



**DE150E0** 

Image shown may not reflect actual package

Output Ratings				
Generator Set Model - 3 Phase	Prime*	Standby*		
400/230 V, 50 Hz	135.0 kVA	150.0 kVA		
	108.0 kW	120.0 kW		
480/277 V, 60 Hz	150.0 kVA	165.0 kVA		
	120.0 kW	132.0 kW		

 $<sup>^{\</sup>ast}$  Refer to ratings definitions on page 4. Ratings at  $_{0.8}$  power factor.

Technical Data				
Engine Make & Model:	Cat® C7.1			
Generator Model:	LC3114H			
Control Panel:	EMCP 4.1			
Base Frame Type:	Heavy Duty Fabricated Steel			
Circuit Breaker Type:	3 Pole MCCB			
Frequency:	50 Hz	60 Hz		
Engine Speed: RPM	1500	1800		
Fuel Tank Capacity: litres (US gal)	349 (92.2)			
Fuel Consumption, Prime: I/hr (US gal/hr)	29.7 (7.8) 32.7 (8.6)			
Fuel Consumption, Standby : I/hr (US gal/hr)	33.2 (8.8)	36.2 (9.6)		



# **Engine Technical Data**

Physical Data	
Manufacturer:	Caterpillar
Model:	C7.1
No. of Cylinders/Alignment:	6 / In Line
Cycle:	4 Stroke
Induction:	Turbocharged
Cooling Method:	Water
Governing Type:	Mechanical
Governing Class:	ISO 8528 G2
Compression Ratio:	18.2:1
Displacement: I (cu.in)	7.0 (427.8)
Bore/Stroke: mm (in)	105.0 (4.1)/135.0 (5.3)
Moment of Inertia: kg m² (lb. in²)	1.40 (4784)
Engine Electrical System:	
-Voltage/Ground:	12/Negative
-Battery Charger Amps:	65
Weight: kg (lb) - Dry:	725 (1598)
- Wet:	748 (1649)

Air System		50 Hz	60 Hz
Air Filter Type:		Paper Element	
Combustion Air Flo	ow:		
m³/min (cfm)	-Standby:	8.1 (286)	11.5 (405)
	-Prime:	7.6 (270)	11.0 (387)
Max. Combustion	Air Intake		
Restriction: kPa (in H <sub>2</sub> O)		5.0 (20.1)	5.0 (20.1)
Radiator Cooling	Air Flow:		
m³/min (cfm)		228.6 (8073)	234.0 (8264)
External Restriction	n to		
Cooling Air Flow	: Pa (in H <sub>2</sub> O)	125 (0.5)	125 (0.5)

Cooling System	n	50 Hz	60 Hz
Cooling System Ca	Cooling System Capacity:		
l (US gal)		21.0 (5.5)	21.0 (5.5)
Water Pump Type:	:	Centr	ifugal
Heat Rejected to V	Vater &		
Lube Oil: kW (Bto	u/min)		
	-Standby:	82.0 (4663)	92.0 (5232)
	-Prime:	74.9 (4259)	84.2 (4788)
Heat Radiation to	Room: Heat radiate	d from engine and alt	ernator
kW (Btu/min)	-Standby:	25.1 (1427)	25.1 (1427)
	-Prime:	20.9 (1189)	22.6 (1285)
Radiator Fan Load	: kW (hp)	5.0 (6.7)	7.0 (9.4)
Cooling system desig (122°F). Contact you conditions.			

Lubrication System	
Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity I (US gal):	16.5 (4.4)
Oil Pan I (US gal):	14.9 (3.9)
Oil Type:	API CH4 / CI4 15W-40
Cooling Method:	Water

Performance	50 Hz	60 Hz
Engine Speed: RPM	1500	1800
Gross Engine Power: kW (hp)		
-Standby:	136.9 (184.0)	155.4 (208.0)
-Prime:	123.7 (166.0)	140.5 (188.0)
BMEP: kPa (psi)		
-Standby:	1562.0 (226.5)	1477.0 (214.2)
-Prime:	1411.0 (204.6)	1336.0 (193.7)
Regenerative Power: kW	6.2	7.0

Fuel S	ystem			
Fuel Filter Type: Recommended Fuel:			Element sel or BSEN59	0
Fuel Co	nsumption: I/hr		750/	<b>F0</b> 0/
	110% Load	100% Load	75% Load	50% Load
Prime				
50 Hz	33.2 (8.8)	29.7 (7.8)	22.4 (5.9)	16.1 (4.3)
60 Hz	36.2 (9.6)	32.7 (8.6)	25.3 (6.7)	19.7 (5.2)
Standby	,			
50 Hz		33.2 (8.8)	24.8 (6.6)	17.4 (4.6)
60 Hz		36.2 (9.6)	27.4 (7.2)	20.6 (5.4)
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)				

