



C13 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.

Image shown may not represent actual configuration

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
- Integral lifting frame
- 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

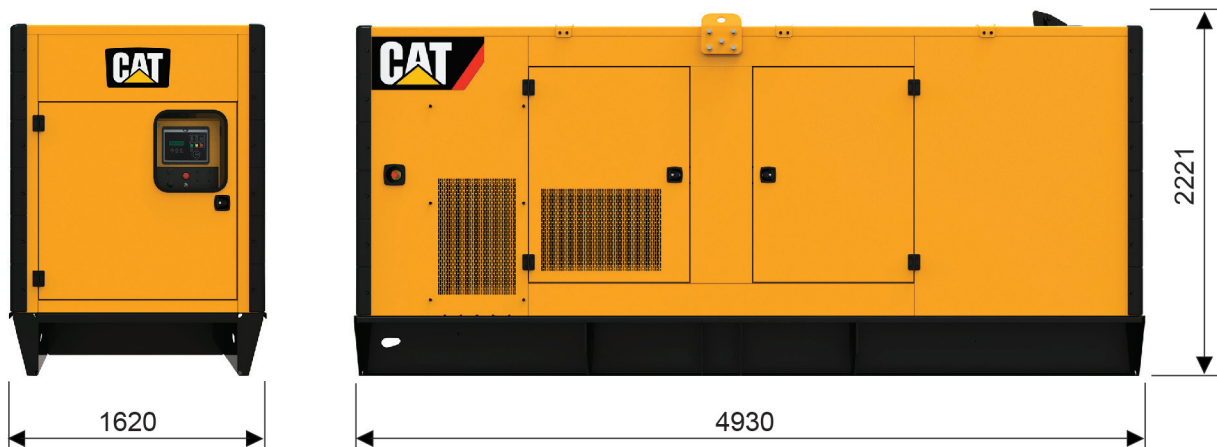
Options

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

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												
DE400E0	350	280	PP	97	79	80	69	70	5.6	11866	54	129
	400	320	SB	97	80	80	70	70	5.6	11866	54	129
DE450E0	400	320	PP	98	80	80	70	70	5.6	11866	49	120
	450	360	SB	98	80	81	70	71	5.6	11866	49	120
DE450E3	400	320	PP	–	80	80	70	70	5.6	11866	58	136
	450	360	SB	–	80	80	70	71	5.6	11866	54	129
60 Hz												
DE350SE0	400	320	PP	–	82	82	72	72	7.9	16739	56	133
	438	350	SB	–	82	83	72	72	7.9	16739	57	135
DE400SE0	438	350	PP	–	82	83	72	72	7.9	16739	52	126
	500	400	SB	–	82	83	72	73	7.9	16739	51	124

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



Approximate weight of enclosure package: 4667 kg (10289 lb), **4770 kg (10516 lb) DE450E3. Exact weight is dependent on options. Enclosure weight includes: Sound attenuated enclosure, exhaust system, base and generator set.

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



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Engine Model	Cat® C13 ACERT In-line 6, 4-cycle diesel
Bore x Stroke	130mm x 157mm (5.1 in x 6.2 in)
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

Model	Standby	Prime	Emission Strategy
DE400E0	400 kVA, 320 ekW	350 kVA, 280 ekW	Non-Certified Emissions

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	400 kVA	350 kVA
Gen set power rating with fan @ 0.8 power factor	320 ekW	280 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	EM0425	EM0431
Fuel Consumption		
100% load with fan	83.5 L/hr, 22 gal/hr	72.4 L/hr, 19.1 gal/hr
75% load with fan	61.9 L/hr, 16.4 gal/hr	54.8 L/hr, 14.5 gal/hr
50% load with fan	43.7 L/hr, 11.5 gal/hr	39.0 L/hr, 10.3 gal/hr
25% load with fan	26.1 L/hr, 6.9 gal/hr	23.8 L/hr, 6.3 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	398 m³/min, 14055 cfm	398 m³/min, 14055 cfm
Engine coolant capacity	13.9 L, 3.7 gal	13.9 L, 3.7 gal
Radiator coolant capacity	43 L, 11.5 gal	43 L, 11.5 gal
Total coolant capacity	56.9 L, 15.2 gal	56.9 L, 15.2 gal
Inlet Air		
Combustion air inlet flow rate	22.3 m³/min, 790 cfm	20.3 m³/min, 717.5 cfm
Max. Allowable Combustion Air Inlet Temp	44 °C, 110 °F	44 °C, 110 °F
Exhaust System		
Exhaust stack gas temperature	529.2 °C, 985 °F	504.3 °C, 939.7 °F
Exhaust gas flow rate	62.8 m³/min, 2216 cfm	54.8 m³/min, 1936.6 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	128 kW, 7271 Btu/min	113 kW, 6453 Btu/min
Heat rejection to exhaust (total)	290 kW, 16484 Btu/min	249 kW, 14146 Btu/min
Heat rejection to aftercooler	54 kW, 3037 Btu/min	43 kW, 2425 Btu/min
Heat rejection to atmosphere from engine	53 kW, 3031 Btu/min	47 kW, 2694 Btu/min

