

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



Engine Model	Cat® C18 ATAAC™ In-line 6, 4-cycle diesel
Bore x Stroke	145 mm x 183 mm (5.71 in x 7.2 in)
Displacement	18.13 L (1106.36 in ³)
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Standby	Prime	Performance Strategy
600 ekW, 750 kVA	545 ekW, 681 kVA	Low BSFC

PACKAGE PERFORMANCE

Performance	Standby		Prime	
Frequency	60 Hz		60 Hz	
Genset Power Rating	750 kVA		681 kVA	
Gen set power rating with fan @ 0.8 power factor	600 ekW		545 ekW	
Fuelling strategy	Low BSFC		Low BSFC	
Performance Number	DM9834-01		DM9833-00	
Fuel Consumption				
100% Load with Fan	163.0 L/hr	43.0 gal/hr	150.6 L/hr	39.8 gal/hr
75% Load with Fan	119.5 L/hr	31.6 gal/hr	111.0 L/hr	29.3 gal/hr
50% Load with Fan	81.1 L/hr	21.4 gal/hr	76.6 L/hr	20.2 gal/hr
25% Load with Fan	47.2 L/hr	12.5 gal/hr	46.2 L/hr	12.2 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	481 m ³ /min	16986 cfm	481 m ³ /min	16986 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	48.7 m ³ /min	1719.2 cfm	N/A	N/A
Max. Allowable Combustion Air Inlet Temp	49.0 °C	120.2 °F	N/A	N/A
Exhaust System				
Exhaust Stack Gas Temperature	511.4 °C	952.5 °F	N/A	N/A
Exhaust Gas Flow Rate	132.3 m ³ /min	4670.4 cfm	N/A	N/A
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	181 kW	10313 Btu/min	173 kW	9824 Btu/min
Heat Rejection to Exhaust (Total)	615 kW	34960 Btu/min	567 kW	32217 Btu/min
Heat Rejection to Aftercooler	152 kW	8652 Btu/min	137 kW	7819 Btu/min
Heat Rejection to Atmosphere from Engine	111 kW	6330 Btu/min	102 kW	5823 Btu/min
Heat Rejection to Atmosphere from Generator	35.8 kW	2036 Btu/min	33 kW	1877 Btu/min

Emissions (Nominal) ²	Standby		Prime	
	NOx	2622.7 mg/Nm ³	5.5 g/hp-hr	2358.1 mg/Nm ³
CO	65.0 mg/Nm ³	0.1 g/hp-hr	75.1 mg/Nm ³	0.2 g/hp-hr
HC	5.6 mg/Nm ³	0.0 g/hp-hr	6.0 mg/Nm ³	0.0 g/hp-hr
PM	5.4 mg/Nm ³	0.0 g/hp-hr	N/A	N/A
Alternator ³	Standby		Prime	
	220V			
Motor Starting Capability @ 30% Voltage Dip	1577 skVA			
Current	1968 amps		1787 amps	
Frame Size	GTA312AEDK			
Excitation	Auxiliary Coil			
Temperature Rise	163 ° 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 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.

LEHE1736 (04/18)

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