



**Prime 150kVA (120kW)  
50/60 Hz Switchable  
EU Stage IIIA**

Image shown may not reflect actual configuration

## Specifications

| Frequency (Hz) | Speed (rpm) | Voltage     | Prime |     | Output Amps (A) | Breaker Rating (A) |
|----------------|-------------|-------------|-------|-----|-----------------|--------------------|
|                |             |             | kVA   | kW  |                 |                    |
| 50             | 1500        | 415 / 240 V | 150   | 120 | 209             | 250                |
|                |             | 400 / 230 V | 150   | 120 | 217             |                    |
|                |             | 380 / 220 V | 150   | 120 | 228             |                    |
| 60             | 1800        | 480 / 277 V | 182   | 146 | 219             | 250                |
|                |             | 440 / 254 V | 182   | 146 | 239             |                    |
|                |             | 380 / 220 V | 160   | 128 | 243             |                    |
|                |             | 240 / 139 V | 182   | 146 | 438             | 630                |
|                |             | 220 / 127 V | 182   | 146 | 478             |                    |

| Cat® C7.1 ACERT™ Diesel Engine | Metric                                                  | Imperial (English)  |
|--------------------------------|---------------------------------------------------------|---------------------|
| Configuration                  | Inline 6-cylinder, 4-Stroke-Cycle, Water Cooled, Diesel |                     |
| Bore                           | 105 mm                                                  | 4.13 in             |
| Stroke                         | 135 mm                                                  | 5.31 in             |
| Displacement                   | 7.01 L                                                  | 427 in <sup>3</sup> |
| Aspiration                     | Turbocharged-Aftercooled (TA)                           |                     |
| Compression Ratio              | 16.5:1                                                  |                     |
| Engine rpm                     | 1500-1800                                               |                     |
| Aftercooler Type               | ATAAC                                                   |                     |
| Turbocharger                   | Single                                                  |                     |
| Fuel System                    | Direct Injection, Rotary Pump                           |                     |
| Governor Type                  | Electronic Governor, Mechanical Actuator                |                     |
| Fuel                           | See Fuel Specification Table                            |                     |

## Benefits & Features

### Rental-ready Features

- 24hr dual wall fuel tank
- Forklift pockets
- Integrated heavy duty drag bar with robust skid plate base
- Externally certified single point lift
- Coolant and oil drains piped to baseframe
- Externally certified spark arrest silencer
- 50/60Hz frequency switch via terminal link
- Optimized cable entry for easy hook-up
- Robust busbar connection for lugged cable connection
- Sound isolated side mounted control panel with integrated power distribution access
- AC protected by limit switch on distribution door

### Fuel/Emissions Strategy

- EU Stage IIIA

### Single-source Supplier

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

### Cat C7.1 ACERT™ Diesel Engine

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

### Cat EMCP 4.2B Control Panel

- Fully featured power metering, protective relaying, engine/generator control and monitoring
- Simple, user-friendly interface and navigation
- Single point interface for voltage and frequency adjustment

### Cat LC3100 Generator

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

### Available Options

- CE socket box with integrated MCB & RCBO protection
- Clipsal socket box with integrated MCB & RCBO protection
- 220-240V 3-phase 60Hz configuration available with appropriately sized breaker and power cables.
- Anti condensation heater 110V or 230V AC
- Coolant heater 110V or 230V AC
- 12V battery charger
- Permanent Magnet Generator (PMG)
- Earth leakage detection
- Lube oil sump pump

### 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
- 6 access doors for improved service access
- Secure design with safety glass control panel viewing window and padlockable or keylock access doors
- Fuel fill, battery and controls accessible only through lockable access doors

### Environmental Considerations

- Dual wall base tank with 110% spill containment
- Bund Level alarm
- Low noise enclosure
- Inboard mounted 3-way valve for external fuel connection

### Cat Connect

- Fleet management and asset tracking\*

\*Subject to local certifications

## Standard Equipment

### Generator

- LC3114J frame; 3-phase random wound, 12 lead, self excited, 2/3 pitch
- Coastal insulation protection (CIP)

### Cat C7.1 ACERT™ Diesel Engine

- Turbocharged, air-to-air aftercooler
- Electronic ECM control

### Air Filter

- Air cleaner, cyclonic/paper with dust cup and service indicator

### Cooling System

- Package mounted radiator with vertical air discharge
- High ambient performance
- Fully guarded pusher fan
- Low coolant level shutdown
- Coolant piped to base via radiator-mounted ball valve
- 50% glycol mix with corrosion inhibitor

### Charging System

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

### Starting System

- Single 12V electric starting motor
- 2x12V 950CCA maintenance-free batteries (connected in parallel) with padlockable single-pole isolator switch

