

Standby & Prime: 60Hz, 220V (3 Phase)



Engine Model	Cat® C15 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	130mm x 157mm (5.1in x 6.2in)
Displacement	12.5 L (763 in³)
Compression Ratio	16.3:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Standby	Prime	Performance Strategy
400 ekW, 500 kVA	365 ekW, 456 kVA	Low BSFC

PACKAGE PERFORMANCE

Performance	Standby		Prime	
Frequency	60 Hz		60 Hz	
Genset Power Rating	500 kVA		456 kVA	
Gen set power rating with fan @ 0.8 power factor	400 ekW		365 ekW	
Fuelling strategy	Low BSFC		Low BSFC	
Performance Number	DM8161-03		DM8160-03	
Fuel Consumption				
100% Load with Fan	107.5 L/hr	28.4 gal/hr	97.8 L/hr	25.8 gal/hr
75% Load with Fan	81.7 L/hr	21.6 gal/hr	75.2 L/hr	19.9 gal/hr
50% Load with Fan	58.0 L/hr	15.3 gal/hr	53.9 L/hr	14.3 gal/hr
25% Load with Fan	35.9 L/hr	9.5 gal/hr	33.9 L/hr	8.9 gal/hr
Cooling System¹				
Radiator air flow restriction (system)	0.12 kPa	0.48 in. Water	0.12 kPa	0.48 in. Water
Radiator air flow	720 m³/min	25427 cfm	720 m³/min	25427 cfm
Engine coolant capacity	20.8 L	5.5 gal	20.8 L	5.5 gal
Radiator coolant capacity	37.0 L	9.7 gal	37.0 L	9.7 gal
Total coolant capacity	57.8 L	15.2 gal	37.0 L	9.7 gal
Inlet Air				
Combustion air inlet flow rate	30.7 m³/min	1084.1 cfm	28.8 m³/min	1017.3 cfm
Max. Allowable Combustion Air Inlet Temp	48.1°C	118.6 °F	47.7 °C	117.9 °F
Exhaust System				
Exhaust Stack Gas Temperature	519.1 °C	966.4 °F	515.0 °C	959.0 °F
Exhaust Gas Flow Rate	85.6 m³/min	3022.7 cfm	78.1 m³/min	2759.4 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	171 kW	9725 Btu/min	159 kW	9042 Btu/min
Heat Rejection to Exhaust (Total)	400 kW	22749 Btu/min	366 kW	20813 Btu/min
Heat Rejection to Aftercooler	70 kW	3987 Btu/min	58 kW	3326 Btu/min
Heat Rejection to Atmosphere from Engine	50 kW	2855 Btu/min	43 kW	2457 Btu/min
Heat Rejection from alternator	21.9 kW	1245 Btu/min	19.2 kW	1092 Btu/min

Emissions (Nominal) ²		Standby		Prime	
NOx		3552.6 mg/Nm ³	6.8 g/hp-hr	3440.1 mg/Nm ³	6.8 g/hp-hr
CO		194.8 mg/Nm ³	0.4 g/hp-hr	192.5 mg/Nm ³	0.4 g/hp-hr
HC		5.5 mg/Nm ³	0.0 g/hp-hr	5.7 mg/Nm ³	0.0 g/hp-hr
PM		25.5 mg/Nm ³	0.1 g/hp-hr	43.4 mg/Nm ³	0.1 g/hp-hr
Alternator ³		Standby		Prime	
Voltages		220V			
Motor Starting Capability @ 30% Voltage Dip		1325 skVA			
Current		1312 amps		1197 amps	
Frame Size		GTA311AE41			
Excitation		Auxiliary Coil			
Temperature Rise		130 ° C		125 ° C	

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.

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 are based on SAE J1349 standard conditions. These ratings also apply to 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.

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