# Cat® XQP115 Rental Generator Set



Image shown may not reflect actual configuration

**Prime 115 kVA (92 kW)**
**50/60 Hz Switchable**
**EU Stage V**

## Specifications

| Frequency (Hz) | Speed (rpm) | Voltage | Prime | | Output Amps (A) | Breaker Rating (A) |
|---|---|---|---|---|---|---|
| | | | kVA | kW | | |
| 50 | 1500 | 415 / 240 V | 115 | 92 | 160 | 200 |
| | | 400 / 230 V | 115 | 92 | 166 | |
| | | 380 / 220 V | 115 | 92 | 175 | |
| 60 | 1800 | 480 / 277 V | 120 | 96 | 144 | 200 |
| | | 440 / 254 V | 120 | 96 | 157 | |
| | | 380 / 220 V | 120 | 96 | 182 | |

| Cat® C4.4 Diesel Engine | Metric | Imperial (English) |
|---|---|---|
| Configuration | Inline 4-cylinder, 4-Stroke-Cycle, Water Cooled, Diesel | |
| Bore | 105 mm | 4.13 in |
| Stroke | 127 mm | 5 in |
| Displacement | 4.4 L | 268 $in^3$ |
| Aspiration | Turbocharged-Aftercooled (TA) | |
| Compression Ratio | 18.23:1 | |
| 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 | |



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## Benefits & Features

### Rental-ready Features

- Dual wall tank base with drag / tie down points and robust skid plate
- Forklift pockets
- Externally certified dual point lift
- Certified spark arrest system
- 50/60Hz frequency switch via terminal link
- EMC certified
- Robust busbar connection for lugged cable connection
- AC protected by limit switch on distribution door

### Available Options

- CE socket box with integrated MCB & RCBO protection
- Syncronising control panel and motorised breaker
- Anti condensation heater 230V AC
- Coolant heater 230V AC
- Permanent Magnet Generator (PMG)
- Earth leakage detection
- Lube oil sump pump
- Fuel Option Pack - Inboard mounted 3-way valve for external fuel connection, electronic fuel gauge and Bund Level Sender
- Battery option - 12V 950CCA maintenance-free CAT Batteries
- Battery Isolator - Single pole (padlockable)
- 12V battery charger
- Control Panel noise breakout option
- Drains option Pack - Oil and coolant drains piped to baseframe

### Fuel/Emissions Strategy

- EU Stage V

### Single-source Supplier

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

### Cat® C4.4 Diesel Engine

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

### After Treatment

- Diesel Emissions Fluid (DEF) Tank located in discharge box, accessible through lockable access door
- DEF tank capacity is sufficient to last more than 34 hrs when fully filled (based on 75% Prime load)

### XQCP Control Panel

- Fully featured power metering, protective relaying, engine/generator control and monitoring
- Simple user-friendly interface and navigation

### Cat LC3100 Generator

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

### Automatic Voltage Regulator (AVR)

- 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

- 110% spill containment of all on-board engine fluids and bund level alarm
- Low noise enclosure

### Cat Connect

- Fleet management and asset tracking*

*Subject to local certifications



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## Standard Equipment

### Generator

- LC3114F frame; 3-phase random wound, 12 lead, self-excited, 2/3 pitch
- Coastal insulation protection (CIP)

### Cat® C4.4 Diesel Engine

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

### After Treatment

- Remote mounted Clean Emissions Module (CEM)
- Diesel Emissions Fluid (DEF) Tank located in discharge box, accessible through lockable access door

### 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
- 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
- Single 12V 950CCA maintenance-free battery with padlockable single-pole isolator switch

### Fuel System

- 24hr dual wall fuel tank (based on 75% Prime load)
- Internal fuel fill
- Engine mounted primary and secondary fuel filter
  - Primary filter (10 micron) with integral water separator (330ml capacity)
  - Secondary filter (4 micron)
- Automatic onboard priming pump
- Mechanical fuel gauge