### Fuel System

- 24hr dual wall fuel tank (based on 75% Prime load)
- Internal fuel fill
- Engine-mounted primary fuel filter with water separator (10 micron) Includes water in fuel sensing
- Manual push button priming pump
- Auxiliary connections for remote supply with 3-way valve
- 3-way valve internally mounted within banded area
- Mechanical fuel gauge
- Electronic fuel gauge with panel display, low fuel level warning and shutdown

### Control Panel

- EMCP 4.2B set mounted digital controller
- 50/60Hz frequency switch (via terminal link)
- IVR with EM10 excitation module
- Panel & enclosure mounted emergency stop

### Distribution System

- Single robust steel enclosure for controls & distribution
- Separately hinged distribution door with 12V DC shunt trip safety switch
- 4 pole, 250 A main circuit breaker
- Two-wire remote start/stop terminals and AC aux power connection for rapid starting

### Mounting System

- Heavy duty steel baseframe with integral fuel tank (dual wall)
- Provides 110% spill containment including all on-board fluids
- Forklift pockets
- Heavy duty drag bar with skid plates
- Generator set soft mounted using captive vibration mounts

### Enclosure

- Sound attenuating, galvanised sheet steel enclosure with exceptional noise reduction performance
- Interior walls, ceilings and ducts insulated with precision cut noise insulating materials
- Sealed quarter-turn compression latches with key or padlock capabilities
- Front and rear service access provided through hinged doors
- External single point lift
- Powder coated with Cat Rental Power decals

### Exhaust System

- Integrated certified spark arresting silencer with flexible connectors
- Outlet box mounted with vertical discharge

### Lube Oil System

- On-engine primary and secondary oil filters, dipstick and oil filler
- Open crankcase breather with fumes disposal container and drain point
- Oil piped to edge of baseframe with internally mounted ball valve
- 500 hour oil change requirement

### General

- Factory Tested
- Full manufacturer's warranty, O&M manuals

## Fuel Specifications

| Specification Standard | Grade Class                 | Fuel Description                                                                                                                                                                                                                                                               |
|------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EN 590                 | Grade A to F & Class 0 to 4 | European automotive fuel (DERV)                                                                                                                                                                                                                                                |
| ASTM D975              | 1-D S15                     | U.S. special purpose light middle distillate                                                                                                                                                                                                                                   |
|                        |                             | 15ppm sulphur                                                                                                                                                                                                                                                                  |
| ASTM D975              | 2-D S15                     | U.S. special purpose light middle distillate                                                                                                                                                                                                                                   |
|                        |                             | 15ppm sulphur                                                                                                                                                                                                                                                                  |
| JIS K2204              | No. 1                       | Japanese automotive diesel. Different classes correspond to season and district where used                                                                                                                                                                                     |
|                        | No. 2                       |                                                                                                                                                                                                                                                                                |
|                        | No. 3                       |                                                                                                                                                                                                                                                                                |
|                        | Special No. 3               |                                                                                                                                                                                                                                                                                |
| BS 2869                | Class A2                    | Fuel oil for agriculture and industrial engines (red diesel)                                                                                                                                                                                                                   |
| MIL-DTL-83133 NATO F34 | JP-8                        | Aviation kerosene fuels - acceptable when used with appropriate lubricity additive, and must meet minimum requirements of Caterpillar Specification for Diesel Fuel. The lubricity of these fuels must not exceed wear scar diameter of 0.52mm (0.02047 in) as per ISO 12156-1 |
| MIL-DTL-83133 NATO F35 |                             |                                                                                                                                                                                                                                                                                |
| MIL-DTL-5624 NATO F44  | JP-5                        |                                                                                                                                                                                                                                                                                |
| MIL-DTL-38219 (USAF)   | JP-7                        |                                                                                                                                                                                                                                                                                |
| NATO XF63              |                             |                                                                                                                                                                                                                                                                                |
| ASTM D1655             | JET A                       |                                                                                                                                                                                                                                                                                |
|                        | JET A1                      |                                                                                                                                                                                                                                                                                |
| B5-B7                  |                             | Blend of biodiesel meeting EN 14214 or ASTM D6751 with EN 590 or ASTM D975 standard mineral diesel fuels.                                                                                                                                                                      |
| B7-B20                 |                             |                                                                                                                                                                                                                                                                                |

