

# Cat® C4.4

## Diesel Generator Sets



### Standby & Prime: 50 Hz



Image shown might not reflect actual configuration

Engine Model	Cat® C4.4 Inline 4-stroke Diesel
Bore x Stroke	105.0 mm x 127.0 mm (4.1 in x 5.0 in)
Displacement	4.4 L (268.5 in³)
Compression Ratio	16.2:1
Aspiration	Turbocharged Air To Air Charge Cooled
Fuel Injection System	Inline
Governor	Electronic

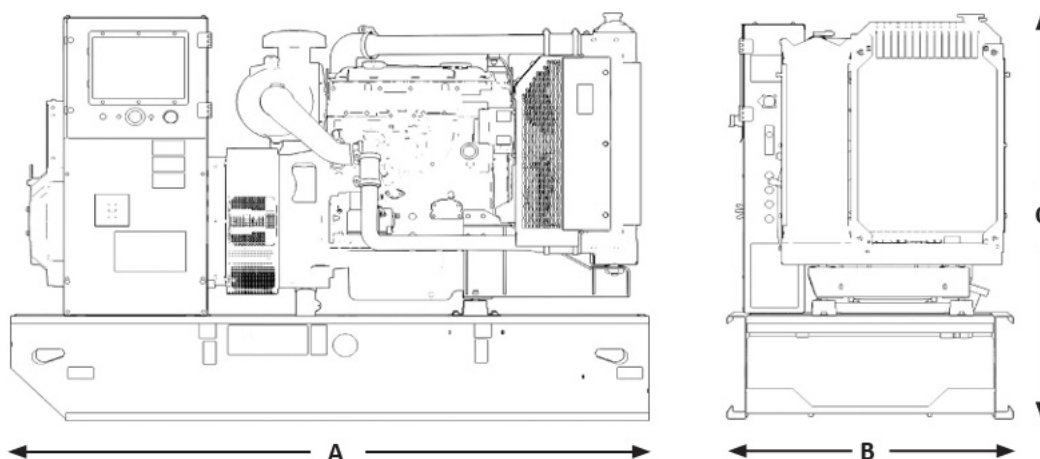
Model	Standby	Prime	Emission Strategy
DE88E3	50 Hz	50 Hz	EU IIIA
	88.0 kVA (70.4 kW)	80.0 kVA (64.0 kW)	

### PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	88.0 kVA	80.0 kVA
Genset power rating with fan @ 0.8 power factor	70.4 kW	64.0 kW
Emissions	EU IIIA	
Performance Number	P4522B	
Fuel Consumption		
Fuel Tank Capacity, litres (US gal)	250 (66.0)	
100% load with fan, L/hr (gal/hr)	21.5 (5.7)	20.1 (5.3)
75% load with fan, L/hr (gal/hr)	17.2 (4.5)	15.9 (4.2)
50% load with fan, L/hr (gal/hr)	12.1 (3.2)	11.1 (2.9)
Cooling System <sup>1</sup>		
Radiator air flow, m³/min (cfm)	197.4 (6971)	
Total coolant capacity, L (gal)	17.5 (4.6)	
Inlet Air		
Max. Combustion Air Intake Restriction, kPa (in H <sub>2</sub> O)	8.0 (32.1)	
Combustion air inlet flow rate, m³/min (cfm)	6.0 (213)	5.7 (201)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	50 (122)	
Exhaust System		
Exhaust stack gas temperature, °C (°F)	492 (918)	470 (878)
Exhaust gas flow rate, m³/min (cfm)	14.8 (523)	13.8 (487)
Exhaust system backpressure (maximum allowable), kPa (in H <sub>2</sub> O)	15.0 (4.4)	
Heat Rejection		
Heat rejection to jacket water, kW (Btu/min)	55.4 (3151)	50.3 (2861)
Heat rejection to alternator, kW (Btu/min)	6.7 (381)	
Heat rejection to atmosphere from engine, kW (Btu/min)	22.8 (1297)	20.6 (1172)

Alternator <sup>3</sup>	50 Hz		
Voltages	415V	400V	380V
Motor starting capability @ 30% Voltage Dip, skVA	196	184	168
Current, amps	122	127	134
Temperature Rise, °C	125/40		
Frame Size	LC3114D		
Excitation	S.E		

### WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
2089 (82.2)	1120 (44.1)	1400 (55.1)	1111 (2450)

**Note:** General configuration not to be used for installation. See general dimension drawings for detail.

### APPLICABLE CODES AND STANDARDS:

AS1359, 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 rated kW. 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.