### Control Panel

- XQCP set mounted digital controller
- 50/60Hz frequency switch (via terminal link)
- Automatic Voltage Regulator (AVR) with D350 excitation module
- Panel & enclosure mounted emergency stop

### Distribution System

- Separate robust steel enclosures for control & distribution sections
- Distribution door protected with 12V DC shunt trip safety switch
- 4 pole, 200A 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
- Skid plates with drag points
- 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
- External side-mounted dual point lifting frame for improved hook access
- Powder coated with Cat Rental Power decals

### Exhaust System

- Certified spark arresting system
- Outlet box mounted with vertical discharge

### Lube Oil System

- On-engine primary and secondary oil filters, dipstick and oil filler
- Closed crankcase breather
- 500-hour oil change requirement

### General

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



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## Fuel Specifications

| Specification Standard | Grade Class | Fuel Description |
|---|---|---|
| EN 590 | Grade A to F<br>& 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 | | |
| EU Stage V specifies Ultra Low Sulphur Diesel | | Ultra-Low Sulphur Diesel Only (ULSD)<br>ULSD with a maximum fuel sulphur level of either 15 or 20 ppm1 is required in all diesel applications using a diesel particulate filter (DPF and DOC).<br><br>Bio-diesel fuel may be used up to B20 (80% standard ULSD with 20% bio-fuel dilution by volume), provided an appropriate approved additive is used |

## Oil Specifications

| Specification Standard | Oil Description |
|---|---|
| EU Stage V Recommended oil 15W-40 CK-4 1E1867F | CAT DEO-ULS (Preffered) |

## DEF Specifications

| Specification Standard | DEF Description |
|---|---|
| EU Stage V DEF Requirements ISO22241-1 | Diesel Exhaust Fluid |



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## Technical Data

| Cat® Generator | |
|---|---|
| Frame size | LC3114F |
| 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 ± 0.5% |
| Wave form deviation<br>Telephone Influence Factor (TIF)<br>Harmonic Distortion (THD) | <br>Less than 2%<br>Less than 2% |

| Cat Generator Set | | | |
|---|---|---|---|
| | **TMI Performance No. Units** | **Prime — 50 Hz P6324B** | **Prime — 60 Hz P6320A** |
| **Power Rating** | kVA (kW) | 115 (92) | 120 (96) |
| **Performance Specification** | | | |
| **Lubricating System**<br>Oil pan capacity | L (gal) | 7 (1.85) | |
| **Fuel System**<br>Fuel consumption — 100% Load<br>75% Load<br>50% Load<br>Fuel tank capacity<br>Running time @ 75% rating | <br>L/hr (gal/hr)<br>L/hr (gal/hr)<br>L/hr (gal/hr)<br>L (gal)<br>Hr | <br>27.3 (7.2)<br>20.4 (5.3)<br>13.9 (3.7)<br>518 (136.8)<br>25.4 | <br>28 (7.4)<br>21 (5.5)<br>27.3 (7.2)<br><br>24.7 |
| **After Treatment***<br>DEF Tank Capacity | <br>L (gal) | 28 (7.4) | |
| **Cooling System**<br>Ambient capability @ 750 m<br>Engine & radiator coolant capacity<br>Engine coolant capacity | <br>°C (°F)<br>L (gal)<br>L (gal) | <br>36(96.8)<br>19.5 (5.1)<br>9.1 (2.4) | <br>43(109.4) |
| **Air Requirements**<br>Combustion air flow at 110% Load | <br>$m^3$/min (cfm) | <br>6.7 (236.6) | <br>7.3(257.7) |
| **Exhaust System**<br>Exhaust flow at rated — dry exhaust<br>Exhaust temperature at rated kW | <br>$m^3$/min (cfm)<br>°C (°F) | <br>14.1 (498)<br>530 (986) | <br>15.6 (551)<br>530 (986) |

