



Prime 120 kW, 150 kVA  
50/60 Hz Switchable  
EU Stage IIIA

Image shown may not reflect actual configuration

## Specifications

Frequency	Voltage	Prime kW (kVA)	Speed rpm
50 Hz	380/220 V	120 (150)	1500
	400/230 V	120 (150)	1500
	415/240 V	120 (150)	1500
60 Hz	380/220 V	128 (160)	1800
	440/254 V	148 (185)	1800
	480/277 V	148 (185)	1800
	220/127 V	148 (185)	1800
	240/138 V	148 (185)	1800

Cat® C7.1 Diesel Engine	Metric	Imperial (English)
Configuration	I-6, 4-Stroke-Cycle Water Cooled Diesel EATAAC (TAG3)	
Bore	105 mm	4.13 in
Stroke	135 mm	5.31 in
Displacement	7.01 L	427 in <sup>3</sup>
Aspiration	Turbocharged-Aftercooled	
Compression Ratio	16.8:1	
Engine rpm	1500-1800	
Aftercooler Type	ATAAC	
Turbocharger	Single	
Fuel System	Electronic CRIN2	
Governor Type	A4:E2	

## Benefits & Features

### Fuel/Emissions Strategy

- Cat® C7.1 high performance diesel engine
- Meets Stage IIIA emissions standards

### Single-source Supplier

- Factory designed and fully prototype tested with certified torsional vibration analysis available
- ISO 9001:2000 compliant facility

### Cat C7.1 Diesel Engine

- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- ECM electronic engine control

### Cat EMCP 4.2B Control Panel

- Fully featured power metering, protective relaying, and engine/generator control and monitoring
- Simple user-friendly interface and navigation
- Automatic set-point adjustment integrated with voltage and frequency changes

### Cat LC3100 Generator

- Designed to match performance and output characteristics of Cat diesel engines
- Coastal insulation protection
- Self (shunt) excitation

### Integrated Voltage Regulator (IVR)

- Three-phase sensing
- Adjustable volts-per-hertz regulation
- Provides precise control, excellent block loading, and constant voltage in the normal operating range

### Enclosure

- Galvanized sheet steel construction
- Two-coat polyester powder-coated finish
- Six lockable (padlock/keylock) access doors
- Safety glass control panel viewing window with key lock or padlockable access doors
- Fuel fill and battery can only be reached through lockable access doors

### Reduced Environmental Impact

- Meets Stage IIIA emissions standards
- Dual wall base tank with 110% spill containment
- Bund level alarm
- High noise reduction performance – 92 dBA; sound power 50 Hz, exceeding EU machinery directive limits

### Rental-ready Features

- Forklift pockets
- Integrated heavy-duty drag bar with robust skid plate
- Fully certified single-point lift
- Coolant and oil drains piped to baseframe
- EMC certified
- Fully certified spark arresting silencer
- 50/60 Hz frequency switch via terminal link
- Optimized cable entry for easy hook-up
- Sound isolated control panel with integrated power distribution access
- Robust hook-up point for lugged cable connection
- AC protected by limit switch on distribution door

### Available Options

- CE socket box with integrated MCB and RCBO protection
- Clipsal socket box with integrated MCB and RCBO protection
- Anti-condensation heater 110 or 230 VAC
- Coolant heater 110 or 230 VAC
- 12V battery charger
- Permanent Magnet Generator (PMG)
- Earth leakage
- CE labeling
- Lube oil sump pump
- UL/CSA listed 120V, 20 amp battery charger, shock mounted and enclosed in dust-proof housing

## Standard Equipment

### Air Inlet

- Air cleaner, two stage cyclonic/paper with dust cup and service indicator
- Turbocharger and air-to-air aftercooler

### Alternator

- LC3114J frame — 3-phase, random wound, 12 lead design, self excited, 2/3 pitch
- Coastal Insulation protection

### Charging System

- Charging alternator — 12V, heavy duty with integral regulator and belt guards

### Control Panel

- EMCP 4.2B generator set mounted digital controller
- 50/60 Hz frequency switch via terminal link
- Panel mounted emergency stop switch
- IVR with EM10 excitation module
- Automatic set-point adjustment integrated with voltage and frequency changes
- Fully featured power metering, protective relaying and engine/generator control and monitoring

### Cooling System

- Package-mounted radiator with high ambient performance
- Pusher fan with guards
- Coolant drain line with internal brass ball control valve piped to base-frame
- Low coolant level shutdown
- 50% coolant antifreeze with corrosion inhibitor

### Distribution System

- Robust steel enclosure, separate hinged, lockable door with rust-resistant pinned hinges
- Main circuit breaker 4-pole, 250A with 24V DC shunt trip wired to distribution door safety switch
- Two-wire remote start/stop terminals and 120-240 VAC auxiliary power connection for rapid starting

### Enclosure

- Sound attenuating, galvanized sheet metal enclosure with exceptional noise reduction performance
- External emergency stop switch on enclosure
- Modular panel construction with a welded roof design
- Interior walls, ceilings, and ducts insulated with precision-cut noise insulating materials
- Sealed quarter-turn compression door latches with key and padlock capabilities
- Front and rear access provided through hinged doors
- External single-point lifting
- Enclosure is powder-coated white with Cat Rental Power decals

