</b>		
100% load with fan, L/hr, gal/hr	180 (47.6)	162 (42.8)
75% load with fan, L/hr, gal/hr	132 (34.9)	118 (31.2)
50% load with fan, L/hr, gal/hr	87 (23)	80 (21.1)
25% load with fan, L/hr, gal/hr	47 (12.4)	44 (11.6)
<b>Cooling System<sup>1</sup></b>		
Radiator air flow restriction (system), kPa, in. Water	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m <sup>3</sup> /min, cfm	852 (30088)	852 (30088)
Engine coolant capacity, L, gal	21 (5.5)	21 (5.5)
Radiator coolant capacity, L, gal	89 (23.5)	89 (23.5)
Total coolant capacity, L, gal	110 (29.1)	110 (29.1)
<b>Inlet Air</b>		
Combustion air inlet flow rate, m <sup>3</sup> /min, cfm	62 (2190)	58 (2048)
Max. Allowable Combustion Air Inlet Temp, °C, °F	NA	NA
<b>Exhaust System</b>		
Exhaust stack gas temperature, °C, °F	410 (770)	400 (752)
Exhaust gas flow rate, m <sup>3</sup> /min, cfm	142 (5015)	132 (4662)
Exhaust system backpressure (maximum allowable) kPa, in. water	8.5 (2.5)	8.5 (2.5)
<b>Heat Rejection</b>		
Heat rejection to jacket water, kW, Btu/min	205 (11658)	186 (10578)
Heat rejection to exhaust (total) kW, Btu/min	659 (37477)	585 (33268)
Heat rejection to aftercooler, kW, Btu/min	230 (13080)	209 (11886)
Heat rejection to atmosphere from engine, kW, Btu/min	107 (6085)	98 (5573)

Emissions (Nominal)	Standby			Prime		
NOx, mg/Nm <sup>3</sup> , g/hp-hr	2544.5 (5.57)			2547.5 (5.57)		
CO, mg/Nm <sup>3</sup> , g/hp-hr	535.1 (1.17)			268.3 (0.58)		
HC, mg/Nm <sup>3</sup> , g/hp-hr	35.1 (0.09)			14.0 (0.04)		
PM, mg/Nm <sup>3</sup> , g/hp-hr	36.0(0.09)			19.4 (0.05)		
Alternator	Standby			Prime		
Voltages, V	<b>415</b>	<b>400</b>	<b>380</b>	<b>415</b>	<b>400</b>	<b>380</b>
Motor Starting Capability @ 30% Voltage Dip & 0.6 p.f, skVA	2268	2118	1924	2268	2118	1924
Current, amps	1182.5	1227	1291.4	1071.2	1111.4	1170
Frame Size	LC7224L	LC7224L	LC7224L	LC7224L	LC7224L	LC7224L
Excitation	AREP	AREP	AREP	AREP	AREP	AREP
Temperature Rise, °C, °F	150, (302)	150, (302)	150, (302)	125, (257)	125, (257)	125, (257)

## 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.

### 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.



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