### 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.

<sup>2</sup> 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.

<sup>3</sup> Generator temperature rise is based on a 40°C ambient per NEMA MG1-32.

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# LET'S DO THE WORK.™

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The International System of Units (SI) is used in this publication.  
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Image shown may not reflect actual configuration.

## Sound Attenuated Level 2 Enclosures

24 – 220 kVA Range

The sound attenuated Level 2, factory installed enclosures incorporate internally mounted critical level silencers. They are the premium enclosure offering for this range, designed for safety and aesthetic value on an integral fuel tank base. Extremely durable and weather resistant, these enclosures are designed to resist corrosion and handling damage.

The enclosures are the result of continuing research and development by our specialist acoustic engineers.

These enclosures reduce sound levels to comply with the Stage 2 levels of the European Community Directive 2000/14/EC which became effective January 3, 2006.

### FEATURES

#### Durable and Robust Construction

- Manufactured from galvanized steel
- Advanced powder-coated paint finish
- Single-piece main roof
- Base frame extends beyond enclosure, protecting against handling damage
- Minimal external fixings exposed to environment
- Zinc-plated fasteners
- Corner posts and air handling units manufactured from high-grade engineering thermoplastic

#### Security and Safety

- Secure, lockable doors prevent unauthorized access to control panel, fuel fill, and battery
- Emergency stop button mounted on exterior, convenient to control panel
- Cooling fan and battery charging alternator fully guarded

#### Excellent Service and Maintenance Access

- Side-hinged doors on both sides of the enclosure incorporate lift-off hinges at 45°
- Radiator fill via removable, flush-mounted rain cap fitted with compression seal
- Lube oil cooling water drains piped to baseframe side rail, on exterior
- Removable end panels allow access to radiator, exhaust outlet, and alternator rear
- Doors positioned for optimum access of frequently serviced items

#### Transportability

- Optional tested and certified lifting arch
- Lifting and drag points on base frame facilitate handling from both sides

## Sound Pressure Levels (dBA)

Generator Set Model Single-phase		LWA	50 Hz						60 Hz					
			15m (50 ft)		7m (23 ft)		1m (3.3 ft)		15m (50 ft)		7m (23 ft)		1m (3.3 ft)	
			75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load
DE26E0S	Prime	94	61	62	67	68	76	77	61	63	67	69	77	79
	Standby	94	61	62	67	68	76	77	61	64	67	70	78	80
DE26E3S	Prime	94	59	61	65	67	75	77	—	—	—	—	—	—
	Standby	94	60	62	66	68	76	77	—	—	—	—	—	—
DE40E0S	Prime	93	57	58	63	64	74	74	60	61	66	67	76	77
	Standby	93	57	58	63	64	74	75	60	62	66	68	77	78
DE40E2S	Prime	93	56	56	62	62	74	75	—	—	—	—	—	—
	Standby	93	56	57	62	63	74	75	—	—	—	—	—	—
DE50E0S	Prime	93	57	58	63	64	75	76	60	61	66	67	78	78
	Standby	93	57	58	63	64	75	76	60	61	66	67	78	78
DE55E3S	Prime	93	58	59	64	65	75	76	—	—	—	—	—	—
	Standby	93	58	59	64	65	75	76	—	—	—	—	—	—
DE90E2S	Prime	97	62	63	68	69	80	81	65	65	71	71	84	84
	Standby	97	63	64	69	70	80	81	65	66	71	72	84	84
DE90E3S	Prime	97	61	62	67	68	79	79	—	—	—	—	—	—
	Standby	97	62	62	68	68	79	79	—	—	—	—	—	—

Levels in accordance with European Noise Directive (2000/14/EC).