*DEF consumption is on average approximately 4% of the fuel consumption

## Technical Data (continued)

| Cat Generator Set | | | |
|---|---|---|---|
| | TMI Performance No. Units | Prime — 50 Hz T6316 | |
| **Noise Rating (with enclosure) ** Sound Power*** | dB(A) | 92 | 96 |
| @ 7 meters @ 75% load | dB(A) | 64.9 | 68.9 |
| @ 7 meters @ 100% load | dB(A) | 65.9 | 69.6 |
| @ 1 meters @ 75% load | dB(A) | 75.3 | 78.9 |
| @ 1 meter @ 100% load | dB(A) | 75.8 | 80 |
| **Emissions data at 100% Load** | | | |
| Nox | g/hp-hr | TBC | TBC |
| CO | g/hp-hr | TBC | TBC |
| HC | g/hp-hr | TBC | TBC |
| PM | g/hp-hr | TBC | TBC |

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

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

| Dimensions | | | |
|---|---|---|---|
| | Length mm (in) | Width mm (in) | Height mm (in) |
| Generator Set | 2 970 (116.9) | 1 150 (45.3) | 2 076 (81.7) |

| Weight | |
|---|---|
| | Weight — kg (lb) |
| Lube Oil & Coolant — Empty Fuel Tank | 2 077 (4 579) |
| Full Fuel Tank | 2 527 (5 571) |

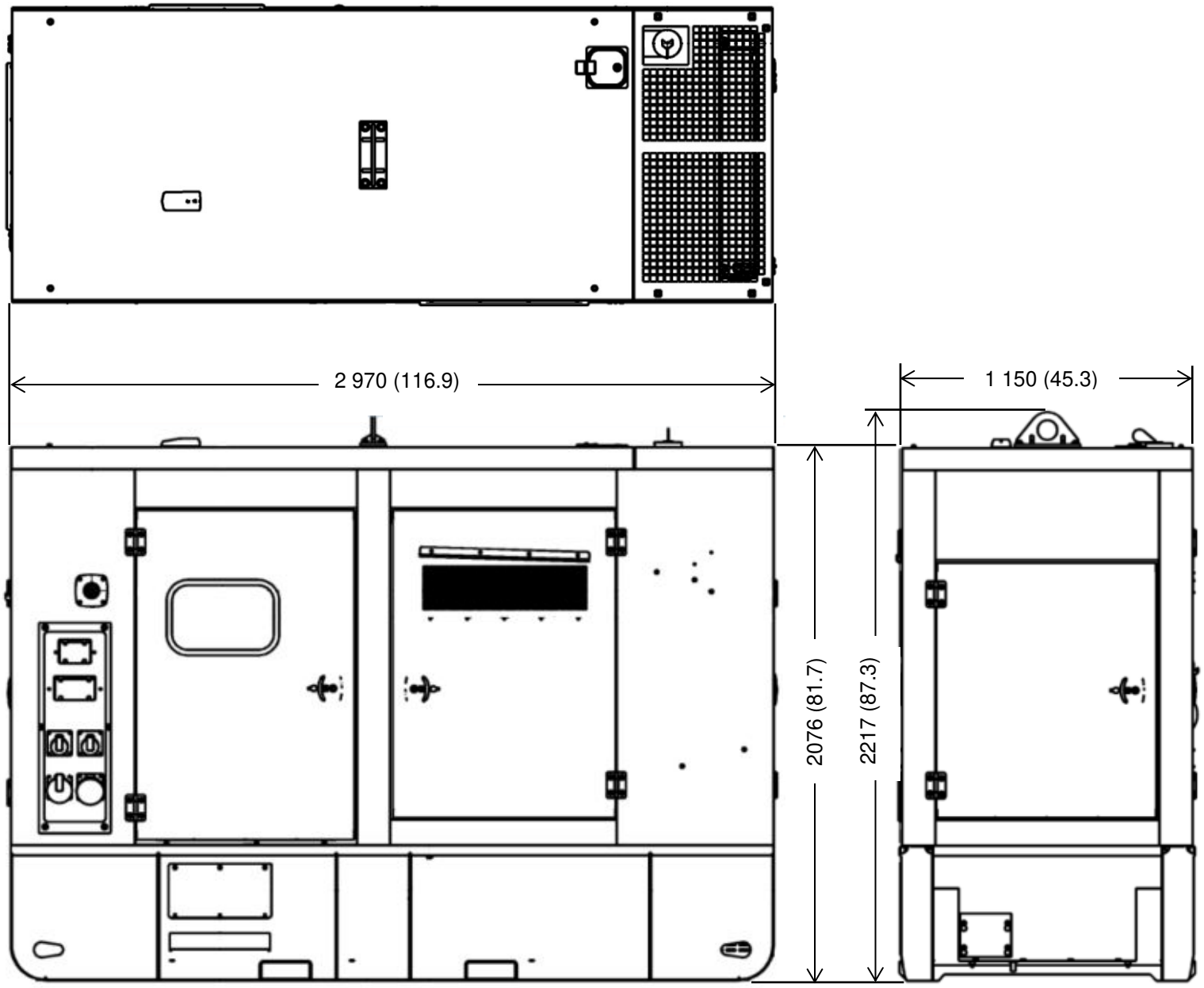
| Socket Box Option | | | | | | |
|---|---|---|---|---|---|---|
| Sockets | 15A | 16A | 32A | 50A | 63A | 125A |
| CEE Form* | – | 2x1ph+N+E | 1x3ph+N+E | – | 1x3ph+N+E | – |



