Cat® C18 DIESEL GENERATOR SETS

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

Image shown might not reflect actual configuration

Engine Model	Cat® C18 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
Displacement	18.1 L (1106 in^3)
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	**715 kVA, 572 ekW**	**650 kVA, 520 ekW**	**Non-Certified Emissions**

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	715 kVA	650 kVA
Gen set power rating with fan @ 0.8 power factor	572 ekW	520 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	DM9824	DM9823
Fuel Consumption		
100% load with fan	144.5 L/hr 38.2 gal/hr	130.6 L/hr 34.5 gal/hr
75% load with fan	107.0 L/hr 28.3 gal/hr	96.9 L/hr 25.6 gal/hr
50% load with fan	73.5 L/hr 19.4 gal/hr	67.0 L/hr 17.7 gal/hr
25% load with fan	42.3 L/hr 11.2 gal/hr	38.8 L/hr 10.3 gal/hr
Cooling System[1]		
Radiator air flow restriction (system)	0.12 kPa, 0.48 in. Water	0.12 kPa, 0.48 in. Water
Radiator air flow	374 m3/min, 13207 cfm	374 m3/min, 13207 cfm
Engine coolant capacity	20.8 L, 5.5 gal	20.8 L, 5.5 gal
Radiator coolant capacity	34 L, 8.9 gal	34 L, 8.9 gal
Total coolant capacity	54.8 L, 14.4 gal	54.8 L, 14.4 gal
Inlet Air		
Combustion air inlet flow rate	37.5 m^3/min 1325.8 cfm	35.3 m^3/min 1246.1 cfm
Max. Allowable Combustion Air Inlet Temp	51 ° C 124 ° F	49 ° C 119 ° F
Exhaust System		
Exhaust stack gas temperature	568.2 ° C 1054.8 ° F	550.5 ° C 1022.9 ° F
Exhaust gas flow rate	110.6 m^3/min 3906.1 cfm	101.2 m^3/min 3572.0 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	179 kW 10181 Btu/min	165 kW 9375 Btu/min
Heat rejection to exhaust (total)	541 kW 30791 Btu/min	487 kW 27711 Btu/min
Heat rejection to aftercooler	107 kW 6091 Btu/m	91 kW 5192 Btu/min
Heat rejection to atmosphere from engine	89 kW 5064 Btu/min	83 kW 4729 Btu/min
Heat Rejection to Atmosphere from Generator	32 kW 1820 Btu/min	28 kW 1592 Btu/min

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Emissions (Nominal)[2]		
NOx	2989.7 mg/Nm³ 6.1 g/hp-hr	3135.1 mg/Nm³ 6.2 g/hp-hr
CO	354.8 mg/Nm³ 0.7 g/hp-hr	411.8 mg/Nm³ 0.8 g/hp-hr
HC	4.3 mg/Nm³ 0.0 g/hp-hr	7.2 mg/Nm³ 0.0 g/hp-hr
PM	9.4 mg/Nm³ 0.0 g/hp-hr	14.2 mg/Nm³ 0.0 g/hp-hr

Alternator[3]			
Voltages	**380V**	**400V**	**415V**
Motor Starting Capability @ 30% Voltage Dip	1859 skVA	2064 skVA	2228 skVA
Current	SB: 1086A PP: 988A	SB: 1032A PP: 938A	SB: 995A PP: 904A
Frame Size	A3355L4	A3355L4	A3355L4
Excitation	SE	SE	SE
Temperature Rise	SB:163°C, 325°F PP: 125°C, 257°F		

SB: Standby PP: Prime Power

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 ekW 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.

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.

Media Number: LEHE1660-00

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Enclosures

Image shown may not reflect actual configuration.

C18 Sound Attenuated Enclosures

50 Hz / 60 Hz

These sound attenuated, factory installed enclosures incorporate internally mounted super critical level silencers, designed for safety and aesthetic value on integral fuel tank base or optional dual wall integral fuel tank base for total fluid containment. These enclosures are of extremely rugged construction to withstand exposure to the elements and provide weather protection.

Features

Robust/Highly Corrosion Resistant Construction

- Factory installed on integral fuel tank base
- Environmentally friendly, polyester powder baked paint
- 1.6 mm (0.063 in) galvanized steel
- All round overhanging base to protect enclosure
- High-grade engineering thermoplastic corner posts for protection
- Compression door latches giving solid door seal
- Zinc plated or black coated stainless steel fasteners
- Internally mounted super critical exhaust silencing system

Excellent Access

- Large cable entry area for installation ease
- Accommodates rear mounted breaker and control panel
- Double doors on both sides
- Vertically hinged doors with solid bar door stays to hold doors open at 135° rotation
- Lube oil and coolant drains pipes to exterior of enclosure and terminated drain valves
- Radiator fill cover

Security and Safety

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill and battery can only be reached via lockable access
- Externally mounted emergency stop button
- Designed for spreader-bar lifting to ensure safety
- Control panel viewing window
- Stub-up area is rodent proof