Emissions (Nominal) ²						
NOx	2731 mg/Nm³, 5.3 g/hp-hr			2874.9 mg/Nm³, 5.6 g/hp-hr		
CO	750 mg/Nm³, 1.47 g/hp-hr			761.4 mg/Nm³, 1.5 g/hp-hr		
HC	8 mg/Nm³, 0.02 g/hp-hr			7.2 mg/Nm³, 0.0 g/hp-hr		
Alternator ³						
Voltages	415V		400V		380V	
Motor Starting Capability @ 30% Voltage Dip	1071 skVA		793 skVA		888 skVA	
Current	556 amps		577 amps		381 amps	
Frame Size	A2925L4		A2925L4		A2925L4	
Excitation	SE		SE		SE	
Temperature Rise	125 °C	257 °F	125 °C	257 °F	125 °C	257 °F

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, NO_x. 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: 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.

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C13/C15 INTEGRAL FUEL TANK BASE

Diesel Generator Set
350 – 550 kVA 50 Hz
320 – 500 kW 60 Hz

FEATURES

- Tank design provides capacity for thermal expansion of fuel
- Integral diesel fuel tank is incorporated into the generator set base frame
- Direct reading fuel level gauge
- Fuel supply dip tubes positioned so as not to pick up fuel sediment
- Fuel return and supply dip tubes are separated by an internal baffle to prevent recirculation of heated return fuel
- Fuel fill – 76.2 mm (3 in), lockable flip top cap
- Tanks are leak tested at 31 kPa (4.5 psi) minimum
- Heavy gauge steel gussets suitable for lifting package
- Polyester powder coating – Gloss black textured finish
- Primary tanks are equipped with customer connections for remote fuel transfer, return and vent
- Sloped top tank plate to front to contain accidental coolant, oil and fuel spillages
- Sloped bottom tank plate to middle for fuel drainage
- Rear stub-up access

DESCRIPTION – SINGLE WALL TANKS

- Single wall design
- Heavy construction 6 mm (0.24 in) steel plate side channels and 4 mm (0.16 in) sheet steel tank design
- Standard offering for open and enclosed (High Ambient and Sound Attenuated) generator sets

DESCRIPTION – DUAL WALL TANKS

- Secondary containment – Open top design
- Welded steel basin designed to contain a minimum of 110% of primary tank capacity (total fluid containment)
- Heavy construction 6 mm (0.24 in) steel plate side channels and 4 mm (0.16 in) sheet steel tank design
- Option for enclosed (High Ambient and Sound Attenuated) generator sets

OPTIONS

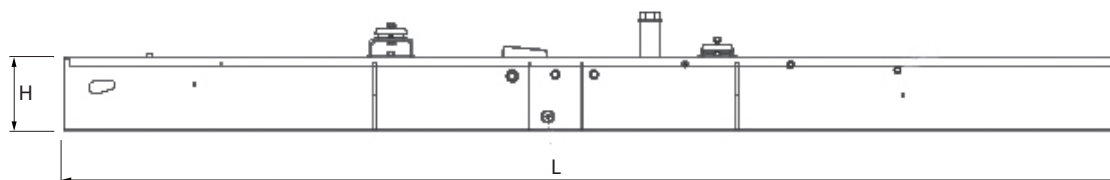
- Manual fuel transfer pump
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm

C13/C15 FUEL TANKS BASE (INTEGRAL) DIMENSIONS AND CAPACITIES

Configuration	Single / Dual Wall	Fillable Capacity		Usable Capacity		Weight (Dry)	
		Litres	Gallons	Litres	Gallons	kg	lb
Open (Standard)	Single	888	235	839	222	524	1155
Enclosed* (Standard)	Single	887	234	842	222	810	1786
Enclosed* (Option)	Dual	873	231	827	218	1021	2251

Configuration	Single / Dual Wall	Width		Length 'L'		Height 'H'		Package Height C13		Package Height C15	
		mm	in	mm	in	mm	in	mm	in	mm	in
Open (Standard)	Single	1110	43.7	3800	149.6	430	16.9	2156	84.9	2215	87.2
Enclosed* (Standard)	Single	1620	63.8	4930	194.1	340	13.4	2317	91.2	2317	91.2
Enclosed* (Option)	Dual	1620	63.8	4930	194.1	390	15.4	2367	93.2	2367	93.2

*Available for both Sound Attenuated and High Ambient Enclosed Generator Sets.



The heights listed above do not include lumber used during manufacturing and shipping.
Weight is for tank only. Does not include additions or removals required by price list.
All fuel tanks are shipped "installed."

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