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## Layout for General Dimensions

Dimensions in millimeters (inches)

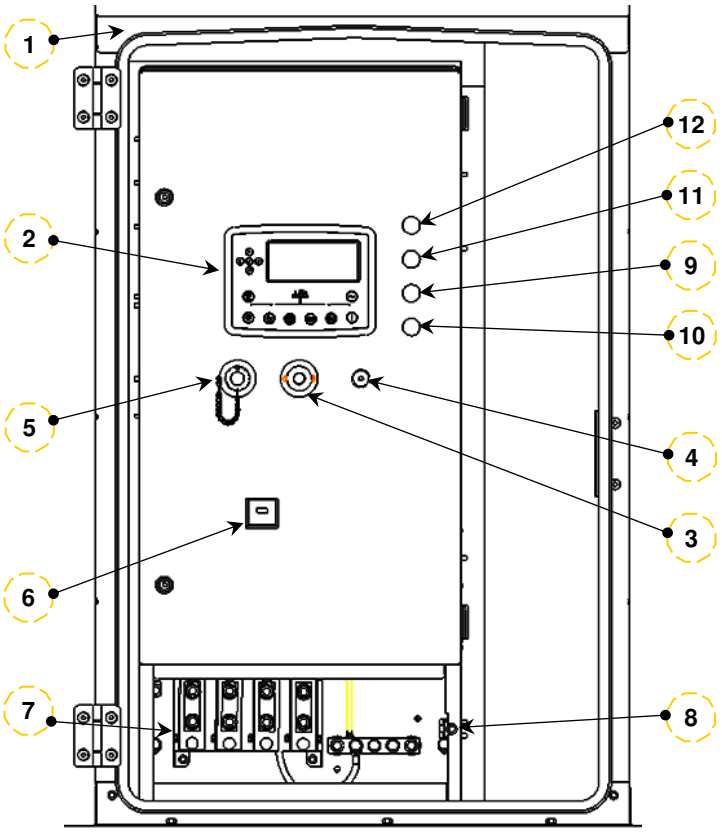





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## Control Panel and Power Distribution Layout

| Item | Description |
|---|---|
| 1 | Steel enclosure with hinged, lockable door (Not shown) |
| 2 | XQCP digital generator set controller |
| 3 | Emergency Stop button |
| 4 | Alarm |
| 5 | Service tool connector |
| 6 | Circuit breaker. 4-pole molded case |
| 7 | Main bus connection (bus bars with 14 mm holes) |
| 8 | Micro safety switch for busbar door |
| 9 | Manual holder |
| 10 | Emission System Failure Lamp |
| 11 | Low-DEF level Lamp |
| 12 | Wait to start lamp |




## 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 ekW 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 35º API [16ºC (60ºF)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29ºC (85ºF) 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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