## Sound Pressure Levels (dBA)

Generator Set Model Three-phase		LWA	50 Hz						60 Hz					
			15m (50 ft)		7m (23 ft)		1m (3.3 ft)		15m (50 ft)		7m (23 ft)		1m (3.3 ft)	
			75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load
DE165E3	Prime	—	58	59	64	65	73	74	—	—	—	—	—	—
	Standby	—	58	59	64	65	74	74	—	—	—	—	—	—
DE175E3	Prime	—	58	59	64	65	74	74	—	—	—	—	—	—
	Standby	—	58	59	64	65	74	75	—	—	—	—	—	—
DE200E0	Prime	97	62	62	68	68	78	78	65	65	71	71	81	81
	Standby	97	62	63	68	69	78	78	65	65	71	71	81	81
DE200E3	Prime	—	59	60	65	66	74	75	—	—	—	—	—	—
	Standby	—	59	60	65	66	74	75	—	—	—	—	—	—
DE220E0	Prime	97	62	64	68	70	78	79	—	—	—	—	—	—
		97	63	64	69	70	78	79	—	—	—	—	—	—

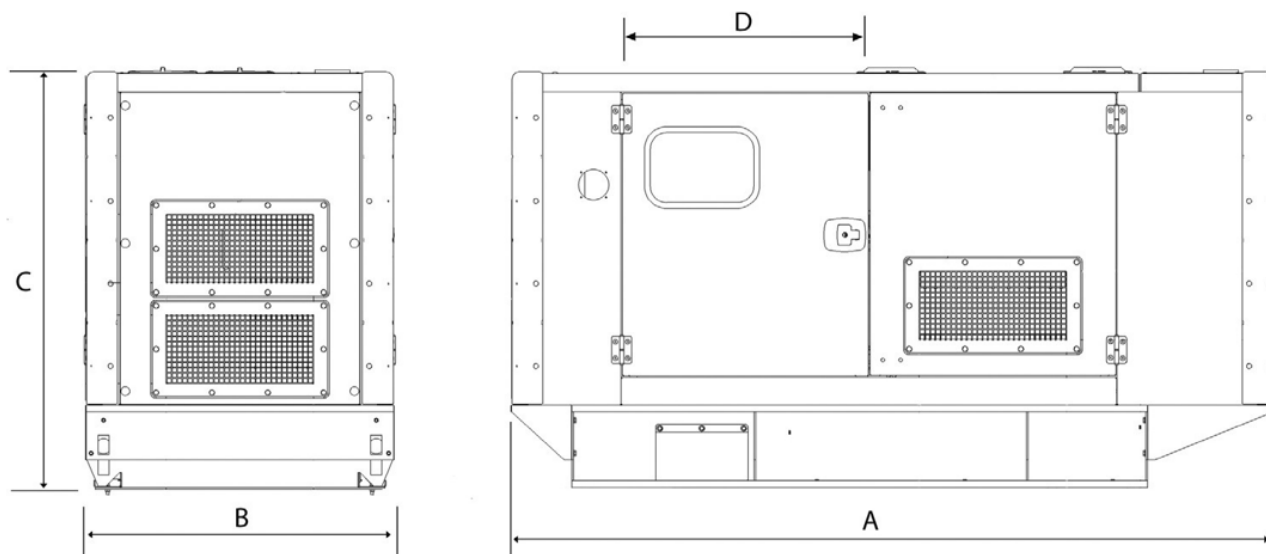
Levels in accordance with European Noise Directive (2000/14/EC).

