

# DIESEL GENERATOR SET



## DE13.5E3

EU t a e IIIA e ... c ... at .  
S t a b e f M b e A ... c a ... t e E ... e a C ... t ...

l a e ... a t e f e q a q a a c a e

Output Ratings		
Generator Set Model - 3 Phase	P / e*	ξ a db *
400/230 V, 50 H	12.5 VA	13.5 VA
	10.0 W	10.8 W
220/127V, 60 H	15.0 VA	16.5 VA
	12.0 W	13.2 W

\* Refe t ... a d e f t ... a e 4.  
R a ... a 0.8 ... e f a q ...

Technical Data		
Engine Make & Model:	Cat® C1.5	
Generator Model:	LC1114D	
Control Panel:	EMCP 4.1	
Base Frame Type:	Hea ... D t ... Fab ... c a ... e d ξ e e	
Circuit Breaker Type:	3 P ... e MCB	
Frequency:	50 Hz	60 Hz
Engine Speed: RPM	1500	1800
Fuel Tank Capacity: t e (US a )	62 (16.4)	
Fuel Consumption, Prime: / (US a / γ	3.7 (1.0)	4.3 (1.1)
Fuel Consumption, Standby : / (US a / γ	4.0 (1.1)	4.9 (1.3)

# DIESEL GENERATOR SET



## Engine Technical Data

Physical Data	
Manufacturer:	Caterpillar
Model:	C1.5
No. of Cylinders/Alignment:	3 / In-Line
Cycle:	4-Stroke
Induction:	Naturally Aspirated
Cooling Method:	Water
Governing Type:	Mechanical
Governing Class:	ISO 8528
Compression Ratio:	22.5:1
Displacement: (cc)	1.5 (91.3)
Bore/Stroke: (mm)	84.0 (3.3)/90.0 (3.5)
Moment of Inertia: (kg·m <sup>2</sup> )	2.17 (7415)
Engine Electrical System:	
-Voltage/Ground:	12/Negative
-Battery Charger Amps:	65
Weight: (kg) - Dry:	197 (434)
- Wet:	202 (445)

Air System	50 Hz	60 Hz
Air Filter Type:	Replacement Element	
Combustion Air Flow:		
/ (cfm)		
-Standby:	1.1 (38)	1.2 (43)
-Prime:	1.1 (38)	1.2 (43)
Max. Combustion Air Intake		
Restriction: Pa (H <sub>2</sub> O)	6.4 (25.7)	6.4 (25.7)
Radiator Cooling Air Flow:		
/ (cfm)	28.8 (1017)	37.2 (1314)
External Restriction to		
Cooling Air Flow: Pa (H <sub>2</sub> O)	125 (0.5)	125 (0.5)

Cooling System	50 Hz	60 Hz
Cooling System Capacity:		
(US gal)	6.0 (1.6)	6.0 (1.6)
Water Pump Type:	Centrifugal	
Heat Rejected to Water & Lube Oil: W (Btu/hr)		
-Standby:	12.9 (734)	15.2 (864)
-Prime:	11.6 (660)	13.6 (773)
Heat Radiation to Room: Heat rejected from engine to room: W (Btu/hr)		
-Standby:	6.0 (341)	7.1 (404)
-Prime:	5.4 (307)	6.3 (358)
Radiator Fan Load: W ( )	0.2 (0.2)	0.3 (0.4)

Lubrication System	
Oil Filter Type:	S-O, F F
Total Oil Capacity (US gal):	6.0 (1.6)
Oil Pan (US gal):	4.5 (1.2)
Oil Type:	API CH4 15W-40
Cooling Method:	N/A

Performance	50 Hz	60 Hz
Engine Speed: RPM	1500	1800
Gross Engine Power: W ( )		
-Standby:	13.5 (18.0)	16.2 (22.0)
-Prime:	12.2 (16.0)	14.7 (20.0)
BMEP: Pa ( )		
-Standby:	722.0 (104.7)	722.0 (104.7)
-Prime:	652.0 (94.6)	655.0 (95.0)
Regenerative Power: W	4.1	5.3

Fuel System				
Fuel Filter Type:	Replacement Element			
Recommended Fuel:	Cat A2 Diesel BSEN590			
Fuel Consumption: / (US gal/hr)				
	110% Load	100% Load	75% Load	50% Load
Prime				
50 Hz	4.0 (1.1)	3.7 (1.0)	2.8 (0.7)	2.0 (0.5)
60 Hz	4.9 (1.3)	4.3 (1.1)	3.2 (0.8)	2.4 (0.6)
Standby				
50 Hz		4.0 (1.1)	3.0 (0.8)	2.1 (0.6)
60 Hz		4.9 (1.3)	3.5 (0.9)	2.5 (0.7)