## 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               | Less than 2%                                    |
| Telephone Influence Factor (TIF)  |                                                 |
| Harmonic Distortion (THD)         |                                                 |

| Cat Generator Set                     |                              |                         |                         |
|---------------------------------------|------------------------------|-------------------------|-------------------------|
|                                       | TMI Performance No.<br>Units | Prime — 50 Hz<br>P4390D | Prime — 60 Hz<br>P4390C |
| <b>Power Rating</b>                   | kVA (kW)                     | 150 (120)               | 181 (145)               |
| <b>Performance Specification</b>      |                              |                         |                         |
| <b>Lubricating System</b>             |                              |                         |                         |
| Oil pan capacity                      | L (gal)                      | 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 (156)               |                         |
| Running time @ 75% rating             | Hr                           | 20                      | 17                      |
| <b>Cooling System</b>                 |                              |                         |                         |
| Ambient capability                    | °C (°F)                      | 46 (115)                | 46 (115)                |
| 21 (5.5) Engine & radiator coolant    | 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 (916)               | 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)                        | 63.9                    | 67.1                    |
| @ 1 meters @ 75% load                 | dB(A)                        | 64.7                    | 67.5                    |
| @ 7 meters @ 75% load                 | dB(A)                        | 73.1                    | 76.4                    |
|                                       | dB(A)                        | 74.2                    | 76.8                    |

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

For full Engine & Emissions data please refer to TMI using the engine performance no.

## Technical Data (continued)

| Dimensions    |                   |                  |                   |
|---------------|-------------------|------------------|-------------------|
|               | Length<br>mm (in) | Width<br>mm (in) | Height<br>mm (in) |
| Generator Set | 3520 (138.6)      | 1120 (44.1)      | 2226 (87.6)       |

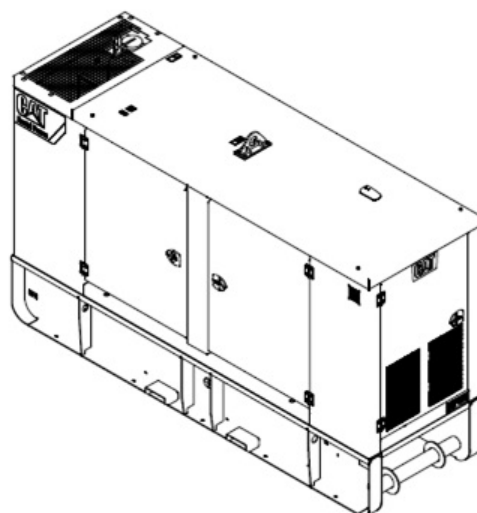
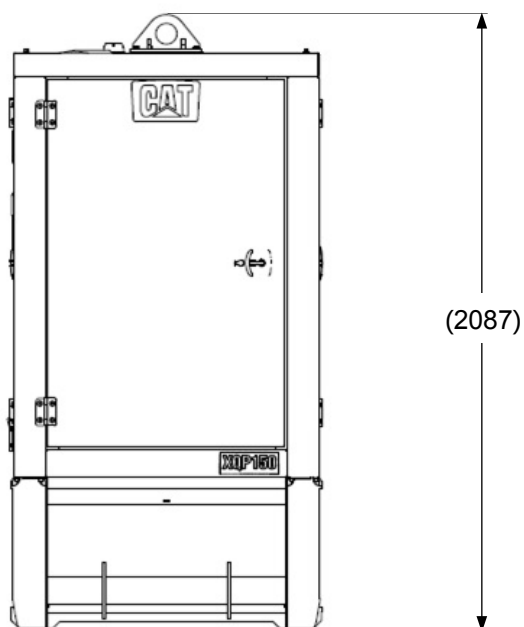
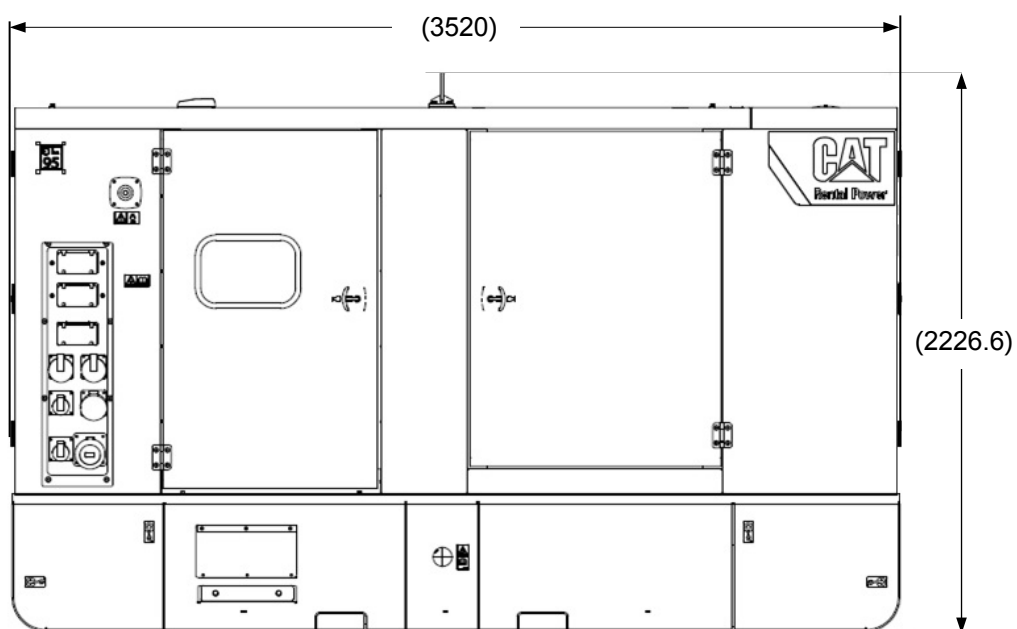
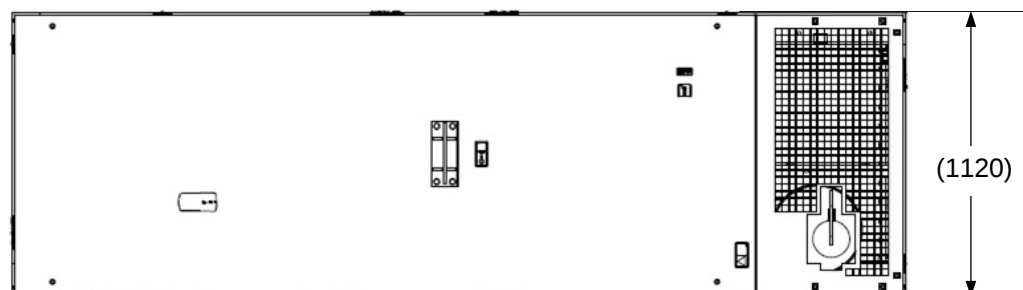
| Weight                               |                  |
|--------------------------------------|------------------|
|                                      | Weight — kg (lb) |
| Lube Oil & Coolant — Empty Fuel Tank | 2547 (5615)      |
| Full Fuel Tank                       | 3124 (6887)      |