## Sound Pressure Levels (dBA)

Generator Set Model Single-phase		LWA	50 Hz						60 Hz					
			15m (50 ft)		7m (23 ft)		1m (3.3 ft)		15m (50 ft)		7m (23 ft)		1m (3.3 ft)	
			75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load
DE26E0S	Prime	94	61	62	67	68	76	77	61	63	67	69	77	79
	Standby	94	61	62	67	68	76	77	61	64	67	70	78	80
DE26E3S	Prime	94	59	61	65	67	75	77	—	—	—	—	—	—
	Standby	94	60	62	66	68	76	77	—	—	—	—	—	—
DE40E0S	Prime	93	57	58	63	64	74	74	60	61	66	67	76	77
	Standby	93	57	58	63	64	74	75	60	62	66	68	77	78
DE40E2S	Prime	93	56	56	62	62	74	75	—	—	—	—	—	—
	Standby	93	56	57	62	63	74	75	—	—	—	—	—	—
DE50E0S	Prime	93	57	58	63	64	75	76	60	61	66	67	78	78
	Standby	93	57	58	63	64	75	76	60	61	66	67	78	78
DE55E3S	Prime	93	58	59	64	65	75	76	—	—	—	—	—	—
	Standby	93	58	59	64	65	75	76	—	—	—	—	—	—
DE90E2S	Prime	97	62	63	68	69	80	81	65	65	71	71	84	84
	Standby	97	63	64	69	70	80	81	65	66	71	72	84	84
DE90E3S	Prime	97	61	62	67	68	79	79	—	—	—	—	—	—
	Standby	97	62	62	68	68	79	79	—	—	—	—	—	—

Levels in accordance with European Noise Directive (2000/14/EC).