(based on engine test at 0.85 adcf/t BS2869, Cat A2)

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industrial	
Silencer Model & Quantity:	EXSY1 (1)	
Pressure Drop Across		
Silencer System: Pa (H)	0.58 (0.171)	0.80 (0.236)
Silencer Noise Reduction		
Level: dB	22.8	10.8
Max. Allowable Back		
Pressure: Pa (H)	10.2 (3.0)	10.2 (3.0)
Exhaust Gas Flow:		
/ (cfm)		
-Standby:	2.9 (102)	3.4 (119)
-Prime:	2.7 (95)	3.1 (111)
Exhaust Gas Temperature: °C (°F)		
-Standby:	490 (914)	505 (941)
-Prime:	445 (833)	455 (851)

### Generator Performance Data

Data Item	50 Hz				60 Hz				
Motor Starting Capability* kVA									
Short Circuit Capacity %									
Reactances: Per Unit									
Xd									
X'd									
X''d									

Reactance based 30%  
 Reactance based 0.6

<b>LC SERIES</b>
<b>Model:</b>
<b>No. of Bearings:</b>
<b>Insulation Class:</b>
<b>Winding Pitch - Code:</b>
<b>Wires:</b>
<b>Ingress Protection Rating:</b>
<b>Excitation System:</b>
<b>AVR Model:</b>

<b>Overspeed: RR6/F2 1 Tf 5.232 0:9 c 0 0 255.119 0 S 1M de :</b>

# DIESEL GENERATOR SET



## Technical Data

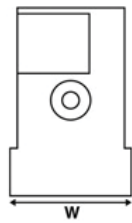
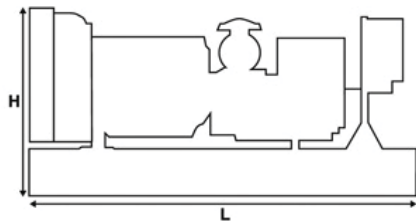
Voltage 50 Hz	Prime		Standby	
	kVA	kW	kVA	kW
415/240V	12.5	10.0	13.5	10.8
400/230V	12.5	10.0	13.5	10.8
380/220V	12.5	10.0	13.5	10.8

Voltage 60 Hz	Prime		Standby	
	kVA	kW	kVA	kW
220/127V	15.0	12.0	16.5	13.2

## Weights & Dimensions

Weights: (b)	
Net (+ lube oil)	371 (818)
Wet (+ lube oil & coolant)	377 (831)
Fuel, lube oil & coolant	430 (947)

Dimensions: ( )	
Length	1400 (55.1)
Width	620 (24.4)
Height	1054 (41.5)



Note: Generator set is not to be used for standby. See generator data for details.

## Definitions

### Standby Rating

Standby rating is the maximum output of the generator set when operating at 50% load for a period of 10 minutes per hour. The generator set is designed to operate at 50% load for a period of 10 minutes per hour.

### Prime Rating

Prime rating is the maximum output of the generator set when operating at 100% load for a period of 1 hour per day. The generator set is designed to operate at 100% load for a period of 1 hour per day.

### Standard Reference Conditions

Note: Standard reference conditions are 25°C (77°F) ambient temperature, 100% relative humidity, 30% sea level density. For correction factors, refer to BS2869: 1998, Category A2.

## General Data

### Documents

For more information, please contact your local distributor.

### Quality Standards

The generator set is designed to meet the following standards: IEC60034-1, IEC60034-22, ISO3046, ISO8528, NEMA MG 1-32, NEMA MG 1-33, 2004/108/EC, 2006/42/EC, 2006/95/EC.

Performance: 2300 RPM, 2340 RPM  
 Frequency: C0, E04, C0, E0, C0, E4  
 Generator: 4/30, 30/4  
 Serial Number: LEHE0683-00 (08/14)

Copyright © 2014 Caterpillar Inc.  
 All rights reserved.  
 Caterpillar is a registered trademark of Caterpillar Inc.  
 CAT, CATERPILLAR, the Caterpillar logo, "Caterpillar" and "PowerEdge" are trademarks of Caterpillar Inc.