Options

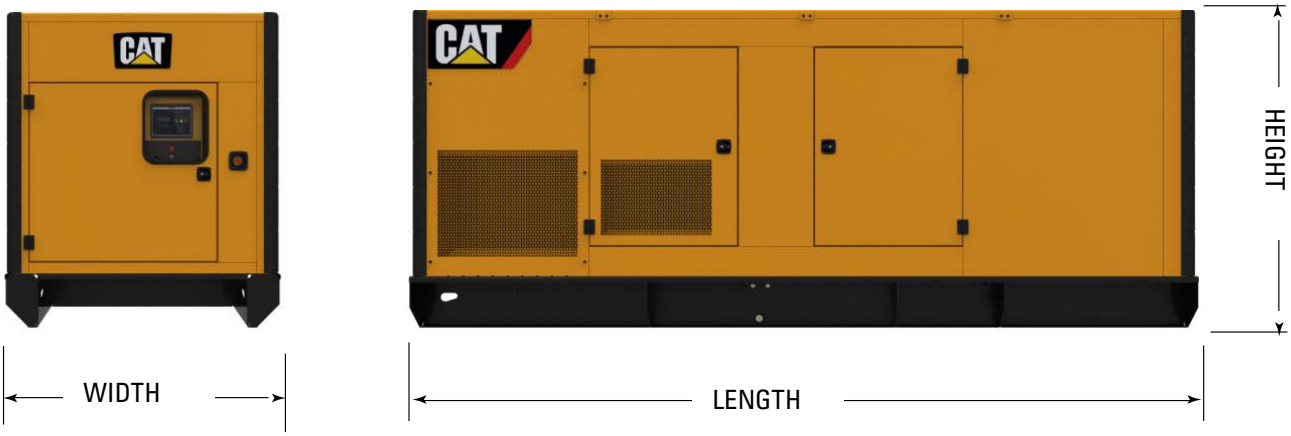
- Caterpillar yellow or white paint
- Integral dual wall fuel tank base for total fluid containment (fuel, oil and coolant)

Enclosures

Enclosure Package Operating Characteristics

Model	kVA	ekW	SB/PP	LWA	Sound Pressure Levels dBA				Air Flow Rate		Ambient Capability at 100% Load*	
					1m (3.3 ft)		7m (23 ft)					
					75% Load	100% Load	75% Load	100% Load	m³/s	cfm	°C	°F
50 Hz												
DE605E0	550	440	pp	105	82	82	72	72	5.6	11866	43	109
	605	484	SB	105	82	83	72	72	5.6	11866	46	115
DE660E0	600	480	pp	105	82	83	72	72	5.6	11866	41	106
	660	528	SB	105	82	83	72	73	5.6	11866	43	109
DE715E0	650	520	pp	105	82	83	72	73	5.6	11866	36	97
	715	572	SB	105	82	83	72	73	5.6	11866	41	106
DE780E0	780	624	SB	106	85	85	74	75	12.6	26698	56	133
	706	565	PP	106	85	85	74	75	12.6	26698	53	127
DE850E0	850	680	SB	106	85	85	74	75	12.6	26698	54	129
	770	616	PP	106	85	85	74	75	12.6	26698	51	124
60 Hz												
DE550SE0	625	500	pp	–	84	84	73	74	7.8	16563	47	117
	688	550	SB	–	84	84	73	74	7.8	16563	48	118
DE600SE0	681	545	pp	–	84	84	73	74	7.8	16563	42	108
	750	600	SB	–	84	84	73	74	7.8	16563	43	109
DE650SE0	812.5	750	pp	-	85	86	74	75	12.8	27122	56	133
	750	600	SB	-	85	86	75	75	12.8	27122	53	128
DE715SE0	895	716	pp	-	85	86	75	75	12.8	27122	54	128
	812.5	650	SB	-	86	86	75	76	12.8	27122	50	122
DE750SE0	937.5	750	pp	-	86	86	75	76	12.8	27122	52	126
	850	680	SB	-	86	86	75	76	12.8	27122	49	120

*Ambient capability measured with the Cat extended life coolant at sea level.



Enclosures

WEIGHTS & DIMENSIONS

Model	kVA	ekW	SB/PP	LENGTH, L		WIDTH, W		HEIGHT, H		WEIGHT *	
				mm	in	mm	in	mm	in	kg	lb
50 Hz											
DE605E0	550	440	pp	5320	209.4	1920	75.6	2289	90.1	5952	13122
	605	484	SB	5320	209.4	1920	75.6	2289	90.1	5952	13122
DE660E0	600	480	pp	5320	209.4	1920	75.6	2289	90.1	5952	13122
	660	528	SB	5320	209.4	1920	75.6	2289	90.1	5952	13122
DE715E0	650	520	pp	5320	209.4	1920	75.6	2289	90.1	5952	13122
	715	572	SB	5320	209.4	1920	75.6	2289	90.1	5952	13122
DE780E0	780	624	SB	5572	219.3	2170	85.4	2398	94.4	6629	14614
	706	565	PP	5572	219.3	2170	85.4	2398	94.4	6629	14614
DE850E0	850	680	SB	5572	219.3	2170	85.4	2398	94.4	6690	14748
	770	616	PP	5572	219.3	2170	85.4	2398	94.4	6690	14748
60 Hz											
DE550SE0	625	500	pp	5320	209.4	1920	75.6	2289	90.1	5952	13122
	688	550	SB	5320	209.4	1920	75.6	2289	90.1	5952	13122
DE600SE0	681	545	pp	5320	209.4	1920	75.6	2289	90.1	5952	13122
	750	600	SB	5320	209.4	1920	75.6	2289	90.1	5952	13122
DE650SE0	812.5	750	pp	5572	219.3	2170	85.4	2398	94.4	6484	14294
	750	600	SB	5572	219.3	2170	85.4	2398	94.4	6484	14294
DE715SE0	895	716	pp	5572	219.3	2170	85.4	2398	94.4	6629	14614
	812.5	650	SB	5572	219.3	2170	85.4	2398	94.4	6629	14614
DE750SE0	937.5	750	pp	5572	219.3	2170	85.4	2398	94.4	6690	14748
	850	680	SB	5572	219.3	2170	85.4	2398	94.4	6690	14748

* Approximate weight of enclosure package: Exact weight is dependent on options.
Enclosure weight includes: sound attenuated enclosure, exhaust system, base and generator set.