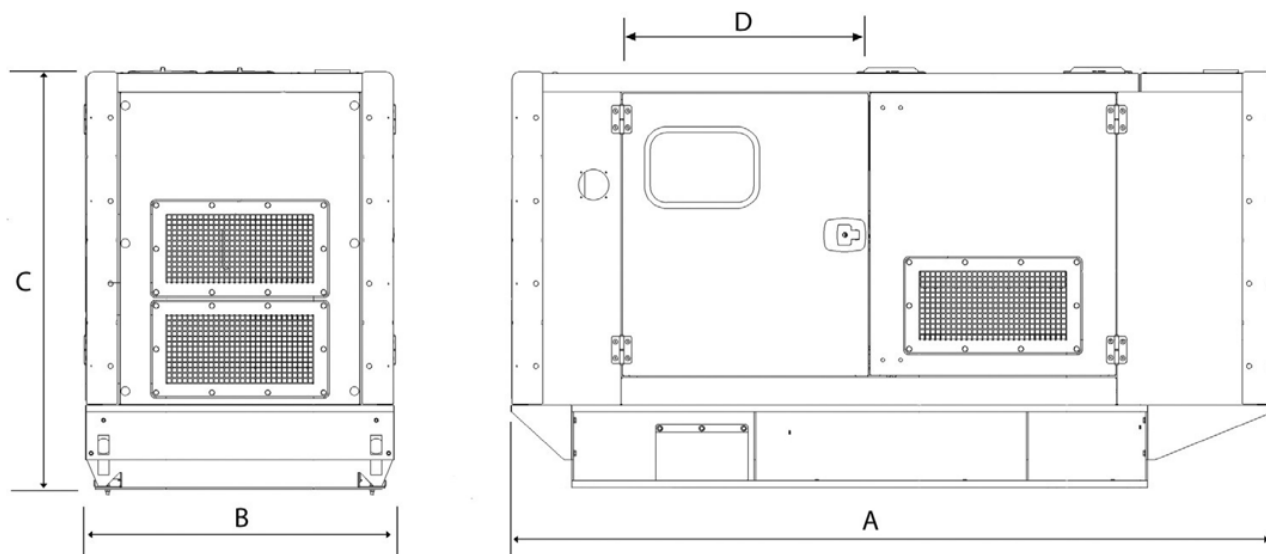
## Weights & Dimensions



Generator Set Model Three-phase	Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Door Width "D" mm (in)	Fuel Capacity: l (US gal)	Weight: kg (lb)
DE33E0	2120 (83.5)	980 (38.6)	1519 (59.8)	716 (28.2)	161 (43.0)	1002 (2209)
DE33E3	2120 (83.5)	980 (38.6)	1519 (59.8)	716 (28.2)	161 (43.0)	1002 (2209)
DE50E2	2300 (90.6)	1132 (44.6)	1519 (59.8)	761 (30.0)	219 (58.0)	1237 (2727)
DE50E0	2300 (90.6)	1132 (44.6)	1519 (59.8)	761 (30.0)	219 (58.0)	1237 (2727)
DE55E0	2300 (90.6)	1132 (44.6)	1519 (59.8)	761 (30.0)	219 (58.0)	1229 (2709)
DE55E2	2300 (90.6)	1130 (44.5)	1525 (60.0)	761 (30.0)	219 (58.0)	1277 (2815)
DE65E0	2300 (90.6)	1132 (44.6)	1519 (59.8)	761 (30.0)	219 (58.0)	1249 (2754)
DE65E3	2300 (90.6)	1130 (44.5)	1519 (59.8)	761 (30.0)	219 (58.0)	1319 (2908)
DE88E0	2300 (90.6)	1130 (44.5)	1519 (59.8)	761 (30.0)	219 (58.0)	1416 (3122)
DE88E3	2770 (109.1)	1130 (44.5)	1530 (60.2)	893 (35.2)	250 (66.0)	1554 (3426)
DE110E2	2770 (109.1)	1130 (44.5)	1530 (60.2)	893 (35.2)	250 (66.0)	1615 (3560)
DE110E3	2770 (109.1)	1130 (44.5)	1530 (60.2)	893 (35.2)	250 (66.0)	1744 (3845)
DE150E0	3520 (138.6)	1130 (44.5)	1809 (71.2)	1143 (45.0)	349 (92.2)	1918 (4228)
DE165E0	3520 (138.6)	1130 (44.5)	1809 (71.2)	1143 (45.0)	349 (92.2)	2016 (4445)
DE165E3	3520 (138.6)	1130 (44.5)	1809 (71.2)	1143 (45.0)	349 (92.2)	2158 (4758)
DE175E3	3520 (138.6)	1130 (44.5)	1809 (71.2)	1143 (45.0)	349 (92.2)	2158 (4758)
DE200E0	3520 (138.6)	1330 (52.4)	1809 (71.2)	1078 (42.4)	418 (110.0)	2198 (4836)
DE200E3	3520 (138.6)	1330 (52.4)	1809 (71.2)	1078 (42.4)	418 (110.0)	2248 (4956)
DE220E0	3520 (138.6)	1330 (52.4)	1809 (71.2)	1078 (42.4)	418 (110.0)	2238 (4934)

\*Clearance required on both sides of set.  
Weight with lube oil and coolant, no fuel.

## Weights & Dimensions



Generator Set Model Single-phase	Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Door Width "D" mm (in)	Fuel Capacity: l (US gal)	Weight: kg (lb)
DE26E0S	2120 (83.5)	980 (38.58)	1519 (59.8)	716 (28.2)	161 (43.0)	991 (2185)
DE26E3S	2120 (83.5)	980 (38.58)	1519 (59.8)	716 (28.2)	161 (43.0)	991 (2185)
DE40E0S	2300 (90.6)	1132 (44.7)	1519 (59.8)	761 (30.0)	219 (58.0)	1247 (2749)
DE40E2S	2300 (90.6)	1132 (44.7)	1519 (59.8)	761 (30.0)	219 (58.0)	1199 (2643)
DE50E0S	2300 (90.6)	1132 (44.7)	1519 (59.8)	761 (30.0)	219 (58.0)	1315 (2899)
DE55E3S	2300 (90.6)	1130 (44.5)	1519 (59.8)	765 (30.1)	219 (58.0)	1355 (2987)
DE90E2S	2770 (109.1)	1130 (44.5)	1530 (60.2)	893 (35.2)	250 (66.0)	1613 (3556)
DE90E3S	2770 (109.1)	1130 (44.5)	1530 (60.2)	893 (35.2)	250 (66.0)	1653 (3644)

\*Clearance required on both sides of set.  
Weight with lube oil and coolant, no fuel.

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