Exhaust System	1	50 Hz	60 Hz	
Silencer Type:		Industrial		
Silencer Model & Q	uantity:	EXSY	1 (1)	
Pressure Drop Acro	ss			
Silencer System: k	(Pa (in Hg)	0.45 (0.133)	0.72 (0.213)	
Silencer Noise Redu	ction			
Level: dB		10	10	
Max. Allowable Bac	:k			
Pressure: kPa (in.	Hg)	6.0 (1.8)	6.0 (1.8)	
Exhaust Gas Flow:				
m³/min (cfm)	-Standby:	20.5 (725)	29.1 (1026)	
	-Prime:	18.9 (666)	27.2 (959)	
Exhaust Gas Tempe	erature: °C (°F)			
	-Standby:	561 (1042)	526 (979)	
	-Prime:	561 (1042)	526 (979)	



# **Generator Performance Data**

		50	Hz				60 Hz	
Data Item	415/240V	400/230V 230/115V 200/115V	380/220V 220/110V	220/127V	480/277V 240/139V	380/220V 220/110V	240/120V 208/120V	440/254V 220/127V
Motor Starting Capability* kVA	373	351	322	409	407	276	322	353
Short Circuit Capacity** %	300	300	300	300	300	300	300	300
Reactances: Per Unit								
Xd	3.001	3.230	3.579	2.472	2.991	4.295	3.982	3.559
X'd	0.141	0.152	0.168	0.116	0.140	0.202	0.187	0.167
X''d	0.085	0.091	0.101	0.070	0.084	0.121	0.112	0.100

Reactances shown are applicable to prime ratings.

\*Based on 30% voltage dip at 0.6 power factor and SHUNT excitation system.

\*\* With optional Permanent Magnet generator.

### **Generator Technical Data**

Physical Data	
LC Series	
Model:	LC3114H
No. of Bearings:	1
Insulation Class:	Н
Winding Pitch - Code:	2/3 - 6
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	R250

Operating Data			
Overspeed: RPM		2250	
Voltage Regulation: (s	steady state)	+/- 0.5%	
Wave Form NEMA =	Wave Form NEMA = TIF:		
Wave Form IEC = Th	IF:	2.0%	
Total Harmonic Content LL/LN:		2.0%	
Radio Interference: Suppression is in line with European Standard EN61000-6			
Radiant Heat: kW (Btu/min)			
-50 Hz:		9.8 (557)	
-60 H	z:	10.2 (580)	



#### **Technical Data**

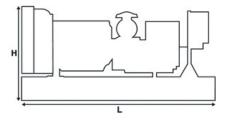
Voltage 50 Hz	Prime		Standby	
	kVA	kW	kVA	kW
415/240V	135.0	108.0	150.0	120.0
400/230V	135.0	108.0	150.0	120.0
380/220V	135.0	108.0	150.0	120.0
230/115V	135.0	108.0	150.0	120.0
220/127V	125.0	100.0	137.5	110.0
220/110V	135.0	108.0	150.0	120.0
200/115V	135.0	108.0	150.0	120.0

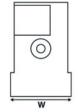
Voltage 60 Hz	Prime		Stand	lby
	kVA	kW	kVA	kW
480/277V	150.0	120.0	165.0	132.0
220/127V	150.0	120.0	165.0	132.0
380/220V	135.0	108.0	148.5	118.8
240/120V	150.0	120.0	165.0	132.0
440/254V	-	-	-	-
220/110V	135.0	108.0	148.5	118.8
208/120V	150.0	120.0	165.0	132.0
240/139V	150.0	120.0	165.0	132.0

### Weights & Dimensions

Weights: kg (lb)		
Net (+ lube oil)	1512 (3333)	
Wet (+ lube oil & coolant)	1533 (3380)	
Fuel, lube oil & coolant	1829 (4031)	

Dimensions: mm (in)		
Length	2500 (98.4)	
Width	1120 (44.1)	
Height	1430 (56.3)	





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

#### **Definitions**

#### **Standby Rating**

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 Rating**

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.

#### **Standard Reference Conditions**

Note: Standard reference conditions 25°C (77°F) air inlet temp, 100m (328ft) A.S.L. 30% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

#### **General Data**

#### **Documents**

A full set of operation and maintenance manuals and circuit wiring diagrams.

#### **Quality Standards**

The equipment meets 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.

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