### Engine

- Cat C7.1 heavy-duty diesel engine
- Full electronic engine control

### Exhaust System

- Integrated spark arresting silencer with flexible connectors, in separate compartment

### Fuel System

- 156 gal (590 L) double-wall fuel tank, 24-hour runtime @ 75% prime rating, internal fuel fill
- Engine-mounted primary fuel filter (10 micron) with integral water separator and water-in-fuel sensor
- Off-engine-mounted Racor fuel water separator (30 micron)
- Manual pushbutton priming pump
- Auxiliary connections for customer-supplied fuel transfer with 3-way fuel transfer system, internally mounted within the bunded area
- Mechanical fuel gauge
- Electronic fuel gauge with control panel display, high and low level fuel warning/shutdown.
- Configurable bund level sensor, low level warning and high level warning/shutdown

## Standard Equipment (continued)

### Generator

- LC3114J frame, three-phase, random wound, 12-lead design, self-excited, 2/3 pitch
- Coastal insulation protection
- 120 or 230 VAC anti-condensation heater available

### Lube System

- On-engine primary and secondary oil filters, filler, and dipstick
- Open crankcase breather with a fumes disposal container, drain located on side of base frame
- Oil drain piped to edge of base frame with internally mounted ball valve.
- 500-hour oil change intervals

### Mounting System

- Generator set soft-mounted using captive vibration mounts

- Heavy-duty steel base frame contains integral fuel tank
- Provides 110% spill containment of all engine fluids
- Forklift pockets and heavy-duty drag bar with skid plates

### Starting System

- Single electric starting motor, 12V
- 2x 12V 950 CCA maintenance-free batteries (wired in parallel), with single-pole battery isolator switch
- 120/240V single-phase jacket water heater with thermostat and shut-off valves

### General

- Factory testing of standard generator set
- Full manufacturer's warranty, O&M manuals

## Technical Data

Cat Generator	
Frame size	LC3114J
Pitch	2/3
No. of poles	4
Excitation	Static regulated, brushless, self-excited
Number of bearings	Single bearing, close coupled
Insulation	Class H
Temperature rise	125/40°C
Enclosure	Drip proof IP23
Overspeed capability — % of rated	25%
Voltage regulator	3-phase sensing with adjustable volts-per-hertz
Voltage regulation	Less than $\pm 0.5\%$
Wave form deviation	
Telephone Influence Factor (TIF)	Less than 2%
Harmonic Distortion (THD)	Less than 2%

Cat Generator Set			
	Units	50 Hz — Prime P4390D	60 Hz — Prime P4390C
<b>Power Rating</b>	kW (kVA)	120 (150)	145 (181)
<b>Performance Specification</b>			
<b>Lubricating System</b>			
Oil pan capacity	L (gal)	12.4 (3.3)	12.4 (3.3)
<b>Fuel System</b>			
Fuel consumption — 100% Load	L/hr (gal/hr)	37.5 (9.9)	42.3 (11.2)
75% Load	L/hr (gal/hr)	29.6 (7.8)	34.7 (9.2)
50% Load	L/hr (gal/hr)	20.3 (5.4)	23.8 (6.3)
Fuel tank capacity	L (gal)	590 (155.9)	590 (155.9)
Running time @ 75% rating	Hr	24	24
<b>Cooling System</b>			
Ambient capability	°C (°F)	46 (115)	46 (115)
Engine & radiator coolant capacity	L (gal)	22 (5.8)	22 (5.8)
Engine coolant capacity	L (gal)	9.5 (2.5)	9.5 (2.5)
<b>Air Requirements</b>			
Combustion air flow	m <sup>3</sup> /min (cfm)	11.4 (402.6)	14.9 (525.5)
<b>Exhaust System</b>			
Exhaust flow at rated — dry exhaust	m <sup>3</sup> /min (cfm)	26.4 (932)	30.6 (1079)
Exhaust temperature at rated kW	°C (°F)	491 (915.8)	440 (824)
<b>Noise Rating (with enclosure)*</b>			
<b>Sound Power*</b>			
@ 1 meter @ 100% load	dB(A)	91	95
@ 7 meters @ 100% load	dB(A)	77	81
@ 1 meters @ 75% load	dB(A)	65	68
@ 7 meters @ 75% load	dB(A)	77	81
@ 1 meters @ 75% load	dB(A)	64	67

\*Guaranteed sound power as per 2000/14/EC



## Technical Data (continued)

Dimensions			
	Length mm (in)	Width mm (in)	Height mm (in)
Generator Set	3520 (138.6)	1120 (44.1)	2226 (87.6)

Weight	
	Weight — kg (lb)
Lube Oil & Coolant — Empty Fuel Tank	2547 (5615)
Full Fuel Tank	3124 (6887)

## Rating Definitions and Conditions

**Designed to Meet Specifications:** ISO 8528, EN 12601, EN 60204-1, ISO 3046, IEC 60034.

**Meets the Following EU Directives (when the CE option is selected):** 2006/42/EC, 2006/95/EC, 2004/108/EC, 2000/14/EC.

**Ratings** are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

**Prime** — Applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation on the annual hours of operation and the generator can supply 10% overload power.

**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/liter (7.001 lbs/U.S. gal).

Additional ratings may be available for specific customer requirements, contact your Cat representative for details. For information regarding low sulfur fuel and biodiesel capability, please consult your Cat dealer.

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