| Sockets   | 15A | 16A       | 32A       | 50A | 63A       | 125A      |
|-----------|-----|-----------|-----------|-----|-----------|-----------|
| Clipsal*  | 1   | –         | –         | 2   | –         | –         |
| CEE Form* | –   | 2x1ph+N+E | 2x3ph+N+E | –   | 1x3ph+N+E | 1x3ph+N+E |

\*Busbar connection is standard. Distribution sockets are optional.

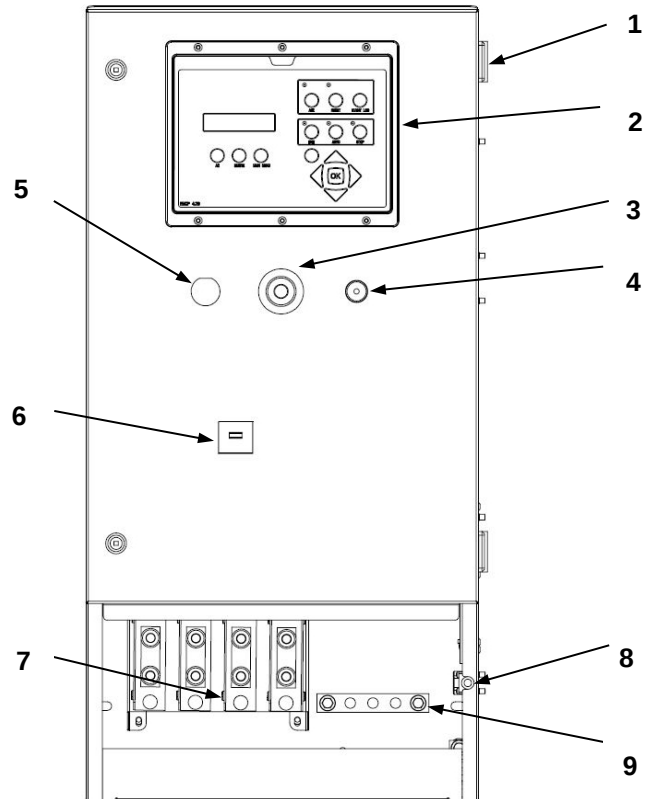
## Layout for General Dimensions

Dimensions in millimeters



## Control Panel and Power Distribution Layout

| Item | Description                                   |
|------|-----------------------------------------------|
| 1    | Steel enclosure with hinged, lockable door    |
| 2    | EMCP 4.2B                                     |
| 3    | Emergency Stop button                         |
| 4    | Alarm                                         |
| 5    | Service tool connector                        |
| 6    | Circuit breaker. 4-pole molded case           |
| 7    | Main bus connection (bus bars with M12 studs) |
| 8    | Micro safety switch for bus bar door          |
| 9    | Main earth terminal                           |



## Rating Definitions and Conditions

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

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

**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.

**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.

[www.Cat.com/rentalpower](http://www.Cat.com/rentalpower)

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